Peer-to-Peer Support Interventions for Health Care Providers

A Series of Literature Reviews

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About This Report

In August 2012 the White House issued a Presidential Executive Order to address mental health challenges. Following that order, an interagency task force was formed and co-chaired by the U.S. Department of Defense, U.S. Department of Veterans Affairs, and U.S. Department of Health and Human Services. The administration outlined three cross-agency priority goals focused on reducing barriers to mental health care; enhancing access for service members, veterans, and their families with mental health needs; and supporting research on effective treatments. The agencies have each implemented one or more public awareness campaigns. Achievement of these goals requires high-functioning health care providers who are able to respond to the mental health needs of their patients. Prior research suggests that provider burnout, stress, and mental health conditions such as post-traumatic stress, depression, and anxiety can hinder provider and team functioning. The project described here focused on the evidence for peer-to-peer interventions for health care providers to determine whether these intervention have beneficial impacts on workforce outcomes. The findings will be of interest to health care systems, policymakers, and practitioners wishing to add peer-to-peer interventions to their efforts and/or to improve mental health of health care practitioners.

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For more information on the RAND Forces and Resources Policy Center, see http://www.rand.org/nsrd/frp or contact the director (contact information is provided on the webpage).

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**Key Informants**

We thank the following individuals for their contributions as key informants:

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Summary

Health care providers are exposed to many of the same stresses experienced by their patients yet carry the additional responsibilities of providing high-quality, humanistic, and high-throughput health care. Providing appropriate mental health support to providers has been challenging, especially given limited mental health specialist access, issues of privacy and stigma, and the need to identify and address organizational issues that manifest as provider distress, or burnout, rather than to simply identify and treat mental illness. Peer-to-peer support has shown promise in addressing distress, as well as in identifying needs for mental health care, among patients and stress-prone professions. Peer-to-peer support for health care providers has been little studied and was addressed in this series of literature reviews.

The project began with interviews with key informants known to have implemented peer-to-peer approaches. We conducted a scoping review to identify conceptual and theoretical underpinnings and empirical examples of peer-to-peer approaches. We used the scoping review and key informant input to develop a conceptual framework to tie the intended roles that peer support individuals might play with the desired outcomes that might be achieved and the features that characterize the type and level of peer-to-peer interaction. Subsequently, we built an evidence map of empirical evaluations of peer-to-peer interventions for professionals broadly (not restricted to health care providers). The evidence map was designed to provide an overview of the research area and combined systematic searches and explicit eligibility criteria with a user-friendly visual representation of the evidence base. The evidence map included emotional support peer-to-peer interventions for working professionals. Finally, we conducted a systematic review to synthesize the evidence on specific peer-to-peer interventions, i.e., health care provider-to-provider support interventions. We searched multiple research databases and contacted topic experts. We included studies evaluating interventions that included support through peers, i.e., other health care providers. We abstracted outcomes of interest from the existing evidence base. We found a growing research area that currently is still developing and that cannot yet definitively estimate the effects of provider-to-provider interventions.

We combined this series of literature reviews with key informant input to explore peer-to-peer support interventions for professionals, including provider-to-provider interventions. We identified a promising intervention approach that may successfully support professionals.
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1. Introduction

In August 2012, the White House issued a Presidential Executive Order to address mental health challenges. Following that order, an interagency task force was formed and co-chaired by the U.S. Department of Defense, U.S. Department of Veterans Affairs, and U.S. Department of Health and Human Services. The administration outlined three cross-agency priority goals focused on reducing barriers to mental health care; enhancing access for service members, veterans, and their families with mental health needs; and supporting research on effective treatments. The agencies have each implemented one or more public awareness campaigns. Achievement of these goals requires high-functioning health care providers who are able to respond to the mental health needs of their patients.

