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## MAPPING REVIEW SEARCH METHODS

Five different search approaches were carried out:

1. Electronic database searches
2. Utilities database searches
3. Citation searching of key publications
4. Targeted journal searching
5. Targeted website searching

### 1. Electronic database search

Three electronic databases were searched:

- MEDLINE, MEDLINE Epub Ahead of Print, In-Process & Other Non-Indexed Citations: Ovid, 1946 to Present
- Web of Science (Web of Science Citation Index, 1899 to present; Social Sciences Citation Index, 1956 to present; Conference Proceedings Citation Index (CPCI), 1990 to present; Conference Proceedings Citation Index - Social Science & Humanities, 1990 to present): Clarivate Analytics.
- Cumulative Index to Nursing and Allied Health Literature (CINAHL): EBSCO, 1982 to present

The search strategy comprised free-text synonyms for six generic preference based measures of interest 'EQ-5D, SF-6D, HUI, QWB, AQoL, CHU-9D and 15D/16D/17D' combined with free-text terms for 'mapping/cross-walking'. Searches were translated across databases and were limited to English language publications published since 2007. The search strategies are presented in Appendix 1.

### 2. Utilities database search

Two utilities databases were searched:

- Dakin, H, 2013. Review of studies mapping from quality of life or clinical measures to EQ-5D: an online database. Health and Quality of Life Outcomes. 11:151. HERC database of mapping studies, Version 6.0 (Last updated: January 2017). Available at: <http://www.herc.ox.ac.uk/downloads/herc-database-of-mapping-studies>. [Accessed 11th October 2018]. The search was limited by publication date from 2007.
- SchARRHUD database (<http://www.scharrhud.org/>) [Accessed 11th October 2018] Free-text terms for map\*, crosswalk\*, cross walk\*, cross-walk\*, estimat\* or predict\*, transfer, transformation or deriv\* in the title field was applied. The search was limited by publication date from 2007.

### 3. Citation search

Three types of citation searches were carried out on 11th October 2018:

- a) For the **previously published mapping review** and the thirty studies included in the review on in the Scopus (Elsevier) database:
  - Brazier JE, Yang Y, Tsuchiya A, Rowen DL. A review of studies mapping (or cross walking) non-preference based measures of health to generic preference-based measures. The European Journal of Health Economics. 2010 1;11(2):215-25.
  
- b) For three known **mapping guidelines** in the Web of Science (Clarivate Analytics), Scopus (Elsevier) and Google Scholar:
  - Wailoo A, Alava MH, Manca A, Mejia A, Ray J, Crawford B, Botteman M, Busschbach J, Hoffmann-La Roche F. Use of Mapping to Estimate Utility Values from Non-Preference-Based Outcome Measures for Cost per QALY Economic Analysis: Good Research Practices Task Force.
  - Longworth L, Rowen D. NICE DSU technical support document 10: the use of mapping methods to estimate health state utility values. Sheffield: Decision Support Unit, SCHARR, University of Sheffield. 2011.
  - Petrou S, Rivero-Arias O, Dakin H, Longworth L, Oppe M, Froud R, Gray A. Preferred reporting items for studies mapping onto preference-based outcome measures: The MAPS statement. Health and quality of life outcomes. 2015 13(1):106.
  
- c) For four **mapping reviews** in the Web of Science (Clarivate Analytics), Scopus (Elsevier) and Google Scholar:
  - Brazier J, Connell J, Papaioannou D, Mukuria C, Mulhern B, Peasgood T, Jones ML, Paisley S, O'Cathain A, Barkham M, Knapp M. A systematic review, psychometric analysis and qualitative assessment of generic preference-based measures of health in mental health populations and the estimation of mapping functions from widely used specific measures. Health technology assessment (Winchester, England). 2014 May;18(34).
  - Chen G, Ratcliffe J. A Review of the Development and Application of Generic Multi-Attribute Utility Instruments for Paediatric Populations. PharmacoEconomics. 2015;33(10):1013-28.

