

Supplementary file

Appendix 1A

Specified procedure codes – aortoiliac revascularisations

<p>Open aortoiliac revascularisations</p> <p>PDC 10 Suture of infrarenale abdominal aorta PDC 30 Suture of iliac artery</p> <p>PDE 10 Thrombectomy or embolectomy of infrarenale abdominal aorta PDE 30 Thrombectomy or embolectomy of iliac artery</p> <p>PDF 10 Thrombendartrectomy of infrarenale abdominal aorta PDF 30 Thrombendartrectomy of iliac artery</p> <p>PDH 10 Bypass from infrarenal abdominal aorta PDH 20 Bypass from aorta to iliac artery PDH 21 Bypass from aorta to bilateral iliac arteries PDH 22 Bypass from aorta to iliac and contralateral femoral artery</p> <p>PDH 23 Bypass from aorta to femoral artery PDH 24 Bypass from aorta to bilateral femoral arteries PDH 30 Bypass from iliac artery PDH 35 Bypass from iliac to femoral artery PDH 99 Other bypass from abdominal aorta or iliac artery</p> <p>PDN 10 Plastic repair of infrarenal abdominal aorta PDN 30 Plastic repair of iliac artery</p> <p>PDR 10 Removal of stent from infrarenal abdominal aorta Only combined with diagnosis codes: I70.0, I70.2, I70.8, I70.9, I73.9, I74.0, I74.1, I74.3, I74.4, I74.5, I74.8, I74.9</p> <p>PDR 30 Removal of stent from iliac artery Only combined with diagnosis codes: I70.0, I70.2, I70.8, I70.9, I73.9, I74.0, I74.1, I74.3, I74.4, I74.5, I74.8, I74.9</p> <p>PDU 70 Exploration of previous reconstruction of infrarenal abdominal aorta or iliac arteries and distal connections</p> <p>PDU 74 Thrombectomy or embolectomy in bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 81 Closure of persisting arteriovenous fistula of bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 82 Plastic repair of bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 85 Removal of stent from bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 88 Excision of bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 99 Other repair after previous reconstruction of infrarenal abdominal aorta and iliac arteries and distal connections</p> <p>PDW 99 Other operations on infrarenal abdominal aorta and iliac arteries and distal connections</p> <p>Aortoiliac endoscopic revascularisations</p> <p>PDS 10 Endoscopic operation on infrarenal abdominal aorta PDS 30 Endoscopic operation on iliac artery PDU 86 Endoscopic operation on bypass from infrarenal abdominal aorta or iliac artery</p>	<p>Endovascular aortoiliac revascularisations</p> <p>PDP 10 Percutaneous plastic repair of infrarenal abdominal aorta PDP 30 Percutaneous plastic repair of iliac artery</p> <p>PDQ 10 Insertion of stent into infrarenal abdominal aorta Only combined with diagnosis codes: I70.0, I70.2, I70.8, I70.9, I73.9, I74.0, I74.1, I74.3, I74.4, I74.5, I74.8, I74.9</p> <p>PDQ 30 Insertion of stent into iliac artery Only combined with diagnosis codes: I70.0, I70.2, I70.8, I70.9, I73.9, I74.0, I74.1, I74.3, I74.4, I74.5, I74.8, I74.9</p> <p>PDT 10 Injection of therapeutic agent into or percutaneous occlusion of infrarenal abdominal aorta PDT 30 Injection of therapeutic agent into or percutaneous occlusion of iliac artery</p> <p>PDU 80 Percutaneous closure of persisting arteriovenous fistula of bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 83 Percutaneous plastic repair of bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 84 Insertion of stent into bypass from infrarenal abdominal aorta or iliac artery</p> <p>PDU 87 Injection of therapeutic agent into bypass from infrarenal abdominal aorta or iliac artery</p>
<p>The procedure codes in Table 1A were combined with the following diagnosis codes: Diabetes mellitus: E10-E11-E12-E13-E14, Diseases of arteries-arterioles and capillaries: I70 – I79</p>	

