

**Registered Nurses' Association of Ontario**  
*Pain: Prevention, assessment and management*  
**Fourth Edition**  
**February 2025**

**Systematic review search strategy**

Two systematic reviews of recent literature were conducted to inform the recommendations included in this Best Practice Guideline (BPG). The search strategies were developed by RNAO's BPG team and a health science librarian. An original search was conducted in March 2023 for Recommendation questions 2 and 3 to capture literature from January 2017 to March 2023, and June 2023 for Recommendation question 1 to capture literature from January 2017 to June 2023. An update search was conducted in August 2024 to capture literature from March 2023 (Q2 and Q3) and June 2023 (Q1) to August 2024. An additional search strategy was developed to inform the scoping review included in the BPG. The scoping review captured literature from January 2017 to January 2023.

In addition, panel members were asked to review personal libraries to identify key articles not found through the search strategies. Articles identified by panel members were included in the search results if two guideline development methodologists independently determined the articles had not been identified by the literature search and met the inclusion criteria.

**Databases Searched:** Medline, Embase, Emcare, Cochrane Central, Cochrane Database of Systematic Reviews, PsycInfo and Cumulative Index to Nursing and Allied Health (CINAHL).

**Inclusion Criteria:**

The following criteria were used to guide the systematic reviews:

- A primary focus on the following interventions for health service organizations, academic institutions, health providers and/or students, and the prioritized outcomes per topic:
- Recommendation question #1:
  - **Intervention** – Health-service organizations' interprofessional approach to pain management
  - **Outcomes** – Effective management of pain, interprofessional team functioning, communication or collaboration, pain interventions delivered by health providers, health provider completion of pain assessment, person or family satisfaction
- Recommendation question #2:
  - **Intervention** – Student education on pain assessment, prevention and management
  - **Outcomes** – Student competence/knowledge, student completion of pain assessment, pain interventions delivered by students, student confidence/attitude
- Recommendation question #3:
  - **Intervention** – Health provider education on integrative pain assessment, prevention and management (non-pharm and/or pharm approaches)
  - **Outcomes** – Health provider competence/knowledge, pain interventions delivered by health providers, health provider completion of pain assessment, health provider confidence/attitude, health provider satisfaction

- **A focus on prevention, assessment and management of pain**
- Published after January 2017
- Published in English
- Accessible for retrieval
- Conducted in any geographic region
- Applicable to all health service organizations and academic institutions
- Applicable to all health providers and students
- Peer-reviewed literature
- Any study design (quantitative, qualitative, mixed methods, systematic reviews)

**Exclusion Criteria:**

The following criteria were used to exclude literature from the search:

- Topic **NOT** related to the aforementioned interventions or prioritized outcomes
- Dissertations, commentaries, narratives, discussion papers, case studies, expert reports, consensus documents, studies with no specific methodology
- Studies not published in English
- Unpublished literature (e.g., grey literature)
- Studies published prior to 2017

**Original search for recommendation question #1:** Should organizational or health system implementation of a specialized interprofessional pain care team be recommended or not?

**Databases:** Medline, Embase, Emcare, Cochrane Central, Cochrane Database of Systematic Reviews, PsycInfo and Cumulative Index to Nursing and Allied Health (CINAHL).

**Dates searched:** January 2017 – June 2023

**MEDLINE(R)** 1946 to June 6, 2023

Search Strategy:

#	Searches	Results
1	exp Pain/	457168
2	Pain Management/	40698
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	177851
4	or/1-3	549643
5	Patient Care Team/	69426
6	Hospital Rapid Response Team/	1016
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary	10354

	workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kf.	
8	("rapid response team" or "rapid response teams").tw,kf.	1218
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kf.	15192
10	or/5-9	89522
11	4 and 10	2805
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kf.	366
13	11 or 12	3104
14	limit 13 to english language	2418
15	limit 14 to yr="2017 -Current"	642

**Embase Classic+Embase 1947 to 2023 June 6**

**Search Strategy:**

#	Searches	Results
1	exp pain/	1715580
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	266967
3	1 or 2	1783018
4	collaborative care team/	2463
5	rapid response team/	3254

6	multidisciplinary team/	25563
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kw.	15037
8	("rapid response team" or "rapid response teams").tw,kw.	1886
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kw.	21497
10	or/4-9	66366
11	3 and 10	4627
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kw.	842
13	11 or 12	5419
14	limit 13 to english language	5223
15	limit 14 to yr="2017 -Current"	4013
16	limit 15 to (books or chapter or conference abstract or conference paper or "conference review" or editorial or letter or "preprint (unpublished, non-peer reviewed)")	1597
17	15 not 16	2416

**Emcare Nursing 1995 to Present**

**Search Strategy:**

#	Searches	Results
1	exp pain/	364276

2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	97514
3	1 or 2	405337
4	collaborative care team/	305
5	rapid response team/	1097
6	multidisciplinary team/	3524
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kf.	7818
8	("rapid response team" or "rapid response teams").tw,kf.	1016
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kf.	10989
10	or/4-9	23303
11	3 and 10	913
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kf.	264
13	11 or 12	1167
14	limit 13 to english language	1089
15	limit 14 to yr="2017 -Current"	595
16	limit 15 to (book or chapter or conference abstract or conference paper or "conference review" or dissertation)	4

17	15 not 16	591
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**EBM Reviews - Cochrane Central Register of Controlled Trials May 2023**

Search Strategy:

#	Searches	Results
1	exp Pain/	71087
2	Pain Management/	4946
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	70994
4	or/1-3	116037
5	Patient Care Team/	1999
6	Hospital Rapid Response Team/	21
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kw.	773
8	("rapid response team" or "rapid response teams").tw,kw.	88
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kw.	814
10	or/5-9	3497
11	4 and 10	182
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team"	88

	or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kw.	
13	11 or 12	266
14	limit 13 to english language	248
15	limit 14 to yr="2017 -Current"	115

### EBM Reviews - Cochrane Database of Systematic Reviews 2005 to May 31, 2023

#### Search Strategy:

#	Searches	Results
1	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).mp.	1995
2	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").mp.	128
3	("rapid response team" or "rapid response teams").mp.	6
4	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).mp.	58
5	or/2-4	181
6	1 and 5	37
7	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").mp.	1

8	6 or 7	38
9	limit 8 to last 6 years	14
10	limit 9 to full systematic reviews	13

### APA PsycInfo 1806 to August Week 4 2022

#### Search Strategy:

#	Searches	Results
1	exp Pain/	66500
2	pain management/	11215
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,id.	29603
4	or/1-3	78042
5	collaboration/	15137
6	interdisciplinary treatment approach/	7953
7	work teams/	6003
8	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,id.	2678
9	("rapid response team" or "rapid response teams").tw,id.	83
10	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,id.	7993
11	or/5-10	36564
12	4 and 11	795
13	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain	153



	medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,id.	
14	12 or 13	908
15	limit 14 to english language	859
16	limit 15 to yr="2017 -Current"	221
17	limit 16 to (chapter or dissertation or review-book or review-media or review-software & other)	30
18	limit 16 to ("0200 book" or "0240 authored book" or "0280 edited book" or "0300 encyclopedia" or "0400 dissertation abstract")	32
19	16 not (17 or 18)	189

#### CINAHL

#	Query	Limiters/Expanders	Results
S1	(MH "Pain+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	233,731
S2	(MH "Pain Management")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	13,647
S3	TI ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful)) OR AB ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	85,334
S4	S1 OR S2 OR S3	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	268,052
S5	(MH "Rapid Response Team") OR (MH "Multidisciplinary Care Team")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	51,168

S6	(MH "Cooperative Behavior")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	9,048
S7	TI ("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	924
S8	AB ("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6,431

S9	TI ("rapid response team" or "rapid response teams") OR AB ("rapid response team" or "rapid response teams")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	926
S10	TI ("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork) OR AB ("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	10,066
S11	S5 OR S6 OR S7 OR S8 OR S9 OR S10	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	72,903
S12	S4 AND S11	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,975
S13	TI ("interdisciplinary pain care" or "interdisciplinary pain treatment" or "interdisciplinary pain care" or "interdisciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	69
S14	AB ("interdisciplinary pain care" or "interdisciplinary pain treatment" or "interdisciplinary pain care" or "interdisciplinary pain treatment")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	197

	disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams")		
S15	S12 OR S13 OR S14	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	3,142
S16	S12 OR S13 OR S14	Limiters - Published Date: 20170101-20231231; English Language; Peer Reviewed Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	950

**Update search for recommendation question #1:** Should organizational or health system implementation of a specialized interprofessional pain care team be recommended or not?

**Databases Searched:** Medline, Embase, Emcare, Cochrane Central, Cochrane Database of Systematic Reviews, PsycInfo and Cumulative Index to Nursing and Allied Health (CINAHL).

**Dates searched:** June 2023 – July 2024

**MEDLINE(R)** 1946 to July 31, 2024

Search Strategy:

#	Searches	Results
1	exp Pain/	478410
2	Pain Management/	42709

3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	193019
4	or/1-3	579294
5	Patient Care Team/	70404
6	Hospital Rapid Response Team/	1065
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kf.	11428
8	("rapid response team" or "rapid response teams").tw,kf.	1321
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kf.	16589
10	or/5-9	92755
11	4 and 10	2884
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kf.	398
13	11 or 12	3214
14	limit 13 to english language	2518
15	limit 14 to ed=20230606-20240731	66
16	((("202306*" or "202307*" or "202308*" or "202309*" or "202310*" or "202311*" or "202312*" or "2024*") not ("20230601*" or "20230602*" or "20230603*" or "20230604*" or "20230605*"))).dt.	1810457

17	14 and 16	100
18	15 or 17	112

**Embase Classic + Embase 1947 to 2024 July 31**

Search Strategy:

#	Searches	Results
1	exp pain/	1836999
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	283634
3	1 or 2	1908500
4	collaborative care team/	4021
5	rapid response team/	3477
6	multidisciplinary team/	33990
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kw.	16261
8	("rapid response team" or "rapid response teams").tw,kw.	2012
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kw.	23103
10	or/4-9	79021
11	3 and 10	6076
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team"	894

	or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kw.	
13	11 or 12	6910
14	limit 13 to english language	6675
15	limit 14 to dc=20230606-20240731	1561
16	limit 15 to (books or chapter or conference abstract or conference paper or "conference review" or editorial or letter or "preprint (unpublished, non-peer reviewed)")	498
17	15 not 16	1063

### Emcare Nursing 1995 to Present

Search Strategy:

#	Searches	Results
1	exp pain/	364276
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	97514
3	1 or 2	405337
4	collaborative care team/	305
5	rapid response team/	1097
6	multidisciplinary team/	3524
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kf.	7818
8	("rapid response team" or "rapid response teams").tw,kf.	1016
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kf.	10989
10	or/4-9	23303
11	3 and 10	913

12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kf.	264
13	11 or 12	1167
14	limit 13 to english language	1089
15	limit 14 to yr="2017 -Current"	595
16	limit 15 to (book or chapter or conference abstract or conference paper or "conference review" or dissertation)	4
17	15 not 16	591

### EBM Reviews - Cochrane Central Register of Controlled Trials June 2024

Search Strategy:

#	Searches	Results
1	exp Pain/	72336
2	Pain Management/	5901
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	79125
4	or/1-3	123821
5	Patient Care Team/	2254
6	Hospital Rapid Response Team/	28
7	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health	879



	teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,kw.	
8	("rapid response team" or "rapid response teams").tw,kw.	98
9	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,kw.	917
10	or/5-9	3932
11	4 and 10	197
12	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,kw.	101
13	11 or 12	294
14	limit 13 to english language	275
15	limit 14 to yr="2023 -Current"	25

### EBM Reviews - Cochrane Database of Systematic Reviews 2005 to July 31, 2024

Search Strategy:

#	Searches	Results
1	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).mp.	2057
2	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").mp.	137

3	("rapid response team" or "rapid response teams").mp.	7
4	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).mp.	60
5	or/2-4	190
6	1 and 5	40
7	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").mp.	1
8	6 or 7	41
9	limit 8 to full systematic reviews	39
10	from 9 keep 2-3	2

**APA PsycInfo** 1806 to July Week 4 2024

Search Strategy:

#	Searches	Results
1	exp Pain/	70568
2	pain management/	11968
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,id.	31326
4	or/1-3	82433
5	collaboration/	16992
6	interdisciplinary treatment approach/	8224
7	work teams/	6577
8	("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care	2902

	team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams").tw,id.	
9	("rapid response team" or "rapid response teams").tw,id.	94
10	("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork).tw,id.	8552
11	or/5-10	39799
12	4 and 11	838
13	("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams").tw,id.	159
14	12 or 13	952
15	limit 14 to english language	899
16	limit 15 to yr="2023 -Current"	24
17	limit 16 to (chapter or dissertation or review-book or review-media or review-software & other)	4
18	limit 16 to ("0200 book" or "0240 authored book" or "0280 edited book" or "0300 encyclopedia" or "0400 dissertation abstract")	4
19	16 not (17 or 18)	20

#### CINAHL

#	Query	Limiters/Expanders	Results
S1	(MH "Pain+")	Expanders - Apply equivalent subjects Search modes - Proximity	240,704

