## Online Resource 1

**Search Strategy**

## Online Resource 2

### Quality Assessment Tables

- **Table S1**: Risk of bias assessment of cost studies
- **Table S2**: Risk of bias assessment of economic models (NICE cost-effectiveness checklist, adapted from Drummond, 1996 [1])
- **Table S3**: Risk of bias assessment of RCTs (Cochrane [2, 3])
- **Table S4**: Risk of bias assessment of cohort studies (CRD cohort checklist [4])
- **Table S5**: Risk of bias assessment of cross-sectional studies - Adapted Newcastle Ottawa Scale (Herzog 2013[5])
Online Resource 1 – Search Strategy

The review was informed by a number of separate searches. The original 2018 searches and the 2020 update searches included six separate sets of MEDLINE and Embase database searches, plus searches of additional databases and websites. Full search strategies for all resources searched for the 2020 search are shown below.

The search made use, where available, of subject headings, as well as words in the title, abstract and authors keywords to find records reporting on hand eczema or hand dermatitis. The subject searches were then combined with filters to find particular types of publication such as reviews.

In the MEDLINE strategies, animal studies were removed using a standard algorithm and publication types that were unlikely to yield relevant information, such as comments, editorial, news, letters and case reports were excluded.

Search results were downloaded and loaded into EndNote. The results were deduplicated using several algorithms and the duplicate references held in a separate EndNote database. Results from resources that do not allow export in a format compatible with EndNote were saved in Word or Excel documents and manually deduplicated.

The full searches are reported below.

SEARCH STRATEGIES

A.1: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily

Interface / URL: Ovid SP
Database coverage dates: 1946 to 02/10/2020
Search date: 08/10/2020
Retrieved records: 653
Search strategy:

Note: This strategy identified RCTs and patient preference studies.

1 Skin Diseases, Eczematous/ (69)
2 Eczema/ (10998)
3 Eczema, Dyshidrotic/ (282)
4 exp Dermatitis, Contact/ (34116)
5 (eczema$ or dermatos$ or dermatit$).ti,ab,kf. (92408)
6 (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kf. (2117)
7 or/1-6 (111678)
8 exp Hand/ (79492)
9 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kf. (579808)
10 or/8-9 (605744)
11 7 and 10 (6793)
12 Hand Dermatoses/ (7717)
A.2:    Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily
Interface / URL: Ovid SP
Database coverage dates: 1946 to 02/10/2020
Search date: 08/10/2020
Retrieved records: 320
Search strategy:

Note: This strategy identified economic studies and studies on lost productivity.

Skin Diseases, Eczematous/ (69)
Ecema/ (10998)
Ecema, Dyshidrotic/ (282)
exp Dermatitis, Contact/ (34116)
(eczema$ or dermatos$ or dermatit$).ti,ab,kf. (92408)
(dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kf. (2117)
or/1-6 (111678)
exp Hand/ (79492)
(hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kf. (579808)
or/8-9 (605744)
7 and 10 (6793)
Hand Dermatoses/ (7717)
or/11-12 (12570)
Economics/ (27238)
exp "Costs and cost analysis"/ (238804)
Economics, dental/ (1911)
exexp "Economics, hospital"/ (24702)
A.3: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily
Interface / URL: Ovid SP
Database coverage dates: 1946 to 02/10/2020
Search date: 08/10/2020
Retrieved records: 179
Search strategy:

Note: This strategy identified studies of utility elicitation for chronic hand eczema.
4 exp Dermatitis, Contact/ (34116)
5 (eczema$ or dermatos$ or dermatit$).ti,ab,kf. (92408)
6 (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kf. (2117)
7 or/1-6 (111678)
8 exp Hand/ (79492)
9 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits
or finger or fingers or nail or nails).ti,ab,kf. (579808)
10 or/8-9 (605744)
11 7 and 10 (6793)
12 Hand Dermatoses/ (7717)
13 or/11-12 (12570)
14 Quality-Adjusted Life Years/ (12497)
15 (quality adjusted or adjusted life year$).ti,ab,kf. (17714)
16 (qaly$ or qald$ or qale$ or qtime$).ti,ab,kf. (11290)
17 (illness state$1 or health state$1).ti,ab,kf. (6767)
18 (hui or hui1 or hui2 or hui3).ti,ab,kf. (1589)
19 (multiattribute$ or multi attribute$).ti,ab,kf. (950)
20 (utility adj3 (score$1 or valu$ or health$ or cost$ or measur$ or disease$ or mean or gain or gains or
index$)).ti,ab,kf. (15953)
21 utilities.ti,ab,kf. (7505)
22 (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or
euroqol or euro qol5d or euroqol5d or euro qol or euroqual or euro qual5d or euroqual5d or euro qol or
euroqol or euro qol5d or euro qol5d or euro?qol or euro?qol5d or euro$ quality of life or european
qol).ti,ab,kf. (12255)
23 (euro$ adj3 (5 d or 5d or 5 dimension$ or 5dimension$ or 5 domain$ or 5domain$)).ti,ab,kf. (4370)
24 (sf36$ or sf 36$ or sf thirtysix or sf thirty six).ti,ab,kf. (23179)
25 (time trade off$1 or time tradeoff$1 or tto or timetradeoff$1).ti,ab,kf. (1971)
26 ((qol or hrqol or quality of life).ti,kf. or *quality of life/ and ((qol or hrqol$ or quality of life) adj2
(increas$ or decrease$ or improv$ or declin$ or reduc$ or high$ or low$ or effect or effects or worse
or score or scores or change$1 or impact$1 or impacted or deteriorat$)).ab. (39952)
27 Cost-Benefit Analysis/ and (cost-effectiveness ratio$ and (perspective$ or life expectanc$)).ti,ab,kf. (3615)
28 *quality of life/ and (quality of life or qol).ti. (54543)
29 quality of life/ and ((quality of life or qol) adj3 (improv$ or chang$)).ti,ab,kf. (27986)
30 quality of life/ and ((quality of life or qol) adj (score$1 or measure$1)).ti,ab,kf. (11882)
31 quality of life/ and health-related quality of life.ti,ab,kf. (32636)
32 quality of life/ and ec.fs. (10180)
33 quality of life/ and (health adj3 status).ti,ab,kf. (9134)
34 (quality of life or qol).ti,ab,kf. and Cost-Benefit Analysis/ (12928)
35 Models, Economic/ (10239)
36 or/14-35 (171934)
37 elicitation$1.ab,kf. or elicit$t.ti. or elicit$ab. /freq=2 (59220)
38 13 and (36 or 37) (195)
39 exp Animals/ not Humans/ (4739090)
40 (news or editorial or case report).pt. or case report.ti. (1008198)
41 38 not (39 or 40) (179)
42 remove duplicates from 41 (179)
A.4: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily
Interface / URL: Ovid SP
Database coverage dates: 1946 to 02/10/2020
Search date: 08/10/2020
Retrieved records: 1197
Search strategy:

Note: This strategy identified cohort studies and registry studies.

1 Skin Diseases, Eczematous/ (69)
2 Eczema/ (10998)
3 Eczema, Dyshidrotic/ (282)
4 exp Dermatitis, Contact/ (34116)
5 (eczema$ or dermatos$ or dermatit$).ti,ab,kf. (92408)
6 (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kf. (2117)
7 or/1-6 (111678)
8 exp Hand/ (79492)
9 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kf. (579808)
10 or/8-9 (605744)
11 7 and 10 (6793)
12 Hand Dermatoses/ (7717)
13 or/11-12 (12570)
14 Cohort Studies/ (268792)
15 Longitudinal Studies/ (137861)
16 Follow-up Studies/ (647925)
17 Prospective Studies/ (549917)
18 Retrospective Studies/ (841525)
19 (cohort or longitudinal or prospective or retrospective).ti,kf. (363170)
20 or/14-19 (2149716)
21 Registries/ (90730)
22 (register or registers or registry or registries).ti,kf. (40370)
23 or/21-22 (103984)
24 13 and (20 or 23) (1221)
25 exp Animals/ not Humans/ (4739090)
26 (news or editorial or case report).pt. or case report.ti. (1008198)
27 24 not (25 or 26) (1203)
28 remove duplicates from 27 (1197)

A.5: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily
Interface / URL: Ovid SP
Database coverage dates: 1946 to 02/10/2020
Search date: 08/10/2020
Retrieved records: 48
Search strategy:
Note: This strategy identified systematic reviews.