- Kearns B, Ara R, Wailoo AJ. A review of the use of statistical regression models to inform cost effectiveness analyses within the NICE technology appraisals programme. Report by the NICE Decision Support Unit. 2012
- Kwon J, Kim SW, Ungar WJ, Tsiplova K, Madan J, Petrou S. A Systematic Review and Meta-analysis of Childhood Health Utilities. *Medical Decision Making*. 2017;38(3):277-305.

#### **4. Targeted journal search**

Four journals known to the authors that widely publish mapping review studies were search in the Web of Science (Thomson Reuter) on 11th October 2018: i) *Medical Decision Making* ii) *Value in Health* iii) *Medical Care* and iv) *Journal of Health Economics*. The search was limited by publication date from 2007. The search strategy is presented in Appendix 2.

#### **5. Relevant website and instrument publications site searches**

Three key websites known to the authors were searched on 11th October 2018 i) Health Economists' Study Group website (<http://www.hesg.org.uk>) ii) ISPOR website via the ISPOR Scientific Presentations Database ([http://www.ispor.org/RESEARCH\\_STUDY\\_DIGEST/research\\_index.asp](http://www.ispor.org/RESEARCH_STUDY_DIGEST/research_index.asp)) iii) EuroQoL website (<http://www.euroqol.org/>). The search was limited by publication date from 2007. The search strategies are presented in Appendix 3.

Three generic preference based measures publication lists websites were searched for terms 'map', 'cross', 'estimat', 'predict', 'deriv', 'transfer', 'transform', 'eq', 'sf', 'aqol', 'qwb', '15d' on 18<sup>th</sup> September 2017. The search was limited by publication date from 2007.

## Electronic database search strategies

### MEDLINE, MEDLINE Epub Ahead of Print, In-Process & Other Non-Indexed Citations: Ovid, 1946 to Present

30<sup>th</sup> November 2018

#	Searches
1	preference based.tw.
2	(multiattribut or multi attribute or mau or maui).tw.
3	(euroqol or euro qol or eq5d or eq 5d).tw.
4	(sf 6d or sf6d or short form 6d or shortform 6d or sf six or sfsix or shortform six or short form six).tw.
5	health utilities index.tw.
6	(hui or hui1 or hui2 or hui3).tw.
7	(quality adj2 (wellbeing or well being)).tw.
8	qwb.tw.
9	(assessment adj2 quality adj2 life instrument).tw.
10	aqol*.tw.
11	(15d or 15dimensional or 15 dimensional).tw.
12	(16d or 16dimensional or 16 dimensional).tw.
13	(17d or 17dimensional or 17 dimensional).tw.
14	(CHU-9D or CHU9D or child health utility 9d or child health utility 9 dimensions).tw.
15	or/1-15
16	(mapping* or mapped or map).tw.
17	(crosswalk* or cross walk*).tw.
18	(estimat* or predicted or predicting or prediction or transfer or transformation or derive or derived or deriving or derivation).ti.
19	or/16-19
20	15 and 19
21	limit 20 to english language
21	limit 21 to yr="2007 -Current"

### Web of Science: Clarivate Analytics

11<sup>th</sup> October 2018

#	Searches
# 1	TS=("preference based")
# 2	TS=((multiattribut or "multi attribute" or mau or maui))
# 3	TS=((euroqol or "euro qol" or eq5d or eq 5d))
# 4	TS=((("sf 6d" or sf6d or "short form 6d" or "shortform 6d" or "sf six" or sfsix or "shortform six" or "short form six"))
# 5	TS=("health utilities index")
# 6	TS= ((hui or hui1 or hui2 or hui3))
# 7	TS= ((quality NEAR/2 wellbeing)) OR TS= ((quality NEAR/2 well being))
# 8	TS= (qwb)
# 9	TS= ((assessment NEAR/2 quality NEAR/2 life instrument))

# 10	TS= (aqol*)
# 11	TS=((15d or "15dimensional" or "15 dimensional"))
# 12	#11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1
# 13	TS=((mapping* or mapped or map))
# 14	TS=((crosswalk* or cross walk*))
# 15	TITLE: ((estimat* or predicted or predicting or prediction or transfer or transformation or derive or derived or deriving or derivation))
# 16	#15 OR #14 OR #13
# 17	(#16 AND #12) AND LANGUAGE: (English) Timespan=2007-2018

