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Trajectories of Kidney Function in Children with Reduced Kidney Function

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Trajectories of Kidney Function in Children with Reduced Kidney Function

by

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Abstract

Little is known about the progression of chronic kidney disease (CKD) during the emerging adulthood period in patients with pediatric onset CKD cared for in primary care. We performed a retrospective cohort study using administrative data from The Health Improvement Network Database to determine the natural history of CKD, the impact of the emerging adulthood period, and the effects of comorbidities including mental health disorders, substance use, and pregnancy on CKD progression. We identified 15,679 patients who met cohort inclusion criteria. We found that kidney function measured using the estimated glomerular filtration rate (eGFR) increased with increasing age. Emerging adulthood was associated with an attenuation in this increase in eGFR. Finally, the presence of mental health disorders, substance use, and pregnancy modified the relationship between age and eGFR resulting in a small, but statistically significant acceleration in the eGFR increase over age, but were associated with lower baseline eGFR.

Preface

This thesis is original, unpublished, independent work by the author, Kahlon, B.K. The research reported in Chapters 2-4 was covered by Ethics Certificate E-24423, issued by the University of Calgary Conjoint Health Ethics Board for the project "The Health Improvement Network Database" on February 21, 2012 (renewed on February 21, 2018).

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To Paul, Maya, and baby to be – *you are my inspiration*

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List of Symbols, Abbreviations and Nomenclature

Symbol	Definition
ACE	Angiotensin Converting Enzyme
AKDN	Alberta Kidney Disease Network
AKI	Acute Kidney Injury
CAKUT	Congenital Anomalies of the Kidney and Urinary Tract
CKD	Chronic Kidney Disease
CKiD	Chronic Kidney Disease in Children
ESRD	End Stage Renal Disease
eGFR	Estimated Glomerular Filtration Rate
FAS	Full Age Spectrum
GFR	Glomerular Filtration Rate
HES	Hospital Episode Statistics
HIV	Human Immunodeficiency Virus
IQR	Inter-Quartile Range
KDIGO	Kidney Disease Improving Global Outcomes
Mdn	Median
MDRD	Modification of Diet in Renal Disease
$mL/min/1.73m^2$	Milliliters per Minute per $1.73m^2$ of Body Surface Area
THIN	The Health Improvement Network
UK	United Kingdom
USA	United States of America

CHAPTER ONE: INTRODUCTION

1.1 INTRODUCTION

1.1.1 Normal kidney function

Kidneys play a vital role in the maintenance of health and life. Key functions of the kidneys include regulation of fluid status, electrolytes, and excretion of toxins (1). The kidneys are also responsible for the production of hormones that regulate bone metabolism, red blood cell production, and renal hemodynamics (1).

Kidney function is quantified by measuring the glomerular filtration rate (GFR), which is accepted as the best overall indicator of kidney function (2). Nephrons are the individual filtering units of the kidney, and the GFR is the sum of the filtration rate of each of these units (1). The units in which GFR is commonly reported are milliliters per minute per $1.73m^2$ of body surface area ($mL/min/1.73m^2$). Stability of kidney function or the progression of kidney disease over time can be monitored using serial GFR measurements. The GFR can be quantified using one of several methods (i.e. urinary inulin clearance which is the gold standard, urinary iothalamate clearance, plasma clearance of iohexol, etc.); however, many of these are quite cumbersome and expensive, therefore, their clinical utility is limited (1, 3, 4). This has led to the use of the serum creatinine in conjunction with an estimating equation to determine an estimated glomerular filtration rate (eGFR) for quantification of kidney function. There are various equations available for use to

calculate the eGFR, and these equations take into account variables such as age, sex, ethnicity, and height, in addition to the serum creatinine (5-8).

At birth, kidney function is low, roughly 40 mL/min/1.73m^2 (9). However, by age 2, kidney function has increased to adult levels of 100 to 140 mL/min/1.73m^2 (9-11). Renal mass also increases with age. At birth, the kidneys weigh approximately 50 grams, but by age 40 they are over 400 grams, after which time, kidney mass begins to decline (11). It is generally accepted that kidney function remains normal until the 4th decade of life after which there is a loss of roughly 10 mL/min/1.73m^2 per decade of life (12, 13), although this value varies anywhere from 8 mL/min/1.73m^2 to 12 mL/min/1.73m^2 per decade (14-16).

1.1.2 Kidney disease

Kidney disease is defined as any structural or functional abnormalities of the kidney that may occur as the result of a variety of disorders (17). Kidney disease may be acute (lasting less than 3 months) or chronic (lasting 3 months or longer). Chronic kidney disease (CKD) is generally, but not always, irreversible and progressive (17).

Most often, patients with kidney disease are asymptomatic and abnormalities are detected on routine testing; however, others may present with symptoms related directly to the kidneys themselves, or due to the complications of kidney disease (1). Complications due to reduced kidney function tend to arise when kidney disease is at least moderately severe; however, other consequences of kidney disease, such as increased risk of cardiovascular disease, can manifest at

any stage of kidney disease (17). As kidney disease progresses, patients eventually develop kidney failure, also referred to as end stage renal disease (ESRD). At this point, kidney function must be replaced by either dialysis or a kidney transplant, otherwise a patient will die. Fortunately, for many causes of CKD, there is a long period of time prior to when a patient reaches ESRD, during which there are opportunities to intervene to prevent, or at least prolong the time until one reaches ESRD.

1.1.3 Pediatric CKD

Pediatric onset CKD is associated with increased morbidity and mortality. The most common etiology of pediatric CKD is congenital anomalies of the kidney and urinary tract (CAKUT), representing up to 50% of causes, followed by glomerulonephritis and hereditary nephropathies (18). Pediatric onset CKD that has not yet progressed to ESRD is far more prevalent than ESRD. The prevalence of renal replacement therapy (i.e. ESRD) in children aged 0-19 years has been reported to range anywhere from 18 to 100 per million of the age-related population (19) and some epidemiologic studies suggest that the prevalence of patients with earlier stages of disease is up to 50 times as high as that of ESRD (20). Furthermore, with improvements in medical care, many diseases that had been fatal in childhood often are no longer so; therefore, the prevalence of emerging adults with chronic illnesses, such as CKD, is increasing (21). The negative effects of CKD during childhood include growth impairment resulting in short stature, neurocognitive effects (for example lower IQs, worse memory and executive functioning), bone disease, anemia, increased rates of cardiac complications including cardiac mortality, increased risk of hospitalization, progression to ESRD and increased risk of death (18, 22-26).

Several factors have been identified in the literature as being associated with decline in kidney function or progression to ESRD, and some may serve as targets to act upon to delay progression to ESRD. A recent systematic review conducted to identify risk factors associated with kidney disease development and progression searched databases for studies up until 2012 and retrieved and summarized the findings of 40 eligible studies (27). Risk factors that were identified include, but are not limited to: male sex, baseline proteinuria, older age, lower baseline eGFR, hypertension, smoking, heavy alcohol consumption, diabetes, disease etiology, anemia, hypoalbuminemia, dyslipidemia, certain drugs, other lab abnormalities and the presence of certain biomarkers (27). A recent pediatric study of 496 children and adolescents with CKD from the Chronic Kidney Disease in Children (CKiD) Cohort reported many of the same predictors of disease progression (28) as were summarized in the systemic review performed by Tsai et al.

Other potentially important patient level variables that may influence CKD progression in children and young adults include behavioral factors associated with emerging adulthood, such as substance use, comorbid mental health conditions, and frequency of contact with physicians, have been less well studied. Additionally, provider and system level factors such as whether the patient has been seen by a nephrologist or is followed by their primary care physician only, and if the patient is seen in a specialty multidisciplinary clinic may be important variables. Therefore, these factors and their association with progression of kidney disease warrant further evaluation.

Furthermore, no studies have investigated the progression of kidney disease over the age span, specifically during the emerging adulthood period, in patients with pediatric onset CKD from

a general practice population. One study has described the progression of eGFR in patients with pediatric CKD secondary to renal hypodysplasia (a congenital condition in which the kidneys are small and abnormally developed) and found that puberty was associated with an increased rate of decline in eGFR (29). However, this study did not follow patients through emerging adulthood. Another study examined progression of kidney disease in patients with autosomal recessive polycystic kidney disease and found that the annual eGFR decline was greater in individuals 10 years and older compared with those less than 10 years (30). However, the average age at study entry was 7.9 years and the period of follow-up was not stated; therefore, it is not clear if this cohort was followed through and beyond emerging adulthood. Lastly, a recent study by Calderon-Margalit et al. examined the risk of developing ESRD in adulthood among adolescents with normal kidney function who had a history of childhood kidney disease (based on the medical history provided by the patient and their family physician, which was confirmed by a nephrologist, and assessed independently by two military physicians) (31). The authors' key finding was that these patients were at increased risk of ESRD in adulthood compared with adolescents with normal kidney function and no prior history of childhood kidney disease (31). However, the patients in this study all had normal kidney function at the time of enrolment, and they did not describe the natural history of kidney function in these patients. Thus, none of the available evidence sheds light on the natural history of pediatric onset CKD and whether emerging adulthood is a high-risk time for patients with pediatric onset CKD.

1.1.4 Emerging adulthood

Emerging adulthood, defined as the period between ages 18 and 25 years, is an important but risky period between adolescence and young adulthood (32). It is a unique period that offers individuals the opportunity for identity exploration with respect to worldviews, intimate relationships, and work, in a setting of increased freedom from parents and a relative lack of responsibilities (32). However, it is also a time of demographic instability and unpredictability, as well as increased engagement in risky behaviors such as substance use, unprotected sex, and risky driving behavior (32). A recent report from the United States highlighted that emerging adults face increased health risks, and that as a group they have the highest rates of sexually transmitted infections, mental health concerns, substance abuse, motor vehicle injuries, and death, as well as the lowest compliance with preventative health measures such as vaccinations and seatbelt use (33). There is also evidence of ineffective healthcare utilization amongst emerging adults who have the highest number of emergency room visits, but the least outpatient healthcare visits per person per year (33).

Although emerging adulthood is an important time for personal and social development on the path to adulthood, it is a high-risk period due to both behavioral and non-behavioral factors. Engagement in high-risk behaviors can partially be explained by the exploratory nature of emerging adulthood, during which there is a desire to experience as much as possible before settling into the roles and responsibilities of adulthood (32). An equally important factor is how the human brain develops. Initially development occurs in the motor and sensory systems; however, development of the pre-frontal cortex, the area involved with behavioral inhibition, emotional and impulse control, reflective thought, planning and rational decision making, is still occurring during emerging adulthood (34-37). Therefore, the ability to appreciate the potential

consequences of risky behaviors may be limited, which has implications on chronic illness management and outcomes.

1.1.5 Childhood chronic disease and transition issues

Approximately 20% of youth have a chronic illness. These young patients must navigate our fragmented healthcare system that dichotomizes patients into pediatric and adult populations, in addition to navigating emerging adulthood. This organization of healthcare delivery requires that emerging adults undergo transfer of care from familiar and supportive pediatric healthcare environments, to adult healthcare settings, typically at age 18. Compared with pediatric healthcare environments, adult healthcare settings have been described as impersonal, with more strict and rigid clinic schedules, shorter and less frequent appointments, long wait times, and unfamiliar processes (38). The movement between healthcare settings is accompanied with the expectation that these patients function as adults and assume full responsibility of their health, which includes managing tasks like coordinating clinic visits with work and school responsibilities, engaging in discussions with healthcare providers, and resisting the urge to miss medications and appointments (39).

Based on our knowledge of biological and psychosocial development, expecting young patients with chronic illness to transfer seamlessly and assume full responsibility of their healthcare is unrealistic and risky. Transfer leads to a situation where health suffers because these young patients are unable to effectively utilize or access healthcare. J.S. Cameron summarized it best:

"the young patient meets the difficulties of transfer of care just when he or she is already struggling with the usual problems of identity, independence, self-image, burgeoning sexuality and the need to define their goals in life, against a background of the additional burdens of his or her chronic illness and its multifarious treatments" (40) (p680).

1.1.6 Transition in the context of kidney disease

The problems associated with transition and transfer to adult care have been well studied in pediatric patients with ESRD. The existing body of literature provides evidence that emerging adulthood is a high-risk period for pediatric ESRD patients who have received a kidney transplant. A large study (90,689 patients) was conducted using the United States Renal Data System database, to determine age-specific graft failure rates among young recipients of a first kidney transplant and found that kidney transplant failure rates peak between ages 17 and 24 years, independent of the age at which the transplant was received (41). This finding is supported by a Canadian study of 413 patients from the Canadian Organ Replacement Register which found that rates of kidney graft loss increased with increasing age, and that compared with ages 0-13 years, age older than 18 years was associated with a significantly higher risk of kidney transplant failure (42). The same study reported that there was a 5-fold increase in risk of kidney graft loss in the 1-year period around the time of transfer (42). Amongst individuals with ESRD, rates of non-adherence with prescription medications is high (43, 44), which may explain the increased risk of kidney transplant failure in adolescence and early adulthood (45). A recently published study from Australia and New Zealand using the Australia and New Zealand Dialysis and Transplant registry

looked at 3,289 kidney grafts in 3,048 patients and found a significant association between graft loss due to non-adherence or late acute rejection and age (46). It reported an increased risk in graft loss between ages 16 and 24 years compared with 10 to 12 years, with a peak in risk at age 19 to 21 years (46). This study did not find an association between non-compliance or late acute rejection and pediatric to adult transition (46). A study of 349 patients from the Canadian Organ Replacement Registry found that avoidable hospitalizations (defined as admissions for ambulatory care–sensitive conditions) also increase after transfer of care in pediatric patients with ESRD, and after age 18 years in those with ESRD who were only cared for in an adult setting and did not undergo transfer (47). Thus, both transfer and increasing age are a risk in pediatric onset ESRD.

Fortunately, despite the increased risk of poor outcomes posed to patients by transfer and increasing age, there are data that demonstrate that tailored transition interventions are associated with favorable outcomes. For example, a small study of 66 teenagers with kidney transplants compared outcomes of care provision in a specialized transition clinic, a general transplantation clinic, and a private nephrologist clinic, and found that care in a specialized transition clinic was associated with higher patient satisfaction and fewer changes in therapy at one year after transfer (48). A Canadian study of 33 patients who received renal transplants at British Columbia Children's Hospital reported improved renal allograft and patient survival, in addition to cost savings, following transfer in patients who attended multidisciplinary transition clinics (49). Another intervention consisting of an integrated pediatric-young adult joint transition clinic and care pathway was evaluated in nine young adult kidney transplant recipients and resulted in improved medication adherence, engagement with healthcare providers, and reduced graft failure rates (50). These illustrate that tailored transition interventions can be effective.

Little is known about the risk emerging adulthood and transition to adult care poses to those with pediatric onset CKD. The data on the outcomes in this population of patients is not robust. One study evaluated the quality of cardiovascular care in adolescent patients with kidney disease (CKD and ESRD) who transferred to an adult provider (51). It found that adolescents with kidney disease received sub-optimal preventative cardiac care, with overall rates of cardiovascular risk factor assessment of only 58%, and rates of recommended therapy for modifiable risk factors of only 57% (51). Another study of pediatric patients with CKD secondary to membranoproliferative glomerulonephritis who transitioned to adult care demonstrated that although patients had a favorable disease course with no patients progressing to ESRD, proteinuria did not resolve and there were issues with non-compliance (52). Both studies are small, and the former was not exclusive to patients with pediatric CKD.

1.2 SIGNIFICANCE OF PROJECT

To provide optimal care to patients, it is important to understand disease processes, which includes how a disease progresses over time. As described earlier, no studies to date have investigated the progression of kidney disease over the age span in patients with pediatric onset CKD. It is important to establish the natural history of this disease in terms of how kidney function changes over time so that interventions to slow progression and manage complications can be timed appropriately and care can be provided by the most appropriate individuals, whether that be a patient's primary care provider or a specialist. This project aims to fill this gap in knowledge.

Additionally, given the chronicity of CKD, patients with pediatric onset CKD will at some point require transfer from a pediatric care setting to the adult care setting. Currently, in many centers, this occurs with minimal additional resources devoted to their care, despite data demonstrating that tailored transition interventions in other disease populations are associated with favorable outcomes. To implement similar programs for the pediatric CKD population we must understand the risks so that interventions can be appropriately designed. This project will evaluate the impact of the emerging adulthood age period (age 18 to 25 years) on kidney function.

Finally, it is essential to identify modifiable risk factors that are both prevalent in emerging adulthood and associated with negative outcomes so that these factors can serve as targets for future transition interventions. This study aims to evaluate some potential modifiable risk factors relevant to the emerging adulthood period.

1.3 OBJECTIVES & HYPOTHESES

1.3.1 Objective 1

To characterize disease progression in young adults with pediatric onset CKD living in the UK by describing the natural history of the change in eGFR over age span.

We hypothesize that kidney function will gradually decline over the age span.

1.3.2 Objective 2

To determine if there is a difference in predicted eGFR at age 25 using a model based on the observed change in eGFR prior to emerging adulthood (less than age 18) versus predicted eGFR based on a model of the observed change during emerging adulthood (age 18 to 25).

We hypothesize that in a cohort of young patients with pediatric onset CKD living in the UK the rate of change in eGFR in the 18 to 25 year span will exceed the anticipated rate of change based on earlier age rate of change in eGFR.

1.3.3 Objective 3

To determine if the presence of mental health disorders, substance use, and pregnancy are associated with increased rate of progression of kidney disease.

We hypothesize that the presence of mental health comorbidities, substance use, and pregnancy will be associated with an increased rate of eGFR decline.

CHAPTER TWO: METHODS

2.1 SUMMARY OF METHODS

This was a retrospective cohort study using administrative data from The Health Improvement Network (THIN) Database.

2.2 DATA SOURCE

The Health Improvement Network (THIN) database was established in 2002 and contains de-identified data on patients followed in general practices in the United Kingdom (UK) that utilize Vision GP records software, provided by In Practice Systems (INPS) (53). The aims of THIN were twofold. The first was to improve the clinical data recording of general practices that joined THIN. The second objective was to create a database that could be used for epidemiologic studies, as well as for studies of drug safety, disease prevention, and disease treatment.

Data collection for THIN began in 2003. When a practice joins THIN, an initial full data collection is undertaken at which time all data is retrospectively collected by THIN. Thereafter, there are automatic daily incremental data collections and data are electronically downloaded into THIN. The THIN research dataset is updated three times a year when the collected data are processed and added to the existing research dataset. All identifying information, such as a patient's National Health Service (NHS) number, name, exact date of birth and address, are removed.

Data collected in THIN includes: medical diagnoses, symptoms, procedures (as Read codes), referrals to secondary care (i.e. care provided in hospitals that includes: inpatient or outpatient specialist care, Accident and Emergency Department care) including specialty, prescriptions, lifestyle information (smoking, alcohol status), preventative healthcare (immunizations, height and weight measurements, blood pressure), and laboratory test results. Read codes used in THIN are those developed by Dr. James Read in 1982, which were created for use in general practice and have been the NHS standard since 1990. Read codes are not only terms related to diagnoses, but also to signs and symptoms, procedures and investigations, and certain administrative functions.

It is also possible to obtain anonymous information on ethnicity, environmental indices, and socioeconomic information based on postcodes of patients in THIN from QuintilesIMS (formerly IMS Health). The Hospital Episode Statistics (HES) Database, which contains information on all hospital admissions, outpatients, accident and emergency department visits, maternity care, and critical care in NHS hospital in England, is also linked to the THIN database.

As of December 2017, THIN included data from 15.6 million patients in over 711 practices, with approximately 3 million active patients and around 385 active practices. Six percent of the population of the UK was actively registered in THIN in 2014 (midyear prevalence). As of May 2015, the THIN-HES link data included records from 157 practices and over 2.3 million patients.

In terms of the quality of data collection, at the beginning of the THIN scheme, initial audits were performed on roughly 115 practices that had expressed interest in contributing data to THIN. The results of these audits showed that the data from these practices was of sufficient quality to join THIN. Additionally, THIN offers free Vision software training and seminars to participating general practices to ensure high quality data recording occurs. Furthermore, physicians receive feedback reports on a regular basis that outline the practice's quality of recording and identify areas for improvement.

In 2012, a study of the generalizability of THIN looking specifically at demographics, chronic disease prevalence and mortality was performed by Blak and colleagues and reported that THIN was generalizable to the UK population (54). They determined that the crude prevalence of CKD in THIN was 2.5%, consistent with 2.3% based on the UK national Quality and Outcomes Framework data (54).

Based on the large number of patients actively and historically enrolled in THIN and the prevalence of CKD, THIN is a rich resource of data for performing epidemiologic studies of CKD. As of 2015, only five papers on four unique topics addressing kidney disease using the THIN research dataset had been published (one on identification and classification of CKD, one on the risk of kidney disease in psoriasis, two on validation of THIN for epidemiologic studies of CKD, and two on the QKidney risk of CKD score) (55-59).

2.3 POPULATION OF INTEREST

The population of interest in this study was patients with pediatric onset CKD.

2.3.1 Definition of CKD

The definition of CKD used in this study was an eGFR of less than 90 mL/min/1.73m^2 on two separate occasions, separated in time by at least 90 days. An eGFR cut-off of less than 90 mL/min/1.73m^2 was chosen based on the definition of CKD used in the CKiD Prospective Cohort Study (60).

2.3.2 Inclusion and exclusion criteria

We included all patients within THIN who had pediatric onset CKD, i.e. those who fulfilled the criteria of CKD as defined above, between ages 2 and 18 years. The time of the second measurement was considered as the date of CKD diagnosis.

The criteria of separation of measurements by at least 90 days was used to exclude those patients who had acute kidney injury (AKI). An upper age limit of 18 years at the time of diagnosis was set for this study because we were interested only in patients with CKD onset during pediatric age. Patients under the age of 2 years were excluded because children do not attain stable values of eGFR, nearing those of adults, until age 2 (9). Patients with ESRD (those on dialysis or those with a kidney transplant) were excluded from the cohort if they had no data in THIN for the period during which they had non-ESRD CKD. ESRD was determined using Read codes for the diagnoses of dialysis (hemodialysis and peritoneal dialysis) or kidney transplant.

2.3.3 Patient follow-up

Patients were followed from identification until the end of the observation period (June 2017), loss to follow-up, progression to ESRD (i.e. initiation of dialysis or receipt of kidney transplant), death, or transfer out of a general practitioner's practice.

Progression to ESRD was determined by the presence of any of a list of pre-specified Read codes indicating initiation of dialysis or receipt of a kidney transplant (Appendix A). Death and transfer out of a practice were ascertained by obtaining the death date for those who died or a transfer out date for those who left a THIN practice.

2.4 OUTCOME

The outcome of this study was kidney function. The kidney function was quantified using the eGFR.

2.4.1 Quantifying kidney function: eGFR

Kidney function can be quantified either by measuring or estimating the GFR. The gold standard for measuring GFR is using inulin, an exogenous marker that is freely filtered by the kidney and not reabsorbed, secreted, metabolized or synthesized by the kidney (3). However, measuring GFR this way requires bladder catheterization, an intravenous infusion of inulin, and

obtaining multiple blood samples which is expensive and not practical in routine clinical practice (1). Therefore, GFR is routinely estimated using an endogenous biomarker, serum creatinine, in conjunction with an estimating equation. Serum creatinine is naturally occurring and is derived from dietary meat intake and skeletal muscle metabolism (1).

The serum creatinine and eGFR are inversely related such that the higher the serum creatinine, the lower the eGFR. Higher eGFR values indicate higher kidney function, and lower eGFR values indicate lower kidney function. In order to monitor kidney function over time, repeated serum creatinine measurements are obtained for an individual and these are used to obtain the rate of change in eGFR (slope), which can be used to determine if the kidney function is improving, declining, or stable.

However, serum creatinine is not an ideal biomarker and there are limitations to its use in estimating GFR. In addition to being freely filtered by the kidney, creatinine is also secreted by the kidney and the degree to which this occurs can vary due to medication use, the degree of kidney impairment, and conditions such as nephrotic syndrome and sickle cell disease (1, 61, 62). Additionally, creatinine excretion also occurs via the gastrointestinal tract (1). Furthermore, the production of creatinine is impacted by factors such as muscle mass and dietary intake (1). These factors can affect the serum creatinine levels and in turn the accuracy of GFR estimation for quantifying kidney function.

2.4.2 Measuring kidney function through childhood to adulthood

There are some practical considerations when it comes to following kidney function over time as children age to become adults. Kidney function is most often represented as the eGFR which is calculated using the measured serum creatinine and an estimation equation.

In pediatrics, the most commonly used equation is the Schwartz formula, although other equations do exist. This formula takes into account a patient's serum creatinine and height (8, 63).

In adults, three such equations are available: the Cockroft-Gault equation, the modification of diet in renal disease (MDRD) equation, and the CKD-Epi equation (5-7). The most commonly used equation is the CKD-Epi equation. The CKD-Epi equation takes into consideration a patient's serum creatinine, sex, age, and race (African American versus other) (7). The MDRD and CKD-Epi equations both utilize the same 4 variables to compute eGFR. However, compared with the MDRD equation, the CKD-Epi equation is more accurate and slightly more precise, and it is less biased at higher GFR values (greater than 60 mL/min/1.73m^2); therefore, it is recommended for use among adults in the 2012 KDIGO Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease (17). The Cockcroft-Gault equation cannot be re-expressed for use with standardized creatinine assays because it was developed before standardization of creatinine assays; therefore, it is not recommended for use by KDIGO (17).

Each equation (pediatric and adult) is slightly different; therefore, the GFR estimate obtained using any one of the above equations and a given serum creatinine value will result in four varying estimates of an individual's GFR. This fact underlies one of the issues of using GFR to follow kidney function over time. By virtue of using a different equation to estimate GFR prior

to age 18 and after age 18, one would observe a "change" in kidney function. For example, using the CKD-Epi equation to estimate GFR instead of the Schwartz formula in an 18-year-old could result in up to a 50% apparent increase in GFR, as illustrated in the example provided by Pottel et al. (12). Therefore, to exclude the effect of varying the estimating equation on the eGFR, a single equation to estimate kidney function must be used prior to and following age 18. However, this leads to the issue of which equation to select, and whether or not following eGFR is most appropriate versus some other measure of kidney function.

To avoid having to select the most appropriate equation to follow pediatric patients into adulthood, it may be reasonable to consider following the reciprocal of serum creatinine concentration over time. This is a sound method to infer kidney function because the GFR is proportional to the reciprocal of the serum creatinine concentration (assuming muscle mass remains constant). Thus, as kidney function declines, serum creatinine increases, which is reflected as a lower 1/[serum creatinine concentration] value. By opting to use this method to monitor kidney function over time, there is no need for consideration of which estimation equation is more appropriate. Unfortunately, although this method is suitable in adults, in pediatrics, the relationship between increasing creatinine and kidney function is not as straightforward. In children, the creatinine is expected to increase with age in relation to growth (due to increasing muscle mass) (64), and this increase does not necessarily reflect a worsening of kidney function. In this instance, using an estimating equation to determine the eGFR is necessary. This means that for the purposes of following patients' kidney function from childhood into adulthood, the reciprocal serum creatinine concentration is not an appropriate method.

Taking all this into consideration, one GFR estimating equation must be selected to be used to follow kidney function prior to and after the age of 18. In the CKiD study, patients aged 1 to 16 were eligible for enrolment and were followed prospectively for 48 months (60). GFR was estimated yearly using the serum creatinine and the Schwartz formula, and measured every year for the first two years and then biannually thereafter using blood clearance of iohexol (60). Based on this, the authors used the Schwartz formula after the age of 18 in those patients that were followed long enough. A recent study compared the performance of the Schwartz formula and CKD-Epi equation across various age ranges and found that the Schwartz formula was less biased with better precision and accuracy for all levels of GFR in children and adolescents, and for GFR less than 90 mL/min/1.73m^2 in adults aged 18 to 40 years (63). Thus, it is reasonable to use the Schwartz formula to estimate GFR before and after age 18 (up to age 40).

However, one concern with using the Schwartz formula is that this formula requires height to be inputted to estimate the GFR [(eGFR (mL/min/1.73m^2) = 36.5 × height (cm)/plasma creatinine (μmol/l)] (8, 63). This brings up the issues of completeness of height measurements within the THIN dataset. In the paper published by Denburg and colleagues in 2011 (56), which also used the Schwartz formula to calculate eGFR in pediatric patients, of the 85,055 creatinine measures that were done in individuals ages 2 to 18, measured heights were available for only 36,703 (43.2%) and the remaining values for heights were imputed. The authors performed a sensitivity analysis and felt the results were not impacted by the height imputation; however, they did not follow eGFR longitudinally in their study (56). Because our study is longitudinal, having a large proportion of imputed height values may introduce inaccuracy and a non-specific measurement bias into the results.

An alternative to using the Schwartz formula, which relies on height, is using a single equation developed specifically to serve all ages that does not include height. The full age spectrum (FAS) equation [eGFR (mL/min/1.73m^2) = 107.3/(serum creatinine (µmol/l)/Q, for ages 2 to 40 years] is a new, height independent GFR estimation equation that has been recently developed for use across all ages (12). It operates on the assumption that 107.3 mL/min/1.73m^2 is the GFR for healthy children between ages 2 and 15 years (65). Additionally, it does not require height input, but rather a Q value, which is a median serum creatinine value obtained from a healthy population that is age and sex specific (12). The Q values were derived from a predominantly Caucasian population of healthy individuals from birth until 100 years of age in Belgium (66). The FAS equation has been shown to be less biased and is more accurate in children and adolescents, and adults, than the Schwartz formula and CKD-Epi equation respectively, and has been validated in cohorts from France, Norway, Germany, UK, and USA (12, 67-69). Therefore, the FAS equation would be an acceptable alternative for calculating eGFR and monitoring its change over time.

For the purposes of this project, it would be reasonable to use either the Schwartz formula or use the FAS equation for monitoring kidney function. Use of the FAS equation resolves the issue of missing heights. However, given the newness of the FAS equation, there may be more confidence in using the Schwartz formula, and use of the Schwartz formula would also be more consistent with what others have used in the pediatric literature (and in the case of CKiD – the transition literature). Additionally, although the ability to use the FAS equation across all ages makes it appealing for use in a longitudinal study like ours, to our knowledge, it has not been

validated for use in this way. After weighing these considerations, the Schwartz formula was utilized to formulate the cohort and for the primary analysis. However, due to the concern of the potential impact of missing height values, a sensitivity analysis using the FAS equation was also conducted.

2.4.3 Height measurement and imputation

Patients' heights were obtained from the THIN database as was done in a previous study that also used the Schwartz formula to calculate eGFR in pediatric patients (56). Height measurements recorded within 18 months, and within the nearest quarter, to the serum creatinine measurement for a given patient were used (if there was more than 1 height measurement, an average was taken) (56). If no height was recorded within 18 months of a serum creatinine measurement, a height was imputed (prior to data extraction) based on the median height for all individuals within THIN that were the same age and sex as the patient at the time of serum creatinine measurement (56). Height imputation was performed by the analyst at the Clinical Research Unit at the University of Calgary where the THIN database is housed.

2.5 COVARIATES

The covariates of interest in this study are summarized in Table 1.

Table 1. Covariates and how they were defined	
Covariate	Definition
Sex	This information was part of the demographic information for a given patient and was readily available in THIN. A patient's sex was given as either male or female.
Age at Diagnosis	The information was calculated using the date of CKD diagnosis in conjunction with the patient's date of birth.
eGFR at Diagnosis	This was the eGFR value at the time patient met criteria to receive a diagnosis of CKD (as defined in section 2.3.1).
CKD Etiology	The etiology of CKD was ascertained by the presence of any Read code from a list of pre-specified Read codes that indicated a known potential cause of CKD (Appendix B).
Hypertension	The presence of hypertension was ascertained by the presence of any Read code from a list of pre-specified Read codes that indicated a diagnosis of hypertension (Appendix C). Those patients with no such Read codes in their medical record were assumed to not have hypertension.
Diabetes	The presence of diabetes was ascertained by the presence of any Read code from a list of pre-specified Read codes that indicated a diagnosis of diabetes (Appendix D). Those patients with no such Read codes in their medical record were assumed to not have diabetes.
Proteinuria	Proteinuria was ascertained by the presence and results of any appropriate lab methods to quantify/qualify urinary protein excretion. The methods of measurement that were accepted were: urine albumin to creatinine ratio, urinalysis, and urine dipstick for protein. Conclusion about patients with none of these measures present could not be made as proteinuria may or may not have been present and cannot be known without being tested. Therefore, those with no measures were treated as missing data.
Mental Health Comorbidities Overall	Mental health disorders were ascertained by the presence of any Read code from a list of pre-specified Read codes that indicated the presence of a mental health diagnosis (Appendix E). Those patients with no such Read codes in their medical record were assumed to have no comorbid mental health disorders.
Substance Use Overall	The presence of substance use was ascertained by the presence of any Read code from a list of pre-specified Read codes that indicated substance use (Appendix F). Those patients with no such Read codes in their medical record were assumed to not use substances.
Pregnancies Overall	Pregnancy events were ascertained by the presence of any Read code from a list of pre-specified Read codes that indicated the presence of a pregnancy related diagnosis/condition (Appendix G). Those patients with no such Read codes in their medical record were assumed to never have been pregnant.

2.5.1 Timing of Covariates

For CKD etiology, all Read codes during the course of patient's follow-up were considered in determining the etiology of disease. The timing of the Read code deemed to correspond to the diagnosis relative to the CKD diagnosis date was irrelevant. For hypertension, diabetes, and proteinuria, the presence of a relevant Read code at any point during follow-up was taken to mean that the patient had the condition. This was also true for mental health disorders, substance use, and pregnancy, however, for these three covariates, their temporal relationship to CKD diagnosis (i.e. either occurring before or after CKD diagnosis) was also considered.

2.5.2 Other descriptors of the cohort

As THIN contains data from primary care practices, it was of interest to determine how many patients had contact with sub-specialty nephrology care. This was determined by the presence of any from a list of pre-specified Read codes indicating that a patient had contact with nephrology (Appendix H). Those patients with no such Read codes in their medical record were assumed to not have received any subspecialty nephrology care.

2.6 ANALYSIS PLAN

All analyses were performed using STATA version 14.2.

2.6.1. Data cleaning

Covariates of interest were defined using Read codes, obtained directly from lab results, or from patient demographic information.

Demographic information such as patient sex required recoding into binary indicator variables in order to be utilized for analyses in STATA but were otherwise informative in the way they are provided.

Dates provided in the dataset were converted to a format that is recognized in STATA, which is the number of days from a reference date set in STATA. The date of birth was used in conjunction with the date of serum creatinine measurement to determine the exact age a serum creatinine measurement was obtained. This was important as patients may have had several creatinine measurements in a given year; therefore, having the exact age allowed for measures to be temporally ordered and spaced.

Creatinine measurements were obtained from lab data recorded within the THIN database. Creatinine measurement tests are ordered by the primary care physician when deemed necessary in the care of a given patient. If a given lab is capable of doing so, the results of the creatinine test are automatically loaded into the medical record, if not, the data are manually entered into the patient's record by staff at the primary care physician's office. These data were then converted into an eGFR, our outcome measure. The eGFR, as estimated using the Schwartz formula, was calculated upon the data extraction. The eGFR at diagnosis was also provided with the

corresponding date and age at diagnosis. However, all eGFR measures were also calculated using the FAS equation due to the concern about missing height values. Values of eGFR that were greater than 200 mL/min/1.73m^2, using either the Schwartz formula or FAS equation, were dropped from the dataset as these were deemed to not be biologically plausible.

Data on progression to ESRD was obtained via obtaining data of relevant Read codes. With respect to this outcome, each patient that had any of these Read codes was identified and individually evaluated as to whether or not they had ESRD, and whether they had ESRD upon entry into the dataset or progressed to ESRD during follow-up. For instance, all ESRD related Read codes for a given patient were compared to all the creatinine measures for that same patient. If the earliest ESRD Read codes pertaining to a patient preceded the date of the first creatinine measure within the data, it was assumed that the patient had ESRD at the time of cohort entry. As such, any patients fulfilling these criteria were dropped from the cohort as they met cohort exclusion criteria. Those who progressed to ESRD and had at least two serum creatinine measures prior to the appearance of the first ESRD related Read code in their file remained in the cohort. For these patients, the date of the first ESRD Read code was assumed to be the date at which ESRD occurred and marked the end of observation for the patient, and all creatinine measures after this date were dropped.

The etiology of CKD data was also obtained by pulling relevant Read codes from a patient's medical record. Due to the nature of diagnoses indicated by certain Read codes, many patients' records contained more than one Read code indicating more than one potential cause of CKD. For this reason, the Read codes ascribed to each patient were reviewed manually and used

to categorize patients into one of five categories for cause of CKD: CAKUT, glomerular diseases, urinary tract infections, genetic causes, or other. Those patients with no relevant Read codes in their medical record were coded as unknown.

Data regarding the presence of hypertension and diabetes were also obtained by using Read codes. Any patients who had at least one relevant Read code for either hypertension or diabetes were considered to have the given diagnosis. Those with no relevant Read codes were coded in the dataset as not having hypertension and/or diabetes.

Proteinuria data were obtained from lab results. Three possible lab tests were accepted as measures of proteinuria. These data were used to label patients with either ever having had proteinuria measured if they had at least one of the three potential tests performed, or never having had proteinuria measured. Among those who had proteinuria tested, the data were coded to indicate those patients who had never had proteinuria versus those who had proteinuria on at least one occasion. The presence of proteinuria would be indicated by urine dipsticks for protein or urinalysis results that were anything other than negative, or by urine albumin creatinine ratios greater than 3.4 mg/mmol, which corresponds to greater than 30 mg/day of albuminuria.

Mental health diagnoses and substance use data were also determined through the use of relevant Read codes. For the purposes of this project, patients with any Read code corresponding to a mental health diagnosis or substance use were considered to have a mental health disorder or substance use. For the purposes of the analysis, these data were coded as either yes or no, and then

further delineated into whether the mental health diagnosis or substance use preceded or came after the diagnosis of CKD.

Pregnancy data were also based on Read codes and due to the complexities of these data, each patient with relevant Read codes in their medical record had to be reviewed individually. First any males who had pregnancy Read codes were excluded. Then the Read codes for any given patient were ordered temporally and duplicate records were removed. Diagnoses corresponding to each Read code were reviewed to determine if they were related to one or more pregnancies, and to determine the outcome of pregnancy if possible. Thus, the data were cleaned to indicate the number of pregnancies a patient had, and whether a patient's pregnancy resulted in a live birth, and if the first pregnancy occurred prior to or after the diagnosis of CKD.

2.6.2. Descriptive statistics

The outcome measure of this study was the eGFR, calculated from the measured serum creatinine. In order to put the results of the analyses in context and understand the data extracted from THIN, it was important to describe the creatinine measurements, and subsequently the eGFR measures.

The eGFR data was plotted against the age at creatinine measurement to understand the distribution of data. This was done using eGFR values based on both the Schwartz formula and FAS equation to better understand the differences between the two equations and its impact on the results. The distribution of the first eGFR measure per patient was also plotted based on both the

Schwarz formula and FAS equation. The frequency of serum creatinine measurements per patient were summarized, as well as the temporal spread between the first and last measure for a given patient. This was done for the entire cohort and for any strata and sub-groups identified below in the planned analyses section.

2.6.3. Modeling method

The data obtained from THIN on kidney function were not gathered for research purposes, thus, we expected there to be substantial variability in the number of creatinine measurements per patient, as well as their spacing over time. We also expected there to be variability in length of follow-up (i.e. the length between the first and final creatinine measurement per patient). Furthermore, since these data are comprised of repeated measures within individuals, the observations were not independent.

To address these issues, a mixed-effect models with random intercepts and random slopes was used to examine eGFR over time. These models estimate the eGFR as a linear function over time, and they take into account the varying number and spacing of measurements of eGFR as well as the variable follow-up for each subject (70). They also avoid high variability in estimates for patients with short follow-up and can be used appropriately to analyze longitudinal data where observations on the same individual may not be independent (71). Furthermore, with mixed effects models, the assumption of normality of residuals is not required (72) and some sources advising against testing this assumption (73), therefore, this was not tested.

When it came to building our model, we adjusted our models for sex, hypertension, and diabetes as these were deemed to be clinically significant covariates.

2.6.4. Planned analyses

2.6.4.1 Preliminary analyses

The planned preliminary analyses are described in this section in detail and are also summarized in Figure 1.

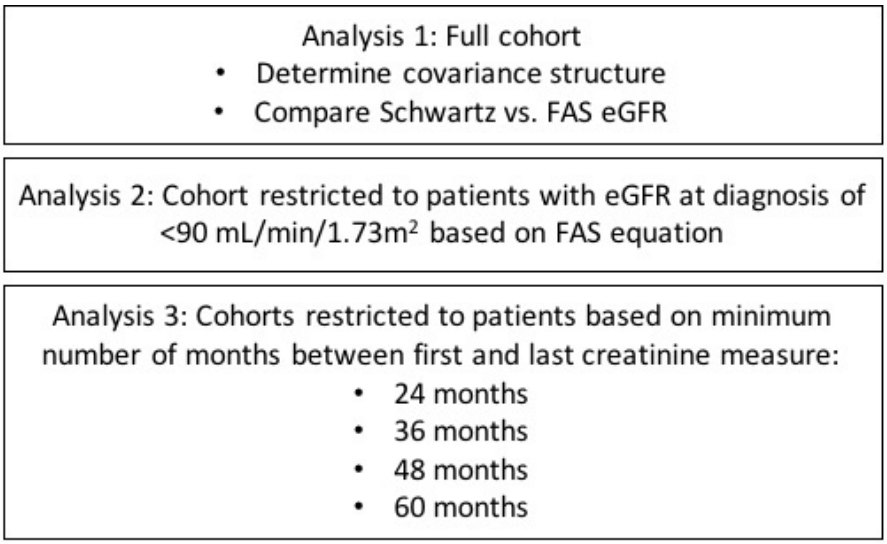

Figure 1. Preliminary analyses planned.

The purpose of this preliminary analysis was to determine the appropriate covariance structure for our models, determine whether the use of the Schwartz formula or the FAS equation to calculate the eGFR from measured serum creatinine impacted the results of our analyses, and to ensure that the results of the analyses planned were not impacted by characteristics of the data

that were not of interest. Thus, the full cohort, as defined in section 2.3 was analyzed using the modeling method described in section 2.6.3. The analysis was repeated on restricted cohorts and the results were compared.

The initial analysis examined the effect of using the four different covariance structures available in STATA (independent, unstructured, identity, and exchangeable) on our models. Our analysis revealed that the two random effects (slopes and intercepts) were correlated. Based on this, and the fact that the unstructured covariance structure has the least assumptions, it was selected as the most appropriate one for our data and was used in all subsequent analyses.

Next, we compared the effects of using the Schwartz formula to calculate eGFR versus using the FAS equation to calculate eGFR (a sensitivity analysis). If there was a large discrepancy between the results of the analyses using these two equations, the more appropriate of the two would need to be selected for all subsequent analyses. This decision would be made based on whether or not there was a large discrepancy in the magnitude of the model coefficients, and the proportion of imputed height values. For instance, if more than 25% of height values were to be imputed, then it would be highly likely that the discrepancy in results would have occurred due to the fact that the Schwartz formula relies on height, a large proportion of which may or may not have been correct, whereas the FAS equation does not require height in its eGFR calculation. In this case, the eGFR values calculated using the FAS equation would be more appropriate for the remaining analyses.

For the next preliminary analysis, we wanted to ensure that defining CKD using the Schwartz formula versus the FAS equation did not impact our results. Thus, we restricted the analysis to the cohort of patients who had an eGFR at diagnosis of less than 90 mL/min/1.73m^2 based on the FAS equation.

For the final preliminary analysis, we wanted to ensure that the results were not impacted by the length of follow-up per patient, as there is concern that using measurements spaced too closely together to calculate slopes (i.e. rate of change in eGFR) may lead to values that are imprecise and have high variability (74). Thus, averaging the change in eGFR over longer periods of time will provide a more accurate representation of the rate of kidney disease progression. With our data, we expected the length of follow-up to vary; however, we did not set a minimum length of follow-up (i.e. length of time between the first and last serum creatinine measure) criteria for cohort entry. To ensure that our results were not impacted by this, we performed analyses restricted to patients with a minimum of 24 months of follow-up, 36 months, 48 months, and 60 months and compared these results to one another and to the full cohort analysis with no minimum follow-up length.

2.6.4.2 Objective 1

The planned analyses are described below in detail and also summarized in Figure 2.

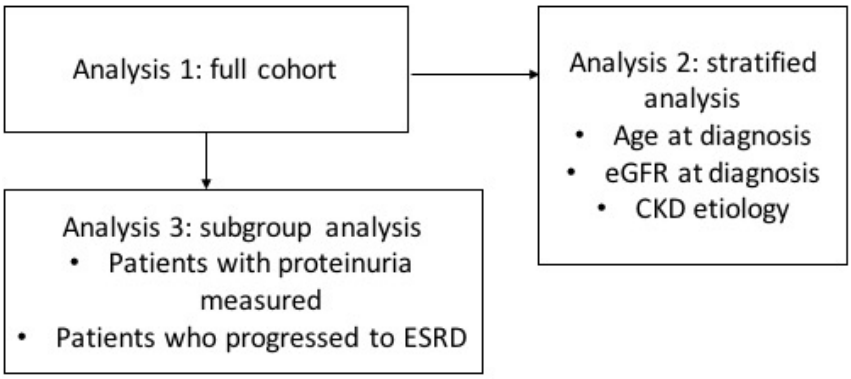

Figure 2. Planned analyses to meet objective 1.

The purpose of this analysis was to determine how eGFR changed over the age span in a cohort of patients with pediatric onset CKD, while adjusting for the effects of sex, hypertension, and diabetes. For the initial part of the analysis, the entire cohort was analyzed using the modeling methods described in section 2.6.3. Additional stratified analyses and sub-group analyses were also planned.

Three stratified analyses were planned. The first was stratification of the cohort by the age at diagnosis. The age at diagnosis was summarized and appropriate cut offs for age categories to stratify by was determined by the summary data obtained. The second stratified analysis planned was stratification by the eGFR at diagnosis. The following eGFR cut-offs were used as they correspond to varying stages of CKD: eGFR less than 30 mL/min/1.73m^2 (stages 4 and 5 CKD), 30 to less than 60 mL/min/1.73m^2 (stage 3 CKD), and 60 to less than 90 mL/min/1.73m^2 (stage 2 CKD). The final stratified analysis was by the etiology of CKD: CAKUT, glomerular disease, urinary tract infections, genetic disorders, other, or unknown.

Finally, two additional sub-group analyses were planned. The first was an analysis restricted to patients with proteinuria tested. This group was analyzed as two separate strata, one group that never had proteinuria, and the other that had proteinuria on at least one occasion. This type of analysis to look at the effects of proteinuria was chosen because proteinuria is an intermediary; therefore, it could not be adjusted for. The final planned analysis was to look at the change in eGFR over the age span in the subgroup of patients who progressed to ESRD during the follow-up period.

2.6.4.3 Objective 2

The purpose of this analysis was to determine how the trajectory of eGFR change differs amongst those aged less than 18 years, and those between ages 18 to 25 years (i.e. during the period of emerging adulthood). The modeling methods described in section 2.6.3 were also applied to this analysis. However, only patients with at least two serum creatinine measurements between ages 18 to 25 years were included in the analysis. This is because those with only one measure between ages 18 to 25 year would not contribute to the slope and therefore not provide information on the trajectory of kidney function. The creatinine measures were divided into two groups, those prior to age 18 years, and those between ages 18 and 25 years, and addition of a new term in the model indicating measurement obtained during one of the two age period groupings provided the difference in slope between the two age periods with an associated p value to indicate if the difference was significant.

2.6.4.4 Objective 3

The analyses that were planned are described below in detail and also summarized in Figure 3.

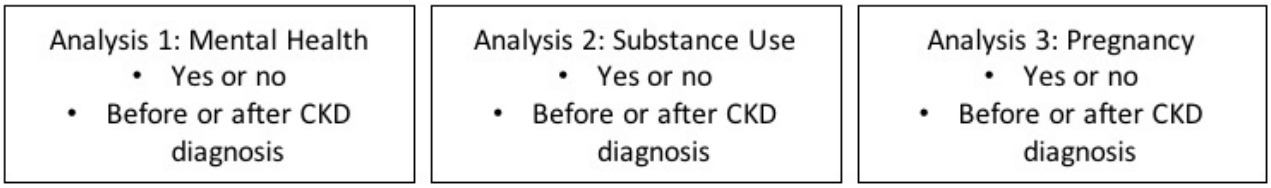

Figure 3. Analyses planned to meet objective 3.

The purpose of this analysis was to determine whether novel factors associated with emerging adulthood were associated with eGFR changes over the age span, while adjusting for the effects of sex, hypertension, and diabetes. Once again, the modeling methods described in section 2.6.3 were applied to this analysis.

For this analysis, we explored the associations between mental health, substance use, and pregnancy on the change in eGFR over the age span. The first two variables, mental health and substance use, were evaluated as either present ever or not, and present prior to CKD diagnosis versus after CKD diagnosis. Evaluation of the association between pregnancy and the trajectory of kidney function was assessed only amongst the female patients in the cohort. This variable was also evaluated for its association with kidney function trajectory in two ways: the first being whether or not an individual was ever pregnant, and secondly, whether or not the first pregnancy occurred prior to or subsequent to the diagnosis of CKD.

2.7 ETHICS AND DATA PRIVACY

Ethics approval for conducting studies on kidney disease using THIN was obtained. Approval was also obtained from the Scientific Reviews Committee (SRC), which is a body that approves any studies utilizing THIN data for scientific merit and feasibility and prior to publication (53).

De-identified data within THIN were only available on those patients who had consented to have their information collected via the THIN data collection scheme (53); therefore, obtaining additional consent for this project was not necessary. To ensure the privacy of subjects, investigators received patient level data from the THIN database that had been stripped of all personal identifying information including names and personal health care numbers. The data were only accessible to the Principal Investigator, designated co-investigators and study personnel involved in the data analysis. Data were stored in a password protected file on a password protected laptop. Only aggregate data will be published in manuscript or abstract form.

CHAPTER THREE: RESULTS

3.1 PARTICIPANTS

At the time of data extraction, data were available on 16,458,973 patients in the THIN database. Of these, 15,679 fulfilled the inclusion criteria to form our final cohort. A diagram detailing the creation of our study cohort can be found in Figure 4.

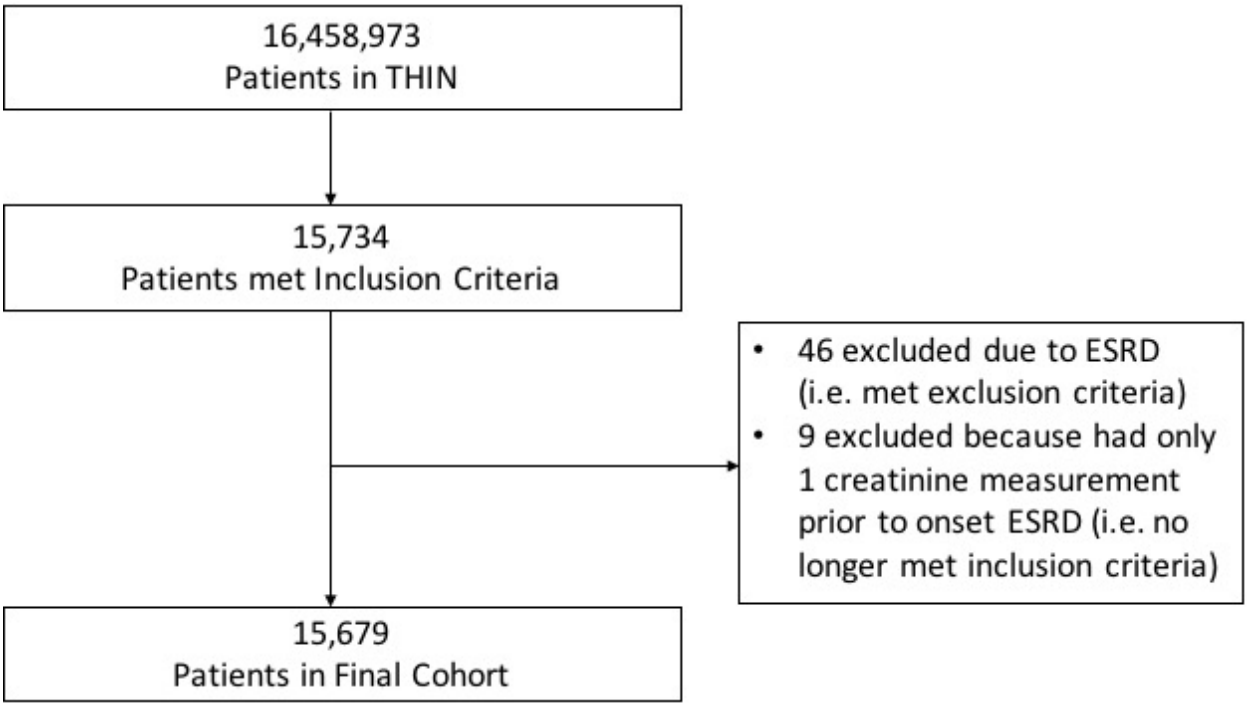

Figure 4. Flow diagram of study participants.

3.2 COHORT CHARACTERISTICS

The characteristics of our cohort are summarized in Table 2.

Table 2. Characteristics of Cohort (n=15,679)	
Sex F	8,253 (52.6%)
M	7,426 (47.4%)
Age at Diagnosis	Mdn 16.4 years (IQR 14.9 – 17.3)
eGFR at Diagnosis	Mdn 78.8 mL/min/1.73m^2 (IQR 72.6 – 84.2)
60-90 mL/min/1.73m^2	15,162 (96.7%)
30-60 mL/min/1.73m^2	457 (2.9%)
<30 mL/min/1.73m^2	60 (0.4%)
CKD Etiology	
CAKUT	377 (2.4%)
Glomerular Disease	190 (1.2%)
Genetic	45 (0.3%)
Urinary Tract Infections	3,286 (21.0%)
Other	1,873 (11.9%)
Unknown	9,908 (63.2%)
Hypertension	189 (1.2%)
Diabetes	827 (5.3%)
Proteinuria	
Never measured	13,534 (86.3%)
Measured	2,145 (13.7%)
Never positive	1,216
Positive on ≥1 occasion	929
Mental Health Comorbidities Overall	5,754 (36.7%)
1st Diagnosis Pre-CKD Diagnosis	3,387 (58.9%)
1st Diagnosis Post-CKD Diagnosis	2,367 (41.1%)
Substance Use Overall	1,766 (11.3%)
1st Use Pre-CKD Diagnosis	581 (32.9%)
1st Use Post-CKD Diagnosis	1,185 (67.1%)
Pregnancies Overall	1,030 females (12.5%)
1st Pregnancy Pre-CKD Diagnosis	140 (13.6%)
1st Pregnancy Post-CKD Diagnosis	890 (86.4%)
Nephrologist Contact	472 (3.0%)
By eGFR at diagnosis:	
60-90 mL/min/1.73m^2	334 (70.8%)
30-60 mL/min/1.73m^2	101 (21.4%)
<30 mL/min/1.73m^2	37 (7.8%)
Progressed to ESRD	51 (0.3%)
By eGFR at diagnosis:	
60-90 mL/min/1.73m^2	6 of 15,162 (0.04%)
30-60 mL/min/1.73m^2	14 of 457 (3.06%)
<30 mL/min/1.73m^2	31 of 60 (51.67%)
Deaths	40 (0.3%)
Transferred out of a THIN Practice	3,867 (24.7%)
Mdn = median, IQR = inter-quartile range.	

3.3 SUMMARY OF CREATININE MEASUREMENTS

There were a total of 79,592 creatinine measurements on our 15,679 patients.

The method by which height measurements were obtained and imputed has been previously described in section 2.4.3. With respect to the height measurement values associated with serum creatinine measurements, 67% of 79, 592 required height values were measured, and the remaining 33% were imputed.

Individual patients had their creatinine measured anywhere between 2 and 182 times; however, the median number of creatinine measures per patient was 3 (IQR 2 – 5). The length of time between the first creatinine measurement until the final creatinine measurement, or in other words the length of follow-up, ranged from 1 to 261 months and the median time was 43 months (IQR 18 – 85). The age at which creatinine measurements were taken ranged from 2 to 38 years (median age 17 years, IQR 15 – 18). Analogous summaries were done for the various strata and subgroups analyzed and these are available in Appendix I.

The length of follow-up for patients with various numbers of serum creatinine measures was assessed. The data showed that the median length of follow-up in months increased with more serum creatinine measurements per patient. These data are summarized in Table 3.

Table 3. Median length of follow-up depending on the number of serum creatinine measures per patient		
Number of creatinine measurements per patient	Number of patients	Median length of follow-up in months (IQR)
Any number of measurements (i.e. full cohort)	*15,679*	*43 (18 – 25)*
2	5,253	16 (9 – 31)
3	3,516	41 (23 – 72)
4	2,093	59 (35 – 90)
5	1,421	73 (46 – 105)
6	814	84.5 (54 – 116)
7	540	91 (58 – 123)
8	377	98 (66 – 127)
9	268	98 (63 – 129)
>10	1,397	101 (63 – 136)
IQR = inter-quartile range.		

Individual kidney function trajectories of a sample of 15 patients were also plotted and are depicted in Figure 5. These were done for 5 patients with 2 creatinine measures only, 5 patients with the median number of creatinine measures, and the 5 patients with the highest number of creatinine measures. Trajectories were plotted using eGFR calculated using the FAS equation.

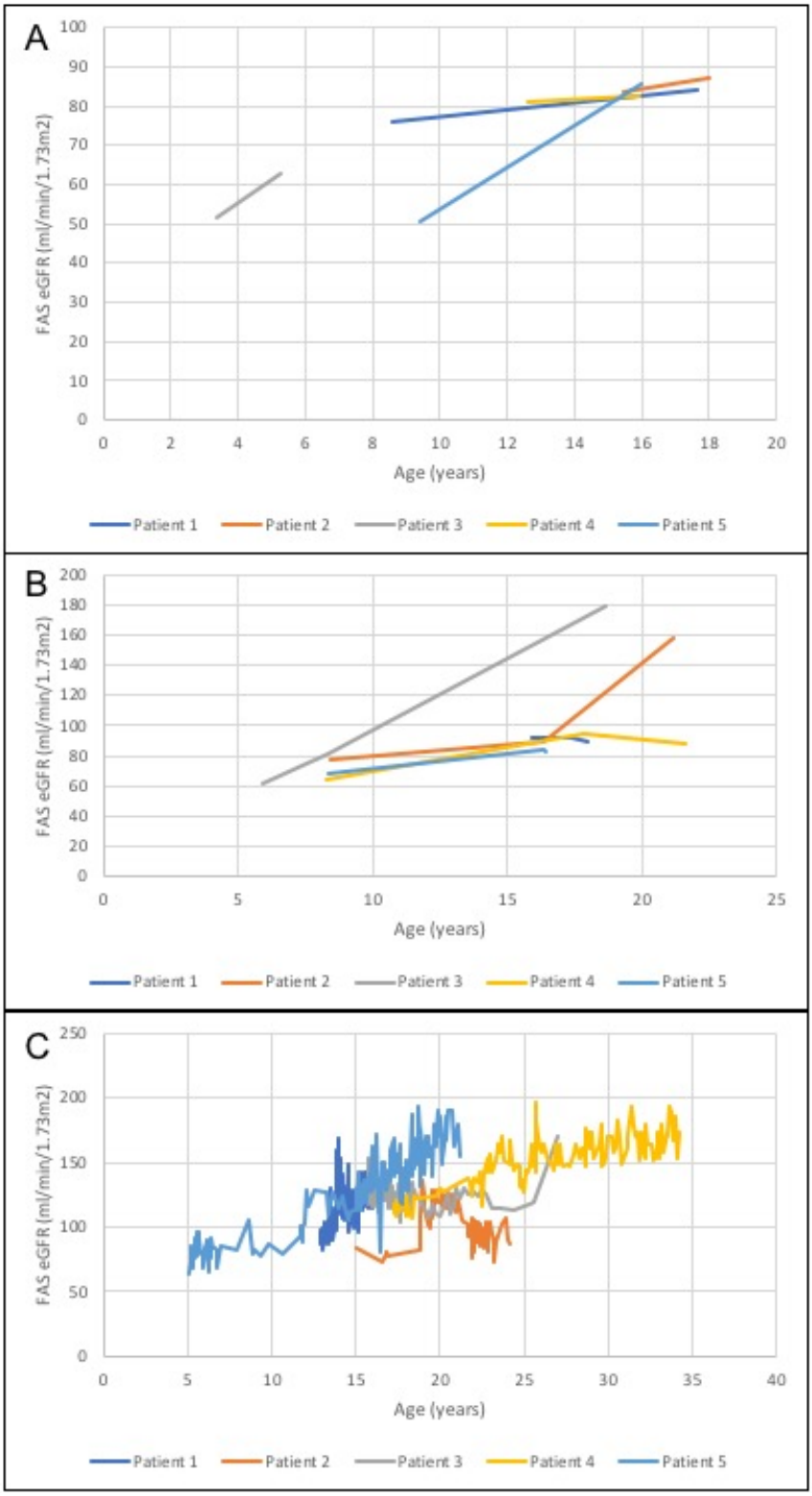

Figure 5. FAS eGFR trajectories of selected patients. A. Patients with 2 creatinine measures. B. Patients with 3 creatinine measures. C. Patients with the most creatinine measures.

The distribution of the eGFR data of the entire cohort varied based on the equation used to calculate eGFR. Using the Schwartz formula, the median eGFR was 82.3 mL/min/1.73m^2 compared to 88.5 mL/min/1.73m^2 using the FAS equation. The distribution of eGFR values calculated using the different equations are depicted in Figure 6. Although the eGFR measures using the FAS equation were overall higher than those using the Schwartz formula, the reverse was true when just looking at the first eGFR measure per patient (median eGFR Schwartz 80.7 mL/min/1.73m^2, median eGFR FAS 79.4 mL/min/1.73m^2). The distributions of the first eGFR are depicted in Figure 7.

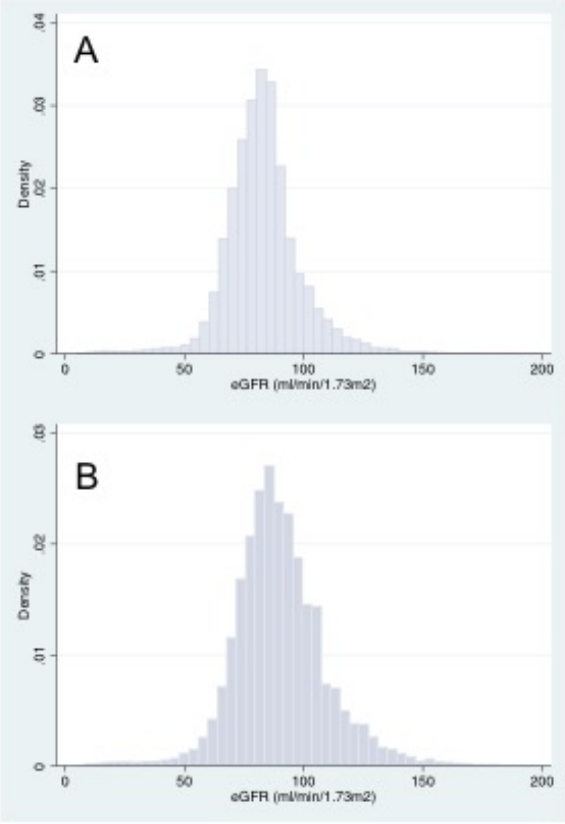

Figure 6. Distribution of all eGFR values. A: eGFR calculated using the Schwartz formula. B: eGFR calculated using the FAS equation.

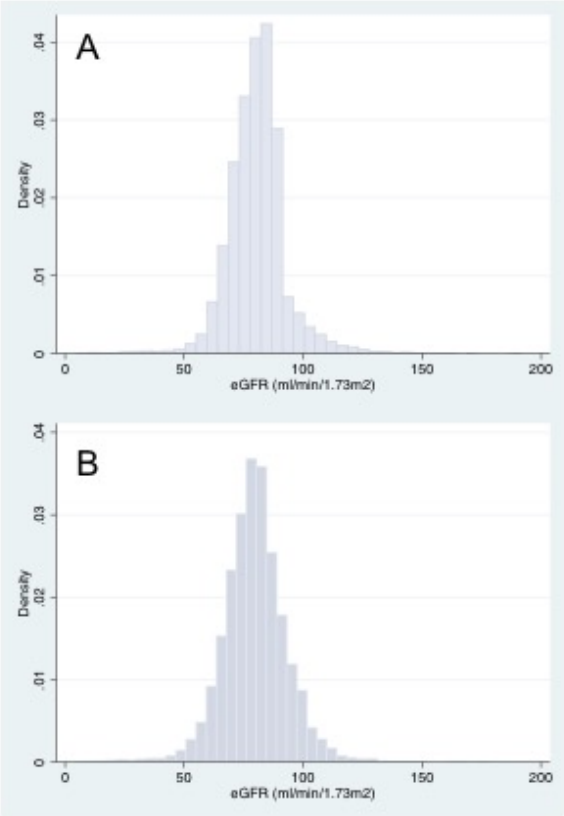

Figure 7. Distribution of first eGFR values per patient. A: eGFR calculated using the Schwartz formula. B: eGFR calculated using the FAS equation.

Finally, the raw data were graphed and are presented in Figure 8.

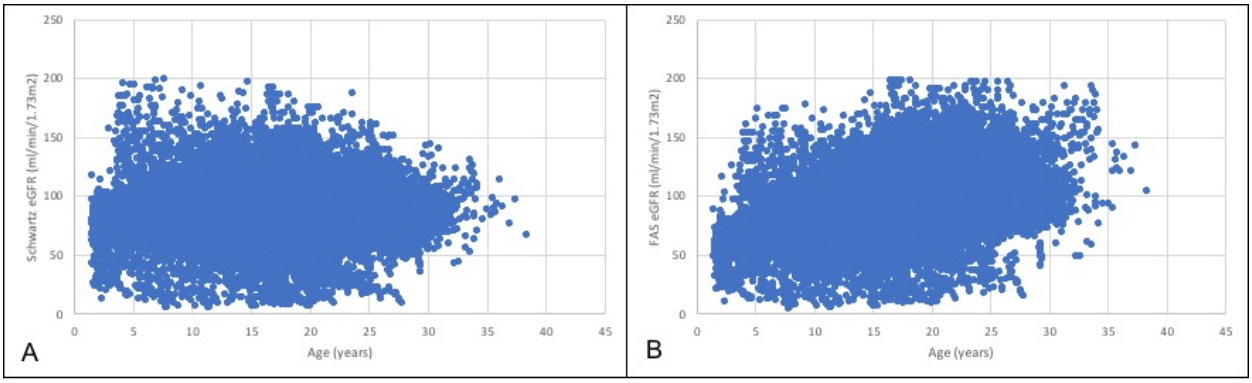

Figure 8. eGFR plotted against age at measurement (raw data). A. eGFR calculated using the Schwartz formula. B. eGFR calculated using the FAS equation.

