

Annex 6. Grade profiles

Recommendation 1

Author(s): Elie Akl
Date: 2013-09-23
Question: Should continuous development programmes for faculty and teaching staff relevant to the evolving health-care needs of their communities be used in health professionals' education and training institutions?
Settings: Undergraduate and postgraduate programs
Bibliography: See evidence table

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: reported behavior, confidence in skills, surgical skills)									
4 ¹	randomized trials	no serious risk of bias ²	no serious inconsistency	serious ³	no serious imprecision	none	Residents assigned to the intervention group reported statistically significant changes in all behaviors ($p < 0.05$). The intervention group faculty were more stringent than controls in their evaluations	○ MODERATE ● ●	CRITICAL
Relevance - not measured									
0	-	-	-	-	-	-	-	-	CRITICAL

1 Results of observational studies generally support the results of RCTs
 2 No major risk of bias described
 3 Studies from high income countries. Surrogate outcomes

* The results across studies were not meta-analyzed given the variability in the outcome measures used, and the way they were analyzed and reported.

Recommendation 2

Author(s): Elie Akl

Date: 2013-09-23

Question: Should governments, funders and accrediting bodies support continuous development programmes for faculty and teaching staff relevant to the evolving health-care needs of their communities, \in health professionals' education and training institutions?

Settings: Undergraduate and postgraduate programs

Bibliography: See evidence table

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: reported behavior, confidence in skills, surgical skills)									
4 ¹	randomized trials	no serious risk of bias ²	no serious inconsistency	very serious ³	no serious imprecision ⁴	none	Residents assigned to the intervention group reported statistically significant changes in all behaviors ($p < 0.05$). intervention group faculty were more stringent than controls in their evaluations	LOW <input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/>	CRITICAL
Relevance - not measured									
0	-	-	-	-	-	-	-	-	CRITICAL

1 Results of observational studies generally support the results of RCTs

2 No major risk of bias described

3 Studies from high-income countries. Surrogate outcomes. Moreover, the question relates to support by governments, funders, and accrediting bodies, which makes the evidence more indirect compared with the previous question

4 No pooled effect estimate and CI to assess precision

* The results across studies were not meta-analyzed given the variability in the outcome measures used, and the way they were analyzed and reported.

Recommendation 3

Author(s): Elie Akl
Date: 2013-09-23
Question: Should innovative expansion of faculty, through the recruitment of community-based clinicians and health workers as educators be used in the education of health professionals?
Settings: Health professionals' education and training institutions
Bibliography: Refer to decision tables

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: perceived quality)									
3	randomized trials	no serious risk of bias	serious ¹	serious ²	no serious imprecision ³	none	Results suggest that quality of care provided by untrained professionals is inferior or equal to that provided by trained professionals	 LOW	CRITICAL
Relevance - not measured									
0	-	-	-	-	-	none	-	-	CRITICAL
Quantity - not measured									
0	-	-	-	-	-	none	-	-	

1 No statistical assessment of heterogeneity available, but appeared to vary across 3 studies
 2 Studies conducted in high income countries. Outcomes are surrogate
 3 No pooled effect estimate to evaluate

* No pooled effect estimates available

Recommendation 5

Author(s): Elie Akl

Date: 2013-09-12

Question: Should simulation methods of varying levels of fidelity be used in the education of health professionals?¹

Settings: Health professionals' education and training institutions

Bibliography: Cook, D. A., R. Hatala, et al. (2011). "Technology-Enhanced Simulation for Health Professions Education: A Systematic Review and Meta-analysis." *JAMA: Journal of the American Medical Association* 306(9): 978-988

Quality assessment							Number of patients		Effect		Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Simulation methods of varying levels of fidelity	Control	Relative (95% CI)	Absolute		
Quality (measured with: Effects on patient care ² ; Better indicated by higher values)												
14 ³	randomized trials	no serious risk of bias ⁴	no serious inconsistency ⁵	serious ⁶	no serious imprecision ⁷	none ⁸	271	270 ⁹	.	SMD 0.37 higher (0.20 to 0.54 higher)	 MODERATE	CRITICAL
Relevance - not measured												
0	.	.	.	.	.	none	.	.	.	.	.	IMPORTANT

