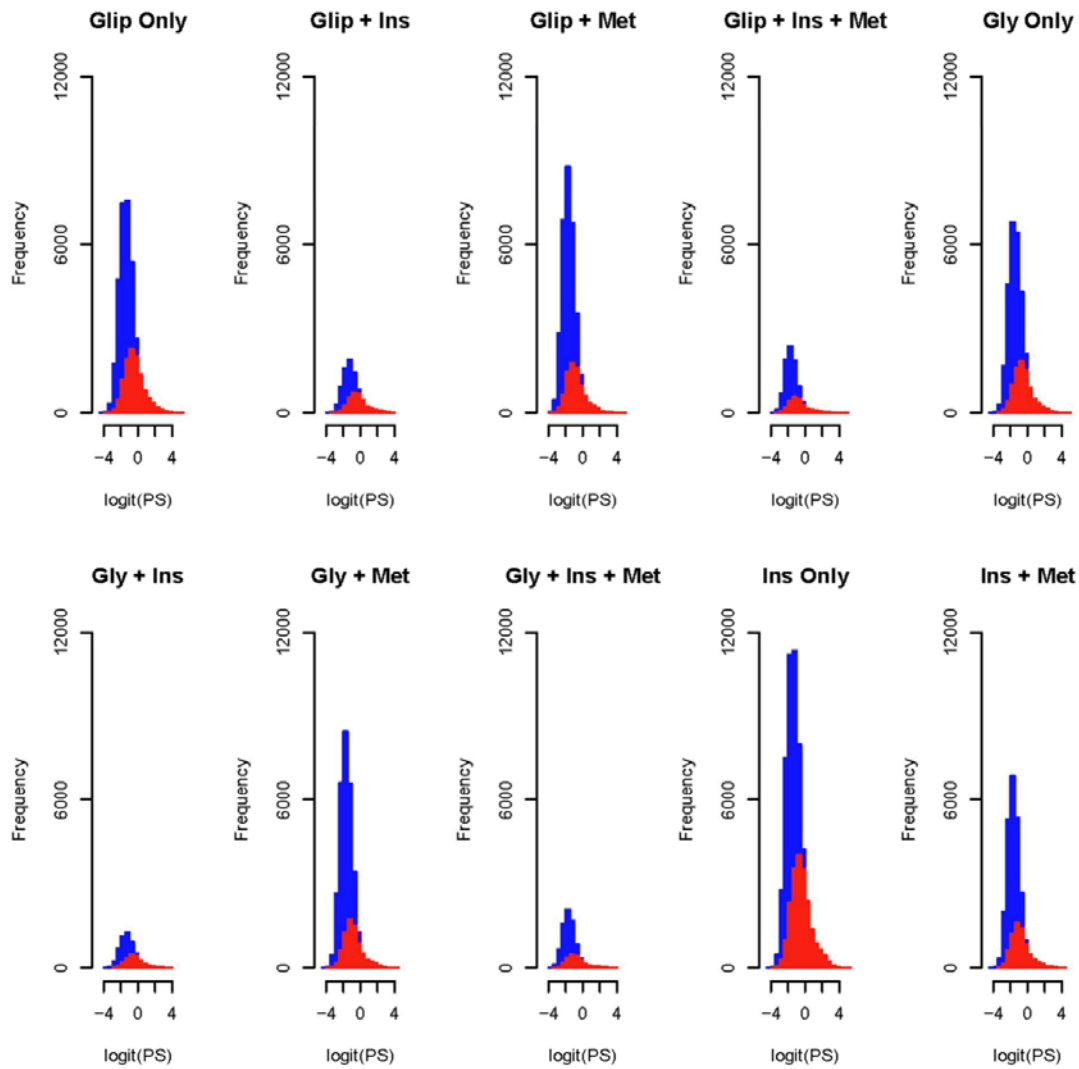


SUPPLEMENTARY DATA

Supplementary Figure 1. Stratified matching- Overlapping Histograms of Logit (PS) for the different Medication regimens



Stratified matching by medication regimen was used to optimize matching within the medication regimens and reduce the variance. This often improves the representativeness of the sample by reducing sampling error.

SUPPLEMENTARY DATA

Supplementary Table 1. Acute Kidney Injury Risk Factors.