**Cumulative Index to Nursing and Allied Health Literature (CINAHL): EBSCO, 1982 to present**

11<sup>th</sup> October 2018

#	Searches
S1	TI preference based OR AB preference based
S2	TI ( (multiattribut or multi attribute or mau or maui) ) OR AB ( (multiattribut or multi attribute or mau or maui) )
S3	TI ( (euroqol or euro qol or eq5d or eq 5d) ) OR AB ( (euroqol or euro qol or eq5d or eq 5d) )
S4	TI ( (sf 6d or sf6d or short form 6d or shortform 6d or sf six or sfsix or shortform six or short form six) ) OR AB ( (sf 6d or sf6d or short form 6d or shortform 6d or sf six or sfsix or shortform six or short form six) )
S5	TI health utilities index OR AB health utilities index
S6	TI ( (hui or hui1 or hui2 or hui3) ) OR AB ( (hui or hui1 or hui2 or hui3) )
S7	TI ( (quality N2 (wellbeing or well being)) ) OR AB ( (quality N2 (wellbeing or well being)) )
S8	TI qwb OR AB qwb
S9	TI (assessment N2 quality N2 life instrument) OR AB (assessment N2 quality N2 life instrument)
S10	TI aqol* OR AB aqol*
S11	TI ( (15d or 15dimensional or 15 dimensional) ) OR AB ( (15d or 15dimensional or 15 dimensional) )
S12	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11
S13	TI ( (mapping* or mapped or map) ) OR AB ( (mapping* or mapped or map) )
S14	TI ( (crosswalk* or cross walk*) ) OR AB ( (crosswalk* or cross walk*) )
S15	TI (estimat* or predicted or predicting or prediction or transfer or transformation or derive or derived or deriving or derivation)
S16	S13 OR S14 OR S15
S17	S12 AND S16
S18	S12 AND S16 Narrow by Language: - english
S19	S12 AND S16 Limiters - Published Date: 20070101- 20181011; English Language

## Journal search strategy

### Web of Science: Clarivate Analytics

11<sup>th</sup> October 2018

#	Searches
# 1	TS=("preference based")
# 2	TS=((multiattribut or "multi attribute" or mau or maui))
# 3	TS=((euroqol or "euro qol" or eq5d or eq 5d))
# 4	TS(("sf 6d" or sf6d or "short form 6d" or "shortform 6d" or "sf six" or sfsix or "shortform six" or "short form six"))
# 5	TS=("health utilities index")
# 6	TOPIC: ((hui or hui1 or hui2 or hui3))
# 7	TOPIC: ((quality NEAR/2 wellbeing)) OR TOPIC: ((quality NEAR/2 well being))
# 8	TOPIC: (qwb)
# 9	TOPIC: ((assessment NEAR/2 quality NEAR/2 life instrument))
# 10	TOPIC: (aqol*)
# 11	TS=((15d or "15dimensional" or "15 dimensional"))
# 12	#11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1
# 13	PUBLICATION NAME: (Medical Decision Making)
# 14	PUBLICATION NAME: (Value in Health)
# 15	PUBLICATION NAME: (Journal of Health Economics)
# 16	PUBLICATION NAME: (Medical Care)
# 17	#16 OR #15 OR #14 OR #13
# 18	#17 AND #12 Indexes=SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH Timespan=2007-2018

## Website search strategies

Health Economists' Study Group website (<http://www.hesg.org.uk>)

16<sup>th</sup> September 2016 (not searchable after 2017)

#	Searches
1	Searched for 'mapping' between 2007-present
2	Searched for 'cross-walk' or 'cross walk' between 2007-present

ISPOR website (<http://www.ispor.org/>)

11<sup>th</sup> October 2018

#	Searches
1	Searched for 'mapping' between 2007-present
2	Searched for 'cross-walk' or 'cross walk' between 2007-present

EuroQoL (<http://www.euroqol.org/>)

11<sup>th</sup> October 2018

#	Searches
1	Searched for "mapping" between 2007-present
2	Searched for 'cross-walk' or 'cross walk' between 2007-present