3.4 PRELIMINARY ANALYSES

Mixed-effects models with random intercepts and random slopes and an unstructured covariance structure were utilized to analyze the data. For a comparison of model coefficients using varying covariance structures, refer to Appendix J.

The initial preliminary analysis was done to compare the results of the model using the Schwartz formula to calculate the eGFR versus the FAS equation. The purpose of this analysis was to see how the results differed using the two equations and which equation should ultimately be used to calculate eGFR for our analyses for objectives 1, 2, and 3. The results of this analysis are summarized in Table 4. This analysis revealed a significant discrepancy in the results based on the equation used to calculate the outcome from the measured serum creatinine. For instance, the magnitude of the effect differs substantially depending on the equation used (for both the unadjusted and adjusted analyses), and for the unadjusted analysis, the significance of the results varies. The significance of hypertension as a modifier also varies depending on the equation used to calculate eGFR. The large proportion of imputed heights used for the eGFR calculation when using the Schwartz formula may be a factor in the discrepancy between the results using the Schwartz formula versus the FAS equation. Therefore, for all remaining analyses, the FAS equation was used to calculate the eGFR.

Table 4. Analysis of the full cohort (n=15,679, obs=79,592) using Schwartz formula versus FAS equation to calculate the eGFR (outcome)				
Model Variable	Coefficient (95% Confidence Interval)			
	Schwartz crude	Schwartz adjusted	FAS crude	FAS adjusted
AgeAtSerumCreatExact	0.03 (-0.01,0.1)	0.7 (0.7, 0.8)	2.4 (2.4, 2.5)	2.1 (2.1, 2.2)
Sex		20.5 (19.2, 21.9)		-5.8 (-7.2, -4.4)
Hypertension		-8.2 (-13.5, -2.8)		1.5 (-3.8, 6.7)
Diabetes		-10.7 (-13.3, -8.0)		-12.0 (-14.6, -9.4)
AS*		-1.6 (-1.7, -1.5)		0.6 (0.5, 0.6)
AH*		-0.1 (-0.4, 0.2)		-0.8 (-1.1, -0.4)
AD*		0.8 (0.6, 0.9)		0.9 (0.8, 1.1)
Constant	80.3 (79.6, 81.0)	71.7 (70.8, 72.7)	47.7 (47.0, 48.4)	51.0 (50.1, 52.0)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*				

The next analysis compared the results of the entire cohort to the sub group of patients that had an eGFR of less than 90 mL/min/1.73m^2 at diagnosis using the FAS equation. This was done to determine if the equation used to define the cohort impacted our results. Of our 15,679 patients, 11,405 met the restricted criteria of an eGFR at diagnosis of less than 90 mL/min/1.73m^2 based on the FAS equation. Analyses of the entire cohort and the restricted cohort, adjusted for sex, hypertension and diabetes, resulted in no difference in the coefficient of interest. Our results indicated that overall, the eGFR increases by approximately 2.1 mL/min/1.73m^2 (95% CI 2.1, 2.2; $p<0.001$) per each additional year of age, irrespective of the equation used to calculate eGFR at diagnosis.

For the final preliminary analysis, we analyzed the full cohort and sub-groups that were defined by a minimum length of follow-up. We looked at sub-groups of patients with a minimum of 24 months of follow-up, 36 months, 48 months, and 60 months, and compared these results to one another and to the full cohort analysis with no minimum follow-up length criteria. These results are summarized in Table 5 and reveal that using different cut-offs for duration of follow-up versus no cut-off does not impact the results of the analysis. The eGFR increased by approximately 2.1 to 2.2 mL/min/1.73m^2 ($p<0.001$) per each additional year of age, irrespective of the minimum length of follow-up.

Table 5. Analysis of entire cohort compared with sub-groups defined by varying lengths of follow-up using the FAS equation to calculate the eGFR (outcome)

Model Variable	Coefficient (95% Confidence Interval)
Full cohort (n=15,679, obs=79,592)	
AgeAtSerumCreatExact	2.1 (2.1, 2.2)
Sex	-5.8 (-7.2, -4.4)
Hypertension	1.5 (-3.8, 6.7)
Diabetes	-12.0 (-14.6, -9.4)
AS*	0.6 (0.5, 0.6)
AH*	-0.8 (-1.1, -0.4)
AD*	0.9 (0.8, 1.1)
Constant	51.0 (50.1, 52.0)
Patients with >24 months of follow-up (n=10,785, obs= 66,341)	
AgeAtSerumCreatExact	2.1 (2.1, 2.2)
Sex	-5.5 (-7.0, -4.0)
Hypertension	4.6 (-1.0, 10.2)
Diabetes	-12.7 (-15.5, -10.0)
AS*	0.5 (0.4, 0.6)
AH*	-0.8 (-1.1, -0.5)
AD*	1.0 (0.8, 1.1)
Constant	51.7 (50.7, 52.7)
Patients with >36 months of follow-up (n=8,855, obs= 58,908)	
AgeAtSerumCreatExact	2.2 (2.1, 2.2)
Sex	-5.2 (-6.8, -3.7)
Hypertension	5.7 (-0.2, 11.5)
Diabetes	-13.0 (-15.8, -10.1)

AS*	0.5 (0.4, 0.6)
AH*	-0.8 (-1.2, -0.5)
AD*	1.0 (0.8, 1.1)
Constant	51.5 (50.5, 52.6)
Patients with >48 months of follow-up (n=7,325, obs= 51,883)	
AgeAtSerumCreatExact	2.2 (2.1, 2.2)
Sex	-5.6 (-7.3, -4.0)
Hypertension	6.4 (0.4, 12.4)
Diabetes	-12.8 (-15.7, -9.9)
AS*	0.6 (0.5, 0.7)
AH*	-0.8 (-1.2, -0.5)
AD*	0.9 (0.8, 1.1)
Constant	51.6 (50.5, 52.7)
Patients with >60 months of follow-up (n=6,075, obs= 45,696)	
AgeAtSerumCreatExact	2.2 (2.1, 2.2)
Sex	-6.5 (-8.3, -4.8)
Hypertension	4.3 (-2.0, 10.5)
Diabetes	-12.3 (-15.3, -9.3)
AS*	0.6 (0.5, 0.7)
AH*	-0.7 (-1.1, -0.3)
AD*	0.9 (0.7, 1.1)
Constant	51.8 (50.7, 53.0)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*	

3.5 OBJECTIVE 1

The results of the effect of age on the eGFR for this objective are summarized in Figure 9 and described in more detail in the following sections.

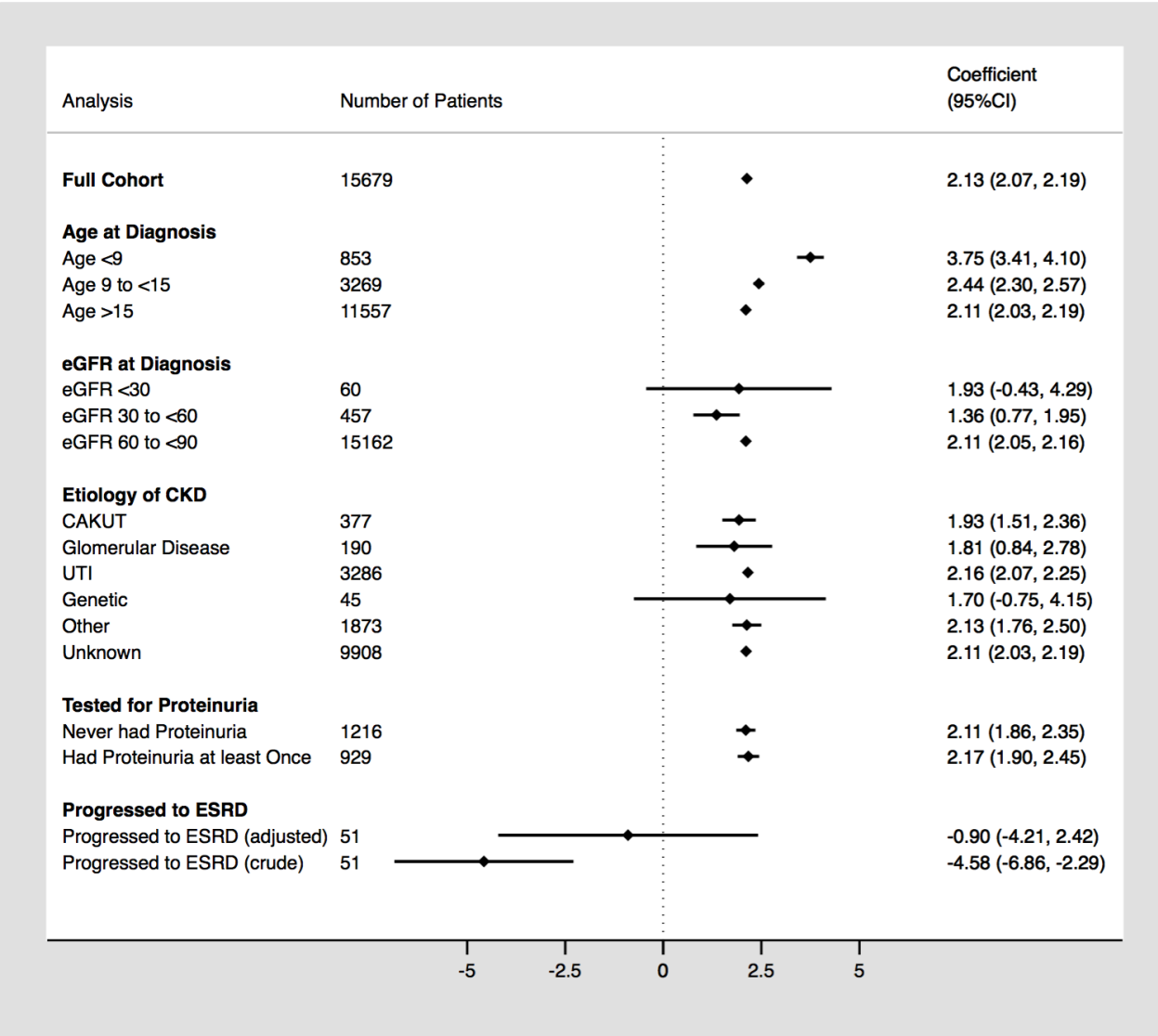

Figure 9. Forest plot depicting the effect of age on the eGFR for the full cohort and various strata and sub-groups analyzed in objective 1.

3.5.1 Full cohort

The initial analysis for objective 1 involved modeling the eGFR over age using all 15,679 patients in our cohort. Initially, an unadjusted analysis, with age at serum creatinine as the exposure and eGFR as the outcome, was carried out. Then, an analysis adjusting for the effects of

sex, hypertension, and diabetes was conducted. The adjusted analysis revealed that the eGFR increased by 2.1 mL/min/1.73m^2 (95% CI: 2.1, 2.2; p<0.001) per each additional year of age (Figure 9).

This analysis also revealed that all three interaction terms, AS (age at serum creatinine x sex), AH (age at serum creatinine x hypertension) and AD (age at serum creatinine x diabetes) were significant. These results were previously summarized in Table 4. This means that sex, hypertension, and diabetes modified the relationship between age and eGFR. Thus, there are 8 unique trajectories of kidney function depending on whether an individual is male or female, hypertensive or not, and diabetic or not. These are depicted in Figure 10.

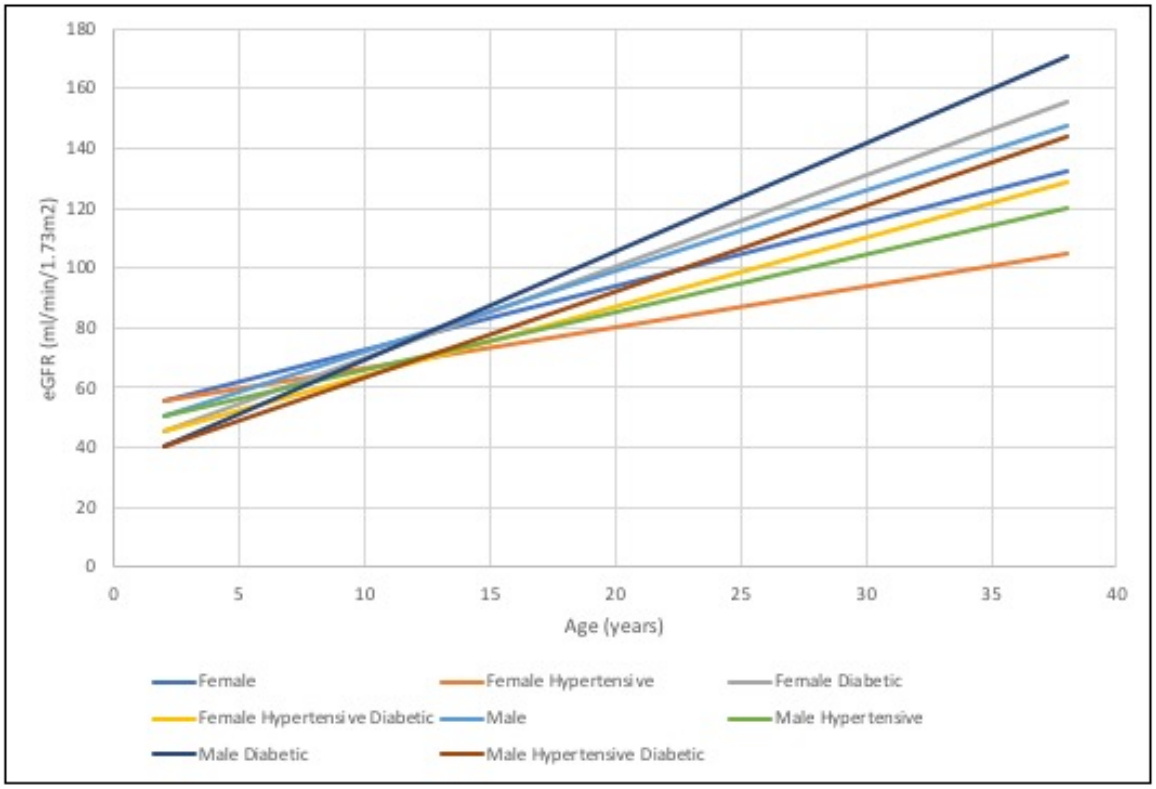

Figure 10. Plot of eGFR over age based on full cohort analysis using FAS eGFR for each of the 8 possible strata.

Based on this analysis, and the finding that sex, hypertension, and diabetes modified the disease exposure relationship, it was decided that these same variables would be included in all subsequent analyses to maintain consistency.

3.5.2. Stratified analyses

3.5.2.1 Age at diagnosis

The first stratified analysis sought to determine if the age at which an individual was diagnosed impacted the relationship between eGFR and age. The age categories used to stratify patients were: (1) age less than 9 years, (2) age 9 to less than 15 years, and (3) age greater than 15 years. These age cut-offs were chosen because ages 9 and 15 represented the 5th and 25th percentiles respectively.

Overall, our results revealed that with increasing age at diagnosis, the change in eGFR per year of age decreased. For individuals less than 9 years of age at diagnosis, the eGFR was found to increase by approximately 3.8 mL/min/1.73m^2 (95% CI 3.4, 4.1; $p<0.001$) per each additional year of age. For those aged 9 to less 15 years at diagnosis the rate of increase in eGFR was slower and was only 2.4 mL/min/1.73m^2 (95% CI 2.3, 2.6; $p<0.001$) per each additional year of age. In individuals aged greater than 15 years at diagnosis, the rate of increase in eGFR was further reduced and was only 2.1 mL/min/1.73m^2 (95% CI 2.0, 2.2; $p<0.001$) per each additional year of age.

The results of this analysis are summarized in Figure 9 and the coefficients associated with the other terms in the model are summarized in Appendix K.

3.5.2.2 eGFR at diagnosis

The second stratified analysis sought to determine if the eGFR at diagnosis impacted the relationship between eGFR and age. The eGFR at diagnosis was calculated using the Schwartz formula. The eGFR categories used to stratify patients were: (1) eGFR less than 30 mL/min/1.73m^2, (2) eGFR 30 to less than 60 mL/min/1.73m^2, and (3) eGFR 60 to less than 90 mL/min/1.73m^2. The results of this analysis are summarized in Figure 9 and reveal that with increasing eGFR category at diagnosis, the change in eGFR per each additional year of age increases. The coefficients associated with the other terms in the model are summarized in Appendix K.

This analysis was repeated using the FAS eGFR at diagnosis for the purposes of stratification; however, this had no impact on the results (Appendix L).

3.5.2.3 Etiology of CKD

The final stratified analysis sought to determine if the etiology of CKD impacted the relationship between eGFR and age. The etiology of CKD was divided into one of six categories: CAKUT, glomerular disease, urinary tract infections, genetic disorders, other, or unknown.

Patients who had CKD as a result of urinary tract infections had the highest change in eGFR per each additional year of age (2.2 mL/min/1.73m^2; 95% CI: 2.1, 2.2; p<0.001). Patients who had CKD as a result of a genetic disorder had the lowest change in eGFR per each additional year of age, but the result was not statistically significant (1.7 mL/min/1.73m^2; 95% CI: -0.7, 4.1; p=0.173). The group of patients with an unknown etiology of CKD had a change in eGFR per each additional year of age of 2.1 mL/min/1.73m^2 (95% CI: 2.0, 2.2; p<0.001), which was comparable to the change in eGFR per year of age for the full cohort as analyzed in section 3.4.1. The results of this analysis are summarized in Figure 9. The coefficients associated with the other terms in the model are summarized in Appendix K.

3.5.3 Subgroup Analyses

3.5.3.1 Subgroup with Proteinuria

The first sub-group analysis was restricted to patients who were evaluated for proteinuria. This group of patients was analyzed as two separate strata: one that never had proteinuria, and one that had proteinuria on at least one occasion. This analysis revealed that patients with proteinuria on at least one occasion had an increase in eGFR of 2.2 mL/min/1.73m^2 (95% CI 1.9, 2.5; p<0.001) per each additional year of age, which was essentially the same as the group that never had proteinuria, who had an increase in eGFR of 2.1 mL/min/1.73m^2 (95% CI 1.9, 2.4; p<0.001) per each additional year of age. These results are summarized in Figure 9 and the coefficients associated with the other terms in the model are summarized in Appendix K.

3.5.3.2 Patients who progressed to ESRD

The final sub-group analysis was restricted to the group of patients who progressed to ESRD during the follow-up period. The results of this analysis are summarized in Figure 9. Notably, the unadjusted analysis revealed a significant relationship between eGFR and age such that the eGFR decreased by 4.6 mL/min/1.73m^2 per each additional year of age. However, once the analysis was adjusted for sex, hypertension, and diabetes, the relationship no longer was statistically significant. The coefficients associated with the other terms in the model are summarized in Appendix K.

3.6 OBJECTIVE 2

The purpose of this analysis was to determine how the trajectory of eGFR change differs amongst those aged less than 18, and those between ages 18 to 25 (i.e. during the period of emerging adulthood). Based on our inclusion criteria, all patients had at least two serum creatinine measurements prior to age 18; however, only those patients with at least two serum creatinine measurements between ages 18 to 25 were included in this analysis. There were 3,677 patients included in this analysis.

The results of this analysis, adjusted for sex, hypertension, and diabetes, revealed that during ages 2 to 18 years, the eGFR increased by 2.3 mL/min/1.73m^2 (95% CI: 2.2, 2.5; $p<0.001$) for each additional year of age. However, during the 18 to 25 year age period, the eGFR increased by only 1.8 mL/min/1.73m^2 (95% CI: 1.6, 1.9; $p<0.001$) for each additional year of age. This

represents an absolute reduction in the rate of eGFR increase of 0.6 mL/min/1.73m^2 that is associated with the age 18 to 25 period (i.e. emerging adulthood). This amounts to a difference in eGFR of 3.9 mL/min/1.73m^2 between the two groups at the end of the 18 to 25 year period. This is depicted in Figure 11.

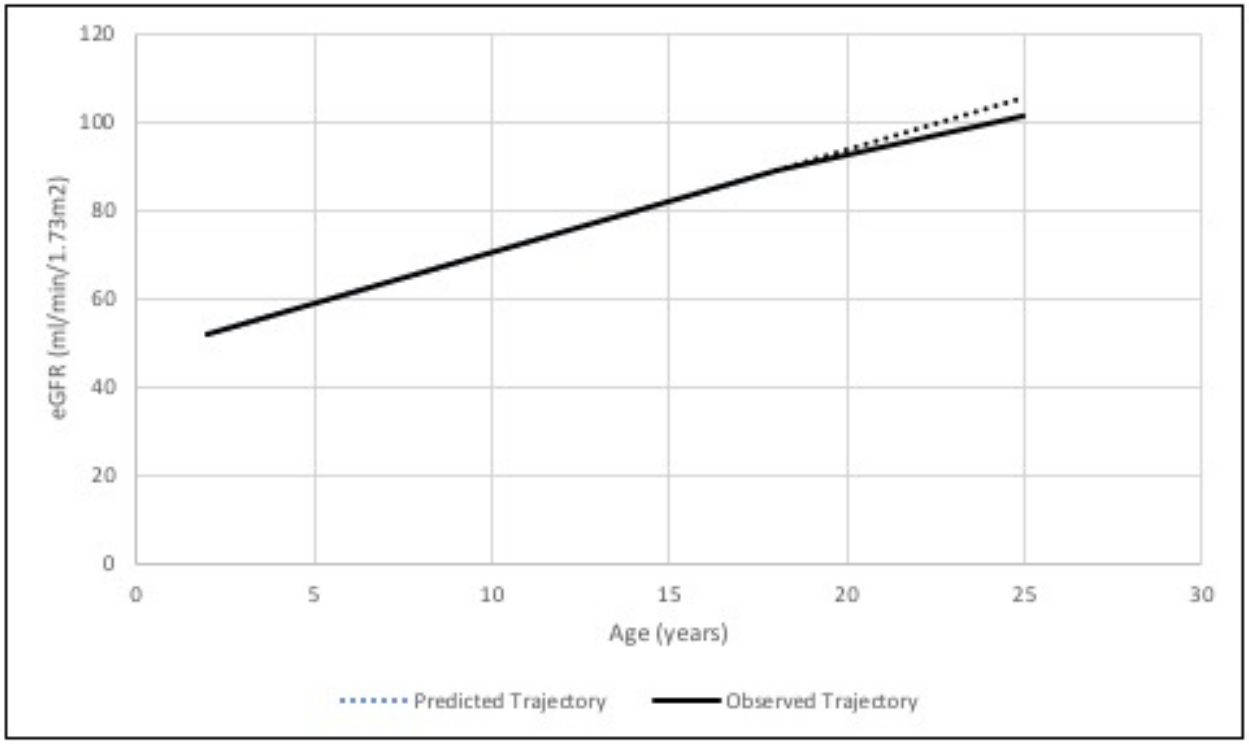

Figure 11. eGFR trajectory predicted based on the eGFR trajectory followed prior to age 18 versus the observed eGFR trajectory based on eGFR values between ages 18 and 25 years for females without hypertension and without diabetes.

3.7 OBJECTIVE 3

3.7.1 Mental health comorbidities

The purpose of this analysis was to determine if the presence of a mental health comorbidity affects the relationship between eGFR and age. The analysis was adjusted for sex, hypertension, and diabetes. The initial analysis evaluated whether having a mental health diagnosis at any point during follow-up affected the relationship between eGFR and age. The second part was restricted to only those patients who had a mental health disorder and examined whether being diagnosed with a mental health disorder before or after the diagnosis of CKD affected the relationship between eGFR and age. The results from these analyses are summarized in Table 6.

Table 6. Objective3 analyses evaluating the effect of mental health disorders	
Model Variable	Coefficient (95% Confidence Interval)
Mental health disorder present at any time during follow-up period (n=15,679, obs=79,592)	
AgeAtSerumCreatExact	2.0 (1.9, 2.1)
Sex	-6.3 (-7.7, -4.9)
Hypertension	1.6 (-3.6, 6.9)
Diabetes	-12.2 (-14.8, -9.5)
AS*	0.6 (0.5, 0.7)
AH*	-0.8 (-1.1, -0.4)
AD*	0.9 (0.8, 1.1)
MentalHealthDisorder	-5.0 (-6.4, -3.6)
AM*	0.3 (0.2, 0.4)
Constant	53.2 (52.1, 54.4)
Mental health disorder diagnosed after CKD diagnosis (n=5,754, obs=32,904)	
AgeAtSerumCreatExact	2.1 (1.9, 2.3)
Sex	-8.6 (-11.0, -6.2)
Hypertension	12.2 (3.5, 21.0)
Diabetes	-8.9 (-13.7, -4.2)
AS*	0.7 (0.6, 0.9)
AH*	-1.3 (-1.8, -0.8)
AD*	0.7 (0.4, 1.0)
MHDxBeforeAfterCKDDx**	-3.1 (-5.5, -0.8)
AMDX*	0.1 (-0.02, 0.3)
Constant	53.1 (49.2, 57.0)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes, AM=age at serum creatinine x mental health disorder, AMDX=age at serum creatinine x mental health diagnosis before/after CKD diagnosis. **MHDxBeforeAfterCKDDx=mental health diagnosis occurred prior to versus after CKD diagnosis.*	

The initial analysis was performed on the full cohort and found that the presence of a mental health disorder at any point during follow-up modified the relationship between eGFR and age such that the eGFR increase per year of age was accelerated by 0.3 mL/min/1.73m^2 (95% CI: 0.2, 0.4; p<0.001) in those with a mental health disorder compared to those without a mental health disorder. However, having a mental health disorder also meant that the initial eGFR was 5.0 mL/min/1.73m^2 (95% CI: -6.4, -3.6; p<0.001) lower in those with a mental health disorder compared to those without.

The second analysis was restricted to only those patients who had a mental health disorder and found that being diagnosed with a mental health disorder after CKD diagnosis (compared with before CKD diagnosis) did not modify the relationship between eGFR and age (coefficient = 0.1; 95% CI: 0.0, 0.3; p=0.09). However, those who received a mental health diagnosis after their CKD diagnosis had a baseline eGFR that was 3.1 mL/min/1.72m^2 (95% CI: -5.5, -0.8; p<0.05) lower than those who were diagnosed with a mental health diagnosis prior to their CKD diagnosis.

3.7.2 Substance use

The purpose of this analysis was to determine if the presence of substance use affects the relationship between eGFR and age. The analysis was adjusted for sex, hypertension, and diabetes. The results from these analyses are summarized in Table 7.

Table 7. Objective 3 analyses evaluating the effect of substance use	
Model Variable	Coefficient (95% Confidence Interval)
Substance use present at any time during follow-up period (n=15,679, obs=79,592)	
AgeAtSerumCreatExact	2.1 (2.0, 2.1)
Sex	-5.9 (-7.3, -4.5)
Hypertension	1.7 (-3.6, 6.9)
Diabetes	-11.3 (-13.9, -8.6)
AS*	0.6 (0.5, 0.7)
AH*	-0.8 (-1.1, -0.4)
AD*	0.9 (0.7, 1.1)
SubstanceUse	-7.0 (-9.2, -4.9)
ASu*	0.4 (0.3, 0.5)
Constant	51.9 (50.9, 52.9)
Substance use identified after CKD diagnosis (n=1,766, obs=10,466)	
AgeAtSerumCreatExact	1.8 (1.3, 2.4)
Sex	-13.1 (-17.1, -9.0)
Hypertension	-5.9 (-19.3, 7.5)
Diabetes	-8.1 (-14.1, -2.0)
AS*	1.0 (0.8, 1.3)
AH*	-0.4 (-1.2, 0.4)
AD*	0.8 (0.4, 1.1)
SUDxBeforeAfterCKDDx**	-5.5 (-10.1, -0.9)
ASDX*	0.2 (-0.04, 0.5)
Constant	57.4 (48.9, 65.9)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes, ASu=age at serum creatinine x substance use, ASDX=age at serum creatinine x substance use before/after CKD diagnosis.* ***SUDxBeforeAfterCKDDx=substance use occurred prior to versus after CKD diagnosis.*	

The initial analysis was performed on the entire cohort and evaluated whether substance use at any point during follow-up affected the relationship between eGFR and age. It revealed that substance use at any point during follow-up modified the relationship between eGFR and age such that the eGFR increase per year of age was accelerated by 0.4 mL/min/1.73m^2 (95% CI: 0.3, 0.5; $p<0.001$) in those with substance use compared to those without substance use. Furthermore, substance use also resulted in a reduction in the baseline eGFR by 7.0 mL/min/1.73m^2 (95% CI: -9.2, -4.9; $p<0.001$) compared to those without substance use.

The second analysis was restricted to only those patients with substance use, and found that substance use occurring after CKD diagnosis (compared to before CKD diagnosis) did not modify the relationship between eGFR and age (coefficient = 0.2; 95% CI: 0.0, 0.5; p=0.093). However, those who had substance use after their CKD diagnosis had a baseline eGFR that was 5.5 mL/min/1.72m^2 (95% CI: -10.1, -0.9; p<0.05) lower than those who had substance use prior to their CKD diagnosis.

3.7.3 Pregnancy

The purpose of this analysis was to determine if, in female patients, pregnancy affected the relationship between eGFR and age. This analysis was adjusted for hypertension and diabetes (including hypertensive disorders of pregnancy and gestational diabetes) only as sex was irrelevant since the analysis was done in female patients only. The results from these analyses are summarized in Table 8.

Table 8. Objective 3 analyses evaluating the effect of pregnancy (restricted to female patients only)	
Model Variable	Coefficient (95% Confidence Interval)
Pregnant at any time during follow-up period (n=8,253, obs=43,265)	
AgeAtSerumCreatExact	2.1 (2.0, 2.1)
Hypertension	5.9 (-1.8, 13.5)
Diabetes	-2.6 (-6.4, 1.3)
AH*	-1.0 (-1.5, -0.6)
AD*	0.4 (0.2, 0.7)
EverPregnant	-10.2 (-12.7, -7.7)
AP*	0.6 (0.4, 0.7)
Constant	52.5 (51.5, 53.4)
Pregnancy occurred after CKD diagnosis (n=1,030, obs=6,386)	
AgeAtSerumCreatExact	2.4 (1.3, 3.4)
Hypertension	30.8 (8.5, 53.0)
Diabetes	4.7 (-5.6, 15.0)
AH*	-2.2 (-3.6, -0.9)
AD*	0.1 (-0.5, 0.7)
FirstPregBeforeAfterCKDDx**	-3.3 (-12.3, 5.7)
APBA*	0.1 (-0.4, 0.7)
Constant	47.8 (30.5, 65.2)
**Interaction terms: AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes, AP=age at serum creatinine x pregnancy, APBA=age at serum creatinine x first pregnancy before/after CKD diagnosis. ** FirstPregBeforeAfterCKDDx=first pregnancy occurred prior to versus after CKD diagnosis.*	

The initial analysis was restricted to only female patients and evaluated whether having a first pregnancy at any point during follow-up affected the relationship between eGFR and age. This revealed that pregnancy occurring at any point during follow-up modified the relationship between eGFR and age such that the eGFR increase per year of age was accelerated by 0.6 mL/min/1.73m^2 (95% CI: 0.4, 0.7; p<0.001) in those who had at least one pregnancy compared to those who had never been pregnancy. However, having ever been pregnant also meant that the initial eGFR was 10.2 mL/min/1.73m^2 (95% CI: -12.7, -7.7; p<0.001) lower compared to those females who had never been pregnant.

The second analysis was restricted to only female patients who had at least 1 pregnancy. It revealed that pregnancy occurring after CKD diagnosis (compared with before CKD diagnosis) did not modify (coefficient = 0.2; 95% CI: -0.3, 0.7; p=0.506) the relationship between eGFR and age, nor did it effect the baseline eGFR (coefficient = -2.8; 95% CI: -11.2, 5.7; p=0.523).

CHAPTER FOUR: DISCUSSION

4.1 SUMMARY OF RESEARCH FINDINGS

4.1.1 Key findings

Our study is unique in that we evaluated a cohort of pediatric CKD patients followed in primary care, identified from a larger population of patients managed by primary care physicians in the UK. Due to this fact, our patient population tended to have mild CKD with a median eGFR at diagnosis of 78.8 mL/min/1.73m^2 and tended to be diagnosed with CKD at an older age (median 16.4 years).

This project described the natural history of pediatric onset CKD over the age span in a large cohort of patients followed in primary care. We also assessed the impact of factors such as emerging adulthood, comorbid mental health conditions, substance use, and pregnancy on the trajectory of kidney function in this patient cohort.

Our findings demonstrate that in a cohort of patients with pediatric onset CKD and predominantly mild kidney disease, who are followed in primary care, kidney function measured by eGFR increases with increasing age. We also found that the emerging adulthood period has a negative effect on eGFR trajectory in that it reduces the rate at which eGFR increases over the age span. Finally, in all patients, the presence of mental health disorders and substance use modified the relationship between age and eGFR resulting in a small but statistically significant acceleration

in the eGFR increase over age, and a similar effect on the rate of eGFR increase was seen due to pregnancy in female patients.

4.1.2 eGFR trajectory

Other studies that have evaluated the progression of CKD have tended to demonstrate gradual progression of disease by way of decreasing eGFR over time, which is in contrast with our findings that eGFR increased with increasing age.

A study conducted by Celedon et al. assessed progression of renal disease in a cohort of 176 patients with dysplastic kidneys diagnosed at a mean age of 1.6 years with a median follow-up time of 11.4 years (75). On assessment of the full cohort they found that in the first few years of life, most patients had an improvement in kidney function, which was followed by a stable period in some patients and in others a period of deterioration (median eGFR loss of 1.5 mL/min/1.73m^2 per year) (75). During puberty, they found that patients either had deterioration of their kidney function (median -4.0 mL/min/1.73m^2 per year) or remained stable. Another study, by Chiou et al., studied CKD progression in 382 Taiwanese children with a median eGFR of 83.6 mL/min/1.73m^2 at study entry, who had CKD due to a variety of causes (76). The authors reported that the percentage of change in eGFR after a median of 11.7 months of follow-up was -1.80%, 4.41%, 2.97%, and 0.83% in patients with stage 1, 2, 3, and 4 CKD at baseline, respectively (76). Therefore, although patients with stage 1 CKD had worsening of eGFR, it appears that patients with higher stages of CKD had improvement in eGFR, however, follow-up in this study was too short to adequately describe long term disease trajectories. The investigators of the CKiD cohort

have published two studies looking at eGFR progression in their patients (77, 78). The first was published in 2011 and examined 586 patients with a median age of 11 years and median eGFR of 44 mL/min/1.73m^2 (78). The authors reported that the median decrease in GFR was 4.3 mL/min/1.73m^2 per year amongst those with glomerular disease and 1.5 mL/min/1.73m^2 per year amongst those with non-glomerular disease. A more recent study by Fathalla-Shaykh et al. looked at only those patients within the CKiD cohort with non-glomerular disease (77). The median age of the 522 patients they evaluated was 10 years, the median baseline GFR was 48 mL/min/1.73m^2 and patients were followed for a median of 4.4 years (77). Overall, they reported a decline in GFR by a mean of 1.3 mL/min/1.73m^2 per year of follow-up, and that the rate of decline was increased with higher baseline proteinuria and higher blood pressures (77). A study by Vu et al. evaluated the renal outcomes of 99 patients with one functioning kidney from birth who had been diagnosed within the first year of life and were followed until age 10 and reported that there was no change in the median GFR (79). Finally, the KIMONO study by Westland et al. modeled eGFR over age in 206 patients with a solitary functioning kidney, with a mean age of 9.5 years and a mean follow-up of 6 years (80). They found that eGFR increased in patients from infancy until roughly age 9-11 years, then began to decrease slowly from puberty into late adolescence (80).

There are several possible explanations as to why our study found that eGFR increased with age compared with other studies of patients with CKD that demonstrated a gradual or eventual decrease in eGFR. These include characteristics of our cohort, the concept of renal reserve, the presence of compensatory renal mechanisms in the setting of reduced kidney functions, the possibility of misclassification of AKI as CKD, variability in eGFR trajectories due to disease

etiologies, potential losses to follow-up, and regression to the mean. Each are discussed in more detail below.

The first explanation of why our results were in contrast to those of other studies is that our cohort was selected from a population of all-comers followed in primary care, not a cohort of known CKD patients followed by subspecialists. Therefore, our patient cohort was made up of patients who predominantly had mild (stage 2) CKD at the time of diagnosis. Furthermore, our cohort was relatively older at diagnosis compared to the other studies discussed. Given our median follow-up time of 43 months and the early stage of CKD, it is possible that the patients in our study were detected too early in their disease course and not followed long enough to observe the eventual progression of kidney disease.

Another factor that may contribute to our findings is renal reserve. Renal reserve is the concept that under certain stimuli, the kidneys are able to increase their function, which can be measured as an increase in GFR (81). This concept may help explain why our research revealed that renal function in our cohort of patients increased over time. Children have substantial renal reserve at birth (82). This means that with respect to their metabolic output, children have more than sufficient renal clearance capacity; therefore, renal injury assessed using creatinine based eGFR may not become apparent until much later, usually during puberty, when the metabolic load is increased (82). The theory that in patients with kidney disease, the kidneys are able to compensate for reduced renal function via hyper-filtration has been shown in patients who have had a loss in renal mass due to a tumor requiring surgical resection of part of the kidney, or removal of the entire kidney, as well as other forms of kidney disease such as diabetes mellitus (83-85).

Hyper-filtration, which occurs due to renal hemodynamic changes resulting from a reduction in functioning nephrons is ultimately a maladaptive response that over time leads to progressive renal damage manifest as declining GFR, despite the initial GFR increase that is observed (83). It has also been shown that the reserve filtration capacity, although still present, is reduced in patients with kidney disease (86, 87), which may explain why we found that the rate at which eGFR increased with age occurred at a slower rate in those with stage 3 CKD at diagnosis compared with those with stage 2 CKD at diagnosis.

There are also additional compensatory mechanisms that occur in CKD that could explain the lack of decline in eGFR with age. For instance, creatinine is not only filtered by the kidneys, but it is also secreted by the proximal tubules in the kidneys. Thus, as kidney function initially declines, the effect of increasing serum creatinine is mitigated by an increase in creatinine secretion (1). Additionally, creatinine excretion also takes place via the gastrointestinal tract, where gut bacteria produce creatininase, the activity of which is increased in advanced kidney disease (88).

Other possibilities that may have confounded our findings include the possibility of misclassification of cases of AKI as CKD. The criteria that two measures corresponding to an eGFR of less than 90 mL/min/1.73m^2 had to be separated by at least 90 days was applied to exclude cases of AKI, as 90 days is the accepted cut off used in the nephrology community to distinguish acute from chronic kidney disease (17). However, this number is somewhat arbitrary as there are patients who recover after an episode of AKI after 90 days. In fact, although a minimum duration of 90 days is part of the criteria for CKD, there is no maximum duration included in the definition of AKI (17). The inclusion of patients with AKI in our study would make it appear as through the

eGFR was increasing over time, when in actuality these cases represented recovery of renal function, not the trajectory of CKD. Therefore, this error would bias our results towards the null.

Different diseases also have different natural histories. For instance, some diseases, such as several glomerulonephritides, often have a relapsing-remitting course early on in their disease history, which may make eGFR overall appear stable or normal. Later, after repeated damage to the kidney, they may demonstrate a gradual loss of kidney function. However, our cohort included a variety of disease etiologies which may have masked differing trajectories of eGFR change with age.

An additional limitation is that these data come from primary care records; therefore, they only contain results for tests ordered by the patient's primary care physician and are not a comprehensive record of all laboratory data available for a given patient. Thus, patients with more severe disease, or preserved eGFR, but other indicators of more serious and progressive causes of CKD, may have been referred to a specialist for ongoing care. If this were to occur, data on these patients would not be captured in the THIN dataset because the THIN dataset is independent from hospital records, where subspecialty care in the UK is provided (53). Thus, we may be missing data from the time period of follow-up where progression of kidney disease did indeed occur.

There is also the possible role of the statistical phenomenon known as regression to the mean which occurs due to the presence of random error associated with our observations (89, 90). For instance, there is random error associated with creatinine measurements. We expect random fluctuations within a patient's serum creatinine measurement to occur from one day to the next

due to factors such as diet changes, supplements, medications, hydration status, etc. (1). There is also the possibility for random measurement error to occur when the sample is processed in the lab. Essentially, when observing repeated measures in an individual, the initial measurement value, whether it is higher or lower than the individual's mean, will be followed by measurement that on average is closer to the mean of multiple measures (89, 90). Regression to the mean can make this natural variation in repeated measures appear to be true change (89).

4.1.3 Emerging adulthood

Our study also sought to determine the effect of emerging adulthood, a period associated with increased health risks, on the progression of kidney disease as measured by eGFR. As discussed, no prior studies have examined this in patients with pre-dialysis CKD; therefore, the risk of disease progression during emerging adulthood and transition in CKD has been inferred based on findings from other conditions such as ESRD in the context of kidney transplant. Consistent with the findings of poorer outcomes during this period in the context of kidney transplant, we found that the rate at which eGFR increased with age was decreased over the emerging adulthood period, suggesting that this is a period of increased risk. The possible explanations of increased risk during this time are likely due to the numerous issues associated with emerging adulthood. These include, but are not limited to: increased participation in risky behaviors, high rates of mental health disorders, substance use, unplanned pregnancies, non-compliance, and transition of care, all occurring within the context of incomplete brain development (32-38, 43, 44). The independent contribution of each of these factors was

impossible to tease out in our analysis; however, certain factors such as mental health, substance use, and pregnancy were explored in more detail in our study.

4.1.4 Mental health, substance use, and pregnancy

There was a high prevalence of mental health comorbidities in our cohort, with approximately one third of patients having at least one mental health diagnosis. Mental health issues are not uncommon and it has been estimated that 25% of patients undergoing medical treatment suffer from some degree of depression, and youth with chronic illnesses are much more likely than healthy controls to have a comorbid mental health disorder in childhood or adolescence (91, 92). Prior studies of patients with pediatric CKD have reported that upwards of 35% of these patients suffer from depression (93-95). In a study published by Kogon et al. that evaluated children from the CKiD cohort, amongst 344 children with CKD aged 6-17 years, 7% had a pre-existing diagnosis of depression and 31% had a history of any prior psychiatric illness (96). However, when they evaluated the effect of depression on kidney function they did not find a relationship between patients' Children's Depression Inventory score and GFR trajectory over time or with progression to ESRD (96).

In our study, we found the presence of a mental health disorder modified the relationship between age and eGFR. Specifically, the rate of eGFR increase with increasing age was greater in those with a mental health disorder. However, those with a mental health condition also had lower eGFR values to begin with.

Mental health could impact kidney disease progression in multiple ways. The association between mental health disorders and reduced adherence to medications and other disease management strategies has been well described in many chronic illnesses, including kidney disease (91, 97, 98). While poor adherence to certain medications may lead to worsening kidney function immediately, non-adherence to other medications, such as angiotensin converting enzyme inhibitors, may lead to worsening kidney function in the long term but initially result in an apparent improvement in kidney function with an increase in eGFR. Furthermore, certain medications used to treat chronic mental health disorders can adversely affect the kidneys. An example would be lithium, which is often used in the treatment of bipolar disorder (99, 100).

Our assessment of the association between mental health disorders and eGFR was exploratory and did not delve into the details of the mental health diagnoses present in our cohort, nor their timing of appearance during the course of follow-up (beyond just whether they occurred pre- or post-CKD diagnosis). For instance, certain mental health disorders listed in THIN (refer to Appendix E) are acute and transient while others are more chronic, and certain disorders may have no impact on kidney disease due the nature of the diagnosis. Therefore, although it is interesting to note that the presence of a mental health disorder modified the disease exposure relationship in our study, it would not be appropriate to draw definitive conclusions based on our cursory analysis. Rather our findings justify the need for further investigation to better understand the relationship between mental health and kidney function, especially since mental health disorders are prevalent in emerging adulthood and are potentially manageable.

The prevalence of any substance use in our cohort, which included tobacco, alcohol, and illicit drug use, was approximately 11%. We found that the presence of substance use modified the relationship between age and eGFR such that the rate of eGFR increase with age was accelerated slightly, however, those with substance use also had lower eGFR values to begin with. The presence of substance use, whether recreational or more pathologic, could negatively impact patient adherence to medication and self-management of their illness. In a study of 16 to 24 year old patients who were prescribed drug therapy for treatment of HIV, substance use was associated with lower adherence (101). Also, among adult patients with ESRD on hemodialysis, illicit drug or tobacco use are associated with a higher risk of missing hemodialysis treatments (102). Medication non-adherence, as described previously, can affect kidney function in differing ways depending on the medication in question. In addition to non-adherence, many drugs of abuse are associated with either direct or indirect nephrotoxicity (103). Thus, there exist plausible mechanisms by which substance use could negatively impact kidney function. However, similar to our analysis of the association between mental health and eGFR, our analysis pertaining to the relationship between substance use and kidney function over time in young patients was exploratory and needs further investigation. The high prevalence of substance use, if deemed to be an important contributor to kidney disease progression, means that it can serve as a target for management as it is a potentially modifiable risk factor.

Finally, we found that having had at least one pregnancy during the follow-up period, regardless of when, modified the relationship between age and eGFR such that the rate of eGFR increase with age was accelerated, but that females who had at least one pregnancy also had lower eGFR values to begin with. These findings may be partially explained by several physiological

changes that occur during pregnancy. Increases in vascular resistance and interstitial volume lead to a 30% increase in kidney volume (104, 105). There is also an increase in renal blood flow, accompanied by a reduction in serum creatinine and a 50% GFR increase compared with pre-pregnancy levels in healthy women (105, 106). Hyper-filtration associated with pregnancy however resolves by 1 month postpartum with a return of GFR to its pre-pregnancy baseline (106, 107). Additionally, pregnancy in the setting of CKD can be associated with increased maternal and fetal risk (108). Across all stages of CKD, there is a risk that CKD will progress, and although the risk for women with stage 1 CKD is quite small (7.6%), it increases with increasing stages of CKD (109). Fortunately, for women with relatively preserved kidney function prior to pregnancy, such as the majority of patients in our cohort, the risk of loss of kidney function is generally low (108). The normal physiological changes associated with pregnancy and the potential for disease progression during pregnancy would each have opposing effects on the eGFR. This may explain the association between pregnancy and eGFR seen in our study, in which pregnancy was associated with a lower baseline eGFR but an acceleration in eGFR with increasing age. This is also likely a product of our analytical methods which assumed that eGFR follows a linear trajectory, and therefore would not be sensitive to the varying effect of pregnancy over the course of a woman's life.

4.1.5 Discrepancy between Schwartz formula and FAS equation

Another interesting finding in our study was the magnitude of discrepancy in results obtained using the Schwartz formula versus the FAS equation to calculate eGFR. This was not

expected. However, it was likely the result of the large proportion of missing height values in the THIN dataset requiring imputed heights to be used.

For instance, the Schwartz formula (described in section 2.4.2) relies on height, in addition to the serum creatinine value, to calculate eGFR. Therefore, the ability to follow a patient's kidney function longitudinally relies heavily on having accurate height measures corresponding in time to the relevant serum creatinine measures. When roughly one third of the corresponding heights are missing and therefore potentially inaccurate imputed heights are used in their place, the longitudinal trajectory of eGFR will inevitably be affected. The extent to which each individual patient's trajectory in our cohort was affected is difficult to know without manually assessing each patient's height and corresponding creatinine measures in a chronological fashion to infer which heights may be incorrect. Even so, you could not know with certainty which heights were imputed and which ones weren't since these are indistinguishable in the data that was extracted. This missing data would affect different patients to varying degrees, and our overall model in a non-predictable way.

The FAS equation (described in section 2.4.2), in addition to serum creatinine value, relies on a Q value, to calculate eGFR. The Q value is determined for use in the equation by the patient's age at the time of serum creatinine measure and their sex. Since this is a standard value it is consistently applied to the entire patient cohort, and because age and sex are known, there is no risk of having missing Q values and therefore no need to rely on inaccurate imputed values. For these reasons, any bias due to the Q value and FAS equation would be applied non-differentially to the entire cohort, but it would not impact individual patient trajectories in variable ways.

Therefore, for longitudinal follow-up, we would expect the results based on the FAS equation to be more reliable, although to our knowledge, this has not been assessed in other studies.

Notably, a height dependent version of the FAS equation is available for use, in which the Q value is based on sex and height of the individual, which is not necessarily the same as the Q value determined using sex and age (65, 110). This is especially relevant in adolescence, during which height can be quite variable amongst children of the same age (65). The height based FAS equation gives better eGFR predictions than the height independent version, which is likely because height is a better surrogate for muscle mass and therefore corresponding serum creatinine than age (65). However, using the height based FAS equation in our study would have presented us with the same issues as using the Schwartz formula did due to the high proportion of missing height values. Therefore, for our study, the decision was made to interpret the results obtained using the height independent FAS equation rather than those obtained using the Schwartz formula.

4.2 STRENGTHS

To our knowledge this is the first study that evaluates the natural history of kidney disease, as measured by eGFR over the age span in a cohort of CKD patients followed in primary care. The majority of studies of CKD patients have evaluated patients followed by subspecialists and therefore are not representative of the larger primary care cohort of CKD patients. Thus, the fact that these data came from primary care records is a strength of this study, providing novel insights into the natural history of kidney disease in this patient population. Another strength of this study is the very large cohort of patients. Earlier studies each have less than 1,000 patients, usually just

a few hundred. Furthermore, an advantage to using the THIN database was that it contained data that spanned both childhood and adulthood; therefore, our investigation shed light on the natural history of kidney disease over a longer time period which is very novel in this area.

Finally, now that we have identified a cohort of patients with CKD, we are able to conduct future studies looking at the risk of progression to ESRD by linking this cohort to data from the UK Renal Registry, which contains records of all patients in UK who require dialysis and transplant.

4.3 LIMITATIONS

Many of the limitations of this study stem from the use of electronic medical record data, which was not collected specifically to answer our research question. Therefore, the data pertaining to some of our variables of interest were incomplete and data pertaining to others may have also been incomplete (111). For instance, in order to calculate the eGFR using the Schwartz formula we needed data on the patient's height; however, these data were missing for roughly one third of observations. Furthermore, proteinuria is generally considered an important variable in kidney disease progression, but this was assessed in approximately 14% of patients. However, because we did not assess proteinuria as a possible confounder or modifier of disease since it was deemed to be an intermediary, this may not have had an impact on our analysis. We did adjust for the effects of hypertension and diabetes in our cohort, which could have been underreported. For instance, in our study, we found that only 1.2% of patients had comorbid hypertension. This is substantially lower than the prevalence of hypertension reported by Wong et al., who reported that

70.2% of the 366 pediatric CKD patients they studied (followed by nephrologists) had hypertension (112). Compared with our study, in which 96% of patients had stage 2 CKD, 86% of patients in the study by Wong et al. had stage 1 or 2 CKD (112). Although their prevalence of mild CKD was slightly lower than in our cohort, it is similar enough to call into question the low prevalence of hypertension found in our cohort. The difference in prevalence may represent a true difference in the two study populations, however, it may have resulted from the use of insensitive Read code definitions to identify hypertension in our cohort (i.e. sensitivity may have improved by including medications commonly used to treat hypertension to identify hypertensive patients, however, this could negatively impact specificity as alternate indications for using certain "anti-hypertensive drugs" exist, for example ACE inhibitors are commonly used to manage proteinuria). The low prevalence of hypertension could also be the result of incomplete reporting of hypertension in the THIN dataset by primary care physicians due to challenges associated with measuring blood pressure in children in routine practice (i.e. may not have the appropriate sized blood pressure cuff available in the office, diagnosis of hypertension in children requires knowledge of gender, age and height specific normal values, young children may not cooperate with measurement).

Another limitation of our study is that the frequency and spacing of serum creatinine measurements were not standardized and instead took place at the discretion of a patient's primary care physician. Though our statistical models took this into account, it would have been ideal to obtain serum creatinine measures at pre-specified intervals because this would allow for better assessment of kidney function trajectory. For instance, in our cohort, patients had serum creatinine measures when deemed appropriate by the primary care physician based on the clinical scenario.

It is not common practice to routinely collect laboratory tests on healthy, asymptomatic children; therefore, it could be inferred that episodes of acute illnesses triggered testing. In this case, we would only have access to serum creatinine measures done during times of acute illness, rather than getting the bigger picture of overall kidney function trajectory with measures taken during periods of general health stability, which would be better evaluated by obtaining serum creatinine measures at pre-specified, evenly spaced, intervals.

It was also not possible in this study to account for all potential confounders that may have influenced eGFR. For instance, several medications are known to affect kidney function, either transiently or permanently (ex: angiotensin converting enzyme (ACE) inhibitors, aminoglycosides, chemotherapeutic agents, etc.), and the effect of this on our results is unknown.

Another limitation is that we lacked validated case definitions (using the THIN dataset and the Read codes within it) to identify the presence of diagnoses such ESRD, hypertension, diabetes, mental health disease, substance use, and pregnancy in the dataset. For this reason, the Read codes that were pre-selected to detect the presence of diseases were purposely selected to be more sensitive than specific. However, the accuracy of identifying the presence of these conditions was impaired and utilization of validated case definitions would have been ideal. Unfortunately, developing validated case definitions would have required additional independent studies, each involving chart reviews to determine the sensitivities and specificities of each Read code, which was not feasible given the scope and timeline for this project.

With respect to our analysis, another limitation is that certain covariates were analyzed only as having been present, or absent, at any point during follow-up in a given individual. These included proteinuria, mental health diagnoses, substance use, and pregnancy. However, these covariates can vary over time, both in whether they are present or absent at a given time point and in terms of their intensity. Since these covariates are not necessarily constant over the study period, they may have been more appropriately included in our statistical models as time varying covariates. However, due to the nature of the data within the THIN database, it was not possible to determine with certainty the timing of the presence of these covariates, therefore, this type of analysis was not performed.

A final limitation is that the population of patients in THIN is from the UK; thus, the external validity of the results may be questioned if we apply the findings to a Canadian population. However, there are many similarities between Canadian and UK society and healthcare systems. Both countries provide universal and publicly funded healthcare, and in both countries primary care is the initial point of contact with the healthcare system, where the majority of care is provided, and so we believe that the information gleaned from this project using THIN is likely generalizable to the Canadian population.

4.4 FUTURE DIRECTIONS

In the current study, we modeled eGFR change over time as being linear, which has been generally accepted in the kidney disease literature to be a reasonable assumption (113, 114). However, despite the convenience of such an assumption and the simplicity in interpreting the

results of such a model, other studies have brought this to question and have reported the presence of non-linear eGFR trajectories (113-115). Thus, one future direction may include re-analyzing these data to explore the possibility of a non-linear eGFR trajectory for this patient cohort. It would be appropriate to do this sort of analysis for each of the strata and sub-groups we analyzed, as it may be more likely to reveal differences between the various groups.

Additional considerations in the future could include re-analyzing only the observations with associated measured heights available (i.e. excluding observations that were associated with imputed height values). Although this would require a repeat data extraction from the THIN database, it could help to better characterize the difference between the results of the analysis using the Schwartz formula versus using the FAS equation. In theory, the use of only measured height values would improve the reliability of eGFR observations calculated using the Schwartz formula, which may result in less discrepancy in the results obtained using the Schwartz formula versus the using FAS equation to calculate eGFR.

Other future work with this patient cohort could include linking these data with the UK Renal Registry to determine the eventual risk of ESRD in this cohort with predominantly mild CKD. Also, more in-depth evaluation of the associations between mental health disorders and kidney function, substance use and kidney function, and pregnancy and kidney function should be carried out.

Additionally, obtaining similar information on a Canadian cohort would be a future direction that could be explored. Currently in Alberta there is a dataset known as the Alberta

Kidney Disease Network (AKDN) database that contains routinely collected data on kidney relevant blood tests, urine tests, and additional data elements such as a unique patient identifier, date of birth, etc., on Albertans aged 18 years and older (116). Expanding this database to include individuals from birth to 18 years of age is a possible future direction that would allow for a study similar to ours to be repeated using Alberta data.

Finally, creating a prospective cohort of CKD patients (with a known primary etiology of disease) from a local context would be a better way to determine the trajectory of kidney disease. It would also serve as a better method to determine the effects of potentially important modifiable comorbid conditions such as mental health disorders, substance use, and pregnancy, as this type of study design is better suited to determining strength of associations (117). Furthermore, by knowing the covariates of interest a priori, they could be evaluated and reported on more thoroughly; therefore, there would be less issues with missing data, and unknown confounders compared with conducting a retrospective study using administrative data.

4.5 IMPLICATIONS FOR PRACTICE / KNOWLEDGE TRANSLATION

This project did not seek to evaluate an intervention, rather it sought to generate knowledge about a group of patients for whom we lacked information. Thus, the findings of this project are not expected to lead to change in practice patterns; however, they add to our knowledge base and understanding of the natural history of kidney disease in a cohort of patients with mild CKD followed by primary care physicians.

Implications of the findings of this project include that follow-up of these patients with mild CKD (predominantly stage 2 CKD) is appropriately left in the capable hands of primary care physicians. However, continued long term follow-up of these patients remains important, because although we were not able to demonstrate progression of kidney disease during the follow-up period in our study, the recent study published by Calderon-Margalit and colleagues demonstrated that clinically evident childhood kidney disease with subsequently normal kidney function in adolescence was associated with an increased risk of developing ESRD in adulthood (31). This is supported by a number of other studies that have demonstrated that pediatric patients with a history of AKI are at increased risk of developing CKD and ESRD later in life (118-120). Even seemingly benign, transient events, such as having at least one kidney stone, is associated with an increased risk of developing ESRD (121). Thus, long term follow-up and vigilance by primary care physicians is essential.

The findings of this project will be synthesized for publication and disseminated in peer-reviewed journals. They will also be presented to provincial and national decision makers in kidney care through the Alberta Health Services Kidney Health Strategic Clinical Network and Canadian Society of Nephrology.

4.6 CONCLUSIONS

To our knowledge, this is the first study describing the natural history of pediatric onset CKD over the age span in a large cohort of patients with predominantly mild CKD followed in primary care. Our findings demonstrate that in this cohort of patients, kidney function measured

by way of eGFR increases with increasing age. Our study also demonstrates that the emerging adulthood period has a negative effect on eGFR trajectory. Finally, in all patients, the presence of mental health disorders, substance use, and pregnancy modified the relationship between age and eGFR by causing a small but statistically significant acceleration in the eGFR increase over age, but were associated with lower baseline eGFR; however, these relationships warrant further investigation.

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APPENDIX A: END STAGE RENAL DISEASE READ CODES.

Read Code	Description
14S2.	H/O: kidney recipient
14V2.	H/O: renal dialysis / H/O: kidney dialysis
7A601	Creation of arteriovenous fistula NEC / Creation of radial-cephalic fistula / Creation of brachial-cephalic fistula
7A602	Attention to arteriovenous shunt
7A603	Removal of infected arteriovenous shunt
7A604	Banding of arteriovenous fistula
7A605	Thrombectomy of arteriovenous fistula
7A606	Creation of graft fistula for dialysis
7A619	Ligation of arteriovenous dialysis fistula
7A61A	Ligation of arteriovenous dialysis graft
7B00.	Transplantation of kidney
7B000	Autotransplant of kidney
7B001	Transplantation of kidney from live donor / Allotransplantation of kidney from live donor
7B002	Transplantation of kidney from cadaver / Allotransplantation of kidney from cadaver
7B003	Allotransplantation of kidney from cadaver, heart-beating
7B004	Allotransplantation kidney from cadaver, heart non-beating
7B005	Allotransplantation of kidney from cadaver NEC
7B00y	Other specified transplantation of kidney
7B00z	Transplantation of kidney NOS
7B015	Transplant nephrectomy / Excision of rejected transplanted kidney
7B063	Exploration of renal transplant
7B0F3	Post-transplantation of kidney examination, recipient
7B0Fy	OS interventions associated with transplantation of kidney
7B0Fz	Interventions associated with transplantation of kidney NOS
7L1A.	Compensation for renal failure / Dialysis for renal failure
7L1A0	Renal dialysis / Thomas intravascular shunt for dialysis
7L1A1	Peritoneal dialysis
7L1A2	Haemodialysis NEC
7L1A3	Haemofiltration
7L1A4	Automated peritoneal dialysis
7L1A5	Continuous ambulatory peritoneal dialysis
7L1A6	Peritoneal dialysis NEC
7L1A7	Haemoperfusion
7L1Ay	Other specified compensation for renal failure
7L1Az	Compensation for renal failure NOS
7L1B.	Placement ambulatory apparatus compensation renal failure / Placement ambulatory dialysis apparatus - compens renal fail
7L1B0	Insertion of ambulatory peritoneal dialysis catheter
7L1B1	Removal of ambulatory peritoneal dialysis catheter
7L1By	Placement ambulatory apparatus- compensate renal failure OS
7L1Bz	Placement ambulatory apparatus- compensate renal failure NOS
7L1C.	Placement other apparatus for compensation for renal failure
7L1C0	Insertion of temporary peritoneal dialysis catheter
7L1Cy	Placement other apparatus- compensate for renal failure OS
7L1Cz	Placement other apparatus- compensate for renal failure NOS
8L50.	Renal transplant planned
K050.	End stage renal failure
K0B5.	Renal tubulo-interstitial disordrs in transplant rejectn

K0D..	End-stage renal disease
Kyu1C	[X]Renal tubulo-interstitial disorders/transplant rejection
SP015	Mechanical complication of dialysis catheter
SP017	Mechanical complication of arterio- venous surgical fistula
SP056	[X]Infec & inflam react due oth int prosth device/imp/graft / [X]Graft infection / [X]Prosthetic infection / [X] Peritoneal dialysis associated peritonitis
SP06B	Continuous ambulatory peritoneal dialysis associated perit
SP07G	Stenosis of arteriovenous dialysis fistula
SP080	Transplanted organ failure / Det.ren.func.after ren.transpl
SP083	Kidney transplant failure and rejection
TA020	Accid cut,puncture,perf,h'ge - kidney dialysis / Accidental cut/puncture/perf/haem'ge during renal dialysis
TA120	Foreign object left in body during kidney dialysis / Foreign object left in body during renal dialysis
TA220	Failure of sterile precautions during kidney dialysis / Failure of sterile precautions during renal dialysis
TA420	Mechanical failure of apparatus during kidney dialysis / Mechanical failure of apparatus during renal dialysis
TB001	Kidney transplant with complication, without blame / Renal transplant with complication, without blame
TB11.	Kidney dialysis with complication, without blame / Renal dialysis with complication, without blame
U641.	[X]Kidny dialysis caus abn reac pt/lat comp no misad at time
Z1A..	Dialysis training
Z1A1.	Peritoneal dialysis training / PD - Peritoneal dialysis training
Z1A2.	Haemodialysis training / HD - Haemodialysis training
Z919.	Care of haemodialysis equipment
Z9191	Priming haemodialysis lines
Z9192	Washing back through haemodialysis lines
Z9193	Reversing haemodialysis lines
Z9194	Recirculation of the dialysis machine
Z91A.	Peritoneal dialysis bag procedure
Z91A1	Putting additive into peritoneal dialysis bag
ZV420	[V]Kidney transplanted
ZV451	[V]Renal dialysis status
ZV56.	[V]Aftercare involving intermittent dialysis
ZV560	[V]Aftercare involving extracorporeal dialysis / [V]Aftercare involving renal dialysis NOS
ZV561	[V]Preparatory care for dialysis
ZV56y	[V]Other specified aftercare involving intermittent dialysis / [V]Aftercare involving peritoneal dialysis
ZV56z	[V]Unspecified aftercare involving intermittent dialysis

APPENDIX B: CKD ETIOLOGY READ CODES.