Chronic Medical Conditions	Demographics
Anemia ^{1,2}	Age ^{1,3-10}
Chronic Kidney Disease ^{1,2,6,9-12}	Race ⁸
Diabetes mellitus ^{1,2,4-10,13,14}	Gender ^{1,4-8}
Dyslipidemia ^{1,7-9}	
Heart Failure ^{1,2,4,5,11}	Acute Medical Conditions
Hypertension ^{1,5,7-9}	Acute Coronary Syndrome ^{1,10}
Chronic Liver Disease ¹⁵	Sepsis ^{3,14}
Peripheral Vascular Disease ^{1,4-6,8}	Hypovolemia and/or hypotension ^{3,13}
Prior Stroke ^{1,8}	Congestive heart failure exacerbation ^{16,17}
Prior CABG ^{4,5,7-9}	Acute myocardial infarction ^{16,17}
Prior PCI ^{5,8,9}	Shock/Hypotension* ^{1,2,4,6}
Prior Myocardial Infarction ⁶⁻⁹	Cardiac Surgery ¹⁸
	Status post major surgery ¹⁹
Medications	Creatinine/Glomerular Filtration Rate ^{1,4,5,7,9}
Aminoglycosides ¹⁹⁻²³	
Amphotericin B ^{24,25}	Setting-Based Systematic Reviews
Diuretics ^{26,27}	Cardiac Surgery ¹⁸
NSAIDs ^{22,28}	Cardiac Catheterization ³⁰
ACE inhibitors ²³	General Inpatient Population ²⁷
Immunosuppressive agents ²³	
Anti-viral agents ^{23,29}	
Radiocontrast media ^{1,2,5-8,14,19,22}	
Quinine ^{31,32}	

SUPPLEMENTARY DATA

Supplementary Table 2. Covariates definitions.

	Definition
Past Medical History	
Diabetes Mellitus	ICD-9 codes: 249.x, 250.x, 357.2x, 362.0x, 366.41; ICD-9 CM codes V45.85, V53.91
Hypertension	ICD-9 codes: 401.x-405.x, 437.2
Congestive Heart Failure	ICD-9 codes: 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.1x-425.9, 428.x
Coronary Artery Disease	ICD-9 codes: 410.x-413.x, 414.0x, 414.2-414.9, V45.81, V45.82
Liver Disease / Cirrhosis	ICD-9 codes : 456.0-456.2X, 571.X, 572.1X-572.8X, 789.5X
Dementia	IC9-9 codes: 290.x, 294.1x, 331.0x-331.2x
Cerebrovascular Disease	ICD9-CM diagnosis codes: 362.34, 430.x-438.x
Chronic Obstructive Pulmonary Disease	ICD9-CM diagnosis codes: 491.x-492.x, 493.2x, 496.x
Connective Tissue Disease	ICD9-CM diagnosis codes: 446.5, 710.0-4, 714.0-714.2, 714.8, 725
Peptic Ulcer Disease	ICD9 codes: 531.x-534.x
Stem cell / bone marrow transplant	CPT codes: 38240, 38241, 38242; ICD-9 Procedure Codes: 41.0x; ICD-9 codes: 996.85, 996.88, V42.81, V42.82
Malignancy	Cancer excluding non-melanoma skin cancer: ICD9-CM codes: 140.x-208.x (excluding 173.x)
HIV	ICD-9 codes: 042.x-044.x, 079.53, 795.71, V08
Peripheral Vascular Disease	ICD-9 codes: 440.x, 441.x, 442.x, 444.2x, V43.4
Glomerulonephritis	ICD-9 codes: 580.x, 581.0-3, 581.89, 582.x, 583.0-4
Inpatient Exposures/Diagnoses	
Mechanical Ventilation	ICD9-CM Procedure Codes: 93.92, 96.04, 96.05, 96.70, 96.71, 96.72
Contrast Dye Exposure	ICD9-CM Procedure Codes: 00.66, 36.01, 36.02, 36.05, 36.06, 36.07, 36.09, 37.22, 37.23, 88.53-88.57, CPT codes: 92973, 92974, 92980, 92981, 92982, 92984, 92995, 92996, 93508, 93510, 93511, 93514, 93524, 93526, 93527, 93528, 93529, 93531, 93532, 93533, 93539, 93540, 93543, 93545, 93555, 93556, G0290, G0291 Text String Processing: Radiologic test names were parsed and transformed to identify contrasted studies.
Inpatient Chemotherapy	CPT codes: 4180F, 96400, 96401, 96402, 96408, 96409, 96410-96417, 96500, 96501, 96502, 96505, 96508, 96509, 96510, 96511, 96512, 99555, C8953, C8954, C8955, G0292, G0355, G0359 ICD9-CM Procedure codes: 00.10, 99.25

