

## BEME Review Protocol

### 1. Cover sheet

- Review title: Failure to Fail Underperforming Trainees in Health Professions: A BEME Systematic Review of the Barriers Inhibiting Educators
- unique BEME identification number:
- Names, contact details and affiliations of group members, with lead reviewer highlighted:
  - **Monica Yepes-Rios, MD, FACP** (Lead reviewer) (1)  
Assistant Professor, Department of Medicine
  - Lara Varpio, PhD  
Associate Professor, Department of Medicine (1)
  - Rita Duboyce, MD (1)  
Senior Educator  
Assistant Professor, Department of Medicine
  - Jerri Curtis, MD (1)  
Associate Dean for Graduate Medical Education
  - Nancy Dudek, MD, MEd (2)  
Associate professor, Department of Medicine, University of Ottawa
  - Rhonda Allard (1)  
Reference/Instruction Librarian

(1): Uniformed Services University of the Health Sciences  
4301 Jones Bridge Rd  
Bethesda, MD 20914

(2): University of Ottawa & The Ottawa Hospital Rehabilitation Centre  
505 Smyth Road  
Ottawa, ON, CAN  
K1H 8M2
- Sources of support –Society of Directors of Research in Medical Education (SDRME) grant, received 10/31/2014.

## **2. Background to the topic–**

We know that many clinical educators feel unable, unprepared, and/or unwilling to report unsatisfactory performance of medical students and trainees. The Association of American Medical Colleges (AAMC) surveyed clinical faculty at ten schools and “unwillingness to record negative evaluations” was rated as a problem by 74.5% (1, 2). In 2005, one member of our team (Dr. N.Dudek) explored the factors identified by supervisors that affect their unwillingness to report poor clinical performance when completing In-Training Evaluation Reports(3). Since that 2005 publication, scattered reports from the medical (4), nursing(5) and dental(6) literature have raised similar concerns. To date, there have not been any comprehensive literature reviews to consolidate the knowledge on this topic that can support advancing effective interventions.

## **3. Review topic/question(s), objectives and key words**

What is the research question driving the review: To conduct a scoping review initially, followed by a systematic review of the healthcare trainees literature, in order to consolidate the available knowledge on factors that affect faculty’s ability and willingness to report poor clinical academic and professional performance.

Why is this important / timely for the medical education community? Accreditation bodies for undergraduate and graduate medical education strive to support an evaluation format that permits recognition of struggling or failing performers, as well as trainees who are progressing in par or surpass their level of training.

Utilizing thematic analysis, we aim to find commonalities that faculty across health professions, institutions and continents express as existing limitations or barriers to failing a trainee they felt should have failed. The thematic analysis will in parallel elicit existing gaps of the tools faculty need to identify, assess, and manage a failing student. Findings from a broad review of healthcare trainees will lead to the development of focused knowledge translation efforts with universal application. Anticipated translation work includes innovative workshops that address the emotional toll, along with the professional and personal burden and ethical considerations of reporting an underperforming student. In addition, other data-driven, translational faculty development workshops may explicitly arm faculty with the tools and confidence to evaluate and report trainee underperformance or failure. These anticipated translational works may be delivered to broad audiences in the field of healthcare education, to institutions, and to designated clinical teaching faculty.

## **4. Search sources and strategies–**

*For detailed search strategy please see Appendix 1 at the end of the document.*

We initiated the review by searching for articles in PubMed and Google Scholar that had cited Dudek’s 2005 article. From 126 citations, we identified less than a handful of articles pertinent to our search, from which we selected key search terms. The ensuing search strategy has been modified several times to ensure capture of the breath of a scoping review, while remaining focused on health care trainees. Relevant citations emerged from medicine, nursing and dentistry, and thus narrowed our search to

these healthcare fields. We have verified that the final search strategy includes all critical citations previously identified. The search strategy was applied to PubMed, EMBASE, and CINAHL. Based on this methodology, our library has 4,626 citations. The search strategy was updated in January 2015 and identified an additional 713 citations, for a total 5,339 citations. Based on a pilot vetting and reliability test, we anticipated less than 10% of the citations will meet inclusion criteria based on the review of title alone. We divided this library into two groups of reviewers (3 reviewers in one group, and 2 in the other) who scanned the citation titles for inclusion. As of 02 March 2015, our team of reviewers has selected by consensus, 126 titles for advance review of the citations' abstract. Another 143 citations have been selected for inclusion by at least one reviewer in either group and will proceed to abstract review as well. Exclusion criteria categories were determined by the authors, based on pilot test iterations of a random sample of citations. The bibliography of articles selected for inclusion will be reviewed for additional citations relevant to our search. The abstract review will again be divided into 2 groups of reviewers, and discrepancies will be resolved by consensus, to select citations for full article review. We have acquired the DistillerSR analytical program to assist in the selection process and tabulation of results.