1  Skin Diseases, Eczematous/ (69)
2   Eczema/ (10998)
3   Eczema, Dyshidrotic/ (282)
4   exp Dermatitis, Contact/ (34116)
5   (eczema$ or dermatos$ or dermatit$).ti,ab,kf. (92408)
6   (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kf. (2117)
7   or/1-6 (111678)
8   exp Hand/ (79492)
9   (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kf. (579808)
10  or/8-9 (605744)
11   7 and 10 (6793)
12   Hand Dermatoses/ (7717)
13   or/11-12 (12570)
14   (systematic adj3 review).ti,kf. (142011)
15   (meta-analy$ or metaanaly$ or meta-synthes$ or metasynthes$ or meta-regressi$ or metaregressi$).ti,kf. (126540)
16   systematic overview$.ti,kf. (296)
17   or/14-16 (214692)
18   13 and 17 (50)
19   exp Animals/ not Humans/ (4739090)
20   (news or editorial or case report).pt. or case report.ti. (1008198)
21   18 not (19 or 20) (48)
22   remove duplicates from 21 (48)

A.6: Source: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily
Interface / URL: Ovid SP
Database coverage dates: 1946 to 02/10/2020
Search date: 08/10/2020
Retrieved records: 428
Search strategy:

Note: This strategy identified cost of illness, economic and cost studies.

1  Skin Diseases, Eczematous/ (69)
2   Eczema/ (10998)
3   Eczema, Dyshidrotic/ (282)
4   exp Dermatitis, Contact/ (34116)
5   (eczema$ or dermatos$ or dermatit$).ti,ab,kf. (92408)
6   (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kf. (2117)
7   or/1-6 (111678)
8   exp Hand/ (79492)
9   (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kf. (579808)
10  or/8-9 (605744)
A.7: Source: Embase
Interface / URL: OvidSP
Database coverage dates: 1974 to 2020 October 09
Search date: 12/10/2020
Retrieved records: 1564
Search strategy:

Note: This strategy identified RCTs and patient preference studies.

exp dermatitis/ (154159)
1 (eczema$ or dermatos$ or dermatit$).ti,ab,kw. (118915)
2 (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kw. (2002)
3 or/1-3 (189977)
4 exp hand/ (80092)
5 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kw. (747697)
6 or/5-6 (768128)
7 4 and 7 (12475)
8 Randomized controlled trial/ (624974)
Controlled clinical study/ (465160)
Random$.ti,ab. (1586530)
randomization/ (88500)
intermethod comparison/ (265947)
placebo.ti,ab. (312364)
(compare or compared or comparison).ti. (521081)
((evaluated or evaluate or evaluating or assessed or assess) and (compare or compared or comparing or comparison)).ab. (2185268)
(open adj label).ti,ab. (82059)
((double or single or doubly or singly) adj (blind or blinded or blindly)).ti,ab. (236634)
double blind procedure/ (176874)
parallel group$1.ti,ab. (26225)
(crossover or cross over).ti,ab. (107391)
((assign$ or match or matched or allocation) adj5 (alternate or group$1 or intervention$1 or patient$1 or subject$1 or participant$1)).ti,ab. (339243)
(assigned or allocated).ti,ab. (399884)
(controlled adj7 (study or design or trial)).ti,ab. (359826)
(volunteer or volunteers).ti. (251995)
human experiment/ (518865)
trial.ti. (311282)
or/9-27 (5163458)
(random$ adj samp$ adj7 ("cross section" or questionnaire$1 or survey$ or database$1)).ti,ab. not (comparative study/ or controlled study/ or randomi?ed controlled.ti,ab. or randomly assigned.ti,ab.) (8257)
Cross-sectional study/ not (randomized controlled trial/ or controlled clinical study/ or controlled study/ or randomi?ed controlled.ti,ab. or control group$1.ti,ab.) (249251)
((case adj control$) and random$) not randomi?ed controlled).ti,ab. (17691)
(Systematic review not (trial or study)).ti. (155173)
(nonrandom$ not random$).ti,ab. (16477)
"Random field$",ti,ab. (2422)
(random cluster adj3 samp$l).ti,ab. (1312)
(review.ab. and review.pt.) not trial.ti. (834747)
"we searched",ab. and (review.ti. or review.pt.) (33585)
"update review",ab. (110)
(databases adj4 searched).ab. (38228)
(rat or rats or mouse or mice or or swine or porcine or murine or sheep or lambs or pigs or piglets or rabbit or rabbits or cat or cats or dog or dogs or cattle or bovine or monkey or monkeys or trout or marmoset$1).ti. and animal experiment/ (1082614)
Animal experiment/ not (human experiment/ or human/) (2280357)
or/29-41 (3561433)
28 not 42 (4593091)
8 and 43 (1494)
patient preference/ (19170)
prefer$.ti,ab,kw. (578823)
8 and (45 or 46) (178)
(animal/ or animal experiment/ or animal model/ or animal tissue/ or nonhuman/) not exp human/ (6111578)
editorial.pt. or case report.ti. (969478)
A.8: Source: Embase
Interface / URL: OvidSP
Database coverage dates: Embase 1974 to 2020 October 12
Search date: 13/10/2020
Retrieved records: 542
Search strategy:

Note: This strategy identified economic studies and studies on lost productivity.

1 exp dermatitis/ (154217)
2 (eczema$ or dermatos$ or dermatit$).ti,ab,kw. (118988)
3 (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kw. (2004)
4 or/1-3 (190057)
5 exp hand/ (80133)
6 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kw. (748027)
7 or/5-6 (768461)
8 4 and 7 (12484)
9 Health Economics/ (33077)
10 exp Economic Evaluation/ (310155)
11 exp Healthcare Cost/ (294817)
12 pharmaeconomics/ (7396)
13 (econom$ or cost or costs or costly or costing or price or prices or pricing or pharmaeconomics$).ti,ab. (1096269)
14 (expenditure$ not energy).ti,ab. (41294)
15 (value adj2 money).ti,ab. (2483)
16 budget$.ti,ab. (39353)
17 or/9-16 (1358887)
18 (metabolic adj cost).ti,ab. (1553)
19 ((energy or oxygen) adj cost).ti,ab. (4404)
20 ((energy or oxygen) adj expenditure).ti,ab. (32240)
21 or/18-20 (37083)
22 17 not 21 (1351275)
23 absenteeism/ (17467)
24 presenteeism/ (1367)
25 (absenteeism or presenteeism).ti,ab,kw. (9359)
26 ((sickness or illness) adj presence).ti,ab,kw. (161)
27 medical leave/ (6861)
28 ((sick$ or illness or disabilit$) adj3 (leave$ or absen$ or rate$)).ti,ab,kw. (19572)
29 (medical$ adj3 (leave$ or absen$)).ti,ab,kw. (2465)
30 ((day$ or week$ or month$ or year$ or time or duration) adj3 (sick$ or absen$ or illness$ or disab$)).ti,ab,kw. (55315)
31 ((day$ or week$ or month$ or year$ or time or duration) adj3 (loss$ or lost or losing)).ti,ab,kw. (65406)
32 ((day$ or week$ or month$ or year$ or time or duration) adj (away or off$)).ti,ab,kw. (10414)
A.9: Source: Embase
Interface / URL: OvidSP
Database coverage dates: Embase 1974 to 2020 October 12
Search date: 13/10/2020
Retrieved records: 319
Search strategy:

Note: This strategy identified studies of utility elicitation for chronic hand eczema.