SUPPLEMENTARY DATA

Severe Sepsis	* Either one Sepsis code or at least one of each Organ Failure and Infection code ICD-9 Codes: Sepsis: 785.52, 995.92 OrganFailure: 286.6, 286.9, 287.4x, 287.5, 293.x, 348.1, 348.3x,
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SUPPLEMENTARY DATA

	<p>458.x, 570, 573.4, 584.x, 785.5x <u>Infection</u>: 001.x-005.x, 008.x-018.x, 020.x-027.x, 030.x-041.x, 090.x-098.x, 100.x-104.x, 110.x-112.x, 114.x-118, 320.x, 322.x, 324.x, 325, 420.x, 421.x, 451.x, 461.x-465.x, 481, 482.x, 485, 486, 491.21, 494.x, 510.x, 513.x, 540.x-542, 562.01, 562.03, 562.11, 562.13, 566, 567.x, 569.5, 569.83, 572.0, 572.1, 575.0, 590.x, 597.x, 599.0, 601.x, 614.x-616.x, 681.x-683, 686.x, 711.0x, 730.x, 790.7, 996.6x, 998.5x, 999.3x</p>
Cardiac Surgery	<p>ICD9-CM Procedure Codes: 35.1x-35.3x, 35.51, 35.53, 35.54, 35.6x-35.9x, 36.03, 36.1x, 36.31, 36.32, 36.39, 36.9x, 37.10, 37.11, 37.31-37.36, 37.49, 39.61-39.64, 39.66 CPT codes: 33020, 33120, 33130, 33140, 33141, 33236, 33237, 33238, 33243, 33251, 33253, 33261, 33300, 33305, 33310, 33315, 33320, 33321, 33322, 33330, 33332, 33335, 33400, 33401, 33403, 33404, 33405, 33406, 33410, 33411, 33412, 33413, 33414, 33415, 33416, 33417, 33420, 33422, 33425, 33426, 33427, 33430, 3346x, 3347x, 33496, 33500, 33501, 33502, 33503, 33504, 33505, 33506, 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33530, 33533, 33534, 33535, 33536, 33542, 33545, 33572, 3360x, 3361x, 33641, 33645, 33647, 33660, 33665, 33670, 33681, 33684, 33688, 33690, 33692, 33694, 33697, 33702, 33710, 33720, 33722, 33730, 33730, 33735, 33736, 33737, 33750, 33755, 33762, 33764, 33766, 33767, 3377x, 33780, 33781, 33786, 33788, 33800, 33802, 33803, 33813, 33814, 33824, 33840, 33845, 33851, 33852, 33853, 33860, 33861, 33863, 33870, 33875, 33877, 3391x, 33920, 33922, 33999</p>
Abdominal Surgery	<p>ICD9-CM Procedure Codes: 41.4x-41.5, 41.95, 41.99, 42.1x, 42.40-42.42, 42.5x, 42.6x, 43.0, 43.5, 43.6, 43.7, 43.8x, 43.9x, 44.31, 44.38, 44.39, 44.40-44.42, 44.5, 44.61-65, 44.68, 44.69, 44.99, 45.01-45.03, 45.6x-45.9x, 46.0x, 46.10, 46.11, 46.13, 46.14, 46.2x, 46.31, 46.39, 46.40-46.43, 46.5x, 46.6x, 46.71-46.76, 46.79, 46.80-46.82, 46.93, 46.94, 46.99, 48.42, 48.43, 48.49, 48.50-48.52, 48.59, 48.61-48.65, 48.69, 50.00, 50.22-50.26, 50.29, 50.3, 50.6x, 51.03, 51.04, 51.2x, 52.22, 52.5x, 52.6, 52.95, 52.99, 54.1x, 54.99 CPT codes: 38100, 38101, 38102, 38115, 38120, 38129, 43107, 43108, 43112, 43113, 43116, 43117, 43118, 43121, 43122, 43123, 43124, 43300, 43305, 43310, 43312, 43320, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43500, 43501, 43502, 43510, 43620, 43621, 43622, 43631, 43632, 43633, 43634, 43638, 43639, 43659, 43840, 43842, 43843, 43846, 43847, 43848, 43850, 43855, 43860, 43865, 43870, 43880, 43999, 44010, 44020, 44021, 44025, 44050, 44055, 44110, 44111, 44120, 44121, 44125, 44130, 44140, 44141, 44143, 44144, 44145, 44146, 44147, 44150, 44151, 44152, 44153, 44155, 44156, 44160, 44201, 44202, 44203, 44204, 44205, 44206, 44207, 44208, 44210, 44211, 44212, 44238, 44239, 44300, 44310, 44312, 44314, 44316, 44320, 44322, 44340, 44345, 44346, 44602, 44603, 44604, 44605, 44620, 44625, 44626, 44640, 44650, 44660, 44661, 44680, 44799, 44820, 44850, 44899, 44900, 44950, 44955, 44960, 45110, 45111, 45112, 45113, 45114, 45116, 45119, 45120, 45121, 45123, 45126, 45805, 45825, 47120, 47122, 47125, 47130, 47350, 47360, 47361, 46362, 47399, 47600, 47605, 47610, 47612,</p>