However, health care providers are exposed to numerous stressors, both those that are broadly common to all professionals and those that are specific to health care providers. Societal, systems, and organizational climate pose complex challenges to the mental health of health care providers. Mental health impacts of work-related stress can include burnout and the development of mental health conditions such as depression, posttraumatic stress disorder (PTSD), and problematic alcohol use (Janosy and Anderson, 2021). A survey of over 15,000 physicians showed a physician burnout rate of 44 percent (Kane, 2019). Although burnout is most often experienced without accompanying mental health diagnoses such as depression or anxiety, persistent burnout may be part of the pathway to these diagnoses. According to the American Foundation for Suicide Prevention, the suicide rates among male and female physicians are 2.27 times and 1.41 times higher, respectively, than the general population (American Foundation for Suicide Prevention, undated). These conditions among providers are likely associated with reduced capacity for helping patients, worsened health care team functioning, and provider turnover. Yet provider mental health has been substantially less studied than patient mental health more generally, despite the fact that providers are a limited resource among whom earlier help may reduce downstream consequences of mental health challenges. Provider burnout can result in a vicious cycle that will ultimately reduce quality of care. While methods for reducing individual and system-level barriers to mental health care for patients have been a common subject of study, methods for reducing barriers to mental health of health care providers have not been extensively studied. Barriers to mental health care experienced by health care providers exist at the individual level (perceptions of mental health problems and treatment, perceived access), the provider level (knowledge attitude, behaviors), and the systems level (appointment availability, facilities, medical record access).

In addition, military workforce populations, including military health care providers, have unique needs regarding mental health impacts of work stress (Gibbons, Hickling, and Watts, 2012). The U.S. Department of Defense, at any given time, employs more than 1.3 million
service members (Defense Manpower Data Center, undated). More than 2.7 million service members have deployed to support operations in Iraq and Afghanistan since 2001 (Watson Institute for International and Public Affairs, 2015). The Military Health System of the Department of Defense delivers care to more than 9 million individuals through more than 50 military hospitals and more than 600 clinics, as well as a network of private-sector providers (U.S. Department of Defense, 2014). The stressful work conditions experienced by health care providers as a part of military duties can result in mental health challenges for service members, including health care providers (Hickling et al., 2011; Shoji, Benight, and Stearns, 2016a). Military service is accompanied by unique job demands, environments, and stresses, but military providers are by no means alone in experiencing job-related increases in mental health conditions.

The general literature on protective interventions to support health care providers in clinical practice can provide insights applicable to military and veteran providers. A variety of interventions have been suggested to support health care professionals in obtaining guideline-concordant depression treatment (Pedersen et al., 2018). Tested interventions typically require changes in organizational structure or processes, such as introducing care managers into provider depression care pathways. These interventions, however, are directed at treating mental health diagnoses among providers, and thus they occur downstream from initial recognition of a developing problem.

Peer-to-peer support as an intervention has been commonly used in academic settings (Brandon et al., 2015; Rees et al., 2014) or in other learning and teaching environments (Burgess, McGregor, and Mellis, 2014; Harvey et al., 2012; Stone, Cooper, and Cant, 2013; Yu et al., 2011; Secomb, 2008). The approach is based on professionals providing support for each other. The effects of professional peer-to-peer interventions have been evaluated primarily in relation to educational goal achievement. There is also a large body of evidence for peer-to-peer interventions for patients. Numerous programs have been suggested that involve patient peers in prevention or treatment studies; some of these studies have been evaluated using robust study designs. A RAND review found over 100 randomized controlled trials (RCTs) evaluating patient peer involvement in health promotion interventions (Ramchand et al., 2017). The review found studies evaluating several roles of peers, including peer counselors accompanying patients, serving as peer educators, providing peer support through informal and unstructured support, working as peer facilitators of programs, or serving as case managers. Patient peer-to-peer interventions have also been studied in the context of unique benefits of peer support to veterans (Zenner, 2019).

Although the extent to which the results of peer support among patients translates to provider-to-provider peer support is unclear, the studies on peer-to-peer support for educators and for patients helped provide a rationale for peer-to-peer support for distressed health care providers, i.e., provider-to-provider interventions. A distressed provider might be particularly likely to listen to a peer, i.e., another health care provider, who could be seen as having similar
responsibilities and experiences. Input from groups of peers, as has been demonstrated for
groups of patients, might amplify this benefit under some circumstances. Trained health care
professional peers could provide help with care coordination when serious issues came to light,
especially in low-resource environments or for those distant from mental health support. These
peers could also leverage existing mental health resources to enhance provider access to mental
health expertise. Finally, these peers could provide links to organizational improvement efforts if
a precipitating system problem was detected. However, benefits and potentially adverse or
unintended consequences should be studied systematically, and this includes additional time
commitments for the participants and the consequences of being untrained for the type of support
required.