Appendix 1B

Specified procedure codes – femoral to popliteal revascularisations

<p>Open femoral to popliteal revascularisations</p> <p>PEC 10 Suture of femoral artery PEC 11 Suture of deep femoral artery PEC 12 Suture of superficial femoral artery PEE 10 Thrombectomy or embolectomy of femoral artery PEE 11 Thrombectomy or embolectomy of deep femoral artery PEE 12 Thrombectomy or embolectomy of superficial femoral artery PEF 10 Thrombendarterectomy of femoral artery PEF 11 Thrombendarterectomy of deep femoral artery PEF 12 Thrombendarterectomy of superficial femoral artery PEH 10 Bypass from femoral artery PEH 11 Bypass from deep femoral artery PEH 12 Bypass from superficial femoral artery PEH 20 Bypass from femoral to popliteal artery above knee PEH 30 Bypass from femoral to popliteal artery below knee PEN 10 Plastic repair of femoral artery PEN 11 Plastic repair of deep femoral artery PEN 12 Plastic repair of superficial femoral artery PER 10 Removal of stent from femoral artery PER 11 Removal of stent from deep femoral artery PER 12 Removal of stent from superficial femoral artery PEU 70 Exploration of previous reconstruction of femoral artery with branches or connection to popliteal artery PEU 74 Thrombectomy or embolectomy of bypass from femoral to popliteal artery PEU 76 Operation for aneurysm of bypass from femoral to popliteal artery PEU 81 Closure of persisting arteriovenous fistula of bypass from femoral to popliteal artery PEU 82 Plastic repair of bypass from femoral to popliteal artery PEU 85 Removal of stent from bypass from femoral to popliteal artery PEU 88 Excision of bypass from femoral to popliteal artery PEU 89 Ligature of bypass from femoral to popliteal artery PEU 99 Other repair after previous reconstruction of femoral artery with branches and connection to popliteal artery PEW 99 Other operation on femoral artery with branches and connection to popliteal artery</p> <p>Infrainguinal endoscopic revascularisations</p> <p>PES 10 Endoscopic operation on femoral artery PES 11 Endoscopic operation on deep femoral artery PES 12 Endoscopic operation on superficial femoral artery PEU 86 Endoscopic operation on bypass from femoral to popliteal artery PFS 10 Endoscopic operation on popliteal artery PFU 86 Endoscopic operation on bypass from femoral or popliteal artery to infrapopliteal arteries</p>	<p>Endovascular femoral to popliteal revascularisations</p> <p>PEP 10 Percutaneous plastic repair of femoral artery PEP 11 Percutaneous plastic repair of deep femoral artery PEP 12 Percutaneous plastic repair of superficial femoral artery PEQ 10 Insertion of stent into femoral artery PEQ 11 Insertion of stent into deep femoral artery PEQ 12 Insertion of stent into superficial femoral artery PET 10 Injection of therapeutic agent into or percutaneous occlusion of femoral artery PET 11 Injection of therapeutic agent into or percutaneous occlusion of deep femoral artery PET 12 Injection of therapeutic agent into or percutaneous occlusion of superficial femoral artery PEU 80 Percutaneous closure of persisting arteriovenous fistula of bypass from femoral to popliteal artery PEU 83 Percutaneous plastic repair of bypass from femoral to popliteal artery PEU 84 Insertion of stent into bypass from femoral to popliteal artery PEU 87 Injection of therapeutic agent into bypass from femoral to popliteal artery</p>
<p>The procedure codes in Table 1B were combined with the following diagnosis codes: Diabetes mellitus: E10-E11-E12-E13-E14, Diseases of arteries-arterioles and capillaries: I70 – I79</p>	