1. exp dermatitis/ (154217)
2. (eczema$ or dermatos$ or dermatitis$).ti,ab,kw. (118988)
3. (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kw. (2004)
4. or/1-3 (190057)
5. exp hand/ (80133)
6. (hand or hands or palm or palms or palmar or palmpantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kw. (748027)
7. or/5-6 (768461)
8. 4 and 7 (12484)
9. quality adjusted life year/ (27362)
10. (quality adjusted or adjusted life year$).ti,ab,kw. (25782)
11. (qaly$ or qald$ or qale$ or qtime$).ti,ab,kw. (21023)
12. (illness state$1 or health state$1).ti,ab,kw. (11622)
13. (hui or hui1 or hui2 or hui3).ti,ab,kw. (2378)
14. (multiattribute$ or multi attribute$).ti,ab,kw. (1206)
15. (utility adj3 (score$1 or valu$ or health$ or cost$ or measur$ or disease$ or mean or gain or gains or index$)).ti,ab,kw. (25087)
16. utilities.ti,ab,kw. (12091)
17. (eq-5d or eq5d or eq-5 or eq5 or euro qual or euroqual or euro qual5d or euroqual5d or euro qol or euroqol or euro qol5d or euroqol5d or euro qol or euroqol or euro qol5d or euro qol5d or euro qol5d or eu?qol or eu?qol5d or euro$ quality of life or european qol).ti,ab,kw. (22095)
18. (euro$ adj3 (5 d or 5d or 5 dimension$ or 5dimension$ or 5 domain$ or 5domain$)).ti,ab,kw. (6540)
19. (sf36s or sf or sff thirty six or sff thirty six).ti,ab,kw. (38751)
20. (time trade off$1 or time tradeoff$1 or tto or timetradeoff$1).ti,ab,kw. (2854)
21. ((qol or hrqol or quality of life$).ti,kw. or *"quality of life"*) and ((qol or hrqol$ or quality of life$) adj2 (increase$ or decrease$ or improv$ or declin$ or reduc$ or high$ or low$ or effect or effects or worse or score or scores or change$1 or impact$1 or impacted or deteriorat$)).ab. (58989)
"cost-benefit analysis"/ and (cost-effectiveness ratio$ and (perspective$ or life expectanc$)).ti,ab,kw. (855)
"quality of life"/ and (quality of life or qol).ti. (87921)
"quality of life"/ and ((quality of life or qol) adj3 (improv$ or chang$)).ti,ab,kw. (77904)
"quality of life"/ and ((quality of life or qol) adj (score$1 or measure$1)).ti,ab,kw. (26133)
"quality of life"/ and health-related quality of life.ti,ab,kw. (60028)
"quality of life"/ and pe.fs. (8528)
"quality of life"/ and (quality of life or qol).ti,ab,kw. and "cost-benefit analysis"/ (5612)
economic model/ (2180)
or/9-30 (291772)
elicitation$1.ab,kw. or elicit$.ti. or elicit$.ab. /freq=2 (68066)
8 and (31 or 32) (341)
(855)
(87921)
(77904)
(26133)
(60028)
(8528)
(16592)
(5612)
(2180)
(291772)
(68066)
(339)
(323)
remove duplicates from 36 (319)

Search note: For the 2018 search, line 27 was: "quality of life"/ and ec.fs. In Embase the syntax ec is used for Endogenous Compound – the inclusion of ec as a floating subheading was incorrect. The syntax relating to economics is pe for Pharmacoeconomics. For the 2020 update search, the previously used ec was replaced with pe.

A.10: Source: Embase
Interface / URL: OvidSP
Database coverage dates: 1974 to 2020 October 09
Search date: 12/10/2020
Retrieved records: 1541
Search strategy:

Note: This strategy identified cohort studies and registry studies.

exp dermatitis/ (154159)
(eczema$ or dermatos$ or dermatit$).ti,ab,kw. (118915)
(dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kw. (2002)
or/1-3 (189977)
exphand/ (80092)
(hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti,ab,kw. (747697)
or/5-6 (768128)
4 and 7 (12475)
cohort analysis/ (623417)
longitudinal study/ (145888)
follow-up/ (1594421)
prospective study/ (633140)
retrospective study/ (974268)
(cohort or longitudinal or prospective or retrospective).ti,kw. (511771)
or/9-14 (3299606)
register/ (114343)
(or/ registers or registry or registries).ti,kw. (68195)
or/16-17 (151157)
8 and (15 or 18) (1624)
(animal/ or animal experiment/ or animal model/ or animal tissue/ or nonhuman/) not exp human/ (6111578)
editorial.pt. or case report.ti. (969478)
19 not (20 or 21) (1560)
remove duplicates from 22 (1541)

A.11: Source: Embase
Interface / URL: OvidSP
Database coverage dates: 1974 to 2020 October 12
Search date: 13/10/2020
Retrieved records: 84
Search strategy:

Note: This strategy identified systematic reviews.

1 exp dermatitis/ (154217)
2 (eczema$ or dermatos$ or dermatit$).ti,ab,kw. (118988)
3 (dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kw. (2004)
4 or/1-3 (190057)
5 exp hand/ (80133)
6 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits
or finger or fingers or nail or nails).ti,ab,kw. (748027)
7 or/5-6 (768461)
8 4 and 7 (12484)
9 (systematic adj3 review).ti,kw. (170930)
10 (meta-analy$ or metaanaly$ or meta-synthes$ or metasynthes$ or meta-regressi$ or
metaregressi$).ti,kw. (161064)
11 systematic overview$.ti,kw. (336)
12 or/9-11 (264491)
13 8 and 12 (86)
14 (animal/ or animal experiment/ or animal model/ or animal tissue/ or nonhuman/) not exp human/
(6113634)
15 editorial.pt. or case report.ti. (970037)
16 13 not (14 or 15) (84)
17 remove duplicates from 16 (84)

A.12: Source: Embase
Interface / URL: OvidSP
Database coverage dates: 1974 to 2020 October 09
Search date: 12/10/2020
Retrieved records: 919
Search strategy:
Note: This strategy identified cost of illness studies, economic and cost studies.

1 exp dermatitis/ (154159)
2 (eczema$ or dermatos$ or dermatit$).ti,ab,kw. (118915)
3 (dyshidros$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite).ti,ab,kw. (2002)
4 or/1-3 (189977)
5 exp hand/ (80092)
6 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits
or finger or fingers or nail or nails).ti,ab,kw. (747697)
7 or/5-6 (768128)
8 4 and 7 (12475)
9 "cost of illness"/ (19456)
10 ((burden or cost) adj3 (illness or disease)).ti,ab,kw. (57387)
11 exp healthcare cost/ (294776)
12 cost/ (58780)
13 cost benefit analysis/ (85387)
14 (cost or costs).ti,ab,kw. (764630)
15 (costing adj3 (illness$ or disease$ or sickness$ or treatment$ or therap$)).ti,ab,kw. (223)
16 (burden$1 adj3 (illness$ or disease$ or sickness$ or treatment$ or therap$)).ti,ab,kw. (62066)
17 (resource$1 adj4 (use$1 or usage or utilit$)).ti,ab,kw. (45459)
18 (economic evaluation$ or pharmacoeconomic$).ti,ab,kw. (26563)
19 (hospitalization$1 or hospitalisation$1 or hospitalised or hospitalized).ti,ab,kw. (407865)
20 (admission$1 or readmission$1 or admitted or readmitted or visit or visits).ti,ab,kw. (959229)
21 (bed adj2 days).ti,ab,kw. (4403)
22 hospital stay$1.ti,ab,kw. (140768)
23 ((days or time or length or duration$1) adj3 hospital$).ti,ab,kw. (156365)
24 ((days or time or length or duration$1) adj3 (stay or stays or stayed)).ti,ab,kw. (185603)
25 ((days or time or length or duration$1) adj3 (discharge or discharged or home or homes)).ti,ab,kw. (43882)
26 or/9-25 (2316651)
27 8 and 26 (1008)
28 (animal/ or animal experiment/ or animal model/ or animal tissue/ or nonhuman/) not exp human/
(6111578)
29 editorial.pt. or case report.ti. (969478)
30 27 not (28 or 29) (933)
31 remove duplicates from 30 (919)

A.13: Source: NHS Economic Evaluation Database (NHS EED)
Interface / URL: https://www.crd.york.ac.uk/CRDWeb/
Database coverage dates: Information not found. Bibliographic records were published on NHS EED until 31st
March 2015. Searches of MEDLINE, Embase, CINAHL, PsycINFO and PubMed were continued until the end
of the 2014.
Search date: 14/10/2020
Retrieved records: 10
Search strategy:
1 MeSH DESCRIPTOR Skin Diseases, Eczematous 0
2 MeSH DESCRIPTOR Eczema 26
Search note: In 2018 NHS EED was searched via the Cochrane Library interface. NHS EED is no longer available via the Cochrane Library interface. For the 2020 update search, NHS EED was searched via the CRD interface.

