

**Measuring the impact of chronic kidney disease on primary care:
informing targeting of future models of care**

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**Principal Investigator:
Dr C Black**

**Other investigators:
P Sharma
C Simpson
P Hannaford
N Fluck
A MacLeod**

1. Protocol Summary

In 2002, the National Kidney Foundation (KDOQI)¹ proposed a definition for Chronic Kidney Disease (CKD) that has been adopted internationally. In the UK, it has formed the basis for a national standard for laboratory reporting of renal function, national service framework agreements, quality outcome frameworks (QOF) in the general medical contract for primary care and national guideline development.²⁻⁴ Implementation of the CKD component of QOF has been variable.⁵

CKD has been under recognised in primary care in Scotland. The proportion of patients with a recorded diagnosis of CKD in primary care was extremely low (0.14% of the population in 2004/05), however, 4.3% of patients had an abnormal blood test result suggesting CKD. While going unrecognised as having CKD, a proportion of these patients had co-morbidities that meant they may be undergoing regular primary or secondary care review for diabetes mellitus (DM), cardiovascular disease (CVD), hypertension (HBP) or hyperlipidaemia.⁶

In order to better understand the impact CKD will have on clinical practice in primary care, we will describe the characteristics and explore the management of patients with sufficient evidence of CKD as to meet QOF criteria for entry onto a practice CKD register. This project will allow a better understanding of the implications of CKD for primary care and inform service planning; provide a robust baseline against which future change in practice can be monitored, and form the foundation for a prospective cohort study to explore the natural history, risk factors and effect of guidelines on clinical practice and outcomes.

1.1 Background

Advanced chronic kidney disease (CKD) requiring renal replacement therapy (RRT) places a heavy burden on individuals, society and the health service. Over the last 20 years, the prevalence of end stage renal failure and RRT has doubled, with a growth rate of around 5% per annum.¹ Approximately 2% of NHS resources are used to provide care for 0.05% of the patient population, with dialysis costing ~21K per patient annually². Significant efforts have been made to increase the detection of individuals with early CKD so that intervention might prevent progression and its associated costs.

The Renal National Service Framework recommended early detection of CKD in those at risk³, adopted the 5 stage Kidney Disease Outcome Quality Initiative (KDOQI) classification system based on Glomerular Filtration Rate (GFR), and recommended an estimate of GFR appear on all biochemistry reports of serum creatinine. The Quality and Outcomes Framework in the new General Medical Services contract for General Practitioners (GPs) includes a requirement to keep a list of all patients with CKD (Stage 3–5). Several CKD management guidelines have been produced recently by organisations including the Royal College of Physicians, Scottish Intercollegiate Guidelines Network and NICE.⁴⁻⁶ These drivers have the potential to increase the identification of CKD in primary care but at the current time little is known about how many patients are likely to be identified through current blood testing approaches. Because CKD is associated with a cluster of vascular and metabolic conditions (CVD, DM, HBP) and there is an overlap in the clinical

management needs, the additional service and care requirements for people identified as having CKD is critical information for the health service and is currently uncertain.

CSO funded work undertaken by the Aberdeen Applied Renal Research Group (AARRG) found from blood results recorded in primary care that approximately 4% of the Scottish population currently have recorded evidence of kidney impairment in the form of an abnormal creatinine level; more than 200,000 people.^{7,8} Less than 3% of these people had been recognised as having renal impairment by their GPs in 2004/05.

Changes in reporting of measures of renal function outlined above (creatinine levels to estimated GFR), along with the inclusion of renal impairment in the General Medical Services contract, has resulted in growing recognition of patients with evidence of renal impairment. The rate of new patient referrals has approximately doubled for NHS Grampian. A similar pattern has been reported for one Health Authority in England.⁹

Currently there is uncertainty for the NHS about:

- the number of people likely to be identified with CKD and added to a practice register,
- the proportion of these who have co-morbidities that mean they are on other practice registers and receiving clinical review
- the proportion who are already receiving optimal care
- which groups to target to enhanced care

This is at a time when the NHS is working hard to ensure the patient remains central to the care pathway and that the patient journey is clear, simple and ensures that, where appropriate, care is delivered close to the patient's home. In 2005, *Building a Health Service: Fit for the Future*, identified the challenges to health and wellbeing from an ageing population, persistent health inequalities and a growth in long term conditions.¹⁰ *Better Health Better Care* (2007) identifies the importance of care close to patients' homes and the need for the health service to work together in a co-ordinated fashion. Shifting the balance of care towards a service embedded in the needs of communities.¹¹

1.2 Overall Purpose (Aim)

This project aims to inform NHS service planning by providing a better understanding of the health care needs of patients who are likely to be identified as having impaired renal function in primary care using the current approach to early disease identification. This will inform targeting of future service development.

1.3 Research Questions

The following research questions will be addressed by this study:

- a) What is the epidemiology of CKD in primary care defined by 2 eGFR <60mL/min/1.72m² at least 3 months apart and how does it compare with those with a labelled diagnosis of CKD or a single abnormal eGFR?
- b) What proportion of people has a "vascular" co-morbidity that would qualify them to be under regular primary or secondary care review and on another primary care disease register?

- c) Does the level of care differ between the different diagnostic groups, those with different stages of CKD and by demographic subgroups?

1.4 Study population

We have previously extracted a dataset from PCCIU for a cohort of all patients registered with a contributing practice between 04/1999 and the 04/2005 and used it to estimate the prevalence of CKD based on diagnosis of renal disease and evidence of one abnormal measure of renal function. In this study, we will utilise the same basic dataset but will extract additional information about co-morbidities, management and outcomes and update it through to Spring 2007.

Inclusion and exclusion criteria:

This study will include all adult patients registered with a contributing practice during the study period and with at least one creatinine recorded during the study period.

Study period: 04/1999 and last update (03/2007?)

Exclusions: children < 16yrs at time of creatinine record.

For the general descriptive analysis and estimation of prevalence all, patients will be included. For analysis dependent on the description of care, only those patients registered with the practice for at least 15 months prior to their index date will be included. Analysis plan is outline below.

1.5 Study design

Descriptive & analytical cohort study nested in the PCCIU cohort.

1.6 Exposure of interest

We will identify the presence of specific, known, risk factors for renal disease as well as age and sex. The date of first diagnosis will also be recorded. "First diagnosis" will be defined as the first recorded diagnosis using a relevant read code from appendix 1 in people with at least 12 months of prior recorded history.

1.7 Outcome of interest- Morbidity

- Clinical READ codes for CKD (Appendix 1) & date of first event
- Creatinine (which we will use to estimate eGFR)
- Clinical READ codes for comorbidities (Appendix 1) & date of first event

Case definition:

We have previously tested two definitions of CKD using primary care data:

- *As recorded by GPs*

A consultant renal physician, plus a clinical researcher, has reviewed all READ disease codes to select those describing CKD (codes can be provided on request). We will define a patient as having 'diagnosed CKD' if they have at least two relevant codes at least 3 months apart. The date of the first code will be considered to be the Index date

- *Based on single eGFR*

Using the PCCIU database, we are also able to seek evidence of CKD based on recorded creatinine. Every recorded creatinine value will be extracted. For each creatinine, we will estimate the eGFR and classify renal impairment using the KDOQI. Impaired renal function will be defined based on a single eGFR of $<60\text{mL}/\text{min}/1.72\text{m}^2$.