S2	(MH "Pain Management")	Expanders - Apply equivalent subjects Search modes - Proximity	17,202
S3	TI ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful)) OR AB ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful))	Expanders - Apply equivalent subjects Search modes - Proximity	84,607
S4	S1 OR S2 OR S3	Expanders - Apply equivalent subjects Search modes - Proximity	275,074
S5	(MH "Rapid Response Team") OR (MH "Multidisciplinary Care Team")	Expanders - Apply equivalent subjects Search modes - Proximity	54,401
S6	(MH "Cooperative Behavior")	Expanders - Apply equivalent subjects Search modes - Proximity	8,933
S7	TI ("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi	Expanders - Apply equivalent subjects Search modes - Proximity	939

	disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams")		
S8	AB ("health care team" or "health care teams" or "healthcare team" or "healthcare teams" or "inter disciplinary health team" or "inter disciplinary health teams" or "inter disciplinary workforce" or "interdisciplinary health team" or "interdisciplinary health teams" or "interdisciplinary workforce" or "multi disciplinary care team" or "multi disciplinary care team" or "multi disciplinary care teams" or "multi disciplinary care teams" or "multi disciplinary health team" or "multi disciplinary health team" or "multi disciplinary health teams" or "multi disciplinary health teams" or "patient care team" or "patient care teams")	Expanders - Apply equivalent subjects Search modes - Proximity	6,402
S9	TI ("rapid response team" or "rapid response teams") OR AB ("rapid response team" or "rapid response teams")	Expanders - Apply equivalent subjects Search modes - Proximity	933
S10	TI ("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork) OR AB ("collaborative health care team" or "collaborative healthcare team" or "collaborative patient care team" or "team work" or teamwork)	Expanders - Apply equivalent subjects Search modes - Proximity	10,186

S11	S5 OR S6 OR S7 OR S8 OR S9 OR S10	Expanders - Apply equivalent subjects Search modes - Proximity	76,031
S12	S4 AND S11	Expanders - Apply equivalent subjects Search modes - Proximity	3,220
S13	TI ("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams")	Expanders - Apply equivalent subjects Search modes - Proximity	73
S14	AB ("interdisciplinary pain care" or "interdisciplinary pain treatment" or "inter disciplinary pain care" or "inter disciplinary pain treatment" or "pain care team" or "pain care teams" or "pain management collaborat* team" or "pain management collaborat* teams" or "pain management team" or "pain management teams" or "pain medicine team" or "pain medicine teams" or "pain multidisciplinary team" or "pain	Expanders - Apply equivalent subjects Search modes - Proximity	201

	multidisciplinary teams" or "pain multi disciplinary team" or "pain multi disciplinary teams" or "pain resource team" or "pain resource teams" or "pain service team" or "pain service teams" or "pain special* team" or "pain special* teams" or "pain team" or "pain teams")		
S15	S12 OR S13 OR S14	Expanders - Apply equivalent subjects Search modes - Proximity	3,388
S16	S12 OR S13 OR S14	Limiters - English Language; Peer Reviewed Expanders - Apply equivalent subjects Search modes - Proximity	2,789
S17	EM 20230606*-	Expanders - Apply equivalent subjects Search modes - Proximity	291,038
S18	S16 AND S17	Expanders - Apply equivalent subjects Search modes - Proximity	263

**Original search for recommendation questions #2 and #3:**

As recommendation questions #2 and #3 focused on the same intervention but different populations, one search strategy was developed and the guideline development methodologists screened for both questions.

**Recommendation question #2:** Should interactive education on pain assessment, prevention and management for students entering health professions be recommended or not?

**Recommendation question #3:** Should interactive education on pain assessment, prevention and management for health providers be recommended or not?

**Databases:** Medline, Embase, Emcare, Cochrane Central, Cochrane Database of Systematic Reviews, PsycInfo and Cumulative Index to Nursing and Allied Health (CINAHL).

**Dates searched:** January 2017 – March 2023

**MEDLINE(R) 1946 to August 20, 2023**

Search Strategy:

#	Searches	Results
1	exp pain/dh, dt, nu, pc, rt, rh, th [Diet Therapy, Drug Therapy, Nursing, Prevention & Control, Radiotherapy, Rehabilitation]	171532
2	Pain Management/	40397
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	175378
4	or/1-3	298608
5	Computer Assisted Instruction/	12519
6	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kf.	688
7	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	2443
8	("e learn*" or elearn*).tw,kf.	4762
9	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kf.	247
10	((digital* or electronic or internet or online or "on line" or "web based" or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	54182
11	interactive tutorial/	281
12	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	10645
13	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	6497
14	webcast/	1110
15	videoconferencing/ or webcasts as topic/	2716
16	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kf.	8783



17	("video tutorial?" or videotutorial?).tw,kf.	435
18	Simulation Training/ or High Fidelity Simulation Training/ or Patient Simulation/	11496
19	Computer Simulation/ or Augmented Reality/	210279
20	simulat*.tw,kf.	677750
21	(vignette or vignettes).tw,kf.	13604
22	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kf.	4577
23	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kf.	151
24	virtual reality/	5251
25	("virtual reality" or "virtual realities" or "VR").tw,kf.	21942
26	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	4330
27	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	13812
28	InService Training/	20739
29	(inservice or "in service" or "on the job training" or "training on the job").tw,kf.	11713
30	((case? or "case based") adj2 (discus* or conference* or learn* or tutorial*)).tw,kf.	22391
31	(group? adj2 discuss*).tw,kf.	26199
32	"lunch* and learn*".tw,kf.	44
33	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	5042
34	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	6154

35	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	4713
36	or/5-35	989335
37	4 and 36	5118
38	exp "Attitude of Health Personnel"/	169172
39	exp Health Personnel/	604968
40	exp Personnel, Hospital/	95089
41	exp Health Occupations/	1842608
42	exp Patient Care Team/	72632
43	Social Work/	16226
44	Social Workers/	1070
45	Nurse's Role/	42737
46	Licensed Practical Nurses/	99
47	exp Nurses/	97616
48	exp Nursing Staff/	69671
49	Nursing Staff, Hospital/	47830
50	exp Nursing/	262879
51	Nursing, Practical/	3444
52	Health Educators/	492
53	exp Administrative Personnel/	42243
54	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	318648
55	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	21243
56	nurs*.tw,kf.	526206
57	(patient care? adj2 team?).tw,kf.	1036
58	(health* adj2 educator?).tw,kf.	3824
59	(social adj2 worker?).tw,kf.	12620
60	(support* adj2 (worker? or staff?)).tw,kf.	8170
61	practitioner?.tw,kf.	177343

62	Caregivers/	49017
63	(caregiver? or care-giver? or carer or carers).tw,kf.	106751
64	students, health occupations/ or students, medical/ or students, nursing/ or students, pharmacy/ or students, premedical/ or students, public health/	79176
65	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kf.	76590
66	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kf.	1322
67	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kf.	1440955
68	Health Workforce/	14385
69	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kf.	7926
70	or/38-69 [Students or Health Providers terms]	3695262
71	37 and 70	2130
72	limit 71 to english language	2046
73	limit 72 to yr="2017 -Current"	1025

**Embase Classic+Embase 1947 to 2023 March 20**

**Search Strategy:**

#	Searches	Results
1	exp pain/dm, dt, pc, rt, rh, th [Disease Management, Drug Therapy, Prevention, Radiotherapy, Rehabilitation, Therapy]	272749
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	262958
3	1 or 2	455399
4	Computer Assisted Instruction.ti.	382
5	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kw.	931
6	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	3155
7	e-learning/	5247
8	virtual learning environment/	978
9	("e learn*" or elearn*).tw,kw.	7215
10	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kw.	295
11	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	77239
12	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	16875
13	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	7338
14	podcast/ or videoconferencing/ or web conferencing/ or webcast/ or webinar/	11203
15	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kw.	13572
16	("video tutorial?" or videotutorial?).tw,kw.	599

17	simulation training/ or high fidelity simulation training/	9213
18	simulation/ or computer simulation/ or digital twin/ or discrete event simulation/ or high fidelity simulation/ or high-fidelity patient simulation/ or patient simulation/ or vignette/	393219
19	augmented reality/	2084
20	simulat*.tw,kw.	742659
21	(vignette or vignettes).tw,kw.	18065
22	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kw.	5447
23	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kw.	281
24	virtual reality/	25347
25	("virtual reality" or "virtual realities" or "VR").tw,kw.	30456
26	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	7568
27	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	20181
28	"in service training"/	16823
29	(inservice or "in service" or "on the job training" or "training on the job").tw,kw.	15092
30	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,kw.	40718
31	((group? or "group based") adj2 discuss*).tw,kw.	40950
32	"lunch* and learn*".tw,kw.	107
33	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	7170
34	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	10904

35	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	5922
36	or/4-35	1116603
37	3 and 36	8291
38	exp health personnel attitude/	205585
39	exp health care personnel/	2020549
40	exp hospital personnel/	155640
41	exp multidisciplinary team/	26177
42	social work/	30684
43	social worker/	16743
44	licensed practical nurse/	395
45	exp nurse/	222360
46	nursing staff/	77949
47	exp nursing/	418050
48	practical nursing/	169
49	exp health educator/	3523
50	exp administrative personnel/	35379
51	nurse attitude/	43368
52	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	414819
53	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	29708
54	nurs*.tw,kw.	637085
55	(patient care? adj2 team?).tw,kw.	882
56	(health* adj2 educator?).tw,kw.	4439
57	(social adj2 worker?).tw,kw.	21531
58	(support* adj2 (worker? or staff?)).tw,kw.	11727
59	practitioner?.tw,kw.	230947
60	caregiver/	110549
61	(caregiver? or care-giver? or carer or carers).tw,kw.	152914

62	health student/	1886
63	medical student/ or physician assistant student/	90369
64	premedical student/	159
65	public health student/	134
66	paramedical student/ or audiology student/ or dietetics student/ or occupational therapy student/ or pharmacy student/ or physical therapy student/ or respiratory therapy student/	10912
67	nursing student/ or baccalaureate nursing student/ or graduate nursing student/ or male nursing student/	32656
68	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	100469
69	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	1814
70	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	2057591
71	health workforce/	3461
72	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	8898
73	or/38-72	3874942
74	37 and 73	3339
75	limit 74 to english language	3255

76	limit 75 to yr="2017 -Current"	1653
77	limit 76 to (books or chapter or conference abstract or conference paper or "conference review")	602
78	76 not 77	1051

### Emcare Nursing 1995 to Present

#### Search Strategy:

#	Searches	Results
1	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	95876
2	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kf.	469
3	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	1720
4	e-learning/	1709
5	virtual learning environment/	175
6	("e learn*" or elearn*).tw,kf.	3588
7	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kf.	144
8	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	33947
9	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	6539
10	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	2755
11	podcast/ or videoconferencing/ or web conferencing/ or webcast/ or webinar/	2909
12	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kf.	5467



13	("video tutorial?" or videotutorial?).tw,kf.	94
14	simulation training/ or high fidelity simulation training/	1760
15	simulation/ or computer simulation/ or digital twin/ or discrete event simulation/ or high fidelity simulation/ or high-fidelity patient simulation/ or patient simulation/ or vignette/	77334
16	augmented reality/	373
17	simulat*.tw,kf.	160133
18	(vignette or vignettes).tw,kf.	8988
19	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kf.	1924
20	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kf.	116
21	virtual reality/	8988
22	("virtual reality" or "virtual realities" or "VR").tw,kf.	11942
23	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	2414
24	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	7734
25	in service training/	1747
26	(inservice or "in service" or "on the job training" or "training on the job").tw,kf.	7603
27	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,kf.	8532
28	((group? or "group based") adj2 discuss*).tw,kf.	19781
29	"lunch* and learn*".tw,kf.	29
30	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	3292
31	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	3880

32	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kf.	3730
33	or/2-32	279067
34	1 and 33	2420
35	exp health personnel attitude/	45207
36	exp health care personnel/	720830
37	exp hospital personnel/	43972
38	exp multidisciplinary team/	3704
39	social work/	19500
40	social worker/	10325
41	licensed practical nurse/	244
42	exp nurse/	169367
43	nursing staff/	26058
44	exp nursing/	166225
45	practical nursing/	189
46	exp health educator/	2524
47	exp administrative personnel/	13975
48	nurse attitude/	15716
49	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	205905
50	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	10409
51	nurs*.tw,kf.	324223
52	(patient care? adj2 team?).tw,kf.	956
53	(health* adj2 educator?).tw,kf.	2653
54	(social adj2 worker?).tw,kf.	13516
55	(support* adj2 (worker? or staff?)).tw,kf.	6750
56	practitioner?.tw,kf.	110869
57	caregiver/	51405
58	(caregiver? or care-giver? or carer or carers).tw,kf.	81696

59	health student/	569
60	medical student/ or physician assistant student/	26150
61	premedical student/	41
62	health student/	569
63	paramedical student/ or allied health student/ or audiology student/ or dietetics student/ or midwifery student/ or occupational therapy student/ or pharmacy student/ or physical therapy student/ or respiratory therapy student/	4693
64	nursing student/ or baccalaureate nursing student/ or graduate nursing student/ or male nursing student/	19760
65	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kf.	45463
66	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kf.	1393
67	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kf.	727825
68	health workforce/	1438
69	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kf.	5247
70	or/35-69	1336894
71	34 and 70	1059

72	limit 71 to english language	1024
73	limit 72 to yr="2017 -Current"	521
74	limit 73 to (book or chapter or conference abstract or conference paper or "conference review")	5
75	73 not 74	516

### EBM Reviews - Cochrane Central Register of Controlled Trials February 2023

#### Search Strategy:

#	Searches	Results
1	pain management/	4916
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	69166
3	1 or 2	70821
4	Computer-Assisted Instruction/	1359
5	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kw.	247
6	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	1050
7	("e learn*" or elearn*).tw,kw.	1031
8	("e-education*" or "e-school*" or "e-program*" or "e-train*).tw,kw.	78
9	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	14314
10	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	2984
11	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	677
12	webcast/	0
13	videoconferencing/ or webcasts as topic/	284