Read Code	Description
2474	O/E - renal bruit present
P116.	Myelocystocele
P1161	Cervical myelocystocele
14D1.	H/O: nephritis
14D2.	H/O: kidney infection
14D3.	H/O: urinary stone
14D6.	H/O: urethral stricture
14H4.	H/O: urinary anomaly
14R2.	H/O: kidney donation
7B01.	Total nephrectomy / Total excision of kidney
7B010	Radical nephrectomy / Nephrectomy and excision of perirenal tissue
7B011	Nephroureterectomy-unspecified
7B012	Bilateral nephrectomy
7B013	Heminephrectomy for horseshoe kidney / Excision of half of horseshoe kidney
7B014	Simple nephrectomy - other
7B017	Nephroureterectomy with open lower ureterectomy
7B018	Nephroureterectomy with pluck lower ureterectomy
7B01y	Other specified total nephrectomy
7B01z	Total nephrectomy NOS
7B02.	Partial nephrectomy / Partial excision of kidney
7B020	Heminephrectomy for duplex kidney
7B021	Division of isthmus of horseshoe kidney
7B022	Upper pole partial nephrectomy
7B023	Lower pole partial nephrectomy
7B02y	Other specified partial nephrectomy
7B02z	Partial nephrectomy NOS
7B03.	Open extirpation of renal lesion / Open removal of renal lesion
7B030	Open deroofing of renal cyst
7B031	Open excision of renal lesion
7B032	Open destruction of renal lesion
7B033	Rovsing's operation for polycystic kidney
7B03y	Other specified open extirpation of renal lesion
7B03z	Open extirpation of renal
7B04.	Open repair of kidney / Pyeloplasty
7B040	Other open pyeloplasty / Foley pyeloplasty
7B041	Revision of pyeloplasty
7B042	Nephropexy
7B043	Plication of kidney
7B044	Repair of renal laceration
7B045	Plication and pyeloplasty of kidney / Hamilton plication and pyeloplasty of kidney / Stewart plication and pyeloplasty of kidney
7B046	Anderson-Hynes pyeloplasty
7B047	Culp pyeloplasty
7B04y	Other specified open repair of kidney
7B04z	Open repair of kidney NOS
A160.	Tuberculosis of kidney / Renal tuberculosis
A1600	Tuberculous nephropathy
A1601	Tuberculous pyelitis

A1602	Tuberculous pyelonephritis
A160z	Tuberculosis of kidney NOS
A786.	Haemorrhagic nephrosonephritis
A8441	Plasmodium malariae malaria with nephropathy
A954.	Syphilis of kidney / Renal syphilis
AC2z0	Echinococcosis kidney
B4A..	Malig neop of kidney and other unspecified urinary organs / Renal malignant neoplasm
B4A0.	Malignant neoplasm of kidney parenchyma
B4A00	Hypernephroma
B4A1.	Malignant neoplasm of renal pelvis
B4A10	Malignant neoplasm of renal calyces
B4A11	Malignant neoplasm of ureteropelvic junction
B4A1z	Malignant neoplasm of renal pelvis NOS
B4A2.	Malignant neoplasm of ureter
B4A3.	Malignant neoplasm of urethra
B4A4.	Malignant neoplasm of paraurethral glands
B4Ay.	Malignant neoplasm of other urinary organs
B4Ay0	Malignant neoplasm of overlapping lesion of urinary organs
B4Az.	Malignant neoplasm of kidney or urinary organs NOS
B580.	Secondary malignant neoplasm of kidney
B7D0.	Benign neoplasm of renal parenchyma / Benign neoplasm of kidney
B7Dz.	Benign neoplasm of kidney or urinary organ NOS
B91z1	Neoplasm of uncertain behaviour of kidney / Renal neoplasm of uncertain behaviour
BBLJ.	[M]Clear cell sarcoma of kidney
C104.	Diabetes mellitus with renal manifestation / Diabetic nephropathy
C1040	Diabetes mellitus, juvenile type, with renal manifestation
C104y	Other specified diabetes mellitus with renal complications
C104z	Diabetes mellitis with nephropathy NOS
C3000	Cystinosis
C314.	Renal glycosuria / Renal diabetes
C31y2	Oxalosis
C3274	Alpha-galactosidase A deficiency / Fabry's disease / Anderson's disease / Anderson-Fabry diseas
C341.	Gouty nephropathy
C3410	Gouty nephropathy unspecified
C3411	Uric acid nephrolithiasis / Renal stone - uric acid
C341z	Gouty nephropathy NOS
D1111	Microangiopathic haemolytic anaemia
D1113	Haemolytic-uraemic syndrome
D3101	Henoch-Schonlein nephritis
G22..	Hypertensive renal disease / Nephrosclerosis
G220.	Malignant hypertensive renal disease
G221.	Benign hypertensive renal disease
G222.	Hypertensive renal disease with renal failure
G22z.	Hypertensive renal disease NOS / Renal hypertension
G750.	Polyarteritis nodosa / Necrotising angiitis
G7520	Goodpasture's syndrome
G754.	Wegener's granulomatosis
G7561	Thrombotic thrombocytopenic purpura
G758.	Churg-Strauss vasculitis
G75X.	Necrotising vasculopathy, unspecified
G763.	Hyperplasia of renal artery
G76B.	Vasculitis

K....	Genitourinary system diseases
K0...	Nephritis, nephrosis and nephrotic syndrome
K00..	Acute glomerulonephritis / Acute nephritis / Bright's disease
K000.	Acute proliferative glomerulonephritis
K001.	Acute nephritis with lesions of necrotising glomerulitis
K00y.	Other acute glomerulonephritis
K00y0	Acute glomerulonephritis in diseases EC
K00y1	Acute exudative nephritis
K00y2	Acute focal nephritis
K00y3	Acute diffuse nephritis
K00yz	Other acute glomerulonephritis NOS
K00z.	Acute glomerulonephritis NOS
K01..	Nephrotic syndrome
K010.	Nephrotic syndrome with proliferative glomerulonephritis
K011.	Nephrotic syndrome with membranous glomerulonephritis
K012.	Nephrotic syndrome+membranoproliferative glomerulonephritis
K013.	Nephrotic syndrome with minimal change glomerulonephritis / Lipoid nephrosis / Steroid sensitive nephrotic syndrome
K014.	Nephrotic syndrome, minor glomerular abnormality
K015.	Nephrotic syndrome, focal and segmental glomerular lesions
K016.	Nephrotic syndrome, diffuse membranous glomerulonephritis
K017.	Nephrotic syn difus mesangial prolifertiv glomerulonephritis
K018.	Nephrotic syn,difus endocapilary proliftv glomerulonephritis
K019.	Nephrotic syn,diffuse mesangiocapillary glomerulonephritis
K01A.	Nephrotic syndrome, dense deposit disease
K01B.	Nephrotic syndrome, diffuse crescentic glomerulonephritis
K01w.	Congenital nephrotic syndrome
K01w0	Finnish nephrosis syndrome / Microcystic type congenital nephrotic syndrome
K01wz	Congenital nephrotic syndrome NOS
K01x.	Nephrotic syndrome in diseases EC
K01x0	Nephrotic syndrome in amyloidosis
K01x1	Nephrotic syndrome in diabetes mellitus / Kimmelstiel - Wilson disease
K01x2	Nephrotic syndrome in malaria
K01x3	Nephrotic syndrome in polyarteritis nodosa
K01x4	Nephrotic syndrome in systemic lupus erythematosus / Lupus nephritis
K01xz	Nephrotic syndrome in diseases EC NOS
K01y.	Nephrotic syndrome with other pathological kidney lesions
K01z.	Nephrotic syndrome NOS
K02..	Chronic glomerulonephritis / Nephritis - chronic / Nephropathy - chronic
K020.	Chronic proliferative glomerulonephritis
K021.	Chronic membranous glomerulonephritis
K022.	Chronic membranoproliferative glomerulonephritis
K023.	Chronic rapidly progressive glomerulonephritis
K02y.	Other chronic glomerulonephritis
K02y0	Chronic glomerulonephritis + diseases EC
K02y1	Chronic exudative glomerulonephritis
K02y2	Chronic focal glomerulonephritis
K02y3	Chronic diffuse glomerulonephritis
K02yz	Other chronic glomerulonephritis NOS K02z. Chronic glomerulonephritis NOS
K03..	Nephritis and nephropathy unspecified / Nephritis and nephropathy unspecified / Nephropathy, unspecified
K030.	Proliferative nephritis unspecified

K031.	Membranous nephritis unspecified
K032.	Membranoproliferative nephritis unspecified
K0320	Focal membranoproliferative glomerulonephritis
K0321	Recurrent benign haematuria syndrome
K0322	Focal glomerulon + focal recurr macroscop glomerulonephritis
K0323	Anaphylactoid glomerulonephritis
K0324	Familial glomerulonephritis in Alport's syndrome
K0325	Other familial glomerulonephritis
K0326	Berger's IgA or IgG nephropathy
K032y	Nephritis unsp+OS membranoprolif glomerulonephritis lesion / Hypocomplementaemic persistent glomerulonephritis NEC / Lobular glomerulonephritis NEC / Mesangioproliferative glomerulonephritis NEC / Mesangiocapillary glomerulonephritis NEC / Mixed membranous and proliferative glomerulonephritis NEC
K032z	Nephritis unsp+membranoprolif glomerulonephritis lesion NOS
K033.	Rapidly progressive nephritis unspecified
K034.	Renal cortical necrosis unspecified
K035.	Renal medullary necrosis unspecified
K03T.	Tubulo-interstit nephritis, not specif as acute or chron
K03U.	Unspecif nephr synd, diff concentric glomerulonephritis
K03V.	Unspecified nephritic syndrome, dense deposit disease
K03W.	Unsp nephrit synd, diff endocap prolif glomerulonephritis
K03X.	Unsp nephrit synd, diff mesang prolif glomerulonephritis
K03y.	Other nephritis and nephrosis unspecified
K03y0	Other nephritis and nephrosis in diseases EC
K03y1	Other exudative nephritis
K03y2	Other interstitial nephritis
K03yz	Other nephritis and nephrosis NOS
K03z.	Unspecified glomerulonephritis NOS K04.. Acute renal failure
K040.	Acute renal tubular necrosis
K041.	Acute renal cortical necrosis
K042.	Acute renal medullary necrosis / Necrotising renal papillitis
K043.	Acute drug-induced renal failure
K044.	Acute renal fail urin obstruct
K04y.	Other acute renal failure
K04z.	Acute renal failure NOS
K05..	Chronic renal failure / Chronic uraemia / End stage renal failure
K050.	End stage renal failure
K06..	Renal failure unspecified / Uraemia NOS K060. Renal impairment / Impaired renal function K07.. Renal sclerosis unspecified
K070.	Atrophy of kidney
K071.	Renal fibrosis
K072.	Glomerulosclerosis
K07z.	Renal sclerosis NOS
K08..	Impaired renal function disorder K080. Renal osteodystrophy
K0800	Phosphate-losing tubular disorders
K0801	Renal dwarfism
K0802	Renal infantilism
K0803	Renal rickets
K080z	Renal osteodystrophy NOS
K081.	Nephrogenic diabetes insipidus
K08y.	Other impaired renal function disorder
K08y0	Hypokalaemic nephropathy

K08y1	Secondary hyperparathyroidism
K08y2	Lightwood - Albright syndrome / Albright's renal tubular acidosis
K08y3	Renal function impairment with growth failure
K08y4	Renal tubular acidosis / Renal tubular acidaemia
K08y5	Acute interstitial nephritis
K08yz	Other impaired renal function disorder NOS / Renal acidaemia / Renotubular acidaemia
K08z.	Impaired renal function disorder NOS K09.. Small kidney of unknown cause K090. Unilateral small kidney
K0900	Atrophy of kidney
K091.	Bilateral small kidneys K09z. Small kidneys unspecified K0A.. Glomerular disease
K0A0.	Acute nephritic syndrome
K0A00	Acute nephritic syndrome, minor glomerular abnormality
K0A01	Acute nephritic syndrome, focal+segmental glomerular lesions
K0A02	Acute nephritic syn, diffuse membranous glomerulonephritis
K0A03	Acut neph syn, diffuse mesangial prolifrative glomnephritis
K0A04	Ac neph syn difus endocaplry prolifrative glomerulonephritis
K0A05	Acute neph syn, diffuse mesangiocapillary glomerulonephritis
K0A06	Acute nephritic syndrome, dense deposit disease
K0A07	Acute nephrotic syndrm diffuse crescentic glomerulonephritis
K0A1.	Rapidly progressive nephritic syndrome
K0A10	Rapid progres neph syndrome, minor glomerular abnormality
K0A11	Rapid progres nephritic syn focal+segmental glomerulr lesion
K0A12	Rapid progres neph syn diffuse membranous glomerulonephritis
K0A13	Rpd prog neph syn df mesangial prolifratv glomerulonephritis
K0A14	Rapid progres neph syn df endocapilary prolifv glomnephritis
K0A15	Rapid prog neph syn df mesangiocapillary glomerulonephritis
K0A16	Rapid progressive nephritic syndrome, dense deposit disease
K0A17	Rapid progres nephritic syn df crescentic glomerulonephritis
K0A2.	Recurrent and persistent haematuria
K0A20	Recurrent+persistnt haematuria minor glomerular abnormality
K0A21	Recur+persist haematuria, focal+segmental glomerular lesions
K0A22	Recur+persist haematuria difus membranous glomerulonephritis
K0A23	Recur+persist haemuria df mesangial prolif glomerulnephritis
K0A24	Recur+persist haemuria df endocaplry prolifrtv glomeruloneph
K0A25	Recur+persist hmuria df mesangiocapilary glomerulonephritis
K0A26	Recurrent and persistent haematuria, dense deposit disease
K0A27	Recur+persist haematuria difus crescentic glomerulonephritis
K0A28	IgA nephropathy
K0A3.	Chronic nephritic syndrome
K0A30	Chronic nephritic syndrome, minor glomerular abnormality
K0A31	Chronic nephritic syndrm focal+segmental glomerular lesions
K0A32	Chron nephritic syndrom difuse membranous glomerulonephritis
K0A33	Chron neph syn difus mesangial prolifrtiv glomerulonephritis
K0A34	Chron neph syn difuse endocap prolifrativ glomerulonephritis
K0A35	Chronic neph syn difus mesangiocapillary glomerulonephritis
K0A36	Chronic nephritic syndrome, dense deposit disease
K0A37	Chronic nephritic syn diffuse crescentic glomerulonephritis
K0A4.	Isolated proteinuria with specified morphological lesion
K0A40	Isolatd proteinur specfd morphlgcl lesion min glom abnrm
K0A41	Isolatd proteinur/specifd morphlgcl les foc+seg glom lesn
K0A42	Isolatd proteinur/specfd morphlgcl les df membrn glomneph
K0A43	Isoltd prteinur/spcfd morph lesn df mesngl prolf glomneph

K0A44	Isolt prteinur/spcfd morph les df endocap prolif glomneph
K0A45	Isoltd prteinur+specfd morph les df mesangiocap glomnephr
K0A46	Isolatd proteinur spcfd morph lesion dense deposit diseas
K0A47	Isol proteinur specfd morph lesion df crescentic glomneph
K0A4W	Isolated proteinuria, with unspecified morpholog changes
K0A4X	Isolated proteinuria, with oth specif morpholog changes
K0A5.	Hereditary nephropathy not elsewhere classified
K0A50	Hereditary nephropathy NEC, minor glomerular abnormality
K0A51	Hereditary nephropathy NEC,focal+segmnt glomerular lesion
K0A52	Hereditry nephropathy NEC,difus membran glomerulnephritis
K0A53	Heredtry nephrpthy NEC difus mesangial prolif glomnephrit
K0A54	Heredtry nephrpthy NEC difus endocapil prolif glomnephrit
K0A55	[X]Heredtry nephrpthy NEC difus mesangiocapilry glomneph
K0A56	Hereditary nephropathy, NEC, dense deposit disease
K0A57	Hereditary nephropathy,NEC,difus crescentic glomnephritis
K0A5X	Hereditary nephropathy, unspecif morphological changes
K0A6.	Glomerular disorders in neoplastic diseases
K0A7.	Glom disordr in blood diseas+disordr invlvg imun mechansm
K0B..	Renal tubulo-interstitial disorders in diseases EC
K0B0.	Ren tubulo-interstital disord infect and parasitic dis EC
K0B1.	Renal tubulo-interstitial disorder/ neoplastic
K0B2.	Ren tub-interst disordr/blood dis+disordr inv immune mech
K0B3.	Renal tubulo-interstitial disorders in metabolic diseases
K0B4.	Ren tub-interstitl disordr/systemc connectv tiss disorder
K0B40	Renal tubulo-interstitial disorder in SLE
K0B5.	Renal tubulo-interstitial disordrs in transplant rejectn
K0B6.	Balkan nephropathy
K0C..	Drug/heavy-metal-induced tubulo-interstitial and tub conditn
K0C0.	Analgesic nephropathy
K0C1.	Nephropathy induced by other drugs meds and biologl substncs
K0C2.	Nephropathy induced by unspec drug medicament or biol subs
K0C3.	Nephropathy induced by heavy metals
K0C4.	Toxic nephropathy, not elsewhere classified
K0D..	End-stage renal disease
K0E..	Acute-on-chronic renal failure
K0y..	Other specified nephritis, nephrosis or nephrotic syndrome
K0y0.	Late syphilis of kidney
K0z..	Nephritis, nephrosis and nephrotic syndrome NOS
K1...	Other urinary system diseases K15.. Cystitis
K10..	Infections of kidney / Renal infections
K100.	Chronic pyelonephritis
K1000	Chronic pyelonephritis without medullary necrosis
K1001	Chronic pyelonephritis with medullary necrosis
K1002	Chronic pyelitis
K1003	Chronic pyonephrosis
K1004	Nonobstructive reflux-associated chronic pyelonephritis
K1005	Chronic obstructive pyelonephritis
K1006	Calculous pyelonephritis
K100z	Chronic pyelonephritis NOS K101. Acute pyelonephritis
K1010	Acute pyelonephritis without medullary necrosis
K1011	Acute pyelonephritis with medullary necrosis
K1012	Acute pyelitis

K1013	Acute pyonephrosis
K101z	Acute pyelonephritis NOS
K102.	Renal and perinephric abscess
K1020	Renal abscess
K1021	Perinephric abscess
K1022	Renal carbuncle
K102z	Renal and perinephric abscess NOS
K103.	Pyeloureteritis cystica / Ureteritis cystica / Infestation of renal pelvis with ureter
K104.	Xanthogranulomatous pyelonephritis
K10y.	Pyelonephritis and pyonephrosis unspecified
K10y0	Pyelonephritis unspecified
K10y1	Pyelitis unspecified
K10y2	Pyonephrosis unspecified
K10y3	Pyelonephritis in diseases EC
K10y4	Pyelitis in diseases EC
K10yz	Unspecified pyelonephritis NOS
K10z.	Infection of kidney NOS
K11..	Hydronephrosis
K110.	Hydrocalycosis
K111.	Hydroureteronephrosis
K112.	Hydronephrosis with renal and ureteral calculous obstruction
K113.	Hydronephrosis with ureteropelvic junction obstruction / Hydronephrosis with pelviureteric junction obstruction
K11X.	Hydronephrosis with ureteral stricture NEC
K11z.	Hydronephrosis NOS
K12..	Calculus of kidney and ureter / Kidney calculus / Urinary calculus
K120.	Calculus of kidney / Nephrolithiasis NOS / Renal calculus / Renal stone
K1200	Staghorn calculus
K120z	Renal calculus NOS
K121.	Calculus of ureter / Ureteric calculus / Ureteric stone / Ureterolithiasis
K122.	Calculus of kidney with calculus of ureter
K12z.	Urinary calculus NOS
K13..	Other kidney and ureter disorders / Other kidney disorders / Other ureter disorders
K130.	Nephroptosis / Floating kidney / Mobile kidney
K131.	Hypertrophy of kidney
K132.	Acquired cyst of kidney
K1320	Single acquired kidney cyst
K1321	Multiple acquired kidney cysts
K1322	Peripelvic (lymphatic) cyst
K132z	Acquired cyst of kidney NOS
K133.	Stricture of ureter
K1330	Postoperative ureteric constriction
K1331	Stricture of pelviureteric junction
K133z	Stricture of ureter NOS
K134.	Other ureteric obstruction
K1340	Idiopathic retroperitoneal fibrosis
K134z	Occlusion of ureter NOS
K135.	Hydroureter
K136.	Benign postural proteinuria / Orthostatic proteinuria
K137.	Vesicoureteric reflux / Ureteric reflux
K138.	Vascular disorders of kidney / Renal vascular disorders
K1380	Renal artery embolism / Renal artery embolus

K1381	Renal artery haemorrhage
K1382	Renal artery thrombosis
K1383	Intrarenal haematoma
K138z	Renal vascular disorders NOS / Renal infarction
K139.	Pararenal urinoma
K13A.	Paraureteric urinoma
K13B.	Calyceal diverticulum
K13y.	Other kidney and ureteric disorders
K13y0	Ureteric fistula
K13y1	Adhesions of kidney
K13y2	Adhesions of ureter
K13y3	Periureteritis
K13y4	Pyelectasia
K13y5	Polyp of ureter
K13y6	Ureterocele - acquired / Idiopathic dilation of ureter
K13y7	Megaloureter - acquired
K13y8	Perirenal haematoma
K13y9	Ureteric neuromuscular incoordination
K13yz	Other kidney and ureteric disorders NOS / Salt- losing nephritis
K13z.	Kidney and ureter disease NOS
K13z0	Non-functioning kidney
K14..	Lower urinary tract calculus
K140.	Bladder calculus / Bladder stone
K1400	Calculus in diverticulum of bladder
K1401	Other calculus in bladder
K140z	Bladder calculus NOS
K141.	Calculus in urethra
K14y.	Other lower urinary tract calculus
K14z.	Lower urinary tract calculus NOS
K150.	Acute cystitis
K151.	Chronic interstitial cystitis
K1510	Hunner's ulcer
K1511	Panmural fibrosis of bladder
K1512	Submucous cystitis
K151z	Chronic interstitial cystitis NOS
K152.	Other chronic cystitis
K1520	Subacute cystitis
K152y	Chronic cystitis unspecified
K152z	Other chronic cystitis NOS
K153.	Trigonitis / Follicular cystitis
K1530	Acute trigonitis
K1531	Chronic trigonitis
K1532	Urethrotrigonitis
K153z	Trigonitis NOS
K154.	Cystitis in diseases EC
K1540	Cystitis in actinomycosis
K1541	Cystitis in amoebiasis
K1542	Cystitis in bilharziasis
K1543	Cystitis in echinococcus infestation
K1544	Cystitis in diphtheria
K1545	Cystitis in gonorrhoea
K1546	Cystitis in moniliasis

K1547	Cystitis in trichomoniasis
K1548	Cystitis in tuberculosis
K154z	Cystitis in diseases EC NOS
K155.	Recurrent cystitis
K15y	Other specified cystitis
K15y0	Cystitis cystica
K15y1	Irradiation cystitis
K15y2	Abscess of bladder
K15y3	Malakoplakia of bladder
K15yz	Other cystitis NOS
K15z.	Cystitis NOS
K16..	Other disorders of bladder
K160.	Bladder neck obstruction / Contracture of bladder neck / Stenosis of bladder neck / BOO - Bladder outflow obstruction
K161.	Intestinovesical fistula
K1610	Enterovesical fistula
K1611	Vesicocolic fistula
K1612	Vesicosigmoidal fistula
K1613	Vesicorectal fistula
K161z	Intestinovesical fistula NOS
K162.	Vesical fistula NEC
K1620	Vesicocutaneous fistula
K1621	Vesicoperineal fistula
K1622	Urethrovesical fistula
K162z	Vesical fistula NEC NOS
K163.	Diverticulum of bladde
K1630	Acquired bladder diverticulum
K1631	False bladder diverticulum
K1632	Bladder diverticulitis
K163z	Diverticulum of bladder NOS
K164.	Atony of bladder / Atonic bladder
K1640	Hypotonic bladder
K1641	Bladder inertia
K164z	Atony of bladder NOS / Atonic bladder NOS
K165.	Other functional disorder of bladder
K1650	Hypertonic bladder sphincter
K1651	Bladder sphincter paralysis
K1652	Bladder outflow obstruction
K1653	Detrusor instability
K1654	Unstable bladder
K165z	Other bladder function disorder NOS
K166.	Bladder rupture due to nontraumatic cause
K167.	Haemorrhage into bladder wall
K16V.	Neuromuscular dysfunction of bladder, unspecified
K16V0	Neuropathic bladder / Neurogenic bladder
K16V1	Overactive bladder
K16W.	Reflex neuropathic bladder, not elsewhere classified
K16X.	Uninhibited neuropathic bladder, NEC
K16y.	Other bladder disorders
K16y0	Calcified bladder
K16y1	Contracted bladder
K16y2	Bladder haemorrhage

K16y3	Bladder hypertrophy
K16y4	Irritable bladder / Detrusor instability / Unstable bladder
K16y5	Trabeculation of bladder
K16y6	Hourglass bladder
K16y7	Squamous metaplasia of bladder
K16y8	Functional disorder of bladder / Functional voiding disorder
K16y9	Metaplasia of trigone
K16yA	Bladder scarring
K16yz	Other bladder disorders NOS
K16z.	Bladder disorders NOS
K17..	Urethritis due to non venereal causes / Periurethritis
K170.	Urethral and periurethral abscess / Urethral abscess
K1700	Urethral abscess unspecified
K1701	Bulbourethral gland abscess / Cowper's gland abscess
K1702	Urethral gland abscess / Littre's gland abscess
K1703	Periurethral cellulitis / Periurethritis
K1704	Periurethral abscess
K170z	Urethral abscess NOS
K171.	Post menopausal atrophic urethritis / Post menopausal urethritis
K172.	Candidal urethritis
K17y.	Other urethritis
K17y0	Urethritis unspecified
K17y1	Urethral syndrome NOS
K17y2	Skene's glands adenitis
K17y3	Cowperitis
K17y4	Urethral meatitis
K17y5	Urethral meatal ulcer
K17y6	Verumontanitis
K17y7	Utriculus masculinus
K17yz	Other urethritis NOS
K17z.	Urethritis due to non venereal cause NOS
K18..	Urethral stricture / Pinhole meatus
K180.	Infective urethral stricture
K1800	Urethral stricture due to unspecified infection
K1801	Urethral stricture due to infection EC
K180z	Infective urethral stricture NOS
K181.	Traumatic urethral stricture / Postobstetric urethral stricture
K182.	Postoperative urethral stricture / Postcatheterisation urethral stricture
K183.	Stenosis of urinary meatus
K18y.	Other urethral stricture
K18z.	Urethral stricture NOS
K19..	Other urethral and urinary tract disorders / Other urethral disorders
K190.	Urinary tract infection, site not specified / Recurrent urinary tract infection
K1900	Bacteriuria, site not specified / Asymptomatic bacteriuria
K1901	Pyuria, site not specified
K1902	Post operative urinary tract infection
K1903	Recurrent urinary tract infection / Recurrent UTI
K1904	Chronic urinary tract infection
K1905	Urinary tract infection
K190X	Persistent proteinuria, unspecified
K190z	Urinary tract infection, site not specified NOS
K191.	Urethral fistula

K1910	Urethroperineal fistula
K1911	Urethrorectal fistula
K191z	Urethral fistula NOS
K192.	Urethral diverticulum
K193.	Urethral caruncle / Urethral polyp
K194.	Urethral false passage
K195.	Prolapsed urethral mucosa / Urethrocele
K196.	Urinary obstruction unspecified / Obstructive uropathy, unspecified
K197.	Haematuria / Traumatic haematuria / Essential haematuria
K1970	Painless haematuria
K1971	Painful haematuria
K1972	Microscopic haematuria
K1973	Frank haematuria
K1974	Clot haematuria
K198.	Stress incontinence
K19C.	Other obstructive and reflux uropathy
K19W.	Urethral disorder, unspecified
K19X.	Obstructive and reflux uropathy, unspecified PD... Urinary system congenital anomalies
K19y.	Other urinary tract disorders
K19y0	Urethral rupture due to nontraumatic cause
K19y1	Urethral cyst
K19y2	Urethral granuloma
K19y3	Pneumaturia
K19y4	Bleeding from urethra / Urethral bleeding
K19yw	Disorder of urinary system, unspecified
K19yz	Other urinary tract disorders NOS
K19z.	Urethral and urinary tract disorders NOS
K1A..	Urinary calculus in schistosomiasis
K1y..	Other specified diseases of urinary system
K1z..	Other urinary system diseases NOS
K2...	Male genital organ diseases
K20..	Benign prostatic hypertrophy / Benign adenoma of prostate / Benign fibroma of prostate / Benign myoma of prostate / Enlarged prostate - benign / BPH - benign prostatic hypertrophy / Prostatism
K200.	Prostatic hyperplasia unspecified
K201.	Prostatic hyperplasia of the lateral lobe
K202.	Prostatic hyperplasia of the medial lobe
K20z.	Prostatic hyperplasia NOS
K21..	Prostate inflammatory diseases / Prostatitis and other inflammatory diseases of prostate
K210.	Acute prostatitis
K211.	Chronic prostatitis
K212.	Abscess of prostate
K213.	Prostatocystitis
K214.	Prostatitis in diseases EC
K2140	Prostatitis in actinomycosis
K2141	Prostatitis in blastomycosis
K2142	Prostatitis in syphilis
K2143	Prostatitis in tuberculosis
K2144	Prostatitis in gonorrhoea
K2145	Prostatitis in moniliasis
K2146	Prostatitis in trichomoniasis
K214z	Prostatitis in diseases EC NOS
K21y.	Other prostatic inflammatory diseases

K21z.	Prostatitis NOS
K22..	Other disorders of prostate
K220.	Calculus of prostate / Stone of prostate
K221.	Prostatic congestion or haemorrhage
K2210	Prostatic congestion
K2211	Prostatic haemorrhage
K221z	Prostatic congestion or haemorrhage NOS
K222.	Atrophy of prostate
K22y.	Other disorders of prostate OS
K22y0	Prostatic fistula
K22y1	Infarction of prostate
K22y2	Stricture of prostate
K22y3	Periprostatic adhesions
K22yz	Other prostate disorders NOS
K22z.	Prostatic disorders NOS
K23..	Hydrocele
K230.	Encysted hydrocele
K231.	Infected hydrocele
K23y.	Other types of hydrocele
K23z.	Hydrocele NOS
K24..	Orchitis and epididymitis
K240.	Orchitis
K2400	Orchitis with abscess
K2401	Orchitis with no abscess
K2402	Orchitis unspecified
K2403	Orchitis in diseases EC
K240z	Orchitis NOS
K241.	Epididymitis
K2410	Epididymitis with abscess
K2411	Epididymitis with no abscess
K2412	Epididymitis unspecified
K2413	Epididymitis in diseases EC
K2414	Acute epididymitis
K2415	Chronic epididymitis
K2416	Chlamydial epididymitis
K241z	Epididymitis NOS
K242.	Epididymo-orchitis
K2420	Epididymo-orchitis with abscess
K2421	Epididymo-orchitis with no abscess
K2422	Epididymo-orchitis unspecified
K2423	Epididymo-orchitis in diseases EC
K242z	Epididymo-orchitis NOS
K24z.	Orchitis and epididymitis NOS
K25..	Redundant prepuce and phimosis / Foreskin redundant / Tight foreskin / Tight frenulum
K250.	Redundant prepuce
K251.	Adherent prepuce
K252.	Tight prepuce
K253.	Phimosis
K254.	Paraphimosis
K255.	Preputial adhesions
K25z.	Redundant prepuce and phimosis NOS
K26..	Male infertility

K260.	Azoospermia / Young's syndrome
K261.	Oligospermia
K26y.	Infertility due to extratesticular cause
K26y0	Infertility due to drug therapy
K26y1	Infertility due to infective cause
K26y2	Infertility due to efferent duct obstruction
K26y3	Infertility due to radiation
K26y4	Infertility in systemic disease
K26yz	Infertility due to extratesticular cause NOS
K26z.	Male infertility NOS
K27..	Disorders of penis
K270.	Leukoplakia of penis / Kraurosis of penis / Leucoplakia of penis
K271.	Balanoposthitis / Balanitis
K2710	Balanitis
K2711	Posthitis
K2712	Zoon's balanitis
K271z	Balanoposthitis NOS
K272.	Other penile inflammatory disorders / Infection of penis
K2720	Penile abscess
K2721	Penile boil
K2722	Penile carbuncle
K2723	Cellulitis of penis
K272z	Other penile inflammatory disorder NOS
K273.	Priapism / Erection - painful
K274.	Peyronie's disease / Balanitis xerotica obliterans
K275.	Vascular disorders of penis
K2750	Corpus cavernosum embolism / Corpus cavernosum embolus
K2751	Corpus cavernosum haematoma
K2752	Corpus cavernosum haemorrhage
K2753	Corpus cavernosum thrombosis
K275z	Penile vascular disorder NOS
K276.	Balanitis xerotica obliterans
K27y.	Other penile disorders
K27y0	Oedema of penis
K27y1	Impotence of organic origin
K27y2	Atrophy of penis
K27y3	Fibrosis of penis
K27y4	Hypertrophy of penis
K27y5	Chronic ulcer of penis
K27y6	Vasectomy scar
K27yz	Other penile disorders NOS
K27z.	Penile disorders NOS
K28..	Other male genital organ disorders
K280.	Seminal vesiculitis
K2800	Seminal vesiculitis unspecified
K2801	Abscess of seminal vesicle
K2802	Cellulitis of seminal vesicle
K280z	Seminal vesiculitis NOS
K281.	Spermatocele
K282.	Torsion of testis
K2820	Torsion of testis unspecified
K2821	Torsion of epididymis

K2822	Torsion of spermatic cord
K2823	Torsion of appendix of testis / Torsion of the hydatid of Morgagni - male
K282z	Torsion of testis NOS
K283.	Atrophy of testis
K284.	Other male genital inflammatory disorders
K2840	Abscess of scrotum
K2841	Boil of scrotum
K2842	Carbuncle of scrotum
K2843	Cellulitis of scrotum
K2844	Abscess of spermatic cord
K2845	Vasitis
K2845	Fournier's gangrene of scrotum
K2847	Sperm granuloma of spermatic cord
K2848	Sperm granuloma of epididymis
K2849	Inflammation of scrotum
K284z	Other male genital inflammatory disorders NOS
K285.	Male genital organ disorders in diseases EC
K286.	Male genital organ vascular diseases
K2860	Scrotal haematoma due to nontraumatic cause
K2861	Scrotal haemorrhage
K2862	Scrotal thrombosis
K2863	Testicular haematoma due to nontraumatic cause
K2864	Testicular haemorrhage
K2865	Testicular thrombosis
K286v	Male genital haematoma NOS
K286w	Male genital haemorrhage NOS / Haematospermia
K286x	Male genital thrombosis NOS
K286z	Male genital vascular diseases NOS
K287.	Chylocele of tunica vaginalis
K288.	Male genital organ stricture
K2880	Spermatic cord stricture
K2881	Tunica vaginalis stricture
K2882	Vas deferens stricture
K288z	Male genital organ stricture NOS
K289.	Male genital organ oedema
K28X.	Inflammatory disorder of unspecified male genital organ
K28y.	Other male genital organ diseases OS
K28y0	Atrophy of scrotum
K28y1	Fibrosis of scrotum
K28y2	Hypertrophy of scrotum
K28y3	Ulcer of scrotum
K28y4	Fibrosis of testis
K28y5	Hypertrophy of testis
K28y6	Epididymal cyst
K28y7	Dyspareunia due to non psychogenic cause in the male
K28y8	Pain in testis / Testicular pain
K28y9	Testicular microlithiasis
K28yF	Sebaceous cyst of scrotum
K28yG	Haemospermia
K28ys	Other seminal vesicle disease
K28yu	Other testicular disease / Testicular swelling NOS
K28yv	Other scrotal disease

K28yw	Other tunica vaginalis disease
K28yx	Other vas deferens disease
K28yz	Other male genital organ diseases NOS
K28z.	Other male genital disorders NOS / Pain in testis
K2y..	Other specified diseases of male genital organ
K2z..	Male genital organ disease NOS
K4...	Female pelvic inflammatory diseases
K40..	Ovarian, fallopian tube and pelvic inflammatory diseases
K400.	Acute salpingitis and oophoritis / Oophoritis - acute
K4000	Acute oophoritis
K4001	Acute perioophoritis
K4002	Acute salpingo-oophoritis
K4003	Acute salpingitis
K4004	Acute perisalpingitis
K4005	Subacute oophoritis
K4006	Subacute perioophoritis
K4007	Subacute salpingo-oophoritis
K4008	Subacute salpingitis
K4009	Subacute perisalpingitis
K400z	Acute salpingitis and oophoritis NOS
K401.	Chronic salpingitis and oophoritis
K4010	Chronic oophoritis
K4011	Chronic perioophoritis
K4012	Chronic salpingo-oophoritis
K4013	Chronic salpingitis
K4014	Chronic perisalpingitis
K4015	Hydrosalpinx
K4016	Salpingitis follicularis
K4017	Salpingitis isthmica nodosa
K401z	Chronic salpingitis and oophoritis NOS
K402.	Salpingitis and oophoritis unspecified
K4020	Fallopian tube abscess / Pyosalpinx
K4021	Ovarian abscess
K4022	Tubo-ovarian abscess
K4023	Oophoritis unspecified
K4024	Perioophoritis unspecified
K4025	Salpingo-oophoritis unspecified
K4026	Salpingitis unspecified
K4027	Perisalpingitis unspecified
K402z	Unspecified salpingitis and oophoritis NOS
K403.	Acute parametritis and pelvic cellulitis
K4030	Acute parametritis
K4031	Acute pelvic cellulitis / Acute pelvic abscess - female
K403z	Acute parametritis and pelvic cellulitis NOS
K404.	Chronic parametritis and pelvic cellulitis
K4040	Chronic female pelvic cellulitis
K4041	Chronic abscess of the broad ligament
K4042	Chronic abscess of the parametrium
K4043	Chronic abscess of the female pelvis
K4044	Chronic abscess of the pouch of Douglas
K4045	Female chronic pelvic peritonitis
K404z	Chronic pelvic inflammatory diseases NOS

K405.	Parametritis and pelvic cellulitis unspecified
K4050	Parametritis unspecified
K4051	Pelvic cellulitis unspecified
K405z	Parametritis and pelvic cellulitis NOS
K406.	Acute and unspecified female pelvic peritonitis / Acute pelvic inflammatory disease
K4060	Acute female pelvic peritonitis
K4061	Female pelvic peritonitis unspecified
K406z	Acute and unspecified female pelvic peritonitis NOS
K407.	Female pelvic peritoneal adhesions
K4070	Peritubal peritoneal adhesions
K4071	Tubo-ovarian peritoneal adhesions
K407z	Female pelvic peritoneal adhesions NOS
K408.	Other chronic female pelvic peritonitis
K409.	Acute pelvic inflammatory disease
K40y.	Other female pelvic organ inflammatory diseases
K40y0	Female syphilitic pelvic inflammatory disease
K40y1	Female chlamydial pelvic inflammatory disease
K40z.	Female pelvic inflammatory diseases NOS / PID / Female pelvic infection / PID - pelvic inflammatory disease
K41..	Uterine inflammatory diseases excluding the cervix
K410.	Acute uterine inflammatory disease
K4100	Acute endometritis
K4101	Acute endomyometritis
K4102	Acute myometritis
K4103	Acute perimetritis
K4104	Acute pyometra or uterine abscess
K4105	Subacute endometritis
K4106	Subacute endomyometritis
K4107	Subacute myometritis
K4108	Subacute perimetritis
K4109	Subacute pyometra
K410z	Acute uterine inflammatory diseases NOS
K411.	Chronic uterine inflammatory disease
K4110	Chronic endometritis
K4111	Chronic endomyometritis
K4112	Chronic myometritis
K4113	Chronic perimetritis
K4114	Chronic pyometra
K411z	Chronic uterine inflammatory disease NOS
K41z.	Unspecified uterine inflammatory disease
K41z0	Endometritis unspecified
K41z1	Endomyometritis unspecified
K41z2	Myometritis unspecified
K41z3	Perimetritis unspecified
K41z4	Pyometra unspecified
K41zz	Unspecified uterine inflammatory disease NOS
K42..	Cervical, vaginal and vulval inflammatory diseases
K420.	Cervicitis and endocervicitis
K4200	Cervicitis unspecified
K4201	Endocervicitis unspecified
K4202	Acute cervicitis
K4203	Cervicitis with erosion

K4204	Cervicitis with Nabothian cyst
K4205	Cervicitis with ectropion
K4206	Endocervicitis with erosion
K4207	Endocervicitis with Nabothian cyst
K4208	Endocervicitis with ectropion
K4209	Chlamydia cervicitis
K420A	Nabothian follicles / Nabothian cyst
K420B	Chronic cervicitis
K420z	Cervicitis and endocervicitis NOS / Nabothian follicles NOS
K421.	Vaginitis and vulvovaginitis
K4210	Vaginitis unspecified
K4211	Vulvitis unspecified / Vulval sores
K4212	Vulvovaginitis unspecified
K4213	Postirradiation vaginitis
K4214	Vaginitis in diseases EC
K4215	Vulvitis in diseases EC
K4216	Vulvovaginitis in diseases EC
K4217	Subacute and chronic vaginitis
K4218	Subacute and chronic vulvitis
K4219	Bacterial vaginitis / Bacterial vaginosis
K421A	Acute vulvitis
K421z	Vaginitis and vulvovaginitis NOS
K422.	Cyst of Bartholin's gland
K423.	Abscess of Bartholin's gland / Vulvovaginal gland abscess
K424.	Other abscess of vulva
K4240	Abscess of vulva / Abscess of labia
K4241	Carbuncle of vulva / Boil of vulva
K4242	Furuncle of vulva
K424z	Other abscess of vulva NOS
K425.	Ulceration of vulva
K4250	Ulceration of vulva unspecified
K4251	Ulceration of vulva in diseases EC
K4252	Ulceration of vulva in Behcet's disease
K425z	Ulceration of vulva NOS
K42X.	Disease of Bartholin's gland, unspecified
K42y.	Other cervical, vaginal and vulval diseases
K42y0	Carbuncle of vagina
K42y1	Carbuncle of labium
K42y2	Ulcer of vagina
K42y3	Bartholinitis
K42y4	Cyst of labium
K42y5	Vulval vestibulitis
K42yz	Other cervical, vaginal and vulval disease NOS
K42z.	Cervical, vaginal and vulval inflammatory disease NOS
K43..	Female tuberculous pelvic inflammatory disease
K44..	Female gonococcal pelvic inflammatory disease
K4y..	Other specified female pelvic inflammatory disease
K4z..	Female pelvic inflammatory disease NOS
K5...	Other female genital tract disorders
K50..	Endometriosis / Adenomyosis
K500.	Endometriosis of uterus
K5000	Internal endometriosis

K5001	Endometriosis of myometrium / Adenomyosis of endometrium
K5002	Endometriosis of cervix
K500z	Endometriosis of uterus NOS
K501.	Endometriosis of ovary / Chocolate cyst of ovary
K502.	Endometriosis of the fallopian tube
K503.	Endometriosis of the pelvic peritoneum
K5030	Endometriosis of the broad ligament
K5031	Endometriosis of the pouch of Douglas
K5032	Endometriosis of the parametrium
K5033	Endometriosis of the round ligament
K503z	Endometriosis of the pelvic peritoneum NOS
K504.	Endometriosis of the rectovaginal septum and vagina
K5040	Endometriosis of the rectovaginal septum
K5041	Endometriosis of the vagina
K504z	Endometriosis of the rectovaginal septum and vagina NOS
K505.	Endometriosis of the intestine
K5050	Endometriosis of the appendix
K5051	Endometriosis of the colon
K5052	Endometriosis of the rectum
K505z	Endometriosis of the intestine NOS
K506.	Endometriosis in scar of skin
K50y.	Other endometriosis
K50y0	Endometriosis of the bladder
K50y1	Endometriosis of the lung
K50y2	Endometriosis of the umbilicus
K50y3	Endometriosis of the vulva
K50yz	Other endometriosis
K50z.	Endometriosis NOS
K51..	Genital prolapse
K510.	Vaginal wall prolapse without uterine prolapse
K5100	Cystocele without uterine prolapse
K5101	Cystourethrocele without uterine prolapse
K5102	Rectocele without uterine prolapse / Proctocele without uterine prolapse
K5103	Urethrocele without uterine prolapse
K5104	Vaginal prolapse unspecified without uterine prolapse
K510z	Vaginal prolapse without uterine prolapse NOS
K511.	Uterine prolapse without vaginal wall prolapse / Descens uteri
K5110	First degree uterine prolapse
K5111	Second degree uterine prolapse
K5112	Third degree uterine prolapse
K511z	Uterine prolapse without vaginal wall prolapse NOS
K512.	Uterovaginal prolapse, incomplete
K5120	Cystocele with first degree uterine prolapse
K5121	Cystocele with second degree uterine prolapse
K513.	Uterovaginal prolapse, complete / Procidentia - uterine
K5130	Cystocele with third degree uterine prolapse
K514.	Uterovaginal prolapse, unspecified
K5140	Cystocele with unspecified uterine prolapse
K515.	Post hysterectomy vaginal vault prolapse
K516.	Vaginal enterocele / Pelvic enterocele
K5160	Congenital vaginal enterocele
K5161	Acquired vaginal enterocele

K516z	Vaginal enterocele NOS
K517.	Old laceration of pelvic floor muscle
K518.	Female rectocele
K51y.	Other genital prolapse
K51y0	Incompetence of pelvic fundus
K51y1	Weakening of pelvic fundus
K51y2	Relaxation of vaginal outlet
K51y3	Relaxation of pelvis
K51yz	Other genital prolapse NOS
K51z.	Genital prolapse NOS
K52..	Female genital tract fistula
K520.	Female urinary - genital tract fistula
K5200	Cervicovesical fistula
K5201	Ureterovaginal fistula
K5202	Urethrovaginal fistula
K5203	Urethrovesicovaginal fistula
K5204	Uteroureteric fistula
K5205	Uterovesical fistula
K5206	Vesicocervicovaginal fistula
K5207	Vesicovaginal fistula
K520z	Female urinary - genital tract fistula NOS
K521.	Female digestive - genital tract fistula
K5210	Intestinouterine fistula
K5211	Intestinovaginal fistula
K5212	Rectovaginal fistula
K5213	Rectovulval fistula
K5214	Sigmoidovaginal fistula
K5215	Uterorectal fistula
K5216	Fistula of vagina to small intestine
K5217	Fistula of vagina to large intestine
K521z	Female digestive - genital tract fistula NOS
K522.	Female genital tract - skin fistula
K5220	Uterus - abdominal wall fistula
K5221	Vaginoperineal fistula
K522z	Female genital tract - skin fistula NOS
K52y.	Other female genital fistula
K52z.	Female genital tract fistula NOS
K53..	Noninflammatory disorders of the ovary/tube/broad ligament / Ovarian cysts
K530.	Follicular cyst of ovary / Graafian follicle cyst
K531.	Corpus luteum cyst
K5310	Corpus luteum cyst unspecified
K5311	Corpus luteum cyst haemorrhage
K5312	Corpus luteum cyst rupture
K531z	Corpus luteum cyst NOS
K532.	Other ovarian cysts
K5320	Corpus albicans cyst of the ovary
K5321	Theca lutein cyst of the ovary
K5322	Germinal inclusion cyst
K5323	Simple cystoma of the ovary
K532z	Ovarian cyst NOS
K533.	Acquired atrophy of the ovary and fallopian tube
K5330	Acquired atrophy of the ovary unspecified

K5331	Senile involution of the ovary
K5332	Acquired atrophy of the fallopian tube
K5333	Acquired absence of ovary or fallopian tube / Oviduct absent acquired / Fallopian tube absent acquired / Absent ovary, acquired
K533z	Acquired atrophy of the ovary and fallopian tube NOS
K534.	Prolapse of the ovary and fallopian tube
K5340	Prolapse of the ovary
K5341	Salpingocele
K5342	Displacement of the ovary and fallopian tube
K534z	Ovarian and fallopian tube prolapse NOS
K535.	Torsion of the ovary, ovarian pedicle or fallopian tube
K5350	Torsion of the ovary
K5351	Torsion of the ovary and fallopian tube
K5352	Torsion of the fallopian tube
K5353	Torsion of the ovarian pedicle
K5354	Torsion of the accessory tube
K5355	Torsion of the hydatid of Morgagni - female
K535z	Ovary, ovarian pedicle or fallopian tube torsion NOS
K536.	Broad ligament laceration syndrome / Masters - Allen syndrome
K537.	Haematoma of the broad ligament
K53y.	Other ovary, fallopian tube and broad ligament disorders
K53y0	Cyst of broad ligament
K53y1	Polyp of broad ligament
K53y2	Infarction of ovary
K53y3	Rupture of ovary
K53y4	Infarction of fallopian tube
K53y5	Rupture of fallopian tube
K53y6	Haematosalpinx
K53yz	Other ovary, fallopian tube and broad ligament disorder NOS
K53z.	Ovarian, fallopian tube and broad ligament disorder NOS
K54..	Disorders of the uterus NEC
K540.	Polyp of the corpus uteri / Endometrial polyp
K541.	Chronic subinvolution of the uterus
K542.	Hypertrophy of the uterus
K5420	Hypertrophy of uterus unspecified
K5421	Bulky uterus
K5422	Enlarged uterus
K542z	Hypertrophy of the uterus NOS
K543.	Endometrial cystic hyperplasia
K5430	Adenomatous endometrial hyperplasia
K5431	Cystic endometrial hyperplasia
K5432	Glandular endometrial hyperplasia
K543z	Endometrial cystic hyperplasia NOS
K544.	Haematometra
K545.	Intrauterine adhesions / Synechiae - intrauterine
K546.	Malposition of uterus
K5460	Anteversion of uterus
K5461	Retroversion of uterus
K546z	Malposition of uterus NOS
K547.	Chronic inversion of uterus
K54y.	Other uterine disorders NOS
K54y0	Acquired atrophy of uterus

K54y1	Cyst of uterus
K54y2	Fibrosis of uterus NOS
K54y3	Old uterine laceration due to obstetric cause
K54y4	Ulcer of uterus
K54yz	Other uterine disorder NOS
K54z.	Disorder of uterus NOS
K55..	Noninflammatory cervical disorders
K550.	Erosion and ectropion of the cervix
K5500	Erosion of cervix
K5501	Ulcer of cervix
K5502	Ectropion (eversion) of cervix / Ectopy of cervix
K550z	Erosion and ectropion of the cervix NOS
K551.	Dysplasia of cervix uteri / Atypism - cervical / CIN I - II, cervical dysplasia
K5510	Anaplasia of cervix
K5511	Epidermidization of cervix
K5512	Squamous metaplasia of cervix
K5513	Mild cervical dysplasia / Cervical intraepithelial neoplasia grade I
K5514	Moderate cervical dysplasia / Cervical intraepithelial neoplasia grade II
K551X	Severe cervical dysplasia, not elsewhere classified
K551z	Dysplasia of cervix NOS
K552.	Leukoplakia of cervix
K553.	Old laceration of cervix
K5530	Old laceration of cervix unspecified
K5531	Adhesions of cervix
K5532	Cicatrix (postpartum) of cervix
K553z	Old laceration of cervix NOS
K554.	Stricture and stenosis of cervix / Stenosis of cervix uteri
K5540	Acquired stricture of cervix / Stenosis of cervix - acquired
K5541	Contracture of cervix
K5542	Occlusion of cervix
K5543	Pinpoint os uteri
K554z	Stricture and stenosis of cervix NOS
K555.	Incompetence of cervix
K556.	Hypertrophic elongation of the cervix
K557.	Mucous polyp of cervix / Polyp of cervix NOS
K55y.	Other noninflammatory cervical disorders
K55y0	Senile atrophy of cervix
K55y1	Cyst of cervix
K55y2	Fibrosis of cervix
K55y3	Haemorrhage of cervix
K55y4	Hypertrophy of cervix
K55yz	Other noninflammatory cervical disorder NOS
K55z.	Noninflammatory cervical disorder NOS
K56..	Noninflammatory vaginal disorders
K560.	Dysplasia of vagina
K5600	Mild vaginal dysplasia
K5601	Moderate vaginal dysplasia
K561.	Leukoplakia of vagina
K562.	Stricture or atresia of the vagina / Adhesions of vagina / Atresia of vagina
K5620	Post-operative vaginal adhesions
K5621	Post-radiation vaginal adhesions
K5622	Occlusion of vagina

K5623	Atresia of vagina
K5624	Stenosis of vagina
K562z	Stricture or atresia of the vagina NOS / Vaginal band
K563.	Tight hymenal ring / Introitus - tight / Rigid hymen
K564.	Old vaginal laceration
K565.	Leukorrhoea unspecified / Vaginal discharge NOS
K566.	Vaginal haematoma
K567.	Polyp of vagina
K56X.	Severe vaginal dysplasia, not elsewhere classified
K56y.	Other noninflammatory vaginal disorders
K56y0	Cyst of vagina
K56y1	Haemorrhage of vagina / Bleeding - vaginal NOS / BPV - Vaginal bleeding
K56y2	Granulation tissue at vaginal vault
K56yz	Other noninflammatory vaginal disorder NOS
K56z.	Noninflammatory vaginal disorder NOS
K57..	Vulval and perineal noninflammatory disorders
K570.	Dystrophy of vulva
K5700	Kraurosis of vulva
K5701	Leukoplakia of vulva
K570z	Dystrophy of vulva NOS
K571.	Atrophy of vulva
K572.	Hypertrophy of clitoris
K573.	Hypertrophy of labia / Vulva hypertrophy NOS
K574.	Old laceration or scarring of vulva
K5740	Old laceration of vulva
K5741	Old scarring of vulva / Old episiotomy scarring
K574z	Old laceration or scar of vulva NOS
K575.	Haematoma of vulva
K576.	Polyp of labia and vulva
K5760	Polyp of labia
K5761	Polyp of vulva
K576z	Polyp of labia and vulva NOS
K577.	Dysplasia of vulva
K5770	Mild vulvar dysplasia
K5771	Moderate vulvar dysplasia
K577W	Dysplasia of vulva, unspecified
K577X	Severe vulvar dysplasia, not elsewhere classified
K578.	Female genital mutilation
K57y.	Other noninflammatory vulval and perineal disorders
K57y0	Cyst of vulva
K57y1	Oedema of vulva
K57y2	Stricture of vulva
K57y3	Deficient perineum
K57y4	Lesion of vulva
K57yz	Other noninflammatory vulval and perineal disorder NOS
K57z.	Noninflammatory vulval and perineal disorder NOS
K58..	Female genital organ symptoms
K580.	Dyspareunia due to non psychogenic cause in the female
K581.	Vaginismus due to non psychogenic cause / Colpospasm / Vulvismus
K582.	Mittelschmerz - ovulation pain
K583.	Dysmenorrhoea / Painful menorrhoea / Painful menstruation / Period pains / Spasmodic dysmenorrhoea

K5830	Primary dysmenorrhoea
K5831	Secondary dysmenorrhoea
K584.	Premenstrual tension syndrome / Migraine - menstrual
K585.	Pelvic congestion syndrome / Taylor's syndrome
K586.	Stress incontinence - female
K587.	Contact bleeding of cervix
K58y.	Other female genital symptom
K58y0	Other pelvic pain - female
K58z.	Female genital organ symptoms NOS
K59..	Menstruation disorders / Period disorders
K590.	Absence of menstruation / Amenorrhoea
K5900	Primary amenorrhoea
K5901	Secondary amenorrhoea / Post-pill amenorrhoea
K590z	Amenorrhoea NOS
K591.	Scanty or infrequent menstruation / Infrequent menstruation
K5910	Hypomenorrhoea
K5911	Oligomenorrhoea
K5912	Primary oligomenorrhoea
K5913	Secondary oligomenorrhoea
K591z	Scanty or infrequent menstruation NOS
K592.	Excessive or frequent menstruation / Frequent menses / Hypermenorrhoea
K5920	Menorrhagia / Heavy periods
K5921	Polymenorrhoea / Epimenorrhoea
K592z	Excessive or frequent menstruation NOS
K593.	Puberty bleeding / Pubertal bleeding and menorrhagia
K594.	Irregular menstrual cycle
K5940	Delayed period / Late period / Delayed menstruation
K594z	Irregular menstrual cycle NOS
K595.	Ovulation bleeding / Intermenstrual bleeding - regular
K596.	Metrorrhagia / Intermenstrual bleeding - irregular
K597.	Postcoital bleeding
K598.	Menometrorrhagia
K599.	Mid-cycle bleeding
K59A.	Premenopausal postcoital bleeding
K59B.	Postmenopausal postcoital bleeding
K59y.	Other menstruation disorders / Metropathia haemorrhagica
K59y0	Retained menstruation
K59y1	Suppression of menstruation
K59y2	Supression of ovulation
K59y3	Intermenstrual bleeding
K59yx	Dysfunctional uterine haemorrhage NOS / Dysfunctional uterine bleeding
K59yy	Functional uterine haemorrhage NOS
K59yz	Other menstruation disorder NOS
K59z.	Menstruation disorder NOS / Break - through bleeding
K5A..	Menopausal and postmenopausal disorders / Postmenopausal disorders
K5A0.	Premenopausal menorrhagia / Climacteric menorrhagia
K5A1.	Postmenopausal bleeding
K5A2.	Menopausal or female climacteric state
K5A20	Menopausal flushing / Hot flushes - menopausal
K5A21	Menopausal sleeplessness
K5A22	Menopausal headache
K5A23	Menopausal concentration lack

K5A2z	Menopausal symptoms NOS
K5A3.	Postmenopausal atrophic vaginitis / Senile (atrophic) vaginitis
K5A30	Atrophy of vagina
K5A4.	Artificial menopause state
K5A5.	Perimenopausal atrophic vaginitis
K5A6.	Perimenopausal menorrhagia
K5Ay.	Other menopausal and postmenopausal states
K5Az.	Menopausal and postmenopausal disorder NOS
K5B..	Infertility - female
K5B0.	Female infertility of anovulatory origin / Anovular cycle
K5B00	Primary anovulatory infertility
K5B01	Secondary anovulatory infertility
K5B0z	Female infertility of anovulatory origin NOS
K5B1.	Female infertility of pituitary - hypothalamic origin
K5B10	Primary pituitary - hypothalamic infertility
K5B11	Secondary pituitary - hypothalamic infertility
K5B1z	Female infertility of pituitary - hypothalamic cause NOS
K5B2.	Female infertility of tubal origin
K5B20	Primary tubal infertility
K5B21	Secondary tubal infertility
K5B23	Blocked fallopian tube
K5B2z	Female infertility of tubal origin NOS
K5B3.	Female infertility of uterine origin
K5B30	Primary uterine infertility
K5B31	Secondary uterine infertility
K5B3z	Female infertility of uterine origin NOS
K5B4.	Female infertility of cervical origin
K5B40	Primary cervical infertility
K5B41	Secondary cervical infertility
K5B4z	Female infertility of cervical origin NOS
K5B5.	Female infertility of vaginal origin
K5B50	Primary vaginal infertility
K5B51	Secondary vaginal infertility
K5B5z	Female infertility of vaginal origin NOS
K5B6.	Female infertility associated with male factors
K5By.	Other female infertility
K5By0	Primary infertility unspecified
K5By1	Secondary infertility unspecified
K5Byz	Other female infertility NOS / Subfertility
K5Bz.	Female infertility NOS
K5C..	Other female genital organ disorder
K5C0.	Female haematocele NEC
K5C1.	Acquired cyst of canal of Nuck
K5C2.	Haematocolpos
K5Cy.	Other female genital organ disorder OS
K5Cz.	Other female genital disorder NOS / Habitual aborter-not pregnant
K5D..	Habitual aborter - non pregnant state
K5E..	Other abnormal uterine and vaginal bleeding
K5E0.	Abnormal uterine bleeding unrelated to menstrual cycle
K5E1.	Abnormal uterine bleeding, unspecified
K5E2.	Abnormal vaginal bleeding, unspecified
K5Ez.	Abnormal uterine and vaginal bleeding, unspecified

K5X..	Polyp of female genital tract, unspecified
K5y..	Other specified disorders of female genital tract
K5z..	Female genital tract disorder NOS
Ky...	Other specified diseases of genitourinary system
Kyu..	[X]Additional genitourinary disease classification terms
Kyu0.	[X]Glomerular diseases
Kyu00	[X]Glomerular disorders in infectious+parasitic diseases CE
Kyu01	[X]Glomerular disorders in neoplastic diseases CE
Kyu02	[X]Glomerulr disordrs/bld dis+disordr inv immune mechansm CE
Kyu03	[X]Glomerular disorders in diabetes mellitus
Kyu04	[X]Glomerulr disordr/oth endocrine,nutritnl+metabolic dis CE
Kyu05	[X]Glomerular disordrs/systemic disordrs/connectiv tissue CE
Kyu06	[X]Glomerular disorders in other diseases CE
Kyu07	[X]Rapidly progressive nephritic syndrome, other
Kyu08	[X]Unspecif nephritic syndr, minor glomerular abnormality
Kyu09	[X]Unsp nephrit synd, diff mesang prolif glomerulonephritis
Kyu0A	[X]Unsp nephrit synd, diff endocap prolif glomerulonephritis
Kyu0B	[X]Unspecified nephritic syndrome, dense deposit disease
Kyu0C	[X]Unspecif nephr synd, diff concentric glomerulonephritis
Kyu0D	[X]Isolated proteinuria, with oth specif morpholog changes
Kyu0E	[X]Isolated proteinuria, with unspecified morpholog changes
Kyu0F	[X]Hereditary nephropathy, unspecif morphological changes
Kyu1.	[X]Renal tubulo-interstitial diseases
Kyu10	[X]Other chronic tubulo-interstitial nephritis
Kyu11	[X]Other and unspecified hydronephrosis
Kyu12	[X]Other obstructive and reflux uropathy
Kyu13	[X]Obstructive and reflux uropathy, unspecified
Kyu14	[X]Nephropathy induced by other drugs+biological substances
Kyu15	[X]Toxic nephropathy, not elsewhere classified
Kyu16	[X]Other specified renal tubulo-interstitial disease
Kyu17	[X]Renal tubulo-interstitial disordr/infect+parasitic dis CE
Kyu18	[X]Renal tubulo-interstitial disordrs/neoplastic diseases CE
Kyu19	[X]Renal tub-interstl disord/bld dis+disord invl imm mech CE
Kyu1A	[X]Renal tubulo-interstitial disorders/metabolic diseases CE
Kyu1B	[X]Renal tubul-interstitl disordrs/connectv tissu disordr CE
Kyu1C	[X]Renal tubulo-interstitial disorders/transplant rejection
Kyu1D	[X]Renal tubulo-interstitial disorders in other diseases CE
Kyu1E	[X]Tubulo-interstit nephritis, not specif as acute or chron
Kyu1F	[X]Hydronephrosis with ureteral stricture NEC
Kyu2.	[X]Renal failure
Kyu20	[X]Other acute renal failure
Kyu21	[X]Other chronic renal failure
Kyu3.	[X]Urolithiasis
Kyu30	[X]Other lower urinary tract calculus
Kyu31	[X]Calculus of urinary tract in other diseases CE
Kyu4.	[X]Other disorders of kidney and ureter
Kyu40	[X]Other disorders resulting/impaired renal tubular function
Kyu41	[X]Other specified disorders of kidney and ureter
Kyu42	[X]Oth disordrs/kidney+ureter/infects+parasitic diseases CE
Kyu43	[X]Other disorders of kidney+ureter in other diseases CE
Kyu5.	[X]Other diseases of urinary system
Kyu50	[X]Other chronic cystitis

Kyu51	[X]Other cystitis
Kyu52	[X]Other neuromuscular dysfunction of bladder
Kyu53	[X]Other specified disorders of bladder
Kyu54	[X]Bladder disorders in other diseases classified elsewhere
Kyu55	[X]Other urethritis
Kyu56	[X]Other urethral stricture
Kyu57	[X]Other specified disorders of urethra
Kyu58	[X]Urethritis in diseases classified elsewhere
Kyu59	[X]Other urethral disorders in diseases CE
Kyu5A	[X]Other specified urinary incontinence
Kyu5B	[X]Other specified disorders of urinary system
Kyu5C	[X]Uninhibited neuropathic bladder, NEC
Kyu5D	[X]Reflex neuropathic bladder, not elsewhere classified
Kyu5E	[X]Neuromuscular dysfunction of bladder, unspecified
Kyu5F	[X]Urethral disorder, unspecified
Kyu5G	[X]Persistent proteinuria, unspecified
Kyu6.	[X]Diseases of male genital organs
Kyu60	[X]Other inflammatory diseases of prostate
Kyu61	[X]Other specified disorders of prostate
Kyu62	[X]Other hydrocele
Kyu63	[X]Other inflammatory disorders of penis
Kyu64	[X]Other specified disorders of penis
Kyu65	[X]Inflammatory disorders/other specifd male genital organs
Kyu66	[X]Inflammatory disorder of unspecified male genital organ
Kyu67	[X]Other specified disorders of male genital organs
Kyu68	[X]Disorders of prostate in diseases classified elsewhere
Kyu69	[X]Disorders of testis and epididymis in diseases CE
Kyu6A	[X]Balanitis in diseases classified elsewhere
Kyu6B	[X]Other disorders of male genital organs in diseases CE
Kyu7.	[X]Disorders of breast
Kyu70	[X]Other benign mammary dysplasias
Kyu71	[X]Other signs and symptoms in breast
Kyu72	[X]Other specified disorders of breast
Kyu8	[X]Inflammatory diseases of female pelvic organs
Kyu80	[X]Other specified female pelvic inflammatory diseases
Kyu81	[X]Female pelvic inflammatory disorders in other diseases CE
Kyu82	[X]Other diseases of Bartholin's gland
Kyu83	[X]Other specified inflammation of vagina and vulva
Kyu84	[X]Ulceration of vulva in infectious+parasitic diseases CE
Kyu85	[X]Vaginits,vulvits+vulvovaginitis/infect+parasitc diseas CE
Kyu86	[X]Vulvovaginal ulceration+inflammation in other diseases CE
Kyu87	[X]Female pelvic peritonitis, unspecified
Kyu88	[X]Disease of Bartholin's gland, unspecified
Kyu9.	[X]Noninflammatory disorders of female genital tract
Kyu90	[X]Other endometriosis
Kyu91	[X]Other female genital prolapse
Kyu92	[X]Other female urinary-genital tract fistulae
Kyu93	[X]Other female intestinal-genital tract fistulae
Kyu94	[X]Other female genital tract fistulae
Kyu95	[X]Other and unspecified ovarian cysts
Kyu96	[X]Oth noninflam disorders/ovary,fallopian tbe+broad ligamnt
Kyu97	[X]Polyp of other parts of female genital tract

Kyu98	[X]Other specified noninflammatory disorders of uterus
Kyu99	[X]Other specified noninflammatory disorders/cervix uteri
Kyu9A	[X]Other specified noninflammatory disorders of vagina
Kyu9B	[X]Other specified noninflammatory disorders/vulva+perineum
Kyu9C	[X]Other specified irregular menstruation
Kyu9D	[X]Other specified abnormal uterine and vaginal bleeding
Kyu9E	[X]Oth spcf conditn assoc wth fem genital organs+menstrl cyc
Kyu9F	[X]Other specified menopausal and perimenopausal disorders
Kyu9G	[X]Female infertility of other origin
Kyu9H	[X]Other complicatns associated wth artificial fertilization
Kyu9J	[X]Polyp of female genital tract, unspecified
Kyu9K	[X]Severe cervical dysplasia, not elsewhere classified
Kyu9L	[X]Severe vaginal dysplasia, not elsewhere classified
Kyu9M	[X]Severe vulvar dysplasia, not elsewhere classified
Kyu9N	[X]Dysplasia of vulva, unspecified
Kyu9P	[X]Complication assoc with artific fertilization, unspecif
KyuA.	[X]Other disorders of genitourinary tract
KyuA0	[X]Other postprocedural disorders/genitourinary system
KyuA1	[X]Residual ovary syndrome
Kz...	Genitourinary disease NOS
P1...	Spina bifida
P10..	Spina bifida with hydrocephalus / Arnold - Chiari syndrome
P100.	Unspecified spina bifida with hydrocephalus
P1000	Spina bifida with hydrocephalus, unspecified
P1001	Cervical spina bifida with hydrocephalus
P1002	Thoracic spina bifida with hydrocephalus
P1003	Lumbar spina bifida with hydrocephalus
P100z	Spina bifida with hydrocephalus NOS
P101.	Arnold - Chiari syndrome / Closed spina bifida with Arnold-Chiari malformation
P1010	Chiari malformation type I
P1011	Chiari malformation type II
P1012	Chiari malformation type III
P1013	Chiari malformation type IV
P102.	Spina bifida with hydrocephalus - open / Fissured spine with hydrocephalus / Hydromyelocele with hydrocephalus / Myelocele with hydrocephalus / Rachischisis with hydrocephalus
P1020	Unspecified spina bifida with hydrocephalus - open
P1021	Cervical spina bifida with hydrocephalus - open
P1022	Thoracic spina bifida with hydrocephalus - open
P1023	Lumbar spina bifida with hydrocephalus - open
P1024	Sacral spina bifida with hydrocephalus - open
P102z	Spina bifida with hydrocephalus - open NOS
P103.	Spina bifida with hydrocephalus - closed
P1030	Unspecified spina bifida with hydrocephalus - closed
P1031	Cervical spina bifida with hydrocephalus - closed
P1032	Thoracic spina bifida with hydrocephalus - closed
P1033	Lumbar spina bifida with hydrocephalus - closed
P1034	Sacral spina bifida with hydrocephalus - closed
P103z	Spina bifida with hydrocephalus - closed NOS / Thoracolumbar spina bifida with hydrocephalus - closed
P104.	Spina bifida with hydrocephalus of late onset
P105.	Spina bifida with stenosis of aqueduct of Sylvius
P10y.	Other specified spina bifida with hydrocephalus