A.14: Source: Cochrane Central Register of Controlled Trials (CENTRAL)

Interface / URL: Wiley / Cochrane Library

Database coverage dates: Information not found. Issue searched: Issue 10 of 12, October 2020

Search date: 14/10/2020

Retrieved records: 910

Search strategy:

#1 [mh ^"Skin Diseases, Eczematous"] 7
#2 [mh ^Eczema] 1041
#3 [mh ^Eczema, Dyshidrotic"] 8
#4 [mh "Dermatitis, Contact"] 747
#5 (eczema* or dermatos* or dermatit*) 11269
#6 (dyshidro* or dyshydro* or dishidro* or dishydro* or pulpitis or pulpite) 834
#7 #1 or #2 or #3 or #4 or #5 or #6 12079
#8 [mh Hand] 2292
#9 (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails) 49739
#10 #8 or #9 49814
#11 #7 and #10 1141
#12 [mh ^"Hand Dermatoses"] 257
#13 #11 or #12 1141
#14 #11 or #12 in Trials 910

A.15: Source: HTA Database

Interface / URL: https://database.inahta.org/

Database coverage dates: Information not found. The former database was produced by the CRD until March 2018, at which time the addition of records was stopped as INAHTA was in the process of rebuilding the new database platform. In July 2019, the database records were exported from the CRD platform and imported into the new platform that was developed by INAHTA. The rebuild of the new platform was launched in June 2020.

Search date: 14/10/2020

Retrieved records: 2
Search strategy:

11  #10 AND #7  2
10  #9 OR #8  228
9  (hand OR hands OR palm OR palms OR palmar OR palmoplantar OR acra OR acral OR acras OR digit OR digits OR finger OR fingers OR nail OR nails)  223
8  "Hand"[mh]  19
7  #6 OR #5 OR #4 OR #3 OR #2 OR #1  35
6  (dyshidro* OR dyshydro* OR dishidro* OR dishydro* OR pulpitis OR pulpite)  1
5  (eczema* OR dermatos* OR dermatit*)  34
4  "Dermatitis, Contact"[mh]  0
3  "Eczema, Dyshidrotic"[mh]  0
2  "Eczema"[mh]  6
1  "Skin Diseases, Eczematous"[mh]0

Search note: In 2018 the HTA database was searched via the University of York Centre for Reviews and Dissemination (CRD) interface. This version of the HTA is no longer being updated (from the 31 March 2018, the HTA database has remained available, but CRD are no longer adding new records to it). A new version of the HTA database is now available via INAHTA. For the 2020 update search, the new INAHTA HTA Database was searched.

A.16: Source: Cost-Effectiveness Analysis (CEA) Registry

Interface / URL: http://healtheconomicdev.tuftsmedicalcenter.org/cear2/search/search.aspx
Database coverage dates: The website states that the database includes studies published from 1976 to 2018 (https://cevr.tuftsmedicalcenter.org/databases/cea-registry). However, more recent studies (e.g. 2019 and 2020) can be found in the database.
Search date: 14/10/2020
Retrieved records: 4

Search strategy:

The search interface at the above URL was used. The following terms were searched separately.

Records for downloaded results were retrieved via PubMed.

hand eczema = 3 (3 results returned, 3 results downloaded)
hand dermatitis = 1 results (2 results returned: 1 excluded as duplicate, 1 downloaded)
hand dermatosis = 0 results
hand dermatose = 0 results
dyshidrosis = 0 results
dyshidroses = 0 results
dysydrosis = 0 results
dysydroses = 0 results
dishidrosis = 0 results
dishidroses = 0 results
dishydrosis = 0 results
dishyrdoses = 0 results
pulpitis = 0 results
pulpite = 0 results
A.17:  **Source: ScHARRHUD**  
Interface / URL: https://www.scharrhud.org/  
Database coverage dates: Information not found  
Search date: 14/10/2020  
Retrieved records: 0  
Search strategy:  
The search was conducted using the search interface at:  
https://www.scharrhud.org/index.php?recordsN1&m=search  
The following terms were entered. The drop-down field options were left at default ('Any field'). The two sets of terms were combined with Boolean AND using the drop-down option.  

(eczema* or dermatos* or dermatit* or dyshidro* or dyshydro* or dishidro* or dishydro* or pulpitis or pulpite)  
AND  
(hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails)  
0 records were returned  

A.18:  **Source: Evidence Search**  
Interface / URL: https://www.evidence.nhs.uk/  
Database coverage dates: Information not found  
Search date: 14/10/2020  
Retrieved records: 418  
Search strategy:  
The following search terms were entered in to the search interface at:  
(eczema or dermatosis or dermatitis) AND (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails or dyshidrosis or dyshidrotic or pulpitis or pulpite)  
(eczema OR dermatosis OR dermatitis) AND (hand OR hands OR palm OR palms OR palmar OR palmoplantar OR acra OR acral OR acras OR digit OR digits OR finger OR fingers OR nail OR nails OR dyshidrosis OR dyshidrotic OR pulpitis OR pulpite)  
1028 results were returned. Results were restricted using the 'Filter' options available to Guidance and Policy. In the information under the filter, the interface indicated that 653 results were returned when applying this restriction. However, in the information above the search results, the interface indicated that 418 results were returned. The search was re-run a number of times by two Information Specialists with the same outcome. An e-mail query was sent to NICE questioning the difference between the two result numbers. NICE confirmed that the difference is due to the way the interface rolls up certain types of results into one result, and that 418 was the correct number of unique results that could be downloaded when the search was restricted using the 'Filter' options available to Guidance and Policy.
418 is the number of records retrieved.

A.19: Source: National Institute for Health and Care Excellence (NICE) website
Interface / URL: https://www.nice.org.uk
Database coverage dates: n/a
Search date: 16/10/2020
Retrieved records: 0
Search strategy:

The previous search was conducted on 04/07/18.

The default search interface was used at the above URL. The following terms were searched on separately. Results were assessed by the Information Specialist for guidelines focused on the population of interest - chronic hand eczema – with a publication date of 04/07/18 to date. Relevant company submission documents or guidance documents were retrieved.

(eczema or dermatosis or dermatitis) AND (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails or dyshidrosis or dyshidrotic or pulpite) = 0 (7 results returned)

0 documents were retrieved for further assessment

A.20: Source: Guidelines International Network International Guideline Library
Interface / URL: https://guidelines.ebmportal.com/
Database coverage dates: Information not found
Search date: 16/10/2020
Retrieved records: 0
Search strategy:

The previous search was conducted on 04/07/18.

The default search interface was used at the above URL. The following terms were searched on separately. Results were assessed by the Information Specialist for guidelines focused on the population of interest - chronic hand eczema – with a publication date or expected publication date of 04/07/18 to date. Duplicates were excluded. For any potentially relevant guideline result, the full text online was sought via the link provided in the Library. Published guidelines were retrieved.

eczema = 0 (5 results returned)
dermatosis = 0 (1 result returned)
dermatitis = 0 (6 results returned)

0 guidelines were retrieved for further consideration.

Search note: In 2018 the search URL used for the Guidelines International Network International Guideline Library was http://www.g-i-n.net/library/international-guidelines-library/. This URL no longer leads to a search interface. For the 2020 update search, the following URL was used: https://guidelines.ebmportal.com/

A.21: Source: ECRI Guidelines Trust
The previous search was conducted on 04/07/18.

The Information Specialist logged into the ECRI Guidelines Trust at the above URL using username and password.