14	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kw.	2273
15	("video tutorial?" or videotutorial?).tw,kw.	72
16	simulation training/ or high fidelity simulation training/ or patient simulation/	1381
17	computer simulation/ or augmented reality/	2379
18	simulat*.tw,kw.	21920
19	(vignette or vignettes).tw,kw.	1563
20	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kw.	432
21	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kw.	75
22	virtual reality/	779
23	("virtual reality" or "virtual realities" or "VR").tw,kw.	6089
24	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	634
25	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	1512
26	Inservice Training/	809
27	(inservice or "in service" or "on the job training" or "training on the job").tw,kw.	687
28	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*).tw,kw.	747
29	((group? or "group based") adj2 discuss*).tw,kw.	4088
30	"lunch* and learn*".tw,kw.	13
31	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	3242

32	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "workshop?")).tw,kw.	1001
33	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "workshop?")).tw,kw.	444
34	or/4-33	56758
35	3 and 34	2002
36	exp "attitude of health personnel"/	2967
37	exp Health Personnel/	12842
38	exp Personnel, Hospital/	1051
39	exp Health Occupations/	30865
40	exp Patient Care Team/	2032
41	Social Work/	219
42	Social Workers/	37
43	Nurse's Role/	530
44	Licensed Practical Nurses/	1
45	exp Nurses/	1579
46	exp Nursing Staff/	775
47	Nursing Staff, Hospital/	523
48	exp Nursing/	4044
49	Nursing, Practical/	11
50	Health Educators/	30
51	exp Administrative Personnel/	136
52	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	25314
53	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	2092
54	nurs*.tw,kw.	48738
55	(patient care? adj2 team?).tw,kw.	52
56	(health* adj2 educator?).tw,kw.	551
57	(social adj2 worker?).tw,kw.	1396

58	(support* adj2 (worker? or staff?)).tw,kw.	800
59	practitioner?.tw,kw.	16312
60	Caregivers/	3114
61	(caregiver? or care-giver? or carer or carers).tw,kw.	19577
62	students, health occupations/ or students, medical/ or students, nursing/ or students, pharmacy/ or students, premedical/ or students, public health/	2334
63	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	6326
64	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	174
65	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	137452
66	Health Workforce/	29
67	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	115
68	or/36-67	211034
69	35 and 68	701
70	limit 69 to english language	698
71	limit 70 to yr="2017 -Current"	466

## EBM Reviews - Cochrane Database of Systematic Reviews 2005 to March 15, 2023

### Search Strategy:

#	Searches	Results
1	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	1993
2	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kw.	44
3	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	55
4	("e learn*" or elearn*).tw,kw.	42
5	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kw.	3
6	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	821
7	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	165
8	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	27
9	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kw.	153
10	simulat*.tw,kw.	459
11	(vignette or vignettes).tw,kw.	44
12	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kw.	8
13	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kw.	0



14	("virtual reality" or "virtual realities" or "VR").tw,kw.	142
15	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	25
16	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	72
17	(inservice or "in service" or "on the job training" or "training on the job").tw,kw.	122
18	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*).tw,kw.	102
19	((group? or "group based") adj2 discuss*).tw,kw.	268
20	"lunch* and learn*".tw,kw.	1
21	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	225
22	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	75
23	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,kw.	27
24	or/2-23	1874
25	1 and 24	322
26	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	3065
27	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	229
28	nurs*.tw,kw.	3309
29	(patient care? adj2 team?).tw,kw.	63
30	(health* adj2 educator?).tw,kw.	52
31	(social adj2 worker?).tw,kw.	231
32	(support* adj2 (worker? or staff?)).tw,kw.	146
33	practitioner?.tw,kw.	1862

34	(caregiver? or care-giver? or carer or carers).tw,kw.	2205
35	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	124
36	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	5
37	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	7789
38	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	49
39	or/26-38	8712
40	25 and 39	308
41	limit 40 to last 6 years	68

**APA PsycInfo 1806 to March Week 2 2023**

**Search Strategy:**

#	Searches	Results
1	pain management/	11070
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,id.	29314

3	1 or 2	31277
4	computer assisted instruction/ or computer supported collaborative learning/ or exp electronic learning/ or intelligent tutoring systems/	23465
5	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,id.	1811
6	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	3189
7	electronic learning/ or mobile learning/	4076
8	("e learn*" or elearn*).tw,id.	4203
9	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,id.	199
10	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	42966
11	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	8443
12	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	3837
13	blended learning/	771
14	videoconferencing/	834
15	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,id.	4260
16	("video tutorial?" or videotutorial?).tw,id.	63
17	computer simulation/ or simulation/ or simulation games/	29567
18	augmented reality/ or role playing games/	1418
19	simulat*.tw,id.	78625
20	(vignette or vignettes).tw,id.	22583
21	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,id.	1571

22	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,id.	27
23	virtual reality/	10686
24	("virtual reality" or "virtual realities" or "VR").tw,id.	10217
25	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	1799
26	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	11081
27	inservice training/	697
28	(inservice or "in service" or "on the job training" or "training on the job").tw,id.	13765
29	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,id.	9337
30	group discussion/ or debates/	6898
31	((group? or "group based") adj2 discuss*).tw,id.	18849
32	"lunch* and learn*".tw,id.	20
33	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	3978
34	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	3073
35	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	6678
36	or/4-35	251037
37	3 and 36	1120
38	exp health personnel attitudes/	26902
39	exp health personnel/	186904
40	social casework/	20540

41	social workers/	14257
42	exp nurses/	37201
43	nursing/	26399
44	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,id.	114908
45	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,id.	6177
46	nurs*.tw,id.	117887
47	(patient care? adj2 team?).tw,id.	156
48	(health* adj2 educator?).tw,id.	2283
49	(social adj2 worker?).tw,id.	29009
50	(support* adj2 (worker? or staff?)).tw,id.	6221
51	practitioner?.tw,id.	107104
52	caregivers/	35438
53	(caregiver? or care-giver? or carer or carers).tw,id.	71930
54	medical students/	14698
55	nursing students/	6366
56	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,id.	24428
57	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,id.	943
58	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,id.	293049

59	("health care labor force" or "health care labour force" or "health care work force" or "health care workforce" or "health labor force" or "health labour force" or "health manpower" or "health occupations manpower" or "health work force" or "health workforce" or "healthcare labor force" or "healthcare labour force" or "healthcare manpower" or "healthcare work force" or "healthcare workforce" or "medical manpower").tw,id.	1644
60	or/38-59	618474
61	37 and 60	502
62	limit 61 to english language	487
63	limit 62 to yr="2017 -Current"	189
64	limit 63 to (chapter or dissertation or review-book or review-media or review-software & other)	20
65	63 not 64	169

#### CINAHL

#	Query	Limiters/Expanders	Results
S1	(MH "Pain+/DH/DT/NU/PC/RT/RH/TH")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	111,186
S2	(MH "Pain Management")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	13,135
S3	TI ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful)) OR AB ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	85,401

S4	S1 OR S2 OR S3	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	158,898
S5	(MH "Computer Assisted Instruction")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	8,306
S6	TI ("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction") OR AB ("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	347
S7	TI ("computer based" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ("computer based" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,257
S8	(MH "Online Education")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	3,260
S9	TI ("e learn*" or elearn*) OR AB ("e learn*" or elearn*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	3,000

S10	TI ("e-education*" or "e-school*" or "e-program*" or "e-train*") OR AB ("e-education*" or "e-school*" or "e-program*" or "e-train*")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	299
S11	TI ((digital* or electronic or internet or online or "on line" or web or virtual*) N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ((digital* or electronic or internet or online or "on line" or web or virtual*) N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	33,979
S12	TI ((interactive* or "inter active*") N4 (class or classes or course# or education* or learn* or media or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ((interactive* or "inter active*") N4 (class or classes or course# or education* or learn* or media or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,484
S13	TI ((blended or hybrid) N4 (class or classes or course# or education* or learn* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ((blended or hybrid) N4 (class or classes or course# or education* or learn* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,054
S14	(MH "Videoconferencing") OR (MH "Webcasts") OR (MH "Webinars")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,834



S15	TI (podcast* or "pod cast*" or "streaming video#" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*") OR AB (podcast* or "pod cast*" or "streaming video#" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6,877
S16	TI ("video tutorial#" or videotutorial#) OR AB ("video tutorial#" or videotutorial#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	93
S17	(MH "Simulations") OR (MH "Computer Simulation") OR (MH "Augmented Reality") OR (MH "Patient Simulation") OR (MH "Vignettes")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	48,162
S18	TI simulat* OR AB simulat*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	68,670
S19	TI (vignette or vignettes) OR AB (vignette or vignettes)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6,779
S20	TI ("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality") OR AB ("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,221
S21	TI ("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or	Expanders - Apply equivalent subjects	90

	"high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin") OR AB ("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin")	Search modes - Boolean/Phrase	
S22	(MH "Virtual Reality")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	7,461
S23	TI ("virtual reality" or "virtual realities" or "VR") OR AB ("virtual reality" or "virtual realities" or "VR")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	7,537
S24	TI ("hands on" N4 (class or classes or course# or education* or learn* or practic* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ("hands on" N4 (class or classes or course# or education* or learn* or practic* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,741
S25	TI (practical N4 (class or classes or course# or education* or learn* or lesson# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB (practical N4 (class or classes or course# or education* or learn* or lesson# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6,502
S26	(MH "Staff Development")	Expanders - Apply equivalent subjects	29,838

		Search modes - Boolean/Phrase	
S27	TI (inservice or "in service" or "on the job training" or "training on the job") OR AB (inservice or "in service" or "on the job training" or "training on the job")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	8,189
S28	TI ((case# or "case based") N1 (discuss* or conference* or learn* or tutorial*)) OR AB ((case# or "case based") N1 (discuss* or conference* or learn* or tutorial*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	8,374
S29	TI ((group# or "group based") N1 discuss*) OR AB ((group# or "group based") N1 discuss*)	Expanders - Apply equivalent subjects Search modes - SmartText Searching	1,824
S30	TI ("lunch* and learn*") OR AB ("lunch* and learn*")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	56
S31	TI ("face to face" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ("face to face" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,930
S32	TI (didactic* N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB (didactic* N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,968

	teach* or train* or tutor* or workshop# or "work shop#"))		
S33	TI (experiential N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB (experiential N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	3,407
S34	S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	212,907
S35	S4 AND S34	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	3,360
S36	(MH "Attitude of Health Personnel+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	123,645
S37	(MH "Health Personnel+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	641,708
S38	(MH "Personnel, Health Facility+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	45,096

S39	(MH "Health Occupations+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	826,361
S40	(MH "Multidisciplinary Care Team+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	52,113
S41	(MH "Social Work+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	15,479
S42	(MH "Social Workers")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	11,301
S43	(MH "Nursing Role")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	65,893
S44	(MH "Practical Nurses") OR (MH "Practical Nursing")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	7,734
S45	(MH "Nurses+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	242,746
S46	(MH "Nursing Staff, Hospital")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	25,287

S47	(MH "Health Educators+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	4,209
S48	(MH "Administrative Personnel+")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	40,875
S49	TI (health* N2 provider#) OR AB (health* N2 provider#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	58,112
S50	TI (hospital* N2 provider#) OR AB (hospital* N2 provider#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,841
S51	TI (health* N2 staff#) OR AB (health* N2 staff#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	9,051
S52	TI (hospital* N2 staff#) OR AB (hospital* N2 staff#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	6,103
S53	TI (health* N2 personnel#) OR AB (health* N2 personnel#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	5,475
S54	TI (hospital* N2 personnel#) OR AB (hospital* N2 personnel#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,163

S55	TI (health* N2 employe*) OR AB (health* N2 employe*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	7,181
S56	TI (hospital* N2 employe*) OR AB (hospital* N2 employe*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,081
S57	TI (health* N2 profession*) OR AB (health* N2 profession*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	101,812
S58	TI (hospital* N2 profession*) OR AB (hospital* N2 profession*)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,012
S59	TI (health* N2 occupation#) OR AB (health* N2 occupation#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,026
S60	TI (hospital* N2 occupation#) OR AB (hospital* N2 occupation#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	59
S61	TI (health* N2 practitioner#) OR AB (health* N2 practitioner#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	12,301
S62	TI (hospital* N2 practitioner#) OR AB (hospital* N2 practitioner#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	935

S63	TI (health* N2 worker#) OR AB (health* N2 worker#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	34,513
S64	TI (hospital* N2 worker#) OR AB (hospital* N2 worker#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,613
S65	TI nurs* OR AB nurs*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	643,964
S66	TI (patient care# N2 team#) OR AB (patient care# N2 team#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	597
S67	TI (health* N2 educator#) OR AB (health* N2 educator#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	3,792
S68	TI (social N2 worker#) OR AB (social N2 worker#)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	15,135
S69	TI (support* N2 (worker# or staff#)) OR AB (support* N2 (worker# or staff#))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	9,774
S70	TI clinician# OR AB clinician#	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	124,274