1 Systematic review included studies in medical students, physician trainees, physicians in practice, nurses, nursing students and other health professionals
 2 Meta-analyses for related outcomes (knowledge, skills, and behaviors) showed large effects consistent with results for patient-related outcomes
 3 Out of 38 included studies, 12 were randomized. Results of these 2 groups of studies were consistent, although effect size was lower for RCTs compared with non RCTs (0.37 vs. 0.50)

Recommendation 6

Author(s): Elie Akl
Date: 2013-09-19
Question: Should direct entry of graduates from relevant undergraduate, postgraduate, or other educational programmes into different or higher levels of professional studies be used in the education of health professionals?^{1,2}
Settings: Health professionals' education and training institutions
Bibliography: Please refer to list of studies in Evidence table

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality									
40	observational studies	no serious risk of bias ³	no serious inconsistency ⁴	serious ²	no serious imprecision ⁵	none	Qualitatively, the effects of direct entry on quality were either equivalent and sometimes better than those of the control	 MODERATE	CRITICAL
Quantity									
7	observational studies	no serious risk of bias ³	no serious inconsistency ⁴	serious ²	no serious imprecision ⁶	none	Qualitatively, the effects of direct entry on quantity were either equivalent and sometimes better than those of the control	 LOW	CRITICAL

1 Studies assessed: graduate entry programs, accelerated programs, direct entry programs

2 Most studies come from high income countries

3 No detailed assessment of risk of bias for included studies was reported. We did not downgrade for risk of bias, but considered the potential risk of bias when downgrading for indirectness

4 Although no statistical assessment of heterogeneity is provided, the results were consistent in that the direct entry were at least equivalent (sometimes better) than control for this outcome

5 Although no meta-analysis is conducted, given the large number of included studies, and the apparent consistency of the results, the results were judged not to be imprecise

6 Although no meta-analysis is conducted, and although the number of studies was not that high, we did not downgrade for imprecision given the apparent consistency of the results and given we already downgraded for indirectness

* The results across studies were not meta-analyzed given the variability in the outcome measures used, and the way they were analyzed and reported.

Recommendation 7

Author(s): Elie Akl
Date: 013-09-19
Question: Should targeted admission policies seeking to increase the ethnic and geographical diversity of students be used in the education of health professionals?¹
Settings: Health professionals' education and training institutions
Bibliography: Laven 2003, De Vries 2003, Rabinowitz 2005, Woloshuk 2004

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: measured as % of health workers with a rural background currently practicing in rural area)									
15 ²	observational studies	no serious risk of bias	no serious inconsistency	serious ³	no serious imprecision	strong association ⁴	<p>Laven: Rural background was associated with rural practice in 10 of 12 studies. The strength of association ranged from an odds ratio of 1.68–3.9, but in most cases was around 2–2.5.</p> <p>de Vries: It was found that 38.4% of the rural-origin graduates are currently practicing in rural areas, compared with 12.4% of urban-origin graduates practicing in rural areas (OR=3.09).</p> <p>Rabinowitz: Showing long-term retention rates and persistent effect, after 11-16 years, 68% of the physician shortage area programme graduates were still practicing family medicine in the same rural area, compared with 46% of their non-PSAP peers.</p> <p>Woloshuk: 32% of the 22 rural background students were practicing in a rural community, as were 13% of the 56 urban background students (RR=2.55;CI=1.01-6.42).</p>	LOW ●○○	CRITICAL
Quality									
0	no evidence available	.	.	.	.	none	.	.	IMPORTANT
Relevance									

Recommendation 8

Author(s): Elie Akl
Date: 2013-09-19
Question: Should streamlined educational pathways, or ladder programmes, for the advancement of practicing health professionals be used in the education of health professionals?
Settings: Health professionals' education and training institutions
Bibliography: Please refer to list of studies in Evidence table

