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EFFECTIVENESS AND SAFETY OF SWITCHING ORIGINATOR AND BIOSIMILAR EPOETINS IN PATIENTS WITH CHRONIC KIDNEY DISEASE IN A LARGE-SCALE ITALIAN COHORT STUDY

Running Title: Benefit-risk profile of switching among epoetins.

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Variable	Definition
CKD	ICD9CM: 585.1 Chronic kidney disease, Stage I; 585.2 Chronic kidney disease, Stage II (mild) ; 585.3 Chronic kidney disease, Stage III (moderate);585.4 Chronic kidney disease, Stage IV (severe); 585.5 Chronic kidney disease, Stage V; 586 Renal failure, unspecified Allowance code:023 ICD9CM (Procedure Codes): 39.95 Hemodialysis; 54.98 Peritoneal dialysis ICD9CM (Diagnosis Codes): V56.0 Encounter for extracorporeal dialysis V56.1 Fitting and adjustment of extracorporeal dialysis catheter convert V56.2 Fitting and adjustment of peritoneal dialysis catheter V56.31 Encounter for adequacy testing for hemodialysis V56.32 Encounter for adequacy testing for peritoneal dialysis primary and secondary procedure/diagnoses
Age	Age at first ESA dispensing (mean, age-classes)
Gender	Male, female
Year of first ESA dispensing	2009-2015
Blood transfusions*	ICD9CM: Procedure Codes: 99.0* primary and secondary ICD9CM: Diagnosis Codes: 9996, 9997, 9998, V582, E8730, E8798 retrieved 3 months prior first ESA dispensing
Iron supplementation	ATC: B03AA Iron bivalent, oral preparations ATC: B03AB Iron trivalent, oral preparations ATC: B03AC Iron, parenteral preparations ATC: B03AD or B03AE Iron in combinations retrieved 3 months prior first ESA dispensing
Anemia*	ICD9CM (Diagnosis Codes): 285. Primary Two variables: one retrieved 3 months prior first ESA dispensing/ one retrieved 3 months prior switch
Dialyzed	ICD9CM (Procedure Codes): 39.95 ; 54.98 ICD9CM (Diagnosis Codes): V56.0 V56.1 V56.2 V56.31 V56.32 retrieved 1 year prior first ESA dispensing
Tumour	ICD9 (Diagnosis Codes): primary or secondary 140-209 Malignant Neoplasm retrieved 1 year prior first ESA dispensing
Diabetes	ICD9 (primary or secondary): 250 or ATC=A10 or Allowance code=013 retrieved 1 year prior first ESA dispensing
Hypertension	ICD9: 401-405 (primary or secondary) or Allowance code= 031 retrieved 1 year prior first ESA dispensing
Arrhythmia	ICD9 diagnosis and procedure codes (primary or secondary): 426-427 or 37.x OR ATC C01B (Antiarrhythmics) OR ATC C08D (Ca-antagonists) retrieved 1 year prior first ESA dispensing

Heart failure	ICD9CM (primary or secondary): 428 or Allowance code= 021 retrieved 1 year prior first ESA dispensing
Cerebrovascular Disease	ICD (primary or secondary): 430-438 retrieved 1 year prior first ESA dispensing
COPD, Asthma disease	ICD9 (primary or secondary): 490-496 retrieved 1 year prior first ESA dispensing
Hyperkalemia	ATC V03AE retrieved 3 months prior first ESA dispensing
Vitamin B12	ATC B03BA retrieved 3 months prior first ESA dispensing
Folic acid	ATC B03BB retrieved 3 months prior first ESA dispensing
Vitamin A, D	ATC A11C retrieved 3 months prior first ESA dispensing
FANS	ATC M01 retrieved 3 months prior first ESA dispensing
Hypersensitivity reactions*	ICD9CM (Diagnosis Codes): 995.0; 995.2; 995.3; 999.41; 999.49; 999.51; 995.9. Primary and secondary diagnosis Two variables: one retrieved 3 months prior first ESA dispensing/ one retrieved 3 months prior switch
Blood Dyscrasias*	Haemolytic anaemia or aplastic anaemia. ICD9 (Diagnosis Codes): 283 or 284 (primary and secondary) retrieved 3 months prior switch
Major Cardiovascular Events (MACE)*	Acute myocardial infarction or stroke or thrombosis or pulmonary embolism ICD9 (Diagnosis Codes): 410 or (430,431,434,436) or (444; 452-453) or 415. All codes should be present as primary diagnosis. retrieved 3 months prior switch

*subjects with lack of effectiveness and safety events during 3 months prior switching date were excluded