

Acute Kidney Injury Update

The literature searches for this review are detailed below and complied with the methodology outlined in Developing NICE guidelines: the manual (2014)

For more information, please see the Methodology review published as part of the accompanying documents for this guideline.

A.1 Clinical search literature search strategy

Searches were constructed using a PICO framework where population (P) terms were combined with Intervention (I) and in some cases Comparison (C) terms. Outcomes (O) are rarely used in search strategies as these concepts may not be indexed or described in the title or abstract and are therefore difficult to retrieve. Search filters were applied to the search where appropriate.

Table 1: Database parameters, filters and limits applied

Database	Dates searched	Search filter used
Medline (OVID) Medline in process (OVID) Medline e pubs	01-01-2013 -09-02-2024 01-01-2013 -09-02-2024 Searched 09-02-2024	Prognostic studies Exclusions (animal studies, letters, comments, editorials, case studies/reports) English language
Embase (OVID)	01-01-2013 -09-02-2024	Prognostic studies Exclusions (animal studies, letters, comments, editorials, case studies/reports, conference abstracts) English language
The Cochrane Library (Wiley)	Cochrane Reviews 2013 to 2024 Issue 2 of 12	
Epistemonikos (The Epistemonikos Foundation)	No date limits applied (searched 09/02/2024)	

Medline (Ovid) search terms

1.	exp Acute Kidney Injury/
2.	((acute or early) adj1 (kidney or renal) adj2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).tw.
3.	((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).kf.
4.	or/1-3
5.	exp Contrast Media/

6.	iodine/
7.	5 and 6
8.	((contrast or radio* or media or intraven* or intraart* or intra-art*) adj4 iodin*).tw.
9.	((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*).kf.
10.	or/7-9
11.	glomerular filtration rate/
12.	(glomerular adj1 filtrat*).tw.
13.	(glomerular and filtrat*).kf.
14.	(egfr or gfr).tw,kf.
15.	or/11-14
16.	4 and (10 or 15)
17.	letter/ or editorial/ or news/ or exp historical article/ or anecdotes as topic/ or comment/ or case reports/
18.	(letter or comment*).ti.
19.	17 or 18
20.	randomized controlled trial/ or random*.ti,ab.
21.	19 not 20
22.	animals/ not humans/
23.	exp Animals, Laboratory/
24.	exp Animal Experimentation/
25.	exp Models, Animal/
26.	exp Rodentia/
27.	(rat or rats or mouse or mice or rodent*).ti.
28.	or/21-27
29.	16 not 28
30.	predict.ti.
31.	(validat* or rule*).ti,ab.
32.	(predict* and (outcome* or risk* or model*)).ti,ab.
33.	((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)).ti,ab.
34.	decision*.ti,ab. and Logistic models/
35.	(decision* and (model* or clinical*)).ti,ab.
36.	(prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or factor* or model*)).ti,ab.
37.	(stratification or discrimination or discriminate or c statistic or "area under the curve" or AUC or calibration or indices or algorithm or multivariable).ti,ab.
38.	ROC curve/
39.	or/30-38
40.	29 and 39
41.	limit 40 to english language/

Embase (Ovid) search terms

1.	exp acute kidney failure/
2.	((acute or early) adj1 (kidney or renal) adj2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).tw.

3.	((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).kf.
4.	or/1-3
5.	iodinated contrast medium/
6.	((contrast or radio* or media or intraven* or intraart* or intra-art*) adj4 iodin*).tw.
7.	((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*).kf.
8.	or/5-7
9.	exp glomerulus filtration rate/
10.	(glomerular adj1 filtrat*).tw.
11.	(glomerular and filtrat*).kf.
12.	(egfr or gfr).tw,kf.
13.	or/9-12
14.	4 and (8 or 13)
15.	letter.pt. or letter/
16.	note.pt.
17.	editorial.pt.
18.	case report/ or case study/
19.	(letter or comment*).ti.
20.	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su.
21.	or/15-20
22.	randomized controlled trial/ or random*.ti,ab.
23.	21 not 22
24.	animal/ not human/
25.	nonhuman/
26.	exp Animal Experiment/
27.	exp Experimental Animal/
28.	animal model/
29.	exp Rodent/
30.	(rat or rats or mouse or mice or rodent*).ti.
31.	or/23-30
32.	14 not 31
33.	predict.ti.
34.	(validat* or rule*).ti,ab.
35.	(predict* and (outcome* or risk* or model*)).ti,ab.
36.	((history or variable* or criteria or scor* or characteristic* or finding* or factor*) and (predict* or model* or decision* or identif* or prognos*)).ti,ab.
37.	decision*.ti,ab. and statistical model/
38.	(decision* and (model* or clinical*)).ti,ab.
39.	(prognostic and (history or variable* or criteria or scor* or characteristic* or finding* or factor* or model*)).ti,ab.
40.	(stratification or discrimination or discriminate or c statistic or "area under the curve" or AUC or calibration or indices or algorithm or multivariable).ti,ab.
41.	receiver operating characteristic/
42.	or/33-41