In terms of health care provider group peer-to-peer support, Balint groups are one of the
oldest that have been tested. These groups began in the 1950s, were disseminated in the 1960s
and 1970s, and are still being used today. The focus of these groups is on ameliorating the
provider stresses and the patient outcomes related to actual current clinical cases. These cases
may be stressful either because of their complexity or because of the ways in which the patient
interacts with the provider and their own issues. By unpacking the interrelationships between
patient physical and mental health needs and provider skills and emotional reactions, Balint
groups aim to reduce provider distress and improve patient outcomes. Traditionally, providers in
a Balint group met regularly; formats and focus have varied, however, over the half-century
since initial development of the approach and may increasingly use virtual environments
(Lichtenstein et al., 2018). In the setting of resident physician training, the goal of Balint training
is to understand the patient as a person and help physicians to resolve professional role conflict
(Lichtenstein et al., 2018).

Implementation science has long recognized the importance of peer-driven change within
health care organizations through the role of champions (Luz et al., 2018), although it is difficult
to distinguish between the benefits of “peer champions” from those of “organizational
champions,” who may be in positions of leadership. Increasingly, organizations are exploring the
role of peer review for clinical processes (Johnson et al., 2017a). The American College of
Physicians has recently promoted team health care (American College of Physicians, 2018),
which is characterized by at least two health professionals who work together to interact
collaboratively with patients and their caregivers. The framework is designed primarily for care
coordination but can potentially serve a peer-support function in terms of reducing the stress of
being a patient’s only lifeline to care. Another tested type of health care provider peer-to-peer
support involves peer-to-peer supervision. These frameworks vary in their approaches, with the
majority being characterized by supervision within medical hierarchies. Hierarchical provider
relationships, such as relationships between trainees and trainee supervisors, or junior versus
senior professionals, may not meet definitions of true peer-to-peer exchange. These
interventions, however, may explicitly include components that encourage peer interaction, such
as resident-to-resident support among residents who are supervised or mentored by the same provider.

Provider-to-provider interactions between primary care providers and specialists have received substantial attention. In terms of providing support for mental health distress among providers, there are high-quality studies addressing engagement of psychiatrists in integrating mental health input (e.g., psychiatrists providing in-person meetings, telephone calls, secure messaging to primary care providers) into primary care settings. These frameworks aim primarily to increase the quality of mental health care for patients. These approaches, however, can include aspects directed specifically at provider-to-provider interactions more generally (not specific to peer-to-peer support) or specifically at peer-to-peer support (Foy et al., 2010). Given that provider-to-provider exchanges are now facilitated by technology such as secure messaging and are not limited to in-person meetings or phone calls, newer studies of peer-to-peer support may include approaches that use these modalities. Furthermore, in the military environment, with its widely dispersed and continuously changing workforce, the availability of peer-to-peer support may have particular advantages over mental health specialty care alone. Military mental health care providers themselves are at significant risk of the mental health consequences of deployment (Kane, 2019). Additionally, bringing help closer to the provider’s work environment could reduce physical and time barriers to seeking care and could improve access by providing a local link to further intervention if needed. The feasibility of equipping peers to provide help may also be greater than the feasibility of providing accessible mental health providers in all sites. Finally, peer-to-peer support may reduce barriers due to stigma, or due to expectations that available mental health specialists would not understand local challenges.

To fill the gaps in the evidence base for peer-to-peer health care provider support interventions, an evidence synthesis of the existing research is needed. The project produced three separate but interrelated products: key informant interviews and a scoping review resulting in a framework, an evidence map visualizing the literature, and a systematic review estimating provider-to-provider intervention effects.

Key Questions

The report addresses the following question and subquestions:

Scoping Review

- Key Question 1: What are the roles and functions of professional peers in peer-to-peer interventions in health care settings?
  - Key Question 1a: Have specific considerations for health care providers in military settings been suggested?
Evidence Map

- Key Question 2: What are the approaches of professional peer-to-peer interventions for mental health and emotional support?

Systematic Review

- Key Question 3: What are the effects of provider-to-provider interventions on emotional support, organizational measures, or mental health outcomes in providers?
  - Key Question 3a: Do the effects vary by professional field?
  - Key Question 3b: Do the effects vary by organizational features?
  - Key Question 3c: Do the effects vary by personal characteristics of professionals?
  - Key Question 3d: Do the effects vary by the health care setting (e.g., military setting)?
2. Methods

In this chapter, we outline the methods used across reviews and methods specific to the three components of this work: the scoping review (Review A), the evidence map (Review B), and the systematic review (Review C). The method for each task is described, including data sources, search strategy, eligibility criteria, data extraction, and expected results. The scope of the reviews varied from broad (scoping review, health-relevant peer-to-peer approaches), to narrower (evidence map, peer-to-peer intervention evaluations), to specific (systematic review, health care provider-to-provider interventions). The systematic review was registered in PROSPERO (CRD42020179814) (Crandall et al., 2020), an international registry for systematic reviews.