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: number of graduates/completion rate, turnover rate, physician to population ratio)									
6 ¹	observational studies	serious ²	no serious inconsistency ³	no serious indirectness	no serious imprecision ⁴	none ⁵	<p>Drenkard 2005: 5.2% turnover rate for the 268 clinical ladder promoted RNs with only 14 resigning compared to a general Inova wide turnover rate of 14.1%.</p> <p>Goldberger S. 2005: Participants under the employer-sponsored workplace advancement programme had a higher-than-average PN completion rate (82% for New Courtland's nursing aides and 83% for Golden Slippers).</p> <p>Goldberger S. 2005: Reduced staff turnover and vacancy rates; outstanding retention and completion rate for CNA-to-LPN programs</p> <p>Estrada 2011: physician-population ratio improved from 1:21 000 to 1:3222</p> <p>Goodrich 2004: Number of RNs at Level IV has doubled but still lower than the desired quantity by the committee</p> <p>Ward 2007: Number of nurses advancing to Level III has increased over the years. Number of nurses advancing to Level IV has increased over the years. Percentage of nurses at each level has remained relatively constant</p>	 VERY LOW	CRITICAL
Quality (assessed with: involvement in activities)									
1 ¹	observational studies	serious ²	no serious inconsistency ⁶	no serious indirectness	no serious imprecision ³	none ⁵	<p>Nelson 2009: Career ladder RNs were more involved in leadership ($p < 0.001$), quality improvement ($p = 0.02$), preceptorship ($p = 0.001$).</p>	 VERY LOW	CRITICAL
Relevance									
1	observational studies	serious ²	no serious inconsistency ⁶	no serious indirectness	no serious imprecision ³	none ⁵	<p>Dodgson 1998: The programme effectively increased diversity within the nursing workforce and improved care for an increasingly diverse population</p>	 VERY LOW	CRITICAL

- 1 Most studies included in the evidence table did not provide comparative results and were not considered in this evidence profile
- 2 Concerns about selection bias in a number of studies
- 3 Hard to assess in the absence of meta-analysis, but reported results tended to show benefit
- 4 Difficult to assess in the absence of pooled effect estimate
- 5 Undetected but possible
- 6 Only one study considered for this outcome

* Results across studies not meta-analyzed

Recommendation 9

Author(s): Elie Akl
Date: 2013-09-19
Question: Should inter-professional education be used in the education of health professionals?
Settings: Health professionals' education and training institutions
Bibliography: Reeves et al. Inter-professional education: effects on professional practice and healthcare outcomes. Cochrane database of systematic reviews 2013.

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: patient outcomes (functional improvement, community discharge, length of stay))									
6	randomized trials ¹	no serious risk of bias ²	Serious indirectness ³	serious indirectness ⁴	no serious imprecision ⁵	none	"The care provided by use of 6 inter-professional education may lead to improved outcomes for patients" ⁶	LOW	CRITICAL

- 1 2 additional studies (interrupted time series analyses) also assessed this outcome
- 2 Cochrane risk of bias summary did not suggest significant risk of bias. The systematic review authors note that 3 RCTs were unclear or had evidence of selective outcome reporting
- 3 Systematic reviewers narratively reported that some studies showed benefits while others showed no effect
- 4 Studies conducted in HIC, "primarily USA and the UK"
- 5 Hard to assess in the absence of a meta-analysis
- 6 In addition, three studies provided low quality evidence that use of inter-professional education may lead to changes in the use of guidelines or standards

* Systematic review authors did not report a pooled effect estimate

Recommendation 10

Author(s): Elie Akl

Date: 2013-09-23

Question: Should accreditation by national governments be used in the education of health professionals?

Settings: Health professionals' education and training institutions

Bibliography: Please refer to list of studies in evidence profile; Greenfield. IJQHC. 2008;3;172-183

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality									
3	observational studies	no serious risk of bias ¹	no serious inconsistency	no serious indirectness	no serious imprecision ²	none	“accreditation affiliation of a health education program has been shown to have a positive influence on individuals seeking professional organization membership	LOW 	CRITICAL
Quantity - not reported									
0	-	-	-	-	-	none	-	-	CRITICAL

1 No such risk described

2 Although no statistical assessment available

Recommendation 11

Author(s): Elie Akl
Date: 2013-09-23
Question: Should continuous professional development be used in health professionals?
Settings: Health professionals' education and training institutions
Bibliography: Refer to list of studies in Evidence table

Quality assessment							Results (narrative summary)*	Quality	Importance
Number of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations			
Quality (assessed with: clinical practices such as application of screening tests)									
1	randomized trials ¹	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ²	none	Observed and self reported practices improved (main results from RCT and overall consistent results from 12 non randomized studies)	○ ● ● ● MODERATE	CRITICAL
Relevance - not measured									
0	-	-	-	-	-	none	-	-	CRITICAL

1 12 studies with non randomized design identified; results generally consistent with those of the RCT

2 Only one study identified

* Results not meta-analyzed