43.	32 and 42
44.	limit 43 to english language/

Cochrane Library (Wiley) search terms

#1.	MeSH descriptor: [Acute Kidney Injury] explode all trees
#2.	((acute or early) near/1 (kidney or renal) near/2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)):ti,ab,kw
#3.	#1 or #2
#4.	MeSH descriptor: [Contrast Media] explode all trees
#5.	MeSH descriptor: [Iodine] explode all trees
#6.	#4 and #5
#7.	((contrast or radio* or media or intraven* or intraart* or intra art*) near/4 iodin*)):ti,ab,kw
#8.	#6 or #7
#9.	MeSH descriptor: [Glomerular Filtration Rate] this term only
#10.	((glomerular near/1 filtrat*)):ti,ab,kw
#11.	((egfr or gfr)):ti,ab,kw
#12.	#9 or #10 or #11
#13.	#8 or #12
#14.	#3 and #13

Epistemonikos search terms

1.	(title:((title:((contrast OR radio* OR media OR intraven* OR intraart* OR intra-art*) AND iodin*) OR abstract:((contrast OR radio* OR media OR intraven* OR intraart* OR intra-art*) AND iodin*))) OR abstract:((title:((contrast OR radio* OR media OR intraven* OR intraart* OR intra-art*) AND iodin*) OR abstract:((contrast OR radio* OR media OR intraven* OR intraart* OR intra-art*) AND iodin*)))) OR (title:(glomerular AND filtrat*) OR abstract:(glomerular AND filtrat*)) OR (title:(egfr OR gfr) OR abstract:(egfr OR gfr)) AND (title:((acute OR early) AND (kidney OR renal) AND (failure* OR injur* OR insufficien* OR dysfunction* OR impair* OR damag* OR trauma* OR necrosis)) OR abstract:((acute OR early) AND (kidney OR renal) AND (failure* OR injur* OR insufficien* OR dysfunction* OR impair* OR damag* OR trauma* OR necrosis))))
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1 Health Economics literature search strategy

Health economic evidence was identified by applying filters to the clinical literature search strategy in Medline and Embase. The following databases were also searched: Econlit (Ovid) NHS Economic Evaluation Database (NHS EED - this ceased to be updated after 31st March 2015), Health Technology Assessment database (HTA - this ceased to be updated from 31st March 2018) and The International Network of Agencies for Health Technology Assessment (INAHTA)

Table 2: Database parameters, filters and limits applied

Database	Dates searched	Search filters and limits applied
Medline (OVID)	Health Economics 1 January 2013–19 February 2024	Health economics studies Exclusions (animal studies, letters, comments, editorials, case studies/reports,) English language
Embase (OVID)	Health Economics 1 January 2014 – 19 February 2024	Health economics studies Exclusions (animal studies, letters, comments, editorials, case studies/reports, conference abstracts) English language
NHS Economic Evaluation Database (NHS EED) (Centre for Research and Dissemination - CRD)	Inception –31 st March 2015	
Health Technology Assessment Database (HTA) (Centre for Research and Dissemination – CRD)	Inception – 31 st March 2018	
The International Network of Agencies for Health Technology Assessment (INAHTA)	Inception - 19 February 2024	English language
Econlit (Ovid)	Inception - 19 February 2024	

Medline (Ovid) search terms

1.	exp Acute Kidney Injury/
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Health Economics literature search strategy

2.	((acute or early) adj1 (kidney or renal) adj2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).tw.
3.	((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).kf.
4.	or/1-3
5.	exp Contrast Media/
6.	Iodine/
7.	5 and 6
8.	((contrast or radio* or media or intraven* or intraart* or intra-art*) adj4 iodin*).tw.
9.	((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*).kf.
10.	or/7-9
11.	glomerular filtration rate/
12.	(glomerular adj1 filtrat*).tw.
13.	(glomerular and filtrat*).kf.
14.	(egfr or gfr).tw,kf.
15.	or/11-14
16.	4 and (10 or 15)
17.	letter/ or editorial/ or news/ or exp historical article/ or anecdotes as topic/ or comment/ or case reports/
18.	(letter or comment*).ti.
19.	17 or 18
20.	randomized controlled trial/ or random*.ti,ab.
21.	19 not 20
22.	animals/ not humans/
23.	exp Animals, Laboratory/
24.	exp Animal Experimentation/
25.	exp Models, Animal/
26.	exp Rodentia/
27.	(rat or rats or mouse or mice or rodent*).ti.
28.	or/21-27
29.	16 not 28
30.	Economics/
31.	Value of life/
32.	exp "Costs and Cost Analysis"/
33.	exp Economics, Hospital/
34.	exp Economics, Medical/
35.	Economics, Nursing/
36.	Economics, Pharmaceutical/
37.	exp "Fees and Charges"/
38.	exp Budgets/
39.	budget*.ti,ab.
40.	cost*.ti.
41.	(economic* or pharmaco?economic*).ti.
42.	(price* or pricing*).ti,ab.
43.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
44.	(financ* or fee or fees).ti,ab.
45.	(value adj2 (money or monetary)).ti,ab.
46.	or/30-45
47.	exp Models, Economic/
48.	*Models, Theoretical/
49.	*Models, Organizational/
50.	markov chains/
51.	monte carlo method/
52.	exp Decision Theory/

