Table S1: Administrative data algorithm for capturing baseline characteristics of patients at the time of first access placement.

Variable	Diagnostic (dx)/ Billing (fc) codes	ICD-10 Diagnostic (Dx) / Procedural (Pr) codes
Diabetes	**Fc**: Q040, K029, K030 **Dx**: 250	**Dx**: E10, E11, E13, E14
History of hypertension		**Dx**: I10, I11, I12, I13, I15
Coronary artery disease (including angina)	**Fc**: R741, R742, R743, G298, E646, E651, E652, E654, E655, G262, Z434, Z448 **Dx**: 410, 412, 413	**Dx**: I20, I21, I22, I23, I24, I25, Z955, Z958, Z959, R931, T822 **Pr**: 1IJ26, 1IJ27, 1IJ54, 1IJ57, ,1IJ50, 1IJ76
Congestive heart failure	**Fc**: R701, R702, Z429 **Dx**: 428	**Dx**: I500, I501, I509, I255, J81 **Pr**: 1HP53, 1HP55, 1HZ53GRFR, 1HZ53LAFR, 1HZ53SYFR
History of stroke	N/A	**Dx**: H341, I630, I631, I632, I633, I634, I635, I638, I639, I629, I64, G45, I61
Peripheral vascular disease	**Fc**: R787, R780, R797, R804, R809, R875, R815, R936, R783, R784, R785, E626, R814, R786, R937, R860, R861, R855, R856, R933, R934, R791, E672, R794, R813, R867, E649	**Dx**: I700, I702, I708, I709, I731, I738, I739, K551 **Pr**: 1KA76, 1KA50, 1KE76, 1KG26, 1KG50, 1KG57, 1KG76MI, 1KG87
Lung disease	N/A	**Dx**: J41, J43, J44
Liver disease	**Fc**: Z551, Z554 **Dx**: 571, 573, 70	**Dx**: B16, B17, B18, B19, I85, R17, R18, R160, R162, B942, Z2250, Z2251, Z2258, E8310, K70, K713, K714, K715, K717, K721, K729, K73, K74, K753, K754, K758, K759, K76, K77

Abbreviations: Fc: Ontario Health Insurance Plan (OHIP) Fee code; Dx: Codes using International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10); Pr: Codes using Canadian Classification of Health Interventions (CCI).

Table S2: Description of CCI and billing codes use to identify vascular access placement.

Access	Code	Description
Catheter	**Fc:** G099	Subclavian or external jugular catheter for haemodialysis - Percutaneous insertion of permanent jugular/femoral dialysis catheter (including subcutaneous positioning)
Fistula	**Fc:** R827	Creation of A.V. fistula
	Fc: R840	Bypass graft for haemodialysis - autogenous vein
	Fc: R946	Revision or repair of arterio-venous (AV) fistula or graft for haemodialysis - Brachio-basilic vein AV fistula transposition for haemodialysis
	In: 1KY76LA	Bypass, artery with vein using arteriovenous fistula
Arteriovenous Graft	**Fc:** R850	Haemodialysis - Surgical component alone - insertion of Scribner shunt
	Fc: R851	Bypass graft for haemodialysis - synthetic
	Pr: 1KY76LASJ	Bypass, artery with vein using arteriovenous shunt (e.g. Quinton Scribner)
	Pr: 1KY76LAXXL	Bypass, artery with vein using xenograft (e.g. bovine carotid artery)
	Pr: 1KY76LAXXN	Bypass, artery with vein using interposition graft made of synthetic material (e.g. Gore Tex)
	Pr: 1KG76MZXXN	Bypass, arteries of leg NEC using synthetic material[e.g. Dacron] bypass terminating in lower limb vein(e.g. femoral artery to saphenous vein for long term hemodialysis)
	Pr: 1JM76NC	Bypass, arteries of arm NEC using direct suture (without tissue) bypass terminating in upper limb vein (e.g. radial artery to cephalic vein)

Abbreviations: Fc: Ontario Health Insurance Plan (OHIP) Fee code using International Statistical Classification of Diseases and Related Health Problems, Nine Revision (ICD-9); Pr: Codes using Canadian Classification of Health Interventions (CCI).

<u>Table S3:</u> Description of CCI Procedure and billing codes used to identify arteriovenous access revisions.

AV-Access Revision Codes	Description
Fc: R825	Resection of AV aneurysm or fistula with or without major graft - major aneurysm
Fc: R826	Resection of AV aneurysm or fistula with or without major graft - minor aneurysm
Fc: R867	Thrombectomy artery - or graft as - sole procedure
Fc: R841	Obliteration of A.V. fistula
Pr: 1KY80LA	Repair artery with vein using open approach
Pr: 1JU80LA	Repair, veins of arm NEC using open approach without tissue [e.g. direct repair or end-to-end anastomosis]
Pr: 1JU51LA	Occlusion, veins of arm NEC using open approach
Pr: 1TX52LA	Drainage, soft tissue of arm NEC using open (incisional) approach
Pr: 1KZ51LA	Occlusion, blood vessels NEC using open approach without tissue [suture]
Pr: 1KZ80LA	Repair, blood vessels NEC using open approach
Pr: 1JM57LA	Extraction, arteries of arm NEC using open approach without tissue
Pr: 1KY50GPBD	Dilation, artery with vein using percutaneous transluminal approach and balloon dilator

<u>Abbreviations</u>: AV: arteriovenous; Fc: Ontario Health Insurance Plan (OHIP) Fee codes using International Statistical Classification of Diseases and Related Health Problems, Ninth Revision (ICD-9); Pr: Codes using Canadian Classification of Health Interventions (CCI).