## 5. Study selection criteria

- a) The following exclusion criteria (1-5) were selected after the reviewers independently read random samples of 150 citations of the initial search strategy and through three iterations, agreed on exclusion criteria.
  - i. Not target profession (not one of: medicine, nursing, dental)
  - ii. Related to the development or vetting of an **evaluation tool**
  - iii. Related to the development or assessment of (1) **curriculum content**; (2) specific **educational interventions or programs**; (3) specific **trainee skills and/or competencies** ; (4) **Knowledge assessment/surveys** (5) **peer mentoring**
  - iv. Not related to trainee education (clinical, clinical decision-making, practice management, other)
  
- b) Inclusion Criteria

We will include studies that address the faculty or evaluator's perspective on failing students or trainees, and factors that affect faculty's ability and willingness to report poor clinical performance. We will search for studies that discuss concerns or problems that faculty have in regards to failing trainees that might prevent them from actually failing the trainees.

## 6. Procedure for extracting data–

With a grant from SDRME, we acquired DistillerSR analytical program to assist with data abstraction and data analysis.

The final library of citations will again be divided into two groups of reviewers or coders (3 reviewers in one group, and 2 in the other) who will abstract from each article descriptive data and themes. Descriptive data includes study type (quantitative vs qualitative, and if the latter, individual interviews vs focus groups), year, country, trainee group (medical, dental, nursing), setting (academic institution vs other clinical site, elicited barriers to failing a trainee. Our pilot search strategies have mainly identified qualitative studies, and thus anticipate to utilize for study quality assessment the CASP-UK (Critical Appraisal Skills Program – UK)(7) checklist which includes the questions, i/ is there a clear statement of the aims, ii/ is the methodology appropriate, and iii/ is it worth continuing? While we have not yet come across intervention studies, we may anticipate nonetheless utilizing guidelines to evaluate the study quality by applying the Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions(8). The Cochrane guideline proposes the following questions: Was the research design appropriate to address the aims?, Was the recruitment strategy appropriate to the aims?, Was the data collected in a way that addressed the research issue?, Was the relationship between researcher and participants adequately considered?, Have ethical issues been taken into consideration?, Was data analysis sufficiently rigorous?, Is there a clear statement of findings?, How valuable is the research?

## 7. Synthesis of extracted evidence

Pilot review of Dudek’s and 10 other key articles generated a set of concerns elicited by faculty in their assessment of limitations or barriers to failing a trainee. We pilot tested a data abstraction form, that will be entered into Distiller SR, to synthesize the results.

The evidence will be synthesized by trainee group (undergraduate vs graduate, medical vs nursing vs dentistry), by study design (individual interviews vs focus groups) and by response to the following questions:

1. Does the study discuss concerns or problems that faculty have in regards to failing trainees that might prevent them from actually failing the trainees
2. If yes, what concerns or problems are elicited: a/concerns about student factors, b/concerns about consequences to self, c/ concerns about consequences to the institution, d/ concerns about performance standards or patient safety, e/concerns

about trainee evaluation process and or f/faculty development, and g/concerns about remediation factors h/other

3. Are Faculty development innovations or initiatives described for helping faculty manage their concerns/problems with failing a trainee?

We anticipate most if not all of the citations will contain qualitative data, either in the form of interview of faculty or focus groups. We do not anticipate searching primary data but instead to synthesize the published results as summarized above. We will use Thematic Analysis to classify and summarize our findings under thematic headings (9). The analysis will be further weighed by the level of study quality as measured with the CASP tool, and by the level of explanatory theory presented in the article, with the goal of interpreting the synthesized qualitative evidence to develop explanatory theory or models.

## **8. Project timetable–**

To date, the study group has performed an initial literature search, refined the research question, refined the literature search terms, reviewed key articles, pilot reviewed for exclusion criteria, and definition of inclusion terms and data for future synthesis. In our team, an experienced librarian has finalized the search strategy, updated in January 2015. We have finalized scanning 5,339 titles and selected citations for level 2, abstract review.

