

## Supplement 2 – Code lists for outcomes

### WP1- Progression of renal disease

Table 1 - Renal dialysis ICD-10 Codes

ICD10	Description
Z49.1	Extracorporeal dialysis
Z49.2	Other dialysis (Peritoneal dialysis)
Z99.2	Dependence on renal dialysis

Table 2 - Renal dialysis OPCS-4 codes

OPCS1	Description
X401	Renal dialysis
X402	Peritoneal dialysis NEC
X403	Haemodialysis NEC
X404	Haemofiltration
X405	Automated peritoneal dialysis
X406	Continuous ambulatory peritoneal dialysis
X407	Haemoperfusion
X411	Insertion of ambulatory peritoneal dialysis catheter

Table 3 - Renal dialysis READ codes

CPRD medcode	READ code	READ term
96184	TA02000	Accid cut,puncture,perf,h'ge - kidney dialysis
105436	SP0G.00	Anaphylactoid reaction due to haemodialysis
60446	Z919.00	Care of haemodialysis equipment

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
107900	SP0E.00	Disorders associated with peritoneal dialysis
69266	TA22000	Failure of sterile precautions during kidney dialysis
104586	7L1B200	Flushing of peritoneal dialysis catheter
44422	14V2.11	H / O: kidney dialysis
20196	14V2.00	H / O: renal dialysis
72336	Z919100	Priming haemodialysis lines
23773	7L1B100	Removal of ambulatory peritoneal dialysis catheter
60498	Z919300	Reversing haemodialysis lines
45160	ZV56y11	[V]Aftercare involving peritoneal dialysis
46145	ZV56011	[V]Aftercare involving renal dialysis NOS
22252	ZV45100	[V]Renal dialysis status
46438	SP05613	[X] Peritoneal dialysis associated peritonitis
104201	SP08H00	Acute rejection of renal transplant
104960	SP08E00	Acute rejection of renal transplant - grade I
107000	SP08F00	Acute rejection of renal transplant - grade II
104630	SP08G00	Acute rejection of renal transplant - grade III
104905	SP08D00	Acute-on-chronic rejection of renal transplant
106620	SP08J00	Chronic rejection of renal transplant
72004	7B01511	Excision of rejected transplanted kidney
26862	7B06300	Exploration of renal transplant
11553	SP08300	Kidney transplant failure and rejection
104050	7B0Fy00	OS interventions associated with transplantation of kidney

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
105811	SP08R00	Renal transplant rejection
48057	K0B5.00	Renal tubulo-interstitial disorders in transplant rejectn
106301	SP08P00	Stenosis of vein of transplanted kidney
105724	SP08N00	Unexplained episode of renal transplant dysfunction
107752	SP08T00	Urological complication of renal transplant
106866	SP08W00	Vascular complication of renal transplant
108437	SP08V00	Very mild acute rejection of renal transplant
5911	ZV42000	[V]Kidney transplanted
100693	Kyu1C00	[X]Renal tubulo-interstitial disorders / transplant rejection
88597	7L1A400	Automated peritoneal dialysis
30756	7L1A500	Continuous ambulatory peritoneal dialysis
101124	SP06B00	Continuous ambulatory peritoneal dialysis associated perit
11773	7L1A.11	Dialysis for renal failure
102210	7L1f000	Extracorporeal albumin haemodialysis
108785	SP0F.00	Haemodialysis first use syndrome
2996	7L1A200	Haemodialysis NEC
8037	7L1B000	Insertion of ambulatory peritoneal dialysis catheter
30709	7L1C000	Insertion of temporary peritoneal dialysis catheter
28158	TB11.00	Kidney dialysis with complication, without blame
2994	7L1A100	Peritoneal dialysis
63502	Z91A.00	Peritoneal dialysis bag procedure
64828	7L1A600	Peritoneal dialysis NEC

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
98888	4I29.00	Peritoneal dialysis sample
36442	7L1B.11	Placement ambulatory dialysis apparatus - compens renal fail
20073	7L1A000	Renal dialysis
66714	TB11.11	Renal dialysis with complication, without blame