SUPPLEMENTARY DATA

	47620, 47701, 47720, 47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 48005, 48140, 48145, 48146, 48150, 48152, 48153, 48154, 48155, 48180, 48520, 48540, 48545, 48547, 48556, 48999, 49000, 49002, 49010, 49020, 49040, 49060, 49062, 49085, 49200, 49201, 49220, 49999
Vascular Surgery	ICD9-CM Procedure Codes: 38.04-38.06, 38.14-38.18, 38.21-38.23, 38.34-38.36, 38.44-38.46, 38.64-38.66, 38.84-38.86, 39.0, 39.21, 39.23-39.26, 39.54, 39.55, 39.71, 39.73, 39.78 CPT codes: 33320, 33321, 33322, 33330, 33332, 33335, 33860, 33861, 33863, 33870, 33875, 33877, 33880, 33881, 34151, 34201, 34800, 34802, 34803, 34804, 34805, 34825, 34826, 34830, 34831, 34832, 35081, 35082, 35091, 35092, 35102, 35103, 35111, 35112, 35121, 35122, 35211, 35216, 35221, 35241, 35246, 35251, 35271, 35276, 35281, 35341, 35361, 35363, 35450, 35452, 35471, 35472, 35480, 35481, 35490, 35491, 35531, 35535, 35536, 35537, 35538, 35539, 35540, 35541, 35546, 35548, 35549, 35551, 35560, 35582, 35631, 35632, 35636, 35637, 35638, 35641, 35646, 35647, 35651, 35820, 35840, 35870, 35905, 35907
Acute Coronary Syndrome	ICD-9 codes: 410.x, 411.x
Decompensated Liver Disease	ICD-9 codes: 070.22, 070.23, 070.44, 456.0, 456.1, 456.20, 456.21, 571.2, 571.3, 571.5, 571.6, 572.2, 572.3, 572.4, 572.8
Gastrointestinal Bleed	ICD-9 codes: 530.82, 531.00, 531.20, 531.40, 531.60, 532.00, 532.20, 532.40, 532.60, 533.00, 533.20, 533.40, 533.60, 534.00, 534.20, 534.40, 534.60, 535.01, 535.41, 535.51, 578.x
Congestive Heart Failure	ICD-9 codes: 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.1x-425.9, 428.x
Preadmission Dialysis	Dialysis ICD-9 Procedure Codes: 39.93, 39.95, 54.98, V39.27, V39.42, V38.43, V45.1, V56.0, V56.2, V56.31, V56.32, V56.8 ICD-9 Diagnosis codes: 585.6 CPT codes: 90921, 90925, 90935, 90937, 90945, 90947, 90960, 90961, 90962, 90966, 90989, 90993, 90999, G8956
Acute Dialysis (captured during hospitalization)	ICD-9 codes: V45.1, V56.0, V56.1, 39.95 and CPT codes 90935, 90937, 90945, and 90947
Palliative Care	ICD-9 Outpatient or Inpatient Discharge Codes: V66.7 CPT code: 99377
Renal transplant	ICD-9 Codes: 55.69, 996.81, V42.0 ICD-9 Inpatient Procedure Codes: 00.91, 00.92, 00.93 Outpatient CPT Codes: 50360, 50365
Nephrectomy	CPT codes: 50220, 50225, 50230, 50234, 50236, 50240, 50300, 50320, 50340, 50370, 50543, 50545, 50546, 50547, 50548 ICD9-CM Procedure codes: 55.4, 55.5x

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