

Growth of linked hospital data use in Australia: a systematic review*Michelle Tew*¹ MPH, MPharm, Health Economics Research Assistant*Kim M. Dalziel*¹ PhD, MHIthEcon, BHIthSc(Hons), Senior Research Fellow*Dennis J. Petrie*^{1,2} PhD, BEcon(Hons), BSc, Senior Research Fellow*Philip M. Clarke*¹ PhD, MEcon, BEcon, Professor of Health Economics

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Appendix S1

Table A1: Search strategy and number of hits from MEDLINE Ovid, Embase and PsycINFO databases. Search conducted on 5th July 2015.

#	Search terms	Results
1	exp Australia/	
2	Australia.mp.	
3	1 or 2	
4	(hospital* and data* and link*).mp.	
5	(hospital* and records* and link*).mp.	
6	4 or 5	
7	3 and 6	
8	7 and 1860:2014.(sa_year).	
9	remove duplicates from 8	
	N=	1386

Table A2: Search strategy and number of hits from Scopus database. Search conducted on 5th July 2015

#	Search terms	Results
1	TITLE-ABS-KEY (australia*) AND DOCTYPE (article or review) AND PUBYEAR<2015	272,205
2	(TITLE-ABS-KEY (“new south wales” OR nsw OR “western australia” OR wa OR victoria* OR vic OR tasmania* OR tas OR “northern territories” OR nt OR queensland OR qld OR “south australia” OR act OR “australian capital territory” AND DOCTYPE	694,934

	(article or review) AND PUBYEAR<2015)	
3	1 OR 2	883,245
4	TITLE-ABS-KEY (hospital* AND data* AND link*) AND DOCTYPE (article or review) AND PUBYEAR<2015)	13,463
5	TITLE-ABS-KEY (hospital* AND record* AND link*) AND DOCTYPE (article or review) AND PUBYEAR<2015)	6,713
6	4 OR 5	15,988
7	3 AND 6	1,258
8	3 AND 6 AND (LIMIT-TO (LANGUAGE. "English"))	1,215
		N= 1215

Table A3: Search strategy and number of hits from EconLit database.
Search conducted on 8th July 2015

Search ID	Search terms	Search options	Results
S1	hospital* AND link* AND data*	Search modes – Boolean/Phrase	135
S2	hospital* AND record* AND data*	Search modes – Boolean/Phrase	30
S3	S1 OR S2	Search modes – Boolean/Phrase	140
S4	australia*	Search modes – Boolean/Phrase	35,442
S5	“western australia” OR wa	Search modes – Boolean/Phrase	6,427
S6	“south australia” OR sa	Search modes – Boolean/Phrase	1,653
S7	victoria* OR vic	Search modes – Boolean/Phrase	4,954
S8	queensland OR qld	Search modes – Boolean/Phrase	4,042
S9	tasmania* OR tas	Search modes – Boolean/Phrase	713
S10	“northern territory” OR nt	Search modes – Boolean/Phrase	208
S11	“australian capital territory” OR act	Search modes – Boolean/Phrase	17,171
S12	S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11	Search modes – Boolean/Phrase	34,557
S13	S4 OR S12	Search modes – Boolean/Phrase	64,273
S14	S3 AND S13	Limiters – Publication date: -20141231; Publication type: Journal Article Search modes – Boolean/Phrase	11
		N=	11