P10y0	Dandy - Walker syndrome with spina bifida
P10yz	Other spina bifida with hydrocephalus NOS
P10z.	Spina bifida with hydrocephalus NOS
P11..	Spina bifida without mention of hydrocephalus
P110.	Spina bifida without mention of hydrocephalus, unspecified / Split notochord syndrome
P1100	Spina bifida without hydrocephalus, site unspecified
P1101	Cervical spina bifida without mention of hydrocephalus
P1102	Thoracic spina bifida without mention of hydrocephalus
P1103	Lumbar spina bifida without mention of hydrocephalus
P110z	Unspecified spina bifida without hydrocephalus NOS
P111.	Spinal hydromeningocele
P1110	Spinal hydromeningocele, unspecified
P1111	Cervical spinal hydromeningocele
P1112	Thoracic spinal hydromeningocele
P111z	Spinal hydromeningocele NOS
P112.	Hydromyelocele
P1120	Hydromyelocele of unspecified site
P1121	Cervical hydromyelocele
P1122	Thoracic hydromyelocele
P1123	Lumbar hydromyelocele
P112z	Hydromyelocele NOS
P113.	Spinal meningocele
P1130	Spinal meningocele of unspecified site
P1131	Cervical spinal meningocele
P1132	Thoracic spinal meningocele
P1133	Lumbar spinal meningocele
P113z	Spinal meningocele NOS
P114.	Meningomyelocele
P1140	Meningomyelocele of unspecified site
P1141	Cervical meningomyelocele
P1142	Thoracic meningomyelocele
P1143	Lumbar meningomyelocele
P114z	Meningomyelocele NOS
P115.	Myelocele
P1150	Myelocele of unspecified site
P1151	Cervical myelocele
P1152	Thoracic myelocele
P1153	Lumbar myelocele
P115z	Myelocele NOS
P1160	Myelocystocele of unspecified site
P1162	Thoracic myelocystocele
P1163	Lumbar myelocystocele
P116z	Myelocystocele NOS
P117.	Spina bifida without hydrocephalus - open / Fissured spine / Rachischisis
P1170	Unspecified spina bifida without hydrocephalus - open
P1171	Cervical spina bifida without hydrocephalus - open
P1172	Thoracic spina bifida without hydrocephalus - open
P1173	Lumbar spina bifida without hydrocephalus - open
P1174	Sacral spina bifida without hydrocephalus - open
P117z	Spina bifida without hydrocephalus - open NOS
P118.	Spina bifida without hydrocephalus - closed
P1180	Unspecified spina bifida without hydrocephalus - closed

P1181	Cervical spina bifida without hydrocephalus - closed
P1182	Thoracic spina bifida without hydrocephalus - closed
P1183	Lumbar spina bifida without hydrocephalus - closed
P1184	Sacral spina bifida without hydrocephalus - closed
P118z	Spina bifida without hydrocephalus - closed NOS / Thoracolumbar spina bifida without hydrocephalus - closed
P11y.	Other specified spina bifida without hydrocephalus / Syringomyelocele
P11z.	Spina bifida without mention of hydrocephalus NOS / Rachischisis / Syringomyelocele / Billroth's disease / Congenital hernia of dura mater
P1z..	Spina bifida NOS
P7690	Renal artery stenosis
P76B.	Multiple renal arteries / Accessory renal artery
P76C.	Anomalies of renal artery NEC
P76C0	Aberrant main renal artery
P76Cz	Anomaly of renal artery NEC NOS
PC...	Congenital genital organ anomalies
PC0..	Anomalies of ovaries
PC00.	Congenital absence of ovary / Agenesis of ovary
PC01.	Accessory ovary
PC02.	Ectopic ovary
PC03.	Streak ovary
PC04.	Developmental ovarian cyst
PC05.	Congenital torsion of ovary
PC0y.	Other specified congenital anomalies of ovaries / Congenital ovarian dysplasia
PC0z.	Congenital anomalies of ovaries NOS
PC1..	Fallopian tube and broad ligament anomalies
PC10.	Fallopian tube and broad ligament anomalies, unspecified
PC11.	Embryonic cyst of fallopian tube and broad ligament / Cyst of mesenteric remnant
PC110	Epoophoron cyst
PC111	Fimbrial cyst
PC112	Gartner's duct cyst / Persistent Gartner's duct
PC113	Parovarian cyst
PC11z	Embryonic cyst of fallopian tube or broad ligament NOS
PC1y.	Other fallopian tube and broad ligament anomalies
PC1y0	Congenital absence of fallopian tube / Congenital absence of oviduct
PC1y1	Accessory fallopian tube
PC1y2	Atresia of fallopian tube
PC1y3	Absent broad ligament
PC1y4	Accessory broad ligament
PC1y5	Atresia of broad ligament
PC1yz	Other fallopian tube or broad ligament anomalies NOS
PC1z.	Fallopian tube or broad ligament anomalies NOS
PC2..	Doubling of uterus
PC20.	Doubling of uterus, unspecified
PC21.	Didelphic uterus
PC22.	Doubling of uterus, including cervix and vagina
PC2z.	Doubling of uterus NOS
PC3..	Other anomalies of uterus
PC30.	Congenital absence of uterus
PC31.	Agenesis of uterus
PC32.	Aplasia of uterus
PC33.	Bicornuate uterus

PC34.	Uterus unicornis
PC35.	Displaced uterus / Congenital prolapse of uterus
PC36.	Fistulae involving uterus with digestive or urinary tract
PC360	Uterointestinal fistula, congenital
PC361	Uterovesical fistula, congenital
PC36z	Fistula involving uterus with digestive or urinary tract NOS
PC3y.	Other specified anomalies of uterus
PC3z.	Anomalies of uterus NOS
PC4..	Cervical, vaginal and external female genital anomalies
PC40.	Cervical/vaginal/external female genital anomalies, unspec
PC41.	Embryonic cyst of cervix/vagina/external female genitalia
PC410	Congenital cyst of canal of Nuck / Patent canal of Nuck
PC411	Embryonal cyst of vagina
PC412	Congenital cyst of vulva
PC413	Embryonic cyst of cervix
PC41z	Embryonic cyst cervix/vagina/external female genitalia NOS
PC42.	Imperforate hymen
PC43.	Rectovaginal fistula, congenital
PC4y.	Other cervical, vaginal and external female genital anomaly
PC4y0	Congenital absence of cervix
PC4y1	Agenesis of cervix
PC4y2	Congenital absence of clitoris
PC4y3	Agenesis of clitoris
PC4y4	Congenital absence of vagina / Rudimentary vagina
PC4y5	Agenesis of vagina
PC4y6	Congenital absence of vulva / Congenital absence of labium major / Congenital absence of labium minor
PC4y7	Agenesis of vulva
PC4y8	Congenital stenosis of cervical canal
PC4y9	Congenital stenosis of vagina / Congenital stricture of vagina
PC4yA	Atresia of cervix
PC4yB	Atresia of vagina / Imperforate vagina
PC4yC	Congenital vaginal cyst NEC
PC4yD	Fusion of vulva / Fusion of labia
PC4yE	Congenital labial adhesions
PC4yv	Other congenital anomaly of cervix
PC4yw	Other congenital anomaly of vagina / Vaginal septum
PC4yx	Other congenital anomaly of vulva
PC4yy	Other congenital anomaly of clitoris / Hooded clitoris / Hypertrophy of clitoris
PC4yz	Other cervical/vaginal/external female genital anomaly NOS
PC4z.	Cervical, vaginal and external female genital anomaly NOS
PC5..	Undescended testicle
PC50.	Cryptorchidism
PC500	Cryptorchidism, unilateral
PC501	Cryptorchidism, bilateral
PC50z	Cryptorchidism NOS
PC51.	Ectopic testis
PC5z.	Undescended testicle NOS / Retractile testis / Maldescent of testicle
PC5z0	Undescended testis, unilateral / Maldescent of testis, unilateral
PC5z1	Undescended testis, bilateral / Maldescent of testis, bilateral
PC6..	Hypospadias and epispadias
PC60.	Hypospadias / Anaspadias

PC600	Hypospadias, penile
PC601	Hypospadias, penoscrotal
PC602	Hypospadias, perineal
PC603	Hypospadias, balanic / Hypospadias, glanular / Hypospadias, glandular
PC61.	Epispadias / Anaspadias
PC62.	Congenital chordee
PC6z.	Hypospadias or epispadias NOS
PC7..	Indeterminate sex and pseudohermaphroditism / Gynandrism
PC70.	True hermaphroditism / Ovotestis
PC71.	Male pseudohermaphroditism
PC72.	Female pseudohermaphroditism
PC73.	Pure gonadal dysgenesis
PC7z.	Indeterminate sex or pseudohermaphroditism NOS
PC7z0	Indeterminate sex NOS / Intersex NEC
PC7z1	Pseudohermaphrodite NOS / False hermaphrodite
PC8..	Congenital anomaly of male genital system
PC80.	Other specified congenital anomaly of male genital system
PCy..	Other specified genital organ anomaly
PCy0.	Absence of genital organ NEC
PCy00	Congenital absence of penis
PCy01	Congenital absence of prostate
PCy02	Congenital absence of spermatic cord
PCy03	Congenital absence of vas deferens / Congenital absence of seminal tract
PCy0z	Genital organ absence NEC NOS
PCy1.	Congenital aplasia of genital organ NEC
PCy10	Congenital aplasia of prostate
PCy11	Congenital aplasia of round ligament
PCy12	Congenital aplasia of testicle
PCy13	Congenital aplasia of scrotum
PCy14	Aplasia of penis
PCy1z	Congenital aplasia of genital organ NEC NOS
PCy2.	Hypoplasia of genital organ NEC
PCy20	Hypoplasia of penis
PCy21	Hypoplasia of testis
PCy22	Hypoplasia of scrotum
PCy2z	Hypoplasia of genital organ NEC NOS
PCy3.	Atresia of genital organ NEC
PCy30	Atresia of ejaculatory duct
PCy31	Atresia of vas deferens
PCy3z	Atresia of genital organ NEC NOS
PCy4.	Anorchism / Congenital absence of both testes / Testicular agenesis, bilateral
PCy5.	Monorchism / Congenital absence of testis, unilateral / Testicular agenesis, unilateral
PCy6.	Polyorchism
PCy7.	Congenital lateral curvature of penis
PCy8.	Fusion of testes
PCy9.	Paraspadias
PCyA.	Cysts of embryonic remnants NEC
PCyA0	Hydatid cyst of Morgagni
PCyA1	Wolffian duct cyst
PCyA2	Hydatid cyst of Morgagni - male
PCyA3	Hydatid cyst of Morgagni - female
PCyA4	Wolffian duct cyst - male

PCyA5	Wolffian duct cyst - female
PCyA6	Cyst of embryonic remnant - male
PCyA7	Cyst of embryonic remnant - female
PCyAz	Cyst of embryonic remnant NEC NOS
PCyB.	Doubling of vagina
PCyw.	Other congenital anomaly of testis or scrotum
PCyx.	Other congenital anomaly of vas deferens or prostate
PCyy.	Other congenital anomaly of penis
PCyy0	Hooded penis
PCyy1	Webbed penis
PCyyz	Other congenital anomaly of penis NOS
PCyz.	Other specified genital organ anomaly NOS
PCz..	Genital organ anomaly NOS
PD0..	Renal agenesis and dysgenesis
PD00.	Renal agenesis, unspecified
PD000	Bilateral renal agenesis
PD001	Unilateral renal agenesis
PD00z	Renal agenesis, unspecified NOS
PD01.	Congenital renal atrophy
PD02.	Congenital absence of kidney
PD020	Bilateral congenital absence of kidneys
PD021	Unilateral congenital absence of kidney
PD02z	Congenital absence of kidney NOS
PD03.	Hypoplasia of kidney
PD030	Bilateral renal hypoplasia / Potter's syndrome
PD031	Unilateral renal hypoplasia
PD04.	Dysplasia of kidney
PD040	Bilateral renal dysplasia / Bilateral renal dysgenesis
PD041	Unilateral renal dysplasia / Unilateral renal dysgenesis
PD04z	Dysplasia of kidney NOS
PD0z.	Renal agenesis or dysgenesis NOS
PD1..	Congenital cystic kidney disease / Congenital cystic renal disease / Fibrocystic kidney / Polycystic kidney / Sponge kidney
PD10.	Congenital renal cyst, single
PD11.	Polycystic kidney disease
PD110	Polycystic kidneys, infantile type
PD111	Polycystic kidneys, adult type
PD11z	Polycystic kidney disease NOS / Cystic kidney disease NEC
PD12.	Medullary cystic disease
PD120	Medullary cystic disease, juvenile type / Nephronophthisis
PD121	Medullary cystic disease, adult type / Medullary sponge kidney
PD12y	Medullary cystic disease OS
PD12z	Medullary cystic disease NOS
PD13.	Multicystic renal dysplasia / Multicystic kidney
PD1y.	Other specified congenital cystic kidney disease
PD1y0	Fibrocystic kidney disease / Fibrocystic renal degeneration
PD1yz	Other congenital cystic kidney disease NOS
PD1z.	Congenital cystic kidney disease NOS
PD2..	Renal pelvis and ureter obstructive defects
PD20.	Atresia of ureter
PD21.	Occlusion of ureter / Congenital ureteric valves
PD22.	Congenital stricture of ureter / Congenital stenosis of ureter

PD220	Congenital stricture of ureter, unspecified
PD221	Congenital stricture of ureteropelvic junction
PD222	Congenital stricture of ureterovesical orifice
PD22z	Congenital stricture of ureter NOS
PD23.	Congenital hydronephrosis / Congenital dilated renal pelvis
PD24.	Congenital dilatation of ureter
PD25.	Hydroureter - congenital
PD26.	Megaloureter - congenital
PD27.	Ureterocele - congenital
PD28.	Impervious ureter
PD2y.	Other specified obstructive defect of renal pelvis or ureter
PD2z.	Obstructive defect of renal pelvis or ureter NOS
PD3..	Other specified renal anomaly
PD30.	Accessory kidney / Duplication of kidney / Renal duplication NEC / Supernumerary kidney
PD31.	Congenital calculus of kidney
PD32.	Congenital displaced kidney
PD33.	Discoid kidney
PD34.	Double kidney with double pelvis / Duplex kidneys / Pyelon duplex
PD35.	Ectopic kidney / Pelvic kidney
PD36.	Fusion of kidneys
PD37.	Giant kidney
PD38.	Horseshoe kidney
PD39.	Hyperplasia of kidney
PD3A.	Lobulation of kidney / Ren arcuatus / Ren unguliformis
PD3B.	Malrotation of kidney
PD3C.	Triple kidney with triple pelvis / Trifid kidney / Pyelon triplex
PD3D.	Enlarged kidney
PD3z.	Other specified renal anomaly NOS
PD4..	Other specified ureter anomalies
PD40.	Absent ureter
PD41.	Accessory ureter
PD42.	Deviation of ureter
PD43.	Displaced ureteric orifice
PD44.	Double ureter / Duplication of ureter
PD45.	Ectopic ureter / Congenital displacement of opening of ureter / Ectopic insertion of ureter
PD46.	Anomalous ureter implantation
PD47.	Congenital vesico-uretero-renal reflux
PD4z.	Other specified ureter anomaly NOS
PD5..	Exstrophy of urinary bladder / Ectopia vesicae / Ectopic bladder
PD50.	Ectopic bladder / Ectopia vesicae
PD5z.	Exstrophy of urinary bladder NOS
PD6..	Urethra and bladder neck atresia and stenosis PD60. Congenital bladder neck obstruction
PD600	Atresia of bladder neck
PD601	Stenosis of bladder neck
PD60z	Congenital bladder neck obstruction NOS PD61. Congenital obstruction of urethra
PD610	Atresia of anterior urethra
PD611	Stenosis of anterior urethra
PD61z	Congenital obstruction of urethra NOS
PD62.	Congenital urethral valvular stricture / Congenital posterior urethral valves / Congenital urethral posterior valvular stricture
PD63.	Congenital urinary meatus stricture / Congenital urinary meatus obstruction / Congenital pinhole urinary meatus

PD630	Atresia of urinary meatus
PD631	Stenosis of urinary meatus
PD63z	Congenital urinary meatus stricture NOS
PD64.	Congenital vesicourethral orifice stricture
PD65.	Imperforate urinary meatus
PD66.	Impervious urethra
PD67.	Congenital posterior urethral valves
PD6y.	Other specified urethra or bladder neck atresia or stenosis
PD6z.	Urethra or bladder neck atresia or stenosis NOS
PD7..	Anomalies of urachus
PD70.	Cyst of urachus
PD71.	Fistula of urachus
PD72.	Patent urachus / Persistent urachus
PD73.	Persistent umbilical sinus
PD7y.	Other specified anomalies of urachus
PD7z.	Anomalies of urachus NOS
PDy..	Other specified bladder and urethral anomalies
PDy0.	Congenital absence of bladder
PDy1.	Congenital absence of urethra
PDy2.	Accessory bladder
PDy3.	Accessory urethra
PDy4.	Congenital bladder diverticulum
PDy5.	Congenital bladder hernia
PDy6.	Congenital urethrorectal fistula
PDy7.	Congenital prolapse of bladder mucosa
PDy8.	Congenital prolapse of urethra
PDy9.	Double urethra
PDyA.	Double urinary meatus
PDyB.	Congenital hourglass bladder
PDyz.	Other bladder or urethral anomaly NOS
PDyz0	Epispadias, female
PDyz1	Hypospadias, female
PDz..	Urinary system anomalies NOS
PDz0.	Unspecified anomaly of kidney
PDz1.	Unspecified anomaly of ureter
PDz2.	Unspecified anomaly of bladder
PDz3.	Unspecified anomaly of urethra
PKy90	Alport's syndrome
Pyu7.	[X]Congenital malformations of the urinary system
Pyu70	[X]Other cystic kidney diseases
Pyu71	[X]Other obstructive defects of renal pelvis and ureter
Pyu72	[X]Other congenital malformations of ureter
Pyu73	[X]Other specified congenital malformations of kidney
Pyu74	[X]Other atresia and stenosis of urethra and bladder neck
Pyu75	[X]Other congenital malformations of bladder and urethra
Pyu76	[X]Other specified congenital malform of urinary system
Q48y0	Congenital renal failure / Congenital uraemia
R110.	[D]Proteinuria
R112.	[D]Haemoglobinuria R117. [D]Cells and casts in urine
S76..	Injury to kidney
S760.	Closed injury of kidney
S7600	Kidney injury without open wound into cavity, unspecified

S7601	Kidney haematoma without mention of open wound into cavity / Renal haematoma without mention of open wound into cavity
S7602	Kidney laceration without mention of open wound into cavity
S7603	Kidney parenchyma disruption without open wound to cavity
S760z	Kidney injury without mention of open wound into cavity NOS
S761.	Open injury of kidney
S7610	Kidney injury with open wound into cavity, unspecified
S7611	Kidney haematoma with open wound into cavity / Renal haematoma with open wound into cavity
S7612	Kidney laceration with open wound into cavity
S7613	Kidney parenchyma disruption with open wound into cavity
S761z	Kidney injury with open wound into cavity NOS
S76z.	Injury to kidney NOS / Ruptured kidney NOS
SP154	Renal failure as a complication of care / Kidney failure as a complication of care / Post operative renal failure / Uraemia - post operative
ZV105	[V]Personal history of malignant neoplasm of urinary organ / [V]Personal history of malignant neoplasm of bladder / [V]Personal history of malignant neoplasm of kidney / [V]Personal history of malignant neoplasm of kidney
ZV6G5	[V]Acquired absence of kidney

APPENDIX C: HYPERTENSION READ CODES.

Read Code	Description
6627	Good hypertension control
6628	Poor hypertension control
6629	Hypertension:follow-up default
61462	Hypertension induced by oral contraceptive pill
14A2.	H/O: hypertension
1JD..	Suspected hypertension
246M.	White coat hypertension
662b.	Moderate hypertension control
662c.	Hypertension six month review
662d.	Hypertension annual review
662F.	Hypertension treatm. started
662G.	Hypertensive treatm.changed
662O.	On treatment for hypertension
662P.	Hypertension monitoring
67H8.	Lifestyle advice regarding hypertension
7Q01y	Other specified high cost hypertension drugs
7Q01z	High cost hypertension drugs NOS
8CR4.	Hypertension clinical management plan
8HT5.	Referral to hypertension clinic
8I3N.	Hypertension treatment refused
9N03.	Seen in hypertension clinic
9N1y2	Seen in hypertension clinic
9OI1.	Attends hypertension monitor.
9OI2.	Refuses hypertension monitor.
9OIA.	Hypertension monitor.chck done / Hypertension monitored
9OIZ.	Hypertens.monitoring admin.NOS
G20..	Essential hypertension / High blood pressure
G200.	Malignant essential hypertension
G201.	Benign essential hypertension
G202.	Systolic hypertension
G203.	Diastolic hypertension
G20z.	Essential hypertension NOS / Hypertension NOS
G22z.	Hypertensive renal disease NOS / Renal hypertension
G24..	Secondary hypertension
G240.	Secondary malignant hypertension
G2400	Secondary malignant renovascular hypertension
G240z	Secondary malignant hypertension NOS
G241.	Secondary benign hypertension
G2410	Secondary benign renovascular hypertension
G241z	Secondary benign hypertension NOS
G244.	Hypertension secondary to endocrine disorders
G24z.	Secondary hypertension NOS
G24z0	Secondary renovascular hypertension NOS
G24z1	Hypertension secondary to drug
G24zz	Secondary hypertension NOS
G2y..	Other specified hypertensive disease
G2z..	Hypertensive disease NOS
Gyu20	[X]Other secondary hypertension

Gyu21	[X]Hypertension secondary to other renal disorders
L12..	Hypertension complicating pregnancy/childbirth/puerperium
L120.	Benign essential hypertension in pregnancy/childbirth/puerp
L1200	Benign essential hypertension in preg/childb/puerp unspec
L1201	Benign essential hypertension in preg/childb/puerp - deliv
L1202	Benign ess hypert in preg/childb/puerp - deliv with p/n comp
L1203	Benign essential hypertension in preg/childb/puerp-not deliv
L1204	Benign essential hypertension in preg/childb/puerp +p/n comp
L120z	Benign essential hypertension in preg/childb/puerp NOS
L121.	Renal hypertension in pregnancy/childbirth/puerperium
L1210	Renal hypertension in pregnancy/childbirth/puerp unspecified
L1211	Renal hypertension in pregnancy/childbirth/puerp - delivered
L1212	Renal hypertension in preg/childb/puerp -deliv with p/n comp
L1213	Renal hypertension in preg/childbirth/puerp - not delivered
L1214	Renal hypertension in preg/childb/puerp + p/n complication
L121z	Renal hypertension in pregnancy/childbirth/puerperium NOS
L122.	Other pre-existing hypertension in preg/childbirth/puerp
L1220	Other pre-existing hypertension in preg/childb/puerp unspec
L1221	Other pre-existing hypertension in preg/childb/puerp - deliv
L1222	Oth pre-exist hypert in preg/childb/puerp -del with p/n comp
L1223	Other pre-exist hypertension in preg/childb/puerp-not deliv
L1224	Other pre-exist hypertension in preg/childb/puerp + p/n comp
L122z	Other pre-existing hypertension in preg/childb/puerp NOS
L123.	Transient hypertension of pregnancy
L1230	Transient hypertension of pregnancy unspecified
L1231	Transient hypertension or pregnancy delivered
L1232	Transient hypertension of pregnancy deliv with p/n comp
L1233	Transient hypertension or pregnancy not delivered
L1234	Transient hypertension of pregnancy postnatal complication
L1235	Gestational hypertension
L1236	Transient hypertension of pregnancy
L123z	Transient hypertension of pregnancy NOS
L124.	Mild or unspecified pre-eclampsia / Mild pre-eclampsia / Toxaemia NOS
L1240	Mild or unspecified pre-eclampsia unspecified
L1241	Mild or unspecified pre-eclampsia delivered
L1242	Mild or unspecified pre-eclampsia - delivered with p/n comp
L1243	Mild or unspecified pre-eclampsia - not delivered
L1244	Mild or unspecified pre-eclampsia with p/n complication
L1245	Mild pre-eclampsia
L1246	Pre-eclampsia, unspecified
L124z	Mild or unspecified pre-eclampsia NOS
L125.	Severe pre-eclampsia
L1250	Severe pre-eclampsia unspecified
L1251	Severe pre-eclampsia - delivered
L1252	Severe pre-eclampsia - delivered with postnatal complication
L1253	Severe pre-eclampsia - not delivered
L1254	Severe pre-eclampsia with postnatal complication
L125z	Severe pre-eclampsia NOS
L126.	Eclampsia
L1260	Eclampsia unspecified
L1261	Eclampsia - delivered
L1262	Eclampsia - delivered with postnatal complication

L1263	Eclampsia - not delivered
L1264	Eclampsia with postnatal complication
L1265	Eclampsia in pregnancy
L1266	Eclampsia in labour
L126z	Eclampsia NOS
L127.	Pre-eclampsia or eclampsia with pre-existing hypertension
L1270	Pre-eclampsia or eclampsia with hypertension unspecified
L1271	Pre-eclampsia or eclampsia with hypertension - delivered
L1272	Pre-eclampsia or eclampsia with hypertension - del+p/n comp
L1273	Pre-eclampsia or eclampsia with hypertension - not delivered
L1274	Pre-eclampsia or eclampsia with hypertension + p/n comp
L127z	Pre-eclampsia or eclampsia + pre- existing hypertension NOS
L128.	Pre-exist hypertension compl preg childbirth and puerperium
L1280	Pre-exist hyperten heart dis compl preg childbth+puerperium
L1281	Pre-exist hyperten heart renal dis comp preg chldbirth/puerp
L1282	Pre-exist 2ndry hypertens comp preg childbth and puerperium
L129.	Moderate pre-eclampsia
L12A.	HELLP - Syndrome haemolysis, elev liver enzyme low platelets
L12B.	Proteinuric hypertension of pregnancy
L12z.	Unspecified hypertension in pregnancy/childbirth/puerperium
L12z0	Unspecified hypertension in preg/childb/puerp unspecified
L12z1	Unspecified hypertension in preg/childb/puerp - delivered
L12z2	Unspecified hypertension in preg/childb/puerp -del +p/n comp
L12z3	Unspecified hypertension in preg/childb/puerp - not deliv
L12z4	Unspecified hypertension in preg/childb/puerp with p/n comp
L12zz	Unspecified hypertension in preg/childb/puerp NOS

APPENDIX D: DIABETES READ CODES.

Read Code	Description
1434	H/O: diabetes mellitus
3882	Diabetes well being questionnaire
3883	Diabetes treatment satisfaction questionnaire
6761	Diabetic pre-pregnancy counselling
7276	Pan retinal photocoagulation for diabetes
9360	Patient held diabetic record issued
13AB.	Diabetic lipid lowering diet
13AC.	Diabetic weight reducing diet
13B1.	Diabetic diet
13Y1.	Diabetic association member
14F4.	H/O: Admission in last year for diabetes foot problem
2BBF.	Retinal abnormality - diabetes related
2BBk.	O/E - right eye stable treated prolif diabetic retinopathy
2BBL.	O/E - diabetic maculopathy present both eyes
2BBl.	O/E - left eye stable treated prolif diabetic retinopathy
2BBo.	O/E - sight threatening diabetic retinopathy
2BBP.	O/E - right eye background diabetic retinopathy
2BBQ.	O/E - left eye background diabetic retinopathy
2BBr.	Impair vision due diab retinop
2BBR.	O/E - right eye preproliferative diabetic retinopathy
2BBS.	O/E - left eye preproliferative diabetic retinopathy
2BBT.	O/E - right eye proliferative diabetic retinopathy
2BBV.	O/E - left eye proliferative diabetic retinopathy
2BBW.	O/E - right eye diabetic maculopathy
2BBX.	O/E - left eye diabetic maculopathy
2G510	Foot abnormality - diabetes related
2G5A.	O/E - Right diabetic foot at risk
2G5B.	O/E - Left diabetic foot at risk
2G5C.	Foot abnormality - diabetes related
2G5E.	O/E - Right diabetic foot at low risk
2G5F.	O/E - Right diabetic foot at moderate risk
2G5G.	O/E - Right diabetic foot at high risk
2G5H.	O/E - Right diabetic foot - ulcerated
2G5I.	O/E - Left diabetic foot at low risk
2G5J.	O/E - Left diabetic foot at moderate risk
2G5K.	O/E - Left diabetic foot at high risk
2G5L.	O/E - Left diabetic foot - ulcerated
2G5V.	O/E - right chronic diabetic foot ulcer
2G5W.	O/E - left chronic diabetic foot ulcer
66A..	Diabetic monitoring
66A1.	Initial diabetic assessment
66A2.	Follow-up diabetic assessment
66A3.	Diabetic on diet only
66A4.	Diabetic on oral treatment
66A5.	Diabetic on insulin
66A6.	Last hypo. attack
66A7.	Frequency of hypo. attacks
66A70	Frequency of hospital treated hypoglycaemia

66A71	Frequency of GP or paramedic treated hypoglycaemia
66A8.	Has seen dietician - diabetes
66A9.	Understands diet - diabetes
66AA.	Injection sites / Injection sites - diabetic
66Aa.	Diabetic diet - poor compliance
66AB.	Urine sugar charts
66Ab.	Diabetic foot examination
66Ac.	Diabetic peripheral neuropathy screening
66AC.	Blood sugar charts
66Ad.	Hypoglycaemic attack requiring 3rd party assistance
66AD.	Fundoscopy - diabetic check
66Ae.	HBA1c target
66AE.	Feet examination
66Af.	Patient diabetes education review
66AF.	Attends out-patients
66Ag.	Insulin needles changed daily
66AG.	Diabetic drug side effects
66Ah.	Insulin needles changed for each injection
66AH.	Diabetic treatment changed
66AH0	Conversion to insulin
66Ai.	Diabetic 6 month review
66AI.	Diabetic - good control
66Aj.	Insulin needles changed less than once a day
66AJ.	Diabetic - poor control / Unstable diabetes
66AJ0	Chronic hyperglycaemia
66AJ1	Brittle diabetes
66AJ2	Loss of hypoglycaemic warning
66AJ3	Recurrent severe hypos
66AJz	Diabetic - poor control NOS
66Ak.	Diabetic monitoring - lower risk albumin excretion
66AK.	Diabetic - cooperative patient
66Al.	Diabetic monitoring - higher risk albumin excretion
66AL.	Diabetic-uncooperative patient
66AM.	Diabetic - follow-up default
66Am.	Insulin dose changed
66An.	Diabetes type 1 review
66AN.	Date diabetic treatment start
66Ao.	Diabetes type 2 review
66AO.	Date diabetic treatment stopp.
66Ap.	Insulin treatment initiated
66AP.	Diabetes: practice programme
66Aq.	Diabetic foot screen
66AQ.	Diabetes: shared care programme
66AQ0	Unsuitable for diabetes year of care programme
66AQ1	Declined consent for diabetes year of care programme
66Ar.	Insulin treatment stopped
66AR.	Diabetes management plan given
66As.	Diabetic on subcutaneous treatment
66AS.	Diabetic annual review
66AT.	Annual diabetic blood test
66AU.	Diabetes care by hospital only
66AV.	Diabetic on insulin and oral treatment

66AW.	Diabetic foot risk assessment
66AX.	Diabetes: shared care in pregnancy - diabetol and obstet
66AY.	Diabetic diet - good compliance
66AZ.	Diabetic monitoring NOS
679L.	Health education - diabetes
679L0	Education in self management of diabetes
679R.	Patient offered diabetes structured education programme
8BL2.	Patient on maximal tolerated therapy for diabetes
8CA41	Pt advised re diabetic diet
8CP2.	Transition of diabetes care options discussed
8CR2.	Diabetes clinical management plan
8CS0.	Diabetes care plan agreed
8H2J.	Admit diabetic emergency
8H3O.	Non-urgent diabetic admission screener
8H4e.	Referral to diabetes special interest general practitioner
8H4F.	Referral to diabetologist
8H7C.	Refer, diabetic liaison nurse
8H7f.	Referral to diabetes nurse
8H7r.	Refer to diabetic foot screener
8HBG.	Diabetic retinopathy 12 month review
8HBH.	Diabetic retinopathy 6 month review
8Hg4.	Discharged from care of diabetes specialist nurse
8HgC.	Discharged from diabetes shared care programme
8HHy.	Referral to diabetic register
8Hj0.	Referral to diabetes structured education programme
8Hj3.	Referral to DAFNE diabetes structured education programme
8Hj4.	Referral to DESMOND diabetes structured education programme
8Hj5.	Referral to XPERT diabetes structured education programme
8Hl1.	Referral for diabetic retinopathy screening
8Hl4.	Referral to community diabetes specialist nurse
8HTe.	Referral to diabetes preconception counselling clinic
8HTi.	Referral to multidisciplinary diabetic clinic
8HTk.	Referral to diabetic eye clinic
8HVU.	Private referral to diabetologist
9m00.	Eligible for diabetic retinopathy - screening
9N0m.	Seen in diabetic nurse consultant clinic
9N0n.	Seen in community diabetes specialist clinic
9N0o.	Seen in community diabetic specialist nurse clinic
9N1i.	Seen in diabetic foot clinic
9N1o.	Seen in multidisciplinary diabetic clinic
9N1v.	Seen in diabetic eye clinic
9N2d.	Seen by diabetologist
9N2i.	Seen by a diabetic liaison nurse
9Nl4.	Seen by general practitioner special interest in diabetes
9NM0.	Attending diabetes clinic
9NN8.	Under care of diabetologist
9NN9.	Under care of diabetes specialist nurse
9NND.	Under care of diabetic foot screener
9OL..	Diabetes monitoring admin. / Diabetes clinic administration
9OL1.	Attends diabetes monitoring
9OL2.	Refuses diabetes monitoring
9OLB.	Attended diabetes structured education programme

9OLD.	Diabetic patient unsuitable for digital retinal photography
9OLE.	Attended DESMOND structured programme
9OLF.	Diabetes structured education programme completed
9OLG.	Attended XPERT diabetes structured education programme
9OLH.	Attended DAFNE diabetes structured education programme
9OLJ.	DAFNE diabetes structured education programme completed
9OLK.	DESMOND diabetes structured education programme completed
9OLL.	XPERT diabetes structured education programme completed
9OLM.	Diabetes structured education programme declined
9OLZ.	Diabetes monitoring admin.NOS
C10..	Diabetes mellitus
C100.	Diabetes mellitus with no mention of complication
C1000	Diabetes mellitus, juvenile type, no mention of complication / Insulin dependent diabetes mellitus
C1001	Diabetes mellitus, adult onset, no mention of complication / Maturity onset diabetes / Non-insulin dependent diabetes mellitus
C100z	Diabetes mellitus NOS with no mention of complication
C101.	Diabetes mellitus with ketoacidosis
C1010	Diabetes mellitus, juvenile type, with ketoacidosis
C1011	Diabetes mellitus, adult onset, with ketoacidosis
C101y	Other specified diabetes mellitus with ketoacidosis
C101z	Diabetes mellitus NOS with ketoacidosis
C102.	Diabetes mellitus with hyperosmolar coma
C1020	Diabetes mellitus, juvenile type, with hyperosmolar coma
C1021	Diabetes mellitus, adult onset, with hyperosmolar coma
C102z	Diabetes mellitus NOS with hyperosmolar coma
C103.	Diabetes mellitus with ketoacidotic coma
C1030	Diabetes mellitus, juvenile type, with ketoacidotic coma
C1031	Diabetes mellitus, adult onset, with ketoacidotic coma
C103y	Other specified diabetes mellitus with coma
C103z	Diabetes mellitus NOS with ketoacidotic coma
C104.	Diabetes mellitus with renal manifestation / Diabetic nephropathy
C1040	Diabetes mellitus, juvenile type, with renal manifestation
C1041	Diabetes mellitus, adult onset, with renal manifestation
C104y	Other specified diabetes mellitus with renal complications
C104z	Diabetes mellitis with nephropathy NOS
C105.	Diabetes mellitus with ophthalmic manifestation
C1050	Diabetes mellitus, juvenile type, + ophthalmic manifestation
C1051	Diabetes mellitus, adult onset, + ophthalmic manifestation
C105y	Other specified diabetes mellitus with ophthalmic complicatn
C105z	Diabetes mellitus NOS with ophthalmic manifestation
C106.	Diabetes mellitus with neurological manifestation / Diabetic amyotrophy / Diabetes mellitus with neuropathy / Diabetes mellitus with polyneuropathy
C1060	Diabetes mellitus, juvenile, + neurological manifestation
C1061	Diabetes mellitus, adult onset, + neurological manifestation
C106y	Other specified diabetes mellitus with neurological comps
C106z	Diabetes mellitus NOS with neurological manifestation
C107.	Diabetes mellitus with peripheral circulatory disorder / Diabetes mellitus with gangrene / Diabetes with gangrene
C1070	Diabetes mellitus, juvenile +peripheral circulatory disorder
C1071	Diabetes mellitus, adult, + peripheral circulatory disorder
C1072	Diabetes mellitus, adult with gangrene

C1073	IDDM with peripheral circulatory disorder
C1074	NIDDM with peripheral circulatory disorder
C107y	Other specified diabetes mellitus with periph circ comps
C107z	Diabetes mellitus NOS with peripheral circulatory disorder
C108.	Insulin dependent diabetes mellitus / IDDM-Insulin dependent diabetes mellitus / Type 1 diabetes mellitus / Type I diabetes mellitus
C1080	Insulin-dependent diabetes mellitus with renal complications / Type I diabetes mellitus with renal complications / Type 1 diabetes mellitus with renal complications
C1081	Insulin-dependent diabetes mellitus with ophthalmic comps / Type I diabetes mellitus with ophthalmic complications / Type 1 diabetes mellitus with ophthalmic complications
C1082	Insulin-dependent diabetes mellitus with neurological comps / Type I diabetes mellitus with neurological complications / Type 1 diabetes mellitus with neurological complications
C1083	Insulin dependent diabetes mellitus with multiple complicatn / Type I diabetes mellitus with multiple complications / Type 1 diabetes mellitus with multiple complications
C1084	Unstable insulin dependent diabetes mellitus / Unstable type I diabetes mellitus / Unstable type 1 diabetes mellitus
C1085	Insulin dependent diabetes mellitus with ulcer / Type I diabetes mellitus with ulcer / Type 1 diabetes mellitus with ulcer
C1086	Insulin dependent diabetes mellitus with gangrene / Type I diabetes mellitus with gangrene / Type 1 diabetes mellitus with gangrene
C1088	Insulin dependent diabetes mellitus - poor control / Type I diabetes mellitus - poor control / Type 1 diabetes mellitus - poor control
C1089	Insulin dependent diabetes maturity onset / Type I diabetes mellitus maturity onset / Type 1 diabetes mellitus maturity onset
C108A	Insulin-dependent diabetes without complication / Type I diabetes mellitus without complication / Type 1 diabetes mellitus without complication
C108B	Insulin dependent diabetes mellitus with mononeuropathy / Type I diabetes mellitus with mononeuropathy / Type 1 diabetes mellitus with mononeuropathy
C108C	Insulin dependent diabetes mellitus with polyneuropathy / Type I diabetes mellitus with polyneuropathy / Type 1 diabetes mellitus with polyneuropathy
C108D	Insulin dependent diabetes mellitus with nephropathy / Type I diabetes mellitus with nephropathy / Type 1 diabetes mellitus with nephropathy
C108E	Insulin dependent diabetes mellitus with hypoglycaemic coma / Type I diabetes mellitus with hypoglycaemic coma / Type 1 diabetes mellitus with hypoglycaemic coma
C108F	Insulin dependent diabetes mellitus with diabetic cataract / Type I diabetes mellitus with diabetic cataract / Type 1 diabetes mellitus with diabetic cataract
C108G	Insulin dependent diab mell with peripheral angiopathy / Type I diabetes mellitus with peripheral angiopathy / Type 1 diabetes mellitus with peripheral angiopathy
C108H	Insulin dependent diabetes mellitus with arthropathy / Type I diabetes mellitus with arthropathy / Type 1 diabetes mellitus with arthropathy
C108J	Insulin dependent diab mell with neuropathic arthropathy / Type I diabetes mellitus with neuropathic arthropathy / Type 1 diabetes mellitus with neuropathic arthropathy
C108y	Other specified diabetes mellitus with multiple comps
C108z	Unspecified diabetes mellitus with multiple complications

C109.	Non-insulin dependent diabetes mellitus / NIDDM - Non-insulin dependent diabetes mellitus / Type 2 diabetes mellitus / Type II diabetes mellitus
C1090	Non-insulin-dependent diabetes mellitus with renal comps / Type II diabetes mellitus with renal complications / Type 2 diabetes mellitus with renal complications
C1091	Non-insulin-dependent diabetes mellitus with ophthalm comps / Type II diabetes mellitus with ophthalmic complications / Type 2 diabetes mellitus with ophthalmic complications
C1092	Non-insulin-dependent diabetes mellitus with neuro comps / Type II diabetes mellitus with neurological complications / Type 2 diabetes mellitus with neurological complications
C1093	Non-insulin-dependent diabetes mellitus with multiple comps / Type II diabetes mellitus with multiple complications / Type 2 diabetes mellitus with multiple complications
C1094	Non-insulin dependent diabetes mellitus with ulcer / Type II diabetes mellitus with ulcer / Type 2 diabetes mellitus with ulcer
C1095	Non-insulin dependent diabetes mellitus with gangrene / Type II diabetes mellitus with gangrene / Type 2 diabetes mellitus with gangrene
C1096	Non-insulin-dependent diabetes mellitus with retinopathy / Type II diabetes mellitus with retinopathy / Type 2 diabetes mellitus with retinopathy
C1097	Non-insulin dependent diabetes mellitus - poor control / Type II diabetes mellitus - poor control / Type 2 diabetes mellitus - poor control
C1098	Reaven's syndrome
C1099	Non-insulin-dependent diabetes mellitus without complication / Type II diabetes mellitus without complication / Type 2 diabetes mellitus without complication
C109A	Non-insulin dependent diabetes mellitus with mononeuropathy / Type II diabetes mellitus with mononeuropathy / Type 2 diabetes mellitus with mononeuropathy
C109B	Non-insulin dependent diabetes mellitus with polyneuropathy / Type II diabetes mellitus with polyneuropathy / Type 2 diabetes mellitus with polyneuropathy
C109C	Non-insulin dependent diabetes mellitus with nephropathy / Type II diabetes mellitus with nephropathy / Type 2 diabetes mellitus with nephropathy
C109D	Non-insulin dependent diabetes mellitus with hypoglyca coma / Type II diabetes mellitus with hypoglycaemic coma / Type 2 diabetes mellitus with hypoglycaemic coma
C109E	Non-insulin depend diabetes mellitus with diabetic cataract / Type II diabetes mellitus with diabetic cataract / Type 2 diabetes mellitus with diabetic cataract
C109F	Non-insulin-dependent d m with peripheral angiopath / Type II diabetes mellitus with peripheral angiopathy / Type 2 diabetes mellitus with peripheral angiopathy
C109G	Non-insulin dependent diabetes mellitus with arthropathy / Type II diabetes mellitus with arthropathy / Type 2 diabetes mellitus with arthropathy
C109H	Non-insulin dependent d m with neuropathic arthropathy / Type II diabetes mellitus with neuropathic arthropathy / Type 2 diabetes mellitus with neuropathic arthropathy
C109J	Insulin treated Type 2 diabetes mellitus / Insulin treated non-insulin dependent diabetes mellitus / Insulin treated Type II diabetes mellitus
C109K	Hyperosmolar non-ketotic state in type 2 diabetes mellitus
C10A.	Malnutrition-related diabetes mellitus / Jamaica type diabetes
C10A0	Malnutrition-related diabetes mellitus with coma
C10A1	Malnutrition-related diabetes mellitus with ketoacidosis
C10A2	Malnutrition-related diabetes mellitus with renal complicatn

C10A3	Malnutrit-related diabetes mellitus wth ophthalmic complicat
C10A4	Malnutrition-related diabetes mellitus wth neuro complicatns
C10A5	Malnutritn-relat diabetes melitus wth periph circul complctn
C10A6	Malnutrition-related diabetes mellitus with multiple comps
C10A7	Malnutrition-related diabetes mellitus without complications
C10AW	Malnutrit-related diabetes mellitus with unspec complics
C10AX	Malnutrit-relat diabetes mellitus with other spec comps
C10B.	Diabetes mellitus induced by steroids
C10B0	Steroid induced diabetes mellitus without complication
C10C.	Diabetes mellitus autosomal dominant / Maturity onset diabetes in youth / Maturity onset diabetes in youth type 1
C10D.	Diabetes mellitus autosomal dominant type 2 / Maturity onset diabetes in youth type 2
C10E.	Type 1 diabetes mellitus / Type I diabetes mellitus / Insulin dependent diabetes mellitus
C10E0	ype 1 diabetes mellitus with renal complications / Type I diabetes mellitus with renal complications / Insulin-dependent diabetes mellitus with renal complications
C10E1	Type 1 diabetes mellitus with ophthalmic complications / Type I diabetes mellitus with ophthalmic complications / Insulin-dependent diabetes mellitus with ophthalmic comps
C10E2	Type 1 diabetes mellitus with neurological complications / Type I diabetes mellitus with neurological complications / Insulin-dependent diabetes mellitus with neurological comps
C10E3	Type 1 diabetes mellitus with multiple complications / Type I diabetes mellitus with multiple complications / Insulin dependent diabetes mellitus with multiple complicat
C10E4	Unstable type 1 diabetes mellitus / Unstable type I diabetes mellitus / Unstable insulin dependent diabetes mellitus
C10E5	Type 1 diabetes mellitus with ulcer / Type I diabetes mellitus with ulcer / Insulin dependent diabetes mellitus with ulcer
C10E6	Type 1 diabetes mellitus with gangrene / Type I diabetes mellitus with gangrene / Insulin dependent diabetes mellitus with gangrene
C10E7	Type 1 diabetes mellitus with retinopathy / Type I diabetes mellitus with retinopathy / Insulin dependent diabetes mellitus with retinopathy
C10E8	Type 1 diabetes mellitus - poor control / Type I diabetes mellitus - poor control / Insulin dependent diabetes mellitus - poor control
C10E9	Type 1 diabetes mellitus maturity onset / Type I diabetes mellitus maturity onset / Insulin dependent diabetes maturity onset
C10EA	Type 1 diabetes mellitus without complication / Type I diabetes mellitus without complication / Insulin-dependent diabetes without complication
C10EB	Type 1 diabetes mellitus with mononeuropathy / Type I diabetes mellitus with mononeuropathy / Insulin dependent diabetes mellitus with mononeuropathy
C10EC	Type 1 diabetes mellitus with polyneuropathy / Type I diabetes mellitus with polyneuropathy / Insulin dependent diabetes mellitus with polyneuropathy
C10ED	Type 1 diabetes mellitus with nephropathy / Type I diabetes mellitus with nephropathy / Insulin dependent diabetes mellitus with nephropathy
C10EE	Type 1 diabetes mellitus with hypoglycaemic coma / Type I diabetes mellitus with hypoglycaemic coma / Insulin dependent diabetes mellitus with hypoglycaemic coma
C10EF	Type 1 diabetes mellitus with diabetic cataract / Type I diabetes mellitus with diabetic cataract / Insulin dependent diabetes mellitus with diabetic cataract

C10EG	Type 1 diabetes mellitus with peripheral angiopathy / Type I diabetes mellitus with peripheral angiopathy / Insulin dependent diab mell with peripheral angiopathy
C10EH	Type 1 diabetes mellitus with arthropathy / Type I diabetes mellitus with arthropathy / Insulin dependent diabetes mellitus with arthropathy
C10EJ	Type 1 diabetes mellitus with neuropathic arthropathy / Type I diabetes mellitus with neuropathic arthropathy / Insulin dependent diab mell with neuropathic arthropathy
C10EK	Type 1 diabetes mellitus with persistent proteinuria / Type I diabetes mellitus with persistent proteinuria
C10EL	Type 1 diabetes mellitus with persistent microalbuminuria / Type I diabetes mellitus with persistent microalbuminuria
C10EM	Type 1 diabetes mellitus with ketoacidosis / Type I diabetes mellitus with ketoacidosis
C10EN	Type 1 diabetes mellitus with ketoacidotic coma / Type I diabetes mellitus with ketoacidotic coma
C10EP	Type 1 diabetes mellitus with exudative maculopathy / Type I diabetes mellitus with exudative maculopathy
C10EQ	Type 1 diabetes mellitus with gastroparesis
C10ER	Latent autoimmune diabetes mellitus in adult
C10F.	Type 2 diabetes mellitus / Type II diabetes mellitus
C10F0	Type 2 diabetes mellitus with renal complications / Type II diabetes mellitus with renal complications
C10F1	Type 2 diabetes mellitus with ophthalmic complications / Type II diabetes mellitus with ophthalmic complications
C10F2	Type 2 diabetes mellitus with neurological complications / Type II diabetes mellitus with neurological complications
C10F3	Type 2 diabetes mellitus with multiple complications / Type II diabetes mellitus with multiple complications
C10F4	Type 2 diabetes mellitus with ulcer / Type II diabetes mellitus with ulcer
C10F5	Type 2 diabetes mellitus with gangrene / Type II diabetes mellitus with gangrene
C10F6	Type 2 diabetes mellitus with retinopathy / Type II diabetes mellitus with retinopathy
C10F7	Type 2 diabetes mellitus - poor control / Type II diabetes mellitus - poor control
C10F8	Reaven's syndrome / Metabolic syndrome X
C10F9	Type 2 diabetes mellitus without complication / Type II diabetes mellitus without complication
C10FA	Type 2 diabetes mellitus with mononeuropathy / Type II diabetes mellitus with mononeuropathy
C10FB	Type 2 diabetes mellitus with polyneuropathy / Type II diabetes mellitus with polyneuropathy
C10FC	Type 2 diabetes mellitus with nephropathy / Type II diabetes mellitus with nephropathy
C10FD	Type 2 diabetes mellitus with hypoglycaemic coma / Type II diabetes mellitus with hypoglycaemic coma
C10FE	Type 2 diabetes mellitus with diabetic cataract / Type II diabetes mellitus with diabetic cataract
C10FF	Type 2 diabetes mellitus with peripheral angiopathy / Type II diabetes mellitus with peripheral angiopathy
C10FG	Type 2 diabetes mellitus with arthropathy / Type II diabetes mellitus with arthropathy

C10FH	Type 2 diabetes mellitus with neuropathic arthropathy / Type II diabetes mellitus with neuropathic arthropathy
C10FJ	Insulin treated Type 2 diabetes mellitus / Insulin treated Type II diabetes mellitus
C10FK	Hyperosmolar non-ketotic state in type 2 diabetes mellitus
C10FL	Type 2 diabetes mellitus with persistent proteinuria / Type II diabetes mellitus with persistent proteinuria
C10FM	Type 2 diabetes mellitus with persistent microalbuminuria / Type II diabetes mellitus with persistent microalbuminuria
C10FN	Type 2 diabetes mellitus with ketoacidosis / Type II diabetes mellitus with ketoacidosis
C10FP	Type 2 diabetes mellitus with ketoacidotic coma / Type II diabetes mellitus with ketoacidotic coma
C10FQ	Type 2 diabetes mellitus with exudative maculopathy / Type II diabetes mellitus with exudative maculopathy
C10FR	Type 2 diabetes mellitus with gastroparesis
C10FS	Maternally inherited diabetes mellitus
C10G.	Secondary pancreatic diabetes mellitus
C10G0	Secondary pancreatic diabetes mellitus without complication
C10H.	Diabetes mellitus induced by non- steroid drugs
C10H0	DM induced by non-steroid drugs without complication
C10J.	Insulin autoimmune syndrome
C10J0	Insulin autoimmune syndrome without complication
C10K.	Type A insulin resistance
C10K0	Type A insulin resistance without complication
C10L.	Fibrocalculous pancreatopathy
C10L0	Fibrocalculous pancreatopathy without complication
C10M.	Lipoatrophic diabetes mellitus
C10M0	Lipoatrophic diabetes mellitus without complication
C10N.	Secondary diabetes mellitus
C10N0	Secondary diabetes mellitus without complication
C10N1	Cystic fibrosis related diabetes mellitus
C10y.	Diabetes mellitus with other specified manifestation
C10y0	Diabetes mellitus, juvenile, + other specified manifestation
C10y1	Diabetes mellitus, adult, + other specified manifestation
C10yy	Other specified diabetes mellitus with other spec comps
C10yz	Diabetes mellitus NOS with other specified manifestation
C10z.	Diabetes mellitus with unspecified complication
C10z0	Diabetes mellitus, juvenile type, + unspecified complication
C10z1	Diabetes mellitus, adult onset, + unspecified complication
C10zy	Other specified diabetes mellitus with unspecified comps
C10zz	Diabetes mellitus NOS with unspecified complication
Cyu2.	[X]Diabetes mellitus
Cyu20	[X]Other specified diabetes mellitus
F1711	Autonomic neuropathy due to diabetes
F372.	Polyneuropathy in diabetes / Diabetic polyneuropathy / Diabetic neuropathy
F3720	Acute painful diabetic neuropathy
F3721	Chronic painful diabetic neuropathy
F3722	Asymptomatic diabetic neuropathy
K01x1	Nephrotic syndrome in diabetes mellitus / Kimmelstiel - Wilson disease
Kyu03	[X]Glomerular disorders in diabetes mellitus
L180.	Diabetes mellitus during pregnancy/childbirth/puerperium

L1800	Diabetes mellitus - unspec whether in pregnancy/puerperium
L1801	Diabetes mellitus during pregnancy - baby delivered
L1802	Diabetes mellitus in puerperium - baby delivered
L1803	Diabetes mellitus during pregnancy - baby not yet delivered
L1804	Diabetes mellitus in pueperium - baby previously delivered
L1805	Pre-existing diabetes mellitus, insulin- dependent
L1806	Pre-existing diabetes mellitus, non- insulin-dependent
L1807	Pre-existing malnutrition-related diabetes mellitus
L1808	Diabetes mellitus arising in pregnancy / Gestational diabetes mellitus
L1809	Gestational diabetes mellitus
L180X	Pre-existing diabetes mellitus, unspecified
L180z	Diabetes mellitus in pregnancy/childbirth/puerperium NOS
Lyu29	[X]Pre-existing diabetes mellitus, unspecified
ZC2C8	Dietary advice for diabetes mellitus
ZC2C9	Dietary advice for type I diabetes / Diet advice for insulin-dependent diabetes
ZC2CA	Dietary advice for type II diabetes / Dietary advice non-insulin-dependent diabetes
ZC2CB	Dietary advice for gestational diabetes
ZL625	Referral to diabetes nurse
ZL626	Referral to diabetic liaison nurse
ZRB4.	Diabetes clinic satisfaction questionnaire / CSQ - Diabetes clinic satisfaction questionnaire
ZRB5.	Diabetes treatment satisfaction questionnaire / DTSQ - Diabetes treatment satisfaction questionnaire
ZRB6.	Diabetes wellbeing questionnaire / DWBQ - Diabetes wellbeing questionnaire
ZV13F	[V]Personal history of gestational diabetes mellitus

APPENDIX E: MENTAL HEALTH READ CODES.

Read Code	Description
E0...	Organic psychotic conditions
E00..	Senile and presenile organic psychotic conditions / Senile dementia / Senile/presenile dementia
E000.	Uncomplicated senile dementia
E001.	Presenile dementia
E0010	Uncomplicated presenile dementia
E0011	Presenile dementia with delirium
E0012	Presenile dementia with paranoia
E0013	Presenile dementia with depression
E001z	Presenile dementia NOS
E002.	Senile dementia with depressive or paranoid features
E0020	Senile dementia with paranoia
E0021	Senile dementia with depression
E002z	Senile dementia with depressive or paranoid features NOS
E003.	Senile dementia with delirium
E004.	Arteriosclerotic dementia / Multi infarct dementia
E0040	Uncomplicated arteriosclerotic dementia
E0041	Arteriosclerotic dementia with delirium
E0042	Arteriosclerotic dementia with paranoia
E0043	Arteriosclerotic dementia with depression
E004z	Arteriosclerotic dementia NOS
E00y.	Other senile and presenile organic psychoses / Presbyophrenic psychosis
E00z.	Senile or presenile psychoses NOS
E01..	Alcoholic psychoses
E010.	Alcohol withdrawal delirium / DTs - delirium tremens / Delirium tremens
E011.	Alcohol amnestic syndrome
E0110	Korsakov's alcoholic psychosis
E0111	Korsakov's alcoholic psychosis with peripheral neuritis
E0112	Wernicke-Korsakov syndrome
E011z	Alcohol amnestic syndrome NOS
E012.	Other alcoholic dementia / Alcoholic dementia NOS
E0120	Chronic alcoholic brain syndrome
E013.	Alcohol withdrawal hallucinosis
E014.	Pathological alcohol intoxication / Drunkenness - pathological
E015.	Alcoholic paranoia
E01y.	Other alcoholic psychosis
E01y0	Alcohol withdrawal syndrome
E01yz	Other alcoholic psychosis NOS
E01z.	Alcoholic psychosis NOS
E02..	Drug psychoses
E020.	Drug withdrawal syndrome
E021.	Drug-induced paranoia or hallucinatory states
E0210	Drug-induced paranoid state
E0211	Drug-induced hallucinosis
E021z	Drug-induced paranoia or hallucinatory state NOS
E022.	Pathological drug intoxication
E023.	Nicotine withdrawal
E02y.	Other drug psychoses
E02y0	Drug-induced delirium

E02y1	Drug-induced dementia
E02y2	Drug-induced amnestic syndrome
E02y3	Drug-induced depressive state
E02y4	Drug-induced personality disorder
E02yz	Other drug psychoses NOS E02z. Drug psychosis NOS
E03..	Transient organic psychoses
E030.	Acute confusional state / Delirium - acute organic / Toxic confusional state
E0300	Acute confusional state, post traumatic
E0301	Acute confusional state, of infective origin
E0302	Acute confusional state, of endocrine origin
E0303	Acute confusional state, of metabolic origin
E0304	Acute confusional state, of cerebrovascular origin
E030z	Acute confusional state NOS
E031.	Subacute confusional state / Delirium - subacute organic
E0310	Subacute confusional state, post traumatic
E0311	Subacute confusional state, of infective origin
E0312	Subacute confusional state, of endocrine origin
E0313	Subacute confusional state, of metabolic origin
E0314	Subacute confusional state, of cerebrovascular origin
E031z	Subacute confusional state NOS
E03y.	Other transient organic psychoses
E03y0	Organic delusional syndrome
E03y1	Organic hallucinosis syndrome
E03y2	Organic affective syndrome
E03y3	Unspecified puerperal psychosis
E03yz	Other transient organic psychoses NOS
E03z.	Transient organic psychoses NOS
E04..	Other chronic organic psychoses
E040.	Non-alcoholic amnestic syndrome / Korsakoff's non-alcoholic psychosis
E041.	Dementia in conditions EC
E042.	Chronic confusional state
E04y.	Other specified chronic organic psychoses
E04z.	Chronic organic psychosis NOS
E0y..	Other specified organic psychoses
E0z..	Organic psychoses NOS
E1...	Non-organic psychoses
E10..	Schizophrenic disorders
E100.	Simple schizophrenia / Schizophrenia simplex
E1000	Unspecified schizophrenia
E1001	Subchronic schizophrenia
E1002	Chronic schizophrenic
E1003	Acute exacerbation of subchronic schizophrenia
E1004	Acute exacerbation of chronic schizophrenia
E1005	Schizophrenia in remission
E100z	Simple schizophrenia NOS
E101.	Hebephrenic schizophrenia
E1010	Unspecified hebephrenic schizophrenia
E1011	Subchronic hebephrenic schizophrenia
E1012	Chronic hebephrenic schizophrenia
E1013	Acute exacerbation of subchronic hebephrenic schizophrenia
E1014	Acute exacerbation of chronic hebephrenic schizophrenia
E1015	Hebephrenic schizophrenia in remission

E101z	Hebephrenic schizophrenia NOS
E102.	Catatonic schizophrenia
E1020	Unspecified catatonic schizophrenia
E1021	Subchronic catatonic schizophrenia
E1022	Chronic catatonic schizophrenia
E1023	Acute exacerbation of subchronic catatonic schizophrenia
E1024	Acute exacerbation of chronic catatonic schizophrenia
E1025	Catatonic schizophrenia in remission
E102z	Catatonic schizophrenia NOS
E103.	Paranoid schizophrenia
E1030	Unspecified paranoid schizophrenia
E1031	Subchronic paranoid schizophrenia
E1032	Chronic paranoid schizophrenia
E1033	Acute exacerbation of subchronic paranoid schizophrenia
E1034	Acute exacerbation of chronic paranoid schizophrenia
E1035	Paranoid schizophrenia in remission
E103z	Paranoid schizophrenia NOS
E104.	Acute schizophrenic episode / Oneirophrenia
E105.	Latent schizophrenia
E1050	Unspecified latent schizophrenia
E1051	Subchronic latent schizophrenia
E1052	Chronic latent schizophrenia
E1053	Acute exacerbation of subchronic latent schizophrenia
E1054	Acute exacerbation of chronic latent schizophrenia
E1055	Latent schizophrenia in remission
E105z	Latent schizophrenia NOS
E106.	Residual schizophrenia / Restzustand - schizophrenia
E107.	Schizo-affective schizophrenia / Cyclic schizophrenia
E1070	Unspecified schizo-affective schizophrenia
E1071	Subchronic schizo-affective schizophrenia
E1072	Chronic schizo-affective schizophrenia
E1073	Acute exacerbation subchronic schizo- affective schizophrenia
E1074	Acute exacerbation of chronic schizo- affective schizophrenia
E1075	Schizo-affective schizophrenia in remission
E107z	Schizo-affective schizophrenia NOS
E10y.	Other schizophrenia / Cenesthopathic schizophrenia
E10y0	Atypical schizophrenia
E10y1	Coenesthopathic schizophrenia
E10yz	Other schizophrenia NOS
E10z.	Schizophrenia NOS
E11..	Affective psychoses / Bipolar psychoses / Depressive psychoses / Manic psychoses
E110.	Manic disorder, single episode / Hypomanic psychoses
E1100	Single manic episode, unspecified
E1101	Single manic episode, mild
E1102	Single manic episode, moderate
E1103	Single manic episode, severe without mention of psychosis
E1104	Single manic episode, severe, with psychosis
E1105	Single manic episode in partial or unspecified remission
E1106	Single manic episode in full remission
E110z	Manic disorder, single episode NOS
E111.	Recurrent manic episodes
E1110	Recurrent manic episodes, unspecified

E1111	Recurrent manic episodes, mild
E1112	Recurrent manic episodes, moderate
E1113	Recurrent manic episodes, severe without mention psychosis
E1114	Recurrent manic episodes, severe with psychosis
E1115	Recurrent manic episodes, partial or unspecified remission
E1116	Recurrent manic episodes, in full remission
E111z	Recurrent manic episode NOS
E112.	Single major depressive episode / Agitated depression / Endogenous depression first episode / Endogenous depression first episode / Endogenous depression
E1120	Single major depressive episode, unspecified
E1121	Single major depressive episode, mild
E1122	Single major depressive episode, moderate
E1123	Single major depressive episode, severe, without psychosis
E1124	Single major depressive episode, severe, with psychosis
E1125	Single major depressive episode, partial or unspec remission
E1126	Single major depressive episode, in full remission
E112z	Single major depressive episode NOS
E113.	Recurrent major depressive episode / Endogenous depression - recurrent
E1130	Recurrent major depressive episodes, unspecified
E1131	Recurrent major depressive episodes, mild
E1132	Recurrent major depressive episodes, moderate
E1133	Recurrent major depressive episodes, severe, no psychosis
E1134	Recurrent major depressive episodes, severe, with psychosis
E1135	Recurrent major depressive episodes,partial/unspec remission
E1136	Recurrent major depressive episodes, in full remission
E1137	Recurrent depression
E113z	Recurrent major depressive episode NOS
E114.	Bipolar affective disorder, currently manic / Manic-depressive - now manic
E1140	Bipolar affective disorder, currently manic, unspecified
E1141	Bipolar affective disorder, currently manic, mild
E1142	Bipolar affective disorder, currently manic, moderate
E1143	Bipolar affect disord, currently manic, severe, no psychosis
E1144	Bipolar affect disord, currently manic,severe with psychosis
E1145	Bipolar affect disord,currently manic, part/unspec remission
E1146	Bipolar affective disorder, currently manic, full remission
E114z	Bipolar affective disorder, currently manic, NOS
E115.	Bipolar affective disorder, currently depressed / Manic-depressive - now depressed
E1150	Bipolar affective disorder, currently depressed, unspecified
E1151	Bipolar affective disorder, currently depressed, mild
E1152	Bipolar affective disorder, currently depressed, moderate
E1153	Bipolar affect disord, now depressed, severe, no psychosis
E1154	Bipolar affect disord, now depressed, severe with psychosis
E1155	Bipolar affect disord, now depressed, part/unspec remission
E1156	Bipolar affective disorder, now depressed, in full remission
E115z	Bipolar affective disorder, currently depressed, NOS
E116.	Mixed bipolar affective disorder
E1160	Mixed bipolar affective disorder, unspecified
E1161	Mixed bipolar affective disorder, mild
E1162	Mixed bipolar affective disorder, moderate
E1163	Mixed bipolar affective disorder, severe, without psychosis
E1164	Mixed bipolar affective disorder, severe, with psychosis
E1165	Mixed bipolar affective disorder, partial/unspec remission