S71	TI doctor# OR AB doctor#	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	65,731
S72	TI physician# OR AB physician#	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	170,340
S73	TI practitioner# OR AB practitioner#	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	108,721
S74	TI surgeon# OR AB surgeon#	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	63,779
S75	(MH "Caregivers")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	43,231
S76	TI (caregiver# or care-giver# or carer or carers) OR AB (caregiver# or care-giver# or carer or carers)	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	80,432
S77	(MH "Students, Medical") OR (MH "Students, Audiology") OR (MH "Students, Dietetics") OR (MH "Students, Occupational Therapy") OR (MH "Students, Physical Therapy") OR (MH "Students, Physician Assistant") OR (MH "Students, Respiratory Therapy") OR (MH "Students, Nursing") OR (MH "Students, Health Occupations") OR (MH "Students, Allied Health") OR (MH "Students, Midwifery") OR (MH	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	71,481

	<p>"Students, Nurse Midwifery") OR (MH "Students, Nursing, Associate") OR (MH "Students, Post-RN") OR (MH "Students, Nursing, Diploma Programs") OR (MH "Students, Nursing, Graduate") OR (MH "Students, Nursing, Doctoral") OR (MH "Students, Nursing, Masters") OR (MH "Students, Nursing, Male") OR (MH "Students, Nursing, Practical") OR (MH "Students, Pharmacy") OR (MH "Students, Podiatry")</p>		
S78	<p>TI ("health care student" or "health care students" or "health occupations student" or "health occupations students" or "healthcare student" or "healthcare students" or "med school student" or "med school students" or "med student" or "med students" or "medical school student" or "medical school students" or "medical student" or "medical students" or "nursing student" or "nursing students" or "pharmacy student" or "pharmacy students" or "physician assistant student" or "physician assistant students" or "premedical student" or "premedical students" or "public health student" or "public health students")</p>	<p>Expanders - Apply equivalent subjects Search modes - Boolean/Phrase</p>	25,149
S79	<p>AB ("health care student" or "health care students" or "health occupations student" or "health occupations students" or "healthcare student" or "healthcare students" or "med school student" or "med school students" or "med student" or "med students" or "medical school student" or "medical school students" or "medical student" or "medical students" or "nursing student" or "nursing students" or "pharmacy student" or "pharmacy students" or "physician assistant student" or "physician assistant students" or "premedical student" or "premedical students" or "public health student" or "public health students")</p>	<p>Expanders - Apply equivalent subjects Search modes - Boolean/Phrase</p>	36,407

S80	<p>TI ("audiology student" or "audiology students" or "dietetics student" or "dietetics students" or "occupational therapy student" or "occupational therapy students" or "paramedical student" or "paramedical students" or "physical therapy student" or "physical therapy students" or "respiratory therapy student" or "respiratory therapy students") OR AB ("audiology student" or "audiology students" or "dietetics student" or "dietetics students" or "occupational therapy student" or "occupational therapy students" or "paramedical student" or "paramedical students" or "physical therapy student" or "physical therapy students" or "respiratory therapy student" or "respiratory therapy students")</p>	<p>Expanders - Apply equivalent subjects Search modes - Boolean/Phrase</p>	2,278
S81	<p>TI (doctor or doctors or clinician# or "health care professional" or "health care professionals" or "health care provider" or "health care providers" or "health personnel" or "healthcare professional" or "healthcare professionals" or "healthcare provider" or "healthcare providers" or "healthcare worker" or "healthcare workers" or "medical staff" or nurse or nurses or "nursing staff" or physician or physicians or surgeon#) OR AB (doctor or doctors or clinician# or "health care professional" or "health care professionals" or "health care provider" or "health care providers" or "health personnel" or "healthcare professional" or "healthcare professionals" or "healthcare provider" or "healthcare providers" or "healthcare worker" or "healthcare workers" or "medical staff" or nurse or nurses or "nursing staff" or physician or physicians or surgeon#)</p>	<p>Expanders - Apply equivalent subjects Search modes - Boolean/Phrase</p>	846,934
S82	<p>TI ("health care labor force" or "health care labour force" or "health care work force" or "health care workforce" or "health labor force" or "health labour force" or "health manpower" or "health occupations manpower" or "health work force" or "health</p>	<p>Expanders - Apply equivalent subjects Search modes - Boolean/Phrase</p>	4,896

	workforce" or "healthcare labor force" or "healthcare labour force" or "healthcare manpower" or "healthcare work force" or "healthcare workforce" or "medical manpower") OR AB ("health care labor force" or "health care labour force" or "health care work force" or "health care workforce" or "health labor force" or "health labour force" or "health manpower" or "health occupations manpower" or "health work force" or "health workforce" or "healthcare labor force" or "healthcare labour force" or "healthcare manpower" or "healthcare work force" or "healthcare workforce" or "medical manpower")		
S83	S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	2,238,874
S84	S35 AND S83	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	1,859
S85	S35 AND S83	Limiters - Published Date: 20170101-20231231; English Language; Peer Reviewed Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	660

**Update search for recommendation questions #2 and #3:**

**Recommendation question #2:** Should interactive education on pain assessment, prevention and management for students entering health professions be recommended or not?

**Recommendation question #3:** Should interactive education on pain assessment, prevention and management for health providers be recommended or not?

**Databases Searched:** Medline, Embase, Emcare, Cochrane Central, Cochrane Database of Systematic Reviews, PsycInfo and Cumulative Index to Nursing and Allied Health (CINAHL).

**Dates searched:** March 21, 2023 – July 31, 2024

**MEDLINE(R)** 1946 to July 31, 2024

Search Strategy:

#	Searches	Results
1	exp pain/dh, dt, nu, pc, rt, rh, th [Diet Therapy, Drug Therapy, Nursing, Prevention & Control, Radiotherapy, Rehabilitation]	179929
2	Pain Management/	42709
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	193019
4	or/1-3	320486
5	Computer Assisted Instruction/	12732
6	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kf.	707
7	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	2554
8	("e learn*" or elearn*).tw,kf.	5511
9	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kf.	280
10	((digital* or electronic or internet or online or "on line" or "web based" or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	65913
11	interactive tutorial/	276

12	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	11902
13	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	8289
14	webcast/	1154
15	videoconferencing/ or webcasts as topic/	2866
16	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kf.	10594
17	("video tutorial?" or videotutorial?).tw,kf.	506
18	Simulation Training/ or High Fidelity Simulation Training/ or Patient Simulation/	12329
19	Computer Simulation/ or Augmented Reality/	217832
20	simulat*.tw,kf.	757773
21	(vignette or vignettes).tw,kf.	15131
22	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kf.	6161
23	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kf.	179
24	virtual reality/	6790
25	("virtual reality" or "virtual realities" or "VR").tw,kf.	26623
26	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	5068
27	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	15794
28	InService Training/	20790
29	(inservice or "in service" or "on the job training" or "training on the job").tw,kf.	12917

30	((case? or "case based") adj2 (discus* or conference* or learn* or tutorial*)).tw,kf.	25000
31	(group? adj2 discuss*).tw,kf.	29820
32	"lunch* and learn*".tw,kf.	48
33	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	5983
34	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	6891
35	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	5422
36	or/5-35	1100214
37	4 and 36	5985
38	exp "Attitude of Health Personnel"/	172931
39	exp Health Personnel/	638177
40	exp Personnel, Hospital/	96304
41	exp Health Occupations/	1895474
42	exp Patient Care Team/	73802
43	Social Work/	16618
44	Social Workers/	1208
45	Nurse's Role/	43342
46	Licensed Practical Nurses/	103
47	exp Nurses/	101032
48	exp Nursing Staff/	70693
49	Nursing Staff, Hospital/	48621
50	exp Nursing/	266450
51	Nursing, Practical/	3444
52	Health Educators/	500
53	exp Administrative Personnel/	42767
54	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	360847

55	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	22592
56	nurs*.tw,kf.	559868
57	(patient care? adj2 team?).tw,kf.	1199
58	(health* adj2 educator?).tw,kf.	4183
59	(social adj2 worker?).tw,kf.	13701
60	(support* adj2 (worker? or staff?)).tw,kf.	9322
61	practitioner?.tw,kf.	192193
62	Caregivers/	53899
63	(caregiver? or care-giver? or carer or carers).tw,kf.	121646
64	students, health occupations/ or students, medical/ or students, nursing/ or students, pharmacy/ or students, premedical/ or students, public health/	85189
65	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kf.	85921
66	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kf.	1488
67	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kf.	1570894
68	Health Workforce/	14782
69	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force	9300



	or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kf.	
70	or/38-69 [Students or Health Providers terms]	3914993
71	37 and 70	2453
72	limit 71 to english language	2367
73	limit 72 to ed=20230321-20240731	220
74	72 and ("20230320*" or "20230321*" or "20230322*" or "20230323*" or "20230324*" or "20230325*" or "20230326*" or "20230327*" or "20230328*" or "20230329*" or "20230330*" or "20230331*" or "202304*" or "202305*" or "202306*" or "202307*" or "202308*" or "202309*" or "202310*" or "202311*" or "202312*" or "2024*").dt.	299
75	73 or 74	339

**Embase Classic+Embase 1947 to 2024 July 31**

Search Strategy:

#	Searches	Results
1	("76" not "77").mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]	416413
2	exp pain/dm, dt, pc, rt, rh, th [Disease Management, Drug Therapy, Prevention, Radiotherapy, Rehabilitation, Therapy]	292465
3	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	283634
4	2 or 3	489639
5	Computer Assisted Instruction.ti.	384
6	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kw.	943
7	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	3247
8	e-learning/	6772
9	virtual learning environment/	1225
10	("e learn*" or elearn*).tw,kw.	8040

11	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kw.	335
12	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	90595
13	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	18717
14	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	9100
15	podcast/ or videoconferencing/ or web conferencing/ or webcast/ or webinar/	14261
16	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kw.	15957
17	("video tutorial?" or videotutorial?).tw,kw.	673
18	simulation training/ or high fidelity simulation training/	11039
19	simulation/ or computer simulation/ or digital twin/ or discrete event simulation/ or high fidelity simulation/ or high-fidelity patient simulation/ or patient simulation/ or vignette/	431890
20	augmented reality/	3360
21	simulat*.tw,kw.	814588
22	(vignette or vignettes).tw,kw.	19458
23	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kw.	6981
24	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kw.	315
25	virtual reality/	29921
26	("virtual reality" or "virtual realities" or "VR").tw,kw.	35360
27	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	8557

28	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	22718
29	"in service training"/	17025
30	(inservice or "in service" or "on the job training" or "training on the job").tw,kw.	16420
31	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,kw.	44633
32	((group? or "group based") adj2 discuss*).tw,kw.	45471
33	"lunch* and learn*".tw,kw.	118
34	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	8273
35	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	12012
36	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	6643
37	or/5-36	1231247
38	4 and 37	9574
39	exp health personnel attitude/	214523
40	exp health care personnel/	2172565
41	exp hospital personnel/	161829
42	exp multidisciplinary team/	38198
43	social work/	32418
44	social worker/	18549
45	licensed practical nurse/	456
46	exp nurse/	236182
47	nursing staff/	80486
48	exp nursing/	426494
49	practical nursing/	192
50	exp health educator/	3877
51	exp administrative personnel/	36808

52	nurse attitude/	44360
53	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	461132
54	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	31389
55	nurs*.tw,kw.	677022
56	(patient care? adj2 team?).tw,kw.	940
57	(health* adj2 educator?).tw,kw.	4786
58	(social adj2 worker?).tw,kw.	23186
59	(support* adj2 (worker? or staff?)).tw,kw.	13139
60	practitioner?.tw,kw.	247877
61	caregiver/	125671
62	(caregiver? or care-giver? or carer or carers).tw,kw.	170950
63	health student/	2269
64	medical student/ or physician assistant student/	99573
65	premedical student/	189
66	public health student/	158
67	paramedical student/ or audiology student/ or dietetics student/ or occupational therapy student/ or pharmacy student/ or physical therapy student/ or respiratory therapy student/	12179
68	nursing student/ or baccalaureate nursing student/ or graduate nursing student/ or male nursing student/	35612
69	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	110296
70	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	1995

71	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	2218659
72	health workforce/	4876
73	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	10200
74	or/39-73	4166975
75	38 and 74	3830
76	limit 75 to english language	3738
77	limit 76 to dc=20230321-20240731	552
78	limit 77 to (books or chapter or conference abstract or conference paper or "conference review")	149
79	77 not 78	403

### Emcare Nursing 1995 to Present

Search Strategy:

#	Searches	Results
1	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	105974
2	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kf.	482
3	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	1776
4	e-learning/	2461
5	virtual learning environment/	220
6	("e learn*" or elearn*).tw,kf.	4042

7	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kf.	165
8	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	41142
9	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	7211
10	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	3538
11	podcast/ or videoconferencing/ or web conferencing/ or webcast/ or webinar/	3526
12	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kf.	6740
13	("video tutorial?" or videotutorial?).tw,kf.	113
14	simulation training/ or high fidelity simulation training/	2284
15	simulation/ or computer simulation/ or digital twin/ or discrete event simulation/ or high fidelity simulation/ or high-fidelity patient simulation/ or patient simulation/ or vignette/	85353
16	augmented reality/	588
17	simulat*.tw,kf.	178868
18	(vignette or vignettes).tw,kf.	9958
19	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kf.	2538
20	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kf.	136
21	virtual reality/	9921
22	("virtual reality" or "virtual realities" or "VR").tw,kf.	14288
23	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	2823

24	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	8942
25	in service training/	1854
26	(inservice or "in service" or "on the job training" or "training on the job").tw,kf.	8553
27	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,kf.	9596
28	((group? or "group based") adj2 discuss*).tw,kf.	22600
29	"lunch* and learn*".tw,kf.	34
30	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	3930
31	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	4356
32	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kf.	4288
33	or/2-32	315500
34	1 and 33	2878
35	exp health personnel attitude/	45619
36	exp health care personnel/	763110
37	exp hospital personnel/	46357
38	exp multidisciplinary team/	4600
39	social work/	20941
40	social worker/	11491
41	licensed practical nurse/	283
42	exp nurse/	183517
43	nursing staff/	26879
44	exp nursing/	175084
45	practical nursing/	207
46	exp health educator/	2601
47	exp administrative personnel/	14727