The default search interface was used. The following terms were searched on separately. Results were assessed by the Information Specialist for guidelines focused on the population of interest - chronic hand eczema – with a publication date of 04/07/18 to date. Duplicates were excluded.

eczema = 0 (4 results returned)
dermatosis = 0 (1 result returned)
dermatitis = 0 (21 results returned)

0 guidelines were retrieved for further assessment

Search note: In 2018 the National Guideline Clearinghouse as searched. This resource is no longer available. For the 2020 update search, the ECRI Guidelines Trust resource was searched as a replacement resource

A.22: Source: Office of National Statistics website
Interface / URL: https://www.ons.gov.uk/
Database coverage dates: n/a
Search date: 16/10/2020
Retrieved records: 0
Search strategy:

The previous search was conducted on 04/07/18

The following terms were searched on separately using the search interface at the above URL. Returned results were screened online by the Information Specialist for statistics with a publication date of 04/07/18 to date, related to chronic hand eczema disease burden (including, for example: epidemiology, incidence, prevalence, morbidity).

eczema: 0 results returned
dermatitis: 0 results returned
dermatosis: 0 results returned
dermatoses: 0 results returned
dyshidrosis: 0 results returned
pulpitis: 0 results returned
pulpite: 0 results returned
skin diseases: 0 (66 results returned)

0 results were selected for further assessment
A.23: Source: NHS Digital website
Interface / URL: https://digital.nhs.uk/
Database coverage dates: n/a
Search date: 14/10/2020
Retrieved records: 0
Search strategy:

The previous search was conducted on 04/07/18

The following terms were searched on separately using the search interface at the above URL. Returned results were screened online by the Information Specialist for statistics with a publication date of 04/07/18 to date, related to chronic hand eczema disease burden (including, for example: epidemiology, incidence, prevalence, morbidity).

eczema: 0 results returned
dermatitis: 0 results returned
dermatosis: 0 results returned
dermatoses: 0 results returned
dyshidrosis: 0 results returned
pulpitis: 0 results returned
pulpite: 0 results returned
skin diseases: 0 (4 results returned)

0 results were selected for further assessment

A.24: Source: Centers for Disease Control and Prevention website
Interface / URL: https://www.cdc.gov/datastatistics/index.html
Database coverage dates: n/a
Search date: 14/10/2020
Retrieved records: 0
Search strategy:

The previous search was conducted on 04/07/18

The advanced search interface available from the above URL was used to conduct the following searches. The searches were restricted using the 'Between these dates' option to results with a date from 04/07/18 to 16/10/20.

The information given in each returned result was scanned by the Information Specialist for potential relevance. Results judged to indicate clear potential relevance as a source of statistics related to chronic hand eczema disease burden (including, for example, epidemiology, incidence, prevalence, morbidity) were opened for further assessment. Relevant results were retrieved.

1. The following terms were entered into the search box "All these words": hand eczema = 0 (28 results returned)
2. The following terms were entered into the search box "All these words": hands eczema = 0 (28 results returned)
3. The following terms were entered into the search box "All these words": hand dermatitis = 0 (243 results returned)

4. The following terms were entered into the search box "All these words": hands dermatitis = 0 (243 results returned)

5. The following terms were entered into the search box "Any of these words" dermatosis dermatoses dyshidrosis pulpitis pulpite = 0 (55 results returned)

In addition, the webpages found under the heading 'Skin exposures and effects' in the content hierarchy on the left side of the page at the following URL were browsed by the Information Specialist for statistics with a publication date of 04/07/18 to date related to chronic hand eczema disease burden (including, for example: epidemiology, incidence, prevalence, morbidity).

https://www.cdc.gov/niosh/topics/skin/

0 results were retrieved for further consideration

A.25: Source: World Health Organization webpages
Interface / URL: http://www.who.int/gho/en/
Database coverage dates: n/a
Search date: 19/10/2020
Retrieved records: 0
Search strategy:

The previous search was conducted on 04/07/18

The following two searches were conducted.

Search 1: World Health Statistics reports were browsed for reports with a publication date of 2018 to 2020 at http://www.who.int/gho/publications/world_health_statistics/en/

The 2020 report was downloaded at: https://apps.who.int/iris/bitstream/handle/10665/332070/9789240005105-eng.pdf

The 2019 report was downloaded at: https://apps.who.int/iris/bitstream/handle/10665/324835/9789241565707-eng.pdf?sequence=9&isAllowed=y

The 2018 report was downloaded at: https://apps.who.int/iris/bitstream/handle/10665/272596/9789241565585-eng.pdf

The Ctrl-F function was used to search across each PDF on the following terms:

cezema
dermatitis
dermatosis
dermatoses
dyshidrosis
pulpitis
pulpite
skin

Any information found was assessed by the Information Specialist for statistics relevant to chronic hand eczema disease burden (including, for example, epidemiology, incidence, prevalence, morbidity).

No relevant statistical information was identified.

Search 2: The Global Health Observatory data repository webpage was browsed for relevant information at http://apps.who.int/gho/data/node.home. The information was assessed by the Information Specialist for statistics relevant to chronic hand eczema disease burden (including, for example, epidemiology, incidence, prevalence, morbidity).

No relevant statistical information was identified.

In addition, the Global Health Observatory data repository search option was used at: https://apps.who.int/gho/data/node.imr?search=

All 'Also search in' options were left as default (i.e. selected).

The following terms were searched on separately:

eczema = 0 results returned
dermatitis = 0 results returned
dermatosis = 0 results returned
dermatoses = 0 results returned
dyshidrosis = 0 results returned
pulpitis = 0 results returned
pulpite = 0 results returned
skin = 0 results returned

No relevant statistical information was identified.

A.26: Source: Canadian Agency for Drugs and Technologies in Health (CADTH) webpages
Interface / URL: https://www.cadth.ca/
Database coverage dates: n/a
Search date: 19/10/2020
Retrieved records: 9
Search strategy:

The previous search was conducted on 05/07/18.

The following documents were sought: clinical guidance, economic guidance and final recommendations.

The site-wide search interface was used at: https://www.cadth.ca/. Separate searches were conducted on each term shown below.

Results were filtered by 'Product Line' to "Common Drug Review".
Searches were restricted using the 'Publication Date' filter option to results with publication date from 05/07/18 to 19/10/20.

Results were assessed for potential relevance to chronic hand eczema. Relevant results were checked for document types of interest.

PDFs of relevant documents were retrieved for further assessment. Duplicate documents were not retrieved.

eczema = 9 results were returned. 9 documents were downloaded related to three Common Drug Review reports

dermatitis = 6 results were returned. 0 documents were downloaded

dermatosis = 0 results were returned
dyshidrosis = 0 results were returned

dyshidrosis = 0 results were returned

dyshidrosis = 0 results were returned

9 documents were retrieved for further assessment

A.27: Source: Institute for Quality and Efficiency in Healthcare (IQWiG) webpages

Interface / URL: https://www.iqwig.de/en/projects-results/projects.1057.html

Database coverage dates: n/a

Search date: 19/10/2020

Retrieved records: 3

Search strategy:

The previous search was conducted on 05/07/18.

The following documents were sought: dossier assessment documents (German language) and accompanying "extract of dossier assessment" documents in English (if available).

The "Projects" search engine was used, found at: https://www.iqwig.de/en/projects-results/projects.1057.html

"Drug Assessment" was selected from the "Department/Division" menu

Separate searches were conducted on each term shown below. The term was entered and "Filter Projects" was selected to see the results.

Results were checked for potential relevance to hand eczema, published from 05/07/18 to date. For relevant results, the "Report documents" link was selected to view the PDF files available to download. The files were checked to identify the dossier assessment documents (German language) and accompanying "extract of dossier assessment" documents in English (if available).