- *Based on at least two eGFRs three months apart*

In this study, we will, for the first time, also examine those people with chronic kidney impairment that can be confirmed by at least two eGFR $<60\text{mL}/\text{min}/1.72\text{m}^2$ more than 3 months apart. The date of the first code will be considered to be the Index date.

1.8 Outcome of interest - Other Care

- QOF measures for cardiovascular disease prevention and control (measurement of weight, BP, cholesterol, proteinuria in the last 15 months)
 - Smoking status
 - BP recorded; BP $<150/90$ mmHg; BP $<140/80$ mmHg
 - Cholesterol recorded; <5 mmol/L
 - BMI - Weight and height recorded; BMI >25 kg/m²
 - HbA1c recorded; with HbA1c $<7.5\%$
- Medication BNF codes
 - BP medication
 - Diuretics 2.2
 - Beta Blockers 2.4
 - Ca Channel blockers 2.6.2
 - Vasodilator anti HBP 2.5.1,
 - Centrally acting anti HBP 2.5.2
 - Adrenergic neurone blockers 2.5.3
 - Alpha blockers 2.5.4
 - ACE I 2.5.5.1
 - Ang II RBs 2.5.5.2
 - Renin inhib 2.5.5.3
 - Lipid lowering agents 2.12
 - Antiplatelet agents 2.9

In addition we will look for prescribing of potentially nephrotoxic medicines

- Quantity of GP attendances.

1.9 Analysis

Firstly we will undertake validation of the data extraction process – checking inclusion & exclusion criteria, “sense checking” clinical data, and reviewing 50-100 clinical profiles to validate coding.

We will then provide simple descriptive statistics of the cohort by the following subgroups:

- CKD definition and stage
- Demographics (age, sex, deprivation etc)
- Co-morbidity

From the cohort of patients with evidence of CKD we will examine current clinical care in relation to prescribing of medicines, and monitoring and control of risk factors recommended in current clinical guidelines and compares the care of people with:

- a clinical diagnosis of CKD
- single biochemical evidence of renal impairment but no clinical diagnosis,
- Confirmable chronic kidney disease based on two eGFR $<60\text{mL}/\text{min}/1.72\text{m}^2$

This will be stratified by co-morbidity and stage of CKD.

Finally, we will test the research hypothesis that those with a clinical diagnosis of CKD and/or certain co-morbidities receive more rigorous care of their condition. All data variables in this part of the analysis will be categorical and we will use logistic regression to explore differences in the proportions receiving various components of care between groups. Potential confounding (age, sex, CKD stage, CKD cause) will be adjusted for using multiple logistic regression if data allow. Stratified analyses will be presented for selected co-morbidity subgroups (DM, HBP, CVD).

1.10 Data Transfer

We will arrange secure access to folder on S:drive on Population Health server (protected access to named individuals)

1.11 Data Storage

Only anonymised data will be stored on a secure backed, up PC in locked room in the Population Health in the University of Aberdeen. Any printed records will be stored in a locked filing cabinet. Only the named researchers will have access to the dataset.

1.12 Timetable

To start from 1st April 2009 with completion of project by 31st March 2010.

1.13 Observational period

31st March 1999 to 1st April 2007 (or latest update).

2.14 Individuals with access to this data

The data will not be released to any other individual(s) or organisation(s) other than below not directly connected with the work specified in the protocol and specification without prior approval from PCCIU-R, except in the form of non-disclosive statistical tables or conclusions.

Named individuals to have access to data	Job Title	Organisation
Dr Corri Black	Senior Clinical Lecturer	University of Aberdeen
Prof Alison MacLeod	Professor of Medicine	University of Aberdeen
Dr Nick Fluck	Consultant Nephrologist / Unit Clinical Director	University of Aberdeen
Dr Colin Simpson	Research Fellow	University of Aberdeen
Prof Phil Hannaford	NHS Grampian Chair of Primary Care and Head of Division of Applied Health Sciences	University of Aberdeen
Pawana Sharma	Research Assistant	University of Aberdeen
Gordon Prescott	Senior Lecturer in Medical	University of Aberdeen

	Statistics	
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1.15 Plan for dissemination

Publication will be sought in appropriate peer reviewed journals and as conference abstracts.

1.16 Ethical Approval

Scientific approval requested here – no additional ethical approval being sought

1.17 Funding

NHS Endowments 2009

Appendix 1 Diagnostic codes**CODES FOR CKD****READ**

K05..00 - CHRONIC RENAL FAILURE
K05..11 - CHRONIC URAEMIA
K05..12 - END STAGE RENAL FAILURE
K050.00 - END STAGE RENAL FAILURE
K06..00 - RENAL FAILURE UNSPECIFIED
K06..11 - URAEMIA NOS
K060.00 - RENAL IMPAIRMENT
K060.11 - IMPAIRED RENAL FUNCTION
14D..11 - H/O: KIDNEY DISEASE
14S2.00 - H/O: KIDNEY RECIPIENT
14V2.11 - H/O: KIDNEY DIALYSIS
7B00.00 - TRANSPLANTATION OF KIDNEY
7B00100 - TRANSPLANTATION OF KIDNEY FROM LIVE DONOR
7B00111 - ALLOTRANSPLANTATION OF KIDNEY FROM LIVE DONOR
7B00200 - TRANSPLANTATION OF KIDNEY FROM CADAVER
7B00211 - ALLOTRANSPLANTATION OF KIDNEY FROM CADAVER
7B00y00 - OTHER SPECIFIED TRANSPLANTATION OF KIDNEY
7B00z00 - TRANSPLANTATION OF KIDNEY NOS
7B01511 - EXCISION OF REJECTED TRANSPLANTED KIDNEY
K01y.00 - NEPHROTIC SYNDROME WITH OTHER PATHOLOGICAL KIDNEY LESIONS
K070.00 - ATROPHY OF KIDNEY
K09..00 - SMALL KIDNEY OF UNKNOWN CAUSE
K090.00 - UNILATERAL SMALL KIDNEY
K090000 - ATROPHY OF KIDNEY
K091.00 - BILATERAL SMALL KIDNEYS
K09z.00 - SMALL KIDNEYS UNSPECIFIED
K138.00 - VASCULAR DISORDERS OF KIDNEY
K13z000 - NON-FUNCTIONING KIDNEY
PD03.00 - HYPOPLASIA OF KIDNEY
PD1..00 - CONGENITAL CYSTIC KIDNEY DISEASE
PD1..12 - FIBROCYSTIC KIDNEY
PD1..13 - POLYCYSTIC KIDNEY
PD11.00 - POLYCYSTIC KIDNEY DISEASE
PD11000 - POLYCYSTIC KIDNEYS, INFANTILE TYPE
PD11100 - POLYCYSTIC KIDNEYS, ADULT TYPE
PD11z00 - POLYCYSTIC KIDNEY DISEASE NOS
PD11z11 - CYSTIC KIDNEY DISEASE NEC
PD1y.00 - OTHER SPECIFIED CONGENITAL CYSTIC KIDNEY DISEASE
PD1y000 - FIBROCYSTIC KIDNEY DISEASE
PD1yz00 - OTHER CONGENITAL CYSTIC KIDNEY DISEASE NOS
R144.11 - [D]KIDNEY FUNCTION TEST ABNORMAL
SP08300 - KIDNEY TRANSPLANT FAILURE AND REJECTION
SP15411 - KIDNEY FAILURE AS A COMPLICATION OF CARE
TB00100 - KIDNEY TRANSPLANT WITH COMPLICATION, WITHOUT BLAME
TB11.00 - KIDNEY DIALYSIS WITH COMPLICATION, WITHOUT BLAME
U610200 - [X]UNINTENT CUT/PUNCT/PERF/HAEMORRH DUR KIDNEY DIAL/OTH PERF
U611200 - [X]FOREIGN OBJ ACCID LEFT BODY DUR KIDNEY DIALYS/OTH PERFUS
U612200 - [X]FAILURE STERILE PRECAUTIONS DUR KIDNEY DIALYS/OTHER PERF
Z4B4.00 - POLYCYSTIC KIDNEY DISEASE COUNSELLING
ZV42000 - [V]KIDNEY TRANSPLANTED
C104.11 - DIABETIC NEPHROPATHY
C104z00 - DIABETES MELLITIS WITH NEPHROPATHY NOS
C108D00 - INSULIN DEPENDENT DIABETES MELLITUS WITH NEPHROPATHY
C108D11 - TYPE I DIABETES MELLITUS WITH NEPHROPATHY
C109C00 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH NEPHROPATHY
C109C11 - TYPE II DIABETES MELLITUS WITH NEPHROPATHY
C341.00 - GOUTY NEPHROPATHY