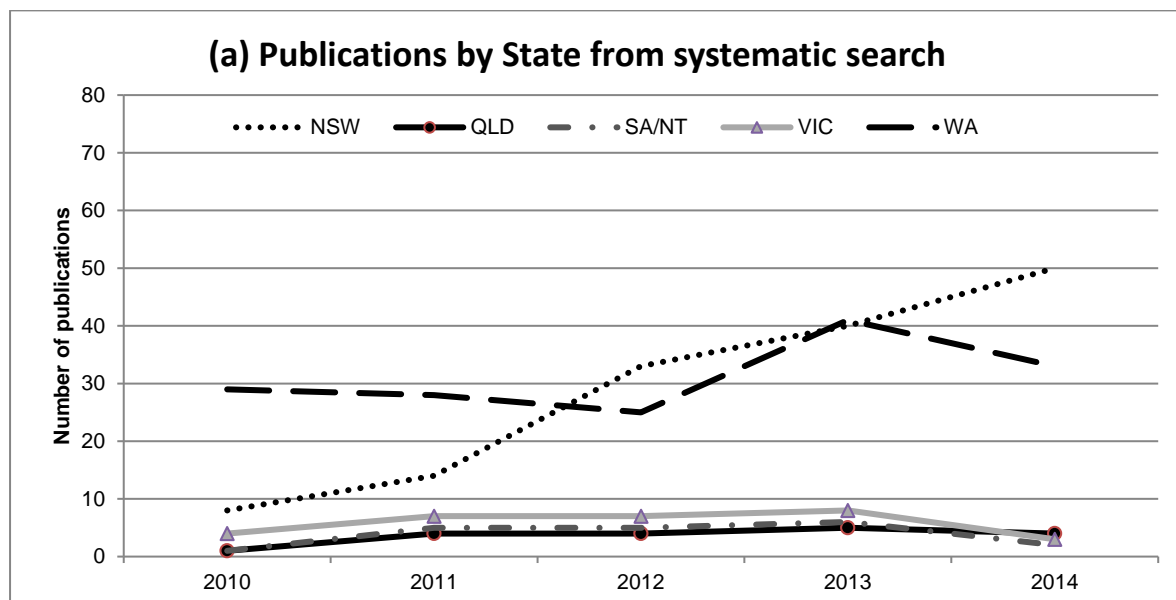
Appendix S2

Of the 229 published articles listed on the PHRN website, 101 were excluded based on the eligibility criteria. One hundred and twenty eight articles met the inclusion criteria and of these, 59 matched those found from the systematic search. The total number of articles obtained from both searches between 2010 and 2014 can be as shown in Table B1. Our systematic search strategy was able to capture 70% of the total number of peer-reviewed articles from the two sources with no difference observed in the trends between States when adding this additional data (see Figure B1).

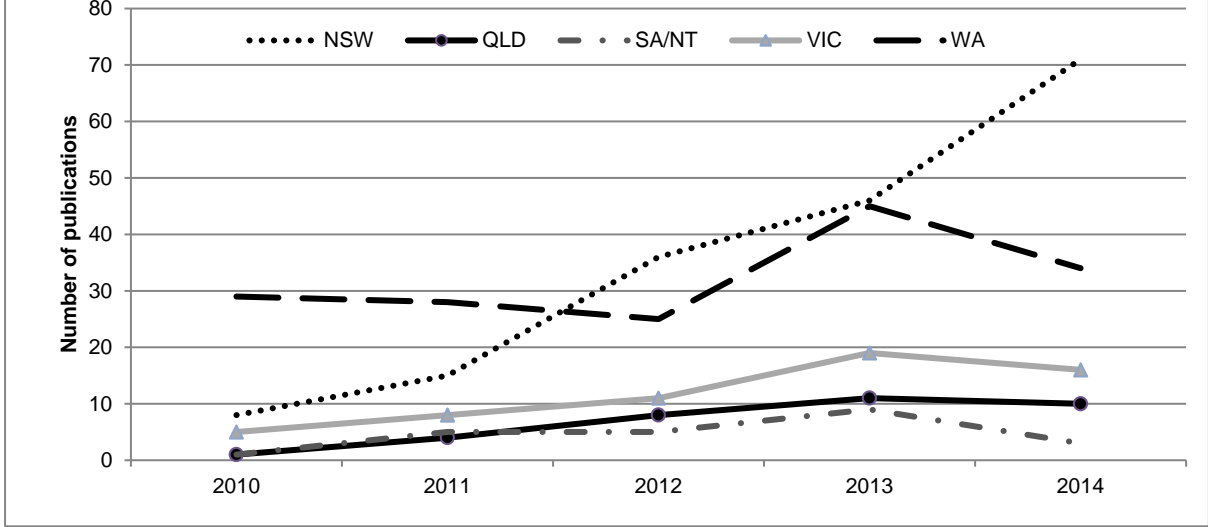
Table B1: Total number of articles identified between 2010 and 2014 (PHRN website list accessed 27 November 2015)