Appendix 1C

Specified procedure codes – popliteal to foot revascularisations

<p>Open popliteal to foot revascularisations</p> <p>PFB 10 Ligature of popliteal artery</p> <p>PFB 30 Ligature of artery of lower leg or foot</p> <p>PFC 10 Suture of popliteal artery</p> <p>PFE 10 Thrombectomy or embolectomy of popliteal artery</p> <p>PFE 30 Thrombectomy or embolectomy of artery of lower leg or foot</p> <p>PFH 10 Bypass from popliteal artery</p> <p>PFH 20 Bypass from femoral or popliteal artery to artery of lower leg</p> <p>PFH 21 Bypass from femoral or popliteal artery to proximal anterior tibial artery</p> <p>PFH 22 Bypass from femoral or popliteal artery to distal anterior tibial artery</p> <p>PFH 23 Bypass from femoral or popliteal artery to tibioperoneal trunk</p> <p>PFH 24 Bypass from femoral or popliteal artery to proximal posterior tibial artery</p> <p>PFH 25 Bypass from femoral or popliteal artery to distal posterior tibial artery</p> <p>PFH 26 Bypass from femoral or popliteal artery to proximal peroneal artery</p> <p>PFH 27 Bypass from femoral or popliteal artery to distal peroneal artery</p> <p>PFH 28 Bypass from femoral or popliteal artery to dorsal artery on foot</p> <p>PFH 29 Bypass from femoral or popliteal artery to posterior tibial artery in foot</p> <p>PFH 99 Other bypass from femoral artery to artery of lower leg or foot</p> <p>PFN 10 Plastic repair of popliteal artery</p> <p>PFR 10 Removal of stent from popliteal artery</p> <p>PFR 30 Removal of stent from artery of lower leg</p> <p>PFU 70 Exploration of previous bypass from femoral or popliteal artery to infrapopliteal arteries or reconstruction of popliteal artery and arteries of lower leg and foot</p> <p>PFU 74 Thrombectomy or embolectomy of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 76 Operation for aneurysm of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 81 Closure of persisting arteriovenous fistula of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 82 Plastic repair of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 85 Removal of stent from bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 88 Excision of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 89 Ligature of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 99 Other repair after previous bypass from femoral or popliteal artery to infrapopliteal arteries or reconstruction of popliteal artery and arteries of lower leg and foot</p> <p>PFW 99 Other connection from femoral artery to infrapopliteal arteries or operations on popliteal artery and arteries of lower leg and foot</p>	<p>Endovascular popliteal to foot revascularisations PFP</p> <p>10 Percutaneous plastic repair of popliteal artery PFP 30</p> <p>Percutaneous plastic repair of artery of lower leg PFQ</p> <p>10 Insertion of stent into popliteal artery</p> <p>PFQ 30 Insertion of stent into artery of lower leg</p> <p>PFT 10 Injection of therapeutic agent into or percutaneous occlusion of popliteal artery</p> <p>PFT 30 Injection of therapeutic agent into or percutaneous occlusion of artery of lower leg</p> <p>PFU 80 Percutaneous closure of persisting arteriovenous fistula of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 83 Percutaneous plastic repair of bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 84 Insertion of stent into bypass from femoral or popliteal artery to infrapopliteal arteries</p> <p>PFU 87 Injection of therapeutic agent into bypass from femoral or popliteal artery to infrapopliteal arteries</p>
<p>The procedure codes in Table 1C were combined with the following diagnosis codes: Diabetes mellitus: E10-E11-E12-E13-E14, Diseases of arteries-arterioles and capillaries: I70 – I79</p>	

Appendix 1D

Specified procedure codes – lower extremity amputations

Major amputations (thigh or below knee):

NFQ 19 Amputation of femur
NFQ 99 Other amputation or related operation on hip or femur
NGQ 09 Exarticulation of knee
NGQ 19 Amputation of lower leg
NGQ 99 Other amputation or related operation on knee or lower leg

Major revisions:

NFQ 29 Revision of exarticulation or amputation stump of hip or femur
NGQ 29 Revision of exarticulation or amputation stump of knee or lower leg

Minor amputations (ankle, foot or digit):

NHQ 00 Exarticulation of ankle or foot - Talocrural
NHQ 01 Exarticulation of ankle of foot - Talocrural and malleoli (Syme)
NHQ 02 Exarticulation of ankle of foot - Intertarsal
NHQ 03 Exarticulation of ankle of foot - Tarsometatarsal
NHQ 04 Exarticulation of ankle of foot - Transmetatarsal
NHQ 05 Exarticulation of ankle of foot - Metatarsophalangeal
NHQ 07 Exarticulation of ankle of foot - Toe-partial

NHQ 10 Amputation of ankle of foot - Talocrural
NHQ 11 Amputation of ankle of foot - Talocrural and malleoli (Syme)
NHQ 12 Amputation of ankle of foot - Intertarsal
NHQ 13 Amputation of ankle of foot - Tarsometatarsal
NHQ 14 Amputation of ankle of foot - Transmetatarsal
NHQ 15 Amputation of ankle of foot - Metatarsophalangeal
NHQ 17 Amputation of ankle of foot - Toe-partial
NHQ 99 Other amputation or related operation on ankle or foot

Minor revisions:

NHQ 20 Revision of amputation or exarticulation stump of ankle or foot - Talocrural
NHQ 21 Revision of amputation or exarticulation stump of ankle or foot - Talocrural and malleoli (Syme)
NHQ 22 Revision of amputation or exarticulation stump of ankle or foot - Intertarsal
NHQ 23 Revision of amputation or exarticulation stump of ankle or foot - Tarsometatarsal
NHQ 24 Revision of amputation or exarticulation stump of ankle or foot - Transmetatarsal
NHQ 25 Revision of amputation or exarticulation stump of ankle or foot - Metatarsophalangeal
NHQ 27 Revision of amputation or exarticulation stump of ankle or foot - Toe-partial

The procedure codes in Table 1D were combined with the following diagnosis codes:
Diabetes mellitus: E10-E11-E12-E13-E14, Diseases of arteries-arterioles and capillaries: I70 – I79

Appendix 2A

Multilevel revascularisations in Norway from 2001 to 2014

Treatment sessions ^a (%)	Patients < 60 years 816 (14.2)			Patients ≥ 60 years 4 922 (85.8)		
Sex – male (%)	562 ^b (68.9)			2 910 ^b (59.1)		
Diabetics of total (%)	126 ^c (15.4)			798 ^c (16.2)		
Category	Open	Endo	Hybrid	Open	Endo	Hybrid
Number (%)	304 ^d (37.3)	253 ^e (31.0)	259 ^f (31.7)	1 778 ^d (36.1)	1 752 ^e (35.6)	1 392 ^f (28.3)

^a Total treatment sessions were 5 738

^{b, e, f} Significant difference between the proportion of men, endovascular and hybrid categories in age-group < and ≥ 60 years ($p \leq .05$)

^{c, d} Non-significant difference between the proportion of diabetics and the open category in age-group < and ≥ 60 years ($p > .05$)

Appendix 2B

Aortoiliac revascularisations in Norway from 2001 to 2014

Treatment sessions ^a (%)	Patients < 60 years 4 292 (25.1)			Patients ≥ 60 years 12 826 (74.9)		
Sex – male (%)	2 618 ^b (61.0)			7 456 ^b (58.1)		
Diabetics of total (%)	471 ^c (11.0)			1 599 ^c (12.5)		
Category	Open	Endo	Hybrid	Open	Endo	Hybrid
Number (%)	1 009 ^d (23.5)	3 250 ^e (75.7)	33 ^f (0.8)	2 774 ^d (21.6)	9 951 ^e (77.6)	101 ^f (0.8)

^a Total treatment sessions were 17 118

^{b, c, d, e} Significant difference between the proportion of men, diabetics, the open and the endovascular categories in age-group < and ≥ 60 years ($p \leq .05$)