C341000 - GOUTY NEPHROPATHY UNSPECIFIED
C341z00 - GOUTY NEPHROPATHY NOS
K02..12 - NEPHROPATHY - CHRONIC
K03..00 - NEPHRITIS AND NEPHROPATHY UNSPECIFIED
K03..11 - NEPHRITIS AND NEPHROPATHY UNSPECIFIED
K03..12 - NEPHROPATHY, UNSPECIFIED
K032600 - BERGER'S IGA OR IGG NEPHROPATHY
K08y000 - HYPOKALAEMIC NEPHROPATHY
K0A5.00 - HEREDITARY NEPHROPATHY NOT ELSEWHERE CLASSIFIED
K0A5000 - HEREDITARY NEPHROPATHY NEC, MINOR GLOMERULAR ABNORMALITY
K0A5100 - HEREDITARY NEPHROPATHY NEC, FOCAL+SEGMENT GLOMERULAR LESION
K0A5200 - HEREDITARY NEPHROPATHY NEC, DIFFUSE MEMBRAN GLOMERULONEPHRITIS
K0A5300 - HEREDITARY NEPHROPATHY NEC, DIFFUSE MESANGIAL PROLIF GLOMERULONEPHRITIS
K0A5400 - HEREDITARY NEPHROPATHY NEC, DIFFUSE ENDOCAPIL PROLIF GLOMERULONEPHRITIS
K0A5500 - [X]HEREDITARY NEPHROPATHY NEC, DIFFUSE MESANGIOCAPILARY GLOMERULONEPHRITIS
K0A5600 - HEREDITARY NEPHROPATHY, NEC, DENSE DEPOSIT DISEASE
K0A5700 - HEREDITARY NEPHROPATHY, NEC, DIFFUSE CRESCENTIC GLOMERULONEPHRITIS
K0A5X00 - HEREDITARY NEPHROPATHY, UNSPECIFIED MORPHOLOGICAL CHANGES
K0B6.00 - BALKAN NEPHROPATHY
K0C0.00 - ANALGESIC NEPHROPATHY
K0C1.00 - NEPHROPATHY INDUCED BY OTHER DRUGS MEDS AND BIOLOGICAL SUBSTANCES
K0C2.00 - NEPHROPATHY INDUCED BY UNSPECIFIED DRUG MEDICAMENT OR BIOLOGICAL SUBSTANCES
K0C3.00 - NEPHROPATHY INDUCED BY HEAVY METALS
K0C4.00 - TOXIC NEPHROPATHY, NOT ELSEWHERE CLASSIFIED
Kyu0F00 - [X]HEREDITARY NEPHROPATHY, UNSPECIFIED MORPHOLOGICAL CHANGES
Kyu1400 - [X]NEPHROPATHY INDUCED BY OTHER DRUGS+BIOLOGICAL SUBSTANCES
Kyu1500 - [X]TOXIC NEPHROPATHY, NOT ELSEWHERE CLASSIFIED
14D..12 - H/O: RENAL DISEASE
14V2.00 - H/O: RENAL DIALYSIS
4512.00 - RENAL FUNCTION TESTS ABNORMAL
4519.00 - DETERIORATING RENAL FUNCTION
451Z.00 - RENAL FUNCTION TEST NOS
5573.00 - RENAL ARTERIOGRAM ABNORMAL
7B06300 - EXPLORATION OF RENAL TRANSPLANT
7L1A.00 - COMPENSATION FOR RENAL FAILURE
7L1A.11 - DIALYSIS FOR RENAL FAILURE
7L1A000 - RENAL DIALYSIS
7L1Ay00 - OTHER SPECIFIED COMPENSATION FOR RENAL FAILURE
7L1Az00 - COMPENSATION FOR RENAL FAILURE NOS
7L1B.11 - PLACEMENT AMBULATORY DIALYSIS APPARATUS - COMPENSATE RENAL FAILURE
7L1B000 - INSERTION OF AMBULATORY PERITONEAL DIALYSIS CATHETER
7L1B100 - REMOVAL OF AMBULATORY PERITONEAL DIALYSIS CATHETER
7L1By00 - PLACEMENT AMBULATORY APPARATUS- COMPENSATE RENAL FAILURE OS
7L1Bz00 - PLACEMENT AMBULATORY APPARATUS- COMPENSATE RENAL FAILURE NOS
7L1C.00 - PLACEMENT OTHER APPARATUS FOR COMPENSATION FOR RENAL FAILURE
7L1C000 - INSERTION OF TEMPORARY PERITONEAL DIALYSIS CATHETER
7L1Cy00 - PLACEMENT OTHER APPARATUS- COMPENSATE FOR RENAL FAILURE OS
7L1Cz00 - PLACEMENT OTHER APPARATUS- COMPENSATE FOR RENAL FAILURE NOS
8L50.00 - RENAL TRANSPLANT PLANNED
C104.00 - DIABETES MELLITUS WITH RENAL MANIFESTATION
C104000 - DIABETES MELLITUS, JUVENILE TYPE, WITH RENAL MANIFESTATION
C104100 - DIABETES MELLITUS, ADULT ONSET, WITH RENAL MANIFESTATION
C104y00 - OTHER SPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS
C104z00 - DIABETES MELLITUS WITH NEPHROPATHY NOS
C108000 - INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS
C108011 - TYPE I DIABETES MELLITUS WITH RENAL COMPLICATIONS
C109000 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS
C109011 - TYPE II DIABETES MELLITUS WITH RENAL COMPLICATIONS
C10A200 - MALNUTRITION-RELATED DIABETES MELLITUS WITH RENAL COMPLICATIONS
Cyu2300 - [X]UNSPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS

D215.00 - ANAEMIA SECONDARY TO RENAL FAILURE
D215000 - ANAEMIA SECONDARY TO CHRONIC RENAL FAILURE
G22..00 - HYPERTENSIVE RENAL DISEASE
G220.00 - MALIGNANT HYPERTENSIVE RENAL DISEASE
G221.00 - BENIGN HYPERTENSIVE RENAL DISEASE
G222.00 - HYPERTENSIVE RENAL DISEASE WITH RENAL FAILURE
G22z.00 - HYPERTENSIVE RENAL DISEASE NOS
G22z.11 - RENAL HYPERTENSION
G23..00 - HYPERTENSIVE HEART AND RENAL DISEASE
G230.00 - MALIGNANT HYPERTENSIVE HEART AND RENAL DISEASE
G231.00 - BENIGN HYPERTENSIVE HEART AND RENAL DISEASE
G233.00 - HYPERTENSIVE HEART AND RENAL DISEASE WITH RENAL FAILURE
G234.00 - HYPERTEN HEART&RENAL DIS+BOTH(CONGESTV)HEART AND RENAL FAIL
G23z.00 - HYPERTENSIVE HEART AND RENAL DISEASE NOS
G701.00 - RENAL ARTERY ATHEROSCLEROSIS
G763.00 - HYPERPLASIA OF RENAL ARTERY
Gyu2100 - [X]HYPERTENSION SECONDARY TO OTHER RENAL DISORDERS
K05..00 - CHRONIC RENAL FAILURE
K05..11 - CHRONIC URAEMIA
K05..12 - END STAGE RENAL FAILURE
K050.00 - END STAGE RENAL FAILURE
K06..00 - RENAL FAILURE UNSPECIFIED
K06..11 - URAEMIA NOS
K060.00 - RENAL IMPAIRMENT
K060.11 - IMPAIRED RENAL FUNCTION
K07..00 - RENAL SCLEROSIS UNSPECIFIED
K070.00 - ATROPHY OF KIDNEY
K071.00 - RENAL FIBROSIS
K072.00 - GLOMERULOSCLEROSIS
K07z.00 - RENAL SCLEROSIS NOS
K08..00 - IMPAIRED RENAL FUNCTION DISORDER
K080.00 - RENAL OSTEODYSTROPHY
K080300 - RENAL RICKETS
K080z00 - RENAL OSTEODYSTROPHY NOS
K08y.00 - OTHER IMPAIRED RENAL FUNCTION DISORDER
K08y300 - RENAL FUNCTION IMPAIRMENT WITH GROWTH FAILURE
K08yz00 - OTHER IMPAIRED RENAL FUNCTION DISORDER NOS
K08z.00 - IMPAIRED RENAL FUNCTION DISORDER NOS
K0B..00 - RENAL TUBULO-INTERSTITIAL DISORDERS IN DISEASES EC
K0B0.00 - REN TUBULO-INTERSTITIAL DISORD INFECT AND PARASITIC DIS EC
K0B1.00 - RENAL TUBULO-INTERSTITIAL DISORDER/ NEOPLASTIC DISEASES
K0B2.00 - REN TUB-INTERST DISORDR/BLOOD DIS+DISORDR INV IMMUNE MECH
K0B3.00 - RENAL TUBULO-INTERSTITIAL DISORDERS IN METABOLIC DISEASES
K0B4.00 - REN TUB-INTERSTITL DISORDR/SYSTEMC CONNECTV TISS DISORDER
K0B4000 - RENAL TUBULO-INTERSTITIAL DISORDER IN SLE
K0B5.00 - RENAL TUBULO-INTERSTITIAL DISORDRS IN TRANSPLANT REJECTN
K0B6.00 - BALKAN NEPHROPATHY
K0C..00 - DRUG/HEAVY-METAL-INDUCED TUBULO-INTERSTITIAL AND TUB CONDITN
K0C0.00 - ANALGESIC NEPHROPATHY
K0C1.00 - NEPHROPATHY INDUCED BY OTHER DRUGS MEDS AND BIOLOGL SUBSTNCS
K0C2.00 - NEPHROPATHY INDUCED BY UNSPEC DRUG MEDICAMENT OR BIOL SUBS
K0C3.00 - NEPHROPATHY INDUCED BY HEAVY METALS
K0C4.00 - TOXIC NEPHROPATHY, NOT ELSEWHERE CLASSIFIED
K0D..00 - END-STAGE RENAL DISEASE
K0y..00 - OTHER SPECIFIED NEPHRITIS, NEPHROSIS OR NEPHROTIC SYNDROME
K100.00 - CHRONIC PYELONEPHRITIS
K100000 - CHRONIC PYELONEPHRITIS WITHOUT MEDULLARY NECROSIS
K100100 - CHRONIC PYELONEPHRITIS WITH MEDULLARY NECROSIS
Kyu1.00 - [X]RENAL TUBULO-INTERSTITIAL DISEASES
Kyu1000 - [X]OTHER CHRONIC TUBULO-INTERSTITIAL NEPHRITIS