Total number of articles	Year					Total	% coverage
	2010	2011	2012	2013	2014		
<i>Systematic search only</i>	42	48	66	89	51	296	70
<i>PHRN website list only</i>	1	3	9	19	38	70	16
<i>Duplicates</i>		2	8	8	41	59	14

Figure B1: Number of publications by State between 2010 and 2014 (a) from systematic search and (b) combined source of systematic search and PHRN list.



(b) Publications by State from combined searches



Appendix S3

Table C1: State Data Linkage Unit information ^a

State	Data Linkage Unit and website address	Comments on completion of table	Data linkage availability						Productivity and Output					Website score#
			All hosp.	Hosp. sector	ED	Out Pat	First year of Admitted hospital data	Fee	Total number of -				Pub. list on DLU site	
									Linkage projects undertaken	Linkage projects in 2014	FTE staff at DLU	Research pub.		
SA	SA/NT DataLink	Completed by DLU	NO	Public	YES	NO	2001	YES	24 (total for SA and NT)	4	12.4	5	NO **	4.5
NT			NO	Public	YES	NO	2001	YES		1	0.9	2	NO **	
https://www.santdatalink.org.au														
ACT	CHeReL	Completed from website and checked by DLU	YES	Both	Partial	NO	2004	YES	1	1	NA	4	YES	5
NSW			YES	Both	Partial	NO	2001	YES	182	NA	NA	277	YES	
http://www.cherel.org.au/														
QLD	Queensland Health - Health Statistics Unit	Completed by DLU	YES	Both	YES	YES	1995	NO	272	105	10	21	NO	3
https://www.health.qld.gov.au/hsu/link/datalink.asp														
TAS	Tasmanian Data Linkage Unit (TDLU)	Completed from website and not checked by DLU	NO	Public	YES	NO	2000	NA	1	1	NA	NA	NO	0.25
http://www.menzies.utas.edu.au/														
VIC	Victorian Data Linkages	Completed from website and confirmed by DLU	YES	Both*	YES	NO	1993	No	200+	29	10	20^	NO	3
https://www2.health.vic.gov.au/about/reporting-planning-data/victorian-data-linkages														

WA	Data Linkage Western Australia	Completed from web and confirmed by DLU	<i>YES</i>	<i>Both</i>	<i>YES</i>	<i>NO</i>	<i>1970</i>	<i>YES</i>	<i>924 applications</i>	<i>44</i>	<i>NA</i>	<i>172 (1995-2003)</i>	<i>YES</i>	<i>5</i>
http://www.datalinkage-wa.org.au/														

Footnotes:

Abbreviations: DLU – Data Linkage Unit, ED – Emergency presentations, OutPat- Outpatient visits, Hosp. – hospital, pub. – publications, NA – not available

Text in **bold** represents information completed by DLU. *Italics* represents text completed by researcher.

^a State data linkage units were approached via email to complete template information. In the event no information was provided after the email and a follow up telephone call the template was completed from information available on their websites and the PHRN website. The final data was sent back to the state data linkage units to allow them the opportunity to confirm or amend their information.

*Private hospital data is not consistently available.

** Request for list via e-mail

Website score. Each DLU website is scored according to its comprehensiveness, usability, application guidance, availability of online application form, demonstration of achievements or productivity. One point is awarded to each.

^ Linkage Unit is currently in the midst of updating their list of publications hence total number listed does not represent the complete list.