



USE OF CLAIMS DATABASES FOR DU STUDIES

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**NORTH-WEST UNIVERSITY
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- What is claims data?
- Types of DU studies
- DU research in relation to other disciplines
- Example: Prescription claims data
 - DU studies: Prescribing patterns
 - DU studies: Adherence
 - DU studies: Policy changes
 - DU studies: Drug interactions
 - DU studies: Prescriber quality
 - DU studies: Comorbidity
 - DU studies: Drug cost
 - DU studies: Market demand
 - DU studies: Intervention
- Claims data: Strengths & Weaknesses

What is claims data?

- Also known as 'administrative', 'billing' or 'secondary' data
- "Clinical information collected through claims submitted by healthcare providers to medical schemes for access to benefits and reimbursement; claims usually contain clinical, financial and administrative information".¹
- **Characteristics:**²

Characteristic	Claims data
Scope of the data	Broad: capture information from all doctors/providers caring for a patient High – velocity, volume, variety, veracity and value. Anonymous
Scope of patients	Insured patients only
Data richness	Limited: Diagnosis, procedures, hospitalisation, lab. results, smoking, etc. often missing
Owner	Insurance company/medical aid scheme/administrator (Pharmaceutical benefit manager)
Ease of analysis	Ready to use since computerised; less expensive; free from bias/no response

¹ Matshidze, P. & Hanmer, L. 2007. Health information systems in the private health sector. (In Harrison, S., Bhana, R. & Ntuli, A., eds. South Africa Health Review 2007. National Department of Health: Health Systems Trust. p. 89-102).

Characteristic	Claims data
Patient details	Basic demographics – age, gender, date of enrollment
Medications	Drug code (name, form, strength), prescription fill date, amount supplied, dose, frequency, days supply, non-prescription drugs
Diagnostics	ICD-9 or ICD-10 codes
Procedures	Diagnostic & procedural coded (often not included)
Laboratory results	Date, test and results (often not included)
Hospital data	Dates of admission & discharge, diagnoses, major procedures; inpatient drugs (sometimes not included)
Financial	Charges, amounts reimbursed; patient co-pays
Timeliness	Time lag – months/quarters/years
Linkage	Linkage with multiple sources often possible (depend on source) Longitudinal studies possible