48	nurse attitude/	15954
49	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	234972
50	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	11432
51	nurs*.tw,kf.	357191
52	(patient care? adj2 team?).tw,kf.	1093
53	(health* adj2 educator?).tw,kf.	2946
54	(social adj2 worker?).tw,kf.	14974
55	(support* adj2 (worker? or staff?)).tw,kf.	7816
56	practitioner?.tw,kf.	121560
57	caregiver/	56408
58	(caregiver? or care-giver? or carer or carers).tw,kf.	93199
59	health student/	783
60	medical student/ or physician assistant student/	27822
61	premedical student/	45
62	health student/	783
63	paramedical student/ or allied health student/ or audiology student/ or dietetics student/ or midwifery student/ or occupational therapy student/ or pharmacy student/ or physical therapy student/ or respiratory therapy student/	5315
64	nursing student/ or baccalaureate nursing student/ or graduate nursing student/ or male nursing student/	22542
65	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kf.	51999
66	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or	1552



	paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kf.	
67	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kf.	806360
68	health workforce/	2009
69	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kf.	6350
70	or/35-69	1460010
71	34 and 70	1246
72	limit 71 to english language	1205
73	limit 72 to dc=20230321-20240731	182
74	limit 73 to (book or chapter or conference abstract or conference paper or "conference review")	3
75	73 not 74	179

### EBM Reviews - Cochrane Central Register of Controlled Trials June 2024

Search Strategy:

#	Searches	Results
1	pain management/	5901
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	79125
3	1 or 2	81053
4	Computer-Assisted Instruction/	1485
5	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kw.	258

6	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	1147
7	("e learn*" or elearn*).tw,kw.	1280
8	("e-education*" or "e-school*" or "e-program*" or "e-train*).tw,kw.	90
9	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	18420
10	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	3422
11	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	906
12	webcast/	0
13	videoconferencing/ or webcasts as topic/	332
14	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*).tw,kw.	2963
15	("video tutorial?" or videotutorial?).tw,kw.	87
16	simulation training/ or high fidelity simulation training/ or patient simulation/	1675
17	computer simulation/ or augmented reality/	2862
18	simulat*.tw,kw.	25063
19	(vignette or vignettes).tw,kw.	1761
20	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kw.	661
21	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kw.	82
22	virtual reality/	1139
23	("virtual reality" or "virtual realities" or "VR").tw,kw.	8069

24	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	751
25	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	1826
26	Inservice Training/	876
27	(inservice or "in service" or "on the job training" or "training on the job").tw,kw.	767
28	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,kw.	867
29	((group? or "group based") adj2 discuss*).tw,kw.	4646
30	"lunch* and learn*".tw,kw.	14
31	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	3971
32	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	1099
33	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	513
34	or/4-33	67884
35	3 and 34	2545
36	exp "attitude of health personnel"/	3357
37	exp Health Personnel/	15392
38	exp Personnel, Hospital/	1161
39	exp Health Occupations/	35827
40	exp Patient Care Team/	2298
41	Social Work/	235
42	Social Workers/	48
43	Nurse's Role/	617
44	Licensed Practical Nurses/	1
45	exp Nurses/	1754

46	exp Nursing Staff/	852
47	Nursing Staff, Hospital/	572
48	exp Nursing/	4330
49	Nursing, Practical/	14
50	Health Educators/	33
51	exp Administrative Personnel/	151
52	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	29387
53	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	2343
54	nurs*.tw,kw.	55427
55	(patient care? adj2 team?).tw,kw.	63
56	(health* adj2 educator?).tw,kw.	594
57	(social adj2 worker?).tw,kw.	1615
58	(support* adj2 (worker? or staff?)).tw,kw.	913
59	practitioner?.tw,kw.	18149
60	Caregivers/	3803
61	(caregiver? or care-giver? or carer or carers).tw,kw.	23071
62	students, health occupations/ or students, medical/ or students, nursing/ or students, pharmacy/ or students, premedical/ or students, public health/	2806
63	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	7380
64	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	209

65	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	155632
66	Health Workforce/	34
67	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	139
68	or/36-67	240705
69	35 and 68	876
70	limit 69 to english language	873
71	limit 70 to yr="2023 -Current"	146

### EBM Reviews - Cochrane Database of Systematic Reviews 2005 to July 31, 2024

Search Strategy:

#	Searches	Results
1	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	2057
2	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,kw.	45
3	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	59
4	("e learn*" or elearn*).tw,kw.	44
5	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,kw.	3
6	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	1045

7	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	175
8	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	30
9	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,kw.	173
10	simulat*.tw,kw.	469
11	(vignette or vignettes).tw,kw.	43
12	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,kw.	9
13	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,kw.	0
14	("virtual reality" or "virtual realities" or "VR").tw,kw.	147
15	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	27
16	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	75
17	(inservice or "in service" or "on the job training" or "training on the job").tw,kw.	125
18	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,kw.	101
19	((group? or "group based") adj2 discuss*).tw,kw.	278
20	"lunch* and learn*".tw,kw.	1
21	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,kw.	240

22	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "workshop?")).tw,kw.	76
23	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "workshop?")).tw,kw.	27
24	or/2-23	2100
25	1 and 24	364
26	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	3216
27	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	236
28	nurs*.tw,kw.	3410
29	(patient care? adj2 team?).tw,kw.	67
30	(health* adj2 educator?).tw,kw.	57
31	(social adj2 worker?).tw,kw.	240
32	(support* adj2 (worker? or staff?)).tw,kw.	154
33	practitioner?.tw,kw.	1910
34	(caregiver? or care-giver? or carer or carers).tw,kw.	2278
35	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	131
36	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	6
37	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare	7980

	worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	
38	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	53
39	or/26-38	8904
40	25 and 39	348
41	limit 40 to full systematic reviews	292
42	from 41 keep 1, 3-4, 6-10, 13-14, 16-18, 20...	55

**APA PsycInfo** 1806 to July Week 4 2024

Search Strategy:

#	Searches	Results
1	pain management/	11968
2	((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,id.	31326
3	1 or 2	33443
4	computer assisted instruction/ or computer supported collaborative learning/ or exp electronic learning/ or intelligent tutoring systems/	26575
5	("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction").tw,id.	1829
6	("computer based" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	3303
7	electronic learning/ or mobile learning/	6027
8	("e learn*" or elearn*).tw,id.	4653
9	("e-education*" or "e-school*" or "e-program*" or "e-train*").tw,id.	223
10	((digital* or electronic or internet or online or "on line" or web or virtual*) adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	50280



11	((interactive* or "inter active*") adj5 (class or classes or course? or education* or learn* or media or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	9100
12	((blended or hybrid) adj5 (class or classes or course? or education* or learn* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	4592
13	blended learning/	1050
14	videoconferencing/	1063
15	(podcast* or "pod cast*" or "streaming video?" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*").tw,id.	5136
16	("video tutorial?" or videotutorial?).tw,id.	81
17	computer simulation/ or simulation/ or simulation games/	31941
18	augmented reality/ or role playing games/	1859
19	simulat*.tw,id.	83649
20	(vignette or vignettes).tw,id.	24133
21	("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality").tw,id.	2062
22	("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin").tw,id.	28
23	virtual reality/	12449
24	("virtual reality" or "virtual realities" or "VR").tw,id.	12173
25	("hands on" adj5 (class or classes or course? or education* or learn* or practic* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	2021
26	(practical adj5 (class or classes or course? or education* or learn* or lesson? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?")).tw,id.	12096
27	inservice training/	734
28	(inservice or "in service" or "on the job training" or "training on the job").tw,id.	14859

29	((case? or "case based") adj2 (discuss* or conference* or learn* or tutorial*)).tw,id.	9704
30	group discussion/ or debates/	7068
31	((group? or "group based") adj2 discuss*).tw,id.	20284
32	"lunch* and learn*".tw,id.	26
33	("face to face" adj5 (class or classes or course? or education* or learn* or presentation* or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,id.	4624
34	(didactic* adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,id.	3306
35	(experiential adj5 (class or classes or course? or education* or learn* or presentation? or program* or seminar? or session* or teach* or train* or tutor* or workshop? or "work shop?").tw,id.	7260
36	or/4-35	273791
37	3 and 36	1272
38	exp health personnel attitudes/	29671
39	exp health personnel/	203576
40	social casework/	22087
41	social workers/	15514
42	exp nurses/	40848
43	nursing/	28678
44	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,id.	126667
45	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,id.	6555
46	nurs*.tw,id.	126296
47	(patient care? adj2 team?).tw,id.	184
48	(health* adj2 educator?).tw,id.	2445
49	(social adj2 worker?).tw,id.	30884
50	(support* adj2 (worker? or staff?)).tw,id.	7012
51	practitioner?.tw,id.	115168
52	caregivers/	39895

53	(caregiver? or care-giver? or carer or carers).tw,id.	79586
54	medical students/	15675
55	nursing students/	7321
56	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,id.	26141
57	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,id.	1047
58	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,id.	314553
59	("health care labor force" or "health care labour force" or "health care work force" or "health care workforce" or "health labor force" or "health labour force" or "health manpower" or "health occupations manpower" or "health work force" or "health workforce" or "healthcare labor force" or "healthcare labour force" or "healthcare manpower" or "healthcare work force" or "healthcare workforce" or "medical manpower").tw,id.	1906
60	or/38-59	664979
61	37 and 60	558
62	limit 61 to english language	544
63	limit 62 to yr="2023 -Current"	29
64	limit 63 to (chapter or dissertation or review-book or review-media or review-software & other)	6
65	63 not 64	23

## CINAHL

#	Query	Limiters/Expanders	Results
S1	(MH "Pain+/DH/DT/NU/PC/RT/RH/TH")	Expanders - Apply equivalent subjects Search modes - Proximity	111,352
S2	(MH "Pain Management")	Expanders - Apply equivalent subjects Search modes - Proximity	17,202
S3	TI ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful)) OR AB ((manage* or managing or relief or relieve or relieves or reduce or reduces or reduced or reducing or treats or treating or treatment or treatments) N4 (pain or pains or painful))	Expanders - Apply equivalent subjects Search modes - Proximity	84,607
S4	S1 OR S2 OR S3	Expanders - Apply equivalent subjects Search modes - Proximity	160,039
S5	(MH "Computer Assisted Instruction")	Expanders - Apply equivalent subjects Search modes - Proximity	9,187
S6	TI ("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction") OR AB ("computer* assisted instruction" or "computer* programmed instruction" or "computer* programmed instruction" or "computer* self instruction")	Expanders - Apply equivalent subjects Search modes - Proximity	331
S7	TI ("computer based" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ("computer based" N4 (class or classes or	Expanders - Apply equivalent subjects Search modes - Proximity	1,253

	course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))		
S8	(MH "Online Education")	Expanders - Apply equivalent subjects Search modes - Proximity	5,347
S9	TI ("e learn*" or elearn*) OR AB ("e learn*" or elearn*)	Expanders - Apply equivalent subjects Search modes - Proximity	2,990
S10	TI ("e-education*" or "e-school*" or "e-program*" or "e-train*") OR AB ("e-education*" or "e-school*" or "e-program*" or "e-train*")	Expanders - Apply equivalent subjects Search modes - Proximity	327
S11	TI ((digital* or electronic or internet or online or "on line" or web or virtual*) N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ((digital* or electronic or internet or online or "on line" or web or virtual*) N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	34,842
S12	TI ((interactive* or "inter active*") N4 (class or classes or course# or education* or learn* or media or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ((interactive* or "inter active*") N4 (class or classes or course# or education* or learn* or media or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	5,530

S13	TI ((blended or hybrid) N4 (class or classes or course# or education* or learn* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ((blended or hybrid) N4 (class or classes or course# or education* or learn* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	2,296
S14	(MH "Videoconferencing") OR (MH "Webcasts") OR (MH "Webinars")	Expanders - Apply equivalent subjects Search modes - Proximity	7,245
S15	TI (podcast* or "pod cast*" or "streaming video#" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*") OR AB (podcast* or "pod cast*" or "streaming video#" or videoteleconf* or "video teleconf*" or videoconferenc* or "video conferenc*" or "web conferenc*" or webconferenc* or webinar* or webcast* or "web cast*")	Expanders - Apply equivalent subjects Search modes - Proximity	6,326
S16	TI ("video tutorial#" or videotutorial#) OR AB ("video tutorial#" or videotutorial#)	Expanders - Apply equivalent subjects Search modes - Proximity	96
S17	(MH "Simulations") OR (MH "Computer Simulation") OR (MH "Augmented Reality") OR (MH "Patient Simulation") OR (MH "Vignettes")	Expanders - Apply equivalent subjects Search modes - Proximity	50,620
S18	TI simulat* OR AB simulat*	Expanders - Apply equivalent subjects Search modes - Proximity	71,169
S19	TI (vignette or vignettes) OR AB (vignette or vignettes)	Expanders - Apply equivalent subjects Search modes - Proximity	7,111