Completed: scanning and first pass selection of articles for inclusion into the study, with coding of excluded articles by pre-selected exclusion criteria

24 July – 24 August or 24 September 2014: BEME protocol review and allocation to a BICC

20 March: Submission of protocol modifications to BEME

16 March – 03 April 2015: Second level review of abstracts for inclusion

06 April – 30 April, 2015: data extraction of selected journal articles

01 May – 01 June 2015: initial data synthesis and analysis

29 June 2015: Presentation of interim results at SDRME annual conference

30 June – 30 December 2015: Completion of data synthesis and analysis, manuscript dissertation and review.

## **9. Conflict of interest statement–**

None of the authors have any financial or any other conflict of interest. The study is performed on the authors' professional education time. An education grant has been awarded from the Society of Directors of Research in Medical Education.

## **10. Plans for updating the review–**

The literature search was updated in January 2015 to capture any citations published since submission of the BEME review protocol in 2014. Our team librarian will place alerts in Pub Med and Google Scholar for any updated studies that will merit inclusion for an updated review.

## **11. Changes to the Protocol**

Significant changes to the protocol will be submitted to BEME for approval.

## **Bibliography**

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9. Noyes J. Supplemental Guidance of Selecting a Methods of Qualitative Evidence Synthesis, and Integrating Qualitative Evidence with Cochrane Intervention Reviews. In: Hannes K HA, Harris J, Lewin S, Lockwood C, ed. Supplementary Guidance for Inclusion of Qualitative Research in Cochrane Systematic Reviews of Interventions. Cochrane Collaboration Qualitative Methods Group; 2011.

## Appendix 1.

### Search Strategy Methods:

The following databases were searched from 2005 to April/May 2014 for relevant articles: CINAHL, EMBASE, and MEDLINE via Ovid (In-Process & Other Non-Indexed Citations and MEDLINE 1946 to Present). The literature search included combinations of keywords and appropriate subject headings for each database to retrieve articles discussing the “failure to fail” medical students, dental and nursing students. Results were limited to English language. The search strategy identified a total of 4,625 articles (after removal of duplicate articles).

Developing the list of terms to capture the concept “failure to fail” required identifying terms from key papers provided by the authors at the onset of the review. To grasp the “failure” concept, terms such as “grade inflation,” “unsafe student,” “poor performance”, etc. were incorporated into the search strategies. Search terms for nursing, dental and medical students or trainees included the terms: apprenticeship, clerkship, interns, preceptorship, residents, etc.

### Databases & Search Strategies: [MEDLINE](#) | [EMBASE](#) | [CINAHL](#)

Limits: 2005 - current

**Total EndNote Library: 4,625**

#### Medline (Ovid)

##### Failure to Fail - Ovid MEDLINE search strategy

Results (05/01/2014): 2497 -16 duplicates = 2481 records

1. remedial teaching/ or (at-risk or below average or below expectation\* or fail or failing or failure or grade inflation or incompeten\* or low perform\* or marginal perform\* or milestone\* or passing or pass rate\* or performance deficienc\* or poor performance or remedia\* or struggling or student competenc\* or trainee competence or underachiev\* or underperform\* or unsafe or unsuccessful student\*).ti,ab.
2. (((academic or resident? or trainee?) adj2 (difficult\* or performance)) or (academic adj2 (dismissal\* or probation or warning\*))).ti,ab.
3. or/1-2
4. 3
5. ((apprenticeship\* or clerkship\* or intern? or internship\* or mentor\* or precept\* or preclerkship\* or residency or residencies or resident? or trainee?) adj2 (medicine or medical or dental)).ti,ab.
6. (first year adj2 (doctor\* or dentist\* or nurse\*)).ti,ab.
7. (nursing residen\* or ((apprenticeship\* or clerkship\* or intern? or internship\* or mentor\$ or precept\* or preclerkship\* or trainee?) and nursing)).ti,ab.
8. Clinical Clerkship/ or exp "Internship and Residency"/ or exp Preceptorship/ or exp Students, Nursing/ or exp Students, Medical/ or Students, Dental/
9. ((student\* adj1 (medical or nursing or dental)) or nursing program).ti,ab.
10. or/5-9
11. 4 and 10
12. limit 12 to (english language and yr="2005 -Current")