Types of DU studies

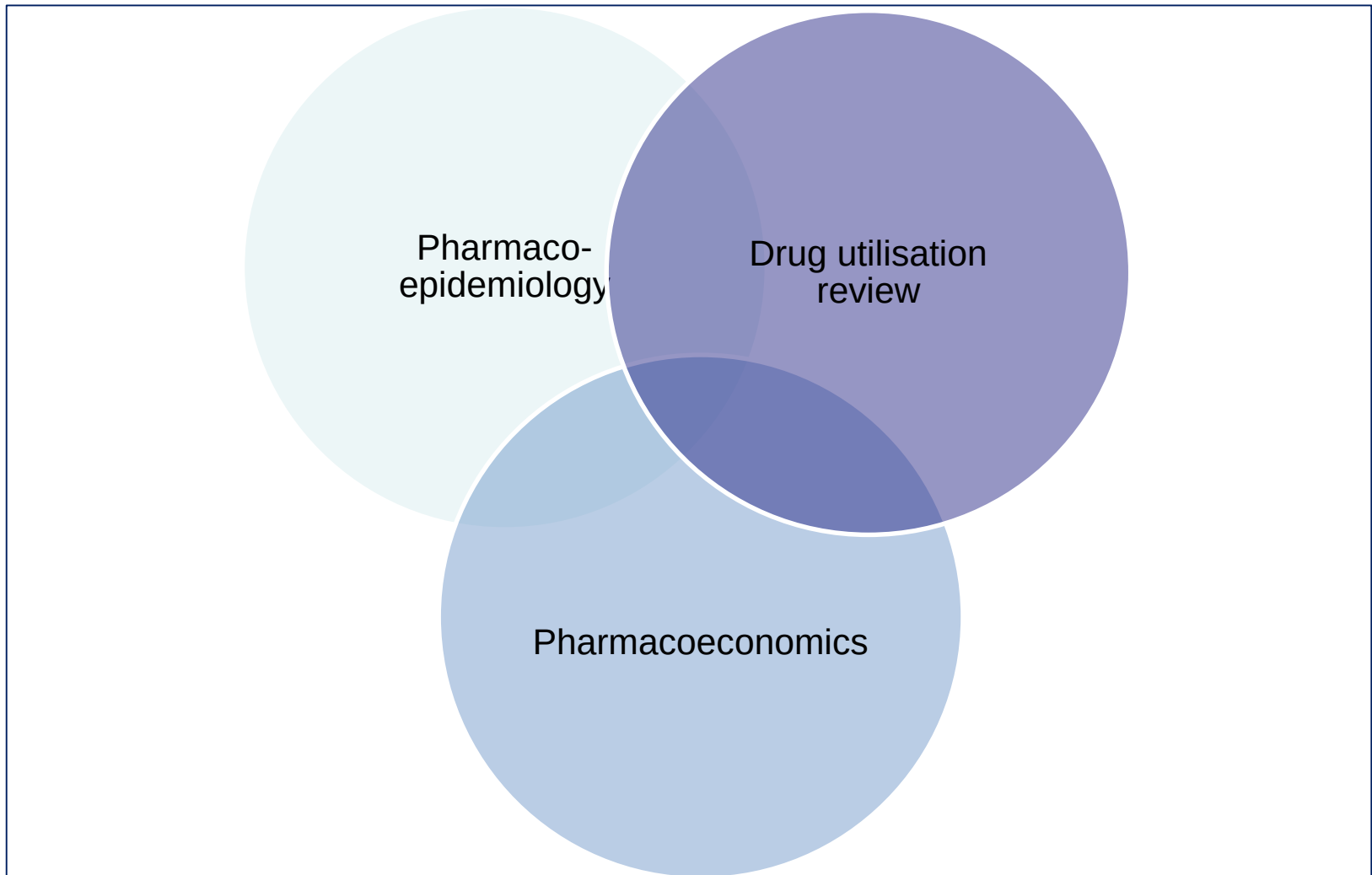
DU studies can be targeted towards any of the following links in the drug-use chain:

- the *systems and structures* surrounding drug use (e.g. how drugs are ordered, delivered and administered in a hospital or healthcare facility);
- the *processes* of drug use (e.g. what drugs are used and how they are used and does their use comply with the relevant criteria, guidelines or restrictions); and
- the *outcomes* of drug use (e.g. efficacy, adverse drug reactions and the use of resources such as drugs, laboratory tests, hospital beds or procedures).

Study designs:

- Cross-sectional
- Longitudinal
- Continuous longitudinal studies

DU research in relation to other disciplines



Example: Prescription claims data



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Member_nr	Deper	Mem	Member	Relat	Nappi_code	Nappi_Description	Gen	Treatment	Rx_numbe	Quant	Days	Type	Pharmacy	Pharmacy_City	Provider_specialit	Prescriber_Cit	Prescriber_Speciality	ICD10	Final_d	Final_Sch	Final_levy	Professio	SEP_unit
1000000	01	F	31-01-21	1	704384002	K-FENAK 50MG TABS	Y	13-10-04	5551401	15	5	PHARMACY RETAIL	SANDTON	PHARMACY	SANDTON	PHARMACY	Z76.9	OTC	\$29.82	\$23.01	32.6452	1.34533	
1000000	01	F	31-01-21	1	778257029	VOLTAREN EMULGEL	O	13-10-04	5551402	100	10	PHARMACY RETAIL	SANDTON	PHARMACY	SANDTON	PHARMACY	Z76.9	OTC	\$65.00	\$129.87	80.9488	1.1392	
1000000	01	F	31-01-21	1	899070020	COXFLAM 15MG	Y	13-05-19	0311101	30	30	PHARMACY RETAIL	WAVERLEY	PHARMACY	EDENVALE	GENERAL MEDICAL PR	Z76.9	Acute	\$122.04	\$105.66	135.015	3.08933	
1000000	01	F	31-01-21	1	899070020	COXFLAM 15MG	Y	13-06-21	0469501	30	30	PHARMACY RETAIL	WAVERLEY	PHARMACY	EDENVALE	GENERAL MEDICAL PR	Z76.9	Acute	\$122.04	\$105.66	135.015	3.08933	
1000000	01	F	31-01-21	1	899070020	COXFLAM 15MG	Y	13-08-30	0779301	30	30	PHARMACY RETAIL	WAVERLEY	PHARMACY	EDENVALE	GENERAL MEDICAL PR	Z76.9	Acute	\$122.04	\$105.66	135.015	3.08933	
1000000	01	F	31-01-21	1	899070020	COXFLAM 15MG	Y	13-10-07	0932401	30	30	PHARMACY RETAIL	WAVERLEY	PHARMACY	EDENVALE	GENERAL MEDICAL PR	Z76.9	Acute	\$122.04	\$105.66	135.015	3.08933	
1000000	01	F	31-01-21	1	713066017	CELESTAMINE TABS	N	13-02-25	3457802	20	7	PHARMACY RETAIL	LONEHILL	PHARMACY	NORTHWOLD	GENERAL MEDICAL PR	Z76.9	Acute	\$143.21	\$113.57	157.157	4.981	
1000000	01	F	31-01-21	1	711040001	PROSPAN COUGH 7MG/1ML	N	13-02-25	3457801	100	7	PHARMACY RETAIL	LONEHILL	PHARMACY	NORTHWOLD	GENERAL MEDICAL PR	Z76.9	Acute	\$64.28	\$49.59	70.37	0.435	
1000000	01	F	31-01-21	1	862452007	CELEBREX 200MG CAPS	N	13-11-19	3533401	30	30	PHARMACY RETAIL	FOUR WAYS	PHARMACY	SILVER LAKES	GENERAL MEDICAL PR	Z76.9	Acute	\$262.38	\$232.74	290.962	6.80533	
1000000	01	F	31-01-21	1	766828018	STILPANE TABS	Y	13-11-19	3533402	50	20	PHARMACY RETAIL	FOUR WAYS	PHARMACY	SILVER LAKES	GENERAL MEDICAL PR	Z76.9	Acute	\$24.56	\$18.95	26.8868	0.3324	
1000016	01	F	37-07-14	2	824291018	ACC 200MG EFF TABS	O	13-02-08	2360401	25	8	PHARMACY RETAIL	TABLE VIEW	PHARMACY	SUNNINGDALE	PHY/IM/RHEU/NEPH/DI	Z76.9	Acute	\$0.00	\$55.62	6.8306	1.9516	
1000373	00	M	28-10-15	1	701281003	ADCO-SIMVASTATIN 40MG TA	Y	13-01-09	6537706	30	30	PHARMACY COURIER	RANDJIES PARK	PHARMACY	BRACKENFEL	GENERAL MEDICAL PR	Z76.9	PMB	\$36.72	\$30.60	40.4776	0.89467	
1000373	00	M	28-10-15	1	862304008	BAYER ASPIRIN CARDIO 100I	Y	13-01-09	6537704	30	30	PHARMACY COURIER	RANDJIES PARK	PHARMACY	BRACKENFEL	GENERAL MEDICAL PR	Z76.9	PMB	\$27.38	\$22.82	30.1828	0.66733	
1000373	00	M	28-10-15	1	714582001	DIAGLUCIDE MR 30MG SR TA	Y	13-01-09	6537804	30	30	PHARMACY COURIER	RANDJIES PARK	PHARMACY	BRACKENFEL	GENERAL MEDICAL PR	Z76.9	PMB	\$29.81	\$29.07	33.38	0.85	
1000373	00	M	28-10-15	1	778362019	ASPEN WARFARIN 5MG TABS	O	13-10-04	3755101	60	30	PHARMACY RETAIL	BRACKENFELL	PHARMACY	PANORAMA	NEUROLOGY	I25.9	PMB	\$122.25	\$97.03	134.175	1.41833	
1000373	00	M	28-10-15	1	710032013	BISOLVON LINCTUS	O	13-04-23	3429701	200	5	PHARMACY RETAIL	BRACKENFELL	PHARMACY	BRACKENFEL	GENERAL MEDICAL PR	J40	Acute	\$43.79	\$46.17	49.46	0.2025	
1000470	00	F	42-12-04	1	712785001	CELESTONE SOLUSPAN VIAL N	Y	13-07-02	0555655	1	1	DISPENSING DR - GP	THREE RIVERS	GENERAL MEDICA	THREE RIVER	GENERAL MEDICAL PR	I50.0	Acute	\$74.88	\$74.88	97.9752	51.78	
1000470	00	F	42-12-04	1	899124006	PHARMA-Q BETAMETHASONE	Y	13-07-02	0555656	1	1	DISPENSING DR - GP	THREE RIVERS	GENERAL MEDICA	THREE RIVER	GENERAL MEDICAL PR	I50.0	Acute	\$10.51	\$7.83	11.4718	6.87	
1000471	00	F	42-10-13	1	707876001	RELESTAT 5ML 0.05% OPD	N	13-09-27	6084401	1	1	PHARMACY RETAIL	LENASIA EXT 3	PHARMACY	LENASIA	OPHTHALMOLOGY	Z76.9	Acute	\$115.19	\$112.07	128.953	98.31	
1000471	00	F	42-10-13	1	709109001	ARCOXIA 90MG TABS	N	13-08-10	5908801	10	10	PHARMACY RETAIL	LENASIA EXT 3	PHARMACY	ELDORADOPAI	GENERAL MEDICAL PR	Z76.9	Acute	\$88.24	\$83.61	98.5076	7.334	
1000475	00	F	42-04-13	1	716167001	BISOPROLOL UNICORN 5MG Y	Y	13-08-23	0142806	15	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$21.57	\$24.08	24.5268	1.408	