E1166	Mixed bipolar affective disorder, in full remission
E116z	Mixed bipolar affective disorder, NOS
E117.	Unspecified bipolar affective disorder
E1170	Unspecified bipolar affective disorder, unspecified
E1171	Unspecified bipolar affective disorder, mild
E1172	Unspecified bipolar affective disorder, moderate
E1173	Unspecified bipolar affective disorder, severe, no psychosis
E1174	Unspecified bipolar affective disorder, severe with psychosis
E1175	Unspecified bipolar affect disord, partial/unspec remission
E1176	Unspecified bipolar affective disorder, in full remission
E117z	Unspecified bipolar affective disorder, NOS
E118.	Seasonal affective disorder
E11y.	Other and unspecified manic- depressive psychoses
E11y0	Unspecified manic-depressive psychoses
E11y1	Atypical manic disorder
E11y2	Atypical depressive disorder
E11y3	Other mixed manic-depressive psychoses
E11y3	Other mixed manic-depressive psychoses
E11yz	Other and unspecified manic- depressive psychoses NOS
E11z.	Other and unspecified affective psychoses
E11z0	Unspecified affective psychoses NOS
E11z1	Rebound mood swings
E11z2	Masked depression
E11zz	Other affective psychosis NOS
E12..	Paranoid states
E120.	Simple paranoid state
E121.	Chronic paranoid psychosis / Sander's disease
E122.	Paraphrenia
E123.	Shared paranoid disorder / Folie a deux
E12y.	Other paranoid states
E12y0	Paranoia querulans
E12yz	Other paranoid states NOS
E12z.	Paranoid psychosis NOS
E13..	Other nonorganic psychoses / Reactive psychoses
E130.	Reactive depressive psychosis / Psychotic reactive depression
E131.	Acute hysterical psychosis
E132.	Reactive confusion
E133.	Acute paranoid reaction / Bouffee delirante
E134.	Psychogenic paranoid psychosis
E135.	Agitated depression
E13y.	Other reactive psychoses
E13y0	Psychogenic stupor
E13y1	Brief reactive psychosis
E13yz	Other reactive psychoses NOS
E13z.	Nonorganic psychosis NOS / Psychotic episode NOS
E14..	Psychoses with origin in childhood
E140.	Infantile autism / Kanner's syndrome / Autism / Childhood autism
E1400	Active infantile autism
E1401	Residual infantile autism
E140z	Infantile autism NOS
E141.	Disintegrative psychosis / Heller's syndrome
E1410	Active disintegrative psychoses

E1411	Residual disintegrative psychoses
E141z	Disintegrative psychosis NOS
E14y.	Other childhood psychoses
E14y0	Atypical childhood psychoses
E14y1	Borderline psychosis of childhood
E14yz	Other childhood psychoses NOS
E14z.	Child psychosis NOS / Childhood schizophrenia NOS
E1y..	Other specified non-organic psychoses
E1z..	Non-organic psychosis NOS
E2...	Neurotic, personality and other nonpsychotic disorders
E20..	Neurotic disorders E200. Anxiety states
E2000	Anxiety state unspecified
E2001	Panic disorder / Panic attack
E2002	Generalised anxiety disorder
E2003	Anxiety with depression
E2004	Chronic anxiety
E2005	Recurrent anxiety
E200z	Anxiety state NOS
E201.	Hysteria
E2010	Hysteria unspecified
E2011	Hysterical blindness
E2012	Hysterical deafness
E2013	Hysterical tremor
E2014	Hysterical paralysis
E2015	Hysterical seizures / Fit - hysterical
E2016	Other conversion disorder / Astasia - abasia, hysterical / Globus hystericus
E2017	Hysterical amnesia
E2018	Hysterical fugue
E2019	Multiple personality
E201A	Dissociative reaction unspecified
E201B	Compensation neurosis
E201C	Phantom pregnancy
E201z	Hysteria NOS / Aphonia - hysterical / Ataxia - hysterical / Ganser's syndrome - hysterical
E202.	Phobic disorders / Social phobic disorders / Phobic anxiety
E2020	Phobia unspecified
E2021	Agoraphobia with panic attacks
E2022	Agoraphobia without mention of panic attacks
E2023	Social phobia, fear of eating in public
E2024	Social phobia, fear of public speaking
E2025	Social phobia, fear of public washing
E2026	Acrophobia
E2027	Animal phobia
E2028	Claustrophobia
E2029	Fear of crowds
E202A	Fear of flying
E202B	Cancer phobia
E202C	Dental phobia
E202D	Fear of death
E202E	Fear of pregnancy
E202z	Phobic disorder NOS / Weight fixation
E203.	Obsessive-compulsive disorders / Anancastic neurosis
E2030	Compulsive neurosis

E2031	Obsessional neurosis
E203z	Obsessive-compulsive disorder NOS
E204.	Neurotic depression reactive type / Postnatal depression
E205.	Neurasthenia - nervous debility / Nervous exhaustion / Tired all the time
E206.	Depersonalisation syndrome
E207.	Hypochondriasis
E20y.	Other neurotic disorders
E20y0	Somatization disorder / Briquet's disorder
E20y1	Writer's cramp neurosis
E20y2	Other occupational neurosis
E20y3	Psychasthenic neurosis
E20yz	Other neurotic disorder NOS
E20z.	Neurotic disorder NOS / Nervous breakdown
E21..	Personality disorders / Neurotic personality disorder
E210.	Paranoid personality disorder / Fanatic personality
E211.	Affective personality disorder
E2110	Unspecified affective personality disorder
E2111	Hypomanic personality disorder
E2112	Depressive personality disorder
E2113	Cyclothymic personality disorder
E211z	Affective personality disorder NOS
E212.	Schizoid personality disorder
E2120	Unspecified schizoid personality disorder
E2121	Introverted personality
E2122	Schizotypal personality
E212z	Schizoid personality disorder NOS
E213.	Explosive personality disorder / Aggressive personality / Quarrelsome personality
E214.	Compulsive personality disorders / Anancastic personality
E2140	Anankastic personality
E2141	Obsessional personality
E214z	Compulsive personality disorder NOS
E215.	Histrionic personality disorders / Hysterical personality disorders
E2150	Unspecified histrionic personality disorder
E2151	Munchausen's syndrome
E2152	Emotionally unstable personality
E2153	Psychoinfantile personality
E215z	Histrionic personality disorder NOS
E216.	Inadequate personality disorder / Asthenic personality / Dependent personality / Labile personality
E217.	Antisocial or sociopathic personality disorder / Amoral personality
E21y.	Other personality disorders
E21y0	Narcissistic personality disorder
E21y1	Avoidant personality disorder
E21y2	Borderline personality disorder
E21y3	Passive-aggressive personality disorder
E21y4	Eccentric personality disorder
E21y5	Immature personality disorder
E21y6	Masochistic personality disorder
E21y7	Psychoneurotic personality disorder / Neurotic personality
E21yz	Other personality disorder NOS / Manipulative personality
E21z.	Personality disorder NOS / Psychopathic personality
E22..	Sexual deviations or disorders

E220.	Homosexuality
E2200	Male homosexuality
E2201	Lesbianism / Female homosexuality
E220z	Homosexuality NOS
E221.	Bestiality (zoophilia)
E222.	Paedophilia
E223.	Transvestism
E224.	Exhibitionism / Flasher
E225.	Trans-sexualism
E2250	Trans-sexuality with unspecified sexual history
E2251	Trans-sexuality with asexual history
E2252	Trans-sexuality with homosexual history
E2253	Trans-sexuality with heterosexual history
E225z	Trans-sexualism NOS
E226.	Psychosexual identity disorder
E2260	Feminism in boys
E2261	Masculinism in girls
E226z	Psychosexual identity disorder NOS
E227.	Psychosexual dysfunction / Lack of libido
E2270	Unspecified psychosexual dysfunction
E2271	Inhibited sexual desire
E2272	Frigidity
E2273	Impotence / Erectile dysfunction
E2274	Inhibited female orgasm
E2275	Inhibited male orgasm
E2276	Premature ejaculation
E2277	Psychogenic dyspareunia
E227z	Psychosexual dysfunction NOS / Fear of ejaculation
E22y.	Other psychosexual disorders
E22y0	Fetishism
E22y1	Voyeurism
E22y2	Sexual masochism
E22y3	Sexual sadism
E22y4	Gender role disorder of adolescent or adult
E22y5	Nymphomania
E22y6	Satyriasis
E22yz	Other psychosexual disorder NOS
E22z.	Psychosexual disorder NOS
E23..	Alcohol dependence syndrome / Alcoholism / Alcohol problem drinking
E230.	Acute alcoholic intoxication in alcoholism / Alcohol dependence with acute alcoholic intoxication
E2300	Acute alcoholic intoxication, unspecified, in alcoholism
E2301	Continuous acute alcoholic intoxication in alcoholism
E2302	Episodic acute alcoholic intoxication in alcoholism
E2303	Acute alcoholic intoxication in remission, in alcoholism
E230z	Acute alcoholic intoxication in alcoholism NOS
E231.	Chronic alcoholism / Dipsomania
E2310	Unspecified chronic alcoholism
E2311	Continuous chronic alcoholism
E2312	Episodic chronic alcoholism
E2313	Chronic alcoholism in remission
E231z	Chronic alcoholism NOS

E23z.	Alcohol dependence syndrome NOS E24.. Drug dependence / Drug addiction
E240.	Opioid type drug dependence / Heroin dependence / Methadone dependence / Morphine dependence / Opium dependence
E2400	Unspecified opioid dependence
E2401	Continuous opioid dependence
E2402	Episodic opioid dependence
E2403	Opioid dependence in remission
E240z	Opioid drug dependence NOS
E241.	Hypnotic or anxiolytic dependence / Anxiolytic dependence / Barbiturate dependence / Benzodiazepine dependence / Diazepam dependence / Librium dependence / Sedative dependence / Valium dependence
E2410	Hypnotic or unspecified
E2411	Hypnotic or continuous
E2412	Hypnotic or episodic
E2413	Hypnotic or remission
E241z	Hypnotic or NOS anxiolytic dependence, anxiolytic dependence, anxiolytic dependence, anxiolytic dependence in anxiolytic dependence
E242.	Cocaine type drug dependence
E2420	Cocaine dependence, unspecified
E2421	Cocaine dependence, continuous
E2422	Cocaine dependence, episodic
E2423	Cocaine dependence in remission
E242z	Cocaine drug dependence NOS
E243.	Cannabis type drug dependence / Hashish dependence / Hemp dependence / Marihuana dependence
E2430	Cannabis dependence, unspecified
E2431	Cannabis dependence, continuous
E2432	Cannabis dependence, episodic
E2433	Cannabis dependence in remission
E243z	Cannabis drug dependence NOS
E244.	Amphetamine or other psychostimulant dependence / Psychostimulant dependence / Stimulant dependence
E2440	Amphetamine or psychostimulant dependence, unspecified / Amfetamine or psychostimulant dependence, unspecified
E2441	Amphetamine or psychostimulant dependence, continuous / Amfetamine or psychostimulant dependence, continuous
E2442	Amphetamine or psychostimulant dependence, episodic / Amfetamine or psychostimulant dependence, episodic
E2443	Amphetamine or psychostimulant dependence in remission / Amfetamine or psychostimulant dependence in remission
E244z	Amphetamine or psychostimulant dependence NOS / Amfetamine or psychostimulant dependence NOS
E245.	Hallucinogen dependence / LSD dependence / Lysergic acid diethylamide dependence / Mescaline dependence
E2450	Hallucinogen dependence, unspecified
E2451	Hallucinogen dependence, continuous
E2452	Hallucinogen dependence, episodic
E2453	Hallucinogen dependence in remission
E245z	Hallucinogen dependence NOS
E246.	Glue sniffing dependence
E2460	Glue sniffing dependence, unspecified
E2461	Glue sniffing dependence, continuous

E2462	Glue sniffing dependence, episodic
E2463	Glue sniffing dependence in remission
E246z	Glue sniffing dependence NOS
E247.	Other specified drug dependence / Absinthe addiction
E2470	Other specified drug dependence, unspecified
E2471	Other specified drug dependence, continuous
E2472	Other specified drug dependence, episodic
E2473	Other specified drug dependence in remission
E247z	Other specified drug dependence NOS
E248.	Combined opioid with other drug dependence
E2480	Combined opioid with other drug dependence, unspecified
E2481	Combined opioid with other drug dependence, continuous
E2482	Combined opioid with other drug dependence, episodic
E2483	Combined opioid with other drug dependence in remission
E248z	Combined opioid with other drug dependence NOS
E249.	Combined drug dependence, excluding opioids
E2490	Combined drug dependence, excluding opioid, unspecified
E2491	Combined drug dependence, excluding opioid, continuous
E2492	Combined drug dependence, excluding opioid, episodic
E2493	Combined drug dependence, excluding opioid, in remission
E249z	Combined drug dependence, excluding opioid, NOS
E24A.	Ecstasy type drug dependence E24z. Drug dependence NOS
E25..	Nondependent abuse of drugs
E250.	Nondependent alcohol abuse / Drunkenness NOS / Hangover (alcohol) / Inebriety NOS / Intoxication - alcohol
E2500	Nondependent alcohol abuse, unspecified
E2501	Nondependent alcohol abuse, continuous
E2502	Nondependent alcohol abuse, episodic
E2503	Nondependent alcohol abuse in remission
E250z	Nondependent alcohol abuse NOS E251. Tobacco dependence
E2510	Tobacco dependence, unspecified
E2511	Tobacco dependence, continuous
E2512	Tobacco dependence, episodic
E2513	Tobacco dependence in remission
E251z	Tobacco dependence NOS
E252.	Nondependent cannabis abuse
E2520	Nondependent cannabis abuse, unspecified
E2521	Nondependent cannabis abuse, continuous
E2522	Nondependent cannabis abuse, episodic
E2523	Nondependent cannabis abuse in remission
E252z	Nondependent cannabis abuse NOS
E253.	Nondependent hallucinogen abuse / "Bad trips" / LSD reaction
E2530	Nondependent hallucinogen abuse, unspecified
E2531	Nondependent hallucinogen abuse, continuous
E2532	Nondependent hallucinogen abuse, episodic
E2533	Nondependent hallucinogen abuse in remission
E253z	Nondependent hallucinogen abuse NOS
E254.	Nondependent hypnotic or anxiolytic abuse / Barbiturate abuse / Hypnotic or anxiolytic abuse / Sedative abuse / Tranquilliser abuse
E2540	Nondependent hypnotic or anxiolytic abuse, unspecified
E2541	Nondependent hypnotic or anxiolytic abuse, continuous
E2542	Nondependent hypnotic or anxiolytic abuse, episodic

E2543	Nondependent hypnotic or anxiolytic abuse in remission
E254z	Nondependent hypnotic or anxiolytic abuse NOS
E255.	Nondependent opioid abuse
E2550	Nondependent opioid abuse, unspecified
E2551	Nondependent opioid abuse, continuous
E2552	Nondependent opioid abuse, episodic
E2553	Nondependent opioid abuse in remission
E255z	Nondependent opioid abuse NOS
E256.	Nondependent cocaine abuse
E2560	Nondependent cocaine abuse, unspecified
E2561	Nondependent cocaine abuse, continuous
E2562	Nondependent cocaine abuse, episodic
E2563	Nondependent cocaine abuse in remission
E256z	Nondependent cocaine abuse NOS
E257.	Nondependent amphetamine or other psychostimulant abuse / Psychostimulant abuse / Stimulant abuse
E2570	Nondependent amphetamine/psychostimulant abuse, unspecified / Nondependent amfetamine/psychostimulant abuse, unspecified
E2571	Nondependent amphetamine/psychostimulant abuse, continuous / Nondependent amfetamine or psychostimulant abuse, continuous
E2572	Nondependent amphetamine or psychostimulant abuse, episodic / Nondependent amfetamine or psychostimulant abuse, episodic
E2573	Nondependent amphetamine/psychostimulant abuse in remission / Nondependent amfetamine/psychostimulant abuse in remission
E257z	Nondependent amphetamine or psychostimulant abuse NOS / Nondependent amfetamine or psychostimulant abuse NOS
E258.	Nondependent antidepressant type drug abuse
E2580	Nondependent antidepressant type drug abuse, unspecified
E2581	Nondependent antidepressant type drug abuse, continuous
E2582	Nondependent antidepressant type drug abuse, episodic
E2583	Nondependent antidepressant type drug abuse in remission
E258z	Nondependent antidepressant type drug abuse NOS
E259.	Nondependent mixed drug ab
E2590	Nondependent mixed drug abuse, unspecified
E2591	Nondependent mixed drug abuse, continuous
E2592	Nondependent mixed drug abuse, episodic
E2593	Nondependent mixed drug abuse in remission
E2594	Misuse of prescription only drugs
E259z	Nondependent mixed drug abuse NOS
E25y.	Nondependent other drug abuse / Analgesic abuse / Laxative abuse / Steroid abuse
E25y0	Nondependent other drug abuse, unspecified
E25y1	Nondependent other drug abuse, continuous
E25y2	Nondependent other drug abuse, episodic
E25y3	Nondependent other drug abuse in remission
E25yz	Nondependent other drug abuse NOS
E25z.	Misuse of drugs NOS
E26..	Physiological malfunction arising from mental factors
E260.	Psychogenic musculoskeletal symptoms
E2600	Psychogenic paralysis
E2601	Psychogenic torticollis
E260z	Psychogenic musculoskeletal symptoms NOS
E261.	Psychogenic respiratory symptoms

E2610	Psychogenic air hunger
E2611	Psychogenic cough
E2612	Psychogenic hiccough
E2613	Psychogenic hyperventilation
E2614	Psychogenic yawning
E2615	Psychogenic aphonia
E261z	Psychogenic respiratory symptom NOS
E262.	Psychogenic cardiovascular symptoms
E2620	Cardiac neurosis
E2621	Cardiovascular neurosis
E2622	Neurocirculatory asthenia
E2623	Psychogenic cardiovascular disorder
E262z	Psychogenic cardiovascular symptom NOS
E263.	Psychogenic skin symptoms
E2630	Psychogenic pruritus
E263z	Psychogenic skin symptoms NOS
E264.	Psychogenic gastrointestinal tract symptoms / Globus abdominalis
E2640	Psychogenic aerophagy / Air swallowing - excessive
E2642	Cyclical vomiting - psychogenic
E2643	Psychogenic diarrhoea / Spurious diarrhoea
E2644	Psychogenic dyspepsia
E2645	Psychogenic constipation
E264z	Psychogenic gastrointestinal tract symptom NOS
E265.	Psychogenic genitourinary tract symptoms
E2650	Psychogenic genitourinary tract malfunction unspecified
E2651	Psychogenic vaginismus
E2652	Psychogenic dysmenorrhea
E2653	Psychogenic dysuria
E265z	Psychogenic genitourinary tract symptom NOS
E266.	Psychogenic endocrine malfunction
E267.	Psychogenic symptom of special sense organ
E26y.	Other psychogenic malfunction
E26y0	Bruxism (teeth grinding)
E26yz	Other psychogenic malfunction NOS
E26z.	Psychosomatic disorder NOS
E27..	Psychogenic syndromes NEC
E270.	Stammering or stuttering / Stammering / Stuttering
E271.	Anorexia nervosa
E272.	Tics
E2720	Tic disorder unspecified
E2721	Transient childhood tic
E2722	Chronic motor tic disorder
E2723	Gilles de la Tourette's disorder
E272z	Tic NOS
E273.	Stereotyped repetitive movements
E2730	Body-rocking
E2731	Head-banging
E2732	Spasmus nutans - nodding spasm
E273z	Stereotyped repetitive movements NOS
E274.	Non-organic sleep disorders / Hypersomnia of non-organic origin / Insomnia due to nonorganic sleep disorder
E2740	Unspecified non-organic sleep disorder

E2741	Transient insomnia / Insomnia NOS
E2742	Persistent insomnia
E2743	Transient hypersomnia / Hypersomnia NOS
E2744	Persistent hypersomnia
E2745	Jet lag syndrome
E2746	Shifting sleep-work schedule
E2747	Somnambulism - sleep walking
E2748	Night terrors
E2749	Nightmares
E274A	Sleep drunkenness
E274B	Repeated rapid eye movement sleep interruptions
E274C	Other sleep stage or arousal dysfunction
E274D	Repetitive intrusions of sleep / Restless sleep
E274E	"Short-sleeper"
E274F	Inversion of sleep rhythm
E274y	Other non-organic sleep disorder / Dreams
E274z	Non-organic sleep disorder NOS
E275.	Other and unspecified non-organic eating disorders
E2750	Unspecified non-organic eating disorder
E2751	Bulimia (non-organic overeating) / Compulsive eating disorder
E2752	Pica
E2753	Psychogenic rumination
E2754	Psychogenic vomiting NOS
E2755	Non-organic infant feeding disturbance
E2756	Non-organic loss of appetite
E2757	Psychogenic polydipsia / Compulsive water drinking
E2758	Specific food craving
E275y	Other specified non-organic eating disorder
E275z	Non-organic eating disorder NOS
E276.	Non-organic enuresis
E2760	Non-organic primary enuresis
E2761	Non-organic secondary enuresis
E276z	Non-organic enuresis NOS
E277.	Non-organic encopresis
E2770	Non-organic continuous encopresis
E2771	Non-organic discontinuous encopresis
E277z	Non-organic encopresis NOS
E278.	Psychalgia
E2780	Psychogenic pain unspecified
E2781	Tension headache / Muscular headache
E2782	Psychogenic backache
E278z	Psychalgia NOS
E27z.	Other and unspecified psychogenic syndrome NEC
E27z0	Hair plucking
E27z1	Lalling
E27z2	Lisping
E27z3	Masturbation
E27z4	Nail-biting
E27z5	Thumb-sucking
E27zz	Psychogenic syndromes NOS
E28..	Acute reaction to stress / Combat fatigue
E280.	Acute panic state due to acute stress reaction

E281.	Acute fugue state due to acute stress reaction
E282.	Acute stupor state due to acute stress reaction
E283.	Other acute stress reactions
E2830	Acute situational disturbance
E2831	Acute posttrauma stress state
E283z	Other acute stress reaction NOS
E284.	Stress reaction causing mixed disturbance of emotion/conduct
E28z.	Acute stress reaction NOS / Examination fear / Flying phobia / Stage fright
E29..	Adjustment reaction
E290.	Brief depressive reaction
E2900	Grief reaction / Bereavement reaction E290z Brief depressive reaction NOS
E291.	Prolonged depressive reaction
E292.	Adjustment reaction, predominant disturbance other emotions
E2920	Separation anxiety disorder
E2921	Adolescent emancipation disorder
E2922	Early adult emancipation disorder
E2923	Specific academic or work inhibition / Specific academic or work inhibition / Specific work inhibition
E2924	Adjustment reaction with anxious mood
E2925	Culture shock
E292y	Adjustment reaction with mixed disturbance of emotion
E292z	Adjustment reaction with disturbance of other emotion NOS
E293.	Adjustment reaction with predominant disturbance of conduct
E2930	Adjustment reaction with aggression
E2931	Adjustment reaction with antisocial behaviour
E2932	Adjustment reaction with destructiveness
E293z	Adjustment reaction with predominant disturbance conduct NOS
E294.	Adjustment reaction with disturbance emotion and conduct
E29y.	Other adjustment reactions
E29y0	Concentration camp syndrome
E29y1	Other post-traumatic stress disorder
E29y2	Adjustment reaction with physical symptoms
E29y3	Elective mutism due to an adjustment reaction
E29y4	Adjustment reaction due to hospitalisation
E29y5	Other adjustment reaction with withdrawal
E29yz	Other adjustment reactions NOS
E29z.	Adjustment reaction NOS
E2A..	Nonpsychotic mental disorders following organic brain damage
E2A0.	Frontal lobe syndrome / Lobotomy syndrome / Postleucotomy syndrome
E2A1.	Organic personality syndrome
E2A10	Mild memory disturbance
E2A11	Organic memory impairment
E2A12	Change in personality
E2A1z	Organic personality syndrome NOS
E2A2.	Post-concussion syndrome / Post- traumatic brain syndrome / Post-head injury syndrome
E2A3.	Post-encephalitic syndrome / Post- encephalitis syndrome
E2Ay.	Other specific mental disorder post- organic brain damage
E2Az.	Nonpsychotic mental disorder post- organic brain damage NOS
E2B..	Depressive disorder NEC
E2B0.	Postviral depression
E2B1.	Chronic depression
E2C..	Disturbance of conduct NEC / Behaviour disorder

E2C0.	Aggressive unsocial conduct disorder
E2C00	Aggressive outburst
E2C01	Anger reaction
E2C0z	Aggressive unsocial conduct disorder NOS
E2C1.	Nonaggressive unsocial conduct disorder / Promiscuity
E2C10	Unsocial childhood truancy / School refusal
E2C11	Solitary stealing / Shop lifting
E2C12	Tantrums
E2C1z	Nonaggressive unsocial conduct disorder NOS
E2C2.	Socialised conduct disorder E2C20 Socialised childhood truancy E2C23 Group delinquency
E2C2z	Socialised conduct disorder NOS
E2C3.	Impulse control disorder NEC
E2C30	Impulse control disorder, unspecified
E2C31	Pathological gambling
E2C32	Kleptomania
E2C33	Pyromania
E2C34	Intermittent explosive disorder
E2C35	Isolated explosive disorder
E2C3z	Impulse control disorder NOS
E2C4.	Mixed disturbance of conduct and emotion
E2C40	Neurotic delinquency
E2C4z	Mixed disturbance of conduct and emotion NOS
E2Cy.	Other conduct disturbances
E2Cy0	Breath holder
E2Cyz	Other conduct disturbances NOS
E2Cz.	Unspecified disturbance of conduct
E2Cz0	Juvenile delinquency unspecified
E2Czz	Disturbance of conduct NOS
E2D..	Disturbance of emotion specific to childhood and adolescence / Adolescent - emotional problem / Disturbance of emotion specific to childhood and adolescence
E2D0.	Disturbance of anxiety and fearfulness childhood/adolescent
E2D00	Childhood and adolescent overanxiousness disturbance
E2D01	Childhood and adolescent fearfulness disturbance
E2D0z	Disturbance anxiety and fearfulness childhood/adolescent NOS
E2D1.	Childhood and adolescence disturbance of unhappiness / Misery of childhood or adolescence / Unhappiness of childhood or adolescence / Taunting / tormenting
E2D2.	Childhood and adolescent disturbance with sensitivity / Sensitivity of childhood or adolescence
E2D20	Childhood and adolescent disturbance with shyness / Shyness of childhood or adolescence
E2D21	Childhood and adolescent disturbance with introversion / Introverted in childhood or adolescence
E2D22	Childhood and adolescent disturbance with elective mutism / Mutism of childhood or adolescence
E2D2z	Childhood and adolescent sensitivity disturbance NOS / School refusal
E2D3.	Childhood and adolescent relationship problem
E2D30	Sibling jealousy
E2D3z	Childhood and adolescent relationship problem NOS
E2Dy.	Other childhood and adolescent emotional problems
E2Dy0	Childhood and adolescent oppositional disorder
E2Dy1	Childhood and adolescent identity disorder
E2Dy2	Academic underachievement disorder
E2Dyz	Other childhood and adolescent emotional problems NOS
E2Dz.	Childhood and adolescent emotion disorder NOS / Overprotective parent / Constantly crying baby

E2E..	Childhood hyperkinetic syndrome / Overactive child syndrome
E2E0.	Child attention deficit disorder
E2E00	Attention deficit without hyperactivity
E2E01	Attention deficit with hyperactivity
E2E0z	Child attention deficit disorder NOS
E2E1.	Hyperkinesis with developmental delay
E2E2.	Hyperkinetic conduct disorder
E2Ey.	Other hyperkinetic manifestation
E2Ez.	Hyperkinetic syndrome NOS
E2F..	Specific delays in development
E2F0.	Specific reading disorder
E2F00	Reading disorder unspecified
E2F01	Alexia / Word blindness
E2F02	Developmental dyslexia
E2F03	Specific spelling difficulty
E2F0z	Specific reading disorder NOS
E2F1.	Dyscalculia
E2F2.	Other specific learning difficulty
E2F3.	Speech or language developmental disorder / Language development disorder / Speech development disorder / Articulation defect
E2F30	Developmental aphasia / Word deafness
E2F31	Dyslalia
E2F3z	Speech or language developmental disorder NOS
E2F4.	Coordination disorder (dyspraxia) / Clumsiness syndrome / Dyspraxia syndrome / Apraxia, developmental
E2F5.	Mixed development disorder / Global delay
E2Fy.	Other development delays
E2Fz.	Developmental disorder NOS
E2G..	Psychic factor with disease EC
E2y..	Other specified neuroses or other mental disorders
E2z..	Neuroses or other mental disorder NOS
E3...	Mental retardation
E30..	Mild mental retardation, IQ in range 50- 70 / Educationally subnormal / Feeble- minded / Moron
E31..	Other specified mental retardation
E310.	Moderate mental retardation, IQ in range 35-49 / Imbecile
E311.	Severe mental retardation, IQ in range 20-34
E312.	Profound mental retardation with IQ less than 20 / Idiocy
E31z.	Other specified mental retardation NOS
E3y..	Other specified mental retardation
E3z..	Mental retardation NOS
Eu...	[X]Mental and behavioural disorders
Eu0..	[X]Organic, including symptomatic, mental disorders
Eu00.	[X]Dementia in Alzheimer's disease
Eu000	[X]Dementia in Alzheimer's disease with early onset / [X]Presenile dementia,Alzheimer's type / [X]Primary degen dementia, Alzheimer's type, presenile onset /[X]Alzheimer's disease type 2
Eu001	[X]Dementia in Alzheimer's disease with late onset / [X]Alzheimer's disease type 1 / [X]Senile dementia,Alzheimer's type / [X]Primary degen dementia of Alzheimer's type, senile onset
Eu002	[X]Dementia in Alzheimer's dis, atypical or mixed type
Eu00z	[X]Dementia in Alzheimer's disease, unspecified / [X]Alzheimer's dementia unspec
Eu01.	[X]Vascular dementia / [X]Arteriosclerotic dementia
Eu010	[X]Vascular dementia of acute onset
Eu011	[X]Multi-infarct dementia / [X]Predominantly cortical dementia

Eu012	[X]Subcortical vascular dementia
Eu013	[X]Mixed cortical and subcortical vascular dementia
Eu01y	[X]Other vascular dementia
Eu01z	[X]Vascular dementia, unspecified
Eu02.	[X]Dementia in other diseases classified elsewhere
Eu020	[X]Dementia in Pick's disease
Eu021	[X]Dementia in Creutzfeldt-Jakob disease
Eu022	[X]Dementia in Huntington's disease
Eu023	[X]Dementia in Parkinson's disease
Eu024	[X]Dementia in human immunodef virus [HIV] disease
Eu025	[X]Lewy body dementia
Eu02y	[X]Dementia in other specified diseases classif elsewhere
Eu02z	[X] Unspecified dementia / [X] Presenile dementia NOS / [X] Presenile psychosis NOS / [X] Primary degenerative dementia NOS / [X] Senile dementia NOS / [X] Senile psychosis NOS / [X] Senile dementia, depressed or paranoid type
Eu03.	[X]Organic amnesic synd not induced alc/oth psychoact subs / [X]Korsakov's psychosis, nonalcoholic
Eu04.	[X]Delirium, not induced by alcohol+other psychoactive subs / [X]Acute / subacute brain syndrome / [X]Acute / subacute confusional state, nonalcoholic / [X]Acute / subacute infective psychosis / [X]Acute / subacute organic reaction / [X]Acute / subacute psycho-organic reaction
Eu040	[X]Delirium not superimposed on dementia, so described
Eu041	[X]Delirium superimposed on dementia
Eu04y	[X]Other delirium / [X]Delirium of mixed origin
Eu04z	[X]Delirium, unspecified
Eu05.	[X]Oth mental disorder brain damag/dysfunction/physical disr
Eu050	[X]Organic hallucinosis
Eu051	[X]Organic catatonic disorder
Eu052	[X]Organic delusional [schizophrenia- like] disorder / [X]Paranoid organic state / [X]Schizophrenia-like psychosis in epilepsy
Eu053	[X]Organic mood [affective] disorders
Eu054	[X]Organic anxiety disorder
Eu055	[X]Organic dissociative disorder
Eu056	[X]Organic emotionally labile [asthenic] disorder
Eu057	[X]Mild cognitive disorder
Eu05y	[X]Oth sp mental disord brain damag/dysfunction/physcal disd / [X]Epileptic psychosis NOS
Eu05z	[X]Unspec mental disorder brain damag/dysfunction/physcal dr / [X]Organic brain syndrome NOS / [X]Organic mental disorder NOS
Eu06.	[X]Personality and behav disorder brain dis dam and dysfunct
Eu060	[X]Organic personality disorder / [X]Organic pseudopsychopathic personality / [X]Frontal lobe syndrome / [X]Limbic epilepsy personality / [X]Lobotomy syndrome / [X]Postleucotomy syndrome
Eu061	[X]Postencephalitic syndrome
Eu062	[X]Postconcussional syndrome / [X]Postcontusional syndrome / [X]Post-traumatic brain syndrome
Eu06y	[X]Oth organ personality behav disorders brain dis dam dysf / [X]Right hemispheric organic affective disorder
Eu06z	[X]Unspec organ personality behav disorder brain dam dysfunc / [X]Organic psychosyndrome
Eu0z.	[X]Unspecified organic or symptomatic mental disorder / [X]Organic psychosis NOS / [X]Symptomatic psychosis NOS
Eu1..	[X]Mental and behavioural disorders due to psychoactive subs
Eu10.	[X]Mental and behavioural disorders due to use of alcohol
Eu100	[X]Mental & behav dis due to use alcohol: acute intoxication / [X]Acute alcoholic drunkenness

Eu101	[X]Mental and behav dis due to use of alcohol: harmful use
Eu102	[X]Mental and behav dis due to use alcohol: dependence syndr / [X]Alcohol addiction / [X]Chronic alcoholism / [X]Dipsomania
Eu103	[X]Mental and behav dis due to use alcohol: withdrawal state
Eu104	[X]Men & behav dis due alcohl: withdrawl state with delirium / [X]Delirium tremens, alcohol induced
Eu105	[X]Mental & behav dis due to use alcohol: psychotic disorder / [X]Alcoholic hallucinosis / [X]Alcoholic jealousy / [X]Alcoholic paranoia / [X]Alcoholic psychosis NOS
Eu106	[X]Mental and behav dis due to use alcohol: amnesic syndrome / [X]Korsakov's psychosis, alcohol induced
Eu107	[X]Men & behav dis due alcoh: resid & late-onset psychot dis / [X]Alcoholic dementia NOS / [X]Chronic alcoholic brain syndrome
Eu108	[X]Alcohol withdrawal-induced seizure
Eu10y	[X]Men & behav dis due to use alcohol: oth men & behav dis
Eu10z	[X]Ment & behav dis due use alcohol: unsp ment & behav dis
Eu11.	[X]Mental and behavioural disorders due to use of opioids
Eu110	[X]Mental & behav dis due to use opioids: acute intoxication
Eu111	[X]Mental and behav dis due to use opioids: harmful use
Eu112	[X]Mental and behav dis due to use opioids: dependence syndr / [X]Drug addiction - opioids / [X]Heroin addiction
Eu113	[X]Mental and behav dis due to use opioids: withdrawal state / [X]Cold turkey, opiate withdrawal
Eu114	[X]Men & behav dis due opioid: withdrawl state with delirium
Eu115	[X]Mental & behav dis due to use opioids: psychotic disorder
Eu116	[X]Mental and behav dis due to use opioids: amnesic syndrome
Eu117	[X]Men & beh dis due opioids: resid & late-onset psychot dis
Eu11y	[X]Men & behav dis due to use opioids: oth men & behav dis
Eu11z	[X]Ment & behav dis due use opioids: unsp ment & behav dis
Eu12.	[X]Mental and behavioural disorders due to use cannabinoids
Eu120	[X]Mental & behav dis due cannabinoids: acute intoxication
Eu121	[X]Mental and behav dis due to use cannabinoids: harmful use
Eu122	[X]Mental and behav dis due to cannabinoids: dependence synd / [X]Drug addiction-cannabis
Eu123	[X]Mental and behav dis due cannabinoids: withdrawal state
Eu124	[X]Men & beh dis due cannabinds: withdrwl state wth delirium
Eu125	[X]Mental & behav dis due to cannabinoids: psychotic disordr
Eu126	[X]Mental and behav dis due to use cannabinoids: amnesic syn
Eu127	[X]Mnt/bh dis due cannabinds: resid & late-onset psychot dis
Eu12y	[X]Men/behav dis due to use cannabinoids: oth men/behav disd
Eu12z	[X]Ment/behav dis due use cannabinoids: unsp ment/behav disd
Eu13.	[X]Mental and behavioural dis due use sedatives/hypnotics
Eu130	[X]Mental & behav dis due seds/hypntcs: acute intoxication
Eu131	[X]Mental and behav dis due to use seds/hypntcs: harmful use
Eu132	[X]Mental and behav dis due to seds/hypntcs: dependence synd / [X]Drug addiction- sedative / hypnotics
Eu133	[X]Mental and behav dis due seds/hypntcs: withdrawal state
Eu134	[X]Men & beh dis due seds/hypns: withdrwl state wth delirium
Eu135	[X]Mental & behav dis due to seds/hypntcs: psychotic disordr
Eu136	[X]Mental and behav dis due to use seds/hypntcs: amnesic syn
Eu137	[X]Mnt/bh dis due seds/hypns: resid & late-onset psychot dis
Eu13y	[X]Men/behav dis due to use seds/hypntcs: oth men/behav disd
Eu13z	[X]Ment/behav dis due use seds/hypntcs: unsp ment/behav disd
Eu14.	[X]Mental and behavioural disorders due to use of cocaine

Eu140	[X]Mental & behav dis due to use cocaine: acute intoxication
Eu141	[X]Mental and behav dis due to use of cocaine: harmful use
Eu142	[X]Mental and behav dis due to use cocaine: dependence syndr / [X]Drug addiction - cocaine
Eu143	[X]Mental and behav dis due to use cocaine: withdrawal state
Eu144	[X]Men & behav dis due cocaine: withdrawl state wth delirium
Eu145	[X]Mental & behav dis due to use cocaine: psychotic disorder
Eu146	[X]Mental and behav dis due to use cocaine: amnesic syndrome
Eu147	[X]Men & beh dis due cocaine: resid & late-onset psychot dis
Eu14y	[X]Men & behav dis due to use cocaine: oth men & behav dis
Eu14z	[X]Ment & behav dis due use cocaine: unsp ment & behav dis
Eu15.	[X]Mental & behav disorder due other stimulants inc caffein
Eu150	[X]Mnt/beh dis due oth stim inc caffein: acute intoxication
Eu151	[X]Ment/behav dis due to use oth stims inc caff: harmful use
Eu152	[X]Mental and behav dis oth stim inc caffein: dependnce synd / [X]Drug addiction-other stimul
Eu153	[X]Mnt/behav dis other stimlnts inc caffeine: withdrwl state
Eu154	[X]Mnt/bh dis oth stims inc caffne: withdr state wt delirium
Eu155	[X]Mental/behav dis oth stims inc caffeine: psychotic dis
Eu156	[X]Mental and behav dis oth stims inc caffeine: amnesic syn
Eu157	[X]Mnt/bh dis oth stm inc caffne resid/late-onset psycht dis
Eu15y	[X]Men/behav dis oth stims inc caffeine: oth men/behav disd
Eu15z	[X]Ment/beh dis oth stims inc caffeine: unsp ment/behav disd
Eu16.	[X]Mental and behavioural disorders due to use hallucinogens
Eu160	[X]Mental & behav dis due hallucinogens: acute intoxicatn
Eu161	[X]Mental and behav dis due to use hallucinogens: harmfl use
Eu162	[X]Mental and behav dis due to hallucinogens: dependence syn / [X]Drug addiction - hallucinogen
Eu163	[X]Mental and behav dis due hallucinogens: withdrawal state
Eu164	[X]Men & beh dis due hallucngns: withdrwl state wth delirium
Eu165	[X]Mental & behav dis due to hallucinogens: psychotic disord
Eu166	[X]Mental and behav dis due use hallucinogens: amnesic syndr
Eu167	[X]Mnt/bh dis due hallucngns: resid & late-onset psychot dis / [X]Post hallucinogen perception disorder
Eu16y	[X]Men/behav dis due to use hallucinogens: oth men/behav dis
Eu16z	[X]Ment/behav dis due use hallucinogens: unsp ment/behav dis
Eu17	[X]Mental and behavioural disorder due to use of tobacco
Eu170	[X]Mental & behav dis due to use tobacco: acute intoxication
Eu171	[X]Mental and behav dis due to use of tobacco: harmful use
Eu172	[X]Mental and behav dis due to use tobacco: dependence syndr
Eu173	[X]Mental and behav dis due to use tobacco: withdrawal state
Eu174	[X]Men & behav dis due tobacco: withdrawl state wth delirium
Eu175	[X]Mental & behav dis due to use tobacco: psychotic disorder
Eu176	[X]Mental and behav dis due to use tobacco: amnesic syndrome
Eu177	[X]Men & beh dis due tobacco: resid & late-onset psychot dis
Eu17y	[X]Men & behav dis due to use tobacco: oth men & behav dis
Eu17z	[X]Ment & behav dis due use tobacco: unsp ment & behav dis
Eu18.	[X]Mental & behav disorders due to use of volatile solvents
Eu180	[X]Mental & behav dis due vol solvents: acute intoxication
Eu181	[X]Mental and behav dis due volatile solvents: harmful use
Eu182	[X]Mental and behav dis due to vol solvents: dependence synd / [X]Drug addiction - solvent
Eu183	[X]Mental and behav dis due vol solvents: withdrawal state
Eu184	[X]Men & beh dis vol solvents: withdrawal state wth delirium
Eu185	[X]Mental & behav dis due to vol solvents: psychotic disordr

Eu186	[X]Mental and behav dis due to use vol solvents: amnesic syn
Eu187	[X]Mnt/bh dis vol solvents: resid & late- onset psychotic dis
Eu18y	[X]Men/behav dis due to use vol solvents: oth men/behav disd
Eu18z	[X]Ment/behav dis due use vol solvents: unsp ment/behav dis
Eu19.	[X]Men & behav disorder multiple drug use/psychoactive subst
Eu190	[X]Mental/behav dis multi drg use/psychoac subs: acute intox
Eu191	[X]Mental and behav dis mlti drg/oth psychoa sbs: harmfl use
Eu192	[X]Mental and behav dis mlti/oth psych sbs: dependence syndr / [X]Drug addiction NOS
Eu193	[X]Mental and behav dis mlti/oth psychoa sbs: withdrwl state
Eu194	[X]Mnt/bh dis mlti drg use/oth psy sbs: wthdr state + dlrium
Eu195	[X]Ment/behav dis mlti drug use/oth psyc sbs: psychotc dis
Eu196	[X]Mental/behav dis multi drg use/oth psy sbs: amnesic syndr
Eu197	[X]Men/beh dis mlt drg use/oth subs: resid/late psychot dis
Eu19y	[X]Men/beh dis mlt drg use/oth psy sbs: oth men & behav dis
Eu19z	[X]Ment/beh dis multi drug use/oth psy sbs unsp mnt/beh dis
Eu1A.	[X]Mental and behavioural disorders due use of crack cocaine
Eu1A0	[X]Ment behav dis due use crack cocaine: acute intoxication
Eu1A1	[X]Mental behav disorders due use crack cocaine: harmful use
Eu1A2	[X]Mental behav disorders due use crack cocaine: depend synd
Eu1A3	[X]Mental behav disord due crack cocaine: withdrawal state
Eu1A4	[X]Ment behav dis due crack cocaine: withdraw state delirium
Eu1A5	[X]Mental behav disord due crack cocaine: psychotic disorder
Eu1A6	[X]Men behav disorders due crack cocaine: amnesic syndrome
Eu1A7	[X]Men beh dis due crack cocaine: resid late-onset psych dis
Eu1Ay	[X]Ment behav disord due crack cocaine: other ment behav dis
Eu1Az	[X]Ment behav dis due crack cocaine: unsp ment and behav dis
Eu2..	[X]Schizophrenia, schizotypal and delusional disorders
Eu20.	[X]Schizophrenia
Eu200	[X]Paranoid schizophrenia / [X]Paraphrenic schizophrenia
Eu201	[X]Hebephrenic schizophrenia / [X]Disorganised schizophrenia
Eu202	[X]Catatonic schizophrenia / [X]Catatonic stupor / [X]Schizophrenic catalepsy / [X]Schizophrenic catatonia / [X]Schizophrenic flexibilatis cerea
Eu203	[X]Undifferentiated schizophrenia / [X]Atypical schizophrenia
Eu204	[X]Post-schizophrenic depression
Eu205	[X]Residual schizophrenia / [X]Chronic undifferentiated schizophrenia / [X]Restzustand schizophrenic
Eu206	[X]Simple schizophrenia
Eu20y	[X]Other schizophrenia / [X]Cenesthopathic schizophrenia / [X]Schizophreniform disord NOS / [X]Schizophrenifrm psychos NOS
Eu20z	[X]Schizophrenia, unspecified
Eu21.	[X]Schizotypal disorder / [X]Latent schizophrenic reaction / [X]Borderline schizophrenia / [X]Latent schizophrenia / [X]Prepsychotic schizophrenia / [X]Prodromal schizophrenia / [X]Pseudoneurotic schizophrenia / [X]Pseudopsychopathic schizophrenia / [X]Schizotypal personality disorder
Eu22.	[X]Persistent delusional disorders
Eu220	[X]Delusional disorder / [X]Paranoid psychosis / [X]Paranoid state / [X]Paraphrenia - late / [X]Sensitiver Beziehungswahn / [X]Paranoia
Eu221	[X]Delusional misidentification syndrome / [X]Capgras syndrome
Eu222	[X]Cotard syndrome
Eu22y	[X]Other persistent delusional disorders / [X]Delusional dysmorphophobia / [X]Involutional paranoid state / [X]Paranoia querulans
Eu22z	[X]Persistent delusional disorder, unspecified

Eu23.	[X]Acute and transient psychotic disorders
Eu230	[X]Acute polymorphic psychot disord without symp of schizoph / [X]Bouffee delirante / [X]Cycloid psychosis
Eu231	[X]Acute polymorphic psychot disord with symp of schizophren / [X]Bouffee delirante with symptoms of schizophrenia / [X]Cycloid psychosis with symptoms of schizophrenia
Eu232	[X]Acute schizophrenia-like psychotic disorder / [X]Brief schizophreniform disorder / [X]Brief schizophrenifrm psych / [X]Oneirophrenia / [X]Schizophrenic reaction
Eu233	[X]Other acute predominantly delusional psychotic disorders / [X]Psychogenic paranoid psychosis
Eu23y	[X]Other acute and transient psychotic disorders
Eu23z	[X]Acute and transient psychotic disorder, unspecified / [X]Brief reactive psychosis NOS / [X]Reactive psychosis
Eu24.	[X]Induced delusional disorder / [X]Folie a deux / [X]Induced paranoid disorder / [X]Induced psychotic disorder
Eu25.	[X]Schizoaffective disorders
Eu250	[X]Schizoaffective disorder, manic type / [X]Schizoaffective psychosis, manic type / [X]Schizophreniform psychosis, manic type
Eu251	[X]Schizoaffective disorder, depressive type / [X]Schizoaffective psychosis, depressive type / [X]Schizophreniform psychosis, depressive type
Eu252	[X]Schizoaffective disorder, mixed type / [X]Cyclic schizophrenia / [X]Mixed schizophrenic and affective psychosis
Eu25y	[X]Other schizoaffective disorders
Eu25z	[X]Schizoaffective disorder, unspecified / [X]Schizoaffective psychosis NOS
Eu2y.	[X]Other nonorganic psychotic disorders / [X]Chronic hallucinatory psychosis
Eu2z.	[X]Unspecified nonorganic psychosis / [X]Psychosis NOS
Eu3..	[X]Mood - affective disorders
Eu30.	[X]Manic episode / [X]Bipolar disorder, single manic episode
Eu300	[X]Hypomania
Eu301	[X]Mania without psychotic symptoms
Eu302	[X]Mania with psychotic symptoms / [X]Mania with mood-congruent psychotic symptoms / [X]Mania with mood-incongruent psychotic symptoms / [X]Manic stupor
Eu30y	[X]Other manic episodes
Eu30z	[X]Manic episode, unspecified / [X]Mania NOS
Eu31.	[X]Bipolar affective disorder / [X]Manic- depressive illness / [X]Manic- depressive psychosis / [X]Manic- depressive reaction
Eu310	[X]Bipolar affective disorder, current episode hypomanic
Eu311	[X]Bipolar affect disorder cur epi manic wout psychotic symp
Eu312	[X]Bipolar affect disorder cur epi manic with psychotic symp
Eu313	[X]Bipolar affect disorder cur epi mild or moderate depressn
Eu314	[X]Bipol aff disord, curr epis sev depress, no psychot symp
Eu315	[X]Bipolar affect dis cur epi severe depres with psyc symp
Eu316	[X]Bipolar affective disorder, current episode mixed
Eu317	[X]Bipolar affective disorder, currently in remission
Eu31y	[X]Other bipolar affective disorders / [X]Bipolar II disorder / [X]Recurrent manic episodes
Eu31z	[X]Bipolar affective disorder, unspecified
Eu32.	[X]Depressive episode / [X]Single episode of depressive reaction / [X]Single episode of psychogenic depression / [X]Single episode of reactive depression
Eu320	[X]Mild depressive episode
Eu321	[X]Moderate depressive episode
Eu322	[X]Severe depressive episode without psychotic symptoms / [X]Single episode agitated depressn w'out psychotic symptoms / [X]Single episode major depression w'out psychotic symptoms / [X]Single episode vital depression w'out psychotic symptoms

Eu323	[X]Severe depressive episode with psychotic symptoms / [X]Single episode of major depression and psychotic symptoms / [X]Single episode of psychogenic depressive psychosis / [X]Single episode of psychotic depression / [X]Single episode of reactive depressive psychosis
Eu324	[X]Mild depression
Eu325	[X]Major depression, mild
Eu326	[X]Major depression, moderately severe
Eu327	[X]Major depression, severe without psychotic symptoms
Eu328	[X]Major depression, severe with psychotic symptoms
Eu32y	[X]Other depressive episodes / [X]Atypical depression / [X]Single episode of masked depression NOS
Eu32z	[X]Depressive episode, unspecified / [X]Depression NOS / [X]Depressive disorder NOS / [X]Prolonged single episode of reactive depression / [X] Reactive depression NOS
Eu33.	[X]Recurrent depressive disorder / [X]Recurrent episodes of depressive reaction / [X]Recurrent episodes of psychogenic depression / [X]Recurrent episodes of reactive depression / [X]Seasonal depressive disorder / [X]SAD - Seasonal affective disorder
Eu330	[X]Recurrent depressive disorder, current episode mild
Eu331	[X]Recurrent depressive disorder, current episode moderate
Eu332	[X]Recurr depress disorder cur epi severe without psyc sympt / [X]Endogenous depression without psychotic symptoms / [X]Major depression, recurrent without psychotic symptoms / [X]Manic- depress psychosis,depressd,no psychotic symptoms / [X]Vital depression, recurrent without psychotic symptoms
Eu333	[X]Recurrent depress disorder cur epi severe with psyc symp / [X]Endogenous depression with psychotic symptoms / [X]Manic- depress psychosis,depressed type+psychotic symptoms / [X]Recurr severe episodes/major depression+psychotic symptom / [X]Recurr severe episodes/psychogenic depressive psychosis / [X]Recurrent severe episodes of psychotic depression / [X]Recurrent severe episodes/reactive depressive psychosis
Eu334	[X]Recurrent depressive disorder, currently in remission
Eu33y	[X]Other recurrent depressive disorders
Eu33z	[X]Recurrent depressive disorder, unspecified / [X]Monopolar depression NOS
Eu34.	[X]Persistent mood affective disorders
Eu340	[X]Cyclothymia / [X]Affective personality disorder / [X]Cycloid personality / [X]Cyclothymic personality
Eu341	[X]Dysthymia / [X]Depressive neurosis / [X]Depressive personality disorder / [X]Neurotic depression / [X]Persistant anxiety depression
Eu34y	[X]Other persistent mood affective disorders
Eu34z	[X]Persistent mood affective disorder, unspecified
Eu3y.	[X]Other mood affective disorders
Eu3y0	[X]Other single mood affective disorders / [X]Mixed affective episode
Eu3y1	[X]Other recurrent mood affective disorders / [X]Recurrent brief depressive episodes
Eu3y2	[X]Premenstrual dysphoric disorder
Eu3yy	[X]Other specified mood affective disorders
Eu3z.	[X]Unspecified mood affective disorder / [X]Affective psychosis NOS
Eu4..	[X]Neurotic, stress - related and somoform disorders
Eu40.	[X]Phobic anxiety disorders
Eu400	[X]Agoraphobia / [X]Agoraphobia without history of panic disorder / [X]Panic disorder with agoraphobia
Eu401	[X]Social phobias / [X]Anthropophobia / [X]Social neurosis
Eu402	[X]Specific (isolated) phobias / [X]Acrophobia / [X]Animal phobias / [X]Claustrophobia / [X]Simple phobia
Eu403	[X]Needle phobia
Eu40y	[X]Other phobic anxiety disorders
Eu40z	[X]Phobic anxiety disorder, unspecified / [X]Phobia NOS / [X]Phobic state NOS

Eu41.	[X]Other anxiety disorders
Eu410	[X]Panic disorder [episodic paroxysmal anxiety] / [X]Panic attack / [X]Panic state
Eu411	[X]Generalized anxiety disorder / [X]Anxiety neurosis / [X]Anxiety reaction / [X]Anxiety state
Eu412	[X]Mixed anxiety and depressive disorder / [X]Mild anxiety depression
Eu413	[X]Other mixed anxiety disorders
Eu41y	[X]Other specified anxiety disorders / [X]Anxiety hysteria
Eu41z	[X]Anxiety disorder, unspecified / [X]Anxiety NOS
Eu42.	[X]Obsessive - compulsive disorder / [X]Anankastic neurosis / [X]Obsessive- compulsive neurosis
Eu420	[X]Predominantly obsessional thoughts or ruminations
Eu421	[X]Predominantly compulsive acts [obsessional rituals]
Eu422	[X]Mixed obsessional thoughts and acts
Eu42y	[X]Other obsessive-compulsive disorders
Eu42z	[X]Obsessive-compulsive disorder, unspecified
Eu43	[X]Reaction to severe stress, and adjustment disorders
Eu430	[X]Acute stress reaction / [X]Acute crisis reaction / [X]Acute reaction to stress / [X]Combat fatigue / [X]Crisis state / [X]Psychic shock
Eu431	[X]Post - traumatic stress disorder / [X]Traumatic neurosis
Eu432	[X]Adjustment disorders / [X]Culture shock / [X]Grief reaction / [X]Hospitalism in children
Eu43y	[X]Other reactions to severe stress
Eu43z	[X]Reaction to severe stress, unspecified
Eu44.	[X]Dissociative [conversion] disorders / [X]Conversion hysteria / [X]Conversion reaction / [X]Hysteria / [X]Hysterical psychosis
Eu440	[X]Dissociative amnesia
Eu441	[X]Dissociative fugue
Eu442	[X]Dissociative stupor
Eu443	[X]Trance and possession disorders
Eu444	[X]Dissociative motor disorders / [X]Psychogenic aphonia / [X]Psychogenic dysphonia
Eu445	[X]Dissociative convulsions / [X]Pseudoseizures
Eu446	[X]Dissociative anaesthesia and sensory loss / [X]Psychogenic deafness
Eu447	[X]Mixed dissociative [conversion] disorders
Eu44y	[X]Other dissociative [conversion] disorders / [X]Ganser's syndrome / [X]Multiple personality / [X]Psychogenic confusion / [X]Psychogenic twilight state
Eu44z	[X]Dissociative [conversion] disorder, unspecified
Eu45.	[X]Somatoform disorders
Eu450	[X]Somatization disorder / [X]Multiple psychosomatic disorder / [X]Briquet's syndrome / [X]Briquet's disorder
Eu451	[X]Undifferentiated somatoform disorder / [X]Undifferentiated psychosomatic disorder
Eu452	[X]Hypochondriacal disorder / [X]Body dysmorphic disorder / [X]Dysmorphophobia nondelusional / [X]Hypochondriacal neurosis / [X]Hypochondriasis / [X]Nosophobia
Eu453	[X]Somatoform autonomic dysfunction / [X]Cardiac neurosis / [X]Da Costa's syndrome / [X]Gastric neurosis / [X]Neurocirculatory asthenia / [X]Psychogenic cough / [X]Psychogenic diarrhoea / [X]Psychogenic dyspepsia / [X]Psychogenic dysuria / [X]Psychogenic flatulence / [X]Psychogenic hiccough / [X]Psychogenic hyperventilat / [X]Psychogenic freq micturit / [X]Psychogenic IBS / [X]Psychogenic pylorospasm
Eu454	[X]Persistent somatoform pain disorder / [X]Psychalgia / [X]Psychogenic backache / [X]Psychogenic headache / [X]Somatoform pain disorder
Eu455	[X]Globus pharyngeus / [X]Globus hystericus
Eu45y	[X]Other somatoform disorders / [X]Psychogenic dysmenorrhoea / [X]Globus hystericus / [X]Psychogenic pruritis / [X]Psychogenic torticollis / [X]Teeth-grinding
Eu45z	[X]Somatoform disorder, unspecified / [X]Psychosomatic disorder NOS
Eu46.	[X]Other neurotic disorders

Eu460	[X]Neurasthenia / [X]Fatigue syndrome
Eu461	[X]Depersonalization - derealization syndrome
Eu46y	[X]Other specified neurotic disorders / [X]Briquet's disorder / [X]Dhat syndrome / [X]Occupational neurosis, including writer's cramp / [X]Psychasthenia / [X]Psychasthenia neurosis / [X]Psychogenic syncope
Eu46z	[X]Neurotic disorder, unspecified / [X]Neurosis NOS
Eu5..	[X]Behav synd assoc with physiolgcl disturb + physical fctrs
Eu50.	[X]Eating disorders
Eu500	[X]Anorexia nervosa
Eu501	[X]Atypical anorexia nervosa
Eu502	[X]Bulimia nervosa / [X]Bulimia NOS / [X]Hyperorexia nervosa
Eu503	[X]Atypical bulimia nervosa
Eu504	[X]Overeating associated with other psychological disturbncs / [X]Psychogenic overeating
Eu505	[X]Vomiting associated with other psychological disturbances / [X]Psychogenic vomiting
Eu50y	[X]Other eating disorders / [X]Pica in adults / [X]Psychogenic loss of appetite
Eu50z	[X]Eating disorder, unspecified
Eu51.	[X]Nonorganic sleep disorders
Eu510	[X]Nonorganic insomnia
Eu511	[X]Nonorganic hypersomnia
Eu512	[X]Nonorganic disorder of the sleep- wake schedule / [X]Psychogenic inversion of circadian rhythm / [X]Psychogenic inversion of nyctohemeral rhythm / [X]Psychogenic inversion of sleep rhythm
Eu513	[X]Sleepwalking
Eu514	[X]Sleep terrors
Eu515	[X]Nightmares / [X]Dream anxiety disorder
Eu51y	[X]Other nonorganic sleep disorders
Eu51z	[X]Nonorganic sleep disorder, unspecified / [X]Emotional sleep disorder NOS
Eu52.	[X]Sex dysfunction not caused by organic disorder or disease
Eu520	[X]Lack or loss of sexual desire / [X]Frigidity / [X]Hypoactive sexual desire disorder / [X] Lack of libido
Eu521	[X]Sexual aversion and lack of sexual enjoyment / [X]Anhedonia sexual
Eu522	[X]Failure of genital response / [X]Female sexual arousal disorder / [X]Male erectile disorder / [X]Psychogenic impotence
Eu523	[X]Orgasmic dysfunction / [X]Inhibited orgasm / [X]Psychogenic anorgasmy
Eu524	[X]Premature ejaculation
Eu525	[X]Nonorganic vaginismus / [X]Psychogenic vaginismus
Eu526	[X]Nonorganic dyspareunia / [X]Psychogenic dyspareunia
Eu527	[X]Excessive sexual drive / [X]Nymphomania / [X]Satyriasis
Eu528	[X]Erotomania
Eu52y	[X]Oth sex dysfunction, not caused by organic disordr/dsease
Eu52z	[X]Unspec sex dysfunction not caused by organic disordr/dis
Eu53.	[X]Mental and behav disorders assoc with the puerperium NEC
Eu530	[X]Mild mental/behav disorder assoc with the puerperium NEC / [X]Postnatal depression NOS / [X]Postpartum depression NOS
Eu531	[X]Severe mental and behav disorder assoc wth puerperium NEC / [X]Puerperal psychosis NOS
Eu53y	[X]Oth mental and behav disorders assoc with puerperium NEC
Eu53z	[X]Puerperal mental disorder, unspecified
Eu54.	[X]Psychological/behav factor assoc with disorder or dis EC
Eu55.	[X]Abuse of non-dependence- producing substances / [X]Abuse of antacids / [X]Abuse of herbal or folk remedies / [X]Abuse of steroids or hormones / [X]Abuse of vitamins / [X]Laxative habit
Eu5z.	[X]Unsp behav synd assoc with physiol disturb physical facts / [X]Psychogenic physiological dysfunction NOS

Eu6..	[X]Disorders of adult personality and behaviour
Eu60.	[X]Specific personality disorders
Eu600	[X]Paranoid personality disorder / [X]Expansive paranoid personality disorder / [X]Fanatic paranoid personality disorder / [X]Querulant personality disorder / [X]Sensitive paranoid personality disorder
Eu601	[X]Schizoid personality disorder
Eu602	[X]Dissocial personality disorder / [X]Amoral personality disorder / [X]Antisocial personality disorder / [X]Asocial personality disorder / [X]Psychopathic personality disorder / [X]Sociopathic personality disorder
Eu603	[X]Emotionally unstable personality disorder / [X]Aggressive personality disorder / [X]Borderline personality disorder / [X]Explosive personality disorder
Eu604	[X]Histrionic personality disorder / [X]Hysterical personality disorder / [X]Psychoinfantile personality disorder
Eu605	[X]Anankastic personality disorder / [X]Compulsive personality disorder / [X]Obsessional personality disorder / [X]Obsessive-compulsive personality disorder
Eu606	[X]Anxious [avoidant] personality disorder
Eu607	[X]Dependent personality disorder / [X]Asthenic personality disorder / [X]Inadequate personality disorder / [X]Passive personality disorder / [X]Self defeating personality disorder
Eu608	[X]Addictive personality
Eu60y	[X]Other specific personality disorders / [X]Eccentric personality disorder / [X]Haltlose type personality disorder / [X]Immature personality disorder / [X]Narcissistic personality disorder / [X]Passive-aggressive personality disorder / [X]Psychoneurotic personality disorder
Eu60z	[X]Personality disorder, unspecified / [X]Character neurosis NOS / [X]Pathological personality NOS
Eu61.	[X]Mixed and other personality disorders
Eu62.	[X]Enduring personality change not attrib to brain damag/dis
Eu620	[X]Enduring personality change after catastrophic experience / [X]Personality change after concentration camp experiences / [X]Personality change after disasters / [X]Personality change aft prolong captiv+possib/being killed / [X]Personlty chang aft expos life-threat sit/victim/terrorsm / [X]Personality change after torture
Eu621	[X]Enduring personality change after psychiatric illness
Eu62y	[X]Other enduring personality changes / [X]Chronic pain personality syndrome
Eu62z	[X]Enduring personality change, unspecified
Eu63.	[X]Habit and impulse disorders
Eu630	[X]Pathological gambling / [X]Compulsive gambling
Eu631	[X]Pathological fire-setting
Eu632	[X]Pathological stealing
Eu633	[X]Trichotillomania
Eu63y	[X]Other habit and impulse disorders
Eu63z	[X]Habit and impulse disorder, unspecified
Eu64.	[X]Gender identity disorders
Eu640	[X]Transsexualism
Eu641	[X]Dual-role transvestism
Eu642	[X]Gender identity disorder of childhood
Eu64y	[X]Other gender identity disorders
Eu64z	[X]Gender identity disorder, unspecified / [X]Gender-role disorder NOS
Eu65.	[X]Disorders of sexual preference / [X]Paraphilias
Eu650	[X]Fetishism
Eu651	[X]Fetishistic transvestism
Eu652	[X]Exhibitionism
Eu653	[X]Voyeurism
Eu654	[X]Paedophilia

Eu655	[X]Sadomasochism / [X]Masochism / [X]Sadism
Eu656	[X]Multiple disorders of sexual preference
Eu65y	[X]Other disorders of sexual preference / [X]Frotteurism / [X]Necrophilia
Eu65z	[X]Disorder of sexual preference, unspecified / [X]Sexual deviation NOS
Eu66.	[X]Psychol and behav disorder assoc with sex dev and orienta
Eu660	[X]Sexual maturation disorder
Eu661	[X]Egodystonic sexual orientation
Eu662	[X]Sexual relationship disorder
Eu66y	[X]Other psychosexual development disorders
Eu66z	[X]Psychosexual development disorder, unspecified
Eu6y.	[X]Other disorders of adult personality and behaviour
Eu6y0	[X]Elaboration of physical symptoms for psychological reason
Eu6y1	[X]Intent product/feign of symptom/disab eith physical/psych / [X] Munchausens syndrome
Eu6y2	[X]Munchausen's by proxy
Eu6yy	[X]Other specified disorders of adult personality/behaviour
Eu6z.	[X]Unspecified disorder of adult personality and behaviour
Eu7..	[X]Mental retardation
Eu70.	[X]Mild mental retardation / [X]Feeble- mindedness / [X]Mild mental subnormality
Eu700	[X]Mld mental retard with statement no or min impairm behav
Eu701	[X]Mld mental retard sig impairment behav req attent/treatmt
Eu70y	[X]Mild mental retardation, other impairments of behaviour
Eu70z	[X]Mild mental retardation without mention impairment behav
Eu71.	[X]Moderate mental retardation / [X]Moderate mental subnormality
Eu710	[X]Mod mental retard with statement no or min impairm behav
Eu711	[X]Mod mental retard sig impairment behav req attent/treatmt
Eu71y	[X]Mod retard oth behav impair
Eu71z	[X]Mod mental retardation without mention impairment behav
Eu72.	[X]Severe mental retardation / [X]Severe mental subnormality
Eu720	[X]Sev mental retard with statement no or min impairm behav
Eu721	[X]Sev mental retard sig impairment behav req attent/treatmt
Eu72y	[X]Severe mental retardation, other impairments of behaviour
Eu72z	[X]Sev mental retardation without mention impairment behav
Eu73.	[X]Profound mental retardation / [X]Profound mental subnormality
Eu730	[X]Profound ment retrd wth statement no or min impairm behav
Eu731	[X]Profound ment retard sig impairmnt behav req attent/treat
Eu73y	[X]Profound mental retardation, other impairments of behavr
Eu73z	[X]Prfnd mental retardation without mention impairment behav
Eu7y.	[X]Other mental retardation
Eu7y0	[X]Oth mental retard with statement no or min impairm behav
Eu7y1	[X]Oth mental retard sig impairment behav req attent/treatmt
Eu7yy	[X]Other mental retardation, other impairments of behaviour
Eu7yz	[X]Other mental retardation without mention impairment behav
Eu7z.	[X]Unspecified mental retardation / [X]Mental deficiency NOS / [X]Mental subnormality NOS
Eu7z0	[X]Unsp mental retard with statement no or min impairm behav
Eu7z1	[X]Unsp mentl retard sig impairment behav req attent/treatmt
Eu7zy	[X]Unspecified mental retardatn, other impairments of behav
Eu7zz	[X]Unsp mental retardation without mention impairment behav
Eu8..	[X]Disorders of psychological development
Eu80.	[X]Specific developmental disorders of speech and language
Eu800	[X]Specific speech articulation disorder / [X]Developmental phonological disorder / [X]Developmental speech articulation disorder / [X]Dyslalia / [X]Functional speech articulation disorder / [X]Lalling

Eu801	[X]Expressive language disorder / [X]Developmental dysphasia, expressive type / [X]Developmental aphasia, expressive type
Eu802	[X]Receptive language disorder / [X]Congenital auditory imperception / [X]Developmental dysphasia, receptive type / [X]Developmental Wernicke's aphasia / [X]Word deafness / [X]Developmental aphasia, receptive type
Eu803	[X]Acquired aphasia with epilepsy [Landau - Kleffner]
Eu804	[X]Cocktail party syndrome
Eu805	[X]Semantic-pragmatic disorder
Eu80y	[X]Other developmental disorders of speech and language / [X]Lisping
Eu80z	[X]Developmental disorder of speech and language unspecified / [X]Language development disorder NOS
Eu81.	[X]Specific developmental disorders of scholastic skills
Eu810	[X]Specific reading disorder / [X]Backward reading / [X]Developmental dyslexia / [X]Specific reading retardation
Eu811	[X]Specific spelling disorder / [X]Specific spelling retardation without reading disorder
Eu812	[X]Specific disorder of arithmetical skills / [X]Developmental acalculia / [X]Developmental arithmetical disorder / [X]Developmental Gerstmann's syndrome
Eu813	[X]Mixed disorder of scholastic skills
Eu814	[X]Moderate learning disability
Eu815	[X]Severe learning disability
Eu816	[X]Mild learning disability
Eu817	[X]Profound learning disability
Eu81y	[X]Other developmental disorders of scholastic skills / [X]Developmental expressive writing disorder
Eu81z	[X]Developmental disorder of scholastic skills, unspecified / [X]Learning disability NOS / [X]Learning disorder NOS / [X]Learn acquisition disab NOS
Eu82.	[X]Specific developmental disorder of motor function / [X]Clumsy child syndrome / [X]Developmental co - ordination disorder / [X]Developmental dyspraxia
Eu83.	[X]Mixed specific developmental disorders
Eu84.	[X]Pervasive developmental disorders
Eu840	[X]Childhood autism / [X]Autistic disorder / [X]Infantile autism / [X]Infantile psychosis / [X]Kanner's syndrome
Eu841	[X]Atypical autism / [X]Atypical childhood psychosis / [X]Mental retardation with autistic features
Eu842	[X]Rett's syndrome
Eu843	[X]Other childhood disintegrative disorder / [X]Dementia infantalis / [X]Disintegrative psychosis / [X]Heller's syndrome / [X]Symbiotic psychosis
Eu844	[X]Overactive disorder assoc mental retard/stereotype movts
Eu845	[X]Asperger's syndrome / [X]Autistic psychopathy / [X]Schizoid disorder of childhood
Eu84y	[X]Other pervasive developmental disorders
Eu84z	[X]Pervasive developmental disorder, unspecified / [X]Autistic spectrum disorder
Eu8y.	[X]Other disorders of psychological development / [X]Developmental agnosia
Eu8z.	[X]Unspecified disorder of psychological development / [X]Psychological developmental disorder NOS
Eu9..	[X]Behavioural/emotional disords onset childhood/adolescence
Eu90.	[X]Hyperkinetic disorders
Eu900	[X]Disturbance of activity and attention / [X]Attention deficit hyperactivity disorder
Eu901	[X]Hyperkinetic conduct disorder / [X]Hyperkinetic disorder associated with conduct disorder
Eu902	[X]Deficits in attention, motor control and perception
Eu90y	[X]Other hyperkinetic disorders
Eu90z	[X]Hyperkinetic disorder, unspecified / [X]Hyperkinetic reaction of childhood or adolescence NOS / [X]Hyperkinetic syndrome NOS

Eu91.	[X]Conduct disorders
Eu910	[X]Conduct disorder confined to the family context
Eu911	[X]Unsocialized conduct disorder / [X]Conduct disorder, solitary aggressive type / [X]Unsocialised aggressive disorder
Eu912	[X]Socialized conduct disorder / [X]Conduct disorder, group type / [X]Group delinquency / [X]Offences in the context of gang membership / [X]Stealing in company of others / [X]Truancy from school
Eu913	[X]Oppositional defiant disorder
Eu91y	[X]Other conduct disorders
Eu91z	[X]Conduct disorder, unspecified / [X]Childhood behavioural disorder NOS / [X]Childhood conduct disorder NOS
Eu92.	[X]Mixed disorders of conduct and emotions / [X]Emotional behavioural problems
Eu920	[X]Depressive conduct disorder
Eu92y	[X]Other mixed disorders of conduct and emotions / [X]Conduct disorder associated with emotional disorder / [X]Conduct disorder associated with neurotic disorder
Eu92z	[X]Mixed disorder of conduct and emotions, unspecified
Eu93.	[X]Emotional disorders with onset specific to childhood
Eu930	[X]Separation anxiety disorder of childhood
Eu931	[X]Phobic anxiety disorder of childhood
Eu932	[X]Social anxiety disorder of childhood / [X]Avoidant disorder childhood
Eu933	[X]Sibling rivalry disorder / [X]Sibling jealousy
Eu93y	[X]Other childhood emotional disorders / [X]Childhood identity disorder / [X]Childhood overanxious disorder
Eu93z	[X]Childhood emotional disorder, unspecified
Eu94.	[X]Disorder social funct onset specific childhood/adolesc
Eu940	[X]Elective mutism / [X]Selective mutism
Eu941	[X]Reactive attachment disorder of childhood
Eu942	[X]Disinhibited attachment disorder of childhood / [X]Affectionless psychopathy / [X]Institutional syndrome
Eu94y	[X]Other childhood disorders of social functioning
Eu94z	[X]Childhood disorder of social functioning, unspecified
Eu95.	[X]Tic disorders
Eu950	[X]Transient tic disorder
Eu951	[X]Chronic motor or vocal tic disorder
Eu952	[X]Comb vocal multiple motor tic disorder - de la Tourette
Eu953	[X]Involuntary excessive blinking
Eu95y	[X]Other tic disorders
Eu95z	[X]Tic disorder, unspecified
Eu9y.	[X]Oth behav emotion disorder onset usual occur childhd/adol
Eu9y0	[X]Nonorganic enuresis
Eu9y1	[X]Nonorganic encopresis
Eu9y2	[X]Feeding disorder of infancy and childhood
Eu9y3	[X]Pica of infancy and childhood
Eu9y4	[X]Stereotyped movement disorders
Eu9y5	[X]Stuttering [stammering]
Eu9y6	[X]Cluttering
Eu9y7	[X]Attention deficit disorder
Eu9yy	[X]Ot spc behav emotion disorder onst usual childhood adoles
Eu9yz	[X]Unspec behav emotion disorder onst usual childhood adoles
Euz..	[X]Mental disorder, not otherwise specified / [X]Mental illness NOS
Ey...	Other specified mental disorders
Ez...	Mental disorders NOS

APPENDIX F: SUBSTANCE USE READ CODES.