Table 4 - ICD-10 Renal Transplant

<b>ICD10</b>	<b>Description</b>
Z94.0	Kidney transplant status

Table 5 - OPCS-4 Renal Transplant

<b>OPCS1</b>	<b>Description</b>
M011	Autotransplantation of kidney
M012	Allotransplantation of kidney from live donor
M013	Allotransplantation of kidney from cadaver NEC
M014	Allotransplantation of kidney from cadaver heart beating
M015	Allotransplantation of kidney from cadaver heart non-beating
M018	Other specified transplantation of kidney
M019	Unspecified transplantation of kidney

Table 6- READ codes of kidney transplant

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
96133	7B00400	Allotransplantation kidney from cadaver, heart non-beating
98364	7B00211	Allotransplantation of kidney from cadaver

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
109455	7B00500	Allotransplantation of kidney from cadaver NEC
89924	7B00300	Allotransplantation of kidney from cadaver, heart-beating
66705	7B00111	Allotransplantation of kidney from live donor
55151	7B00000	Autotransplant of kidney
105328	7B00212	Cadaveric renal transplant
93366	7B0F.00	Interventions associated with transplantation of kidney
104049	7B0Fz00	Interventions associated with transplantation of kidney NOS
54990	TB00100	Kidney transplant with complication, without blame
70874	7B00y00	Other specified transplantation of kidney
94964	7B0F400	Post-transplantation of kidney examination, live donor
103429	7B0F300	Post-transplantation of kidney examination, recipient
18774	TB00111	Renal transplant with complication, without blame
2997	7B00.00	Transplantation of kidney
24361	7B00200	Transplantation of kidney from cadaver
11745	7B00100	Transplantation of kidney from live donor
5504	7B00z00	Transplantation of kidney NOS
105787	7B00600	Xenograft renal transplant

## WP2 - Fracture

Table 7 - ICD-10 codes of hip fracture

<b>ICD10</b>	<b>Description</b>
S72	Fracture of femur
S72.0	Fracture of neck of femur

ICD10	Description
S72.1	Pertrochanteric fracture

Table 8 - ICD-10 codes of non-hip fracture<sup>1</sup>

ICD10	Description
S72.7	Multiple fractures of femur
S72.8	Fractures of other parts of femur
S72.9	Fracture of femur, part unspecified
S32.1	Fracture of sacrum
S32.2	Fracture of coccyx
S32.3	Fracture of ilium
S32.4	Fracture of acetabulum
S32.5	Fracture of pubis
S32.8	Fracture of other and unspecified parts of lumbar spine and pelvis
S82.2	Fracture of shaft of tibia
S82.3	Fracture of lower end of tibia
S82.1	Fracture of upper end of tibia
S22.4	Multiple fractures of ribs
S22.5	Flail chest
S22	Fracture of rib(s), sternum and thoracic spine
S22.2	Fracture of sternum
S22.3	Fracture of rib
S22.8	Fracture of other parts of bony thorax
S22.9	Fracture of bony thorax, part unspecified

<b>ICD10</b>	<b>Description</b>
S42.0	Fracture of clavicle
S42.1	Fracture of scapula
S42.3	Fracture of shaft of humerus
S42.4	Fracture of lower end of humerus
S42.7	Multiple fractures of clavicle, scapula and humerus
S42.8	Fracture of other parts of shoulder and upper arm
S42.9	Fracture of shoulder girdle, part unspecified
S52.0	Fracture of upper end of ulna
S52.1	Fracture of upper end of radius
S62.0	Fracture of navicular [scaphoid] bone of hand
S62.1	Fracture of other carpal bone(s)
S82	Fracture of lower leg, including ankle
S82.0	Fracture of patella
S82.4	Fracture of fibula alone
S82.5	Fracture of medial malleolus
S82.6	Fracture of lateral malleolus
S82.7	Multiple fractures of lower leg
S82.8	Fractures of other parts of lower leg
S82.9	Fracture of lower leg, part unspecified
S92	Fracture of foot, except ankle
S92.0	Fracture of calcaneus
S92.1	Fracture of talus
S92.2	Fracture of other tarsal bone(s)