1000475	00	F	42-04-13	1	714292001	CARZIN XL 4MG	Y	13-08-23	0142802	30	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$95.35	\$106.42	108.419	3.11167	
1000475	00	F	42-04-13	1	868906018	DIAGLUCIDE 80MG TABS	Y	13-08-23	0142805	60	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$42.90	\$47.88	48.78	0.7	
1000475	00	F	42-04-13	1	891279005	ENAP 10MG TABS	Y	13-08-23	0142901	30	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$35.73	\$39.88	40.6272	1.166	
1000475	00	F	42-04-13	1	714526001	GLUCONORM 850MG TABS	Y	13-08-23	0142804	60	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$35.97	\$40.15	40.9008	0.587	
1000475	00	F	42-04-13	1	765910004	SPIRACTIN 25MG TABS	Y	13-08-23	0142803	30	30	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$30.07	\$33.55	34.1902	0.981	
1000475	00	F	42-04-13	1	704035002	ZANIDIP 10MG TABS	N	13-08-23	0142801	28	28	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$139.22	\$166.96	159.724	5.2071	
1000475	00	F	42-04-13	1	716167001	BISOPROLOL UNICORN 5MG Y	Y	13-09-17	0330307	15	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$21.57	\$24.08	24.5268	1.408	
1000475	00	F	42-04-13	1	714292001	CARZIN XL 4MG	Y	13-09-17	0330303	30	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$95.35	\$106.42	108.419	3.11167	
1000475	00	F	42-04-13	1	868906018	DIAGLUCIDE 80MG TABS	Y	13-09-17	0330306	60	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$42.90	\$47.88	48.78	0.7	
1000475	00	F	42-04-13	1	891279005	ENAP 10MG TABS	Y	13-09-17	0330301	30	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$35.73	\$39.88	40.6272	1.166	
1000475	00	F	42-04-13	1	714526001	GLUCONORM 850MG TABS	Y	13-09-17	0330305	60	29	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$35.97	\$40.15	40.9008	0.587	
1000475	00	F	42-04-13	1	765910004	SPIRACTIN 25MG TABS	Y	13-09-17	0330304	30	30	PHARMACY RETAIL	VRYHEID	PHARMACY	BEREA	CARDIOLOGY	Z76.9	PMB	\$30.07	\$33.55	34.1902	0.981	
1004695	00	M	43-12-13	1	831638001	SOD CHLOR 0.9% 30ML	N	13-08-27	9148106	1	1	Other Providers	NORWOOD	REGISTERED NUR	NORWOOD	REGISTERED NURSES	T81.4	Acute	\$5.15	\$3.98	5.6386	3.49	
1004695	00	M	43-12-13	1	831638001	SOD CHLOR 0.9% 30ML	N	13-09-03	0960406	1	1	Other Providers	NORWOOD	REGISTERED NUR	NORWOOD	REGISTERED NURSES	T81.4	Acute	\$5.15	\$3.98	5.6386	3.49	
1004695	00	M	43-12-13	1	807567019	GRANUFLEX EXTRA THIN	N	13-09-10	3508209	5	1	Other Providers	NORWOOD	REGISTERED NUR	NORWOOD	REGISTERED NURSES	T81.4	Acute	\$149.34	\$119.70	164.04	21	
1004695	00	M	43-12-13	1	831638001	SOD CHLOR 0.9% 30ML	N	13-09-10	3508206	1	1	Other Providers	NORWOOD	REGISTERED NUR	NORWOOD	REGISTERED NURSES	T81.4	Acute	\$5.15	\$3.98	5.6386	3.49	
1001359	01	M	36-06-26	2	711682001	FEDALOC SR 30MG SRT	Y	13-09-18	0543503	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	Acute	\$0.00	\$146.59	18.0026	4.28633	
1001359	01	M	36-06-26	2	735752001	LANOXIN 0.25MG TABS	O	13-09-18	0543501	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$12.55	\$9.68	13.7386	0.283	
1001359	01	M	36-06-26	2	880949007	RIDAQ 25MG TABS	Y	13-09-18	0543502	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$30.22	\$23.31	33.083	0.68167	
1001359	01	M	36-06-26	2	778362019	ASPEN WARFARIN 5MG TABS	O	13-10-21	0922004	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$62.88	\$48.51	68.837	1.41833	
1001359	01	M	36-06-26	2	833428004	DILATREND 6.25MG TABS	O	13-10-21	0922005	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$90.52	\$133.95	106.97	3.91667	
1001359	01	M	36-06-26	2	711682001	FEDALOC SR 30MG SRT	Y	13-10-21	0922003	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	Acute	\$0.00	\$146.59	18.0026	4.28633	
1001359	01	M	36-06-26	2	735752001	LANOXIN 0.25MG TABS	O	13-10-21	0922001	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$12.55	\$9.68	13.7386	0.283	
1001359	01	M	36-06-26	2	880949007	RIDAQ 25MG TABS	Y	13-10-21	0922002	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$30.22	\$23.31	33.083	0.68167	
1001359	01	M	36-06-26	2	735752001	LANOXIN 0.25MG TABS	O	13-11-20	1277301	30	30	PHARMACY RETAIL	WELKOM	PHARMACY	WELKOM	GENERAL MEDICAL PR	Z76.9	PMB	\$12.55	\$9.68	13.7386	0.283	
1001359	01	M	36-06-26	2	880949007	RIDAQ 25MG TABS	Y	13-11-20	1277302	30	30												