Read Code	Description
1362	Trivial drinker - <1u/day / Drinks rarely / Drinks occasionally
1363	Light drinker - 1-2u/day
1364	Moderate drinker - 3-6u/day
1365	Heavy drinker - 7-9u/day
1366	Very heavy drinker - >9u/day
1369	Suspect alcohol abuse - denied
1371	Never smoked tobacco / Non-smoker
1372	Trivial smoker - < 1 cig/day / Occasional smoker
1373	Light smoker - 1-9 cigs/day
1374	Moderate smoker - 10-19 cigs/d
1375	Heavy smoker - 20-39 cigs/day
1376	Very heavy smoker - 40+cigs/d
1377	Ex-trivial smoker (<1/day)
1378	Ex-light smoker (1-9/day)
1379	Ex-moderate smoker (10-19/day)
1462	H/O: alcoholism
1463	H/O: drug dependency
136b.	Feels should cut down drinking
136F.	Spirit drinker
136G.	Beer drinker
136H.	Drinks beer and spirits
136I.	Drinks wine
136J.	Social drinker
136K.	Alcohol intake above recommended sensible limits
136L.	Alcohol intake within recommended sensible limits
136N.	Light drinker
136O.	Moderate drinker
136P.	Heavy drinker
136Q.	Very heavy drinker
136R.	Binge drinker
136S.	Hazardous alcohol use
136T.	Harmful alcohol use
136W.	Alcohol misuse
136Y.	Drinks in morning to get rid of hangover
136Z.	Alcohol consumption NOS
137..	Tobacco consumption / Smoker - amount smoked
137a.	Pipe tobacco consumption
137A.	Ex-heavy smoker (20-39/day)
137B.	Ex-very heavy smoker (40+/day)
137b.	Ready to stop smoking
137C.	Keeps trying to stop smoking
137c.	Thinking about stopping smoking
137D.	Admitted tobacco cons untrue ?
137d.	Not interested in stopping smoking
137e.	Smoking restarted
137E.	Tobacco consumption unknown
137F.	Ex-smoker - amount unknown
137f.	Reason for restarting smoking

137G.	Trying to give up smoking
137g.	Cigarette pack-years
137h.	Minutes from waking to first tobacco consumption
137H.	Pipe smoker
137I.	Passive smoker
137i.	Ex-tobacco chewer
137J.	Cigar smoker
137j.	Ex-cigarette smoker
137k.	Refusal to give smoking status
137K.	Stopped smoking
137K0	Recently stopped smoking
137L.	Current non-smoker
137l.	Ex roll-up cigarette smoker
137M.	Rolls own cigarettes
137N.	Ex pipe smoker
137O.	Ex cigar smoker
137P.	Cigarette smoker / Smoker
137Q.	Smoking started / Smoking restarted
137R.	Current smoker
137S.	Ex smoker
137T.	Date ceased smoking
137U.	Not a passive smoker
137V.	Smoking reduced
137W.	Chews tobacco
137X.	Cigarette consumption
137Y.	Cigar consumption
137Z.	Tobacco consumption NOS
13c..	Drug user
13c0.	Injecting drug user
13c1.	Intravenous drug user
13c2.	Never injecting drug user
13c3.	Intramuscular drug user
13c4.	Intranasal drug user
13c5.	Substance misuse increased
13c6.	Substance misuse decreased
13c7.	Current drug user
13c8.	Reduced drugs misuse
13c9.	Subcutaneous drug user / Skin pops drugs
13cA.	Smokes drugs
13cB.	Misuses drugs orally
13cC.	Continuous use of drugs
13cD.	Episodic use of drugs
13cE.	Prolonged high dose use of cannabis
13cF.	Preoccupied with substance misuse
13cG.	Drug tolerance
13cH.	Persistent substance misuse
13cJ.	Previously injecting drug user
13cK.	Current non recreational drug user
13cL.	Has never injected drugs
13cM.	Substance misuse
13cN.	Has never shared drug injection equipment
13cP.	Does not misuse drugs

13cQ.	Behavioural tolerance to drug
13cR.	Physical tolerance to drug
13cS.	Psychological drug tolerance
13cT.	Reverse tolerance to drug
13p0.	Negotiated date for cessation of smoking
13Y8.	Alcoholics anonymous
13ZY.	Disqualified from driving due to excess alcohol
146E.	H/O: recreational drug use
146F.	H/O: drug abuse
1T...	History of substance misuse
1T0..	H/O heroin misuse
1T00.	H/O daily heroin misuse
1T01.	H/O weekly heroin misuse
1T02.	Previous history of heroin misuse
1T03.	H/O infrequent heroin misuse
1T1..	H/O methadone misuse
1T10.	H/O daily methadone misuse
1T11.	H/O weekly methadone misuse
1T12.	H/O infrequent methadone misuse
1T13.	Previous history of methadone misuse
1T2..	H/O ecstasy misuse
1T20.	H/O daily ecstasy misuse
1T21.	H/O weekly ecstasy misuse
1T22.	H/O infrequent ecstasy misuse
1T23.	Previous history of ecstasy misuse
1T3..	H/O benzodiazepine misuse
1T30.	H/O daily benzodiazepine misuse
1T31.	H/O weekly benzodiazepine misuse
1T32.	H/O infrequent benzodiazepine misuse
1T33.	Previous history of benzodiazepine misuse
1T4..	H/O amphetamine misuse
1T40.	H/O daily amphetamine misuse
1T41.	H/O weekly amphetamine misuse
1T42.	H/O infrequent amphetamine misuse
1T43.	Previous history of amphetamine misuse
1T5..	H/O cocaine misuse
1T50.	H/O daily cocaine misuse
1T51.	H/O weekly cocaine misuse
1T52.	H/O infrequent cocaine misuse
1T53.	Previous history of cocaine misuse
1T6..	H/O crack cocaine misuse
1T60.	H/O daily crack cocaine misuse
1T61.	H/O weekly crack cocaine misuse
1T62.	H/O infrequent crack cocaine misuse
1T63.	Previous history of crack cocaine misuse
1T7..	H/O hallucinogen misuse
1T70.	H/O daily hallucinogen misuse
1T71.	H/O weekly hallucinogen misuse
1T72.	H/O infrequent hallucinogen misuse
1T73.	Previous history of hallucinogen misuse
1T8..	H/O cannabis misuse
1T80.	H/O daily cannabis misuse

1T81.	H/O weekly cannabis misuse
1T82.	H/O infrequent cannabis misuse
1T83.	Previous history of cannabis misuse
1T9..	H/O solvent misuse
1T90.	H/O daily solvent misuse
1T91.	H/O weekly solvent misuse
1T92.	H/O infrequent solvent misuse
1T93.	Previous history of solvent misuse
1TA..	H/O barbiturate misuse
1TA0.	H/O daily barbiturate misuse
1TA1.	H/O weekly barbiturate misuse
1TA2.	H/O infrequent barbiturate misuse
1TA3.	Previous history of barbiturate misuse
1TB..	H/O major tranquiliser misuse
1TB0.	H/O daily major tranquiliser misuse
1TB1.	H/O weekly major tranquiliser misuse
1TB2.	H/O infrequent major tranquiliser misuse
1TB3.	Previous history of major tranquiliser misuse
1TC..	H/O anti-depressant misuse
1TC0.	H/O daily anti-depressant misuse
1TC1.	H/O weekly anti-depressant misuse
1TC2.	H/O infrequent anti-depressant misuse
1TC3.	Previous history of anti-depressant misuse
1TD..	H/O opiate misuse
1TD0.	H/O daily opiate misuse
1TD1.	H/O weekly opiate misuse
1TD2.	H/O infrequent opiate misuse
1TD3.	Previous history of opiate misuse
1TE..	Uses heroin on top of substitution therapy
1TF..	Does not use heroin on top of substitution therapy
1V...	Drug misuse behaviour
1V0..	Misuses drugs
1V00.	Occasional drug user
1V01.	Long-term drug misuser
1V02.	Poly-drug misuser
1V03.	Misuses drugs sublingually
1V04.	Misuses drugs rectally
1V05.	Misuses drugs vaginally
1V06.	Uses drug paraphernalia
1V07.	Notified addict
1V08.	Smokes drugs in cigarette form
1V09.	Smokes drugs through a pipe
1V0A.	Chases the dragon
1V0B.	Sniffs drugs
1V0C.	Drug addict
1V0D.	Am spent per day on drug habit
1V0E.	Health prob sec to drug misuse
1V1..	Time devotd drug rel activties
1V10.	Time spent obtaining drugs
1V11.	Time spent taking drugs
1V12.	Time spent recover from drugs
1V2..	Frequency of drug misuse

1V22.	Age at starting drug misuse
1V23.	Time since stopped drug misuse
1V24.	Total time drugs misused
1V25.	Has never misused drugs
1V26.	Misused drugs in past
1V3..	Drug injection behaviour
1V30.	Injects drugs subcutaneously
1V31.	Injects drugs intramuscularly
1V32.	Neck injector
1V33.	Groin injector
1V34.	Does not inject drugs
1V35.	Shares drug equipment
1V36.	Frontloading
1V37.	Drug inject equipment hygiene
1V38.	Sharing drug inject equipment
1V3A.	Not share drug inject equipmen
1V3B.	Shares syringes
1V3C.	Shares needles
1V3D.	Cleaning of needles
1V3E.	Cleans own needles
1V3F.	Cleans needles with bleach
1V3G.	Does not clean needles
1V3H.	Obtains clean needles
1V3J.	Uses needle exchange scheme
1V3K.	Obtains clean syringes
1V3L.	Needle syringe exch scheme use
1V3M.	Needle + syringe exch not used
1V3N.	Needle and syringe exch used
1V4..	Priority of drug activity
1V40.	No priority to drug activities
1V41.	Priority to drug activities
1V42.	Drug priority ov social obligs
1V43.	Drug priority over family
1V44.	Drug priority ov finance oblig
1V5..	Routine drug-related activity
1V50.	No routine of drug activities
1V51.	Has routine of drug activities
1V52.	Same drug routine every day
1V53.	Drug-related rituals
1V54.	Follows drug-related rituals
1V55.	Not follow drug-relate rituals
1V6..	Drug-relat offending behaviour
1V60.	Dealing with drugs
1V61.	Selling drugs
1V62.	Buying drugs
1V63.	Possession of drugs
1V64.	Illicit drug use
1V65.	Heroin misuse
1V66.	Ecstasy misuse
66e..	Alcohol disorder monitoring
66e0.	Alcohol abuse monitoring
677T.	Substance misuse structured counselling

67H6.	Brief intervention for smoking cessation
745H.	Smoking cessation therapy
745H0	Nicotine replacement therapy using nicotine patches
745H1	Nicotine replacement therapy using nicotine gum
745H2	Nicotine replacement therapy using nicotine inhalator
745H3	Nicotine replacement therapy using nicotine lozenges
745H4	Smoking cessation drug therapy
745Hy	Other specified smoking cessation therapy
745Hz	Smoking cessation therapy NOS
7P221	Delivery of rehabilitation for alcohol addiction
8B2B.	Nicotine replacement therapy
8B3f.	Nicotine replacement therapy provided free
8B3Y.	Over the counter nicotine replacement therapy
8BA8.	Alcohol detoxification
8BAc.	Substance misuse management stopped - self withdrawal
8BAd.	Opiate dependence detoxification
8BP3.	Nicotine replacement therapy provided by community pharmacis
8CAg.	Smoking cessation advice provided by community pharmacist
8CAv.	Advised to contact primary care alcohol worker
8H7i.	Referral to smoking cessation advisor
8H7p.	Referral to community alcohol team
8HBM.	Stop smoking face to face follow-up
8Hh1.	Self referral to substance misuse service
8HHe.	Referral to community drug and alcohol team
8HkF.	Referral to substance misuse service
8HkG.	Referral to specialist alcohol treatment service
8HkJ.	Referral to alcohol brief intervention service
8HkQ.	Referral to NHS stop smoking service
8Hq..	Admission to substance misuse detoxification centre
8HTK.	Referral to stop-smoking clinic
8IAF.	Brief intervention for excessive alcohol consumptn declined
8IAJ.	Declined referral to specialist alcohol treatment service
8IAj.	Smoking cessation advice declined
9HC..	Substance misuse monitoring
9HC0.	Initial substance misuse assessment
9HC1.	Follow up substance misuse assessment
9HC2.	Substance misuse clinical management plan agreed
9HC3.	Substance misuse clinical management plan reviewed
9HC4.	Substance misuse treatment withdrawn
9HC5.	Substance misuse treatment programme completed
9HC6.	Substance misuse treatment declined
9HC7.	Substance misuse treatment not available
9k1..	Alcohol misuse - enhanced services administration
9k10.	Community detoxification registered
9k11.	Alcohol consumption counselling
9k12.	Alcohol misuse - enhanced service completed
9k13.	Alcohol questionnaire completed
9k14.	Alcohol counselling by other agencies
9k15.	Alcohol screen - AUDIT completed
9k16.	Alcohol screen - fast alcohol screening test completed
9k17.	Alcohol screen - AUDIT C completed
9k18.	Alcohol screen - AUDIT PC completed

9k19.	Alcohol assesment declined - enhanced services admin / Alcohol assessment declined
9k1A.	Brief intervention for excessive alcohol consumptn completed
9ko..	Current smoker annual review - enhanced services admin / Current smoker annual review
9N2k.	Seen by smoking cessation advisor
9NN2.	Under care of community alcohol team
9No5.	Seen in substance misuse clinic
9OO1.	Attends stop smoking monitor
9OO2.	Refuses stop smoking monitor
C1505	Alcohol-induced pseudo-Cushing's syndrome
E01..	Alcoholic psychoses
E010.	Alcohol withdrawal delirium / DTs - delirium tremens / Delirium tremens
E011.	Alcohol amnestic syndrome
E0110	Korsakov's alcoholic psychosis
E0111	Korsakov's alcoholic psychosis with peripheral neuritis
E0112	Wernicke-Korsakov syndrome
E011z	Alcohol amnestic syndrome NOS
E012.	Other alcoholic dementia / Alcoholic dementia NOS
E0120	Chronic alcoholic brain syndrome
E013.	Alcohol withdrawal hallucinosis
E014.	Pathological alcohol intoxication / Drunkenness - pathological
E015.	Alcoholic paranoia
E01y.	Other alcoholic psychosis
E01y0	Alcohol withdrawal syndrome
E01yz	Other alcoholic psychosis NOS
E01z.	Alcoholic psychosis NOS
E02..	Drug psychoses
E020.	Drug withdrawal syndrome
E021.	Drug-induced paranoia or hallucinatory states
E0210	Drug-induced paranoid state
E0211	Drug-induced hallucinosis
E021z	Drug-induced paranoia or hallucinatory state NOS
E022.	Pathological drug intoxication
E023.	Nicotine withdrawal
E02y.	Other drug psychoses
E02y0	Drug-induced delirium
E02y1	Drug-induced dementia
E02y2	Drug-induced amnestic syndrome
E02y3	Drug-induced depressive state
E02y4	Drug-induced personality disorder
E02yz	Other drug psychoses NOS
E02z.	Drug psychosis NOS
E23..	Alcohol dependence syndrome / Alcoholism / Alcohol problem drinking
E230.	Acute alcoholic intoxication in alcoholism / Alcohol dependence with acute alcoholic intoxication
E2300	Acute alcoholic intoxication, unspecified, in alcoholism
E2301	Continuous acute alcoholic intoxication in alcoholism
E2302	Episodic acute alcoholic intoxication in alcoholism
E2303	Acute alcoholic intoxication in remission, in alcoholism
E230z	Acute alcoholic intoxication in alcoholism NOS
E231.	Chronic alcoholism / Dipsomania
E2310	Unspecified chronic alcoholism
E2311	Continuous chronic alcoholism
E2312	Episodic chronic alcoholism

E2313	Chronic alcoholism in remission
E231z	Chronic alcoholism NOS
E23z.	Alcohol dependence syndrome NOS
E24..	Drug dependence / Drug addiction
E240.	Opioid type drug dependence / Heroin dependence / Methadone dependence / Morphine dependence / Opium dependence
E2400	Unspecified opioid dependence
E2401	Continuous opioid dependence
E2402	Episodic opioid dependence
E2403	Opioid dependence in remission
E240z	Opioid drug dependence NOS
E241.	Hypnotic or anxiolytic dependence / Anxiolytic dependence / Barbiturate dependence / Benzodiazepine dependence / Diazepam dependence / Librium dependence / Sedative dependence / Valium dependence
E2410	Hypnotic or anxiolytic dependence, unspecified
E2411	Hypnotic or anxiolytic dependence, continuous
E2412	Hypnotic or anxiolytic dependence, episodic
E2413	Hypnotic or anxiolytic dependence in remission
E241z	Hypnotic or anxiolytic dependence NOS
E242.	Cocaine type drug dependence
E2420	Cocaine dependence, unspecified
E2421	Cocaine dependence, continuous
E2422	Cocaine dependence, episodic
E2423	Cocaine dependence in remission
E242z	Cocaine drug dependence NOS
E243.	Cannabis type drug dependence / Hashish dependence / Hemp dependence / Marihuana dependence
E2430	Cannabis dependence, unspecified
E2431	Cannabis dependence, continuous
E2432	Cannabis dependence, episodic
E2433	Cannabis dependence in remission
E243z	Cannabis drug dependence NOS
E244.	Amphetamine or other psychostimulant dependence / Psychostimulant dependence / Stimulant dependence
E2440	Amphetamine or psychostimulant dependence, unspecified / Amfetamine or psychostimulant dependence, unspecified
E2441	Amphetamine or psychostimulant dependence, continuous / Amfetamine or psychostimulant dependence, continuous
E2442	Amphetamine or psychostimulant dependence, episodic / Amfetamine or psychostimulant dependence, episodic
E2443	Amphetamine or psychostimulant dependence in remission / Amfetamine or psychostimulant dependence in remission
E2444	Amphetamine or psychostimulant dependence NOS / Amfetamine or psychostimulant dependence NOS
E2445	Hallucinogen dependence / LSD dependence / Lysergic acid diethylamide dependence / Mescaline dependence
E2450	Hallucinogen dependence, unspecified
E2451	Hallucinogen dependence, continuous
E2452	Hallucinogen dependence, episodic
E2453	Hallucinogen dependence in remission
E245z	Hallucinogen dependence NOS
E246.	Glue sniffing dependence

E2460	Glue sniffing dependence, unspecified
E2461	Glue sniffing dependence, continuous
E2462	Glue sniffing dependence, episodic
E2463	Glue sniffing dependence in remission
E246z	Glue sniffing dependence NOS
E247.	Other specified drug dependence / Absinthe addiction
E2470	Other specified drug dependence, unspecified
E2471	Other specified drug dependence, continuous
E2472	Other specified drug dependence, episodic
E2473	Other specified drug dependence in remission
E247z	Other specified drug dependence NOS
E248.	Combined opioid with other drug dependence
E2480	Combined opioid with other drug dependence, unspecified
E2481	Combined opioid with other drug dependence, continuous
E2482	Combined opioid with other drug dependence, episodic
E2483	Combined opioid with other drug dependence in remission
E248z	Combined opioid with other drug dependence NOS
E249.	Combined drug dependence, excluding opioids
E2490	Combined drug dependence, excluding opioid, unspecified
E2491	Combined drug dependence, excluding opioid, continuous
E2492	Combined drug dependence, excluding opioid, episodic
E2493	Combined drug dependence, excluding opioid, in remission
E249z	Combined drug dependence, excluding opioid, NOS
E24A.	Ecstasy type drug dependence
E24z.	Drug dependence NOS
E250.	Nondependent alcohol abuse / Drunkenness NOS / Hangover (alcohol) / Inebriety NOS / Intoxication - alcohol
E2500	Nondependent alcohol abuse, unspecified
E2501	Nondependent alcohol abuse, continuous
E2502	Nondependent alcohol abuse, episodic
E2503	Nondependent alcohol abuse in remission
E250z	Nondependent alcohol abuse NOS
E251.	Tobacco dependence
E2510	Tobacco dependence, unspecified
E2511	Tobacco dependence, continuous
E2512	Tobacco dependence, episodic
E2513	Tobacco dependence in remission
E251z	Tobacco dependence NOS
E252.	Nondependent cannabis abuse
E2520	Nondependent cannabis abuse, unspecified
E2521	Nondependent cannabis abuse, continuous
E2522	Nondependent cannabis abuse, episodic
E2523	Nondependent cannabis abuse in remission
E252z	Nondependent cannabis abuse NOS
E253.	Nondependent hallucinogen abuse / "Bad trips" / LSD reaction
E2530	Nondependent hallucinogen abuse, unspecified
E2531	Nondependent hallucinogen abuse, continuous
E2532	Nondependent hallucinogen abuse, episodic
E2533	Nondependent hallucinogen abuse in remission
E253z	Nondependent hallucinogen abuse NOS
E254.	Nondependent hypnotic or anxiolytic abuse / Barbiturate abuse / Hypnotic or anxiolytic abuse / Sedative abuse / Tranquilliser abuse

E2540	Nondependent hypnotic or anxiolytic abuse, unspecified
E2541	Nondependent hypnotic or anxiolytic abuse, continuous
E2542	Nondependent hypnotic or anxiolytic abuse, episodic
E2543	Nondependent hypnotic or anxiolytic abuse in remission
E254z	Nondependent hypnotic or anxiolytic abuse NOS
E255.	Nondependent opioid abuse
E2550	Nondependent opioid abuse, unspecified
E2551	Nondependent opioid abuse, continuous
E2552	Nondependent opioid abuse, episodic
E2553	Nondependent opioid abuse in remission
E255z	Nondependent opioid abuse NOS
E256.	Nondependent cocaine abuse
E2560	Nondependent cocaine abuse, unspecified
E2561	Nondependent cocaine abuse, continuous
E2562	Nondependent cocaine abuse, episodic
E2563	Nondependent cocaine abuse in remission
E256z	Nondependent cocaine abuse NOS
E257.	Nondependent amphetamine or other psychostimulant abuse / Psychostimulant abuse / Stimulant abuse
E2570	Nondependent amphetamine/psychostimulant abuse, unspecified / Nondependent amfetamine/psychostimulant abuse, unspecified
E2571	Nondependent amphetamine/psychostimulant abuse, continuous / Nondependent amfetamine or psychostimulant abuse, continuous
E2572	Nondependent amphetamine or psychostimulant abuse, episodic / Nondependent amfetamine or psychostimulant abuse, episodic
E2573	Nondependent amphetamine/psychostimulant abuse in remission / Nondependent amfetamine/psychostimulant abuse in remission
E257z	Nondependent antidepressant type drug abuse
E257z	Nondependent amphetamine or psychostimulant abuse NOS / Nondependent amfetamine or psychostimulant abuse NOS
E2580	Nondependent antidepressant type drug abuse, unspecified
E2581	Nondependent antidepressant type drug abuse, continuous
E2582	Nondependent antidepressant type drug abuse, episodic
E2583	Nondependent antidepressant type drug abuse in remission
E258z	Nondependent antidepressant type drug abuse NOS
E259.	Nondependent mixed drug abuse
E2590	Nondependent mixed drug abuse, unspecified
E2591	Nondependent mixed drug abuse, continuous
E2592	Nondependent mixed drug abuse, episodic
E2593	Nondependent mixed drug abuse in remission
E2594	Misuse of prescription only drugs
E259z	Nondependent mixed drug abuse NOS
E25y.	Nondependent other drug abuse / Analgesic abuse / Laxative abuse / Steroid abuse
E25y0	Nondependent other drug abuse, unspecified
E25y1	Nondependent other drug abuse, continuous
E25y2	Nondependent other drug abuse, episodic
E25y3	Nondependent other drug abuse in remission
E25yz	Nondependent other drug abuse NOS
E25z.	Misuse of drugs NOS
Eu10.	[X]Mental and behavioural disorders due to use of alcohol
Eu100	[X]Mental & behav dis due to use alcohol: acute intoxication / [X]Acute alcoholic drunkenness
Eu101	[X]Mental and behav dis due to use of alcohol: harmful use

Eu102	[X]Mental and behav dis due to use alcohol: dependence syndr / [X]Alcohol addiction / [X]Chronic alcoholism / [X]Dipsomania
Eu103	[X]Mental and behav dis due to use alcohol: withdrawal state
Eu104	[X]Men & behav dis due alcohl: withdrawl state with delirium / [X]Delirium tremens, alcohol induced
Eu105	[X]Mental & behav dis due to use alcohol: psychotic disorder / [X]Alcoholic hallucinosis / [X]Alcoholic jealousy / [X]Alcoholic paranoia / [X]Alcoholic psychosis NOS
Eu106	[X]Mental and behav dis due to use alcohol: amnesic syndrome / [X]Korsakov's psychosis, alcohol induced
Eu107	[X]Men & behav dis due alcoh: resid & late-onset psychot dis / [X]Alcoholic dementia NOS / [X]Chronic alcoholic brain syndrome
Eu108	[X]Alcohol withdrawal-induced seizure
Eu10y	[X]Men & behav dis due to use alcohol: oth men & behav dis
Eu10z	[X]Ment & behav dis due use alcohol: unsp ment & behav dis
Eu11.	[X]Mental and behavioural disorders due to use of opioids
Eu110	[X]Mental & behav dis due to use opioids: acute intoxication
Eu111	[X]Mental and behav dis due to use of opioids: harmful use
Eu112	[X]Mental and behav dis due to use opioids: dependence syndr / [X]Drug addiction - opioids / [X]Heroin addiction
Eu113	[X]Mental and behav dis due to use opioids: withdrawal state / [X]Cold turkey, opiate withdrawal
Eu114	[X]Men & behav dis due opioid: withdrawl state with delirium
Eu115	[X]Mental & behav dis due to use opioids: psychotic disorder
Eu116	[X]Mental and behav dis due to use opioids: amnesic syndrome
Eu117	[X]Men & beh dis due opioids: resid & late-onset psychot dis
Eu11y	[X]Men & behav dis due to use opioids: oth men & behav dis
Eu11z	[X]Ment & behav dis due use opioids: unsp ment & behav dis
Eu12.	[X]Mental and behavioural disorders due to use cannabinoids
Eu120	[X]Mental & behav dis due cannabinoids: acute intoxication
Eu121	[X]Mental and behav dis due to use cannabinoids: harmful use
Eu122	[X]Mental and behav dis due to cannabinoids: dependence synd / [X]Drug addiction - cannabis
Eu123	[X]Mental and behav dis due cannabinoids: withdrawal state
Eu124	[X]Men & beh dis due cannabinds: withdrwl state wth delirium
Eu125	[X]Mental & behav dis due to cannabinoids: psychotic disordr
Eu126	[X]Mental and behav dis due to use cannabinoids: amnesic syn
Eu127	[X]Mnt/bh dis due cannabinds: resid & late-onset psychot dis
Eu12y	[X]Men/behav dis due to use cannabinoids: oth men/behav disd
Eu12z	[X]Ment/behav dis due use cannabinoids: unsp ment/behav disd
Eu13.	[X]Mental and behavioural dis due use sedatives/hypnotics
Eu130	[X]Mental & behav dis due seds/hypntcs: acute intoxication
Eu131	[X]Mental and behav dis due to use seds/hypntcs: harmful use
Eu132	[X]Mental and behav dis due to seds/hypntcs: dependence synd / [X]Drug addiction- sedative / hypnotics
Eu133	[X]Mental and behav dis due seds/hypntcs: withdrawal state
Eu134	[X]Men & beh dis due seds/hypns: withdrwl state wth delirium
Eu135	[X]Mental & behav dis due to seds/hypntcs: psychotic disordr
Eu136	X]Mental and behav dis due to use seds/hypntcs: amnesic syn
Eu137	[X]Mnt/bh dis due seds/hypns: resid & late-onset psychot dis
Eu13y	[X]Men/behav dis due to use seds/hypntcs: oth men/behav disd
Eu13z	[X]Ment/behav dis due use seds/hypntcs: unsp ment/behav disd
Eu14.	[X]Mental and behavioural disorders due to use of cocaine
Eu140	[X]Mental & behav dis due to use cocaine: acute intoxication
Eu141	[X]Mental and behav dis due to use of cocaine: harmful use

Eu142	[X]Mental and behav dis due to use cocaine: dependence syndr / [X]Drug addiction - cocaine
Eu143	[X]Mental and behav dis due to use cocaine: withdrawal state
Eu144	[X]Men & behav dis due cocaine: withdrawl state wth delirium
Eu145	[X]Mental & behav dis due to use cocaine: psychotic disorder
Eu146	[X]Mental and behav dis due to use cocaine: amnesic syndrome
Eu147	[X]Men & beh dis due cocaine: resid & late-onset psychot dis
Eu14y	[X]Men & behav dis due to use cocaine: oth men & behav dis
Eu14z	[X]Ment & behav dis due use cocaine: unsp ment & behav dis
Eu15.	[X]Mental & behav disorder due other stimulants inc caffein
Eu150	[X]Mnt/beh dis due oth stim inc caffein: acute intoxication
Eu151	[X]Ment/behav dis due to use oth stims inc caff: harmful use
Eu152	[X]Mental and behav dis oth stim inc caffein: dependnce synd / [X]Drug addiction-other stimul
Eu153	[X]Mnt/behav dis other stimlnts inc caffeine: withdrwl state
Eu154	[X]Mnt/bh dis oth stims inc caffne: withdr state wt delirium
Eu155	[X]Mental/behav dis oth stims inc caffeine: psychotic dis
Eu156	[X]Mental and behav dis oth stims inc caffeine: amnesic syn
Eu157	[X]Mnt/bh dis oth stm inc caffne resid/late-onset psycht dis
Eu15y	[X]Men/behav dis oth stims inc caffeine: oth men/behav disd
Eu15z	[X]Ment/beh dis oth stims inc caffeine: unsp ment/behav disd
Eu16.	[X]Mental and behavioural disorders due to use hallucinogens
Eu160	[X]Mental & behav dis due hallucinogens: acute intoxicatn
Eu161	[X]Mental and behav dis due to use hallucinogens: harmfl use
Eu162	[X]Mental and behav dis due to hallucinogens: dependence syn / [X]Drug addiction - hallucinogen
Eu163	[X]Mental and behav dis due hallucinogens: withdrawal state
Eu164	[X]Men & beh dis due hallucngns: withdrwl state wth delirium
Eu165	[X]Mental & behav dis due to hallucinogens: psychotic disord
Eu166	[X]Mental and behav dis due use hallucinogens: amnesic syndr
Eu167	[X]Mnt/bh dis due hallucngns: resid & late-onset psychot dis / [X]Post hallucinogen perception disorder
Eu16y	[X]Men/behav dis due to use hallucinogens: oth men/behav dis
Eu16z	[X]Ment/behav dis due use hallucinogens: unsp ment/behav dis
Eu17.	[X]Mental and behavioural disorder due to use of tobacco
Eu170	[X]Mental & behav dis due to use tobacco: acute intoxication
Eu171	[X]Mental and behav dis due to use of tobacco: harmful use
Eu172	[X]Mental and behav dis due to use tobacco: dependence syndr
Eu173	[X]Mental and behav dis due to use tobacco: withdrawal state
Eu174	[X]Men & behav dis due tobacco: withdrawl state wth delirium
Eu175	[X]Mental & behav dis due to use tobacco: psychotic disorder
Eu176	[X]Mental and behav dis due to use tobacco: amnesic syndrome
Eu177	[X]Men & beh dis due tobacco: resid & late-onset psychot dis
Eu17y	[X]Men & behav dis due to use tobacco: oth men & behav dis
Eu17z	[X]Ment & behav dis due use tobacco: unsp ment & behav dis
Eu18.	[X]Mental & behav disorders due to use of volatile solvents
Eu180	[X]Mental & behav dis due vol solvents: acute intoxication
Eu181	[X]Mental and behav dis due volatile solvents: harmful use
Eu182	[X]Mental and behav dis due to vol solvents: dependence synd / [X]Drug addiction - solvent
Eu183	[X]Mental and behav dis due vol solvents: withdrawal state
Eu184	[X]Men & beh dis vol solvents: withdrawal state wth delirium
Eu185	[X]Mental & behav dis due to vol solvents: psychotic disordr
Eu186	[X]Mental and behav dis due to use vol solvents: amnesic syn
Eu187	[X]Mnt/bh dis vol solvents: resid & late-onset psychotic dis

Eu18y	[X]Men/behav dis due to use vol solvents: oth men/behav disd
Eu18z	[X]Ment/behav dis due use vol solvents: unsp ment/behav dis
Eu19.	[X]Men & behav disorder multiple drug use/psychoactive subst
Eu190	[X]Mental/behav dis multi drg use/psychoac subs: acute intox
Eu191	[X]Mental and behav dis mlti drg/oth psychoa sbs: harmfl use
Eu192	[X]Mental and behav dis mlti/oth psych sbs: dependence syndr / [X]Drug addiction NOS
Eu193	[X]Mental and behav dis mlti/oth psychoa sbs: withdrwl state
Eu194	[X]Mnt/bh dis mlti drg use/oth psy sbs: wthdr state + dlrium
Eu195	[X]Ment/behav dis mlti drug use/oth psyc sbs: psychotc dis
Eu196	[X]Mental/behav dis multi drg use/oth psy sbs: amnesic syndr
Eu197	[X]Men/beh dis mlt drg use/oth subs: resid/late psychot dis
Eu19y	[X]Men/beh dis mlt drg use/oth psy sbs: oth men & behav dis
Eu19z	[X]Ment/beh dis multi drug use/oth psy sbs unsp mnt/beh dis
Eu1A.	[X]Mental and behavioural disorders due use of crack cocaine
Eu1A0	[X]Ment behav dis due use crack cocaine: acute intoxication
Eu1A1	[X]Mental behav disorders due use crack cocaine: harmful use
Eu1A2	[X]Mental behav disorders due use crack cocaine: depend synd
Eu1A3	[X]Mental behav disord due crack cocaine: withdrawal state
Eu1A4	[X]Ment behav dis due crack cocaine: withdraw state delirium
Eu1A5	[X]Mental behav disord due crack cocaine: psychotic disorder
Eu1A6	[X]Men behav disorders due crack cocaine: amnesic syndrome
Eu1A7	[X]Men beh dis due crack cocaine: resid late-onset psych dis
Eu1Ay	[X]Ment behav disord due crack cocaine: other ment behav dis
Eu1Az	[X]Ment behav dis due crack cocaine: unsp ment and behav dis
F11x0	Cerebral degeneration due to alcoholism / Alcoholic encephalopathy
F1440	Cerebellar ataxia due to alcoholism
F25B.	Alcohol-induced epilepsy
F375.	Alcoholic polyneuropathy
F3941	Alcoholic myopathy
G555.	Alcoholic cardiomyopathy
G8523	Oesophageal varices in alcoholic cirrhosis of the liver
H3101	Smokers' cough
J153.	Alcoholic gastritis
J610.	Alcoholic fatty liver
J611.	Acute alcoholic hepatitis
J612.	Alcoholic cirrhosis of liver / Florid cirrhosis / Laennec's cirrhosis
J6120	Alcoholic fibrosis and sclerosis of liver
J613.	Alcoholic liver damage unspecified
J6130	Alcoholic hepatic failure
J617.	Alcoholic hepatitis
J6170	Chronic alcoholic hepatitis
J6710	Alcohol-induced chronic pancreatitis
k1B.	Extended intervention for excessive alcohol consumptn complt
R103.	[D]Alcohol blood level excessive
SM0..	Alcohol causing toxic effect
SM00.	Ethyl alcohol causing toxic effect
SM000	Ethanol causing toxic effect
SM001	Denatured alcohol causing toxic effect
SM002	Grain alcohol causing toxic effect
SM00z	Ethyl alcohol causing toxic effect NOS
SM01.	Methyl alcohol causing toxic effect
SM010	Methanol causing toxic effect

SM011	Wood alcohol causing toxic effect
SM01z	Methyl alcohol causing toxic effect NOS
SM02.	Isopropyl alcohol causing toxic effect
SM020	Dimethyl carbinol causing toxic effect
SM021	Isopropanol causing toxic effect
SM022	Rubbing alcohol causing toxic effect
SM02z	Isopropyl alcohol causing toxic effect NOS
SM03.	Fusel oil causing toxic effect
SM030	Amyl alcohol causing toxic effect
SM031	Butyl alcohol causing toxic effect
SM032	Propyl alcohol causing toxic effect
SM03z	Fusel oil causing toxic effect NOS
SM0y.	Other alcohol causing toxic effect
SM0z.	Alcohol causing toxic effect NOS
SMC..	Toxic effect of tobacco and nicotine
SyuG0	[X]Toxic effect of other alcohols
Z191.	Alcohol detoxification
Z1911	Alcohol withdrawal regime / Drying out
Z1912	Planned reduction of alcohol consumption / Alcohol reduction programme
Z1913	Controlled drinking regime
Z1914	Self-monitoring of alcohol intake
Z192.	Dependent drug detoxification
Z1921	Drug withdrawal regime / Coming off it / Reduction programme / Withdrawal programme / Drug detoxification / Breaking the habit
Z416.	Substance abuse counselling
Z4B1.	Alcoholism counselling
ZC222	Advice to change alcoholic drink intake
ZC2H.	Advice to change alcohol intake
ZG231	Advice on alcohol consumption
ZG233	Advice on smoking
ZV113	[V]Personal history of alcoholism / [V]Problems related to lifestyle alcohol use
ZV114	[V]Personal history of psychoactive substance abuse
ZV115	[V]Personal history of drug abuse by injection
ZV116	[V]Personal history of tobacco abuse
ZV4K0	[V]Tobacco use
ZV4K1	[V]Drug use
ZV4KC	[V] Alcohol use
ZV57A	[V]Alcohol rehabilitation
ZV6D6	[V]Alcohol abuse counselling and surveillance
ZV6D8	[V]Tobacco abuse counselling

APPENDIX G: PREGNANCY READ CODES.

Read Code	Description
1521	Nulliparous
1521	No history of miscarriage
1522	Para 1 / Multiparous
1522	H/O: 1 miscarriage
1523	Para 2
1523	H/O: 2 miscarriages
1524	Para 3
1524	H/O: 3 miscarriages
1525	Para 4
1525	H/O: 4 miscarriages
1526	Para 5
1526	H/O: 5 miscarriages
1527	Para 6
1527	H/O: 6 miscarriages
1528	Para 7
1531	Gravida 0
1532	Gravida 1
1533	Gravida 2
1534	Gravida 3
1535	Gravida 4
1536	Gravida 5
1537	Gravida 6
1538	Gravida 7
1539	Gravida 8
1541	H/O: stillbirth
1542	H/O: miscarriage
1543	H/O: abortion / H/O: termination
1544	H/O: ectopic pregnancy
1545	H/O: full term delivery / H/O: normal delivery / H/O: delivery no details
1546	H/O: premature delivery
1547	H/O: medical termination of pregnancy
15431	No history of abortion
15432	H/O: 1 abortion
15433	H/O: 2 abortions
15434	H/O: 3 abortions
15435	H/O: 4 abortions
15436	H/O: 5 abortions
15437	H/O: 6 abortions
13H6.	Single parent / Unmarried parent
13H7.	Unwanted pregnancy / Unwanted child
13H8.	Illegitimate pregnancy
13Hd.	Teenage pregnancy
152..	Parity status
152Z.	Parity NOS
153..	Gravida status
153A.	Gravida 9
153B.	Gravida 10
153Z.	Gravida NOS

154..	Past pregnancy outcome / History of past delivery
1542Z	H/O: miscarriage NOS
1543Z	H/O: abortion NOS
154Z.	Past pregnancy outcome NOS
15A..	H/O: obstetric problem
15A1.	H/O: ante-partum haemorrhage
15A2.	H/O: caesarean section
15A3.	H/O: eclampsia
15A4.	H/O: severe pre-eclampsia
15A5.	H/O:manual removal of placenta
15A6.	H/O: post-partum haemorrhage
15A7.	H/O: prolonged labour / H/O: long labour
15A8.	H/O: perinatal fetal loss / H/O: perinatal death
15A9.	H/O: myomectomy/hysterotomy / H/O: hysterotomy / H/O: myomectomy
15AA.	H/O: previous forceps delivery
15AZ.	H/O: obstetric problem NOS
L....	Complications of pregnancy, childbirth and the puerperium
L0...	Pregnancy with abortive outcome
L02..	Missed abortion / Missed miscarriage / Silent miscarriage
L03..	Ectopic pregnancy
L030.	Abdominal pregnancy
L0300	Delivery of viable fetus in abdominal pregnancy
L031.	Tubal pregnancy
L0310	Fallopian tube pregnancy
L0311	Gravid fallopian tube rupture
L0312	Tubal abortion
L031z	Tubal pregnancy NOS L032. Ovarian pregnancy
L03y.	Other ectopic pregnancy
L03y0	Cervical pregnancy
L03y1	Cornual pregnancy
L03y2	Membranous pregnancy
L03y3	Combined or heterotopic pregnancy
L03y4	Mural pregnancy
L03y5	Intraligamentous pregnancy
L03y6	Mesenteric pregnancy
L03y7	Angular pregnancy
L03y8	Mesometric pregnancy
L03yz	Other ectopic pregnancy NOS
L03z.	Ectopic pregnancy NOS
L04..	Spontaneous abortion / Miscarriage
L040.	Spontaneous abortion unspecified
L0400	Unspec spontaneous abortion + genital tract/pelvic infection / Spontaneous abortion with sepsis
L0401	Unspec spontaneous abortion + delayed/excessive haemorrhage / Spontaneous abortion with heavy bleeding
L0402	Unspec spontaneous abortion + pelvic organ/tissue damage
L0403	Unspecified spontaneous abortion with renal failure
L0404	Unspecified spontaneous abortion with metabolic disorder
L0405	Unspecified spontaneous abortion with shock
L0406	Unspecified spontaneous abortion with embolism
L0409	Inevitable miscarriage
L040w	Unspec spontaneous abortion + other specified complication
L040x	Unspecified spontaneous abortion with complication NOS

L040y	Unspec spontaneous abortion without mention of complication
L040z	Unspecified spontaneous abortion NOS
L041.	Spontaneous abortion incomplete
L0410	Incomp spontaneous abortion + genital tract/pelvic infection
L0411	Incomp spontaneous abortion + delayed/excessive haemorrhage
L0412	Incomplete spontaneous abortion pelvic organ/tissue damage
L0413	Incomplete spontaneous abortion with renal failure
L0414	Incomplete spontaneous abortion with metabolic disorder
L0415	Incomplete spontaneous abortion with shock
L0416	Incomplete spontaneous abortion with embolism
L041w	Incomp spontaneous abortion + other specified complication
L041x	Incomplete spontaneous abortion with complication NOS
L041y	Incomp spontaneous abortion with no mention of complication
L041z	Incomplete spontaneous abortion NOS / Retained products after spontaneous abortion
L042.	Spontaneous abortion complete
L0420	Complete spontaneous abortion + genital tract/pelvic infect
L0421	Complete spontaneous abortion +delayed/excessive haemorrhage
L0422	Complete spontaneous abortion + pelvic organ/tissue damage
L0423	Complete spontaneous abortion with renal failure
L0424	Complete spontaneous abortion with metabolic disorder
L0425	Complete spontaneous abortion with shock
L0426	Complete spontaneous abortion with embolism
L042w	Complete spontaneous abortion + other specified complication
L042x	Complete spontaneous abortion with complication NOS
L042y	Complete spontaneous abortion + no mention of complication
L042z	Complete spontaneous abortion NOS
L043.	Inevitable abortion unspecified / Inevitable miscarriage unspecified
L0430	Unspec inev abor comp by genital tract and pelvic infect / Unspec inev miscarriage comp by genital tract pelvic infec
L0431	Unspec inevit abortion comp by delayed or excessive haemorr / Unsp inevitable mis comp by delayed or excessive haemorrhage
L0432	Unspecified inevitable abortion complicated by embolism / Unspecified inevitable miscarriage complicated by embolism
L043x	Unspecified inevitable abortion with unspec complication / Unspecified inevitable miscarriage with unspec complication
L043y	Unspecified inevitable abortion with OS complication / Unspecified inevitable miscarriage with OS complication
L043z	Unspecified inevitable abortion without complication / Unspecified inevitable miscarriage without complication
L044.	Inevitable abortion incomplete / Inevitable miscarriage incomp
L0440	Incomp inev abor comp by genital tract and pelvic infection / Incomp inev mis complicated by genital tract pelvic infect
L0441	Incom inev abor complicated by delayed or excessive haemorr / Incomplete inev mis comp by delayed or excessive haemorrhage
L0442	Incomplete inevitable abortion complicated by embolism / Incomplete inevitable abortion complicated by embolism
L044x	Incomplete inevitable abortion with unspecified complication / Incomplete inevitable miscarriage with unspecified comp
L044y	Incomplete inevitable abortion with OS complication / Incomplete inevitable miscarriage with other specified comp
L044z	Incomplete inevitable abortion without complication / Incomplete inevitable miscarriage without complication

L045.	Inevitable abortion complete / Inevitable miscarriage complete
L0450	Complete inev abor comp by genital tract and pelvic infec / Complete inev misc compl by genital tract and pelvic infec
L0451	Complete inevitable abor comp by delayed or excessive haem / Complete inevitable miscar comp by delayed or excessive haem
L0452	Complete inevitable abortion complicated by embolism / Complete inevitable miscarriage complicated by embolism
L045x	Complete inevitable abortion with unspecified complication / Complete inevitable miscarriage with unspecified comp
L045y	Complete inevitable abortion with OS complication / Complete inevitable miscarriage with OS complication
L045z	Complete inevitable abortion without complication / Complete inevitable miscarriage without complication
L04z.	Spontaneous abortion NOS
L05..	Legally induced abortion / Elective abortion / Termination of pregnancy / Therapeutic abortion
L050.	Legal abortion unspecified
L0500	Unspecified legal abortion + genital tract/pelvic infection
L0501	Unspecified legal abortion + delayed/excessive haemorrhage
L0502	Unspecified legal abortion + damage to pelvic organs/tissues
L0503	Unspecified legal abortion with failure
L0504	Unspecified legal abortion with metabolic disorder
L0505	Unspecified legal abortion with shock
L0506	Unspecified legal abortion with embolism
L050w	Unspecified legal abortion with other specified complication
L050x	Unspecified legal abortion with complication NOS
L050y	Unspecified legal abortion with no mention of complication
L050z	Unspecified legal abortion NOS
L051.	Legal abortion incomplete / Medal abortion - incomplete / Surgical abortion - incomplete
L0510	Incomplete legal abortion + genital tract/pelvic infection
L0511	Incomplete legal abortion + delayed or excessive haemorrhage
L0512	Incomplete legal abortion + damage to pelvic organs/tissues
L0513	Incomplete legal abortion with renal failure
L0514	Incomplete legal abortion with metabolic disorder
L0515	Incomplete legal abortion with shock
L0516	Incomplete legal abortion with embolism
L051w	Incomplete legal abortion with other specified complication
L051x	Incomplete legal abortion with complication NOS
L051y	Incomplete legal abortion with no mention of complication
L051z	Incomplete legal abortion NOS
L052.	Legal abortion complete / Medical abortion - complete / Surgical abortion - complete
L0520	Complete legal abortion + genital tract or pelvic infection
L0521	Complete legal abortion with delayed/excessive haemorrhage
L0522	Complete legal abortion pelvic organs or tissues + damage to
L0523	Complete legal abortion with renal failure
L0524	Complete legal abortion with metabolic disorder
L0525	Complete legal abortion with shock
L0526	Complete legal abortion with embolism
L052w	Complete legal abortion with other specified complication
L052x	Complete legal abortion with complication NOS
L052y	Complete legal abortion with no mention of complication
L052z	Complete legal abortion NOS
L05z.	Legally induced abortion NOS

L06..	Illegally induced abortion / Criminal abortion / Self-induced abortion
L060.	Illegal abortion unspecified
L0600	Unspec illegal abortion + genital tract or pelvic infection
L0601	Unspec illegal abortion + delayed or excessive haemorrhage
L0602	Unspecified illegal abortion + pelvic organ/tissue damage
L0603	Unspecified illegal abortion with renal failure
L0604	Unspecified illegal abortion with metabolic disorder
L0605	Unspecified illegal abortion with shock
L0606	Unspecified illegal abortion with embolism
L060w	Unspecified illegal abortion + other specified complication
L060x	Unspecified illegal abortion with complication NOS
L060y	Unspecified illegal abortion with no mention of complication
L060z	Unspecified illegal abortion NOS
L061.	Illegal abortion incomplete
L0610	Incomplete illegal abortion + genital tract/pelvic infection
L0611	Incomplete illegal abortion + delayed/excessive haemorrhage
L0612	Incomplete illegal abortion + pelvic organ/tissue damage
L0613	Incomplete illegal abortion with renal failure
L0614	Incomplete illegal abortion with metabolic disorder
L0615	Incomplete illegal abortion with shock
L0616	Incomplete illegal abortion with embolism
L061w	Incomplete illegal abortion + other specified complication
L061x	Incomplete illegal abortion with complication NOS
L061y	Incomplete illegal abortion with no mention of complication
L061z	Incomplete illegal abortion NOS
L062.	Illegal abortion complete
L0620	Complete illegal abortion + genital tract/pelvic infection
L0621	Complete illegal abortion + delayed or excessive haemorrhage
L0622	Complete illegal abortion + pelvic organ/tissue damage
L0623	Complete illegal abortion with renal failure
L0624	Complete illegal abortion with metabolic disorder
L0625	Complete illegal abortion with shock
L0626	Complete illegal abortion with embolism
L062w	Complete illegal abortion with other specified complication
L062x	Complete illegal abortion with complication NOS
L062y	Complete illegal abortion with no mention of complication
L062z	Complete illegal abortion NOS
L06z.	Illegally induced abortion NOS
L07..	Unspecified abortion
L070.	Unspecified abortion
L0700	Unspecified abortion with genital tract or pelvic infection
L0701	Unspecified abortion with delayed or excessive haemorrhage
L0702	Unspecified abortion with damage to pelvic organs or tissues
L0703	Unspecified abortion with renal failure
L0704	Unspecified abortion with metabolic disorder
L0705	Unspecified abortion with shock
L0706	Unspecified abortion with embolism
L070w	Unspecified abortion with other specified complication
L070x	Unspecified abortion with complication NOS
L070y	Unspecified abortion with no mention of complication
L070z	Unspecified abortion NOS
L071.	Unspecified abortion incomplete

L0710	Unspecified incomplete abortion +genital tract/pelvic infect
L0711	Unspecified incomplete abortion + delayed/excess haemorrhage
L0712	Unspecified incomplete abortion + pelvic organ/tissue damage
L0713	Unspecified incomplete abortion with renal failure
L0714	Unspecified incomplete abortion with metabolic disorder
L0715	Unspecified incomplete abortion with shock
L0716	Unspecified incomplete abortion with embolism
L071w	Unspec incomplete abortion with other specified complication
L071x	Unspecified incomplete abortion with complication NOS
L071y	Unspecified incomplete abortion + no mention of complication
L071z	Unspecified incomplete abortion NOS
L072.	Unspecified abortion complete
L0720	Unspecified complete abortion + genital tract/pelvic infect
L0721	Unspecified complete abortion +delayed/excessive haemorrhage
L0722	Unspecified complete abortion + pelvic organ/tissue damage
L0723	Unspecified complete abortion with renal failure
L0724	Unspecified complete abortion with metabolic disorder
L0725	Unspecified complete abortion with shock
L0726	Unspecified complete abortion with embolism
L072w	Unspecified complete abortion + other specified complication
L072x	Unspecified complete abortion with complication NOS
L072y	Unspecified complete abortion + no mention of complication
L072z	Unspecified complete abortion NOS
L07z.	Unspecified abortion NOS
L08..	Failed attempted abortion
L080.	Failed attempted abortion + genital tract/pelvic infection
L081.	Failed attempted abortion + delayed or excessive haemorrhage
L082.	Failed attempted abortion + damage to pelvic organs/tissues
L083.	Failed attempted abortion with renal failure
L084.	Failed attempted abortion with metabolic disorder
L085.	Failed attempted abortion with shock
L086.	Failed attempted abortion with embolism
L08w.	Failed attempted abortion with other specified complication
L08x.	Failed attempted abortion with complication NOS
L08y.	Failed attempted abortion with no mention of complication
L08z.	Failed attempted abortion NOS
L09..	Complications following abortion/ectopic/molar pregnancies / Complications following abortion/ectopic/molar pregnancies
L090.	Genital or pelvic infection following abortive pregnancy
L0900	Endometritis following abortive pregnancy
L0901	Parametritis following abortive pregnancy
L0902	Pelvic peritonitis following abortive pregnancy
L0903	Salpingitis following abortive pregnancy
L0904	Salpingo-oophoritis following abortive pregnancy
L090y	Sepsis NOS following abortion/ectopic/molar pregnancy
L090z	Septicaemia NOS following abortive pregnancy
L091.	Delayed/excessive haemorrhage following abortive pregnancy
L0910	Afibrinogenaemia following abortive pregnancy
L0911	Defibrination syndrome following abortive pregnancy
L0912	Intravascular haemolysis following abortive pregnancy
L091z	Delayed/excess haemorrhage NOS following abortive pregnancy
L092.	Pelvic organ or tissue damage following abortive pregnancy

L0920	Bladder damage following abortive pregnancy
L0921	Bowel damage following abortive pregnancy
L0922	Broad ligament damage following abortive pregnancy
L0923	Cervix damage following abortive pregnancy
L0924	Periurethral tissue damage following abortive pregnancy
L0925	Uterus damage following abortive pregnancy
L0926	Vaginal damage following abortive pregnancy
L092z	Pelvic organ or tissue damage NOS follow abortive pregnancy
L093.	Renal failure following abortive pregnancy
L0930	Oliguria following abortive pregnancy
L0931	Acute renal failure following abortive pregnancy
L0932	Renal shutdown following abortive pregnancy
L0933	Renal tubular necrosis following abortive pregnancy
L0934	Uraemia following abortive pregnancy
L093z	Renal failure NOS following abortive pregnancy
L094.	Metabolic disorder following abortive pregnancy
L095.	Shock following abortive pregnancy
L096.	Embolism following abortive pregnancy / Embolus following abortive pregnancy
L0960	Air embolism following abortive pregnancy
L0961	Amniotic fluid embolism following abortive pregnancy
L0962	Blood-clot embolism following abortive pregnancy
L0963	Fat embolism following abortive pregnancy
L0964	Pulmonary embolism following abortive pregnancy
L0965	Pyaemic embolism following abortive pregnancy
L0966	Septic embolism following abortive pregnancy
L0967	Soap embolism following abortive pregnancy
L096z	Embolism NOS following abortive pregnancy
L097.	Readmission for abortive pregnancy (NHS codes) / Readmission for retained products of conception (NHS codes)
L0970	Readmis for retain products of concept, spontaneous abortion
L0971	Readmission for retained produc of concept, legal abortion
L0972	Readmission for retained produc of concept, illegal abortion
L0973	Readmission for retained produc of concept, unspec abortion
L09y.	Other specified complication following abortive pregnancy
L09y0	Acute liver necrosis following abortive pregnancy
L09y1	Cardiac arrest following abortive pregnancy
L09y2	Cardiac failure following abortive pregnancy
L09y3	Cerebral anoxia following abortive pregnancy
L09y4	Urinary tract infection following abortive pregnancy
L09yz	Other specified complication NOS follow abortive pregnancy
L09z.	Complication NOS following abortion/ectopic/molar pregnancy
L0A..	Failed attempted abortion
L0A1.	Failed medical abortion complic by genital tract/pelvic infn
L0A2.	Failed medical abortion comp by delayed/excessive haem'ge
L0A3.	Failed medical abortion, complicated by embolism
L0A4.	Failed medical abortion, without complication
L0y..	Other specified pregnancy with abortive outcome
L0z..	Pregnancy with abortive outcome NOS
L1...	Pregnancy complications
L10..	Haemorrhage in early pregnancy
L100.	Threatened abortion
L1000	Threatened abortion unspecified

L1001	Threatened abortion - delivered
L1002	Threatened abortion - not delivered
L100z	Threatened abortion NOS
L10y.	Other haemorrhage in early pregnancy / Bleeding in early pregnancy
L10y0	Other haemorrhage in early pregnancy unspecified
L10y1	Other haemorrhage in early pregnancy - delivered
L10y2	Other haemorrhage in early pregnancy - not delivered
L10yz	Other haemorrhage in early pregnancy NOS
L10z.	Early pregnancy haemorrhage NOS
L10z0	Early pregnancy haemorrhage NOS unspecified
L10z1	Early pregnancy haemorrhage NOS - delivered
L10z2	Early pregnancy haemorrhage NOS - not delivered
L10zz	Early pregnancy haemorrhage NOS / Inevitable abortion
L11..	Antepartum haemorrhage, abruptio placentae, placenta praevia / Antepartum haemorrhage / Antepartum bleeding
L110.	Placenta praevia without haemorrhage
L1100	Placenta praevia without haemorrhage unspecified
L1101	Placenta praevia without haemorrhage - delivered
L1102	Placenta praevia without haemorrhage - not delivered
L110z	Placenta praevia without haemorrhage NOS
L111.	Placenta praevia with haemorrhage
L1110	Placenta praevia with haemorrhage unspecified
L1111	Placenta praevia with haemorrhage - delivered
L1112	Placenta praevia with haemorrhage - not delivered
L111z	Placenta praevia with haemorrhage NOS
L112.	Placental abruption / Ablatio placentae / Couvelaire uterus
L1120	Placental abruption unspecified
L1121	Placental abruption - delivered
L1122	Placental abruption - not delivered
L1123	Premature separation of placenta with coagulation defect
L112z	Placental abruption NOS
L113.	Antepartum haemorrhage with coagulation defect / Antepartum haemorrhage with afibrinogenaemia / Antepartum haemorrhage with hyperfibrinolysis / Antepartum haemorrhage with hypofibrinogenaemia
L1130	Antepartum haemorrhage with coagulation defect unspecified
L1131	Antepartum haemorrhage with coagulation defect - delivered
L1132	Antepartum haemorrhage with coagulation defect - not deliv
L113z	Antepartum haemorrhage with coagulation defect NOS
L114.	Antepartum haemorrhage with trauma
L1140	Antepartum haemorrhage with trauma unspecified
L1141	Antepartum haemorrhage with trauma - delivered
L1142	Antepartum haemorrhage with trauma - not delivered
L114z	Antepartum haemorrhage with trauma NOS
L115.	Antepartum haemorrhage with uterine leiomyoma / Antepartum haemorrhage with fibroid / Antepartum haemorrhage with uterine fibroid
L1150	Antepartum haemorrhage with uterine leiomyoma unspecified
L1151	Antepartum haemorrhage with uterine leiomyoma - delivered
L1152	Antepartum haemorrhage with uterine leiomyoma - not deliv
L115z	Antepartum haemorrhage with uterine leiomyoma NOS
L116.	Placenta praevia
L11y.	Other antepartum haemorrhage
L11y0	Other antepartum haemorrhage unspecified