PDFs of relevant documents were retrieved for further assessment. If a relevant additional result was shown for the Benefit Assessment or an additional Addendum, these were also saved as PDF files.

eczema = 0 retrieved (1 result returned)
dermatitis = 3 documents retrieved (3 results returned)
dermatosis = 0 results returned
dermatoses = 0 results returned
dyshidrosis = 0 results returned
pulpitis = 0 results returned
pulpite = 0 results returned

3 documents were retrieved

A.28:  Source: MEDLINE(R) ALL
Interface / URL: OvidSP
Database coverage dates: 1946 to October 27, 2020
Search date: 29/10/2020
Retrieved records: 601
Search strategy:

1. Skin Diseases, Eczematous/ep, mo (4)
2. Skin Diseases, Eczematous/ and (epidemiology/ or incidence/ or prevalence/ or exp mortality/ or morbidity/ or exp comorbidity/) (3)
3. Eczema/ep, mo (1281)
4. Eczema/ and (epidemiology/ or incidence/ or prevalence/ or exp mortality/ or morbidity/ or exp comorbidity/) (783)
5. Eczema, Dyshidrotic/ep, mo (11)
6. Eczema, Dyshidrotic/ and (epidemiology/ or incidence/ or prevalence/ or exp mortality/ or morbidity/ or exp comorbidity/) (8)
7. exp Dermatitis, Contact/ep, mo (3112)
8. exp Dermatitis, Contact/ and (epidemiology/ or incidence/ or prevalence/ or exp mortality/ or morbidity/ or exp comorbidity/) (1323)
9. ((eczema$ or dermatos$ or dermatit$) and (epidemiolog$ or incidence or incidences or incident or incidents or prevalen$ or mortalit$ or morbidit$ or comorbidit$ or multimorbidit$)).ti. (1223)
10. ((dyshidro$ or dyshydro$ or dishidro$ or dishydro$ or pulpitis or pulpite) and (epidemiolog$ or incidence or incidences or incident or incidents or prevalen$ or mortalit$ or morbidit$ or comorbidit$ or multimorbidit$)).ti. (7)
11. or/1-10 (5279)
12. exp Hand/ (79730)
13. (hand or hands or palm or palms or palmar or palmoplantar or acra or acral or acras or digit or digits or finger or fingers or nail or nails).ti. (100978)
14. or/12-13 (148440)
15. 11 and 14 (345)
16. Hand Dermatoses/ep, mo (723)
17. Hand Dermatoses/ and (epidemiology/ or incidence/ or prevalence/ or exp mortality/ or morbidity/ or exp comorbidity/) (430)
18. Hand Dermatoses/ and (epidemiolog$ or incidence or incidences or incident or incidents or prevalen$ or mortalit$ or morbidit$ or comorbidit$ or multimorbidit$).ti. (178)
19. or/16-18 (841)
20. 15 or 19 (910)
21. exp Animals/ not Humans/ (4749702)
22. (news or editorial or case report).pt. or case report.ti. (992605)
23. 20 not (21 or 22) (900)
Search note: For the 2020 update search, this additional, targeted, pragmatic search for records explicitly referring to chronic hand eczema epidemiology (non-specific epidemiology, incidence, prevalence, mortality, morbidity, comorbidity or multimorbidity) was conducted. This search was not conducted for the original 2018 search.
Online Resource 2 – Quality Assessment Tables

Table S1. Risk of bias assessment of cost studies

| Study               | Selection of participants – was there clear inclusion and exclusion criteria? | How representative of the target population were the participants in the study, considering age, disease severity, co-morbidities? | Were the data collection methods reasonable/valid? | Have the researchers tried to reduce potentials for bias, for example interviewer bias? | Have the researchers offered assessments of the limitations of the study approach? |
|---------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Cortesi, 2014 [6]   | Partly - inclusion criteria reported                                           | Representative                                                                                                               | Yes - outlined in detail using a variety of methods | No                                                                                        | Yes - methodology to estimate indirect costs, applicability of results to other countries. |
| Fowler, 2006 [7]    | No - no details of study population given, only stated it was chronic hand eczema | Not clear                                                                                                                   | Yes - taken from a survey of patients in a health plan | NA                                                                                       | Yes - survey response rate was low, respondents may not be representative, cost burden underestimated as no indirect costs or over the counter drugs, multivariate models had low goodness of fit |
| Diepgen, 2013 [11]  | No - published elsewhere                                                        | Representative                                                                                                               | Yes - taken from 2 surveys                        | No                                                                                        | Partly - transferability issues reported                                               |
| Petersen, 2014 [22] | Partly - limited details on inclusion criteria were reported                   | Representative                                                                                                               | Yes                                               | NA                                                                                        | Partly - bias due to higher dropout rate for men, investigators did not assess severity |
| Augustin, 2011 [10] | Yes                                                                             | Representative                                                                                                               | Yes                                               | No                                                                                        | No                                                                                   |
Table S2.  Risk of bias assessment of economic models (NICE cost-effectiveness checklist, adapted from Drummond, 1996 [1])

| Question                                                                 | Study           | Van Gils, 2013 [12] | NICE TA177, 2008 [8] |
|-------------------------------------------------------------------------|-----------------|---------------------|----------------------|
| 1. Was the research question stated?                                    | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     |                      |
| 2. Was the economic importance of the research question stated?         | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     |                      |
| 3. Was/were the viewpoint(s) of the analysis clearly stated and justified? | Yes / No / Not clear / NA | Yes | Yes |
| 6. Was the form of economic evaluation stated?                           | Comment - provide brief justification for judgement | Societal | NHS |
| 4. Was a rationale reported for the choice of the alternative programmes or interventions compared? | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     | According to the patients' population considered |
| 5. Were the alternatives being compared clearly described?               | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     | Detailed description |
| 6. Was the form of economic evaluation stated?                           | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     | CUA |
| 7. Was the choice of form of economic evaluation justified in relation to the questions addressed? | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     | Impact on QoL of chronic hand eczema |
| 8. Was/were the source(s) of effectiveness estimates used stated?        | Yes / No / Not clear / NA | Yes | Yes |
| 9. Were details of the design and results of the effectiveness study given (if based on a single study)? | Yes / No / Not clear / NA | Yes | Yes |
| Comment - provide brief justification for judgement                     |                 |                     | Mainly RCTs |
| 10. Were details of the methods of synthesis or meta-analysis of estimates given (if based on an overview of a number of effectiveness studies)? | Yes / No / Not clear / NA | NA | NA |
| Comment - provide brief justification for judgement                     |                 |                     |                       |
| Question                                                                 | Study                      | Study                                                                 |
|------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------|
| 11. Were the primary outcome measure(s) for the economic evaluation clearly stated? | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | NICE TA177, 2008 [8]                                                  |
| 12. Were the methods used to value health states and other benefits stated? | Yes / No / Not clear / NA | NA                                                                   |
|                                                                         | Comment - provide brief justification for judgement | Yes                                                                  |
| 13. Were the details of the subjects from whom valuations were obtained given? | Yes / No / Not clear / NA | Yes                                                                   |
|                                                                         | Comment - provide brief justification for judgement | From a RCT                                                           |
| 14. Were productivity changes (if included) reported separately?        | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | NA                                                                   |
| 15. Was the relevance of productivity changes to the study question discussed? | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | NA                                                                   |
| 16. Were quantities of resources reported separately from their unit cost? | Yes / No / Not clear / NA | Partly                                                                |
|                                                                         | Comment - provide brief justification for judgement | Only some unit costs reported But not always presented, since they were confidential |
| 17. Were the methods for the estimation of quantities and unit costs described? | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | RCT plus standard tariffs Sources described                           |
| 18. Were currency and price data recorded?                              | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | 2010; € 2006/2007/2008; £                                           |
| 19. Were details of price adjustments for inflation or currency conversion given? | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | Inflated to 2010                                                     |
| 20. Were details of any model used given?                               | Yes / No / Not clear / NA | NA                                                                   |
|                                                                         | Comment - provide brief justification for judgement | Described in detail and presented graphically                       |
| 21. Was there a justification for the choice of model used and the key parameters on which it was based? | Yes / No / Not clear / NA | Yes                                                                  |
|                                                                         | Comment - provide brief justification for judgement | Discussed                                                           |
|                                                                         | Yes / No / Not clear / NA | Yes                                                                  |
| Question                                                                 | Study                                                                 |
|------------------------------------------------------------------------|----------------------------------------------------------------------|
| 22. Was the time horizon of cost and benefits stated?                  | Comment - provide brief justification for judgement 54 weeks 3 years |
| 23. Was the discount rate stated?                                      | Yes / No / Not clear / NA NA Yes                                     |
| 24. Was the choice of rate justified?                                  | Yes / No / Not clear / NA NA Yes                                     |
| 25. Was an explanation given if cost or benefits were not discounted?  | Yes / No / Not clear / NA NA NA                                      |
| 26. Were the details of statistical test(s) and CIs given for stochastic data? | Yes / No / Not clear / NA Yes NA Yes                                 |
| 27. Was the approach to sensitivity analysis described?                | Yes / No / Not clear / NA Yes Yes                                    |
| 28. Was the choice of variables for sensitivity analysis justified?    | Yes / No / Not clear / NA Yes Yes                                    |
| 29. Were the ranges over which the parameters were varied stated?      | Yes / No / Not clear / NA NA Yes                                     |
| 30. Were relevant alternatives compared? (That is, were appropriate comparisons made when conducting the incremental analysis?) | Yes / No / Not clear / NA Yes Yes                                    |
| 31. Was an incremental analysis reported?                              | Yes / No / Not clear / NA Yes Yes                                    |
| 32. Were major outcomes presented in a disaggregated as well as aggregated form? | Yes / No / Not clear / NA Yes Yes                                    |
| 33. Was the answer to the study question given?                        | Yes / No / Not clear / NA Yes Yes                                    |
| Question | Study |
|----------|-------|
| 34. Did conclusions follow from the data reported? | Van Gils, 2013 [12] |
| 35. Were conclusions accompanied by the appropriate caveats? | NICE TA177, 2008 [8] |
| 36. Were generalisability issues addressed? | |
| Author, year | Adequate sequence generation | Allocation concealment | Blinding | Incomplete outcome data addressed | Free of selective reporting | Free of other bias |
|--------------|------------------------------|------------------------|----------|----------------------------------|---------------------------|------------------|
| Van Gils 2013 [12] | Yes, randomization performed | Yes, Pre-stratification was conducted | No, Patients, healthcare professionals and researchers were not blinded to treatment allocation, because of the nature of the intervention | No, Intent-to-treat approach | Yes | Yes |
The following studies were not quality assessed:
- Thyssen (2010) [13] was not quality assessed because it was an epidemiological study incorporating a non-systematic review of the literature.
- Apfelbacher (2012) [25], is a conference abstract and provided insufficient information to determine quality assessment.
- Diepgen (2012) [29], is a conference abstract and provided insufficient information to determine quality assessment.