RESEARCH ARTICLE

Prescribing patterns of non-steroidal anti-inflammatory drugs in chronic kidney disease patients in the South African private sector

Willem P. Meuwesen¹ · Jesslee M. du Plessis¹ · Johanita R. Burger¹ ·
Martie S. Lubbe¹ · Marike Cockeran¹

Aspect	Description
Source/Design	Prescription claims data; Retrospective, repeated cross-sectional (2009-2013)
DU indicator	Prescribing prevalence of drugs, quantity of medicine items prescribed, days supplied of items and prescriber speciality, prescribed daily dosage (PDD)
Classification systems	International Statistical Classification of Diseases and Related Health Problems 10th revision (ICD-10) -- CKD (N18), NSAIDs were classified according to the MIMS
Strengths/Limitations	Lack of claims not reimbursed Group of data as an exact field on the database.



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Fluoroquinolone Prescribing Patterns in the Private Healthcare Sector of South Africa, 2005-2012

Winifred AGYAKWA ¹, Martha S. LUBBE ¹, Johanita R. BURGER ¹,
Norah L KATENDE-KYENDA ², Marike COCKERAN ¹ & Madeeha MALIK ^{1,3}

Aspect	Description
Source/Design	Prescription claims data; repeated cross-sectional (2005-2012)
DU indicator	DDD/1000 inhabitants/day
Classification systems	ATC: J01MA; NAPPI codes
Strengths/Limitations	Sample size (N= 1 983 622 prescriptions).