Kyu1100 - [X]OTHER AND UNSPECIFIED HYDRONEPHROSIS
Kyu1200 - [X]OTHER OBSTRUCTIVE AND REFLUX UROPATHY
Kyu1300 - [X]OBSTRUCTIVE AND REFLUX UROPATHY, UNSPECIFIED
Kyu1400 - [X]NEPHROPATHY INDUCED BY OTHER DRUGS+BIOLOGICAL SUBSTANCES
Kyu1500 - [X]TOXIC NEPHROPATHY, NOT ELSEWHERE CLASSIFIED
Kyu1600 - [X]OTHER SPECIFIED RENAL TUBULO-INTERSTITIAL DISEASES
Kyu1700 - [X]RENAL TUBULO-INTERSTITIAL DISORDR/INFECT+PARASITIC DIS CE
Kyu1800 - [X]RENAL TUBULO-INTERSTITIAL DISORDRS/NEOPLASTIC DISEASES CE
Kyu1900 - [X]RENAL TUB-INTERSTL DISORD/BLD DIS+DISORD INVL IMM MECH CE
Kyu1A00 - [X]RENAL TUBULO-INTERSTITIAL DISORDERS/METABOLIC DISEASES CE
Kyu1B00 - [X]RENAL TUBUL-INTERSTITL DISORDRS/CONNECTV TISSU DISORDR CE
Kyu1C00 - [X]RENAL TUBULO-INTERSTITIAL DISORDERS/TRANSPLANT REJECTION
Kyu1D00 - [X]RENAL TUBULO-INTERSTITIAL DISORDERS IN OTHER DISEASES CE
Kyu1E00 - [X]TUBULO-INTERSTIT NEPHRITIS, NOT SPECIF AS ACUTE OR CHRON
Kyu1F00 - [X]HYDRONEPHROSIS WITH URETERAL STRICTURE
Kyu2.00 - [X]RENAL FAILURE
Kyu2100 - [X]OTHER CHRONIC RENAL FAILURE
P769000 - RENAL ARTERY STENOSIS
PD0..00 - RENAL AGENESIS AND DYSGENESIS
PD00.00 - RENAL AGENESIS, UNSPECIFIED
PD00000 - BILATERAL RENAL AGENESIS
PD00100 - UNILATERAL RENAL AGENESIS
PD03100 - UNILATERAL RENAL HYPOPLASIA
PD1..11 - CONGENITAL CYSTIC RENAL DISEASE
PD13.00 - MULTICYSTIC RENAL DYSPLASIA
R144.00 - [D]RENAL FUNCTION TEST ABNORMAL
TB00111 - RENAL TRANSPLANT WITH COMPLICATION, WITHOUT BLAME
TB00111 - RENAL TRANSPLANT WITH COMPLICATION, WITHOUT BLAME
TB11.11 - RENAL DIALYSIS WITH COMPLICATION, WITHOUT BLAME
ZV56011 - [V]AFTERCARE INVOLVING RENAL DIALYSIS NOS

CKD LABORATORY CODES**READ**

R144.11 - [D]KIDNEY FUNCTION TEST ABNORMAL
4512.00- RENAL FUNCTION TESTS ABNORMAL
4519.00 - DETERIORATING RENAL FUNCTION
451Z.00 - RENAL FUNCTION TEST NOS
5573.00 - RENAL ARTERIOGRAM ABNORMAL
R144.00 - [D]RENAL FUNCTION TEST ABNORMAL
44J3000 - SERUM CREATININE ABNORMAL
44J3300 - SERUM CREATININE RAISED
4513100 - CREATININE CLEARANCE-GLOM FILT ABNORMAL
46I3.00 - 24 HOUR URINE VOLUME REDUCED
46I4.00 - 24 HOUR URINE VOLUME ABNORMAL

Codes for co-morbidities**DIABETES (DISEASE CODE OR DRUG CODE)****READ**

14F4.00 - H/O: ADMISSION IN LAST YEAR FOR DIABETES FOOT PROBLEM
14P3.00 - H/O: INSULIN THERAPY
2BBF.00 - RETINAL ABNORMALITY - DIABETES RELATED
2G51000 - FOOT ABNORMALITY - DIABETES RELATED
2G5A.00 - O/E - RIGHT DIABETIC FOOT AT RISK
2G5B.00 - O/E - LEFT DIABETIC FOOT AT RISK
66A3.00 - DIABETIC ON DIET ONLY
66A4.00 - DIABETIC ON ORAL TREATMENT
66A5.00 - DIABETIC ON INSULIN
66AA.11 - INJECTION SITES - DIABETIC
66AH000 - CONVERSION TO INSULIN
66AI.00 - DIABETIC - GOOD CONTROL
66AJ.00 - DIABETIC - POOR CONTROL
66AJ.11 - UNSTABLE DIABETES
66AJ100 - BRITTLE DIABETES
66AJz00 - DIABETIC - POOR CONTROL NOS
7L19800 - SUBCUTANEOUS INJECTION OF INSULIN
889A.00 - DIAB MELLIT INSULIN-GLUCOSE INFUS ACUTE MYOCARDIAL INFARCT
8A12.00 - DIABETIC CRISIS MONITORING
8A13.00 - DIABETIC STABILISATION
8H2J.00 - ADMIT DIABETIC EMERGENCY
8H30.00 - NON-URGENT DIABETIC ADMISSION
C10.00 - DIABETES MELLITUS
C100.00 - DIABETES MELLITUS WITH NO MENTION OF COMPLICATION
C100000 - DIABETES MELLITUS, JUVENILE TYPE, NO MENTION OF COMPLICATION
C100011 - INSULIN DEPENDENT DIABETES MELLITUS
C100100 - DIABETES MELLITUS, ADULT ONSET, NO MENTION OF COMPLICATION
C100111 - MATURITY ONSET DIABETES
C100112 - NON-INSULIN DEPENDENT DIABETES MELLITUS
C100z00 - DIABETES MELLITUS NOS WITH NO MENTION OF COMPLICATION
C101.00 - DIABETES MELLITUS WITH KETOACIDOSIS
C101000 - DIABETES MELLITUS, JUVENILE TYPE, WITH KETOACIDOSIS
C101100 - DIABETES MELLITUS, ADULT ONSET, WITH KETOACIDOSIS
C101y00 - OTHER SPECIFIED DIABETES MELLITUS WITH KETOACIDOSIS
C101z00 - DIABETES MELLITUS NOS WITH KETOACIDOSIS
C102.00 - DIABETES MELLITUS WITH HYPEROSMOLAR COMA
C102000 - DIABETES MELLITUS, JUVENILE TYPE, WITH HYPEROSMOLAR COMA
C102100 - DIABETES MELLITUS, ADULT ONSET, WITH HYPEROSMOLAR COMA
C102z00 - DIABETES MELLITUS NOS WITH HYPEROSMOLAR COMA
C103.00 - DIABETES MELLITUS WITH KETOACIDOTIC COMA
C103000 - DIABETES MELLITUS, JUVENILE TYPE, WITH KETOACIDOTIC COMA
C103100 - DIABETES MELLITUS, ADULT ONSET, WITH KETOACIDOTIC COMA
C103y00 - OTHER SPECIFIED DIABETES MELLITUS WITH COMA
C103z00 - DIABETES MELLITUS NOS WITH KETOACIDOTIC COMA
C104.00 - DIABETES MELLITUS WITH RENAL MANIFESTATION
C104.11 - DIABETIC NEPHROPATHY
C104000 - DIABETES MELLITUS, JUVENILE TYPE, WITH RENAL MANIFESTATION
C104100 - DIABETES MELLITUS, ADULT ONSET, WITH RENAL MANIFESTATION
C104y00 - OTHER SPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS
C104z00 - DIABETES MELLITUS WITH NEPHROPATHY NOS
C105.00 - DIABETES MELLITUS WITH OPHTHALMIC MANIFESTATION
C105000 - DIABETES MELLITUS, JUVENILE TYPE, + OPHTHALMIC MANIFESTATION
C105100 - DIABETES MELLITUS, ADULT ONSET, + OPHTHALMIC MANIFESTATION
C105y00 - OTHER SPECIFIED DIABETES MELLITUS WITH OPHTHALMIC COMPLICATN
C105z00 - DIABETES MELLITUS NOS WITH OPHTHALMIC MANIFESTATION
C106.00 - DIABETES MELLITUS WITH NEUROLOGICAL MANIFESTATION