Sources

For all reviews, we searched the Cochrane Database of Systematic Reviews, PubMed, and PsycINFO for systematic reviews for reference mining. We also contacted topic experts to identify pertinent studies. Some experts were invited as key informants. Grey literature searches focused on known initiatives, such as Balint groups, to identify intervention evaluations.

For the scoping review, we searched specifically publications indexed in PubMed (biomedical literature and life science), PsycINFO (psychological research literature), the Web of Science (general scientific literature), and the Defense Technical Information Center (DTIC) (military technical reports and research projects). In addition, we used the studies included in the systematic review. We convened discussions with key informants to verify that relevant publications and formally evaluated peer-to-peer support programs were identified. The scoping review was restricted to publications on practicing professionals already working in their profession and peer-to-peer support interventions for colleagues and co-workers.

For the evidence map we searched PubMed, PsycINFO, Web of Science, DTIC, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) (nursing and allied health literature), Business Source Complete (database of peer-reviewed business journals), Academic Search Complete (general scholarly research), and Scopus (general scientific literature). We restricted the evidence map to professions that are characterized by professional interactions with other people who, to some extent, depend on the profession (see social responsibility discussion). Searches included the following labor categories: Community and Social Service; Education, Training, and Library; Health Occupations; Legal; Management; Military; Personal Care and Service; and Protective Service selected from the U.S. Bureau of Labor Statistics. Within each category, we searched all occupations except Business and Financial; Media and Communication; Transportation and Material Moving; and Life, Physical, and Social Science.

For the systematic review, we searched PubMed, PsycINFO, Web of Science, CINAHL,
Scopus, and DTIC for individual studies. In addition, we searched the clinical trial registry ClinicalTrials.gov and the Cochrane Central Register of Controlled Trials (CENTRAL) to identify studies not yet published in journal manuscripts but potentially available for analyses. In addition, we searched PubMed, PsycINFO, and the Web of Science for published systematic reviews on the topic which were reference-minded. The systematic review was restricted to RCTs, clinical trials, cohort studies, and organizational pre-post studies in U.S. participants using database filters and was limited to health care providers. The trial registry search was limited to completed trials.

The search strategy is shown in Appendix A. The results of the searches were collated in one citation database and literature reviewers considered all three reviews during inclusion screening.

Key Informants

We identified a number of content experts to serve as key informants for the project. All are known to have implemented peer-to-peer approaches. We identified key informants through initiatives such as the American College of Physician newsletters addressing peer intervention and recommendations from experts.

We conducted one-hour key informant interviews using a semistructured interview guide. The interviews included the following questions:

- What kinds of organizational initiatives does your organization provide to reduce turnover, productivity measures, absenteeism, stress, and depressive symptoms?
- What types of peer-to-peer support interventions do you participate in at your organization? What types of emotional support does your organization provide to providers?
- Do you participate in any of these support programs? If so, what are strengths and weaknesses of these support programs?
- How do your colleagues provide peer-to-peer support for each other besides these initiatives that are provided at your organization?
- What other programs do you feel that your organization would benefit from having that other similar places are implementing at their own institutions?
- Are there any current peer-to-peer support programs/activities/initiatives/frameworks that you participate in that are outside of your organization or that are currently being developed?
- Are there any relevant publications that the RAND team should look at that would be useful to include for this project?

The interviews took place over the phone and were conducted primarily by one team member with questions from all attendees entertained at the end of the interview. Team members participated in conjunction with members of the Psychological Health Center of Excellence, the sponsoring agency, when available. Notes were taken by the team during the key informant sessions.

The key informants informed the review protocol, including the database search strategy,
grey literature searches, and the key questions across reviews.

**Procedure**

Two reviewers independently screened each title and abstract of identified citations. Full-text publications were retrieved for citations deemed potentially eligible by one or both reviewers. Full-text publications were independently evaluated by two reviewers to determine whether they met the inclusion criteria. Disagreements about the inclusion of a publication were resolved in the team. Reasons for exclusion were recorded in an electronic database.

