

Supplementary Table 1. Criteria for covariates

Variable	Categorization
DM	
DM ICD-9	249, 249.0, 249.1, 249.2, 249.3, 249.4, 249.5, 249.6, 249.7, 249.8, 249.9, 250, 250.0, 250.00, 250.01, 250.02, 250.03, 250.1, 250.10, 250.11, 250.12, 250.13, 250.2, 250.20, 250.21, 250.22, 250.23, 250.3, 250.30, 250.31, 250.32, 250.33, 250.4, 250.40, 250.41, 250.42, 250.43, 250.5, 250.50, 250.51, 250.52, 250.53, 250.6, 250.60, 250.61, 250.62, 250.63, 250.7, 250.70, 250.71, 250.72, 250.73, 250.8, 250.80, 250.81, 250.82, 250.83, 250.9, 250.90, 250.91, 250.92, 250.93;
DM Meds (based on patient's EHR medication list)	Baseline use of any medication listed under Epicare therapeutic class "antihyperglycemic"
HTN	
HTN ICD-9	401, 401.0, 401.1, 401.9, 401.9xx, 402, 402.0, 402.00, 402.01, 402.1, 402.10, 402.11, 402.9, 402.90, 402.91, 403, 403.00, 403.01, 403.1, 403.10, 403.11, 403.9, 403.90, 403.91, 404, 404.0, 404.00, 404.01, 404.02, 404.03, 404.1, 404.10, 404.11, 404.12, 404.13, 404.9, 404.90, 404.91, 404.92, 404.93, 405, 405.0, 405.01, 405.09, 405.1, 405.11, 405.19, 405.9, 405.91, 405.99, 437.2
HTN Meds (based on patient's EHR medication list)	Baseline use of any medication under Epicare therapeutic class diuretics, or any medications under Epicare pharmaceutical classes: (ANTIHYPERTENSIVES ACE INHIBITORS), (ANTIHYPERTENSIVES ANGIOTENSIN RECEPTOR ANTAGONIST), (BETA-ADRENERGIC BLOCKING AGENTS), (ALPHA/BETA-ADRENERGIC BLOCKING AGENTS), (CALCIUM CHANNEL BLOCKING AGENTS), (ANTIHYPERTENSIVES, VASODILATORS), (ANTIHYPERTENSIVES, SYMPATHOLYTIC)
Dyslipidemia	
DL ICD-9	272.0, 272.1, 272.2, 272.3, 272.4, 272.9
DL Meds (based on patient's EHR medication list)	Baseline use of any medications under Epicare pharmaceutical class: (ANTIHYPERLIP.HMG COA REDUCT INHIB&CHOLEST.AB.INHIB),