C106.11 - DIABETIC AMYOTROPHY
C106.12 - DIABETES MELLITUS WITH NEUROPATHY
C106.13 - DIABETES MELLITUS WITH POLYNEUROPATHY
C106000 - DIABETES MELLITUS, JUVENILE, + NEUROLOGICAL MANIFESTATION
C106100 - DIABETES MELLITUS, ADULT ONSET, + NEUROLOGICAL MANIFESTATION
C106y00 - OTHER SPECIFIED DIABETES MELLITUS WITH NEUROLOGICAL COMPS
C106z00 - DIABETES MELLITUS NOS WITH NEUROLOGICAL MANIFESTATION
C107.00 - DIABETES MELLITUS WITH PERIPHERAL CIRCULATORY DISORDER
C107.11 - DIABETES MELLITUS WITH GANGRENE
C107.12 - DIABETES WITH GANGRENE
C107000 - DIABETES MELLITUS, JUVENILE +PERIPHERAL CIRCULATORY DISORDER
C107100 - DIABETES MELLITUS, ADULT, + PERIPHERAL CIRCULATORY DISORDER
C107200 - DIABETES MELLITUS, ADULT WITH GANGRENE
C107y00 - OTHER SPECIFIED DIABETES MELLITUS WITH PERIPH CIRC COMPS
C107z00 - DIABETES MELLITUS NOS WITH PERIPHERAL CIRCULATORY DISORDER
C108.00 - INSULIN DEPENDENT DIABETES MELLITUS
C108.11 - IDDM-INSULIN DEPENDENT DIABETES MELLITUS
C108.12 - TYPE 1 DIABETES MELLITUS
C108.13 - TYPE I DIABETES MELLITUS
C108000 - INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPLICATIONS
C108011 - TYPE I DIABETES MELLITUS WITH RENAL COMPLICATIONS
C108100 - INSULIN-DEPENDENT DIABETES MELLITUS WITH OPHTHALMIC COMPS
C108111 - TYPE I DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS
C108200 - INSULIN-DEPENDENT DIABETES MELLITUS WITH NEUROLOGICAL COMPS
C108211 - TYPE I DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
C108300 - INSULIN DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPLICATN
C108311 - TYPE I DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
C108400 - UNSTABLE INSULIN DEPENDANT DIABETES MELLITUS
C108411 - UNSTABLE TYPE I DIABETES MELLITUS
C108500 - INSULIN DEPENDENT DIABETES MELLITUS WITH ULCER
C108511 - TYPE I DIABETES MELLITUS WITH ULCER
C108600 - INSULIN DEPENDENT DIABETES MELLITUS WITH GANGRENE
C108611 - TYPE I DIABETES MELLITUS WITH GANGRENE
C108700 - INSULIN DEPENDENT DIABETES MELLITUS WITH RETINOPATHY
C108711 - TYPE I DIABETES MELLITUS WITH RETINOPATHY
C108800 - INSULIN DEPENDANT DIABETES MELLITUS - POOR CONTROL
C108811 - TYPE I DIABETES MELLITUS - POOR CONTROL
C108900 - INSULIN DEPENDANT DIABETES MATURITY ONSET
C108911 - TYPE I DIABETES MELLITUS MATURITY ONSET
C108A00 - INSULIN-DEPENDENT DIABETES WITHOUT COMPLICATION
C108A11 - TYPE I DIABETES MELLITUS WITHOUT COMPLICATION
C108B00 - INSULIN DEPENDENT DIABETES MELLITUS WITH MONONEUROPATHY
C108B11 - TYPE I DIABETES MELLITUS WITH MONONEUROPATHY
C108C00 - INSULIN DEPENDENT DIABETES MELLITUS WITH POLYNEUROPATHY
C108C11 - TYPE I DIABETES MELLITUS WITH POLYNEUROPATHY
C108D00 - INSULIN DEPENDENT DIABETES MELLITUS WITH NEPHROPATHY
C108D11 - TYPE I DIABETES MELLITUS WITH NEPHROPATHY
C108E00 - INSULIN DEPENDENT DIABETES MELLITUS WITH HYPOGLYCAEMIC COMA
C108E11 - TYPE I DIABETES MELLITUS WITH HYPOGLYCAEMIC COMA
C108F00 - INSULIN DEPENDENT DIABETES MELLITUS WITH DIABETIC CATARACT
C108F11 - TYPE I DIABETES MELLITUS WITH DIABETIC CATARACT
C108G00 - INSULIN DEPENDENT DIAB MELL WITH PERIPHERAL ANGIOPATHY
C108G11 - TYPE I DIABETES MELLITUS WITH PERIPHERAL ANGIOPATHY
C108H00 - INSULIN DEPENDENT DIABETES MELLITUS WITH ARTHROPATHY
C108H11 - TYPE I DIABETES MELLITUS WITH ARTHROPATHY
C108J00 - INSULIN DEPENDENT DIAB MELL WITH NEUROPATHIC ARTHROPATHY
C108J11 - TYPE I DIABETES MELLITUS WITH NEUROPATHIC ARTHROPATHY
C108y00 - OTHER SPECIFIED DIABETES MELLITUS WITH MULTIPLE COMPS
C108z00 - UNSPECIFIED DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
C109.00 - NON-INSULIN-DEPENDENT DIABETES MELLITUS