L11y1	Other antepartum haemorrhage - delivered
L11y2	Other antepartum haemorrhage - not delivered
L11yz	Other antepartum haemorrhage NOS
L11z.	Antepartum haemorrhage NOS
L11z0	Antepartum haemorrhage NOS, unspecified
L11z1	Antepartum haemorrhage NOS - delivered
L11z2	Antepartum haemorrhage NOS - not deliv
L11zz	Antepartum haemorrhage NOS
L12..	Hypertension complicating pregnancy/childbirth/puerperium
L120.	Benign essential hypertension in pregnancy/childbirth/puerp
L1200	Benign essential hypertension in preg/childb/puerp unspec
L1202	Benign ess hypert in preg/childb/puerp - deliv with p/n comp
L1203	Benign essential hypertension in preg/childb/puerp-not deliv
L1204	Benign essential hypertension in preg/childb/puerp +p/n comp
L120z	Benign essential hypertension in preg/childb/puerp NOS
L121.	Renal hypertension in pregnancy/childbirth/puerperium
L1210	Renal hypertension in pregnancy/childbirth/puerp unspecified
L1211	Renal hypertension in pregnancy/childbirth/puerp - delivered
L1212	Renal hypertension in preg/childb/puerp -deliv with p/n comp
L1213	Renal hypertension in preg/childbirth/puerp - not delivered
L1214	Renal hypertension in preg/childb/puerp + p/n complication
L121z	Renal hypertension in pregnancy/childbirth/puerperium NOS
L122.	Other pre-existing hypertension in preg/childbirth/puerp
L1220	Other pre-existing hypertension in preg/childb/puerp unspec
L1221	Other pre-existing hypertension in preg/childb/puerp - deliv
L1222	Oth pre-exist hypert in preg/childb/puerp -del with p/n comp
L1223	Other pre-exist hypertension in preg/childb/puerp-not deliv
L1224	Other pre-exist hypertension in preg/childb/puerp + p/n comp
L122z	Other pre-existing hypertension in preg/childb/puerp NOS
L123.	Transient hypertension of pregnancy
L1230	Transient hypertension of pregnancy unspecified
L1231	Transient hypertension of pregnancy - delivered
L1232	Transient hypertension of pregnancy - deliv with p/n comp
L1233	Transient hypertension of pregnancy - not delivered
L1234	Transient hypertension of pregnancy + postnatal complication
L1235	Gestational hypertension
L1236	Transient hypertension of pregnancy
L123z	Transient hypertension of pregnancy NOS
L124.	Mild or unspecified pre-eclampsia / Mild pre-eclampsia / Toxaemia NOS
L1240	Mild or unspecified pre-eclampsia unspecified
L1241	Mild or unspecified pre-eclampsia - delivered
L1242	Mild or unspecified pre-eclampsia - delivered with p/n comp
L1243	Mild or unspecified pre-eclampsia - not delivered
L1244	Mild or unspecified pre-eclampsia with p/n complication
L1245	Mild pre-eclampsia
L1246	Pre-eclampsia, unspecified
L124z	Mild or unspecified pre-eclampsia NOS
L125.	Severe pre-eclampsia
L1250	Severe pre-eclampsia unspecified
L1251	Severe pre-eclampsia - delivered
L1252	Severe pre-eclampsia - delivered with postnatal complication
L1253	Severe pre-eclampsia - not delivered

L1254	Severe pre-eclampsia with postnatal complication
L125z	Severe pre-eclampsia NOS
L126.	Eclampsia
L1260	Eclampsia unspecified
L1261	Eclampsia - delivered
L1262	Eclampsia - delivered with postnatal complication
L1263	Eclampsia - not delivered
L1264	Eclampsia with postnatal complication
L1265	Eclampsia in pregnancy
L1266	Eclampsia in labour
L126z	Eclampsia NOS
L127.	Pre-eclampsia or eclampsia with pre-existing hypertension
L1270	Pre-eclampsia or eclampsia with hypertension unspecified
L1271	Pre-eclampsia or eclampsia with hypertension - delivered
L1272	Pre-eclampsia or eclampsia with hypertension - del+p/n comp
L1273	Pre-eclampsia or eclampsia with hypertension - not delivered
L1274	Pre-eclampsia or eclampsia with hypertension + p/n comp
L127z	Pre-eclampsia or eclampsia + pre- existing hypertension NOS
L128.	Pre-exist hypertension compl preg childbirth and puerperium
L1280	Pre-exist hyperten heart dis compl preg childbth+puerperium
L1281	Pre-exist hyperten heart renal dis comp preg chldbirth/puerp
L1282	Pre-exist 2ndry hypertens comp preg childbth and puerperium
L129.	Moderate pre-eclampsia
L12A.	HELLP - Syndrome haemolysis, elev liver enzyme low platelets
L12B.	Proteinuric hypertension of pregnancy
L12z.	Unspecified hypertension in pregnancy/childbirth/puerperium
L12z0	Unspecified hypertension in preg/childb/puerp unspecified
L12z1	Unspecified hypertension in preg/childb/puerp - delivered
L12z2	Unspecified hypertension in preg/childb/puerp -del +p/n comp
L12z3	Unspecified hypertension in preg/childb/puerp - not deliv
L12z4	Unspecified hypertension in preg/childb/puerp with p/n comp
L12zz	Unspecified hypertension in preg/childb/puerp NOS
L13..	Excessive pregnancy vomiting / Hyperemesis gravidarum / Hyperemesis of pregnancy
L130.	Mild hyperemesis gravidarum / Morning sickness
L1300	Mild hyperemesis unspecified
L1301	Mild hyperemesis-delivered
L1302	Mild hyperemesis-not delivered
L130z	Mild hyperemesis gravidarum NOS
L131.	Hyperemesis gravidarum with metabolic disturbance
L1310	Hyperemesis gravidarum with metabolic disturbance unsp
L1311	Hyperemesis gravidarum with metabolic disturbance - deliv
L1312	Hyperemesis gravidarum with metabolic disturbance - not del
L131z	Hyperemesis gravidarum with metabolic disturbance NOS
L132.	Late vomiting of pregnancy
L1320	Late pregnancy vomiting unspecified
L1321	Late pregnancy vomiting - delivered
L1322	Late pregnancy vomiting - not delivered
L132z	Late pregnancy vomiting NOS
L13y.	Other pregnancy vomiting
L13y0	Other pregnancy vomiting unspecified
L13y1	Other pregnancy vomiting - delivered
L13y2	Other pregnancy vomiting - not delivered

L13yz	Other pregnancy vomiting NOS
L13z.	Unspecified pregnancy vomiting
L13z0	Unspecified pregnancy vomiting unspecified
L13z1	Unspecified pregnancy vomiting delivered
L13z2	Unspecified pregnancy vomiting - not delivered
L13zz	Unspecified pregnancy vomiting NOS
L14..	Early or threatened labour / Premature labour
L140.	Threatened premature labour / False labour
L1400	Threatened premature labour unspecified
L1401	Threatened premature labour - not delivered
L1402	False labour at or after 37 completed weeks of gestation
L140z	Threatened premature labour NOS
L141.	Other threatened labour
L1410	Other threatened labour unspecified
L1411	Other threatened labour - not delivered
L141z	Other threatened labour NOS
L142.	Early onset of delivery / Premature delivery
L1420	Early onset of delivery unspecified
L1421	Early onset of delivery - delivered
L142z	Early onset of delivery NOS
L14z.	Early or threatened labour NOS
L15..	Prolonged or post-term pregnancy / Post-term pregnancy
L150.	Post-term pregnancy
L1500	Post-term pregnancy unspecified
L1501	Post-term pregnancy - delivered
L1502	Post-term pregnancy - not delivered
L150z	Post-term pregnancy NOS
L15z.	Prolonged pregnancy NOS
L16..	Other pregnancy complication NEC
L160.	Papyraceous fetus
L1600	Papyraceous fetus unspecified
L1601	Papyraceous fetus - delivered
L1602	Papyraceous fetus - not delivered
L160z	Papyraceous fetus NOS
L161.	Oedema or excessive weight gain in pregnancy no hypertension / Excessive weight gain in pregnancy / Maternal obesity syndrome / Gestational oedema
L1610	Oedema or excessive weight gain in pregnancy, unspecified
L1611	Oedema or excessive weight gain in pregnancy, delivered
L1612	Oedema/excess weight gain preg - delivered + postnatal compl
L1613	Oedema or excessive weight gain in pregnancy - not delivered
L1614	Oedema/excessive weight gain in preg+postnatal complication
L161z	Oedema or excessive weight gain in pregnancy NOS
L162.	Unspecified renal disease in pregnancy / Albuminuria in pregnancy without hypertension / Nephropathy NOS in pregnancy without hypertension /Uraemia in pregnancy without hypertension
L1620	Unspecified renal disease in pregnancy unspecified
L1621	Unspecified renal disease in pregnancy - delivered
L1622	Unspecified renal disease in pregnancy - del with p/n comp
L1623	Unspecified renal disease in pregnancy - not delivered
L1624	Unspecified renal disease in pregnancy with p/n complication
L162z	Unspecified renal disease in pregnancy NOS
L163.	Habitual aborter
L1630	Habitual aborter - unspecified

L1631	Habitual aborter - delivered
L1632	Habitual aborter - not delivered
L1633	Pregnancy care of habitual aborter
L163z	Habitual aborter NOS
L164.	Peripheral neuritis in pregnancy
L1640	Peripheral neuritis in pregnancy unspecified
L1641	Peripheral neuritis in pregnancy - delivered
L1642	Peripheral neuritis in pregnancy - delivered with p/n comp
L1643	Peripheral neuritis in pregnancy - not delivered
L1644	Peripheral neuritis in pregnancy with postnatal complication
L164z	Peripheral neuritis in pregnancy NOS
L165.	Asymptomatic bacteriuria in pregnancy
L1650	Asymptomatic bacteriuria in pregnancy unspecified
L1651	Asymptomatic bacteriuria in pregnancy - delivered
L1652	Asymptomatic bacteriuria in pregnancy - del with p/n comp
L1653	Asymptomatic bacteriuria in pregnancy - not delivered
L1654	Asymptomatic bacteriuria in pregnancy with postnatal comp
L165z	Asymptomatic bacteriuria in pregnancy NOS
L166.	Genitourinary tract infections in pregnancy / Cystitis of pregnancy
L1660	Genitourinary tract infection in pregnancy unspecified
L1661	Genitourinary tract infection in pregnancy - delivered
L1662	Genitourinary tract infection in pregnancy - deliv +p/n comp
L1663	Genitourinary tract infection in pregnancy - not delivered
L1664	Genitourinary tract infection in pregnancy with p/n comp
L1665	Infections of kidney in pregnancy
L1666	Urinary tract infection following delivery
L1667	Infections of the genital tract in pregnancy
L1668	Urinary tract infection complicating pregnancy
L166z	Genitourinary tract infection in pregnancy NOS / UTI - urinary tract infection in pregnancy
L167.	Liver disorder in pregnancy
L1670	Liver disorder in pregnancy unspecified
L1671	Liver disorder in pregnancy - delivered
L1672	Liver disorder in pregnancy - not delivered
L167z	Liver disorder in pregnancy NOS
L168.	Fatigue during pregnancy
L1680	Fatigue during pregnancy unspecified
L1681	Fatigue during pregnancy - delivered
L1682	Fatigue during pregnancy - delivered with postnatal comp
L1683	Fatigue during pregnancy - not delivered
L1684	Fatigue during pregnancy with postnatal complication
L168z	Fatigue during pregnancy NOS
L169.	Herpes gestationis
L1690	Herpes gestationis unspecified
L1691	Herpes gestationis - delivered
L1692	Herpes gestationis - delivered with postnatal complication
L1693	Herpes gestationis - not delivered
L1694	Herpes gestationis with postnatal complication
L169z	Herpes gestationis NOS
L16A.	Glycosuria during pregnancy
L16A0	Glycosuria during pregnancy unspecified
L16A1	Glycosuria during pregnancy - delivered
L16A2	Glycosuria during pregnancy - delivered with p/n comp

L16A3	Glycosuria during pregnancy - not delivered
L16A4	Glycosuria during pregnancy with postnatal complication
L16Az	Glycosuria during pregnancy NOS
L16B.	Braxton-Hicks contractions
L16C.	Pregnancy induced oedema+proteinuria without hypertension
L16C0	Gestational proteinuria
L16C1	Gestational oedema with proteinuria
L16D.	Excessive weight gain in pregnancy
L16E.	Pregnancy pruritus
L16y.	Other pregnancy complications
L16y0	Other pregnancy complication unspecified
L16y1	Other pregnancy complication - delivered
L16y2	Other pregnancy complication - delivered with postnatal comp
L16y3	Other pregnancy complication - not delivered
L16y4	Other pregnancy complication with postnatal complication
L16y5	Abdominal pain in pregnancy
L16yz	Other pregnancy complication NOS
L16z.	Pregnancy complication NOS
L17..	Infective/parasitic disease in preg/childbirth/puerperium
L170.	Maternal syphilis in pregnancy/childbirth/puerperium
L1700	Maternal syphilis, unspec whether in pregnancy or puerperium
L1701	Maternal syphilis during pregnancy - baby delivered
L1702	Maternal syphilis in puerperium - baby delivered
L1703	Maternal syphilis during pregnancy - baby not yet delivered
L1704	Maternal syphilis in puerperium - baby previously delivered
L170z	Maternal syphilis in pregnancy/childbirth/puerperium NOS
L171.	Maternal gonorrhoea during pregnancy/childbirth/puerperium
L1710	Maternal gonorrhoea, unspec whether in pregnancy/puerperium
L1711	Maternal gonorrhoea during pregnancy - baby delivered
L1712	Maternal gonorrhoea in puerperium - baby delivered
L1713	Maternal gonorrhoea in pregnancy - baby not yet delivered
L1714	Maternal gonorrhoea in puerperium- baby previously delivered
L171z	Maternal gonorrhoea in pregnancy/childbirth/puerperium NOS
L172.	Other venereal diseases in pregnancy/childbirth/puerperium
L1720	Other maternal venereal disease, unspec pregnancy/puerperium
L1721	Other maternal venereal disease during pregnancy- baby deliv
L1722	Other maternal venereal disease in puerperium-baby delivered
L1723	Other maternal venereal dis. in pregnancy-baby not delivered
L1724	Other mat. venereal dis. in puerperium-baby previously deliv
L172z	Other mat. venereal dis. in pregnancy/childbirth/puerp. NOS
L173.	Maternal tuberculosis in pregnancy/childbirth/puerperium
L1730	Maternal tuberculosis,unspec whether in pregnancy/puerperium
L1731	Maternal tuberculosis during pregnancy - baby delivered
L1732	Maternal tuberculosis in puerperium - baby delivered
L1733	Maternal tuberculosis in pregnancy - baby not yet delivered
L1734	Maternal tuberculosis in puerperium - baby previously deliv.
L173z	Maternal tuberculosis in pregnancy/childbirth/puerperium NOS
L174.	Maternal malaria in pregnancy, childbirth and the puerperium
L1740	Maternal malaria, unspec whether during pregnancy/puerperium
L1741	Maternal malaria during pregnancy - baby delivered
L1742	Maternal malaria in puerperium - baby delivered
L1743	Maternal malaria during pregnancy - baby not yet delivered

L1744	Maternal malaria in puerperium - baby previously delivered
L174z	Maternal malaria during pregnancy/childbirth/puerperium NOS
L175.	Maternal rubella in pregnancy, childbirth and the puerperium / Rubella contact in pregnancy
L1750	Maternal rubella, unspecified whether pregnancy/puerperium
L1751	Maternal rubella during pregnancy - baby delivered
L1752	Maternal rubella in puerperium - baby delivered
L1753	Maternal rubella during pregnancy - baby not yet delivered
L1754	Maternal rubella in puerperium - baby previously delivered
L175z	Maternal rubella in pregnancy/childbirth/puerperium NOS
L176.	Other maternal viral dis. in pregnancy/childbirth/puerperium
L1760	Other maternal viral disease, unspec in pregnancy/puerperium
L1761	Other maternal viral disease in pregnancy - baby delivered
L1762	Other maternal viral disease in puerperium - baby delivered
L1763	Other maternal viral dis.in pregnancy- baby not yet delivered
L1764	Other mat.viral dis. in puerperium- baby previously delivered
L1765	Viral hepatitis comp pregnancy, childbirth & the puerperium
L176z	Other maternal viral dis. in pregnancy/childbirth/puerp. NOS
L177.	Infections of bladder in pregnancy
L178.	Infections of urethra in pregnancy
L17y.	Other mat.infective/parasitic disease in preg/childb/puerp.
L17y0	Other mat. infective/parasitic disease in preg/puerp unspec
L17y1	Other mat.infective/parasitic dis in pregnancy - delivered
L17y2	Other mat.infect/parasit dis in puerperium - baby delivered
L17y3	Other mat infective/parasit dis in pregnancy - not delivered
L17y4	Other mat.infective/parasit dis in puerp-baby previously del
L17yz	Other mat.infective/parasitic dis in preg/childb/puerp NOS
L17z.	Maternal infect/parasitic dis NOS in pregnancy/childb/puerp
L17z0	Mat infect/parasitic dis NOS - pregnancy/puerperium unspec
L17z1	Mat infect/parasitic dis NOS in pregnancy - baby delivered
L17z2	Mat infect/parasitic dis NOS in puerperium - baby delivered
L17z3	Mat infect/parasitic dis NOS in pregnancy-baby not delivered
L17z4	Mat infect/parasitic dis NOS in baby previously deliv
L17zz	Mat infect/parasitic dis NOS in preg/childbirth/puerp NOS
L18..	Other medical condition in pregnancy/childbirth/puerperium
L180.	Diabetes mellitus during pregnancy/childbirth/puerperium
L1800	Diabetes mellitus - unspec whether in pregnancy/puerperium
L1801	Diabetes mellitus during pregnancy - baby delivered
L1802	Diabetes mellitus in puerperium - baby delivered
L1803	Diabetes mellitus during pregnancy - baby not yet delivered
L1804	Diabetes mellitus in pueperium - baby previously delivered
L1805	Pre-existing diabetes mellitus, insulin- dependent
L1806	Pre-existing diabetes mellitus, non- insulin-dependent
L1807	Pre-existing malnutrition-related diabetes mellitus
L1808	Diabetes mellitus arising in pregnancy / Gestational diabetes mellitus
L1809	Gestational diabetes mellitus
L180X	Pre-existing diabetes mellitus, unspecified
L180z	Diabetes mellitus in pregnancy/childbirth/puerperium NOS
L181.	Thyroid dysfunction in pregnancy/childbirth/puerperium
L1810	Thyroid dysfunction - unspec whether in pregnancy/puerperium
L1811	Thyroid dysfunction during pregnancy - baby delivered
L1812	Thyroid dysfunction in puerperium - baby delivered
L1813	Thyroid dysfunction in pregnancy - baby not yet delivered

L1814	Thyroid dysfunction in puerperium- baby previously delivered
L1815	Postpartum thyroiditis
L181z	Thyroid dysfunction in pregnancy/childbirth/puerperium NOS
L182.	Anaemia during pregnancy, childbirth and the puerperium
L1820	Anaemia - unspecified whether in pregnancy or the puerperium
L1821	Anaemia during pregnancy - baby delivered
L1822	Anaemia in the puerperium - baby delivered
L1823	Anaemia during pregnancy - baby not yet delivered
L1824	Anaemia in the puerperium - baby previously delivered
L1825	Iron deficiency anaemia of pregnancy
L182z	Anaemia during pregnancy/childbirth/puerperium NOS
L183.	Drug dependence in pregnancy, childbirth and the puerperium / Pregnancy and drug dependence
L1830	Drug dependence - unspec whether during pregnancy/puerperium
L1831	Drug dependence during pregnancy - baby delivered
L1832	Drug dependence in the puerperium - baby delivered
L1833	Drug dependence during pregnancy - baby not yet delivered
L1834	Drug dependence in puerperium - baby previously delivered
L183z	Drug dependence during pregnancy/childbirth/puerperium NOS
L184.	Mental disorders in pregnancy, childbirth and the puerperium
L1840	Mental disorder - unspec whether in pregnancy/puerperium
L1841	Mental disorder during pregnancy - baby delivered
L1842	Mental disorder in the puerperium - baby delivered
L1843	Mental disorder during pregnancy - baby not yet delivered
L1844	Mental disorder in puerperium - baby previously delivered
L184z	Mental disorder during pregnancy/childbirth/puerperium NOS
L185.	Congenital cardiovascular disorders in preg/childb/puerp / Congenital heart disease in pregnancy
L1850	Congenital cardiovasc dis - unsp whether in preg/puerperium
L1851	Congenital cardiovasc dis in pregnancy - baby delivered
L1852	Congenital cardiovasc dis in puerp - baby delivered
L1853	Congenital cardiovasc dis in pregnancy - baby not delivered
L1854	Congenital cardiovasc dis in puerp - baby previously deliv
L185z	Congenital cardiovascular disorder in preg/childb/puerp NOS
L186.	Other cardiovascular diseases in pregnancy/childbirth/puerp / Heart disease during pregnancy
L1860	Other cardiovascular dis - unsp whether in preg/puerperium
L1861	Other cardiovascular disease in pregnancy - baby delivered
L1862	Other cardiovasc dis in puerperium - baby delivered
L1863	Other cardiovascular dis in pregnancy - baby not delivered
L1864	Other cardiovasc dis in puerp - baby previously delivered
L1865	Cardiomyopathy in the puerperium
L186z	Other cardiovascular disease in pregnancy/childb/puerp NOS
L187.	Orthopaedic disorders in pregnancy/childbirth/puerperium
L1870	Orthopaedic disorder - unsp whether in pregnancy/puerperium
L1871	Orthopaedic disorder during pregnancy - baby delivered
L1872	Orthopaedic disorder in puerperium - baby delivered
L1873	Orthopaedic disorder in pregnancy - baby not yet delivered
L1874	Orthopaedic disorder in puerperium- baby previously delivered
L187z	Orthopaedic disorder in pregnancy/childbirth/puerperium NOS
L188.	Abnormal glucose tolerance test in pregnancy/childb/puerp / GTT - glucose tolerance test abnormal in preg/childb/puerp
L1880	Abnormal GTT - unspec whether during pregnancy/puerperium
L1881	Abnormal GTT during pregnancy - baby delivered
L1882	Abnormal GTT in puerperium - baby delivered

L1883	Abnormal GTT during pregnancy - baby not yet delivered
L1884	Abnormal GTT in puerperium - baby previously delivered
L188z	Abnormal GTT in pregnancy/childbirth/puerperium NOS
L189.	Dis resp syst comp pregnancy, childbirth & puerperium
L18A.	Dis of the digestive sys comp preg childbirth and puerp
L18A	Cholestasis of pregnancy
L18B.	Dis of the skin and subcut tis comp preg childbrth puerp
L18C.	Endocrine nutrition+metab dis complic pregn,childbirth+puerp
L18D.	Dis nervous syst complic pregnancy,childbirth and puerperium
L18z.	Medical condition NOS in pregnancy/childbirth/puerperium
L18z0	Medical condition NOS - unsp whether in pregnancy/puerperium
L18z1	Medical condition NOS during pregnancy - baby delivered
L18z2	Medical condition NOS in puerperium - baby delivered
L18z3	Medical condition NOS in pregnancy - baby not yet delivered
L18z4	Medical condition NOS in puerperium - baby previously deliv
L18zz	Medical condition NOS in pregnancy/childb/puerp NOS
L19..	Complications specific to multiple gestation
L191.	Continuing pregnancy after abortion of one fetus or more
L192.	Continuing preg after intrauterine death one fetus or more
L1A..	Sublux of symphysis pubis in preg childbirth and puerp
L1y..	Complications of pregnancy/childbirth/puerperium OS
L1z..	Complications of pregnancy/childbirth/puerperium NOS
L2...	Risk factors in pregnancy
L20..	Normal delivery in a completely normal case / Spontaneous vaginal delivery
L200.	Normal delivery but ante- or post- natal conditions present
L20z.	Normal delivery in completely normal case NOS
L21..	Multiple pregnancy / Gestation - multiple
L210.	Twin pregnancy
L2100	Twin pregnancy unspecified
L2101	Twin pregnancy - delivered
L2102	Twin pregnancy with antenatal problem
L210z	Twin pregnancy NOS
L211.	Triplet pregnancy
L2110	Triplet pregnancy unspecified
L2111	Triplet pregnancy - delivered
L2112	Triplet pregnancy with antenatal problem
L211z	Triplet pregnancy NOS
L212.	Quadruplet pregnancy
L2120	Quadruplet pregnancy unspecified
L2121	Quadruplet pregnancy - delivered
L2122	Quadruplet pregnancy with antenatal problem
L212z	Quadruplet pregnancy NOS
L213.	Multiple delivery
L2130	Multiple delivery, all spontaneous
L2131	Multiple delivery, all by forceps and vacuum extractor
L2132	Multiple delivery, all by caesarean section
L21y.	Other multiple pregnancy
L21y0	Other multiple pregnancy unspecified
L21y1	Other multiple pregnancy - delivered
L21y2	Other multiple pregnancy with antenatal problem
L21yz	Other multiple pregnancy NOS
L21z.	Multiple pregnancy NOS

L21z0	Multiple pregnancy NOS, unspecified
L21z1	Multiple pregnancy NOS - delivered
L21z2	Multiple pregnancy NOS with antenatal problem
L21zz	Multiple pregnancy NOS
L22..	Malposition and malpresentation of fetus / Malpresentation of fetus
L220.	Fetus - unstable lie
L2200	Unstable lie unspecified
L2201	Unstable lie - delivered
L2202	Unstable lie with antenatal problem
L220z	Unstable lie NOS
L221.	Cephalic version NOS
L2210	Cephalic version NOS, unspecified
L2211	Cephalic version NOS - delivered
L2212	Cephalic version NOS with antenatal problem
L221z	Cephalic version NOS
L222.	Breech presentation / Assisted breech delivery / Breech delivery / Spontaneous breech delivery
L2220	Breech presentation unspecified
L2221	Breech presentation - delivered
L2222	Breech presentation with antenatal problem
L222z	Breech presentation NOS
L223.	Oblique presentation
L2230	Oblique lie unspecified
L2231	Oblique lie - delivered
L2232	Oblique lie with antenatal problem
L223z	Oblique lie NOS
L224.	Transverse presentation
L2240	Transverse lie unspecified
L2241	Transverse lie - delivered
L2242	Transverse lie with antenatal problem
L224z	Transverse lie NOS / Shoulder presentation
L225.	Face presentation
L2250	Face presentation unspecified
L2251	Face presentation - delivered
L2252	Face presentation with antenatal problem
L225z	Face presentation NOS
L2260	Brow presentation unspecified
L2261	Brow presentation - delivered
L2262	Brow presentation with antenatal problem
L226z	Brow presentation NOS / Mentum presentation
L227.	High head at term
L2270	High head at term unspecified
L2271	High head at term - delivered
L2272	High head at term with antenatal problem
L227z	High head at term NOS
L228.	Multiple pregnancy with malpresentation
L2280	Multiple pregnancy with malpresentation unspecified
L2281	Multiple pregnancy with malpresentation - delivered
L2282	Multiple pregnancy with malpresentation with antenatal prob
L228z	Multiple pregnancy with malpresentation NOS
L229.	Prolapsed arm presentation
L2290	Prolapsed arm unspecified
L2291	Prolapsed arm - delivered

L2292	Prolapsed arm with antenatal problem
L229z	Prolapsed arm NOS
L22y.	Other fetal malposition and malpresentation / Compound presentation
L22y0	Other fetal malposition and malpresentation unspecified
L22y1	Other fetal malposition and malpresentation - delivered
L22y2	Other fetal malposition and malpresentation with a/n prob
L22yz	Other fetal malposition and malpresentation NOS
L22z.	Fetal malposition and malpresentation NOS
L22z0	Fetal malposition and malpresentation NOS, unspecified
L22z1	Fetal malposition and malpresentation NOS - delivered
L22z2	Fetal malposition and malpresentation NOS with a/n problem
L22zz	Fetal malposition and malpresentation NOS
L23..	Cephalo-pelvic disproportion
L230.	Disproportion - major pelvic abnormality
L2300	Disproportion - major pelvic abnormality unspecified
L2301	Disproportion - major pelvic abnormality - delivered
L2302	Disproportion - major pelvic abnormality with antenatal prob
L230z	Disproportion - major pelvic abnormality NOS
L231.	Generally contracted pelvis
L2310	Generally contracted pelvis unspecified
L2311	Generally contracted pelvis - delivered
L2312	Generally contracted pelvis with antenatal problem
L231z	Generally contracted pelvis NOS
L232.	Inlet pelvic contraction
L2320	Inlet pelvic contraction unspecified
L2321	Inlet pelvic contraction - delivered
L2322	Inlet pelvic contraction with antenatal problem
L232z	Inlet pelvic contraction NOS
L233.	Outlet pelvic contraction
L2330	Outlet pelvic contraction unspecified
L2331	Outlet pelvic contraction - delivered
L2332	Outlet pelvic contraction with antenatal problem
L233z	Outlet pelvic contraction NOS
L234.	Mixed feto-pelvic disproportion
L2340	Mixed feto-pelvic disproportion unspecified
L2341	Mixed feto-pelvic disproportion - delivered
L2342	Mixed feto-pelvic disproportion antenatal with problem
L234z	Mixed feto-pelvic disproportion NOS
L235.	Large fetus causing disproportion
L2350	Large fetus causing disproportion unspecified
L2351	Large fetus causing disproportion - delivered
L2352	Large fetus causing disproportion with antenatal problem
L235z	Large fetus causing disproportion NOS
L236.	Hydrocephalic disproportion
L2360	Hydrocephalic disproportion unspecified
L2361	Hydrocephalic disproportion - delivered
L2362	Hydrocephalic disproportion with antenatal problem
L236z	Hydrocephalic disproportion NOS
L237.	Other fetal abnormality causing disproportion / Conjoined twins causing disproportion
L2370	Other fetal abnormality causing disproportion unspecified
L2371	Other fetal abnormality causing disproportion - delivered
L2372	Other fetal abnormality causing disproportion with a/n prob

L237z	Other fetal abnormality causing disproportion NOS
L23y.	Other disproportion
L23y0	Other disproportion unspecified
L23y1	Other disproportion - delivered
L23y2	Other disproportion with antenatal problem
L23yz	Other disproportion NOS
L23z.	Disproportion NOS
L23z0	Disproportion NOS, unspecified
L23z1	Disproportion NOS - delivered
L23z2	Disproportion NOS with antenatal problem
L23zz	Disproportion NOS
L24..	Pelvic soft tissue abnormality in pregnancy/childbirth/puerp
L240.	Congenital abnormality of uterus in preg/childbirth/puerp / Bicornuate uterus in pregnancy, childbirth and puerperium / Double uterus in pregnancy, childbirth and the puerperium
L2400	Congenital abnormality of uterus affecting obstetric care / Bicornuate uterus affecting obstetric care
L2401	Congenital abnormality of uterus - baby delivered / Bicornuate uterus - baby delivered
L2402	Cong abnormality uterus - baby delivered + postpartum compl / Bicornuate uterus - baby delivered + postpartum complication
L2403	Cong abnorm uterus complicating a/n care, baby not delivered / Bicornuate uterus complicating a/n care, baby not delivered
L2404	Cong abnorm uterus complic p/n care - baby previously deliv / Bicornuate uterus complic p/n care - baby previously deliv
L240z	Congenital abnormality uterus in pregnancy/childb/puerp NOS / Bicornuate uterus in pregnancy, childbirth or puerperium NOS
L241.	Tumour of uterine body in pregnancy/childbirth/puerperium / Uterine fibroids in pregnancy, childbirth and the puerperium
L2410	Tumour of uterine body affecting obstetric care / Uterine fibroid affecting obstetric care
L2411	Tumour of uterine body - baby delivered / Uterine fibroid - baby delivered
L2412	Tumour of uterine body - baby delivered + p/n complication / Uterine fibroid - baby delivered + postpartum complication
L2413	Tumour of uterine body complicating a/n care, baby not deliv / Uterine fibroid complicating a/n care, baby not delivered
L2414	Tumour of uterine body complic p/n care, baby prev delivered / Uterine fibroid complicating p/n care - baby delivered prev
L241z	Uterine body tumour in pregnancy/childbirth/puerperium NOS / Uterine fibroid in pregnancy/childbirth/puerperium NOS
L242.	Uterine scar from previous surgery in pregnancy/childb/puerp
L2420	Uterine operation scar in pregnancy/childbirth/puerp unspec
L2421	Uterine operation scar in pregnancy/childbirth/puerp - deliv
L2422	Uterine operation scar in pregnancy/childb/puerp + a/n prob
L242z	Uterine operation scar in pregnancy/childbirth/puerp NOS
L243.	Retroverted incarcerated gravid uterus
L2430	Retroverted incarcerated gravid uterus unspecified
L2431	Retroverted incarcerated gravid uterus - delivered
L2432	Retroverted incarcerated gravid uterus - delivered +p/n comp
L2433	Retroverted incarcerated gravid uterus with antenatal prob
L2434	Retroverted incarcerated gravid uterus with postnatal comp
L243z	Retroverted incarcerated gravid uterus NOS
L244.	Other uterine/pelvic floor abnormality in preg/childb/puerp / Cystocele in pregnancy, childbirth and the puerperium / Pendulous abdomen in pregnancy,childbirth and the puerperium / Rectocele in pregnancy, childbirth and the puerperium

L2440	Other uterine/pelvic floor abnormal affecting obstetric care / Cystocele affecting obstetric care / Rectocele affecting obstetric care
L2441	Other uterine/pelvic floor abnormality - baby delivered / Cystocele - baby delivered / Rectocele - baby delivered
L2442	Other uterine/pelvic floor abn - delivered+postpartum compl / Cystocele - delivered with postpartum complication / Rectocele - delivered with postpartum complication
L2443	Other uterine/pelvic floor abnormal - baby not yet delivered / Cystocele complicating antenatal care - baby not delivered / Rectocele complicating antenatal care - baby not delivered
L2444	Other uterine/pelvic floor abn - baby delivered previously / Cystocele complicating postpartum care - baby delivered prev / Rectocele complicating postpartum care - baby delivered prev
L244z	Other uterine/pelvic floor abn in preg/childb/puerp NOS / Cystocele in pregnancy, childbirth or the puerperium NOS / Rectocele in pregnancy, childbirth or the puerperium NOS
L245.	Cervical incompetence / Shirodkar suture present
L2450	Cervical incompetence unspecified
L2451	Cervical incompetence - delivered
L2452	Cervical incompetence - delivered with postnatal comp
L2453	Cervical incompetence with antenatal problem
L2454	Cervical incompetence with postnatal complication
L245z	Cervical incompetence NOS
L246.	Other cervical abnormality in pregnancy/childbirth/puerp / Polyp of cervix in pregnancy, childbirth and the puerperium / Stenosis of cervix in pregnancy, childbirth, puerperium
L2460	Other cervical abnormality affecting obstetric care
L2461	Other cervical abnormality - baby delivered
L2462	Other cervical abnormality - baby delivered+postpartum compl / Polyp of cervix - baby delivered+postpartum complication / Stenosis of cervix - baby delivered+postpartum complication
L2463	Other cervical abn complicating a/n care- baby not delivered / Polyp of cervix complicating a/n care- baby not delivered / Stenosis of cervix complicating a/n care- baby not delivered
L2464	Other cervical abn complicating p/n care - baby deliv prev / Polyp of cervix complicating p/n care - baby deliv prev / Stenosis of cervix complicating p/n care - baby deliv prev
L246z	Other cervical abnormality in pregnancy/childbirth/puerp NOS / Polyp of cervix in pregnancy/childbirth/puerperium NOS / Stenosis of cervix in pregnancy/childbirth/puerperium NOS
L247.	Congenital/acquired abnormality vagina in preg/childb/puerp / Septate vagina in pregnancy, childbirth and the puerperium / Stenosis of vagina in pregnancy/childbirth/puerperium / Vaginal abnormality in pregnancy/childbirth/puerperium
L2470	Vaginal abnormality affecting obstetric care / Septate vagina affecting obstetric care / Stenosis of vagina affecting obstetric care
L2471	Vaginal abnormality - baby delivered / Septate vagina - baby delivered / Stenosis of vagina - baby delivered
L2472	Vaginal abnormality - baby delivered+postpartum complication / Septate vagina - baby delivered with postpartum complication / Stenosis of vagina - baby delivered+postpartum complication
L2473	Vaginal abnormality complicating a/n care-baby not delivered / Septate vagina complicating a/n care- baby not yet delivered / Stenosis of vagina complicating a/n care- baby not delivered
L2474	Vaginal abnormality complicating p/n care - baby deliv prev / Septate vagina complicating p/n care - baby delivered prev / Stenosis of vagina complicating p/n care - baby deliv prev
L247z	Vaginal abnormality in pregnancy/childbirth/puerperium NOS / Septate vagina in pregnancy/childbirth/puerperium NOS / Stenosis of vagina in pregnancy/childbirth/puerperium NOS
L248.	Congenital/acquired abnormality vulva in preg/childb/puerp / Persistent hymen in pregnancy, childbirth and the puerperium / Rigid perineum in pregnancy, childbirth and the puerperium / Vulval abnormality in pregnancy/childbirth/puerperium
L2480	Vulval abnormality affecting obstetric care / Persistent hymen affecting obstetric care / Rigid perineum affecting obstetric care

L2481	Vulval abnormality - baby delivered / Persistent hymen - baby delivered / Rigid perineum - baby delivered
L2482	Vulval abnormality - baby delivered+postpartum complication / Persistent hymen - baby delivered+postpartum complication / Rigid perineum - baby delivered with postpartum complication
L2483	Vulval abn complicating a/n care - baby not yet delivered / Persistent hymen complicating a/n care - baby not delivered / Rigid perineum complicating a/n care - baby not delivered
L2484	Vulval abn complicating p/n care - baby delivered previously / Persistent hymen complicating p/n care - baby delivered prev / Rigid perineum complicating p/n care - baby delivered prev
L248z	Vulval abnormality in pregnancy/childbirth/puerperium NOS / Persistent hymen in pregnancy/childbirth/puerperium NOS / Rigid perineum in pregnancy/childbirth/puerperium NOS
L24z.	Pelvic soft tissue abnormality in pregnancy/childbirth/puerp
L24z0	Pelvic soft tissue abnormality in preg/childb/puerp unspec
L24z1	Pelvic soft tissue abnormality in preg/childb/puerp - deliv
L24z2	Pelvic soft tissue abnorm in preg/childb/puerp -del+p/n comp
L24z3	Pelvic soft tissue abnorm in preg/childb/puerp with a/n prob
L24z4	Pelvic soft tissue abnorm in preg/childb/puerp with p/n comp
L24zz	Pelvic soft tissue abnormality in preg/childb/puerp NOS
L25..	Known or suspected fetal abnormality
L250.	Fetus with central nervous system malformation / Suspect fetal anencephaly / Suspect fetal hydrocephaly / Suspect fetal spina bifida
L2500	Fetus with central nervous system malformation unspecified
L2501	Fetus with central nervous system malformation - delivered
L2502	Fetus with central nervous system malformation + a/n problem
L2503	Maternal care for suspected CNS malformation in fetus
L2504	Maternal care for CNS malformation in fetus
L250z	Fetus with central nervous system malformation NOS
L251.	Fetus with chromosomal abnormality / Suspect cystic fibrosis fetus / Suspect mongol fetus
L2510	Fetus with chromosomal abnormality unspecified
L2511	Fetus with chromosomal abnormality - delivered
L2512	Fetus with chromosomal abnormality with antenatal problem
L2513	Maternal care for suspected chromosomal abnormality in fetus
L2514	Maternal care for chromosomal abnormality in fetus
L251z	Fetus with chromosomal abnormality NOS
L252.	Fetus with hereditary disease
L2520	Fetus with hereditary disease unspecified
L2521	Fetus with hereditary disease - delivered
L2522	Fetus with hereditary disease with antenatal problem
L252z	Fetus with hereditary disease NOS
L253.	Fetus with viral damage via mother / Fetus with suspected rubella damage via mother
L2530	Fetus with viral damage via mother unspecified
L2531	Fetus with viral damage via mother - delivered
L2532	Fetus with viral damage via mother with antenatal problem
L2533	Maternal care for damage to fetus from maternal rubella
L253z	Fetus with viral damage via mother NOS
L254.	Fetus with damage due to other maternal disease / Suspect fetal damage from maternal alcohol / Suspect fetal damage from maternal toxoplasmosis
L2540	Fetus with damage due to other maternal disease unspecified
L2541	Fetus with damage due to other maternal disease - delivered
L2542	Fetus with damage due to other maternal disease + a/n prob
L254z	Fetus with damage due to other maternal disease NOS
L255.	Fetus with drug damage

L2550	Fetus with drug damage unspecified
L2551	Fetus with drug damage - delivered
L2552	Fetus with drug damage with antenatal problem
L2553	Maternal care for (suspected) damage to fetus from alcohol
L255z	Fetus with drug damage NOS
L256.	Fetus with radiation damage
L2560	Fetus with radiation damage unspecified
L2561	Fetus with radiation damage delivered
L2562	Fetus with radiation damage with antenatal problem
L256z	Fetus with radiation damage NOS
L257.	Fetus with damage due to intra- uterine contraceptive device / Fetus with damage due to coil / Fetus with damage due to intra-uterine contraceptive device
L2570	Fetus with damage due to IUCD unspecified
L2571	Fetus with damage due to IUCD - delivered
L2572	Fetus with damage due to IUCD with antenatal problem
L257z	Fetus with damage due to IUCD NOS
L258.	Fetus with cardiovascular abnormality
L25y.	Fetus with other damage NEC
L25y0	Fetus with other damage NEC, unspecified
L25y1	Fetus with other damage NEC - delivered
L25y2	Fetus with other damage NEC with antenatal problem
L25yz	Fetus with other damage NEC NOS
L25z.	Fetus with damage NOS
L25z0	Fetus with damage NOS, unspecified
L25z1	Fetus with damage NOS - delivered
L25z2	Fetus with damage NOS with antenatal problem
L25z3	Maternal care for suspect fetal abnormal and damage, unspec
L25z4	Maternal care for fetal abnormality and damage, unspecified
L25zz	Fetus with damage NOS
L26..	Other fetal and placental problems
L260.	Fetal-maternal haemorrhage
L2600	Fetal-maternal haemorrhage unspecified
L2601	Fetal-maternal haemorrhage delivered
L2602	Fetal-maternal haemorrhage with antenatal problem
L260z	Fetal-maternal haemorrhage NOS
L261.	Rhesus isoimmunisation / Anti-D antibodies
L2610	Rhesus isoimmunisation unspecified
L2611	Rhesus isoimmunisation - delivered
L2612	Rhesus isoimmunisation with antenatal problem
L261z	Rhesus isoimmunisation NOS
L262.	Other blood-group isoimmunisation / Other blood-group isoimmunisation
L2620	Other blood-group isoimmunisation unspecified
L2621	Other blood-group isoimmunisation delivered
L2622	Other blood-group isoimmunisation with antenatal problem
L262z	Other blood-group isoimmunisation NOS
L263.	Fetal distress - affecting management / Fetal acidosis / Fetal bradycardia / Fetal tachycardia / Meconium stained liquor
L2630	Fetal distress unspecified
L2631	Fetal distress - delivered
L2632	Fetal distress with antenatal problem
L2633	Labour and delivery complicated by fetal heart rate anomaly / Maternal care for fetal hypoxia
L2634	Labour and delivery complic by meconium in amniotic fluid

L2635	Lab+del comp fetal ht rate anom wth meconium in amnio fluid
L2636	Labour+delivery complicatd by biochem evidence/fetal stress
L2637	Maternal care for fetal hypoxia
L2638	Maternal care for fetal decelerations during pregnancy
L2639	Maternal care for fetal tachycardia during pregnancy
L263A	Maternal care for fetal bradycardia during pregnancy / Maternal care for reduced fetal heart rate during pregnancy
L263B	Maternal care for fetal acidosis during pregnancy
L263z	Fetal distress NOS
L264.	Intrauterine death / Fetal death in utero
L2640	Intrauterine death unspecified
L2641	Intrauterine death - delivered
L2642	Intrauterine death with antenatal problem
L264z	Intrauterine death NOS
L265.	Small-for-dates fetus in pregnancy / Placental insufficiency
L2650	Small-for-dates unspecified
L2651	Small-for-dates - delivered
L2652	Small-for-dates with antenatal problem
L2653	Maternal care for poor fetal growth / Maternal care for intrauterine growth retardation
L265z	Small-for-dates NOS
L266.	Large-for-dates fetus in pregnancy
L2660	Large-for-dates unspecified
L2661	Large-for-dates - delivered
L2662	Large-for-dates with antenatal problem
L2663	Suspected macroscopic fetus
L266z	Large-for-dates NOS
L267.	Other placental conditions / Placental infarct
L2670	Other placental conditions unspecified
L2671	Other placental conditions - delivered
L2672	Other placental conditions with antenatal problem
L2673	Placental transfusion syndromes
L2674	Malformation of placenta
L2675	Other fetal problems
L2676	Placental infarction
L2677	Ragged placenta
L2678	Placenta gritty
L267z	Other placental conditions NOS
L268.	Other fetal problems
L2680	Reduced fetal movements
L26y.	Other feto-placental problems / Lithopaedian
L26y0	Other feto-placental problems unspecified
L26y1	Other feto-placental problems - delivered
L26y2	Other feto-placental problems with antenatal problem
L26yz	Other feto-placental problems NOS
L26z.	Feto-placental problems NOS
L26z0	Feto-placental problems NOS, unspecified
L26z1	Feto-placental problems NOS - delivered
L26z2	Feto-placental problems NOS with antenatal problem
L26zz	Feto-placental problems NOS
L27..	Polyhydramnios and hydramnios / Hydramnios
L270.	Polyhydramnios
L2700	Polyhydramnios unspecified

L2701	Polyhydramnios - delivered
L2702	Polyhydramnios with antenatal problem
L270z	Polyhydramnios NOS
L27z.	Polyhydramnios NOS
L28..	Other problems of amniotic cavity and membranes
L280.	Oligohydramnios
L2800	Oligohydramnios unspecified
L2801	Oligohydramnios - delivered
L2802	Oligohydramnios with antenatal problem
L2803	Anhydramnios
L280z	Oligohydramnios NOS
L281.	Premature rupture of membranes
L2810	Premature rupture of membranes unspecified
L2811	Premature rupture of membranes - delivered
L2812	Premature rupture of membranes with antenatal problem
L2813	Premature rupture of membranes onset of labour within 24 hours
L2814	Premature rupture of membranes, labour delayed by therapy
L2815	Prem rupture of membranes onset of labour after 24 hours
L281z	Premature rupture of membranes NOS
L282.	Prolonged spontaneous or unspecified rupture of membranes
L2820	Prolonged spont/unspec rupture of membranes unspecified
L2821	Prolonged spont/unspec rupture of membranes - delivered
L2822	Prolonged spont/unspec rupture of membranes with a/n problem
L2823	Delay deliv after spontaneous or unsp rupture of membranes
L282z	Prolonged spontaneous/unspecified rupture of membranes NOS
L283.	Prolonged artificial rupture of membranes
L2830	Prolonged artificial rupture of membranes unspecified
L2831	Prolonged artificial rupture of membranes - delivered
L2832	Prolonged artificial rupture of membranes with a/n problem
L283z	Prolonged artificial rupture of membranes NOS
L284.	Amniotic cavity infection / Amnionitis / Chorioamnionitis / Membranitis / Placentitis
L2840	Amniotic cavity infection unspecified
L2841	Amniotic cavity infection - delivered
L2842	Amniotic cavity infection with antenatal problem
L284z	Amniotic cavity infection NOS
L28y.	Other problems of amniotic cavity and membranes / Amnion nodosum / Amniotic cyst / Amniotic fluid leaking
L28y0	Other problem of amniotic cavity and membranes unspecified
L28y1	Other problem of amniotic cavity and membranes - delivered
L28y2	Other amniotic/membrane problem with antenatal problem
L28y3	Ragged membranes
L28yz	Other problem of amniotic cavity and membranes NOS
L28z.	Amniotic cavity and membrane problems NOS
L28z0	Amniotic cavity and membrane problem NOS, unspecified
L28z1	Amniotic cavity and membrane problem NOS - delivered
L28z2	Amniotic cavity and membrane problem NOS with a/n problem
L28zz	Amniotic cavity and membrane problem NOS
L29..	Other problems affecting labour
L290.	Failed mechanical induction / Failed mechanical induction of labour
L2900	Failed mechanical induction unspecified
L2901	Failed mechanical induction - delivered
L2902	Failed mechanical induction with antenatal problem

L290z	Failed mechanical induction NOS
L291.	Failed medical or unspecified induction / Failed medical induction of labour
L2910	Failed medical or unspecified induction unspecified
L2911	Failed medical or unspecified induction - delivered
L2912	Failed medical or unspecified induction with a/n problem
L291z	Failed medical or unspecified induction NOS
L292.	Maternal pyrexia during labour, unspecified
L2920	Unspecified maternal pyrexia during labour, unspecified
L2921	Unspecified maternal pyrexia during labour - delivered
L2922	Unspecified maternal pyrexia during labour with a/n problem
L292z	Unspecified maternal pyrexia during labour NOS
L293.	Septicaemia during labour
L2930	Septicaemia during labour unspecified
L2931	Septicaemia during labour - delivered
L2932	Septicaemia during labour with antenatal problem
L293z	Septicaemia during labour NOS
L294.	Grand multiparity
L2940	Grand multiparity unspecified
L2941	Grand multiparity - delivered
L2942	Grand multiparity with antenatal problem
L294z	Grand multiparity NOS
L295.	Elderly primigravida
L2950	Elderly primigravida unspecified
L2951	Elderly primigravida - delivered
L2952	Elderly primigravida with antenatal problem
L295z	Elderly primigravida NOS
L296.	Vaginal delivery following previous caesarean section
L29y.	Other problems affecting labour
L29y0	Other problems affecting labour unspecified
L29y1	Other problems affecting labour - delivered
L29y2	Other problems affecting labour with antenatal problem
L29yz	Other problems affecting labour NOS
L29z.	Problems affecting labour NOS
L29z0	Problems affecting labour NOS unspecified
L29z1	Problems affecting labour NOS delivered
L29z2	Problems affecting labour NOS with antenatal problem
L29zz	Problems affecting labour NOS
L2A..	Abnormal findings on antenatal screening of mother
L2A0.	Abnormal haematologic find on antenatal screening of mother
L2A1.	Abnormal biochemical finding on antenatal screen of mother
L2A2.	Abnormal cytological finding on antenatal screen of mother
L2A3.	Abnormal ultrasonic finding on antenatal screening of mother
L2A4.	Abnormal radiological finding on antenatal screen of mother
L2A5.	Abnormal chromosomal and genet find/antenat screen of mother
L2AX.	Abnormal finding on antenatal screening of mother
L2B..	Low weight gain in pregnancy
L2C..	Malnutrition in pregnancy
L2D..	Retained intrauterine contraceptive device in pregnancy
L2y..	Other specified risk factors in pregnancy
L2z..	Risk factors in pregnancy NOS
L3...	Complications occurring during labour and delivery
L30..	Obstructed labour

L300.	Obstructed labour due to fetal malposition
L3000	Obstructed labour due to fetal malposition unspecified
L3001	Obstructed labour due to fetal malposition - delivered
L3002	Obstructed labour due to fetal malposition with a/n problem
L3003	Obstructed labour due to breech presentation
L3004	Obstructed labour due to face presentation
L3005	Obstructed labour due to brow presentation
L3006	Obstructed labour due to shoulder presentation
L3007	Obstructed labour due to compound presentation
L300z	Obstructed labour due to fetal malposition NOS
L301.	Obstructed labour caused by bony pelvis
L3010	Obstructed labour caused by bony pelvis unspecified
L3011	Obstructed labour caused by bony pelvis - delivered
L3012	Obstructed labour caused by bony pelvis with a/n problem
L3013	Obstructed labour due to deformed pelvis
L3014	Obstructed labour due to generally contracted pelvis
L3015	Obstructed labour due to pelvic inlet contraction
L3016	Obstruct labour due pelvic outlet and mid-cavity contract
L3017	Obstructed labour due abnormality of maternal pelv organs
L301z	Obstructed labour caused by bony pelvis NOS
L302.	Obstructed labour caused by pelvic soft tissues
L3020	Obstructed labour caused by pelvic soft tissues unspecified
L3021	Obstructed labour caused by pelvic soft tissues - delivered
L3022	Obstructed labour caused by pelvic soft tissues + a/n prob
L302z	Obstructed labour caused by pelvic soft tissues NOS
L303.	Deep transverse arrest (DTA)
L3030	Deep transverse arrest unspecified
L3031	Deep transverse arrest - delivered
L3032	Deep transverse arrest with antenatal problem
L303z	Deep transverse arrest NOS
L304.	Persistent occipitoposterior or occipitoanterior position
L3040	Persistent occipitopost/occipitoant position, unspecified
L3041	Persistent occipitopost/occipitoant position - delivered
L3042	Persistent occipitopost/occipitoant position + a/n problem
L304z	Persistent occipitoposterior/occipitoanterior position NOS
L305.	Shoulder dystocia / Impacted shoulders
L3050	Shoulder dystocia unspecified
L3051	Shoulder dystocia - delivered
L3052	Shoulder dystocia with antenatal problem
L305z	Shoulder dystocia NOS
L306.	Locked twins
L3060	Locked twins unspecified
L3061	Locked twins - delivered
L3062	Locked twins with antenatal problem
L306z	Locked twins NOS
L307.	Failed trial of labour unspecified
L3070	Other failed trial of labour unspecified
L3071	Other failed trial of labour - delivered
L3072	Other failed trial of labour with antenatal problem
L307z	Failed trial of labour NOS
L308.	Failed forceps unspecified
L3080	Other failed forceps, unspecified

L3081	Other failed forceps - delivered
L3082	Other failed forceps with antenatal problem
L308z	Failed forceps NOS
L309.	Failed ventouse extraction unspecified
L3090	Other failed ventouse extraction, unspecified
L3091	Other failed ventouse extraction - delivered
L3092	Other failed ventouse extraction with antenatal problem
L309z	Failed ventouse extraction NOS
L30A.	Obstructed labour due to unusually large fetus
L30y.	Other causes of obstructed labour
L30y0	Other causes of obstructed labour unspecified
L30y1	Other causes of obstructed labour - delivered
L30y2	Other causes of obstructed labour with antenatal problem
L30yz	Other causes of obstructed labour NOS
L30z.	Obstructed labour NOS
L30z0	Obstructed labour NOS, unspecified
L30z1	Obstructed labour NOS - delivered
L30z2	Obstructed labour NOS with antenatal problem
L30zz	Obstructed labour NOS / Dystocia NOS
L31..	Abnormal forces of labour
L310.	Primary uterine inertia
L3100	Primary uterine inertia unspecified
L3101	Primary uterine inertia - delivered
L3102	Primary uterine inertia with antenatal problem
L310z	Primary uterine inertia NOS
L311.	Secondary uterine inertia
L3110	Secondary uterine inertia unspecified
L3111	Secondary uterine inertia - delivered
L3112	Secondary uterine inertia with antenatal problem
L311z	Secondary uterine inertia NOS
L312.	Other uterine inertia / Atony of uterus / Poor contractions
L3120	Other uterine inertia unspecified
L3121	Other uterine inertia - delivered
L3122	Other uterine inertia with antenatal problem
L312z	Other uterine inertia NOS
L313.	Precipitate labour
L3130	Precipitate labour unspecified
L3131	Precipitate labour - delivered
L3132	Precipitate labour with antenatal problem
L313z	Precipitate labour NOS
L314.	Hypertonic uterine inertia / Bandl's retraction ring / Contraction ring (dystocia) / Hourglass uterine contraction / Incoordinate uterine action / Uterine dystocia NOS / Uterine or cervical spasm
L3140	Hypertonic uterine inertia unspecified
L3141	Hypertonic uterine inertia - delivered
L3142	Hypertonic uterine inertia with antenatal problem
L314z	Hypertonic uterine inertia NOS
L31z.	Abnormality of forces of labour NOS
L31z0	Abnormality of forces of labour NOS unspecified
L31z1	Abnormality of forces of labour NOS delivered
L31z2	Abnormality of forces of labour NOS with antenatal problem
L31zz	Abnormality of forces of labour NOS
L32..	Long labour

L320.	Prolonged first stage
L3200	Prolonged first stage unspecified
L3201	Prolonged first stage - delivered
L3202	Prolonged first stage with antenatal problem
L320z	Prolonged first stage NOS
L321.	Prolonged labour unspecified
L3210	Unspecified prolonged labour, unspecified
L3211	Unspecified prolonged labour - delivered
L3212	Unspecified prolonged labour with antenatal problem
L321z	Prolonged labour NOS
L322.	Prolonged second stage
L3220	Prolonged second stage unspecified
L3221	Prolonged second stage - delivered
L3222	Prolonged second stage with antenatal problem
L322z	Prolonged second stage NOS
L323.	Delayed delivery of second twin, triplet etc
L3230	Delayed delivery second twin unspecified
L3231	Delayed delivery second twin - delivered
L3232	Delayed delivery second twin with antenatal problem
L323z	Delayed delivery second twin etc NO
L32z.	Prolonged labour NOS
L33..	Umbilical cord complications
L330.	Prolapse of cord / Presentation of cord
L3300	Prolapse of cord unspecified
L3301	Prolapse of cord - delivered
L3302	Prolapse of cord with antenatal problem
L330z	Prolapse of cord NOS
L331.	Cord tight round neck
L3310	Cord tight round neck unspecified
L3311	Cord tight round neck - delivered
L3312	Cord tight round neck with antenatal problem
L331z	Cord tight round neck NOS
L332.	Cord tangled or knotted with compression / Knot in cord
L3320	Cord tangled with compression unspecified
L3321	Cord tangled with compression - delivered
L3322	Cord tangled with compression with antenatal problem
L332z	Cord tangled or knotted with compression NOS
L333.	Other cord entanglement
L3330	Other cord entanglement unspecified
L3331	Other cord entanglement - delivered
L3332	Other cord entanglement with antenatal problem
L333z	Other cord entanglement NOS
L334.	Short cord
L3340	Short cord unspecified
L3341	Short cord - delivered
L3342	Short cord with antenatal problem
L334z	Short cord NOS
L335.	Vasa praevia / Velamentous insertion of cord
L3350	Vasa praevia unspecified
L3351	Vasa praevia - delivered
L3352	Vasa praevia with antenatal problem
L335z	Vasa praevia NOS

L336.	Vascular lesions of cord / Bruising of cord
L3360	Vascular lesions of cord unspecified
L3361	Vascular lesions of cord - delivered
L3362	Vascular lesions of cord with antenatal problem
L336z	Vascular lesions of cord NOS
L33y.	Other umbilical cord complications
L33y0	Other umbilical cord complications unspecified
L33y1	Other umbilical cord complications - delivered
L33y2	Other umbilical cord complications with antenatal problem
L33yz	Other umbilical cord complications NOS
L33z.	Umbilical cord complications NOS
L33z0	Umbilical cord complications NOS, unspecified
L33z1	Umbilical cord complications NOS - delivered
L33z2	Umbilical cord complications NOS with antenatal problem
L33zz	Umbilical cord complications NOS
L34..	Trauma to perineum and vulva during delivery / Perineal tear / Vulval delivery trauma
L340.	First degree perineal tear during delivery / Fourchette tear / Hymen tear / Labial tear / Vaginal tear / Vulval tear
L3400	First degree perineal tear during delivery, unspecified
L3401	First degree perineal tear during delivery - delivered
L3402	First degree perineal tear during delivery with p/n problem
L3403	Labial tear during delivery
L3404	Fourchette tear during delivery
L3405	Vulval tear during delivery
L3406	Vaginal tear during delivery
L340z	First degree perineal tear during delivery NOS
L341.	Second degree perineal tear during delivery / Pelvic floor tear / Perineal muscle tear / Vaginal muscle tear
L3410	Second degree perineal tear during delivery, unspecified
L3411	Second degree perineal tear during delivery - delivered
L3412	Second degree perineal tear during delivery with p/n prob
L341z	Second degree perineal tear during delivery NOS
L342.	Third degree perineal tear during delivery / Anal sphincter tear
L3420	Third degree perineal tear during delivery, unspecified
L3421	Third degree perineal tear during delivery - delivered
L3422	Third degree perineal tear during delivery with p/n problem
L342z	Third degree perineal tear delivery NOS
L343.	Fourth degree perineal tear during delivery / Mucosal tear of anus or rectum
L3430	Fourth degree perineal tear during delivery, unspecified
L3431	Fourth degree perineal tear during delivery - delivered
L3432	Fourth degree perineal tear during delivery with p/n problem
L343z	Fourth degree perineal tear during delivery NOS
L344.	Unspecified perineal laceration during delivery
L3440	Unspecified perineal laceration during delivery unspecified
L3441	Unspecified perineal laceration during delivery - delivered
L3442	Unspecified perineal laceration during delivery + p/n prob
L344z	Unspecified perineal laceration during delivery NOS
L345.	Vulval and perineal haematoma during delivery / Perineal haematoma / Vulval and perineal haematoma during delivery
L3450	Vulval and perineal haematoma during delivery, unspecified
L3451	Vulval and perineal haematoma during delivery - delivered
L3452	Vulval and perineal haematoma during delivery + p/n problem

L345z	Vulval and perineal haematoma during delivery NOS
L34y.	Other vulval and perineal trauma during delivery
L34y0	Other vulval/perineal trauma during delivery, unspecified
L34y1	Other vulval/perineal trauma during delivery- delivered
L34y2	Other vulval/perineal trauma during delivery + p/n problem
L34yz	Other vulval/perineal trauma during delivery NOS
L34z.	Vulval/perineal trauma during delivery NOS
L34z0	Vulval/perineal trauma during delivery NOS unspec
L34z1	Vulval/perineal trauma during delivery NOS - delivered
L34z2	Vulval/perineal trauma during delivery NOS with p/n problem
L34zz	Vulval/perineal trauma during delivery NOS
L35..	Other obstetric trauma
L350.	Ruptured uterus before labour
L3500	Rupture of uterus before labour unspecified
L3501	Rupture of uterus before labour - delivered
L3502	Rupture of uterus before labour with antenatal problem
L350z	Rupture of uterus before labour NOS
L351.	Rupture of uterus during and after labour
L3510	Rupture of uterus during and after labour unspecified
L3511	Rupture of uterus during and after labour - delivered
L3512	Rupture of uterus during/after labour - deliv with p/n prob
L3513	Rupture of uterus during/after labour with postnatal problem
L351z	Rupture of uterus during and after labour NOS
L352.	Obstetric inversion of uterus / Inversion of uterus - obstetric
L3520	Obstetric inversion of uterus unspecified
L3521	Obstetric inversion of uterus - delivered with p/n problem
L3522	Obstetric inversion of uterus with postnatal problem
L352z	Obstetric inversion of uterus NOS
L353.	Obstetric laceration of cervix / Laceration of cervix - obstetric / Tear of cervix - obstetric
L3530	Obstetric laceration of cervix unspecified
L3531	Obstetric laceration of cervix - delivered
L3532	Obstetric laceration of cervix with postnatal problem
L353z	Obstetric laceration of cervix NOS
L354.	Obstetric high vaginal laceration / High vaginal laceration - obstetric / High vaginal tear - obstetric
L3540	Obstetric high vaginal laceration unspecified
L3541	Obstetric high vaginal laceration - delivered
L3542	Obstetric high vaginal laceration with postnatal problem
L354z	Obstetric high vaginal laceration NOS
L355.	Other obstetric pelvic organ damage / Bladder injury - obstetric / Urethra injury - obstetric
L3550	Other obstetric pelvic organ damage unspecified
L3551	Other obstetric pelvic organ damage - delivered
L3552	Other obstetric pelvic organ damage with postnatal problem
L355z	Other obstetric pelvic organ damage NOS
L356.	Obstetric trauma damaging pelvic joints and ligaments / Obstetric pelvic joint damage / Obstetric pelvic ligament damage / Pubic symphysis separation / Symphysis pubis separation
L3560	Obstetric damage to pelvic joints and ligaments unspecified
L3561	Obstetric damage to pelvic joints and ligaments - delivered
L3562	Obstetric damage to pelvic joints and ligaments + p/n prob
L356z	Obstetric damage to pelvic joints and ligaments NOS
L357.	Obstetric trauma causing pelvic haematoma
L3570	Obstetric pelvic haematoma unspecified
L3571	Obstetric pelvic haematoma - delivered

