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#### Recommended Citation

Patel, S., Pelletier-Bui, A., Smith, S., Roberts, M. B., Kilgannon, H. J. Trzeciak, S., & Roberts, B.W. (2019). Curricula and methods for physician compassion training: protocol for a systematic review. *BMJ Open* 2018;8:e024320. doi: 10.1136/bmjopen-2018-024320

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# BMJ Open Curricula and methods for physician compassion training: protocol for a systematic review

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**To cite:** Patel S, Pelletier-Bui A, Smith S, *et al.* Curricula and methods for physician compassion training: protocol for a systematic review. *BMJ Open* 2018;**8**:e024320. doi:10.1136/bmjopen-2018-024320

► Prepublication history and additional material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/10.1136/bmjopen-2018-024320>).

Received 21 May 2018

Revised 26 July 2018

Accepted 10 August 2018



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## ABSTRACT

**Introduction** Compassionate patient care has been associated with improved clinical outcomes for patients. However, current evidence suggests that healthcare is experiencing a compassion crisis, with physicians frequently overlooking opportunities to treat patients with compassion. Although there is evidence that compassionate care can be enhanced through training interventions, it is currently unclear what specific skills and behaviours ought to be taught and how best to transfer this information to the learner. The objectives of this systematic review are to collate the world's literature on compassion training to determine (1) the specific skills and behaviours that should be taught (curriculum), and (2) the methods of training that are most effective at improving compassionate patient care.

**Methods and analysis** We will perform a qualitative systematic review of studies aimed at improving compassionate patient care among physicians and physicians in training. We will comprehensively search CENTRAL, MEDLINE, EMBASE and CINAHL. Additional recommended techniques for systematic reviews of complex evidence will be performed including pursuing selected 'references of references', electronic citation tracking and consulting experts in the field. Two investigators will independently review all search results. After identification and inclusion of papers, we will use a standardised form for data extraction. We will use tables to describe the study populations, interventions tested (including specific skill/behaviours taught and training methods used), outcome measures and effects of interventions on outcome measures compared with control groups. Where appropriate, meta-analysis will be used for quantitative analysis of the data.

**Ethics and dissemination** The proposed systematic review does not require ethical approval since no individual patient-level data will be collected. Results of this study will contribute to the understanding of compassion training and help inform the development of compassion training curricula.

**PROSPERO registration number** CRD42018095040.

## INTRODUCTION

There is currently evidence to suggest that healthcare is experiencing a compassion crisis—an absence of (or inconsistency in) compassionate patient care.<sup>1</sup> Providing

## Strengths and limitations of this study

- This protocol design is focused on identifying the specific skills/behaviours that should be taught to enhance compassion and the training methods that are most effective at improving compassionate patient care, as opposed to only determining if compassion training has an effect.
- This protocol design is consistent with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocols statement and the Cochrane handbook for systematic reviews of interventions.
- It is unlikely that it will be possible to pool data given the likely heterogeneity in both interventions and outcome measures.

compassionate, patient-centred care is associated with improved clinical outcomes for patients, and alternatively the absence of compassionate care is associated with poor quality of care and increased risk of harm to patients through medical errors.<sup>2</sup> In addition, compassionate patient care has been associated with decreased healthcare provider burnout and improved well-being,<sup>3</sup> as well as lower healthcare costs (ie, better patient communication resulting in reduced diagnostic test expenditures).<sup>4</sup> Despite the overwhelming biomedical literature demonstrating the importance of compassionate patient care, physicians frequently overlook opportunities to be compassionate, focusing instead on narrow biomedical inquiry and explanations.<sup>5</sup>

Both the Association of American Medical Colleges and the American Medical Association underscore the importance of compassionate patient care.<sup>6 7</sup> It is reasonable to postulate that medical training is an ideal time to implement compassion training in an effort to help future physicians develop the skills required to care for patients in a compassionate manner. However, compassion training is not a primary focus during

medical training, and studies have demonstrated that empathy declines during both medical school and residency training.<sup>8,9</sup> Thus, there is an urgent need to develop compassion training curricula, which can be implemented during medical training, and to help inform currently practising physicians. Previous reviews have demonstrated that healthcare provider compassion can be enhanced through training interventions.<sup>7,10,11</sup> However, there is currently a paucity of data on what specific skills and behaviours ought to be taught (ie, the curriculum) and how best to transfer this information to the learner.

The objectives of this systematic review are to collate the world's literature on compassion training to determine (1) the specific skills and behaviours that should be taught and (2) the methods of training that are most effective at improving compassionate patient care. We hypothesise that a combination of specific skills (eg, identifying compassion opportunities) and behaviours (both verbal and non-verbal communication) taught through experiential learning will be most effective at enhancing compassionate patient care by physicians and physicians-in-training.

## METHODS AND ANALYSIS

### Protocol and registration

This systematic review protocol is prepared in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Protocols (PRISMA-P) statement (online supplementary material 1)<sup>12</sup> and the Cochrane handbook for systematic reviews of interventions.<sup>13</sup> The final results will be reported according to PRISMA and the Meta-analysis of Observational Studies in Epidemiology guidelines.<sup>14,15</sup> This systematic review has been registered in the PROSPERO international prospective register of systematic reviews.