Original Article

Surveillance of antibiotic use in the private sector in Namibia using sales and claims data

Dawn Dineo Pereko¹, Martie S Lubbe¹, Sabiha Y Essack²

J Infect Dev Ctries 2016; 10(11):1243-1249. doi:10.3855/jidc.7329

Aspect	Description
Source/Design	Prescription claims data and wholesale sales data; retrospective, repeated cross-sectional (2008-2011)
DU indicator	Number of antibiotic-containing prescriptions and volume of units sold, standardized using defined daily dose per 1,000 inhabitants per day
Classification systems	WHO ACT/DDD index of 2013
Strengths / Limitations	Sample size: N = 1,129,053 antibiotic-containing prescription claims Reliable and more informative in terms of patient and provider profiles Annual data, which did not allow for analysis to determine monthly trends and seasonal variations No clinical indications

The impact of HIV/AIDS on compliance with antidepressant treatment in major depressive disorder: A prospective study in a South African private healthcare cohort

Francois N Slabbert, Brian H Harvey, Christiaan B Brink and Martie S Lubbe ✉

AIDS Research and Therapy 2015 12:9 | DOI: 10.1186/s12981-015-0050-2 | © Slabbert et al.; licensee BioMed Central. 2015

Aspect	Description
Source/Design	Prescription claims data; Prospective cohort (2006-2011); patients with only MDD (n = 12 270) and MDD patients with HIV/AIDS (n = 127).
DU indicator	MPR = number of days for which medication is supplied within the refill interval (medicine treatment period) divided by the number of days in the refill interval
Classification systems	ICD-10 codes
Strengths	Only patients diagnosed with MDD by a psychiatrist were included.
Strengths/Limitations	Small numbers of patients with both MDD and HIV/AIDS Limited representation of the national population. Lack of data on stage of HIV/AIDS Clinical outcomes lacked (improvement/deterioration in mood)

Prospective analysis of the medicine possession ratio of antidepressants in the private health sector of South Africa, 2006 - 2011

Francois Naude Slabbert, Brian H Harvey, Christiaan Beyers Brink, Martha Susanne Lubbe

Aspect	Description
Source/ Design	Prescription claims data; Prospective longitudinal cohort (2006 – 2011)
DU indicator	MPR PDD & possible PDD changes
Classification systems	The ICD-10 codes
Strengths	Sample size: 14 135 patients receiving 35 175 AD medicine items
Limitations	Lack of clinical data to determine outcomes

Influence of a new reference-based pricing system in South Africa on the prevalence and cost of antidiabetic medicine: a pilot study

Rianda Steyn, Johanita Riëtte Burger , Jan Hendrik Philippus Serfontein, Martha Susanna Lubbe

First published: December 2007 [Full publication history](#)

DOI: 10.1211/ijpp.15.4.0009 [View/save citation](#)



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Volume 15, Issue 4
December 2007
Pages 307-311

Aspect	Description
Source/Design	Prescription claims data; Retrospective, cross-sectional, 2004 (Three study periods: 1 Jan – 31 Apr (pre-SEP period), 1 May – 31 Aug (interim period) and 1 Sep - 31 Dec, (post-SEP period).
DU indicator	Change in average cost of insulin and oral antidiabetic products
Classification systems	MIMS classification system for medicine
Strengths	Sample size: 143 447 medicine items
Limitations	Indirect costs No cost comparator - all therapeutic medicine classes were subjected to implementation of the new pricing regulations in South Africa Time series analysis not possible due SEP implementation period

Effect of prescribed minimum benefits on the prevalence of possible drug-drug interactions of antiretroviral agents in a section of the private health care sector in South Africa: a 2 year comparative study

Norah L. Katende-Kyenda , Martie S. Lubbe, Jan H.P. Serfontein, Ilse Truter

First published: December 2008 [Full publication history](#)



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Volume 16, Issue 6
December 2008
Pages 403-408

Aspect	Description
Source/Design	Prescription claims data; Retrospective, repeated cross-sectional (2004 - 2005)
DU indicator	Possible DDIs (o Tatro (2005).
Classification systems	DDIs identified based on Tatro (2005).
Strengths/Limitations	Sample size: 43 482 ARV prescriptions (2004); 51 613 (2005) Lack of outcomes data