S20	TI ("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality") OR AB ("augmented realities" or "augmented reality" or "mixed realities" or "mixed reality")	Expanders - Apply equivalent subjects Search modes - Proximity	1,386
S21	TI ("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin") OR AB ("hfps based learning" or "hfps learning" or "hfps training" or "hfs based course" or "hfs based teamwork training" or "hfs based training" or "hfs training" or "high fidelity manikin" or "high fidelity mannikin" or "high fidelity mannequin" or "high fidelity manakin")	Expanders - Apply equivalent subjects Search modes - Proximity	102
S22	(MH "Virtual Reality")	Expanders - Apply equivalent subjects Search modes - Proximity	6,124
S23	TI ("virtual reality" or "virtual realities" or "VR") OR AB ("virtual reality" or "virtual realities" or "VR")	Expanders - Apply equivalent subjects Search modes - Proximity	8,394
S24	TI ("hands on" N4 (class or classes or course# or education* or learn* or practic* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ("hands on" N4 (class or classes or course# or education* or learn* or practic* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	2,691
S25	TI (practical N4 (class or classes or course# or education* or learn* or lesson# or	Expanders - Apply equivalent subjects Search modes - Proximity	6,780

	program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB (practical N4 (class or classes or course# or education* or learn* or lesson# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))		
S26	(MH "Staff Development")	Expanders - Apply equivalent subjects Search modes - Proximity	28,953
S27	TI (inservice or "in service" or "on the job training" or "training on the job") OR AB (inservice or "in service" or "on the job training" or "training on the job")	Expanders - Apply equivalent subjects Search modes - Proximity	8,370
S28	TI ((case# or "case based") N1 (discuss* or conference* or learn* or tutorial*)) OR AB ((case# or "case based") N1 (discuss* or conference* or learn* or tutorial*))	Expanders - Apply equivalent subjects Search modes - Proximity	6,516
S29	TI ((group# or "group based") N1 discuss*) OR AB ((group# or "group based") N1 discuss*)	Expanders - Apply equivalent subjects Search modes - SmartText Searching	1,206
S30	TI ("lunch* and learn*") OR AB ("lunch* and learn*")	Expanders - Apply equivalent subjects Search modes - Proximity	46
S31	TI ("face to face" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB ("face to face" N4 (class or classes or course# or education* or learn* or presentation* or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	3,209



S32	TI (didactic* N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB (didactic* N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	3,055
S33	TI (experiential N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#")) OR AB (experiential N4 (class or classes or course# or education* or learn* or presentation# or program* or seminar# or session* or teach* or train* or tutor* or workshop# or "work shop#"))	Expanders - Apply equivalent subjects Search modes - Proximity	3,521
S34	S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33	Expanders - Apply equivalent subjects Search modes - Proximity	212,148
S35	S4 AND S34	Expanders - Apply equivalent subjects Search modes - Proximity	3,517
S36	(MH "Attitude of Health Personnel+")	Expanders - Apply equivalent subjects Search modes - Proximity	134,342
S37	(MH "Health Personnel+")	Expanders - Apply equivalent subjects Search modes - Proximity	669,116
S38	(MH "Personnel, Health Facility+")	Expanders - Apply equivalent subjects Search modes - Proximity	56,656

S39	(MH "Health Occupations+")	Expanders - Apply equivalent subjects Search modes - Proximity	972,142
S40	(MH "Multidisciplinary Care Team+")	Expanders - Apply equivalent subjects Search modes - Proximity	54,606
S41	(MH "Social Work+")	Expanders - Apply equivalent subjects Search modes - Proximity	16,209
S42	(MH "Social Workers")	Expanders - Apply equivalent subjects Search modes - Proximity	12,208
S43	(MH "Nursing Role")	Expanders - Apply equivalent subjects Search modes - Proximity	66,574
S44	(MH "Practical Nurses") OR (MH "Practical Nursing")	Expanders - Apply equivalent subjects Search modes - Proximity	7,548
S45	(MH "Nurses+")	Expanders - Apply equivalent subjects Search modes - Proximity	243,644
S46	(MH "Nursing Staff, Hospital")	Expanders - Apply equivalent subjects Search modes - Proximity	27,774
S47	(MH "Health Educators+")	Expanders - Apply equivalent subjects Search modes - Proximity	4,245
S48	(MH "Administrative Personnel+")	Expanders - Apply equivalent subjects Search modes - Proximity	40,623
S49	TI (health* N2 provider#) OR AB (health* N2 provider#)	Expanders - Apply equivalent subjects Search modes - Proximity	57,611
S50	TI (hospital* N2 provider#) OR AB (hospital* N2 provider#)	Expanders - Apply equivalent subjects Search modes - Proximity	1,764
S51	TI (health* N2 staff#) OR AB (health* N2 staff#)	Expanders - Apply equivalent subjects Search modes - Proximity	8,842
S52	TI (hospital* N2 staff#) OR AB (hospital* N2 staff#)	Expanders - Apply equivalent subjects Search modes - Proximity	5,785
S53	TI (health* N2 personnel#) OR AB (health* N2 personnel#)	Expanders - Apply equivalent subjects Search modes - Proximity	5,467
S54	TI (hospital* N2 personnel#) OR AB (hospital* N2 personnel#)	Expanders - Apply equivalent subjects Search modes - Proximity	1,155

S55	TI (health* N2 employe*) OR AB (health* N2 employe*)	Expanders - Apply equivalent subjects Search modes - Proximity	6,610
S56	TI (hospital* N2 employe*) OR AB (hospital* N2 employe*)	Expanders - Apply equivalent subjects Search modes - Proximity	1,947
S57	TI (health* N2 profession*) OR AB (health* N2 profession*)	Expanders - Apply equivalent subjects Search modes - Proximity	102,795
S58	TI (hospital* N2 profession*) OR AB (hospital* N2 profession*)	Expanders - Apply equivalent subjects Search modes - Proximity	2,074
S59	TI (health* N2 occupation#) OR AB (health* N2 occupation#)	Expanders - Apply equivalent subjects Search modes - Proximity	1,019
S60	TI (hospital* N2 occupation#) OR AB (hospital* N2 occupation#)	Expanders - Apply equivalent subjects Search modes - Proximity	59
S61	TI (health* N2 practitioner#) OR AB (health* N2 practitioner#)	Expanders - Apply equivalent subjects Search modes - Proximity	11,543
S62	TI (hospital* N2 practitioner#) OR AB (hospital* N2 practitioner#)	Expanders - Apply equivalent subjects Search modes - Proximity	910
S63	TI (health* N2 worker#) OR AB (health* N2 worker#)	Expanders - Apply equivalent subjects Search modes - Proximity	35,218
S64	TI (hospital* N2 worker#) OR AB (hospital* N2 worker#)	Expanders - Apply equivalent subjects Search modes - Proximity	1,619
S65	TI nurs* OR AB nurs*	Expanders - Apply equivalent subjects Search modes - Proximity	614,813
S66	TI (patient care# N2 team#) OR AB (patient care# N2 team#)	Expanders - Apply equivalent subjects Search modes - Proximity	600
S67	TI (health* N2 educator#) OR AB (health* N2 educator#)	Expanders - Apply equivalent subjects Search modes - Proximity	3,857
S68	TI (social N2 worker#) OR AB (social N2 worker#)	Expanders - Apply equivalent subjects Search modes - Proximity	15,439
S69	TI (support* N2 (worker# or staff#)) OR AB (support* N2 (worker# or staff#))	Expanders - Apply equivalent subjects Search modes - Proximity	9,937
S70	TI clinician# OR AB clinician#	Expanders - Apply equivalent subjects Search modes - Proximity	126,850

S71	TI doctor# OR AB doctor#	Expanders - Apply equivalent subjects Search modes - Proximity	57,180
S72	TI physician# OR AB physician#	Expanders - Apply equivalent subjects Search modes - Proximity	160,430
S73	TI practitioner# OR AB practitioner#	Expanders - Apply equivalent subjects Search modes - Proximity	104,382
S74	TI surgeon# OR AB surgeon#	Expanders - Apply equivalent subjects Search modes - Proximity	61,560
S75	(MH "Caregivers")	Expanders - Apply equivalent subjects Search modes - Proximity	45,988
S76	TI (caregiver# or care-giver# or carer or carers) OR AB (caregiver# or care-giver# or carer or carers)	Expanders - Apply equivalent subjects Search modes - Proximity	83,799
S77	(MH "Students, Medical") OR (MH "Students, Audiology") OR (MH "Students, Dietetics") OR (MH "Students, Occupational Therapy") OR (MH "Students, Physical Therapy") OR (MH "Students, Physician Assistant") OR (MH "Students, Respiratory Therapy") OR (MH "Students, Nursing") OR (MH "Students, Health Occupations") OR (MH "Students, Allied Health") OR (MH "Students, Midwifery") OR (MH "Students, Nurse Midwifery") OR (MH "Students, Nursing, Associate") OR (MH "Students, Post-RN") OR (MH "Students, Nursing, Diploma Programs") OR (MH "Students, Nursing, Graduate") OR (MH "Students, Nursing, Doctoral") OR (MH "Students, Nursing, Masters") OR (MH "Students, Nursing, Male") OR (MH "Students, Nursing, Practical") OR (MH	Expanders - Apply equivalent subjects Search modes - Proximity	75,150

	"Students, Pharmacy") OR (MH "Students, Podiatry")		
S78	TI ("health care student" or "health care students" or "health occupations student" or "health occupations students" or "healthcare student" or "healthcare students" or "med school student" or "med school students" or "med student" or "med students" or "medical school student" or "medical school students" or "medical student" or "medical students" or "nursing student" or "nursing students" or "pharmacy student" or "pharmacy students" or "physician assistant student" or "physician assistant students" or "premedical student" or "premedical students" or "public health student" or "public health students")	Expanders - Apply equivalent subjects Search modes - Proximity	26,763
S79	AB ("health care student" or "health care students" or "health occupations student" or "health occupations students" or "healthcare student" or "healthcare students" or "med school student" or "med school students" or "med student" or "med students" or "medical school student" or "medical school students" or "medical student" or "medical students" or "nursing student" or "nursing students" or "pharmacy student" or "pharmacy students" or "physician assistant student" or "physician assistant students" or "premedical student" or "premedical students" or "public health student" or "public health students")	Expanders - Apply equivalent subjects Search modes - Proximity	35,951
S80	TI ("audiology student" or "audiology students" or "dietetics student" or "dietetics students" or "occupational therapy student" or "occupational therapy students" or	Expanders - Apply equivalent subjects Search modes - Proximity	2,248

	<p>"paramedical student" or "paramedical students" or "physical therapy student" or "physical therapy students" or "respiratory therapy student" or "respiratory therapy students") OR AB ("audiology student" or "audiology students" or "dietetics student" or "dietetics students" or "occupational therapy student" or "occupational therapy students" or "paramedical student" or "paramedical students" or "physical therapy student" or "physical therapy students" or "respiratory therapy student" or "respiratory therapy students")</p>		
S81	<p>TI (doctor or doctors or clinician# or "health care professional" or "health care professionals" or "health care provider" or "health care providers" or "health personnel" or "healthcare professional" or "healthcare professionals" or "healthcare provider" or "healthcare providers" or "healthcare worker" or "healthcare workers" or "medical staff" or nurse or nurses or "nursing staff" or physician or physicians or surgeon#) OR AB (doctor or doctors or clinician# or "health care professional" or "health care professionals" or "health care provider" or "health care providers" or "health personnel" or "healthcare professional" or "healthcare professionals" or "healthcare provider" or "healthcare providers" or "healthcare worker" or "healthcare workers" or "medical staff" or nurse or nurses or "nursing staff" or physician or physicians or surgeon#)</p>	<p>Expanders - Apply equivalent subjects Search modes - Proximity</p>	808,818

S82	<p>TI ("health care labor force" or "health care labour force" or "health care work force" or "health care workforce" or "health labor force" or "health labour force" or "health manpower" or "health occupations manpower" or "health work force" or "health workforce" or "healthcare labor force" or "healthcare labour force" or "healthcare manpower" or "healthcare work force" or "healthcare workforce" or "medical manpower") OR AB ("health care labor force" or "health care labour force" or "health care work force" or "health care workforce" or "health labor force" or "health labour force" or "health manpower" or "health occupations manpower" or "health work force" or "health workforce" or "healthcare labor force" or "healthcare labour force" or "healthcare manpower" or "healthcare work force" or "healthcare workforce" or "medical manpower")</p>	<p>Expanders - Apply equivalent subjects Search modes - Proximity</p>	5,012
S83	<p>S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82</p>	<p>Expanders - Apply equivalent subjects Search modes - Proximity</p>	2,305,194
S84	<p>S35 AND S83</p>	<p>Expanders - Apply equivalent subjects Search modes - Proximity</p>	1,989

		Limiters - Publication Date: 20230301-20240731; English Language; Peer Reviewed Expanders - Apply equivalent subjects Search modes - Proximity	
S85	EM 20230321*-		238,758
S86	S84 AND S85	Expanders - Apply equivalent subjects Search modes - Proximity	165

### Scoping review search strategy

To inform this guideline, a scoping review was conducted to explore the current evidence on what types of non-pharmacological approaches are available for the management of pain.

In addition, panel members were asked to review personal libraries to identify key articles not found through the search strategy. Articles identified by panel members were included in the search results if two guideline development methodologists independently determined the articles had not been identified by the literature search and met the inclusion criteria.