<b>ICD10</b>	<b>Description</b>
S92.7	Multiple fractures of foot
S92.9	Fracture of foot, unspecified

Table 9 - ICD-10 codes of non-hip osteoporotic fracture

<b>ICD10</b>	<b>Description</b>
S42.2	Fracture of upper end of humerus
S42	Fracture of shoulder and upper arm
S52	Fracture of forearm
S52.2	Fracture of shaft of ulna
S52.3	Fracture of shaft of radius
S52.4	Fracture of shafts of both ulna and radius
S52.5	Fracture of lower end of radius
S52.6	Fracture of lower end of both ulna and radius
S52.7	Multiple fractures of forearm
S52.8	Fracture of other parts of forearm
S52.9	Fracture of forearm, part unspecified
S62	Fracture at wrist and hand level
S22.0	Fracture of thoracic vertebra
S22.1	Multiple fractures of thoracic spine
S32	Fracture of lumbar spine and pelvis
S32.0	Fracture of lumbar vertebra



## WP3 – Safety outcomes

Table 10 - ICD-10 codes of acute kidney injury

ICD10	Description
N17	Acute renal failure
N17.0	Acute renal failure with tubular necrosis
N17.1	Acute renal failure with acute cortical necrosis
N17.2	Acute renal failure with medullary necrosis
N17.8	Other acute renal failure
N17.9	Acute renal failure, unspecified

Table 11 - ICD-10 codes of peptic ulcer

ICD10	Description
K25	Gastric ulcer
K25.0	Gastric ulcer : acute with haemorrhage
K25.1	Gastric ulcer : acute with perforation
K25.2	Gastric ulcer : acute with both haemorrhage and perforation
K25.3	Gastric ulcer : acute without haemorrhage or perforation
K25.4	Gastric ulcer : chronic or unspecified with haemorrhage
K25.5	Gastric ulcer : chronic or unspecified with perforation
K25.6	Gastric ulcer : chronic or unspecified with both haemorrhage and perforation
K25.7	Gastric ulcer : chronic without haemorrhage or perforation
K25.9	Gastric ulcer : unspecified as acute or chronic, without haemorrhage or perforation
K26	Duodenal ulcer
K26.0	Duodenal ulcer : acute with haemorrhage
K26.1	Duodenal ulcer : acute with perforation

**ICD10 Description**

K26.2	Duodenal ulcer : acute with both haemorrhage and perforation
K26.3	Duodenal ulcer : acute without haemorrhage or perforation
K26.4	Duodenal ulcer : chronic or unspecified with haemorrhage
K26.5	Duodenal ulcer : chronic or unspecified with perforation
K26.6	Duodenal ulcer : chronic or unspecified with both haemorrhage and perforation
K26.7	Duodenal ulcer : chronic without haemorrhage or perforation
K26.9	Duodenal ulcer : unspecified as acute or chronic, without haemorrhage or perforation
K27	Peptic ulcer, site unspecified
K27.0	Peptic ulcer, site unspecified : acute with haemorrhage
K27.1	Peptic ulcer, site unspecified : acute with perforation
K27.2	Peptic ulcer, site unspecified : acute with both haemorrhage and perforation
K27.3	Peptic ulcer, site unspecified : acute without haemorrhage or perforation
K27.4	Peptic ulcer, site unspecified : chronic or unspecified with haemorrhage
K27.5	Peptic ulcer, site unspecified : chronic or unspecified with perforation
K27.6	Peptic ulcer, site unspecified : chronic or unspecified with both haemorrhage and perforation
K27.7	Peptic ulcer, site unspecified : chronic without haemorrhage or perforation
K27.9	Peptic ulcer, site unspecified : unspecified as acute or chronic, without haemorrhage or perforation
K28	Gastrojejunal ulcer
K28.0	Gastrojejunal ulcer : acute with haemorrhage
K28.1	Gastrojejunal ulcer : acute with perforation
K28.2	Gastrojejunal ulcer : acute with both haemorrhage and perforation