DU studies: Drug interactions

Prevalence of possible drug–drug interactions between antiretroviral agents in different age groups in a section of the private health care sector setting in South Africa

N. L. Katende-Kyenda M Pharm, M. S. Lubbe PhD, J. H. P. Serfontein PhD, I. Truter PhD

First published: 9 July 2008 [Full publication history](#)



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Volume 33, Issue 4
August 2008
Pages 393–400

Aspect	Description
Source/ Design	Prescription claims data; Retrospective; cross-sectional (2006)
DU indicator	DDIs
Classification systems	MIMS classification system for medicine Tatro's clinical significance rating
Strengths/Limitations	Sample size: 47 085 ARV prescriptions Lack of outcomes data



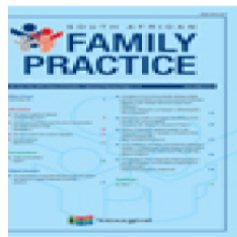
Inappropriate medicine prescribing in older South Africans: A cross-sectional analysis of medicine claims data

J A van Heerden, BPharm; J R Burger, BPharm, MPharm, PhD (Pharm Pract); J J Gerber, BSc (Pharm) Hons, BSc (Ind Pharm),
MSc (Ind Pharm) Hons, BSc (Pharmacol), DSc (Pharm)

S Afr Med J 2016;106(10):1010-1016. DOI:10.7196/SAMJ.2016.v106i10.10627

Aspect	Description
Source/Design	Prescription claims data; Retrospective, cross-sectional (2013)
DU indicator	Inappropriate prescribing
Classification systems	MIMS classification system for medicine Beers criteria
Strengths/Limitations	Sample size: 103 420 patients ≥ 65 years Exclusion of other medical devices and interventions

DU studies: Comorbidity



South African Family Practice

ISSN: 2078-6190 (Print) 2078-6204 (Online) Journal homepage: <http://www.tandfonline.com/loi/ojfp20>

Investigation of the coexistence of CKD and non-communicable chronic diseases in a PBM company in South Africa

WP Meuwesen, JM du Plessis, JR Burger, MS Lubbe & M Cockeran

Aspect	Description
Source/Design	Prescription claims data; Retrospective, repeated cross-sectional (2009 – 2013)
DU indicator	Prevalence of disease
Classification systems	ICD-10 codes; CDL conditions
Strengths/ limitations	Lacked clinical data such as GFR, serum creatinine and blood urea nitrogen (BUN) levels

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Chronic disease risk factors, healthy days and medical claims in South African employees presenting for health risk screening

Tracy L Kolbe-Alexander , Chris Buckmaster, Craig Nossel, Liezel Dreyer, Fiona Bull, Timothy D Noakes and Estelle V Lambert

BMC Public Health 2008 8:228 | DOI: 10.1186/1471-2458-8-228 | © Kolbe-Alexander et al; licensee BioMed Central Ltd. 2008

Aspect	Description
Source/Design	Medical claims data (health insurer); health-risk assessment
DU indicator	Health-related quality of life (Healthy Days Questionnaire) Risk-related age (all cause mortality and elevated cholesterol, BMI, habitual weekly physical activity, fruit and vegetable intake and smoking status) Healthcare expenditure
Classification systems	Not stated
Strengths / Limitations	Biased towards those willing to participate

DU studies: Drug cost



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Full Length Article

Maximum potential cost-savings attributable to generic substitution of antipsychotics 2008 to 2013



D. Husselmann ^a, R. Joubert ^{b,*}, J.R. Burger ^a, M.S. Lubbe ^a, M. Cockeran ^a

Aspect	Description
Source/Design	Prescription claims data; Retrospective; repeated cross-sectional (2008 – 2013)
DU indicator	maximum potential cost-saving through generic substitution Prescribing behaviour (generics vs originals)
Classification systems	ICD-10 codes (F20-F20.9) Active ingredients were identified using the MIMS
Strengths/ Limitations	Sample size: N = 4410 patients Out-of-pocket' payments, hospitalisation not available

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Economic appraisal of dabigatran as first-line therapy for stroke prevention in atrial fibrillation