13. (letter or comment).pt.
  14. 12 not 13
- 

## EMBASE

**Results (05/01/2014): 2478 - 768 duplicates = 1710 records**

1. 'academic failure'/exp OR 'academic failure':ab,ti
  2. (academic OR resident OR residents OR trainee OR trainees) NEAR/2 (difficulty OR difficulties OR performance)
  3. academic NEAR/2 (dismissal\* or probation or warning\*)
  4. 'at-risk':ab,ti OR 'below average':ab,ti OR 'below expectation':ab,ti OR 'below expectations':ab,ti OR fail:ab,ti OR failing:ab,ti OR failure:ab,ti OR 'grade inflation':ab,ti OR milestone:ab,ti OR milestones:ab,ti OR passing:ab,ti OR 'poor performance':ab,ti OR struggling:ab,ti OR 'trainee competence':ab,ti OR 'unsuccessful student':ab,ti OR 'unsuccessful students':ab,ti
  5. incompeten\* OR low NEXT/1 perform\* OR marginal NEXT/1 perform\* OR 'pass rate' OR 'pass rates' OR performance NEXT/1 deficienc\* OR remedia\* OR student NEXT/1 competenc\* OR underachiev\* OR underperform\*
  6. #1 OR #2 OR #3 OR #4 OR #5
  7. residency:ab,ti OR residencies:ab,ti OR resident:ab,ti OR residents:ab,ti OR intern:ab,ti OR interns:ab,ti OR internship:ab,ti OR internships:ab,ti OR trainee:ab,ti OR trainees:ab,ti OR clerkship:ab,ti OR clerkships:ab,ti OR preclerkship:ab,ti OR preclerkships:ab,ti OR preceptor:ab,ti OR preceptors:ab,ti OR preceptorship:ab,ti OR preceptorships:ab,ti OR mentor:ab,ti OR mentors:ab,ti OR mentoring:ab,ti OR apprenticeship:ab,ti OR apprenticeships:ab,ti AND medical:ab,ti
  8. nursing NEXT/1 (residency OR residencies OR resident OR residents) OR (intern:ab,ti OR interns:ab,ti OR internship:ab,ti OR internships:ab,ti OR trainee:ab,ti OR trainees:ab,ti OR clerkship:ab,ti OR clerkships:ab,ti OR preclerkship:ab,ti OR preclerkships:ab,ti OR preceptor:ab,ti OR preceptors:ab,ti OR preceptorship:ab,ti OR preceptorships:ab,ti OR mentor:ab,ti OR mentors:ab,ti OR mentoring:ab,ti OR apprenticeship:ab,ti OR apprenticeships:ab,ti AND nursing:ab,ti)
  9. 'clinical education'/exp OR 'medical student'/exp OR 'nursing student'/exp OR 'nursing student'/exp
  10. 'medical student':ab,ti OR 'medical students':ab,ti OR 'nursing student':ab,ti OR 'nursing students':ab,ti OR 'nursing program':ab,ti OR 'dental student':ab,ti OR 'dental students':ab,ti
  11. "first year" NEXT/1 (doctor\* or dentist\* OR nurse\*)
  12. #7 OR #8 OR #9 OR #10 OR #11
  13. #6 AND #12
  14. #6 AND #12 AND [english]/lim AND [embase]/lim AND [2005-2014]/py
  15. letter:it OR 'note':it
  16. #14 NOT #15
- 

## CINAHL

**Results (04/22/2014): 481 records - 47 dups = 434**

1. (MH "Remedial Teaching") OR (MH "Academic Failure")
2. "at-risk" OR "below average" OR "below expectation" OR "below expectations" OR fail OR failing OR failure OR "grade inflation" OR incompeten\* OR low perform\* OR marginal perform\* OR milestone\* OR passing OR pass rate\* OR "performance assessment" OR performance asesments OR performance deficienc\* OR "performance evaluation" OR "performance evaluations" OR "poor performing" OR "poor performance" OR remedia\* OR struggling OR "student competence" OR "student competencies" OR "trainee competence" OR "trainee competencies" OR underachiev\* OR underperform\* OR unsafe OR "unsuccessful student" OR "unsuccessful students"

3. ((academic OR resident\* OR trainee\*) W2 (difficult\* OR performance)) OR academic W2 (dismissal\* OR probation OR warning\*)
4. S1 OR S2 OR S3
5. (MH "Preceptorship") OR (MH "Internship and Residency") OR (MH "Mentorship") OR (MH "Students, Nursing+") OR (MH "Students, Medical") OR (MH "Students, Dental")
6. (apprenticeship\* OR clerkship\* OR intern OR interns OR internship\* OR mentor\* OR precept\* OR preclerkship\* OR trainee\*) AND ( medical OR medicine OR dental)
7. "first year" W2 (doctor\* OR nurse\* OR dentist\*)
8. ("nursing resident" OR "nursing residents" OR "nursing residencies" ) OR ( (apprenticeship\* OR clerkship\* OR intern OR interns OR internship\* OR mentor\* OR precept\* OR preclerkship\* OR trainee\*) AND (nursing ))
9. S5 OR S6 OR S7 OR S8
10. S4 AND S9 Limiters: Date: 20020101-20141231; English Language; Peer Reviewed; Exclude MEDLINE records