**Databases Searched:** Medline, Embase

**Dates searched:** January 2017 – January 2023

**Inclusion Criteria:**

The following criteria were used to guide the scoping review:

- Articles that address types of non-pharmacological approaches to pain management
- Published between January 2017 and January 2023
- Published in English
- Accessible for retrieval
- Conducted in any geographic region
- Applicable to all health service organizations and academic institutions
- Applicable to all health providers and students
- Study design: randomized controlled trials, systematic reviews/meta-analyses, controlled trial studies, cohort studies, cross-sectional (prevalence studies), prospective/longitudinal/follow-up studies, qualitative studies

**Exclusion Criteria:**

The following criteria were used to exclude literature from the search:

- Studies not focused on types of non-pharmacological approaches to pain management
- Studies published prior to 2017
- Studies not published in English



- Study design: research in progress, conference proceeding/abstracts, dissertations/theses, books/book chapters

**MEDLINE(R)** 1946 to January 12, 2023

Search Strategy:

#	Searches	Results
1	exp Pain/dh, nu, pc, rt, rh, th [Diet Therapy, Nursing, Prevention & Control, Radiotherapy, Rehabilitation, Therapy]	89602
2	Pain Management/	40126
3	((manage* or managing or relief or relieve or relieves or reduce reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kf.	163582
4	exp pain/	449012
5	(ache or pain or pains or painful).tw,kf.	807920
6	4 or 5	963382
7	complementary therapies/ or exp acupuncture therapy/ or cupping therapy/ or dry needling/ or horticultural therapy/ or exp medicine, traditional/ or mind-body therapies/ or exp biofeedback, psychology/ or exp breathing exercises/ or exp hypnosis/ or imagery, psychotherapy/ or laughter therapy/ or meditation/ or mental healing/ or relaxation therapy/ or tai ji/ or therapeutic touch/ or yoga/ or exp musculoskeletal manipulations/ or naturopathy/	148652
8	exp Medicine, Traditional/	44992
9	biofeedback, psychology/	7694
10	mindfulness/	5839
11	smart glasses/	168
12	smartphone/ or cell phone/	18320
13	video games/	7020
14	virtual reality/	5053
15	(alternative medicine or alternative therapies or complementary medicine or complementary therapies).tw,kf.	22192
16	(acupuncture or shonishin or electroacupuncture or electrical acupoint stimulation).tw,kf.	29974

17	(acupressure or "chih ya" or shiatsu or shiatzu or "zhi ya" or acupressure or Shiatsu or "Tui Na").tw,kf.	1605
18	(aroma therapies or aroma therapy or aromatherapies or aromatherapy).tw,kf.	1605
19	("bio feed back?" or "bio feedback?" or biofeedback? or myobiofeedback or myofeedback? or "psychophysiologic feedback?").tw,kf.	8137
20	(bodywork or bodyworks or "craniosacral massage?" or "manipulation therapies" or "manipulation therapy" or "manual therapies" or "manual therapy" or reflexology or rolfing).tw,kf.	4267
21	("breathing exercises" or "breathing therapies" or "breathing therapy" or "ch'i kung" or "qi gong" or qigong or "respiration exercise?" or "respiration therapies" or "respiration therapy" or "respiratory exercise?" or "respiratory physiotherapies" or "respiratory physiotherapy").tw,kf.	3170
22	("cupping manipulation" or "cupping therapies" or "cupping therapy" or "cupping treatment" or "cupping treatment" or "cupping treatments" or "dry cupping" or "fire cupping" or "flash cupping" or "moving cupping" or "suction cupping" or "vacuum cupping" or "wet cupping").tw,kf.	416
23	diffuse noxious inhibitory control.tw,kf.	146
24	("directed reverie therapies" or "directed reverie therapy" or "guided affective imagery" or "guided imagery").tw,kf.	883
25	(distract* and (computer* or robot? or ipad? or visual* or print or auditory or audio or audiovisual or music or multimedia or "multi media" or active or passive or technique or techniques or technic or technics)).tw,kf.	15147
26	("dry needle technique?" or "dry needle therapies" or "dry needle therapy" or "dry needling?" or "intramuscular stimulation?").tw,kf.	945
27	(ecotherapies or ecotherapy or "nature therapies" or "nature therapy").tw,kf.	47
28	("bioenergy healing" or "energy healing" or "energy medicine" or "energy psychology" or "energy therapy" or "healing touch" or "laying-on-of-hands" or reiki or "therapeutic touch" or "thought field therapy" or "vibrational medicine").tw,kf.	1288
29	("ethnomedicinal practice" or "ethnomedicinal use" or "ethnomedicine" or "folk medicine" or "folk remedies" or "folk remedy" or "home remedies" or "home remedy" or "indigenous medicine" or "native healing" or "native medicine" or "traditional healing" or "traditional indigenous medicine" or "traditional medicine" or "traditional remedies" or "traditional remedy").tw,kf.	24273

30	("forest bathing" or "shinrin yoku" or "shinrin'yoku").tw,kf.	105
31	("garden therapy" or "garden* therapy" or "gardening therapy" or "horticultural therapy" or "horticultural therapy" or "therapeutic horticulture").tw,kf.	152
32	(homeopathia or homeotherapy or homoeopathy or homeopathic).tw,kf.	3335
33	(hypnoanalysis or hypnogenesis or hypnosis or hypnotherapies or hypnotherapy or hypnotism or mesmerism).tw,kf.	9745
34	("humor intervention?" or "humor therapies" or "humor therapy" or "humour intervention?" or "humour therapies" or "humour therapy" or "laughter intervention?" or "laughter meditation?" or "laughter therapies" or "laughter therapy").tw,kf.	137
35	(massage or massages or massotherapy or "masso-therapy" or "zone therapies" or "zone therapy").tw,kf.	12190
36	("ching lo" or "jing luo" or "jing mai" or jingluo or jingmai or meridian or meridians).tw,kf.	6013
37	("mind body medicine" or "mind body therapies" or "mind-body medicine" or "mind-body therapies" or "mind-body therapy").tw,kf.	795
38	mindfulness.tw,kf.	11956
39	("relaxation method" or "relaxation methods" or "relaxation technic" or "relaxation technics" or "relaxation technique" or "relaxation techniques" or "relaxation therapies" or "relaxation therapy").tw,kf.	2959
40	(naturopathy or "naturopathic medicine").tw,kf.	844
41	("smart glasses" or "ar glasses" or "ar head-mounted device?" or "ar head-mounted display?" or "ar headset?" or "augmented reality glasses" or "augmented reality head mounted device?" or "augmented reality head mounted display?" or "google glass" or "google glasses" or "head mounted display" or "head mounted displays").tw,kf.	1815
42	("smart phone" or "smart phones" or "smartphone" or "smartphones" or "cell phone" or "cell phones" or "cellphone" or "cellphones" or "cellular phone" or "cellular phones" or "cellular telephone" or "cellular telephones" or "mobile device" or "mobile devices" or "mobile phone" or "mobile phones" or "mobile telephone" or "mobile telephones").tw,kf	44686
43	((therapy or therapeutic or therapies) adj1 (art or color or colour or dance or music or play)).tw,kf.	20935
44	("tai chi" or "t'ai chi" or "tai ji" or taiji or taijiquan).tw,kf.	2451

45	(videogame or videogames or "computer game" or "computer games" or "video game" or "video games").tw,kf.	6675
46	(virtual reality or virtual realities or VR).tw,kf.	21353
47	yoga.tw,kf.	6358
48	physical therapy modalities/ or animal assisted therapy/ or exp exercise movement techniques/ or exp exercise therapy/ or hydrotherapy/ or aquatic therapy/	110119
49	exp Balneology/	12772
50	cryotherapy/	5666
51	hyperthermia, induced/	18998
52	("physical therapies" or "physical therapy" or "physical treatment" or "physio therapy" or "physiotherapies" or "physiotherapy").tw,kf.	49988
53	("exercise therapies" or "exercise therapy" or "exercise treatment?" or "kinesiotherapeutic" or kinesiotherapy or kinesiotherapies or "rehabilitation exercise?" or "remedial exercise?" or "therapeutic exercise?").tw,kf.	10244
54	("active stretching" or "ballistic stretching" or "dynamic stretching" or "isometric stretching" or "muscle stretching exercise?" or "passive stretching" or "pnf stretching" or "pnf stretchings" or "static active stretching" or "static passive stretching" or "static stretching").tw,kf.	1621
55	(hydrotherapies or hydrotherapy or "water immersion therapy" or "whirlpool bath" or "whirlpool baths").tw,kf.	1553
56	("aquatic exercise therapy" or "aquatic therapy" or "pool exercise therapy" or "pool therapy" or "water exercise therapy" or "water tai chi therapy").tw,kf.	243
57	(balneology or balneotherapy).tw,kf.	2934
58	("cold bath" or "cold bathes" or "cold baths" or "cold therapies" or "cold therapy" or "cryogenic therapies" or "cryogenic therapy" or cryotherapies or cryotherapy or cryothermy or cryotreatment or "heat pack" or "heat packs" or "heat therapy" or "ice pack" or "ice packs" or "induced hyperthermia" or "infra red therapies" or "infrared therapies" or "infra red therapy" or "infrared therapy" or "therapeutic hyperthermia" or "thermal packs" or thermotherapies or thermotherapy).tw,kf.	14177
59	(noninvasive or non-invasive or nonpharmacologic* or non-pharmacologic*).tw,kf.	238727
60	drug free intervention*.tw,kf.	12

61	("non pharmacologic intervention*" or "non pharmacologic therap*" or "non pharmacologic treatment*" or "nonpharmacologic intervention*" or "nonpharmacologic therap*" or "nonpharmacologic treatment*").tw,kf.	3379
62	("nonpharmacologic pain treatment*" or "non pharmacologic pain treatment*").tw,kf.	18
63	("nonpharmacologic evidence based pain treatment*" or "non pharmacologic evidence based pain treatment*").tw,kf.	1
64	("cognitive behavioral therapy" or "cognitive behavioral therapies").tw,kf.	13054
65	Therapy Animals/	23
66	("animal assisted therapies" or "animal assisted therapy" or "animal facilitated therapies" or "animal facilitated therapy" or "pet therapies" or "pet therapy" or "pet assisted therapies" or "pet assisted therapy" or "therapy animal" or "therapy animals").tw,kf.	785
67	or/7-66 [non-pharmacological interventions]	736618
68	(2 or 3) and 67 [pain management AND non-pharmacological interventions]	28125
69	1 or 68	108151
70	6 and 67 [pain AND non-pharmacological interventions]	74868
71	69 or 70	144274
72	limit 71 to english language	126178
73	limit 72 to yr="2017 -Current"	41617
74	exp "Attitude of Health Personnel"/	168787
75	exp Health Personnel/	599741
76	exp Personnel, Hospital/	94900
77	exp Health Occupations/	1835122
78	exp Patient Care Team/	72508
79	Social Work/	16193
80	Social Workers/	1045
81	Nurse's Role/	42656
82	Licensed Practical Nurses/	97
83	exp Nurses/	96942
84	exp Nursing Staff/	69502
85	Nursing Staff, Hospital/	47708
86	exp Nursing/	262367

87	Nursing, Practical/	3444
88	Health Educators/	489
89	exp Administrative Personnel/	42130
90	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	313337
91	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kf.	21072
92	nurs*.tw,kf.	522063
93	(patient care? adj2 team?).tw,kf.	1014
94	(health* adj2 educator?).tw,kf.	3769
95	(social adj2 worker?).tw,kf.	12483
96	(support* adj2 (worker? or staff?)).tw,kf.	8018
97	practitioner?.tw,kf.	175290
98	Caregivers/	48301
99	(caregiver? or care-giver? or carer or carers).tw,kf.	104889
100	students, health occupations/ or students, medical/ or students, nursing/ or students, pharmacy/ or students, premedical/ or students, public health/	78271
101	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kf.	75453
102	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kf.	1307
103	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kf.	1423906

104	Health Workforce/	14328
105	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kf.	7745
106	or/74-105 [Students or Health Providers terms]	3665778
107	73 and 106 [pain AND non-pharmacological interventions AND healthcare providers]	9637
108	review/	3101546
109	(medline or medlars or pubmed or grateful med or CINAHL or scisearch or psychinfo or psycinfo or psychlit or psyclit or handsearch* or hand search* or manual* search* or electronic database* or bibliographic database* or embase or lilacs or scopus or web of science).mp.	365141
110	108 and 109	193246
111	meta-analysis.tw,kf.	223964
112	meta-analysis as topic/	22056
113	meta-analysis/	173879
114	systematic review*.tw.	270642
115	cochrane database*.jn.	16096
116	or/110-115	498497
117	107 and 116 [Reviews]	1356
118	Are Nonpharmacologic Pain Interventions Effective at Reducing Pain in Adult Patients Visiting the Emergency Department?.m_titl.	1
119	Use of animal-assisted interventions in relieving pain in healthcare settings.m_titl.	1
120	118 or 119 [Sample Cites]	2
121	117 and 120 [test if sample cites found]	1
122	107 and 120 [test if sample cites in bigger set]	1
123	73 and 116 [pain AND non-pharmacological interventions AND reviews]	5636
124	123 and 120 [samples cites in pain AND non-pharmacological interventions set]	2
125	123 not 117 [SRs missed with healthcare provider terms]	4280
126	from 125 keep 2, 8, 13, 15, 20, 33...	524