53.	(markov* or monte carlo).ti,ab.
54.	econom* model*.ti,ab.
55.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
56.	Or/47-55
57.	46 or 56
58.	29 and 57
59.	limit 58 to english language/

Embase (Ovid) search terms

1.	exp acute kidney failure/
2.	((acute or early) adj1 (kidney or renal) adj2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).tw.
3.	((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).kf.
4.	or/1-3
5.	iodinated contrast medium/
6.	((contrast or radio* or media or intraven* or intraart* or intra-art*) adj4 iodin*).tw.
7.	((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*).kf.
8.	or/5-7
9.	exp glomerulus filtration rate/
10.	(glomerular adj1 filtrat*).tw.
11.	(glomerular and filtrat*).kf.
12.	(egfr or gfr).tw,kf.
13.	or/9-12
14.	4 and (8 or 13)
15.	letter.pt. or letter/
16.	note.pt.
17.	editorial.pt.
18.	case report/ or case study/
19.	(letter or comment*).ti.
20.	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su.
21.	or/15-20
22.	randomized controlled trial/ or random*.ti,ab.
23.	21 not 22
24.	animal/ not human/
25.	nonhuman/
26.	exp Animal Experiment/
27.	exp Experimental Animal/
28.	animal model/
29.	exp Rodent/
30.	(rat or rats or mouse or mice or rodent*).ti.
31.	or/23-30
32.	14 not 31
33.	Health economics/
34.	exp health care cost/
35.	exp Fee/
36.	exp Budget/
37.	Funding/
38.	budget*.ti,ab.
39.	cost*.ti.
40.	(economic* or pharmaco?economic*).ti.
41.	(price* or pricing*).ti,ab.
42.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.

43.	(financ* or fee or fees).ti,ab.
44.	(value adj2 (money or monetary)).ti,ab.
45.	or/33-44
46.	statistical model/
47.	exp economic aspect/
48.	14 and 15
49.	*theoretical model/
50.	*nonbiological model/
51.	stochastic model/
52.	decision theory/
53.	decision tree/
54.	monte carlo method/
55.	(markov* or monte carlo).ti,ab.
56.	econom* model*.ti,ab.
57.	(decision* adj2 (tree* or analy* or model*)).ti,ab.
58.	or/46-58
59.	45 or 58
60.	limit 59 to english language/

NHS EED and HTA (CRD) search terms

#1.	MeSH DESCRIPTOR Acute Kidney Injury EXPLODE ALL TREES
#2.	((acute or early) adj1 (kidney or renal) adj2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)))
#3.	#1 OR #2
#4.	MeSH DESCRIPTOR Contrast Media EXPLODE ALL TREES
#5.	MeSH DESCRIPTOR Iodine EXPLODE ALL TREES
#6.	#4 AND #5
#7.	((contrast or radio* or media or intraven* or intraart* or intra-art*) adj4 iodin*)
#8.	#6 OR #7
#9.	MeSH DESCRIPTOR Glomerular Filtration Rate EXPLODE ALL TREES
#10.	((glomerular adj1 filtrat*))
#11.	(egfr or gfr)
#12.	#9 OR #10 OR #11
#13.	#8 OR #12
#14.	#3 and #13

INAHTA search terms

#1.	"Acute Kidney Injury"[mhe]
#2.	((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis))[Title] OR ((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis))[abs]
#3.	#1 OR #2
#4.	"Contrast Media"[mhe]
#5.	"Iodine"[mhe]
#6.	#4 AND #5
#7.	((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*)[Title] OR ((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*)[abs]

#8.	#6 or #7
#9.	"Glomerular Filtration Rate"[mhe]
#10.	(glomerular and filtrat*)[Title] OR (glomerular and filtrat*)[abs]
#11.	(egfr or gfr)[Title] OR (egfr or gfr)[abs]
#12.	#9 OR #10 OR #11
#13.	#8 OR #12
#14.	#3 AND #13

Econlit (Ovid)search terms

1.	((acute or early) adj1 (kidney or renal) adj2 (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).tw.
2.	[((acute or early) and (kidney or renal) and (failure* or injur* or insufficien* or dysfunction* or impair* or damag* or trauma* or necrosis)).kf.]
3.	or/1-2
4.	(contrast or radio* or media or intraven* or intraart* or intra-art*) adj4 iodin*).tw.
5.	[((contrast or radio* or media or intraven* or intraart* or intra-art*) and iodin*).kf.]
6.	or/4-5
7.	(glomerular adj1 filtrat*).tw.
8.	[(glomerular and filtrat*).kf.]
9.	[(egfr or gfr).tw,kf.]
10.	or/7-9
11.	(6 or 10) and 3