	(ANTIHYPERLIPIDEMIC-HMG COA REDUCTASE INHIBITORS), (ANTIHYPERLIPIDEMIC-HMG COA REDUCTASE INHIB.&NIACIN), (BILE SALT SEQUESTRANTS), (NIACIN PREPARATIONS), (LIPOTROPICS)
Cardiovasc Dsz	Presence of CAD, cerebrovasc dsz, or PAD
CAD	410, 410.0, 410.00, 410.01, 410.02, 410.1, 410.10, 410.11, 410.12, 410.2, 410.20, 410.21, 410.22, 410.3, 410.30, 410.31, 410.32, 410.4, 410.40, 410.41, 410.42, 410.5, 410.50, 410.51, 410.52, 410.6, 410.60, 410.61, 410.62, 410.7, 410.70, 410.71, 401.72, 410.8, 410.80, 410.81, 410.82, 410.9, 410.90, 410.91, 410.92, 411, 411.0, 411.1, 411.8, 411.81, 411.89, 412, 413, 413.0, 413.1, 413.9, 414, 414.0, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.1, 414.10, 414.11, 414.12, 414.19, 414.2, 414.3, 414.8, 414.9, 36.01 36.02, 36.05, 36.06, 36.09, 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.17, 36.19, 996.72C, V45.82, V45.82x, V45.82xx V45.89AXH, V45.09L, 996.72D, 996.72E, V45.09K, V45.81, V45.81xx, 414.05L,
Cerebrovasc Dsz	430, 431, 433.0, 433.00, 433.01, 433.1, 433.10, 433.11, 433.2, 433.20, 433.21, 433.3, 433.30, 433.31, 433.8, 433.80, 433.81, 433.9, 433.90, 433.91, 434.0, 434.00, 434.01, 434.1, 434.10, 434.11, 434.9, 434.90, 434.91, 435.0, 435.1, 435.3, 435.8, 435.9, 436, 437.0, 437.1, 437.3, 437.9, 438, 438.0, 438.10, 438.11, 438.12, 438.13, 438.14, 438.19, 438.20, 438.21, 438.22, 438.30, 438.31, 438.32, 438.40, 438.41, 438.42, 438.50, 438.51, 438.52, 438.53, 438.6, 438.7, 438.81, 438.81, 438.82, 438.83, 438.84, 438.85, 438.89, 438.9, 996.74H, 996.74J,
PAD/PVD	250.70, 250.71, 250.72, 440.0, 440.1, 440.20, 440.21, 440.22, 440.23, 440.24, 440.29, 440.30, 440.31, 440.32, 440.4, 440.8, 440.9, 443.81, 443.89, 443.9, V43.4K, V43.4L, V45.89XJ, V45.89XH, 996.74AP, 440.30, 440.30x, 440.30xx, 996.74S, 996.74U, 996.74AE, 996.74AG, 996.74W, 996.74Z, 996.74AK, V45.89FA, V45.89APW, 440.30, 440.30x, 440.30xx, V45.89AXD
CHF	428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30,

	428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9
Nephrolithiasis	592, 592.x, 594, 594.x,
CKD stage ICD-9	585.1 stage 1 585.2 stage 2 585.3 stage 3 585.4 stage 4 585.5 stage 5 585.6 end-stage, stage 6 585.9 CKD unspecified—stage 7
Kidney Transplant	V42.0 or an office visit with encounter location unique to the post-Kidney Transplant clinic
Tobacco use	
Tobacco ICD-9	V15.82, v65.49, 305.1
Tobacco Meds (based on patient's EHR medication list)	Baseline use of the following medications: "Varenicline" or any medication of the Epicare therapeutic class: "SMOKING DETERRENTS"
Tobacco Social History	The most recent smoking status recorded in the social history section ("current every day smoker", "current some day smoker")
Dementia	290*, 331.2
Chronic lung disease	416.8, 416.9, 490*, 491*, 492*, 493*, 494*, 495*, 496*, 500*, 501*, 502*, 503*, 504*, 505*, 506.4, 508.1, 508.8
Connective tissue disease	446.5, 710.0-710.4, 714.0, 714.1, 714.2, 714.8*, 725
Peptic ulcer disease	531*, 532*, 533*, 534*
Mild liver disease	571.2, 571.4, 571.4*, 571.5, 571.6
Moderate to severe liver disease	456, 456.0, 456.1, 456.2, 456.2*, 572.2, 572.3, 572.4, 572.5, 572.6, 572.7, 572.8,

Hemiplegia/quadriplegia	344.1, 342, 342.0*, 342.1*, 342.8*, 342.9*
Malignancy	140*, 141*, 142*, 143*, 144*, 145*, 146*, 147*, 148*, 149*, 150*, 151*, 152*, 153*, 154*, 155*, 156*, 157*, 158*, 159*, 160*, 161*, 162*, 163*, 164*, 165*, 166*, 167*, 168*, 169*, 170*, 172*, 174*, 175*, 176*, 177*, 178*, 179*, 180*, 181*, 182*, 183*, 184*, 185*, 186*, 187*, 188*, 189*, 190*, 191*, 192*, 193*, 194*, 195*, 200*, 201*, 202*, 203*, 204*, 205*, 206*, 207*, 208, 208.0*, 208.1*, 208.2*, 208.8*, 208.9*
Metastatic disease	196*, 197*, 198*, 199, 199.0, 199.1
AIDS	042
ACEi/ARB use (based on patient's EHR medication list)	Baseline use of any medication under the Epicare pharmaceutical class (ANTIHYPERTENSIVES ACE INHIBITORS), (ANTIHYPERTENSIVES ANGIOTENSIN RECEPTOR ANTAGONIST),