M Bergh, C A Marais, H Miller-Jansön, F Salie, M P Stander

Aspect	Description
Data source/Design	2007 medical scheme claims data.
DU indicator	Modelled outcomes included total cost, quality-adjusted life years (QALYs) and incremental CE ratio (ICER), with the effectiveness measured by QALYs gained. Event costs: (i) the costs of clinical events that are associated with a patient with AF, notably stroke, systemic embolism (SE) and transient ischaemic attack (TIA); and (ii) the costs of adverse events in patients on treatment for AF related to bleeding tendencies
Classification systems	ICD 10
Strengths/ Limitations	2.1 million claim lines occurring between January 2000 and May 2007.

South African Journal of Sports Medicine

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The potential market demand for biokinetics in the private health care sector of South Africa

SJ Moss, MS Lubbe

Aspect	Description
Data source/ Design	Prescription claims data; Retrospective cross-sectional (2007)
DU indicator	Potential market demand for biokinetics Nr of chronic diseases per patient
Classification systems	ICD-10 codes; CDL conditions
Strengths/ Limitations	Sample size: 1.6 million persons, 747 199 persons received medication for a CDL

American Journal of Health Promotion

Participation in Fitness-Related Activities of an Incentive-Based Health Promotion Program and Hospital Costs: A Retrospective Longitudinal Study

Deepak Patel, MD, MSc , **Estelle V. Lambert**, PhD , **Roseanne da Silva**, BScHons, FIA , **Mike Greyling**, MSc , **Tracy Kolbe-Alexander**, BSc, PhD , **Adam Noach**, BSc , **Jaco Conradie**, BSc , **Craig Nossel**, MBChB, MBA , **Jill Borresen**, BSc, PhD , **Thomas Gaziano**, MD

American Journal of Health Promotion, vol. 25, 5: pp. 341-348. , First Published May 1, 2011.

Aspect	Description
Source/Design	Retrospective, longitudinal open cohort (5-years). Hospital claims amongst members of an incentivized health promotion program offered by a private health insurer
DU indicator	Changes in electronically documented gym visits and registered participation in fitness-related activities over 3 years and measures of association between changes in participation (years 1-3) and subsequent probability and costs of hospital admission (years 4-5).
Classification systems	n/a
Strengths / Limitations	Sample size: 304 054 adult members Lck of specific data e.g. the duration, intensity, and type of activities

The value of antibiotic claims data in support of antibiotic stewardship & infection control

5th FIDSSA Conference 2013

Champagne Sports Resort Drakensberg, KwaZulu Natal, South Africa

Oral Presentations

G Kantor¹, S Smith², J Crawford²

¹ Discovery Health, UCT, Case Western Reserve University; ² Discovery Health

Aspect	Description
Source/Design	Discovery Health automated, hospital level data. Design unknown
DU indicator	Total cost and DDDs; Best Care Always campaign measures of overuse: extended duration of treatment (7 or 14 days), 4 drugs; double gram-negative, double gram-positive and double fungal cover; antibiotic treatment without microbiology workup; surgical prophylaxis rates and use of colistin. The mix of antibiotic utilisation (ATC groups e.g. beta-lactams, carbapenems) were assessed and case mix (DRG) adjusted. Trends in healthcare-acquired infection (>2DDDs initiated 48 hours after admission) rates.
Classification systems	Claims coded using Nappi codes; ATC (WHO) DDDs Diagnosis (ICD-10), procedure (CPT) and pathology (NHRPL) codes and DRGs (Diagnosis Related Groups) provide clinical markers.
Strengths / Limitations	Service dates may not always correspond with administration dates Colistin is not always claimed (lack of claims data)

Claims data: Strengths & Weaknesses

Strengths	Limitations
• Good quality and consistency • Good client or population-specific cost estimates • Access to sensitive data, e.g. HIV or rare cases • Large sample sizes • Ethical considerations – you can apply to REC for waived informed consent <i>if data were anonymized</i>	• Not designed for the purposes of research • Generalizable only to people with similar profiles • Hard to compare to national studies • Limited clinical validity/outcomes data • Data often do not include administrative costs • Does not provide context of service environment/treatment • Inconsistency regarding classification systems for medication and diagnosis



Thank you

It all starts here