L3572	Obstetric pelvic haematoma - delivered with p/n problem
L3573	Obstetric pelvic haematoma with postnatal problem
L357z	Obstetric trauma causing pelvic haematoma NOS
L35y.	Other obstetric trauma OS
L35y0	Other obstetric trauma unspecified
L35y1	Other obstetric trauma - delivered
L35y2	Other obstetric trauma - delivered with postnatal problem
L35y3	Other obstetric trauma with antenatal problem
L35y4	Other obstetric trauma with postnatal problem
L35yz	Other obstetric trauma NOS
L35z0	Obstetric trauma NOS, unspecified
L35z1	Obstetric trauma NOS - delivered
L35z2	Obstetric trauma NOS - delivered with postnatal problem
L35z3	Obstetric trauma with antenatal NOS problem
L35z4	Obstetric trauma NOS with postnatal problem
L35zz	Obstetric trauma NOS
L36..	Postpartum haemorrhage (PPH) / Bleeding postpartum
L360.	Third-stage postpartum haemorrhage / Retained placenta NOS
L3600	Third-stage postpartum haemorrhage unspecified
L3601	Third-stage postpartum haemorrhage - deliv with p/n problem
L3602	Third-stage postpartum haemorrhage with postnatal problem
L360z	Third-stage postpartum haemorrhage NOS
L361.	Other immediate postpartum haemorrhage
L3610	Other immediate postpartum haemorrhage unspecified
L3611	Other immediate postpartum haemorrhage - deliv with p/n prob
L3612	Other immediate postpartum haemorrhage with postnatal prob
L361z	Other immediate postpartum haemorrhage NOS
L362.	Secondary and delayed postpartum haemorrhage
L3620	Secondary postpartum haemorrhage unspecified
L3621	Secondary postpartum haemorrhage - deliv with postnatal prob
L3622	Secondary postpartum haemorrhage with postnatal problem
L362z	Secondary and delayed postpartum haemorrhage NOS
L363.	Postpartum coagulation defects / Afibrinogenaemia - postpartum / Fibrinolysis - postpartum
L3630	Postpartum coagulation defects unspecified
L3631	Postpartum coagulation defects - delivered with p/n problem
L3632	Postpartum coagulation defects with postnatal problem
L363z	Postpartum coagulation defects NOS
L36z.	Postpartum haemorrhage NOS
L37..	Retained placenta or membranes with no haemorrhage / Retained membrane without haemorrhage / Retained placenta without haemorrhage
L370.	Retained placenta with no haemorrhage / Placenta accreta without haemorrhage
L3700	Retained placenta with no haemorrhage unspecified
L3701	Retained placenta with no haemorrhage - deliv with p/n prob
L3702	Retained placenta with no haemorrhage with postnatal problem
L370z	Retained placenta with no haemorrhage NOS / Retained placenta without haemorrhage
L371.	Retained portion of placenta or membranes - no haemorrhage
L3710	Retained products with no haemorrhage unspecified
L3711	Retained products with no haemorrhage - deliv with p/n prob
L3712	Retained products with no haemorrhage with postnatal problem
L371z	Retained products with no haemorrhage NOS
L37z.	Retained placenta or membranes with no haemorrhage NOS
L38..	Complications of anaesthesia during labour and delivery

L380.	Obstetric anaesthesia with pulmonary complications / Mendelson's syndrome
L3800	Obstetric anaesthesia with pulmonary complications unsp
L3801	Obstetric anaesthesia with pulmonary complications - deliv
L3802	Obstetric anaesthesia with pulmonary comp - deliv + p/n prob
L3803	Obstetric anaesthesia with pulmonary comp with a/n problem
L3804	Obstetric anaesthesia with pulmonary comp with p/n problem
L380z	Obstetric anaesthesia with pulmonary complications NOS
L381.	Obstetric anaesthesia with cardiac complications
L3810	Obstetric anaesthesia with cardiac complications unspecified
L3811	Obstetric anaesthesia with cardiac complications - delivered
L3812	Obstetric anaesthesia with cardiac comp - deliv + p/n prob
L3813	Obstetric anaesthesia with cardiac comp with antenatal prob
L3814	Obstetric anaesthesia with cardiac comp with postnatal prob
L381z	Obstetric anaesthesia with cardiac complications NOS
L382.	Obstetric anaesthesia with CNS complications
L382	Obstetric anaesthesia with CNS complications unspecified
L3821	Obstetric anaesthesia with CNS complications - delivered
L3822	Obstetric anaesthesia with CNS comp - deliv with p/n problem
L3823	Obstetric anaesthesia with CNS comp with antenatal problem
L3824	Obstetric anaesthesia with CNS comp with postnatal problem
L382z	Obstetric anaesthesia with CNS complication NOS
L383.	Obstetric toxic reaction to local anaesthesia
L3830	Toxic reaction to local anaesthesia during pregnancy
L3831	Toxic reaction to local anaesthesia during the puerperium
L384.	Obstetric spinal and epidural anaesthesia-induced headache
L3840	Spinal+epidural anaesthesia-inducd headache during pregnancy
L3841	Spinal/epidural anaesth-induced headache during puerp
L385.	Failed or difficult intubation during pregnancy
L386.	Toxic reaction to local anaesthesia during labour and deliv
L387.	Spinal/epidural anesth-induced headache dur labour/delivery
L388.	Cardiac comps of anaesthesia during labour and delivery
L389.	CNS comps of anaesthesia during labour and delivery
L38A.	Failed or difficult intubation during labour and delivery
L38B.	Failed or difficult intubation during the puerperium
L38X.	Complication of anaesthesia during labour and deliv unsp
L38y.	Other complications of obstetric anaesthesia
L38y0	Other complications of obstetric anaesthesia unspecified
L38y1	Other complications of obstetric anaesthesia - delivered
L38y2	Other complications of obstetric anaesthesia -del + p/n prob
L38y3	Other complications of obstetric anaesthesia + a/n problem
L38y4	Other complications of obstetric anaesthesia + p/n problem
L38yz	Other complications of obstetric anaesthesia NOS
L38z.	Obstetric anaesthetic complications NOS
L38z0	Obstetric anaesthetic complications NOS, unspecified
L38z1	Obstetric anaesthetic complications NOS - delivered
L38z2	Obstetric anaesthetic complications NOS - deliv + p/n prob
L38z3	Obstetric anaesthetic complications NOS with a/n problem
L38z4	Obstetric anaesthetic complications NOS with p/n problem
L38zz	Obstetric anaesthetic complications NOS
L39..	Other complications of labour and delivery NEC
L390.	Maternal distress
L3900	Maternal distress unspecified

L3901	Maternal distress - delivered
L3902	Maternal distress - delivered with postnatal problem
L3903	Maternal distress with antenatal problem
L3904	Maternal distress with postnatal problem
L390z	Maternal distress NOS
L391.	Obstetric shock
L3910	Obstetric shock unspecified
L3911	Obstetric shock - delivered
L3912	Obstetric shock - delivered with postnatal problem
L3913	Obstetric shock with antenatal problem
L3914	Obstetric shock with postnatal problem
L391z	Obstetric shock NOS
L392.	Maternal hypotension syndrome
L3920	Maternal hypotension syndrome unspecified
L3921	Maternal hypotension syndrome - delivered
L3922	Maternal hypotension syndrome - delivered with p/n problem
L3923	Maternal hypotension syndrome with antenatal problem
L3924	Maternal hypotension syndrome with postnatal problem
L392z	Maternal hypotension syndrome NOS
L393.	Acute renal failure following labour and delivery
L3930	Post-delivery acute renal failure unspecified
L3931	Post-delivery acute renal failure - delivered with p/n prob
L3932	Post-delivery acute renal failure with postnatal problem
L393z	Post-delivery acute renal failure NOS
L394.	Other complications of obstetric procedures
L3940	Other complications of obstetric procedures unspecified
L3941	Other complications of obstetric procedures - delivered
L3942	Other complications of obstetric procedures - del +p/n prob
L3943	Other complications of obstetric procedures with p/n problem
L3944	Infection of obstetric surgical wound
L3945	Haematoma of obstetric wound
L3946	Other complications of obstetric procedures NOS
L395.	Forceps delivery /Keilland's forceps delivery /Neville - Barnes forceps delivery /Simpson's forceps delivery
L3950	Forceps delivery unspecified
L3951	Forceps delivery - delivered
L3952	Low forceps delivery
L3953	Mid-cavity forceps delivery
L3954	Delivery by combination of forceps and vacuum extractor
L3955	Mid-cavity forceps with rotation
L395z	Forceps delivery NOS
L396.	Vacuum extractor delivery / Ventouse delivery
L3960	Vacuum extractor delivery unspecified
L3961	Vacuum extractor delivery - delivered
L396z	Vacuum extractor delivery NOS
L397.	Breech extraction
L3970	Breech extraction unspecified
L3971	Breech extraction - delivered
L397z	Breech extraction NOS
L398.	Caesarean delivery
L3980	Caesarean delivery unspecified
L3981	Caesarean delivery - delivered

L3982	Caesarean section - pregnancy at term
L3983	Delivery by elective caesarean section
L3984	Delivery by emergency caesarean section
L3985	Delivery by caesarean hysterectomy
L3986	Caesarean delivery following previous Caesarean delivery
L398z	Caesarean delivery NOS
L399.	Destructive operation for delivery
L39A.	Death obst cse occur more 42 day less than one yr aft deliv
L39B.	Death from sequelae of direct obstetric causes
L39X.	Obstetric death of unspecified cause
L39y.	Other complications of labour and delivery
L39y0	Other complications of labour and delivery unspecified
L39y1	Other complications of labour and delivery - delivered
L39y2	Other complications of labour and delivery - deliv +p/n prob
L39y3	Other complications of labour and delivery with a/n problem
L39y4	Other complications of labour and delivery with p/n problem / Postnatal vaginal discomfort / Vaginal discomfort postnatal
L39y5	Maternal exhaustion
L39yz	Other complications of labour and delivery NOS
L39z.	Complications of labour and delivery NOS
L39z0	Complications of labour and delivery NOS, unspecified
L39z1	Complications of labour and delivery NOS - delivered
L39z2	Complications of labour and delivery NOS - del + p/n problem
L39z3	Complications of labour and delivery NOS with antenatal prob
L39z4	Complications of labour and delivery NOS with p/n problem
L39zz	Complications of labour and delivery NOS
L3A..	Intrapartum haemorrhage with coagulation defect
L3X..	Intrapartum haemorrhage, unspecified
L3y..	Other specified complications of labour or delivery
L3z..	Complications of labour and delivery NOS
L4...	Complications of the puerperium
L40..	Major puerperal infection / Sepsis - puerperal
L400.	Puerperal endometritis
L4000	Puerperal endometritis unspecified
L4001	Puerperal endometritis - delivered with postnatal comp
L4002	Puerperal endometritis with postnatal complication
L400z	Puerperal endometritis NOS
L401.	Puerperal salpingitis
L4010	Puerperal salpingitis unspecified
L4011	Puerperal salpingitis - delivered with postnatal comp
L4012	Puerperal salpingitis with postnatal complication
L401z	Puerperal salpingitis NOS
L402.	Puerperal peritonitis
L4020	Puerperal peritonitis unspecified
L4021	Puerperal peritonitis - delivered with postnatal comp
L4022	Puerperal peritonitis with postnatal complication
L402z	Puerperal peritonitis NOS
L403.	Puerperal septicaemia
L4030	Puerperal septicaemia unspecified
L4031	Puerperal septicaemia - delivered with postnatal comp
L4032	Puerperal septicaemia with postnatal complication
L403z	Puerperal septicaemia NOS

L40z.	Major puerperal infection NOS
L40z0	Major puerperal infection NOS, unspecified
L40z1	Major puerperal infection NOS - delivered with p/n comp
L40z2	Major puerperal infection NOS with postnatal complication
L40zz	Major puerperal infection NOS
L41..	Venous complications of pregnancy and the puerperium / Varicose veins - obstetric
L410.	Varicose veins of legs in pregnancy and the puerperium
L4100	Varicose veins of legs in pregnancy/puerperium unspecified
L4101	Varicose veins of legs in pregnancy/puerperium - delivered
L4102	Varicose veins of legs in pregnancy/puerperium -del+p/n comp
L4103	Varicose veins of legs in pregnancy/puerperium + a/n comp
L4104	Varicose veins of legs in pregnancy/puerperium + p/n comp
L4105	Varicose veins of legs in pregnancy
L4106	Varicose veins of legs in the puerperium
L410z	Varicose veins of legs in pregnancy and puerperium NOS
L411.	VV's of perineum/vulva in pregnancy/puerperium / Perineal obstetric varicose veins / Vulval obstetric varicose veins
L4110	VV's of perineum/vulva in pregnancy/puerperium unspecified
L4111	VV's of perineum/vulva in pregnancy/puerperium - delivered
L4112	VV's of perineum/vulva in pregnancy/puerperium -del+p/n comp
L4113	VV's of perineum/vulva in pregnancy/puerperium + a/n comp
L4114	VV's of perineum/vulva in pregnancy/puerperium + p/n comp
L4115	Genital varices in pregnancy / Perineal varices in pregnancy / Vaginal varices in pregnancy / Vulval varices in pregnancy
L4116	Genital varices in the puerperium / Perineal varices in the puerperium / Vaginal varices in the puerperium / Vulval varices in the puerperium
L411z	Varicose veins of perineum/vulva in pregnancy/puerperium NOS
L412.	Superficial thrombophlebitis in pregnancy and the puerperium
L4120	Superficial thrombophlebitis in pregnancy/puerperium unsp
L4121	Superficial thrombophlebitis in pregnancy/puerperium -deliv
L4122	Superficial thrombophleb in preg/puerperium - del + p/n comp / Phlebitis - postpartum / Puerperal phlebitis
L4123	Superficial thrombophlebitis in preg/puerperium + a/n comp
L4124	Superficial thrombophlebitis in preg/puerperium + p/n comp
L4125	Superficial thrombophlebitis in pregnancy / Thrombophlebitis of legs in pregnancy
L4126	Superficial thrombophlebitis in the puerperium / Thombophlebitis of legs in the puerperium
L412z	Superficial thrombophlebitis in pregnancy and puerperium NOS
L413.	Antenatal deep vein thrombosis / DVT - deep venous thrombosis, antenatal
L4130	Antenatal deep vein thrombosis unspecified
L4131	Antenatal deep vein thrombosis delivered
L4132	Antenatal deep vein thrombosis with antenatal complication
L413z	Antenatal deep vein thrombosis NOS
L414.	Postnatal deep vein thrombosis / DVT - deep venous thrombosis, postnatal / Phlegmasia alba dolens - obstetric
L4140	Postnatal deep vein thrombosis unspecified
L4141	Postnatal deep vein thrombosis - delivered with p/n comp
L4142	Postnatal deep vein thrombosis with postnatal complication
L414z	Postnatal deep vein thrombosis NOS
L415.	Other phlebitis and thrombosis in pregnancy and puerperium
L4150	Other phlebitis/thrombosis in pregnancy/puerperium unsp
L4151	Other phlebitis/thrombosis in pregnancy/puerperium - deliv
L4152	Other phlebitis/thrombosis in preg/puerperium -del +p/n comp

L4153	Other phlebitis/thrombosis in preg/puerperium + a/n comp
L4154	Other phlebitis/thrombosis in preg/puerperium + p/n comp
L4155	Other phlebitis in pregnancy
L4156	Other phlebitis in the puerperium
L415z	Other phlebitis/thrombosis in pregnancy and puerperium NOS
L416.	Haemorrhoids in pregnancy and the puerperium / Piles - obstetric
L4160	Haemorrhoids in pregnancy and the puerperium unspecified
L4161	Haemorrhoids in pregnancy and the puerperium - delivered
L4162	Haemorrhoids in pregnancy and puerperium - deliv + p/n comp
L4163	Haemorrhoids in pregnancy and puerperium with a/n comp
L4164	Haemorrhoids in pregnancy and puerperium with p/n comp
L4165	Haemorrhoids in the puerperium
L4166	Haemorrhoids in pregnancy
L416z	Haemorrhoids in pregnancy and the puerperium NOS
L417.	Obstetric cerebral venous thrombosis
L4170	Cerebral venous thrombosis in pregnancy
L4171	Cerebral venous thrombosis in the puerperium
L41y.	Other venous complication of pregnancy and the puerperium
L41y0	Other venous complication of pregnancy/puerperium unsp
L41y1	Other venous complication of pregnancy/puerperium - delivered
L41y2	Other venous comp of pregnancy/puerperium - deliv + p/n comp
L41y3	Other venous comp of pregnancy/puerperium + a/n comp
L41y4	Other venous comp of pregnancy/puerperium + p/n comp
L41yz	Other venous complication of pregnancy and puerperium NOS
L41z.	Venous complications of pregnancy and puerperium NOS
L41z0	Venous complication pregnancy/puerperium NOS unspecified
L41z1	Venous complication pregnancy and puerperium NOS - delivered
L41z2	Venous complication pregnancy/puerperium NOS - del +p/n comp
L41z3	Venous complication pregnancy/puerperium NOS + a/n comp
L41z4	Venous complication pregnancy/puerperium NOS + p/n comp
L41z5	Venous complication of pregnancy, unspecified / Gestational phlebitis NOS / Gestational phlebopathy NOS / Gestational thrombosis NOS
L41z6	Venous complication in the puerperium, unspecified / Puerperal phlebitis NOS / Puerperal phlebopathy NOS / Puerperal thrombosis NOS
L41zz	Venous complication of pregnancy and puerperium NOS
L42..	Puerperal pyrexia of unknown origin
L420.	Puerperal pyrexia of unknown origin
L4200	Puerperal pyrexia of unknown origin unspecified
L4201	Puerperal pyrexia of unknown origin delivered + p/n comp
L4202	Puerperal pyrexia of unknown origin with p/n complication
L420z	Puerperal pyrexia NOS
L42z.	Puerperal pyrexia NOS
L43..	Obstetric pulmonary embolism / Obstetric pulmonary embolus
L430.	Obstetric air pulmonary embolism
L4300	Obstetric air pulmonary embolism unspecified
L4301	Obstetric air pulmonary embolism - delivered
L4302	Obstetric air pulm embolism - delivered + p/n complication
L4303	Obstetric air pulmonary embolism with a/n complication
L4304	Obstetric air pulmonary embolism with p/n complication
L430z	Obstetric air pulmonary embolism NOS
L431.	Amniotic fluid pulmonary embolism
L4310	Amniotic fluid pulmonary embolism unspecified

L4311	Amniotic fluid pulmonary embolism delivered
L4312	Amniotic fluid pulm embolism - delivered + p/n complication
L4313	Amniotic fluid pulmonary embolism with a/n complication
L4314	Amniotic fluid pulmonary embolism with p/n complication
L431z	Amniotic fluid pulmonary embolism NOS
L432.	Obstetric blood-clot pulmonary embolism
L4320	Obstetric blood-clot pulmonary embolism unspecified
L4321	Obstetric blood-clot pulmonary embolism - delivered
L4322	Obstetric blood-clot pulm embolism - delivered with p/n comp
L4323	Obstetric blood-clot pulmonary embolism + a/n complication
L4324	Obstetric blood-clot pulmonary embolism + p/n complication
L432z	Obstetric blood-clot pulmonary embolism NOS
L433.	Obstetric pyaemic and septic pulmonary embolism / Pyaemic obstetric embolism / Septic obstetric embolism
L4330	Obstetric pyaemic and septic pulmonary embolism unspecified
L4331	Obstetric pyaemic and septic pulmonary embolism - delivered
L4332	Obstetric pyaemic and septic pulm embolism - deliv +p/n comp
L4333	Obstetric pyaemic and septic pulm embolism + a/n comp
L4334	Obstetric pyaemic and septic pulm embolism + p/n comp
L433z	Obstetric pyaemic and septic pulmonary embolism NOS
L43y.	Other obstetric pulmonary embolism / Fat embolism - obstetric
L43y0	Other obstetric pulmonary embolism unspecified
L43y1	Other obstetric pulmonary embolism - delivered
L43y2	Other obstetric pulmonary embolism - delivered + p/n comp
L43y3	Other obstetric pulmonary embolism with antenatal comp
L43y4	Other obstetric pulmonary embolism with postnatal comp
L43yz	Other obstetric pulmonary embolism NOS
L43z.	Obstetric pulmonary embolism NOS
L43z0	Obstetric pulmonary embolism NOS, unspecified
L43z1	Obstetric pulmonary embolism NOS - delivered
L43z2	Obstetric pulmonary embolism NOS - delivered with p/n comp
L43z3	Obstetric pulmonary embolism NOS with antenatal complication
L43z4	Obstetric pulmonary embolism NOS with postnatal complication
L43zz	Obstetric pulmonary embolism NOS
L44..	Other complications of the puerperium NEC
L440.	Cerebrovascular disorders in the puerperium / CVA - cerebrovascular accident in the puerperium / Stroke in the puerperium
L4400	Puerperal cerebrovascular disorder unspecified
L4401	Puerperal cerebrovascular disorder - delivered
L4402	Puerperal cerebrovascular disorder - delivered with p/n comp
L4403	Puerperal cerebrovascular disorder with antenatal comp
L4404	Puerperal cerebrovascular disorder with postnatal comp
L440z	Puerperal cerebrovascular disorder NOS
L441.	Caesarean wound disruption
L4410	Caesarean wound disruption unspecified
L4411	Caesarean wound disruption - delivered with p/n complication
L4412	Caesarean wound disruption with postnatal complication
L441z	Caesarean wound disruption NOS
L442.	Obstetric perineal wound disruption / Breakdown of perineum / Episiotomy breakdown
L4420	Obstetric perineal wound disruption unspecified
L4421	Obstetric perineal wound disruption deliv + p/n comp
L4422	Obstetric perineal wound disruption with p/n complication

L442z	Obstetric perineal wound disruption NOS
L443.	Other complication of obstetric surgical wound / Haematoma - perineal wound / Infection - perineal wound
L4430	Other complication of obstetric surgical wound unspecified
L4431	Other complication obstetric surg wound -delivered +p/n comp
L4432	Other complication obstetric surgical wound with p/n comp
L443z	Other complication of obstetric surgical wound NOS
L444.	Placental polyp
L4440	Placental polyp unspecified
L4441	Placental polyp - delivered with postnatal complication
L4442	Placental polyp with postnatal complication
L444z	Placental polyp NOS
L44y.	Other complications of the puerperium / Subinvolution of uterus in the puerperium
L44y0	Other complications of the puerperium unspecified
L44y1	Other complications of the puerperium - delivered + p/n comp
L44y2	Other complications of the puerperium with p/n complication
L44yz	Other complications of the puerperium NOS / Blood dyscrasia puerperal
L44z.	Complications of the puerperium NOS
L44z0	Complications of the puerperium NOS, unspecified
L44z1	Complications of the puerperium NOS - delivered + p/n comp
L44z2	Complications of the puerperium NOS with postnatal comp
L44zz	Complications of the puerperium NOS
L45..	Obstetric breast infections
L450.	Obstetric nipple infection / Abscess of nipple - obstetric / Nipple infection - obstetric
L4500	Obstetric nipple infection unspecified
L4501	Obstetric nipple infection - delivered
L4502	Obstetric nipple infection - delivered with p/n complication
L4503	Obstetric nipple infection with antenatal complication
L4504	Obstetric nipple infection with postnatal complication
L450z	Obstetric nipple infection NOS
L451.	Obstetric breast abscess / Purulent mastitis - obstetric
L4510	Obstetric breast abscess unspecified
L4511	Obstetric breast abscess - delivered
L4512	Obstetric breast abscess - deliv with postnatal complication
L4513	Obstetric breast abscess with antenatal complication
L4514	Obstetric breast abscess with postnatal complication
L451z	Obstetric breast abscess NOS
L452.	Obstetric nonpurulent mastitis / Lymphangitis of breast - obstetric
L4520	Obstetric nonpurulent mastitis unspecified
L4521	Obstetric nonpurulent mastitis - delivered
L4522	Obstetric nonpurulent mastitis - deliv with p/n complication
L4523	Obstetric nonpurulent mastitis with antenatal complication
L4524	Obstetric nonpurulent mastitis with postnatal complication
L452z	Obstetric nonpurulent mastitis NOS
L45y.	Other obstetric breast infections
L45y0	Other obstetric breast infection unspecified
L45y1	Other obstetric breast infection - delivered
L45y2	Other obstetric breast infection - deliv with p/n comp
L45y3	Other obstetric breast infection with antenatal complication
L45y4	Other obstetric breast infection with postnatal complication
L45yz	Other obstetric breast infection NOS
L45z.	Obstetric breast infection NOS

L45z0	Obstetric breast infection NOS, unspecified
L45z1	Obstetric breast infection NOS - delivered
L45z2	Obstetric breast infection NOS - deliv with p/n complication
L45z3	Obstetric breast infection NOS with antenatal complication
L45z4	Obstetric breast infection NOS with postnatal complication
L45zz	Obstetric breast infection NOS
L46..	Obstetric breast and lactation disorders NOS / Lactation problems
L460.	Retracted nipple in pregnancy, the puerperium or lactation
L4600	Retracted nipple in pregnancy/puerperium/lactation unspec
L4601	Retracted nipple in pregnancy/puerperium/lactation - deliv
L4602	Retracted nipple in pregnancy/puerp/lact - deliv + p/n comp
L4603	Retracted nipple in pregnancy/puerperium/lact with a/n comp
L4604	Retracted nipple in pregnancy/puerperium/lact with p/n comp
L460z	Retracted nipple in pregnancy/puerperium/lactation NOS
L461.	Cracked nipple in pregnancy, the puerperium or lactation / Fissure of nipple
L4610	Cracked nipple in pregnancy/puerperium/lactation unspecified
L4611	Cracked nipple in pregnancy/puerperium/lactation - delivered
L4612	Cracked nipple in pregnancy/puerp/lact - deliv + p/n comp
L4613	Cracked nipple in pregnancy/puerperium/lactation + a/n comp
L4614	Cracked nipple in pregnancy/puerperium/lactation + p/n comp
L461z	Cracked nipple in pregnancy, the puerperium or lactation NOS
L462.	Breast engorgement in pregnancy, the puerperium or lactation
L4620	Breast engorgement in pregnancy/puerperium/lactation unspec
L4621	Breast engorgement in pregnancy/puerperium/lactation - deliv
L4622	Breast engorgement in pregnancy/puerp/lact - del + p/n comp
L4623	Breast engorgement in pregnancy/puerperium/lact + a/n comp
L4624	Breast engorgement in pregnancy/puerperium/lact + p/n comp
L462z	Breast engorgement in pregnancy/puerperium/lactation NOS / Breast engorgement
L463.	Other breast disorder in pregnancy/puerperium/lactation
L4630	Other breast disorder in pregnancy/puerperium/lact unspec
L4631	Other breast disorder in pregnancy/puerperium/lact - deliv
L4632	Other breast disorder in pregnancy/puerperium/lact +p/n comp
L4633	Other breast disorder in pregnancy/puerperium/lact +a/n comp
L4634	Other breast disorder in pregnancy/puerperium/lact +p/n comp
L4635	Pain on breast feeding
L463z	Other breast disorder in pregnancy/puerperium/lactation NOS
L464.	Failure of lactation / Agalactia
L4640	Failure of lactation unspecified
L4641	Failure of lactation - delivered
L4642	Failure of lactation - delivered with postnatal complication
L4643	Failure of lactation with antenatal complication
L4644	Failure of lactation with postnatal complication
L464z	Failure of lactation NOS
L465.	Suppressed lactation
L4650	Suppressed lactation unspecified
L4651	Suppressed lactation - delivered
L4652	Suppressed lactation - delivered with postnatal complication
L4653	Suppressed lactation with antenatal complication
L4654	Suppressed lactation with postnatal complication
L465z	Suppressed lactation NOS
L466.	Galactorrhoea in pregnancy and the puerperium
L4660	Galactorrhoea in pregnancy and the puerperium unspecified

L4661	Galactorrhoea in pregnancy and the puerperium - delivered
L4662	Galactorrhoea in pregnancy/puerperium - deliv with p/n comp
L4663	Galactorrhoea in pregnancy/puerperium with a/n complication
L4664	Galactorrhoea in pregnancy/puerperium with p/n complication
L466z	Galactorrhoea in pregnancy and the puerperium NOS
L467.	Hypogalactia
L46y.	Other disorders of lactation / Galactocele - obstetric
L46y0	Other disorder of lactation unspecified
L46y1	Other disorder of lactation - delivered
L46y2	Other disorder of lactation - delivered with p/n comp
L46y3	Other disorder of lactation with antenatal complication
L46y4	Other disorder of lactation with postnatal complication
L46yz	Other disorder of lactation NOS
L46z.	Disorders of lactation NOS
L46z0	Disorder of lactation NOS, unspecified
L46z1	Disorder of lactation NOS - delivered
L46z2	Disorder of lactation NOS - delivered with p/n complication
L46z3	Disorder of lactation NOS with antenatal complication
L46z4	Disorder of lactation NOS with postnatal complication
L46zz	Disorder of lactation NOS
L4y..	Other specified complications of the puerperium
L4z..	Complications of the puerperium NOS
L5...	Maternal care for fetus
L50..	Maternal care for compound presentation
L51..	Maternal care for other known or suspected fetal problems
L510.	Maternal care for hydrops fetalis
L511.	Maternal care for viable fetus in abdominal pregnancy
L512.	Maternal care for diminished fetal movements
L514.	Maternal care for poor fetal growth
L51X.	Maternal care/known or suspected fetal problem,unspecifd
Ly...	Complications of pregnancy,childbirth or the puerperium OS
Ly0..	Spontaneous vertex delivery
Ly1..	Spontaneous breech delivery
Lyu..	[X]Additional preg,cldbirth+puerperium diseas clssfctn terms
Lyu0.	[X]Pregnancy with abortive outcome
Lyu00	[X]Other ectopic pregnancy
Lyu01	[X]Other specified abnormal products of conception
Lyu02	[X]Other abortion
Lyu03	[X]Failed medical abortion,wth other+unspcfied complications
Lyu04	[X]Oth+unspcf failed inducd abort,complct gen tract+pelv inf
Lyu05	[X]Oth+unspc fail induc abortn,complict/delay/exces h'morrhg
Lyu06	[X]Other+unspcf failed induced abortion,complicated/embolism
Lyu07	[X]Oth+unspcf failed inducd abortn,wth oth+unspcf complicatn
Lyu08	[X]Other+unspcf failed induced abortion,without complication
Lyu09	[X]Oth venous complicatns follow abortn+ectopic+molr pregncy
Lyu0A	[X]Other complications follow abortn+ectopic+molar pregnancy
Lyu0B	[X]Complic following abortion & ectopic & molar preg, unspec
Lyu1.	[X]Oedema,proteinuria+hypertens in pregnancy,childbrth,puerp
Lyu2.	[X]Other maternal disorders predominant related to pregnancy
Lyu20	[X]Other haemorrhage in early pregnancy
Lyu21	[X]Other vomiting complicating pregnancy
Lyu22	[X]Other venous complications in pregnancy

Lyu23	[X]Infections of other parts of urinary tract in pregnancy
Lyu24	[X]Other+unspcf genitourinary tract infection in pregnancy
Lyu25	[X]Other specified pregnancy-related conditions
Lyu26	[X]Other abnormal findings on antenatal screening of mother
Lyu27	[X]Oth complicatns/spinal+epidural anaesthsia during pregncy
Lyu28	[X]Other complications of anaesthesia during pregnancy
Lyu29	[X]Pre-existing diabetes mellitus, unspecified
Lyu2A	[X]Abnormal finding on antenatal screening of mother
Lyu3.	[X]Maternal care relat to fetus+amniotic cavity+deliv prob
Lyu30	[X]Other multiple gestation
Lyu31	[X]Other complications specific to multiple gestation
Lyu32	[X]Maternal care for other malpresentation of fetus
Lyu33	[X]Maternal care for other abnormalities of cervix
Lyu34	[X]Maternal care for other abnormalities of gravid uterus
Lyu35	[X]Maternal care for other abnormalities of pelvic organs
Lyu36	[X]Maternal care/(suspected)damage/fetus/oth medicl procedur
Lyu37	[X]Maternal care/other(suspected)fetal abnormality+damage
Lyu38	[X]Maternal care for other isoimmunization
Lyu39	[X]Maternal care/oth spcf known or suspected fetal problems
Lyu3A	[X]Maternal care/known or suspected fetal problem,unspecifd
Lyu3B	[X]Other disorders of amniotic fluid and membranes
Lyu3C	[X]Other placental disorders
Lyu3D	[X]Other premature separation of placenta
Lyu3E	[X]Other antepartum haemorrhage
Lyu4.	[X]Complications of labour and delivery
Lyu40	[X]Other failed induction of labour
Lyu41	[X]Other uterine inertia
Lyu42	[X]Other abnormalities of forces of labour
Lyu43	[X]Obstructed labour due/other malposition+malpresentation
Lyu44	[X]Obstructd labour due to oth maternal pelvic abnormalities
Lyu45	[X]Obstructed labour due to other abnormalities of fetus
Lyu46	[X]Other specified obstructed labour
Lyu47	[X]Other intrapartum haemorrhage
Lyu48	[X]Labour+delivery complicat/oth evidence of fetal distress
Lyu49	[X]Labour+delivery complicated by other cord entanglement
Lyu4A	[X]Labour+delivery complicated by other cord complications
Lyu4B	[X]Other obstetric injury to pelvic organs
Lyu4C	[X]Other specified obstetric trauma
Lyu4D	[X]Other immediate postpartum haemorrhage
Lyu4E	[X]Oth pulmonary complicatns/anaesthesia during lab+delivery
Lyu4F	[X]Oth complicatn/spinl+epidur anaesths during lab+delivery
Lyu4G	[X]Other complications of anaesthesia during labour+delivery
Lyu4H	[X]Other infection during labour
Lyu4J	[X]Other complications of obstetric surgery and procedures
Lyu4K	[X]Other specified complications of labour and delivery
Lyu4L	[X]Obstructed labour due to fetopelv disproportion, unspec
Lyu4M	[X]Intrapartum haemorrhage, unspecified
Lyu4N	[X]Labour & delivery complicated by fetal stress, unspecif
Lyu4P	[X]Complication of anaesthesia during labour and deliv unsp
Lyu5.	[X]Delivery
Lyu50	[X]Other single spontaneous delivery
Lyu51	[X]Other and unspecified forceps delivery

Lyu52	[X]Other single delivery by caesarean section
Lyu53	[X]Other assisted breech delivery
Lyu54	[X]Other manipulation-assisted delivery
Lyu55	[X]Other specified assisted single delivery
Lyu56	[X]Other multiple delivery
Lyu57	[X]Assisted single delivery, unspecified
Lyu58	X]Multiple delivery, unspecified
Lyu6.	[X]Complications predominantly related to the puerperium
Lyu60	[X]Other infection of genital tract following delivery
Lyu61	[X]Other genitourinary tract infections following delivery
Lyu62	[X]Other specified puerperal infection
Lyu63	[X]Other venous complications in the puerperium
Lyu64	[X]Other obstetric embolism
Lyu65	[X]Oth complicatn/spinal+epidural anaesthes during puerperum
Lyu66	[X]Other complications of anaesthesia during the puerperium
Lyu67	[X]Other specified puerperal complications
Lyu68	[X]Other+unspcf disorders/breast associated with childbirth
Lyu69	[X]Other and unspecified disorders of lactation
Lyu6A	[X]Infection of caesarean section wound following delivery
Lyu6B	[X]Vaginitis following delivery
Lyu6C	[X]Cervicitis following delivery
Lyu7.	[X]Other obstetric conditions, not elsewhere classified
Lyu70	[X]Oth infctns wth predomin sexual mode/transmissn complicat
Lyu71	[X]Other viral diseases complicating preg,cldbirth+puerperum
Lyu72	[X]Oth infects+parasitc dis complicat preg,cldbrth+puerperum
Lyu73	[X]Oth d/bld+bld-form org+c d inv im mch cm preg,cldbir+puer
Lyu74	[X]Oth spcf dis+conditns complicat preg,childbirth+puerperum
Lyu75	[X]Obstetric death of unspecified cause
Lz...	Complications of pregnancy,childbirth and the puerperium NOS
Z2...	Pregnancy, childbirth and puerperium observations
Z21..	Care relating to reproduction and pregnancy / OBSTETRIC CARE REGIME
Z211.	Preconception care
Z212.	Antenatal care / Pregnancy care / Maternity care / MATERNAL CARE
Z2121	Delivery place planned
Z2122	Home delivery planned
Z2123	Delivery place booked
Z213.	Care of mother in labour
Z214.	Care of episiotomy
Z22..	Pregnancy observations
Z221.	Primigravida / Primip / FIRST TIME MOTHER
Z222.	Multigravida / Multip
Z223.	Primiparous
Z224.	Multiparous
Z225.	Normal pregnancy
Z226.	Pregnancy problem
Z227.	Confirmation of pregnancy
Z229.	Observation of position of pregnancy
Z2291	Intrauterine pregnancy
Z22A.	Observation of pattern of pregnancy
Z22A1	Low risk pregnancy
Z22A2	High risk pregnancy / HRP - High risk pregnancy
Z22A3	Concealed pregnancy

Z22A4	Early stage of pregnancy
Z22A5	Biochemical pregnancy
Z22A6	Teenage pregnancy
Z22A7	Surrogate pregnancy
Z22A8	Undiagnosed pregnancy
Z22A9	Unwanted pregnancy / Unwanted child
Z22AA	Wanted pregnancy
Z22AB	Unplanned pregnancy / Accidental pregnancy
Z22AC	Pregnancy with uncertain dates
Z22AD	Presentation of pregnancy / Reported conception - pregnancy
Z22AE	Baby overdue
Z22B.	Observation of quantity of pregnancy
Z22B1	Single pregnancy
Z22B2	Dizygotic twins / DZ - Dizygotic twins / Binovular twins / Fraternal twins
Z22B3	Monozygotic twins / Monovular twins / Uniovular twins / Identical twins
Z22B4	Undiagnosed twin
Z22B5	Quintuplet pregnancy
Z22B6	Sextuplet pregnancy
Z22B7	Septulet pregnancy
Z22B8	Undiagnosed multiple pregnancy
Z22B9	Continuing pregnancy after abortion of sibling fetus
Z22BA	Contin pregnancy after intrauterine death of sibling fetus
Z22C.	Observation of measures of pregnancy
Z22C1	Estimated date of delivery from last period
Z22C2	Estimated date of delivery from last normal period
Z22C3	Length of gestation / Pregnancy duration / Duration of gestation / Duration of pregnancy / Weeks pregnant
Z22C4	Duration of pregnancy at time of previous miscarriage
Z22C5	Estimated date of conception / EDC - Estimated date of conception
Z22C6	Number of previous pregnancies
Z22C7	Number of live deliveries
Z22C8	Number of lost pregnancies
Z22C9	Number of caesarean sections
Z22CA	Number of stillbirths
Z22CB	Number of miscarriages / Number of spontaneous abortions
Z22CC	Number of fetal deaths
Z22CD	Number of abortions
Z22CE	Number of induced abortions
Z22CF	Date symptom of pregnancy first noted
Z22D.	Observation of viability of pregnancy
Z22D1	Viable pregnancy
Z22D2	Non-viable pregnancy
Z22D3	Uncertain viability of pregnancy / Query viability of pregnancy
Z24..	Labour observations
Z241.	Labour established
Z2411	Onset of labour induced
Z242.	Labour not established
Z243.	Observation of first stage of labour
Z2431	First stage of labour established
Z2432	First stage of labour not established
Z2433	Progress of labour - first stage
Z2434	Rapid first stage of labour / Rapid progress in first stage of labour

Z2435	Normal length of first stage of labour
Z2436	Slow progress in first stage of labour
Z2437	Normal first stage of labour
Z2438	First stage of labour problem
Z244.	Observation of pattern of labour
Z2441	Observation of duration of labour
Z2442	Long duration of labour
Z2443	Short duration of labour
Z2444	Late onset of labour / Postmature labour
Z2445	Relation of onset of labour to due date
Z245.	Observation of blood loss in labour
Z2451	Maternal blood loss minimal
Z2452	Maternal blood loss within normal limits
Z2453	Maternal blood loss moderate
Z2454	Maternal blood loss heavy
Z246.	Observation of measures of labour
Z2461	Duration of labour / Length of labour
Z2462	Onset of labour first stage / Start of labour
Z2463	Onset of contractions / Onset of labour pains / Time painful contractions first detected
Z2464	Time contractions became regular
Z2465	Time vaginal show detected
Z2466	Time rupture of membranes detected / Time waters ruptured
Z2467	Onset of second stage of labour
Z2468	Onset of pushing / Time of onset of pushing
Z2469	Duration of second stage of labour
Z246A	Total duration of labour
Z246B	Estimated maternal blood loss / EBL - Estimated maternal blood loss
Z247.	Device-associated observation of labour
Z2471	Expulsion of IUCD during third stage of labour
Z248.	Normal labour
Z249.	Labour problem
Z25..	Delivery observations
Z251.	Mother delivered
Z252.	Mother not delivered
Z253.	Observation of speed of delivery / Speed of delivery / Rate of delivery
Z2531	Slow rate of delivery
Z2532	Rapid rate of delivery / Precipitate delivery
Z2533	Normal rate of delivery
Z254.	Observation of pattern of delivery
Z2541	Deliveries by forceps - delivered
Z2542	Delivered by low forceps delivery
Z2543	Delivered by mid-cavity forceps delivery
Z2544	Deliveries by breech extraction
Z2545	Delivered by caesarean section - pregnancy at term
Z2546	Deliv caes following prev caes
Z2547	Deliveries by vacuum extractor
Z2548	Deliveries by spontaneous breech delivery
Z2549	Vaginal delivery
Z254A	Abnormal delivery
Z254B	Brow delivery
Z254C	Face delivery
Z254D	Face to pubes birth

Z254E	Multiple birth / Multiple birth delivery
Z255.	Observation of second stage of labour
Z2551	Second stage of labour established
Z2552	Second stage of labour not established
Z2553	Progess of second stage of labour / Progess of delivery
Z2554	Rapid second stage of labour
Z2555	Progressing well in second stage
Z2556	Normal length of second stage of labour
Z2557	Failure to progress in second stage of labour / No progress with delivery / No progress in second stage of labour
Z2558	Second stage of labour problem
Z2559	Normal second stage of labour
Z255A	Observation of delivery push in labour
Z255B	Desire to push / Wants to push in labour
Z255C	No desire to push in labour
Z255D	Ability to push in labour / Observation of ability to push in labour
Z255E	Pushing effectively in labour / Pushing well in labour
Z255F	Not pushing well in labour / Not pushing effectively
Z255G	Urge to push in labour
Z255H	Reluctant to push in labour
Z255I	Pushing voluntarily in labour
Z255J	Pushing involuntarily in labour
Z256.	Observation of third stage of labour
Z2561	Normal length of third stage of labour
Z2562	Prolonged third stage of labour
Z2563	Speed of delivery of placenta / Rate of delivery of placenta
Z2564	Rapid expulsion of placenta
Z2565	Delayed expulsion of placenta
Z2566	Normal rate of expulsion of placenta
Z257.	Delivery normal / Normal delivery / Spontaneous vaginal delivery / SVD - Spontaneous vaginal delivery / FTND - Full term normal delivery / ND - Normal delivery
Z2571	Spontaneous vertex delivery
Z258.	Delivery problem
Z26..	Observation of structures of conception
Z261.	Observation of gestational sac
Z2611	Gestational sac present
Z2612	Gestational sac absent
Z262.	Placental observation / Placental details
Z2621	Size of placenta / Observation of size of placenta
Z2622	Large placenta
Z2623	Small placenta
Z2624	Placenta normal size
Z2625	Observation of completeness of placenta
Z2626	Complete placenta at delivery
Z2627	Incomplete placenta at delivery / Incomplete delivery of placenta
Z2628	Observation of form of placenta
Z2629	Observation of consistency of placenta / Consistency of placenta / Appearance of placenta
Z262A	Placenta gritty
Z262B	Lesion of placenta
Z262C	Retroplacental clot
Z262D	Fresh retroplacental clot
Z262E	Old retroplacental clot / Stale retroplacental clot

Z262F	Volume of retroplacental clot
Z262F	Placenta oedematous
Z262G	Diameter of retroplacental clot
Z262H	Placenta calcified
Z262I	Placenta infarcted
Z262J	Placenta infected / Placental infection
Z262K	Placenta fatty deposits
Z262M	Placenta offensive odour
Z262N	Placenta pale
Z262O	Observation of placental function
Z262P	Placenta healthy / Placenta normal
Z262Q	Placenta unhealthy
Z262R	Placenta problem
Z262S	Placental vessel observation
Z263.	Uterine membrane observations
Z2631	Amniotc membranes normal
Z2632	Membranes absent
Z2633	Condition of membranes at delivery
Z2634	Blood clots in membranes
Z2635	Number of membranes present
Z2636	One placental membrane present
Z2637	Two placental membranes present
Z2638	Number of amnions in membranes
Z2639	Number of chorions in membranes
Z263A	Membranes complete
Z263B	Membranes incomplete / Ragged membranes
Z263C	Intact membranes
Z263D	Intact membranes bulging through cervix
Z263E	Ruptured membranes / Waters broken / ROM - Ruptured membranes
Z263F	Spontaneous forewater rupture of membranes
Z263G	Spontaneous hindwater rupture of membranes
Z263H	Observation of number of amniotic membranes
Z264.	Condition of amniotic fluid / Condition of amniotic liquor / Observation of amniotic fluid
Z2641	Observation of quantity of liquor / Quantity of liquor / Amount of liquor
Z2642	Consistency of liquor
Z2643	Amniotic fluid normal
Z2644	Normal liquor volume / NLV - Normal liquor volume
Z2645	Reduced amniotic fluid / Deficient amniotic fluid
Z2646	Excessive amniotic fluid
Z2647	Change in quantity of liquor
Z2648	Meconium stained liquor
Z2649	Old meconium staining liquor
Z264A	Fresh meconium staining liquor
Z264B	Thick meconium stained liquor
Z264C	Bloodstained liquor
Z265.	Umbilical cord observations
Z2651	Umbilical cord normal
Z2652	Umbilical cord problem
Z2653	Umbilical cord thin
Z2654	Umbilical cord thick
Z2655	Puls umb cord palp intac membr
Z2656	Pulsation umbilical cord not palp through intact membranes

Z2657	Pulsation present in prolapsed cord
Z2658	Pulsation absent in prolapsed cord
Z2659	Umbilical cord not around baby's neck at delivery / No umbilical cord around neck
Z265A	Number of blood vessels in umbilical cord / Number of vessels entering umbilical cord
Z265B	Number of umbilical arteries
Z265C	Number of umbilical veins
Z265D	Length of umbilical cord

APPENDIX H: NEPHROLOGY CONTACT READ CODES.

Read Code	Description
9b9H.	Nephrology
9N1m.	Seen in nephrology clinic / Seen in renal clinic
ZL18O	Under care of nephrologist
ZL9AO	Seen by nephrologist

APPENDIX I: DESCRIPTORS OF VARIOUS STRATA AND SUB-GROUPS ANALYZED.

Number of Patients	Number of total Creatinine Measurements	Median age (years) at diagnosis (IQR)	Median eGFR (ml/min/1.73m^2) at diagnosis (IQR)	Median age (years) at creatinine measures (IQR)	Median number of creatinine measures per patient (IQR)	Median length of follow-up in months (IQR)
Age <9 years at diagnosis of CKD						
853	4,996	6.4 (4.9 – 7.8)	78.7 (70.3 – 84.1)	7.4 (5.2 – 10.7)	3 (2 – 5)	37 (16 – 88)
Age 9 to <15 years at diagnosis of CKD						
3,269	18,106	13.7 (12.1 – 14.5)	80.9 (74.8 – 85.5)	14.3 (12.3 – 16.7)	3 (2 – 5)	52 (19 – 96)
Age 15 to <18 years at diagnosis of CKD						
11,557	56,490	16.9 (16.2 – 17.5)	78.6 (72.1 – 84.0)	17.3 (15.8 – 19.1)	3 (2 – 5)	41 (18 – 81)
eGFR <30 ml/min/1.73m^2 at diagnosis						
60	383	13.9 (8.3 – 16.5)	20.3 (12.5 – 26.1)	14.9 (8.1 – 17.6)	3.5 (2 – 6)	23 (8.5 – 55.5)
eGFR 30 to <60 ml/min/1.73m^2 at diagnosis						
457	3,024	16.5 (14.8 – 17.4)	56.3 (50.8 – 58.3)	17.3 (14.6 – 19.4)	4 (2 – 7)	44 (18 – 91)
eGFR 60 to <90 ml/min/1.73m^2 at diagnosis						
15,162	76,185	16.4 (14.9 – 17.3)	79.5 (73.0 – 84.5)	16.6 (14.5 – 18.4)	3 (2 - 5)	43 (18 - 85)
Etiology of CKD: CAKUT						
377	2,131	15.6 (12.1 – 17.0)	75.1 (63.5 – 82.9)	15.9 (12.0 – 18.3)	4 (2 – 7)	50 (23 – 98)
Etiology of CKD: Glomerular disease						
190	1,740	15.6 (12.4 – 17.0)	75.9 (66.4 – 83.0)	16.9 (9.8 – 19.2)	5 (3 – 11)	68 (23 – 114)
Etiology of CKD: UTI						
3,286	18,381	16.6 (15.2 – 17.3)	79.6 (74.2 – 84.7)	17.2 (15.2 – 19.5)	4 (3 – 6)	59 (26 – 100)
Etiology of CKD: Genetic						
45	281	15.1 (16.5 – 12.6)	70.9 (44.4 – 79.6)	16.0 (10.8 – 18.9)	5 (3 – 7)	63 (30 – 100)
Etiology of CKD: Other						
1,873	10,135	16.2 (14.5 – 17.2)	77.2 (70.5 – 83.1)	16.5 (14.0 – 18.5)	3 (2 – 5)	47 (19 – 90)
Etiology of CKD: Unknown						
9,908	46,924	16.4 (14.9 – 17.3)	79.2 (73.0 – 84.3)	16.5 (14.4 – 18.1)	3 (2 – 5)	38 (16 – 77)
Patients who had proteinuria assessed but no proteinuria ever						
1,216	8,864	16.5 (15.1 – 17.3)	78.6 (72.0 – 84.3)	17.6 (15.6 – 20.4)	5 (3 – 9)	69 (30 – 111)
Patient who had proteinuria assessed and had proteinuria on at least one occasion						
929	8,000	16.3 (14.6 – 17.3)	78.4 (70.5 – 84.0)	17.5 (15.1 – 20.3)	5 (10 – 3)	73 (35 – 115)
Patients who progressed to ESRD						
51	602	14.2	24.9	17.0	5	42

		(8.3 – 16.5)	(13.1 – 38.8)	(11.3 – 19.5)	(3 – 15)	(14 – 70)
Patients who met criteria for objective 2 analysis						
3,677	37,018	16.8 (15.7 – 17.5)	78.6 (72.1 – 84.0)	18.3 (16.6 – 20.9)	7 (5 – 10)	93 (65 – 124)
Patients with a mental health disorder						
5,754	32,904	16.6 (15.3 – 17.4)	78.6 (73.0 – 84.1)	17.2 (15.3 – 19.4)	4 (3 – 6)	55 (23 – 98)
Patient with a history of substance use						
1,766	10,466	16.7 (15.6 – 17.4)	78.1 (71.4 – 84.0)	17.5 (15.7 – 20.0)	4 (3 – 6)	64 (26 – 104)
Female patients						
8,253	43,265	16.4 (15.0 – 17.3)	80.7 (74.8 – 85.2)	16.8 (14.8 – 18.8)	3 (2 – 5)	48 (21 – 91)
Female patients who had at least one pregnancy						
1,030	6,386	16.9 (15.9 – 17.5)	79.6 (73.9 – 84.2)	18.1 (16.3 – 21.6)	5 (3 – 7)	79 (38 – 118)

APPENDIX J: COMPARISON OF THE VARIOUS COVARIANCE STRUCTURES.

Table 1: Schwartz eGFR (full cohort, n=15,679)				
	Covariance structure			
	Independent	Unstructured	Identity	Exchangeable
Model Variable	Coefficient (95% Confidence Interval)			
Crude Model				
AgeAtSerumCreatExact	0.2 (0.2, 0.3)	0.03 (-0.01, 0.1)	0.2 (0.1, 0.2)	0.2 (0.1, 0.2)
_cons	77.2 (76.7, 77.7)	80.3 (79.6, 81.0)	78.7 (78.3, 79.1)	78.4 (78.0, 78.9)
Adjusted Model (no interaction terms)				
AgeAtSerumCreatExact	0.2 (0.2, 0.3)	0.02 (-0.03, 0.1)	0.1 (0.1, 0.2)	0.1 (0.1, 0.2)
Sex	-3.8 (-4.2, -3.5)	-4. 8 (-5.1, -4.4)	-2.7 (-3.0, -2.3)	-2.8 (-3.1, -2.4)
HTN	-11.2 (-12.7, -9.7)	-10.0 (-11.5, -8.6)	-12.9 (-14.2, -11.5)	-12.6 (-14.0, -11.2)
DM	0.9 (0.2, 1.7)	1.5 (0.8, 2.1)	0.2 (-0.5, 0.9)	0.3 (-0.4, 1.0)
_cons	79.4 (78.9, 79.9)	82.8 (82.0, 83.5)	80.5 (80.1, 80.9)	80.3 (79.8, 80.7)
Adjusted Model (WITH interaction terms)				
AgeAtSerumCreatExact	0.8 (0.7, 0.8)	0.7 (0.7, 0.8)	0.6 (0.6, 0.7)	0.6 (0.6, 0.7)
Sex	16.6 (15.7, 17.5)	20.5 (19.2, 21.9)	13.0 (12.2, 13.9)	13.4 (12.6, 14.2)
HTN	-9.1 (-12.2, 17.5)	-8.2 (-13.5, -2.8)	-14.4 (-17.0, -11.8)	-13.6 (-16.2, -11.0)
DM	-8.6 (-10.3, -7.0)	-10.7 (-13.3, -8.0)	-7.4 (-9.0, -5.9)	-7.5 (-9.0, -6.0)
AS*	-1.4 (-1.5, -1.3)	-1.6 (-1.7, -1.5)	-1.2 (-1.2, -1.1)	-1.2 (-1.3, -1.2)
AH*	-0.1 (-0.3, 0.1)	-0.1 (-0.4, 0.2)	0.1 (-0.04, 0.3)	0.1 (-0.1, 0.3)
AD*	0.7 (0.6, 0.8)	0.8 (0.6, 0.9)	0.6 (0.5, 0.7)	0.6 (0.5, 0.7)
_cons	70.8 (70.2, 71.5)	71.7 (70.8, 72.7)	74.0 (73.4, 74.5)	73.5 (72.9, 74.1)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*				

Table 2: FAS eGFR (full cohort, n=15,679)				
	Covariance structure			
	Independent	Unstructured	Identity	Exchangeable
Model Variable	Coefficient (95% Confidence Interval)			
Crude Model				
AgeAtSerumCreatExact	2.3 (2.3, 2.4)	2.4 (2.4, 2.5)	2.2 (2.1, 2.2)	2.2 (2.2, 2.3)
_cons	49.4 (49.0, 49.9)	47.7 (47.0, 48.4)	51.6 (51.2, 52.0)	51.3 (50.9, 51.7)
Adjusted Model (no interaction terms)				
AgeAtSerumCreatExact	2.3 (2.3, 2.4)	2.4 (2.4, 2.5)	2.2 (2.1, 2.2)	2.2 (2.2, 2.3)
Sex	2.6 (2.3, 3.0)	2.7 (2.4, 3.1)	2.1 (1.7, 2.4)	2.1 (1.8, 2.5)
HTN	-10.6 (-12.2, -9.1)	-10.1 (-11.6, -8.6)	-11.2 (-12.6, -9.8)	-11.1 (-12.5, -9.6)
DM	2.5 (1.7, 3.3)	2.8 (2.1, 3.6)	1.6 (0.9, 2.4)	1.8 (1.0, 2.5)
_cons	48.1 (47.6, 48.6)	46.2 (45.4, 46.9)	50.7 (50.3, 51.2)	50.4 (49.9, 50.8)
Adjusted Model (WITH interaction terms)				
AgeAtSerumCreatExact	2.1 (2.0, 2.1)	2.1 (2.1, 2.2)	1.9 (1.9, 2.0)	2.0 (1.9, 2.0)
Sex	-4.6 (-5.6, -3.7)	-5.8 (-7.2, -4.4)	-4.3 (-5.1, -3.5)	-4.2 (-5.1, -3.4)
HTN	-2.5 (-5.6, 0.6)	1.5 (-3.8, 6.7)	-7.6 (-10.3, -5.0)	-6.9 (-9.6, -4.3)
DM	-10.6 (-12.3, -8.9)	-12.0 (-14.6, -9.4)	-10.5 (-12.1, -8.9)	-10.4 (-12.0, -8.8)
AS*	0.5 (0.4, 0.6)	0.6 (0.5, 0.6)	0.5 (0.4, 0.5)	0.5 (0.4, 0.5)
AH*	-0.6 (-0.8, -0.4)	-0.8 (-1.1, -0.4)	-0.3 (-0.5, -0.1)	-0.3 (-0.5, -0.2)
AD*	0.9 (0.7, 1.0)	0.9 (0.8, 1.1)	0.9 (0.8, 1.0)	0.9 (0.8, 1.0)
_cons	52.4 (51.8, 53.1)	51.0 (50.1, 52.0)	54.6 (54.0, 55.2)	54.3 (53.7, 54.9)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*				

APPENDIX K: SUMMARY OF ALL THE COEFFICIENTS IN THE MODEL FOR ANALYSES OF THE VARIOUS STRATA AND SUBGROUPS EVALUATED IN OBJECTIVE 1.

Objective 1 analysis stratified by age at diagnosis.	
Model Variable	Coefficient (95% Confidence Interval)
Age <9 years (n=853, obs=4,996)	
AgeAtSerumCreatExact	3.8 (3.4, 4.1)
Sex	0.6 (-2.4, 3.7)
Hypertension	-0.3 (-10.2, 9.6)
Diabetes	-4.7 (-11.9, 2.6)
AS**	-0.4 (-0.9, 0.1)
AH**	-3.1 (-4.7, -1.4)
AD**	0.5 (-0.5, 1.6)
Constant	47.3 (45.1, 49.5)
Age 9 to <15 years (n=3,269, obs=18,106)	
AgeAtSerumCreatExact	2.4 (2.3, 2.6)
Sex	1.1 (-1.5, 3.7)
Hypertension	-1.9 (-11.5, 7.8)
Diabetes	-17.3 (-22.4, -12.1)
AS**	-0.2 (-0.4, 0.03)
AH**	-0.7 (-1.4, 0.03)
AD**	1.4 (1.0, 1.7)
Constant	47.4 (45.6, 49.2)
Age 15 to <18 years (n=11,557, obs=56,490)	
AgeAtSerumCreatExact	2.1 (2.0, 2.2)
Sex	-7.7 (-9.8, -5.6)
Hypertension	10.7 (2.6, 18.8)
Diabetes	-10.4 (-14.1, -6.7)
AS**	0.7 (0.6, 0.9)
AH**	-1.2 (-1.7, -0.7)
AD**	0.8 (0.6, 1.0)
Constant	50.7 (49.3, 52.1)
**p>0.05; **Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*	

Objective 1 analysis stratified by Schwartz eGFR at diagnosis.	
Model Variable	Coefficient (95% Confidence Interval)
eGFR <30 ml/min/1.73m^2 at diagnosis (n=60, obs=383)	
AgeAtSerumCreatExact	1.9 (-0.4, 4.3)
Sex	45.3 (0.2, 90.3)
Hypertension	65.1 (-7.1, 137.4)
Diabetes	61.4 (-48.0, 170.8)
AS**	-3.5 (-6.9, -0.2)
AH**	-5.9 (-11.0, -0.7)
AD**	-2.1 (-9.9, 5.7)
Constant	10.1 (-21.6, 41.7)
eGFR 30 to <60 ml/min/1.73m^2 at diagnosis (n=457, obs=3,024)	
AgeAtSerumCreatExact	1.4 (0.8, 1.9)
Sex	-6.0 (-17.1, 5.0)

Hypertension	23.7 (5.8, 41.7)
Diabetes	-33.5 (-50.8, -16.2)
AS**	0.4 (-0.3, 1.1)
AH**	-2.3 (-3.5, -1.2)
AD**	2.6 (1.5, 3.7)
Constant	47.0 (37.8, 56.3)
eGFR 60 to <90 ml/min/1.73m^2 at diagnosis (n=15,162, obs=76,185)	
AgeAtSerumCreatExact	2.1 (2.1, 2.2)
Sex	-6.6 (-7.9, -5.2)
Hypertension	1.7 (-4.0, 7.4)
Diabetes	-10.7 (-13.3, -8.1)
AS**	0.6 (0.6, 0.7)
AH**	-0.3 (-0.6, 0.1)
AD**	0.8 (0.7, 1.0)
Constant	51.9 (51.0, 52.8)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*	

Objective 1 analysis stratified by etiology of CKD.	
Model Variable	Coefficient (95% Confidence Interval)
CKD Etiology CAKUT (n=377, obs=2,131)	
AgeAtSerumCreatExact	1.9 (1.5, 2.4)
Sex	-3.6 (-12.0, 4.8)
Hypertension	0.6 (-14.3, 15.5)
Diabetes	7.5 (-10.7, 25.7)
AS*	0.2 (-0.4, 0.8)
AH*	-0.9 (-2.0, 0.2)
AD*	-0.2 (-1.5, 1.1)
Constant	47.7 (41.5, 53.9)
CKD Etiology Glomerular Disease (n=190, obs=1740)	
AgeAtSerumCreatExact	1.8 (0.8, 2.8)
Sex	-3.4 (-21.8, 14.9)
Hypertension	26.8 (3.3, 50.3)
Diabetes	-42.4 (-88.8, 4.1)
AS*	0.4 (-0.9, 1.6)
AH*	-2.5 (-4.1, -1.0)
AD*	3.1 (0.03, 6.3)
Constant	53.8 (39.2, 68.4)
CKD Etiology UTI (n=3,286, obs=18,381)	
AgeAtSerumCreatExact	2.2 (2.1, 2.2)
Sex	-6.3 (-10.5, -2.2)
Hypertension	26.2 (12.7, 39.7)
Diabetes	-5.4 (-11.1, 0.3)
AS*	0.7 (0.4, 0.9)
AH*	-2.0 (-2.8, -1.2)
AD*	0.6 (0.2, 0.9)
Constant	50.6 (49.1, 52.0)
CKD Etiology Genetic (n=45, obs=281)	
AgeAtSerumCreatExact	1.7 (-0.7, 4.1)
Sex	29.5 (-15.6, 74.6)
Hypertension	-10.7 (-67.2, 45.8)

Diabetes	-11.8 (-149.3, 125.7)
AS*	-2.5 (-5.8, 0.7)
AH*	0.7 (-3.4, 4.8)
AD*	1.7 (-8.2, 11.6)
Constant	47.5 (14.1, 81.0)
CKD Etiology Other (n=1,873, obs=10,135)	
AgeAtSerumCreatExact	2.1 (1.7, 2.5)
Sex	-0.6 (-6.7, 5.5)
Hypertension	-9.2 (-22.6, 4.1)
Diabetes	-15.5 (-21.9, -9.1)
AS*	0.4 (-0.02, 0.8)
AH*	-0.1 (-0.9, 0.7)
AD*	1.2 (0.8, 1.6)
Constant	49.4 (43.6, 55.2)
CKD Etiology Unknown (n=9,908, obs=46,924)	
AgeAtSerumCreatExact	2.1 (2.0, 2.2)
Sex	-7.5 (-9.2, -5.7)
Hypertension	-12.0 (-21.7, -2.3)
Diabetes	-12.8 (-16.1, -9.5)
AS*	0.6 (0.5, 0.8)
AH*	0.4 (-0.2, 1.0)
AD*	0.9 (0.7, 1.1)
Constant	51.8 (50.6, 53.1)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*	

Objective 1 analysis restricted to sub-group of patients who were evaluated for proteinuria.	
Model Variable	Coefficient (95% Confidence Interval)
Never had proteinuria (n=1,216, obs=8,864)	
AgeAtSerumCreatExact	2.1 (1.9, 2.3)
Sex	-7.1 (-12.8, -1.4)
Hypertension	-4.9 (-20.1, 10.4)
Diabetes	-10.4 (-16.2, -4.5)
AS*	0.6 (0.2, 0.9)
AH*	0.2 (-0.7, 1.1)
AD*	0.9 (0.5, 1.2)
Constant	51.9 (47.9, 55.9)
Proteinuria at least on one occasion (n=929, obs=8,000)	
AgeAtSerumCreatExact	2.2 (1.9, 2.4)
Sex	-3.5 (-10.2, 3.3)
Hypertension	23.7 (10.8, 36.6)
Diabetes	-13.0 (-20.4, -5.6)
AS*	0.3 (-0.1, 0.7)
AH*	-2.2 (-3.0, -1.4)
AD*	1.2 (0.7, 1.6)
Constant	48.5 (44.0, 52.9)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*	

Objective 1 analysis restricted subgroup of patients that progressed to ESRD (n=51, obs=602)

Model Variable	Coefficient (95% Confidence Interval)	
	Crude Analysis	Adjusted Analysis
AgeAtSerumCreatExact	-4.6 (-6.9, -2.3)	-0.9 (-4.2, 2.4)
Sex		58.4 (-1.9, 118.8)
Hypertension		95.3 (25.5, 165.2)
Diabetes		-153.8 (-347.7, 40.1)
AS*		-3.7 (-7.9, 0.4)
AH*		-6.4 (-11.0, -1.7)
AD*		8.9 (-4.4, 22.1)
Constant	98.0 (64.5, 131.4)	42.7 (-4.4, 89.9)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*		

APPENDIX L: OBJECTIVE 1 ANALYSIS STRATIFIED BY FAS EGFR AT DIAGNOSIS.

Model Variable	Coefficient (95% Confidence Interval)
eGFR <30 ml/min/1.73m^2 at diagnosis (n=55, obs=347)	
AgeAtSerumCreatExact	1.4 (-0.7, 3.5)
Sex	43.5 (1.7, 85.2)
Hypertension	32.1 (-29.9, 94.0)
Diabetes	-8.6 (-112.0, 94.8)
AS*	-3.4 (-6.4, -0.3)
AS*	-3.3 (-7.7, 1.1)
AD*	2.2 (-5.2, 9.6)
Constant	10.1 (-18.9, 39.0)
eGFR 30 to <60 ml/min/1.73m^2 at diagnosis (n=391, obs=2,771)	
AgeAtSerumCreatExact	1.7 (1.2, 2.2)
Sex	0.01 (-5.7, 5.7)
Hypertension	6.8 (-3.8, 17.4)
Diabetes	-16.3 (-28.5, -4.0)
AS*	-0.3 (-0.9, 0.3)
AH*	-1.6 (-2.7, -0.6)
AD*	1.8 (0.6, 3.0)
Constant	47.7 (43.3, 52.2)
eGFR 60 to <90 ml/min/1.73m^2 at diagnosis (n=15,233, obs=76,474)	
AgeAtSerumCreatExact	2.1 (2.0, 2.2)
Sex	-6.4 (-7.8, -5.0)
Hypertension	6.0 (0.03, 11.9)
Diabetes	-11.6 (-14.3, -9.0)
AS*	0.6 (0.5, 0.7)
AH*	-0.6 (-0.9, -0.2)
AD*	0.9 (0.7, 1.0)
Constant	52.0 (51.1, 53.0)
**Interaction terms: AS=age at serum creatinine x sex, AH=age at serum creatinine x hypertension, AD=age at serum creatinine x diabetes.*	