### Table S4. Risk of bias assessment of cohort studies (CRD cohort checklist [4])

| Study (Endnote number) | Is there sufficient description of the groups and the distribution of prognostic factors? | Are the groups assembled at a similar point in their disease progression? | Was the intervention / Treatment reliably ascertained? | Were the groups comparable on all important confounding variables? | Was there adequate adjustment for the effect of these confounding variables? | Was a dose response relationship between intervention and outcome demonstrated? | Was outcome assessment blind to exposure status? | Was follow-up long enough for the outcomes to occur? | What proportion of the cohort was followed up? | Were dropout rates and reasons for dropout similar across intervention and unexposed groups? |
|------------------------|---------------------------------|--------------------------|----------------------------|------------------------------------------------|-------------------------------------------------|-------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------------------------|
| Augustin 2011 [10]     | NA                              | NA                       | NA                         | NA                                             | NA                                             | NA                                             | NA                               | 100%                            | NA                              |                                                   |
| Blank 2010 [9]         | NA                              | NA                       | Yes                        | NA                                             | Yes                                            | NA                                             | NA                               | NA                              | NA                              |                                                   |
| Cvetkovski, 2005 [34]  | YES (Age groups by gender, socioeconomic status; diagnostic subgroups; presence of AD; occupation at NO (Participants had no or minimal, mild-moderate, or severe disease) | NA (Not an intervention study) | UNCLEAR (No details provided) | YES (Characteristics adjusted for age, sex, socioeconomic status, occupation, diagnosis and disease duration) | NA (Not an intervention study) | NA (Not an intervention study) | UNCLEAR (NR) | 82%                            | NA                              | (Not an intervention / Comparison study) |
| Study (Endnote number) | Is there sufficient description of the groups and the distribution of prognostic factors? | Are the groups assembled at a similar point in their disease progression? | Was the intervention / Treatment reliably ascertained? | Were the groups comparable on all important confounding variables? | Was there adequate adjustment for the effect of these confounding variables? | Was a dose response relationship between intervention and outcome demonstrated? | Was outcome assessment blind to exposure status? | Was follow-up long enough for the outcomes to occur? | What proportion of the cohort was followed up? | Were dropout rates and reasons for dropout similar across intervention and unexposed groups? |
|------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Cvetkovski, 2006 [35] | YES (Age groups by gender, socioeconomic status; diagnostic subgroups; presence of AD; occupation at baseline; depression; job change described for groups) | NO (Participants had no or minimal, mild-moderate, or severe disease) | NA (Not an intervention study) | UNCLEAR (No details provided) | YES (Comparison of a poor prognosis across different variables, such as age, sex, diagnoses, socioeconomic status, disease duration, and occupation) | NA (Not an intervention study) | NA (Not an intervention study) | YES (1-year follow-up) | NA (Not an intervention / Comparison study) | |
| Hald, 2009 [36] | YES (Baseline characteristics reported) | NO (Participants had moderate to | NA (Not an intervention/ | UNCLEAR (No details provided) | YES (Risk of having a poor prognosis (yes | NA (Not an intervention study) | NA (Not an intervention study) | YES (6-month follow-up) | <75% | NA (Not an intervention / |
| Study (Endnote number) | Is there sufficient description of the groups and the distribution of prognostic factors? | Are the groups assembled at a similar point in their disease progression? | Was the intervention / Treatment reliably ascertained? | Were the groups comparable on all important confounding variables? | Was there adequate adjustment for the effect of these confounding variables? | Was a dose response relationship between intervention and outcome demonstrated? | Was outcome assessment blind to exposure status? | Was follow-up long enough for the outcomes to occur? | What proportion of the cohort was followed up? | Were dropout rates and reasons for dropout similar across intervention and unexposed groups? |
|-------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| very severe disease)    | Comparison study)                                                                      | /no) was analysed in a multivariable logistic regression model including the explanatory factors of patient delay, healthcare delay and total delay adjusted for the baseline characteristics sex and age, and furthermore, socioeconomic group and geography) |                                                                                 |                                                                                 |                                                                                 |                                                                                 |                                                                                 |                                                                                 |                                                                                 |                                                                                 |
| Study (Endnote number) | Is there sufficient description of the groups and the distribution of prognostic factors? | Are the groups assembled at a similar point in their disease progression? | Was the intervention / Treatment reliably ascertained? | Were the groups comparable on all important confounding variables? | Was there adequate adjustment for the effect of these confounding variables? | Was a dose response relationship between intervention and outcome demonstrated? | Was outcome assessment blind to exposure status? | Was follow-up long enough for the outcomes to occur? | What proportion of the cohort was followed up? | Were dropout rates and reasons for dropout similar across intervention and unexposed groups? |
|-----------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Josefson, 2006 [17]   | NO (Limited baseline characteristics reported)                                         | UNCLEAR (NR)                                                               | UNCLEAR (No details provided)                        | NO (No adjustments made)                                       | NA (Not an intervention study)                                          | NA (Not an intervention study)                                          | YES (20-year follow-up)                                         | 81%                                                            | NA (Not an intervention / Comparison study)                                    |
| Lerbaek, 2008 [21]    | NO (Detailed patient characteristics not provided)                                    | UNCLEAR (NR)                                                               | UNCLEAR (No details provided)                        | YES (Multiple regression analysis evaluated sex, zygosity, age at onset, socio-economic status, AD and positive patch test in 1997-98 on risk of sick leave and medical consultations.) | NA (Not an intervention study)                                          | NA (Not an intervention study)                                          | YES (1-year follow-up)                                         | 41.5%                                                          | NA (Not an intervention / Comparison study)                                    |
| Study (Endnote number) | Is there sufficient description of the groups and the distribution of prognostic factors? | Are the groups assembled at a similar point in their disease progression? | Was the intervention / Treatment reliably ascertained? | Were the groups comparable on all important confounding variables? | Was there adequate adjustment for the effect of these confounding variables? | Was a dose response relationship between intervention and outcome demonstrated? | Was outcome assessment blind to exposure status? | Was follow-up long enough for the outcomes to occur? | What proportion of the cohort was followed up? | Were dropout rates and reasons for dropout similar across intervention and unexposed groups? |
|-----------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Malkonen, 2010 [15]  | YES (Baseline characteristics reported)                                               | NO (Some patients reported healing of OHE 7-14                  | NA (Not an intervention/Comparison study)            | UNCLEAR (No details provided)                         | YES (Characteristic s reported by sex)                                    | NA (Not an intervention study)                                         | NA (Not an intervention study)                                     | YES (7-14 year follow-up)                                      | 80.1%                                                                                                           | NA (Not an intervention / Comparison study)                        |