<b>ICD10</b>	<b>Description</b>
K28.3	Gastrojejunal ulcer : acute without haemorrhage or perforation
K28.4	Gastrojejunal ulcer : chronic or unspecified with haemorrhage
K28.5	Gastrojejunal ulcer : chronic or unspecified with perforation
K28.6	Gastrojejunal ulcer : chronic or unspecified with both haemorrhage and perforation
K28.7	Gastrojejunal ulcer : chronic without haemorrhage or perforation
K28.9	Gastrojejunal ulcer : unspecified as acute or chronic, without haemorrhage or perforation

Table 12 - READ codes for peptic ulcer

<b>CPRD</b>	<b>READ</b>	<b>READ term</b>
<b>medcode</b>	<b>code</b>	
2812	14C1.00	H / O: peptic ulcer
6321	14C1.11	H / O: duodenal ulcer
7108	14C1.12	H / O: gastric ulcer
26261	ZV12711	[V]Personal history of peptic ulcer
40489	ZV12712	[V]Personal history of duodenal ulcer
41271	ZV12C00	[V] Personal history of gastric ulcer
92695	7612111	Balfour excision of gastric ulcer
64014	761J100	Closure of gastric ulcer NEC
4741	7627000	Closure of perforated duodenal ulcer
20677	761J000	Closure of perforated gastric ulcer
45981	761D500	Endoscopic injection haemostasis of duodenal ulcer
63718	761D600	Endoscopic injection haemostasis of gastric ulcer

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
18319	J17y800	Healed gastric ulcer leaving a scar
55933	7627z00	Operation on duodenal ulcer NOS
33914	761Jz00	Operation on gastric ulcer NOS
5928	7627.00	Operations on duodenal ulcer
23688	761J.00	Operations on gastric ulcer
56005	7627y00	Other specified operation on duodenal ulcer
94104	761Jy00	Other specified operation on gastric ulcer
55350	7627200	Oversew of blood vessel of duodenal ulcer
64710	7612500	Resection of gastric ulcer by cautery
37268	7627100	Suture of duodenal ulcer not elsewhere classified
32856	J130.00	Acute peptic ulcer
50048	J130z00	Acute peptic ulcer NOS
67711	J130y00	Acute peptic ulcer unspecified
44637	J130100	Acute peptic ulcer with haemorrhage
45304	J130300	Acute peptic ulcer with haemorrhage and perforation
5521	J130200	Acute peptic ulcer with perforation
68661	J130000	Acute peptic ulcer without mention of complication
40997	J131.00	Chronic peptic ulcer
69663	J131z00	Chronic peptic ulcer NOS
70390	J131y00	Chronic peptic ulcer unspecified
53126	J131100	Chronic peptic ulcer with haemorrhage
52313	J131400	Chronic peptic ulcer with obstruction

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
37620	J131200	Chronic peptic ulcer with perforation
99430	J131000	Chronic peptic ulcer without mention of complication
670	J13..00	Peptic ulcer - (PU) site unspecified
19928	J13z.00	Peptic ulcer NOS
24021	J102000	Peptic ulcer of oesophagus
50497	J13y.00	Unspecified peptic ulcer
60249	J13yz00	Unspecified peptic ulcer NOS
70456	J13y100	Unspecified peptic ulcer with haemorrhage
96622	J13y300	Unspecified peptic ulcer with haemorrhage and perforation
99670	J13y400	Unspecified peptic ulcer with obstruction
64111	J13y200	Unspecified peptic ulcer with perforation
67082	J13y000	Unspecified peptic ulcer without mention of complication
18027	J120.00	Acute duodenal ulcer
53797	J120z00	Acute duodenal ulcer NOS
53822	J120y00	Acute duodenal ulcer unspecified
18001	J120100	Acute duodenal ulcer with haemorrhage
48730	J120300	Acute duodenal ulcer with haemorrhage and perforation
73417	J120400	Acute duodenal ulcer with obstruction
18324	J120200	Acute duodenal ulcer with perforation
44335	J120000	Acute duodenal ulcer without mention of complication
24040	J110.00	Acute gastric ulcer
44324	J110z00	Acute gastric ulcer NOS