Supplementary Table 2. Associations with electronic health record portal use

	OR (95%CI)
Charleston Comorbidity Index (5 points vs. 3 points) [†]	1.00 (0.89 – 1.14)
University-affiliated PCP (vs. non-University PCP)	1.94 (1.60 – 2.35)
Nephrology visits (6 vs. 2 visits) [†]	1.52 (1.26 – 1.83)
University-affiliated outpatient visits, non-nephrology (4 vs. 12 visits) [†]	1.18 (1.05 – 1.34)
Follow-up time (3 vs. 1 year)*	1.10 (0.93 – 1.28)

Odds ratios are adjusted for age, sex, race, marital status, insurance status, neighborhood median HH income, tobacco use, length of follow-up, hyperlipidemia, nephrolithiasis, history of kidney transplant, Charlson Comorbidity Index, proteinuria, eGFR, number of nephrology visits, number of non-nephrology outpatient visits, and University-affiliated PCP

[†]The reported odds ratio is comparison specific due to non-linear effects.

*The reported odds ratio is comparison specific due to natural logarithmic transformation.

OR odds ratio, CI confidence interval, PCP primary care provider

Supplemental Table 3. Proportion of population contributing BP values to the analysis

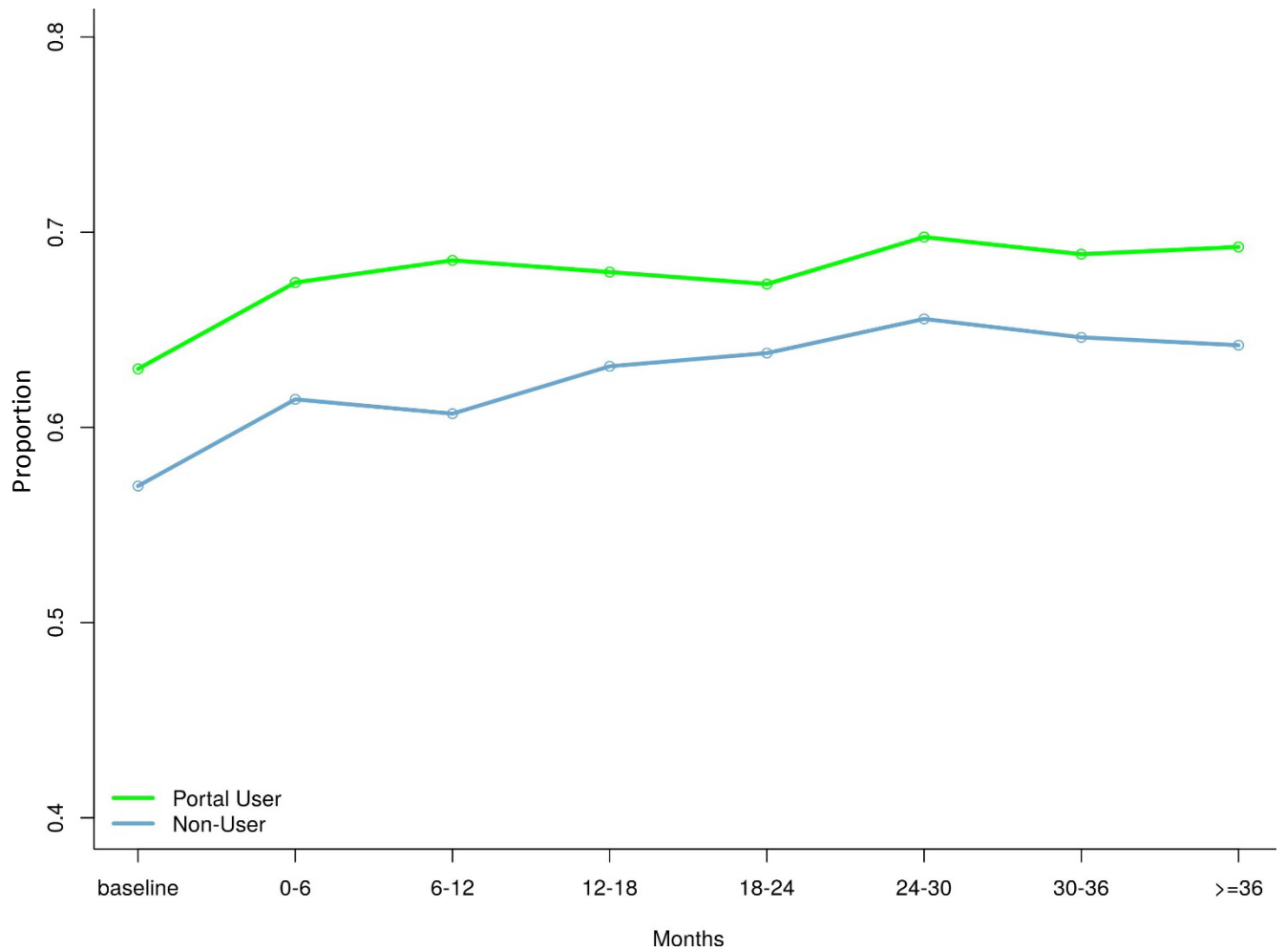
	Overall Cohort	Portal Users	Non-users	P-Value
	N = 2473 (%)	N = 973 (%)	N = 1500 (%)	
<6mo	2049 (83)	795 (82)	1254 (84)	0.2
6-12mo	2092 (85)	852 (88)	1240 (83)	0.001
12-18mo	1842 (74)	766 (79)	1076 (72)	<0.001
18-24mo	1573 (64)	694 (71)	879 (59)	<0.001
24-30mo	1336 (54)	596 (61)	740 (49)	<0.001
30-36mo	1137 (46)	505 (52)	632 (42)	<0.001
>36mo	905 (37)	424 (44)	481 (32)	<0.001