Multiple regression analysis evaluated sex, zygosity, age at onset, socio-economic status, AD, positive patch test in 1997-98, current wet work, and duration of HE on risk of persistent hand eczema.
| Study (Endnote number) | Is there sufficient description of the groups and the distribution of prognostic factors? | Are the groups assembled at a similar point in their disease progression? | Was the intervention / Treatment reliably ascertained? | Were the groups comparable on all important confounding variables? | Was there adequate adjustment for the effect of these confounding variables? | Was a dose response relationship between intervention and outcome demonstrated? | Was outcome assessment blind to exposure status? | Was follow-up long enough for the outcomes to occur? | What proportion of the cohort was followed up? | Were drop-out rates and reasons for dropout similar across intervention and unexposed groups? |
|-----------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------|----------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------|
| Meding, 2005 [19]    | NO (Detailed patient characteristics not provided)                                      | NA (Not an intervention/ Comparison study)                                | UNCLEAR (NR)                                         | YES (Characteristics reported by sex)                         | NA (Not an intervention study)                                | NA (Not an intervention study)                                | YES (15-year follow-up)                           | <80%                                         | NA (Not an intervention / Comparison study)                                               |
| Mollerup, 2014 [37]  | NO (Detailed patient characteristics not provided)                                     | NA (Participants differed in terms of clinical disease severity)           | UNCLEAR (No details provided)                         | YES (Characteristics reported by sex)                         | NA (Not an intervention study)                                | NA (Not an intervention study)                                | NO (No follow-up)                                | No follow-up                                  | NA (Not an intervention / Comparison study)                                               |
| Steengaard, 2016 [23]| NO (Baseline characteristics not reported)                                               | UNCLEAR (NR)                                                             | UNCLEAR (No details provided)                         | UNCLEAR (No details provided)                                | UNCLEAR (No details provided)                                | YES (6-year follow-up)                                     | 44.71% dropout from 18-month follow-up        | UNCLEAR (Details for intervention and control group dropouts not reported) | |
Table S5. Risk of bias assessment of cross-sectional studies - Adapted Newcastle Ottawa Scale (Herzog 2013 [5])

| Study | Selection (max of 5 stars across all of scoring) | Comparability (max of 2 stars) | Outcome (max of 3 stars across all of scoring) |
|-------|-------------------------------------------------|--------------------------------|-----------------------------------------------|
| 1) Representativeness of the sample: a) Truly representative of the average in the target population. *(all participants or random sampling) b) Somewhat representative of the average in the target population. *(non-random sampling) c) Selected group of users (e.g. nurses) d) No description of the sampling strategy | 2) Sample size a) Justified and satisfactory.* b) Not justified. | 1) The participants in different outcome groups are comparable, based on the study design or analysis. Confounding factors are controlled. a) The study controls for the most important factor (select one). * b) The study controls for any additional factor. * | 2) Statistical test a) The statistical test used to analyse the data is clearly described and appropriate, and the measurement of the association is presented, including CIs and the probability level (p value). * b) The statistical test is not appropriate, not described or incomplete. |
| 3) Non-respondents a) Comparability between respondents and non-respondents’ characteristics is established, and the response rate is satisfactory. * b) The response rate is unsatisfactory, or the comparability between respondents and non-respondents is unsatisfactory. c) No description of the response rate or the characteristics of the responders and the non-responders. | 4) Ascertainment of the exposure (risk factor) a) Validated measurement tool. ** b) Non-validated measurement tool, but the tool is available or described.* c) No description of the measurement tool. | 1) Assessment of the outcome: a) Independent blind assessment. ** b) Record linkage. ** c) Self report. * d) No description. |
| Study                        | Characteristics | Justified | Measurement Tool | Significance | Dropout | Self-report | Severity Assessed |
|------------------------------|-----------------|-----------|------------------|--------------|---------|-------------|-------------------|
| Agner, 2009 [24]             | * (Somewhat representative of the average in the target population) | * (Justified) | - (No characteristics of the responders and the non-responders. No dropouts) | ** (Validated measurement tool (HECSI score)) | - (NR) | * (Self-report) | - (Severity assessed both objectively and subjectively) |
| Apfelbacher, 2016 [26, 27]   | * (Somewhat representative of the average in the target population) | * (Justified) | - (No characteristics of patients included and not included in the registry; no dropouts) | ** (Validated (PGA) measurement tool, unclear whether VAS score validated for CHE) | - (NR) | * (Self-report) | |
associated with AH use in univariate analysis. Those variables that were significantly associated with the use of AH were entered into multivariate binary logistic regression models in a second step. Adjusted odds ratios (OR adj.) with corresponding 95% confidence intervals (CI) were computed.
Cazzaniga, 2018 [28]

* (Somewhat representative of the average in the target population)

* (Justified)

* (Population characteristics reported; no dropouts)

** (Validated (PGA) measurement tool)

* (After variable categorisation, multiple logistic regression models were fitted by taking each time, sequentially, a variable as the predictor and the other as covariates. Adjustment by country was performed by combining, for every variable, regression coefficients in each stratum by means of fixed- or random-effect models)

* (Questionnaires)

* (Data presented as mean ± SD or numbers with percentages for continuous and categorical variables, respectively. Continuous variables were categorized, for analysis purposes, using clinically meaningful thresholds as cut-offs. After variable categorisation, multiple logistic regression models were fitted by taking each time, sequentially, a variable as the predictor and the other as covariates. Adjustment by country was performed by combining, for every variable, regression coefficients in each...
stratum by means of fixed- or random-effect models)
| Reference                     | Sample Description                                                                 | Justification                                      | Details                                                                                     | Summary                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Dibenedetti, 2015 [18]        | * (Somewhat representative of the average in the target population)                 | * (Justified)                                     | - (Some patient details provided but no characteristics for non-responders; low response rate to patient survey (46% responded, 40.75% completed survey); very low response rate to physician survey (12.3%)) | * (Self-rated and physician survey data) (Self-report) (Descriptive statistics, such as means, SDs, medians, and ranges, were reported for continuous variables and frequencies and percentages for categorical variables; no imputations were made for missing data; missing data were excluded from the analysis) |
| Diepgen, 2009 [30]            | * (Somewhat representative of the average in the target population)                 | * (Justified)                                     | - (No characteristics of the responders and the non-responders; no dropouts)                | ** (Validated measurement tool (HECSI score)) (Self-report) (For the comparison of continuous measurements (i.e. age, HECSI score) between groups nonparametric tests were used (Mann–Whitney U-test and Kruskal–Wallis test)) |
| Hald, 2008 [20]               | * (Random sample from Civil Registration System)                                    | * (Justified)                                     | - (No characteristics of the responders)                                                    | ** (Self-administered photographic guide previously (Adjusted for gender and AD)) (Self-report) (X² tests and logistic regression models) |
| Study | * (Somewhat representative of the average in the target population) | * (Justified) | * (No characteristics of the responders and the non-responders. Response rate 56.3%) | ** (Validated measurement tool (HECSI score) for severity) | - (NR) | * (Self-report) |
|--------|------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|--------------------------------------------------------|-------|-----------------|
| Herschel, 2013 [16] | * (Somewhat representative of the average in the target population) | * (Justified) | * (No differences reported between responders and non-responders; response rate 70%) | ** (Validated measurement tool (HECSI score) for severity) | * (Multivariate analysis including sex, age group and socioeconomic group) | * (Self-report) |
| Petersen, 2014 [22] | * (Somewhat representative of the average in the target population) | * (Justified) | * (No differences reported between responders and non-responders; response rate 70%) | ** (Validated measurement tool (HECSI score) for severity) | * (Self-report) |

* (The distribution of continuous variables between subgroups was compared using a t-test or Wilcoxon rank-sum test; frequencies were compared using the chi-squared test or the Fisher exact test)
compare paired data. AD, eczema on body locations other than the hands since 2007, baseline severity of hand eczema and periods with symptoms of hand eczema in the past 12 months at baseline were included in the multivariate analyses as these factors were found to be significant for a poor clinical prognosis or frequent eruptions at follow-up in the univariate analyses. ORs were presented with 95% CIs)
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