C109.11 - NIDDM - NON-INSULIN DEPENDENT DIABETES MELLITUS
C109.12 - TYPE 2 DIABETES MELLITUS
C109.13 - TYPE II DIABETES MELLITUS
C109000 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RENAL COMPS
C109011 - TYPE II DIABETES MELLITUS WITH RENAL COMPLICATIONS
C109100 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH OPHTHALM COMPS
C109111 - TYPE II DIABETES MELLITUS WITH OPHTHALMIC COMPLICATIONS
C109200 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH NEURO COMPS
C109211 - TYPE II DIABETES MELLITUS WITH NEUROLOGICAL COMPLICATIONS
C109300 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH MULTIPLE COMPS
C109311 - TYPE II DIABETES MELLITUS WITH MULTIPLE COMPLICATIONS
C109400 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH ULCER
C109411 - TYPE II DIABETES MELLITUS WITH ULCER
C109500 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH GANGRENE
C109511 - TYPE II DIABETES MELLITUS WITH GANGRENE
C109600 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITH RETINOPATHY
C109611 - TYPE II DIABETES MELLITUS WITH RETINOPATHY
C109700 - NON-INSULIN DEPENDANT DIABETES MELLITUS - POOR CONTROL
C109711 - TYPE II DIABETES MELLITUS - POOR CONTROL
C109900 - NON-INSULIN-DEPENDENT DIABETES MELLITUS WITHOUT COMPLICATION
C109911 - TYPE II DIABETES MELLITUS WITHOUT COMPLICATION
C109A00 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH MONONEUROPATHY
C109A11 - TYPE II DIABETES MELLITUS WITH MONONEUROPATHY
C109B00 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH POLYNEUROPATHY
C109B11 - TYPE II DIABETES MELLITUS WITH POLYNEUROPATHY
C109C00 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH NEPHROPATHY
C109C11 - TYPE II DIABETES MELLITUS WITH NEPHROPATHY
C109D00 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH HYPOGLYCA COMA
C109D11 - TYPE II DIABETES MELLITUS WITH HYPOGLYCAEMIC COMA
C109E00 - NON-INSULIN DEPEND DIABETES MELLITUS WITH DIABETIC CATARACT
C109E11 - TYPE II DIABETES MELLITUS WITH DIABETIC CATARACT
C109F00 - NON-INSULIN-DEPENDENT D M WITH PERIPHERAL ANGIOPATH
C109F11 - TYPE II DIABETES MELLITUS WITH PERIPHERAL ANGIOPATHY
C109G00 - NON-INSULIN DEPENDENT DIABETES MELLITUS WITH ARTHROPATHY
C109G11 - TYPE II DIABETES MELLITUS WITH ARTHROPATHY
C109H00 - NON-INSULIN DEPENDENT D M WITH NEUROPATHIC ARTHROPATHY
C109H11 - TYPE II DIABETES MELLITUS WITH NEUROPATHIC ARTHROPATHY
C10A.00 - MALNUTRITION-RELATED DIABETES MELLITUS
C10A000 - MALNUTRITION-RELATED DIABETES MELLITUS WITH COMA
C10A100 - MALNUTRITION-RELATED DIABETES MELLITUS WITH KETOACIDOSIS
C10A200 - MALNUTRITION-RELATED DIABETES MELLITUS WITH RENAL COMPLICATN
C10A300 - MALNUTRIT-RELATED DIABETES MELLITUS WTH OPHTHALMIC COMPLICAT
C10A400 - MALNUTRITION-RELATED DIABETES MELLITUS WTH NEURO COMPLICATNS
C10A500 - MALNUTRITN-RELAT DIABETES MELITUS WTH PERIPH CIRCUL COMPLCTN
C10A600 - MALNUTRITION-RELATED DIABETES MELLITUS WITH MULTIPLE COMPS
C10A700 - MALNUTRITION-RELATED DIABETES MELLITUS WITHOUT COMPLICATIONS
C10AW00 - MALNUTRIT-RELATED DIABETES MELLITUS WITH UNSPEC COMPLICS
C10AX00 - MALNUTRIT-RELAT DIABETES MELLITUS WITH OTHER SPEC COMPS
C10B.00 - DIABETES MELLITUS INDUCED BY STEROIDS
C10B000 - STEROID INDUCED DIABETES MELLITUS WITHOUT COMPLICATION
C10y.00 - DIABETES MELLITUS WITH OTHER SPECIFIED MANIFESTATION
C10y000 - DIABETES MELLITUS, JUVENILE, + OTHER SPECIFIED MANIFESTATION
C10y100 - DIABETES MELLITUS, ADULT, + OTHER SPECIFIED MANIFESTATION
C10yy00 - OTHER SPECIFIED DIABETES MELLITUS WITH OTHER SPEC COMPS
C10yz00 - DIABETES MELLITUS NOS WITH OTHER SPECIFIED MANIFESTATION
C10z.00 - DIABETES MELLITUS WITH UNSPECIFIED COMPLICATION
C10z000 - DIABETES MELLITUS, JUVENILE TYPE, + UNSPECIFIED COMPLICATION
C10z100 - DIABETES MELLITUS, ADULT ONSET, + UNSPECIFIED COMPLICATION
C10zy00 - OTHER SPECIFIED DIABETES MELLITUS WITH UNSPECIFIED COMPS
C10zz00 - DIABETES MELLITUS NOS WITH UNSPECIFIED COMPLICATION

C350011 - BRONZED DIABETES
Cyu2.00 - [X]DIABETES MELLITUS
Cyu2000 - [X]OTHER SPECIFIED DIABETES MELLITUS
Cyu2100 - [X]MALNUTRIT-RELAT DIABETES MELLITUS WITH OTHER SPEC COMPS
Cyu2200 - [X]MALNUTRIT-RELATED DIABETES MELLITUS WITH UNSPEC COMPLICS
Cyu2300 - [X]UNSPECIFIED DIABETES MELLITUS WITH RENAL COMPLICATIONS
F171100 - AUTONOMIC NEUROPATHY DUE TO DIABETES
F345000 - DIABETIC MONONEURITIS MULTIPLEX
F35z000 - DIABETIC MONONEURITIS NOS
F372.00 - POLYNEUROPATHY IN DIABETES
F372.11 - DIABETIC POLYNEUROPATHY
F372.12 - DIABETIC NEUROPATHY
F372000 - ACUTE PAINFUL DIABETIC NEUROPATHY
F372100 - CHRONIC PAINFUL DIABETIC NEUROPATHY
F372200 - ASYMPOMATIC DIABETIC NEUROPATHY
F381300 - MYASTHENIC SYNDROME DUE TO DIABETIC AMYOTROPHY
F381311 - DIABETIC AMYOTROPHY
F3y0.00 - DIABETIC MONONEUROPATHY
F420.00 - DIABETIC RETINOPATHY
F420000 - BACKGROUND DIABETIC RETINOPATHY
F420100 - PROLIFERATIVE DIABETIC RETINOPATHY
F420200 - PREPROLIFERATIVE DIABETIC RETINOPATHY
F420300 - ADVANCED DIABETIC MACULOPATHY
F420400 - DIABETIC MACULOPATHY
F420500 - ADVANCED DIABETIC RETINAL DISEASE
F420z00 - DIABETIC RETINOPATHY NOS
F440700 - DIABETIC IRITIS
F464000 - DIABETIC CATARACT
G73y000 - DIABETIC PERIPHERAL ANGIOPATHY
K01x100 - NEPHROTIC SYNDROME IN DIABETES MELLITUS
Kyu0300 - [X]GLOMERULAR DISORDERS IN DIABETES MELLITUS
L180500 - PRE-EXISTING DIABETES MELLITUS, INSULIN-DEPENDENT
L180600 - PRE-EXISTING DIABETES MELLITUS, NON-INSULIN-DEPENDENT
L180700 - PRE-EXISTING MALNUTRITION-RELATED DIABETES MELLITUS
Lyu2900 - [X]PRE-EXISTING DIABETES MELLITUS, UNSPECIFIED
M037200 - CELLULITIS IN DIABETIC FOOT
M271000 - ISCHAEMIC ULCER DIABETIC FOOT
M271100 - NEUROPATHIC DIABETIC ULCER - FOOT
M271200 - MIXED DIABETIC ULCER - FOOT
N030000 - DIABETIC CHEIROARTHROPATHY
N030011 - DIABETIC CHEIROPATHY
N030100 - DIABETIC CHARCOT ARTHROPATHY
Q441.00 - NEONATAL DIABETES MELLITUS
R054200 - [D]GANGRENE OF TOE IN DIABETIC
R054300 - [D]WIDESPREAD DIABETIC FOOT GANGRENE
TJ23.00 - ADVERSE REACTION TO INSULINS AND ANTIDIABETIC AGENTS
TJ23000 - ADVERSE REACTION TO INSULINS
TJ23z00 - ADVERSE REACTION TO INSULINS AND ANTIDIABETIC AGENTS NOS
U602311 - [X] ADVERSE REACTION TO INSULINS AND ANTIDIABETIC AGENTS
U602312 - [X] ADVERSE REACTION TO INSULINS
U60231E - [X] ADVERSE REACTION TO INSULINS AND ANTIDIABETIC AGENTS NOS
ZV6DA00 - [V]ADMITTED FOR COMMENCEMENT OF INSULIN
ZV6DB00 - [V]ADMITTED FOR CONVERSION TO INSULIN