Results represent N (%). P-values from Chi-square test.

Supplemental Table 4. Number of BP measures per unique patient with at least 1 measurement during the specified time interval

	Cohort Mean	Cohort Median	Users Mean	Users Median	Non-users Mean	Non-users Median	P-Value
<6mo	3.9 (3.1)	3.0 (2-5)	4.0 (3.1)	3.0 (2-5)	3.8 (3.1)	3.0 (2-5)	0.2
6-12mo	3.4 (2.7)	3.0 (1-5)	3.5 (2.8)	3.0 (2-5)	3.4 (2.7)	3.0 (1-4)	0.2
12-18mo	3.2 (2.6)	2.0 (1-4)	3.4 (2.7)	3.0 (1-4)	3.1 (2.6)	2.0 (1-4)	0.02
18-24mo	3.5 (2.8)	3.0 (1-5)	3.6 (2.9)	3.0 (2-5)	3.3 (2.7)	2.0 (1-4)	0.008
24-30mo	3.4 (3.0)	3.0 (1-4)	3.5 (3.2)	3.0 (2-4)	3.3 (2.8)	2.0 (1-4)	0.1
30-36mo	3.5 (3.0)	3.0 (1-5)	3.7 (3.0)	3.0 (2-5)	3.4 (2.9)	3.0 (1-4)	0.01
>36mo	3.6 (3.1)	3.0 (1-5)	3.8 (3.1)	3.0 (2-5)	3.5 (3.1)	3.0 (1-5)	<0.001

Results represent mean and (SD) or medians and (IQR). P-values from Wilcoxon–Mann–Whitney test.



Supplementary Figure 1. Median proportion of blood pressures at goal over time

Baseline value represents proportion of baseline blood pressure values (1 per patient) that were at goal. All other values represent the median of the proportion of blood pressure values at goal for patients with at least 1 blood pressure during the specified interval.