## Embase Classic+Embase 1947 to January 12, 2023

### Search Strategy:

#	Searches	Results
1	exp pain/dm, pc, rt, rh, th [Disease Management, Prevention, Radiotherapy, Rehabilitation, Therapy]	110724
2	((manage* or managing or relief or relieve or relieves or reduce reduces or reduced or reducing or treats or treating or treatment or treatments) adj5 (pain or pains or painful)).tw,kw.	241277
3	exp pain/	1648072
4	(ache or pain or pains or painful).tw,kw.	1233324
5	3 or 4	2029468
6	alternative medicine/ or aromatherapy/ or breathwork/ or cupping therapy/ or dry needling/ or exp energy medicine/ or forest bathing/ or homeopathy/ or horticultural therapy/ or exp laughter therapy/ or moxibustion/ or exp naturopathy/	65052
7	acupuncture/ or exp acupressure/ or electroacupuncture/	54559
8	body meridian/	913
9	exp traditional medicine/	128818
10	exp yoga/	10691
11	biofeedback/	3344
12	breathing exercise/	10533
13	hypnosis/	17741
14	guided imagery/	1636
15	mindfulness/ or mindfulness meditation/	14102
16	mindfulness-based stress reduction/	600
17	relaxation training/	11913
18	Tai Chi/	3824
19	bodywork/ or rolfing/	162
20	massage/	18828
21	art therapy/	4769
22	augmented reality system/ or smart glasses/	466
23	smartphone/ or mobile phone/	43695
24	video game/	5554



25	virtual reality/	24334
26	(alternative medicine or alternative therapies or complementary medicine or complementary therapies).tw,kw.	30746
27	(acupuncture or shonishin or electroacupuncture or electrical acupoint stimulation).tw,kw.	42154
28	(acupressure or "chih ya" or shiatsu or shiatzu or "zhi ya" or acupressure or Shiatsu or "Tui Na").tw,kw.	2189
29	(aroma therapies or aroma therapy or aromatherapies or aromatherapy).tw,kw.	2449
30	("bio feed back?" or "bio feedback?" or biofeedback? or myobiofeedback or myofeedback? or "psychophysiologic feedback?").tw,kw.	12075
31	(bodywork or bodyworks or "craniosacral massage?" or "manipulation therapies" or "manipulation therapy" or "manual therapies" or "manual therapy" or reflexology or rolfing).tw,kw.	5897
32	("breathing exercises" or "breathing therapies" or "breathing therapy" or "ch'i kung" or "qi gong" or qigong or "respiration exercise?" or "respiration therapies" or "respiration therapy" or "respiratory exercise?" or "respiratory physiotherapies" or "respiratory physiotherapy").tw,kw.	5436
33	("cupping manipulation" or "cupping therapies" or "cupping therapy" or "cupping treatment" or "cupping treatment" or "cupping treatments" or "dry cupping" or "fire cupping" or "flash cupping" or "moving cupping" or "suction cupping" or "vacuum cupping" or "wet cupping").tw,kw.	565
34	diffuse noxious inhibitory control.tw,kw.	230
35	("directed reverie therapies" or "directed reverie therapy" or "guided affective imagery" or "guided imagery").tw,kw.	1303
36	(distract* and (computer* or robot? or ipad? or visual* or print or auditory or audio or audiovisual or music or multimedia or "multi media" or active or passive or technique or techniques or technic or technics)).tw,kw.	18422
37	("dry needle technique?" or "dry needle therapies" or "dry needle therapy" or "dry needling?" or "intramuscular stimulation?").tw,kw.	1169
38	(ecotherapies or ecotherapy or "nature therapies" or "nature therapy").tw,kw.	63
39	("bioenergy healing" or "energy healing" or "energy medicine" or "energy psychology" or "energy therapy" or "healing touch" or "laying-on-of-hands" or reiki or "therapeutic touch" or "thought field therapy" or "vibrational medicine").tw,kw.	1698

40	("ethnomedicinal practice" or "ethnomedicinal use" or "ethnomedicine" or "folk medicine" or "folk remedies" or "folk remedy" or "home remedies" or "home remedy" or "indigenous medicine" or "native healing" or "native medicine" or "traditional healing" or "traditional indigenous medicine" or "traditional medicine" or "traditional remedies" or "traditional remedy").tw,kw.	36558
41	("forest bathing" or "shinrin yoku" or "shinrin'yoku").tw,kw.	114
42	("garden therapy" or "garden* therapy" or "gardening therapy" or "horticultural therapy" or "horticultural therapy" or "therapeutic horticulture").tw,kw.	207
43	(homeopathia or homeotherapy or homoeopathy or homeopathic).tw,kw.	5035
44	(hypnoanalysis or hypnogenesis or hypnosis or hypnotherapies or hypnotherapy or hypnotism or mesmerism).tw,kw.	12456
45	("humor intervention?" or "humor therapies" or "humor therapy" or "humour intervention?" or "humour therapies" or "humour therapy" or "laughter intervention?" or "laughter meditation?" or "laughter therapies" or "laughter therapy").tw,kw.	196
46	(massage or massages or massotherapy or "masso-therapy" or "zone therapies" or "zone therapy").tw,kw.	18677
47	("ching lo" or "jing luo" or "jing mai" or jingluo or jingmai or meridians).tw,kw.	2968
48	("mind body medicine" or "mind body therapies" or "mind-body medicine" or "mind-body therapies" or "mind-body therapy").tw,kw.	1193
49	mindfulness.tw,kw.	15155
50	("relaxation method" or "relaxation methods" or "relaxation technic" or "relaxation technics" or "relaxation technique" or "relaxation techniques" or "relaxation therapies" or "relaxation therapy").tw,kw.	4340
51	(naturopathy or "naturopathic medicine").tw,kw.	1082
52	("smart glasses" or "ar glasses" or "ar head-mounted device?" or "ar head-mounted display?" or "ar headset?" or "augmented reality glasses" or "augmented reality head mounted device?" or "augmented reality head mounted display?" or "google glass" or "google glasses" or "head mounted display" or "head mounted displays").tw,kw.	2091
53	("smart phone" or "smart phones" or "smartphone" or "smartphones" or "cell phone" or "cell phones" or "cellphone" or "cellphones" or "cellular phone" or "cellular phones" or "cellular telephone" or "cellular telephones" or "mobile device" or "mobile devices" or "mobile phone" or "mobile phones" or "mobile telephone" or "mobile telephones").tw,kw.	51476

54	((therapy or therapeutic or therapies) adj1 (art or color or colour or dance or music or play)).tw,kw.	29514
55	("tai chi" or "t'ai chi" or "tai ji" or taiji or taijiquan).tw,kw.	3456
56	(videogame or videogames or "computer game" or "computer games" or "video game" or "video games").tw,kw.	8245
57	(virtual reality or virtual realities or VR).tw,kw.	29146
58	yoga.tw,kw.	9273
59	physiotherapy/	110900
60	kinesiotherapy/	40398
61	stretching exercise/	4482
62	hydrotherapy/ or aquatic therapy/	5094
63	cryotherapy/ or thermotherapy/	25738
64	("physical therapies" or "physical therapy" or "physical treatment" or "physio therapy" or "physiotherapies" or "physiotherapy").tw,kw.	81868
65	("exercise therapies" or "exercise therapy" or "exercise treatment?" or "kinesiotherapeutic" or kinesiotherapy or kinesiotherapies or "rehabilitation exercise?" or "remedial exercise?" or "therapeutic exercise?").tw,kw.	14192
66	("active stretching" or "ballistic stretching" or "dynamic stretching" or "isometric stretching" or "muscle stretching exercise?" or "passive stretching" or "pnf stretching" or "pnf stretchings" or "static active stretching" or "static passive stretching" or "static stretching").tw,kw.	1980
67	(hydrotherapies or hydrotherapy or "water immersion therapy" or "whirlpool bath" or "whirlpool baths").tw,kw.	2268
68	("aquatic exercise therapy" or "aquatic therapy" or "pool exercise therapy" or "pool therapy" or "water exercise therapy" or "water tai chi therapy").tw,kw.	419
69	(balneology or balneotherapy).tw,kw.	2576
70	("cold bath" or "cold bathes" or "cold baths" or "cold therapies" or "cold therapy" or "cryogenic therapies" or "cryogenic therapy" or cryotherapies or cryotherapy or cryothermy or cryotreatment or "heat pack" or "heat packs" or "heat therapy" or "ice pack" or "ice packs" or "induced hyperthermia" or "infra red therapies" or "infrared therapies" or "infra red therapy" or "infrared therapy" or "therapeutic hyperthermia" or "thermal packs" or thermotherapies or thermotherapy).tw,kw.	20277
71	(noninvasive or non-invasive or nonpharmacologic* or non-pharmacologic*).tw,kw.	347389

72	drug free intervention*.tw,kw.	15
73	("non pharmacologic intervention*" or "non pharmacologic therap*" or "non pharmacologic treatment*" or "nonpharmacologic intervention*" or "nonpharmacologic therap*" or "nonpharmacologic treatment*").tw,kw.	4619
74	("nonpharmacologic pain treatment*" or "non pharmacologic pain treatment*").tw,kw.	25
75	("nonpharmacologic evidence based pain treatment*" or "non pharmacologic evidence based pain treatment*").tw,kw.	1
76	("cognitive behavioral therapy" or "cognitive behavioral therapies").tw,kw.	17747
77	animal assisted therapy/ or pet therapy/	986
78	("animal assisted therapies" or "animal assisted therapy" or "animal facilitated therapies" or "animal facilitated therapy" or "pet therapies" or "pet therapy" or "pet assisted therapies" or "pet assisted therapy" or "therapy animal" or "therapy animals").tw,kw.	1084
79	or/6-78 [non-pharmacological approaches]	1056673
80	2 and 79 [pain management AND non-pharmacological approaches]	38425
81	1 or 80	135282
82	5 and 79 [pain AND non-pharmacological approaches]	149656
83	81 or 82	223839
84	limit 83 to english language	197740
85	limit 84 to yr="2017 -Current"	70962
86	limit 85 to (books or chapter or conference abstract or conference paper or "conference review" or editorial)	13643
87	85 not 86	57319
88	exp health personnel attitude/	204561
89	exp health care personnel/	1958168
90	exp hospital personnel/	149004
91	exp multidisciplinary team/	23983
92	social work/	30177
93	social worker/	16324
94	licensed practical nurse/	376
95	exp nurse/	217231
96	nursing staff/	77585

97	exp nursing/	415800
98	practical nursing/	167
99	exp health educator/	3416
100	exp administrative personnel/	34875
101	nurse attitude/	43328
102	(health* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	400755
103	(hospital* adj2 (provider? or staff? or personnel? or employe* or profession* or occupation? or practitioner? or worker?)).tw,kw.	29060
104	nurs*.tw,kw.	627406
105	(patient care? adj2 team?).tw,kw.	862
106	(health* adj2 educator?).tw,kw.	4348
107	(social adj2 worker?).tw,kw.	21192
108	(support* adj2 (worker? or staff?)).tw,kw.	11374
109	practitioner?.tw,kw.	226398
110	caregiver/	106356
111	(caregiver? or care-giver? or carer or carers).tw,kw.	147658
112	health student/	1828
113	medical student/ or physician assistant student/	88467
114	premedical student/	148
115	public health student/	127
116	paramedical student/ or audiology student/ or dietetics student/ or occupational therapy student/ or pharmacy student/ or physical therapy student/ or respiratory therapy student/	10587
117	nursing student/ or baccalaureate nursing student/ or graduate nursing student/ or male nursing student/	32220
118	(health care student or health care students or health occupations student or health occupations students or healthcare student or healthcare students or med school student or med school students or med student or med students or medical school student or medical school students or medical student or medical students or nursing student or	98136

	nursing students or pharmacy student or pharmacy students or physician assistant student or physician assistant students or premedical student or premedical students or public health student or public health students).tw,kw.	
119	(audiology student or audiology students or dietetics student or dietetics students or occupational therapy student or occupational therapy students or paramedical student or paramedical students or physical therapy student or physical therapy students or respiratory therapy student or respiratory therapy students).tw,kw.	1777
120	(doctor or doctors or clinician? or health care professional or health care professionals or health care provider or health care providers or health personnel or healthcare professional or healthcare professionals or healthcare provider or healthcare providers or healthcare worker or healthcare workers or medical staff or nurse or nurses or nursing staff or physician or physicians or surgeon?).tw,kw.	2004913
121	health workforce/	3188
122	(health care labor force or health care labour force or health care work force or health care workforce or health labor force or health labour force or health manpower or health occupations manpower or health work force or health workforce or healthcare labor force or healthcare labour force or healthcare manpower or healthcare work force or healthcare workforce or medical manpower).tw,kw.	8625
123	or/88-122	3780495
124	87 and 123	12025
125	review/	2874012
126	(medline or medlars or pubmed or grateful med or CINAHL or scisearch or psycinfo or psycinfo or psychlit or psychlit or handsearch* or hand search* or manual* search* or electronic database* or bibliographic database* or embase or lilacs or scopus or web of science).mp.	459979
127	125 and 126	185447
128	meta-analysis.tw,kw.	286566
129	meta analysis (topic)/	51625
130	meta analysis/	268249
131	systematic review*.tw,kw.	332562
132	cochrane database*.jn.	22841
133	or/127-132	638933
134	124 and 133 [Reviews]	1289

135	Are Nonpharmacologic Pain Interventions Effective at Reducing Pain in Adult Patients Visiting the Emergency Department?.m_titl.	1
136	Use of animal-assisted interventions in relieving pain in healthcare settings.m_titl.	1
137	135 or 136 [Sample Cites]	2
138	137 and 134 [test if sample cites found]	1
139	137 and 87 [test if sample cites in bigger set]	2
140	87 and 133 [pain AND non-pharmacological interventions AND reviews]	6934
141	137 and 140 [samples cites in pain AND non-pharmacological interventions set]	2
142	140 not 134 [SRs missed with healthcare provider terms]	5645
143	from 142 keep 11, 40, 47, 53, 55, 82...	532