CARDIOVASCULAR DISEASE**READ**

G3...00 (and all codes below) Ischaemic heart disease
G6...00 (and all codes below) Stroke
Peripheral Vascular Disease
G70..00 - ATHEROSCLEROSIS

G70..11 - ARTERIOSCLEROSIS
G700.00 - AORTIC ATHEROSCLEROSIS
G700.11 - AORTO-ILIAC DISEASE
G701.00 - RENAL ARTERY ATHEROSCLEROSIS
G702.00 - EXTREMITY ARTERY ATHEROMA
G702000 - MONCKEBERG'S MEDIAL SCLEROSIS
G702z00 - EXTREMITY ARTERY ATHEROMA NOS
G70y.00 - OTHER SPECIFIED ARTERY ATHEROMA
G70z.00 - ARTERIOSCLEROTIC VASCULAR DISEASE NOS
G71..00 - AORTIC ANEURYSM
G710.00 - DISSECTING AORTIC ANEURYSM
G711.00 - THORACIC AORTIC ANEURYSM WHICH HAS RUPTURED
G711.11 - RUPTURED THORACIC AORTIC ANEURYSM
G712.00 - THORACIC AORTIC ANEURYSM WITHOUT MENTION OF RUPTURE
G713.00 - ABDOMINAL AORTIC ANEURYSM WHICH HAS RUPTURED
G713.11 - RUPTURED ABDOMINAL AORTIC ANEURYSM
G713000 - RUPTURED SUPRARENAL AORTIC ANEURYSM
G714.00 - ABDOMINAL AORTIC ANEURYSM WITHOUT MENTION OF RUPTURE
G714.11 - AAA - ABDOMINAL AORTIC ANEURYSM WITHOUT MENTION OF RUPTURE
G714000 - JUXTARENAL AORTIC ANEURYSM
G714100 - INFLAMMATORY ABDOMINAL AORTIC ANEURYSM
G715.00 - RUPTURED AORTIC ANEURYSM NOS
G715000 - THORACOABDOMINAL AORTIC ANEURYSM, RUPTURED
G716.00 - AORTIC ANEURYSM WITHOUT MENTION OF RUPTURE NOS
G716000 - THORACOABDOMINAL AORTIC ANEURYSM, WITHOUT MENTION OF RUPTURE
G717.00 - AORTIC ANEURYSM - SYPHILITIC
G718.00 - LEAKING ABDOMINAL AORTIC ANEURYSM
G71z.00 - AORTIC ANEURYSM NOS
G72..00 - OTHER ANEURYSM
G720.00 - ANEURYSM OF ARTERY OF ARM
G720000 - ANEURYSM OF BRACHIAL ARTERY
G720100 - ANEURYSM OF RADIAL ARTERY
G720200 - ANEURYSM OF ULNAR ARTERY
G720z00 - ANEURYSM OF ARM ARTERY NOS
G721.00 - ANEURYSM OF RENAL ARTERY
G722.00 - ANEURYSM OF ILIAC ARTERY
G722000 - ANEURYSM OF COMMON ILIAC ARTERY
G722100 - ANEURYSM OF EXTERNAL ILIAC ARTERY
G722200 - ANEURYSM OF INTERNAL ILIAC ARTERY
G722z00 - ANEURYSM OF ILIAC ARTERY NOS
G723.00 - ANEURYSM OF LEG ARTERY
G723000 - ANEURYSM OF FEMORAL ARTERY
G723100 - ANEURYSM OF POPLITEAL ARTERY
G723200 - ANEURYSM OF ANTERIOR TIBIAL ARTERY
G723300 - ANEURYSM OF DORSALIS PEDIS ARTERY
G723400 - ANEURYSM OF POSTERIOR TIBIAL ARTERY
G723500 - RUPTURED POPLITEAL ARTERY ANEURYSM
G723600 - POST RADIOLOGICAL FEMORAL FALSE ANEURYSM
G723z00 - ANEURYSM OF LEG ARTERY NOS
G724.00 - ARTERIAL FALSE ANEURYSM
G724.11 - FALSE ANEURYSM
G72y.00 - ANEURYSM OF OTHER ARTERY
G72y000 - ANEURYSM OF COMMON CAROTID ART
G72y100 - ANEURYSM OF EXTERNAL CAROTID ARTERY
G72y200 - ANEURYSM OF INTERNAL CAROTID ARTERY
G72y300 - ANEURYSM OF NECK ARTERY NOS
G72y400 - ANEURYSM OF SUBCLAVIAN ARTERY
G72y500 - ANEURYSM OF SPLENIC ARTERY
G72y600 - ANEURYSM OF AXILLARY ARTERY

G72y700 - ANEURYSM OF COELIAC ARTERY
G72y800 - ANEURYSM OF SUPERIOR MESENTERIC ARTERY
G72y900 - ANEURYSM OF INFERIOR MESENTERIC ARTERY
G72yA00 - ANEURYSM OF HEPATIC ARTERY
G72yB00 - ANEURYSM OF OTHER VISCERAL ARTERY
G72yz00 - OTHER ANEURYSM NOS
G72z.00 - ANEURYSM NOS
G73..00 - OTHER PERIPHERAL VASCULAR DISEASE
G73..11 - PERIPHERAL ISCHAEMIC VASCULAR DISEASE
G73..12 - ISCHAEMIA OF LEGS
G73..13 - PERIPHERAL ISCHAEMIA
G732.00 - PERIPHERAL GANGRENE
G732000 - GANGRENE OF TOE
G732100 - GANGRENE OF FOOT
G732200 - GANGRENE OF FINGER
G732300 - GANGRENE OF THUMB
G732400 - GANGRENE OF HAND
G73z.00 - PERIPHERAL VASCULAR DISEASE NOS
G73z000 - INTERMITTENT CLAUDICATION
G73z011 - CLAUDICATION
G76A.00 - ARTERIAL INSUFFICIENCY

HYPERTENSION**READ**

G2...00 (and all codes below) HYPERTENSION

VASCULITIS**READ**

N04..00 - RHEUMATOID ARTHRITIS AND OTHER INFLAMMATORY POLYARTHRITIS

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4. Royal College of Physicians. Guidelines for Identification, Management and Referral of Adults with Chronic Kidney Disease in the United Kingdom. Royal College of Physicians Jun 2005
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