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
24342	J110y00	Acute gastric ulcer unspecified
30054	J110100	Acute gastric ulcer with haemorrhage
71403	J110300	Acute gastric ulcer with haemorrhage and perforation
109546	J110400	Acute gastric ulcer with obstruction
14671	J110200	Acute gastric ulcer with perforation
64165	J110000	Acute gastric ulcer without mention of complication
89234	J125.00	Anti-platelet induced duodenal ulcer
63001	J112.00	Anti-platelet induced gastric ulcer
89227	J112z00	Anti-platelet induced gastric ulcer NOS
11124	J110111	Bleeding acute gastric ulcer
18625	J121111	Bleeding chronic duodenal ulcer
36583	J111111	Bleeding chronic gastric ulcer
9853	J121.00	Chronic duodenal ulcer
51406	J121z00	Chronic duodenal ulcer NOS
52138	J121y00	Chronic duodenal ulcer unspecified
48951	J121100	Chronic duodenal ulcer with haemorrhage
71881	J121300	Chronic duodenal ulcer with haemorrhage and perforation
44073	J121400	Chronic duodenal ulcer with obstruction
37643	J121200	Chronic duodenal ulcer with perforation
33438	J121000	Chronic duodenal ulcer without mention of complication
18654	J111.00	Chronic gastric ulcer
44309	J111z00	Chronic gastric ulcer NOS

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
64556	J111y00	Chronic gastric ulcer unspecified
63582	J111100	Chronic gastric ulcer with haemorrhage
71897	J111300	Chronic gastric ulcer with haemorrhage and perforation
67356	J111400	Chronic gastric ulcer with obstruction
53336	J111200	Chronic gastric ulcer with perforation
48946	J111000	Chronic gastric ulcer without mention of complication
352	J12..00	Duodenal ulcer - (DU)
22918	J122.00	Duodenal ulcer disease
15175	J12z.00	Duodenal ulcer NOS
1262	J11..00	Gastric ulcer - (GU)
29771	J11z.00	Gastric ulcer NOS
52323	J11z.12	Multiple gastric ulcers
85989	J126.00	Non steroidal anti inflammatory drug induced duodenal ulcer
89023	J113.00	Non steroidal anti inflammatory drug induced gastric ulcer
23087	J121211	Perforated chronic duodenal ulcer
11104	J111211	Perforated chronic gastric ulcer
29317	J124.00	Recurrent duodenal ulcer
28366	J12yy00	Unspec duodenal ulcer; unspec haemorrhage and / or perforation
94397	J11yy00	Unspec gastric ulcer; unspec haemorrhage and / or perforation
53669	J12y.00	Unspecified duodenal ulcer
65737	J12yz00	Unspecified duodenal ulcer NOS

<b>CPRD medcode</b>	<b>READ code</b>	<b>READ term</b>
2814	J12y100	Unspecified duodenal ulcer with haemorrhage
93436	J12y300	Unspecified duodenal ulcer with haemorrhage and perforation
71904	J12y400	Unspecified duodenal ulcer with obstruction
657	J12y200	Unspecified duodenal ulcer with perforation
71150	J12y000	Unspecified duodenal ulcer without mention of complication
53081	J11y.00	Unspecified gastric ulcer
44284	J11yz00	Unspecified gastric ulcer NOS
57958	J11y100	Unspecified gastric ulcer with haemorrhage
73697	J11y400	Unspecified gastric ulcer with obstruction
36461	J11y200	Unspecified gastric ulcer with perforation
73338	J11y000	Unspecified gastric ulcer without mention of complication

Table 13 - ICD-10 codes of hypocalcaemia

<b>ICD10</b>	<b>Description</b>
E83.5	Disorders of calcium metabolism

Table 14 - ICD-10 codes for hypophosphatemia

<b>ICD10</b>	<b>Description</b>
E83.3	Disorders of phosphorus metabolism and phosphatases