### Search for and identification of studies

An electronic search will include databases generally considered to be the most important sources to search<sup>13</sup>: CENTRAL, MEDLINE, EMBASE and CINAHL. The fully reproducible search strategy is provided in online supplementary material 2. These strategies were established using a combination of standardised terms and keywords, and expanded on a previously published systematic review examining if training interventions can improve empathy.<sup>7</sup> In addition, we will perform the following recommended techniques for systematic reviews of complex evidence: pursuing selected 'references of references' (ie, also termed 'snowballing'), electronic citation tracking and consulting experts in the field.<sup>16</sup>

### Eligibility criteria

We will include all clinical studies of interventions aimed at enhancing compassion/empathy among medical students, residents, and/or physicians. In order to be included all studies must contain: (1) an intervention arm in which subjects clearly underwent an intervention aimed

at enhancing compassion/empathy; (2) a clearly defined control arm in which subjects did not receive the intervention (eg, wait-list, before/after, standard training); (3) the intervention was tested on medical students, residents and/or physicians; and (4) an outcome measure assessing the effect of the intervention on self-reported and/or other-reported outcome measures of empathy or compassion. We will consider studies eligible for review regardless of language or publication type. We will exclude studies that are secondary reports of previously published studies. We also will exclude papers that are reviews, correspondence or editorials; however, we will screen the reference lists of review articles to identify further studies for inclusion. We will not limit our search by dates and will search each database in full (1966–2018).

### Study selection and data abstraction

Two members of the research team will independently screen the titles and abstracts of identified studies for potential eligibility. After the relevance screen, exclusion logs will be compared between the two reviewers in order to determine whether there is disagreement and the kappa statistic will be used to quantify the interobserver agreement. In cases of disagreement, the full manuscript will be reviewed for inclusion. All studies deemed potentially relevant will be obtained, and the full manuscripts will be reviewed for inclusion. Two reviewers will independently abstract data on all study populations, interventions tested, outcome measures and effect of interventions on outcome measures compared with control groups, using a standardised data collection form. Any disagreements in these processes will be resolved by consensus with a third reviewer.

### Assessment of study bias

For each included study, the risk of bias will be assessed using the Cochrane Collaboration's tool for assessing the risk of bias in clinical trials. This tool evaluates six domains: selection, performance, detection, attrition, reporting and other biases.<sup>13</sup>

### Analysis

We will perform a primarily qualitative analysis of the data in accordance with the recommended methodology for qualitative reviews published in the Cochrane Handbook.<sup>13</sup> We will collate and summarise studies in table format, stratified by individual publication. We will table: (1) population sampled (ie, medical student, resident, attending physician); (2) specific skills (eg, identifying compassionate opportunities) and behaviours taught during the intervention (behaviours will be further delineated as verbal (eg, compassionate statements) and non-verbal (eg, eye contact, facial expression)); (3) training methods used (ie, lecture, video/audio training, small groups sessions, simulated experiential learning, real experiential learning, reflective exercises and other); (4) outcome measures, including primary and all secondary outcomes; and (5) effect of intervention on outcome measures compared with control groups.

After conducting the systematic review, if it is determined that the data can be pooled, we will perform meta-analyses using random effects models to calculate overall effect sizes (with 95% CIs) between intervention and control groups for each outcome that can be objectively analysed. The  $I^2$  statistic will be used to assess heterogeneity between studies. The following thresholds will be used for the  $I^2$  statistic: low (25%–49%), moderate (50%–74%) and high ( $\geq 75\%$ ) values.<sup>17</sup> For pooled data, publication bias will be assessed using funnel plots (graphical display of the size of the treatment effect against the precision of the trial) for each analysed outcome.

### Protocol amendments

Any amendments to this protocol will be described along with the rationale and date the change was implemented.

### Patient and public involvement

Our study design was informed by the fact that previous research has demonstrated that compassionate care is considered by patients to be one of the most important aspects of high quality healthcare.<sup>18</sup> Patients were not involved in the actual design of this study. Given this is a systematic review, patients will not be enrolled in this study.

### ETHICS AND DISSEMINATION

The results from this systematic review will be submitted for publication to peer-reviewed journals, and to national meetings in presentation form. We anticipate that this study will identify specific skills/behaviours and training methods that are most effective at improving compassionate patient care. The results from this study will be used to inform the development of compassionate training curricula.

### DISCUSSION

There has been increasing evidence that compassionate patient care is lacking across healthcare systems. In addition to compassionate care being the 'right' thing to do out of respect for the patient, it also has been demonstrated to be associated with positive outcomes for patients (eg, improved clinical outcomes), healthcare providers (eg, reduced burnout) and healthcare systems (eg, lower costs).<sup>1</sup> Thus, the current state of inadequate compassionate patient care is a significant public health issue. Although it has previously been demonstrated that training interventions can enhance compassionate care,<sup>7</sup> it is currently unknown what specific skills and behaviours ought to be taught and how best to transfer this information to the learner.

This systematic review will collate the world's literature on compassion training for medical students, residents and physicians. We will tabulate the effects of teaching specific skills/behaviours on outcome measures of compassion/empathy and identify which methods of

training best transfer this information. Specifically, we expect to identify (1) what specific skills and behaviours need to be taught and (2) how best to teach them, based on the current literature.

In conclusion, results of this study will contribute to the understanding of compassion training and help inform the development of compassion training curricula, which can be implemented during medical training, and to help inform currently practising physicians. In addition, it will identify important knowledge gaps in the literature and help guide future research of compassion training.

**Contributors** All authors have made substantial contributions to this paper. BWR supervised all aspects of the study design and takes responsibility for the paper as a whole. SP, AP-B, SS, MBR, HJK, ST and BWR contributed to the development of the selection criteria, the risk of bias assessment strategy and data extraction criteria. MBR, ST and BWR developed the search strategy. BWR provided statistical expertise. SP and BWR drafted the manuscript. SP, AP-B, SS, MBR, HJK, ST and BWR read and contributed substantially to revision of the final manuscript. All authors approved the manuscript in its final form.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent** Not required.

**Ethics approval** This is a systematic review of completed studies and thus no ethical approval will be required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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