^f Non-significant difference between the hybrid categories in age-group < and ≥ 60 years ($p > .05$)

Appendix 2C

Femoral to popliteal revascularisations in Norway from 2001 to 2014

Treatment sessions ^a (%)	Patients < 60 years 2 716 (10.2)			Patients ≥ 60 years 23 952 (89.8)		
Sex – male (%)	1 964 ^b (72.3)			13 464 ^b (56.2)		
Diabetics of total (%)	596 ^c (21.9)			4 824 ^c (20.1)		
Category	Open	Endo	Hybrid	Open	Endo	Hybrid
Number (%)	1 238 ^d (45.6)	1 359 ^e (50.0)	119 ^f (4.4)	10 289 ^d (43.0)	12 621 ^e (52.7)	1 042 ^f (4.4)

^a Total treatment sessions were 26 668

^{b, c, d, e} Significant difference between the proportion of men, diabetics, the open and the endovascular categories in age-group < and ≥ 60 years ($p \leq .05$)

^f Non-significant difference between the hybrid categories in age-group < and ≥ 60 years ($p > .05$)

Appendix 2D

Popliteal to foot revascularisations in Norway from 2001 to 2014

Treatment sessions ^a (%)	Patients < 60 years 1 049 (9.1)			Patients ≥ 60 years 10 515 (90.9)		
Sex – male (%)	805 ^b (76.7)			6 075 ^b (57.8)		
Diabetics of total (%)	300 ^c (28.6)			2 847 ^c (27.1)		
Category	Open	Endo	Hybrid	Open	Endo	Hybrid
Number (%)	363 ^d (34.6)	662 ^e (63.1)	24 ^f (2.3)	2 364 ^d (22.5)	7 961 ^e (75.7)	190 ^f (1.8)

^a Total treatment sessions were 11 564

^{b, d, e} Significant difference between the proportion of men, the open and the endovascular categories in age-group < and ≥ 60 years ($p \leq .05$)

^{c, f} Non-significant difference between the proportion of diabetics and the hybrid categories in age-group < and ≥ 60 years ($p > .05$)

Appendix 2E

Lower extremity amputations in Norway from 2001 to 2014

Treatment sessions ^a (%)	Patients < 60 years 912 (7.0)				Patients ≥ 60 years 12 162 (93)			
Sex – male (%)	674 ^b (73.9)				7 028 ^b (57.8)			
Diabetics total (%)	472 (51.8)				4 109 (33.8)			
Subgroup	Major amp	Major amp rev	Minor amp	Minor amp rev	Major amp	Major amp rev	Minor amp	Minor amp rev
No patients (%)	515 ^c (53.2)	77 ^d (8.0)	339 ^e (35.0)	38 ^f (3.9)	9 162 ^c (72.3)	617 ^d (4.9)	2 650 ^e (20.9)	238 ^f (1.9)
Diabetics (%)	239 ^g (46.4)	39 ^h (50.7)	214 ⁱ (63.1)	19 ^j (50.0)	2 797 ^g (30.5)	172 ^h (27.9)	1 242 ⁱ (46.9)	133 ^j (55.9)

^a Total number were 13 074 treatment sessions. Some patients were included in more than one subgroup depending on their procedure codes during the treatment session. In age-group < 60 years this made the sum of the subgroups increase from the original number 912 to 969 and in age-group ≥ 60 years from 12 162 to 12 667.

^{b, c, d, e, f} Significant difference between the proportion of men and between the proportion of patients in all subgroups in age-groups < and ≥ 60 years ($p \leq .05$)

^{g, h, i} Significant difference between the proportion of diabetics in major amp, major amp rev and minor amp in age-group < and ≥ 60 years ($p \leq .05$)

^j Non-significant difference between the proportion of diabetics in min amp rev in age-group < and ≥ 60 years ($p > .05$)