We created a data extraction form, which included detailed instructions and decision rules for reviewers to maintain a standardized data collection process. To ensure consistency of interpretation of all fields on the form, reviewers pilot tested the form. Data were abstracted by one reviewer and checked by a second experienced reviewer. Any discrepancies were resolved through discussion by the review team.

**Review A: Scoping Review**

The scoping review will address these two questions: What are the roles and functions of professional peers in peer-to-peer interventions in health care settings? Have specific considerations for health care providers in military settings been suggested?

**Scoping Review Eligibility Criteria**

Study inclusion and exclusion criteria were summarized in the following framework (populations, concept, outcomes, and study design):

- **Population:** Publications addressing practicing professionals already working in their profession were eligible. The publications were not limited to health care providers—i.e., physicians, physician assistants, and nurse practitioners—but we were interested in frameworks applicable to health care delivery personnel. We excluded publications focusing on patients and participants not linked through a professional setting (e.g., friends and family). We also excluded students such as nursing students or medical students; publications addressing medical residents already integrated in patient care were included.

- **Concept:** Publications addressing models for peer-to-peer support, such as provider-to-provider interventions, colleagues, co-workers, or other career-to-career models (i.e., support from members on the same organizational level), were eligible. The review focused on organizational initiatives, i.e., facilitated and conducted by the professional organizations, not by personal social network. We excluded studies that focused on other relationships than peers (e.g., supervision by managers or leadership).

- **Outcomes:** Publications needed to address the roles and functions of professional peers in peer-to-peer interventions or models.

- **Study Design:** Publications focusing on concepts and theories of peer support were eligible.
Scoping Review Data Extraction Variables

We extracted the study ID, year, participants (e.g., emergency department physicians), the described roles (i.e., what role peers had) and functions (i.e., what function the peers served) of professional peers in peer-to-peer interventions, and suggested models for peer-to-peer support for professionals.

Scoping Review Synthesis

The scoping review explored the roles and functions of peers in providing peer-to-peer support to determine ways peers could be integrated into interventions. Roles and responsibilities may include providing peer mental health counselling or education or a mixture of both. The function of the peers may vary from providing opportunities to express concerns and worries or educating about existing resources.

We documented the existing models, organizing typologies, or dimensions used to describe the role of peers. With this information, together with the insights from the key informants, we developed a framework that organized the different roles and functions. The framework also tied the intended responsibilities that the peers might have to the desired outcomes that might be achieved (e.g., providing emotional support, validating experiences, serving as role model). The resulting framework could be a logic framework describing factors and possible functions of peers in interventions, and/or an analytic framework that outlines how processes linking peer interaction to the desired outcomes have been conceptualized in existing studies. The framework was designed to integrate the features that characterize the type and level of peer-to-peer interaction. It was also designed to integrate any identified existing framework for peer support in health care providers or to clearly outline how the new framework differs from existing conceptualizations.

The scoping review also highlights literature on military health care providers. We assessed how well existing frameworks apply to military health care providers and settings and, potentially, which unique factors need to be considered in this context.

Review B: Evidence Map

The evidence map was guided by the question: What are the approaches of professional peer-to-peer interventions for mental health and emotional support?

Evidence Map Eligibility Criteria

Study inclusion and exclusion criteria are summarized in the following “PICOTSS” framework (population, interventions, comparators, outcomes, timing, settings, and study design):
Population: Studies addressing practicing professionals—i.e., individuals already working in their profession—were eligible. We excluded publications focusing on students; publications focusing on medical residents were included (already participating in care giving) but not those focusing on medical students.

Interventions: Studies evaluating peer-to-peer support interventions for colleagues, co-workers, or a career-to-career support for selected labor categories ranging from appraisers to veterinarians (see Appendix A for the full list of eligible professions). These interventions were organizational initiatives (facilitated and conducted by the professional organizations, not by personal social network).

Comparators: Studies using historical or concurrent comparators were eligible.

Outcomes: Studies reporting on turnover, productivity measures, absenteeism in the organization, mental health (stress, depressive symptoms, resilience indicators, burnout, suicide), and the experiences of emotional support of the professionals were eligible.

Timing: There were no restrictions related to publication year, the length of the intervention, or the length of the follow-up period.

Settings: There were no restrictions related to settings.

Study Design: Eligible studies included parallel group, individual- or cluster-RCTs, and non-RCTs; cohort studies comparing two cohorts; and large (e.g., 100 participants) or widespread (interventions addressing a large number of participants or affecting an entire site, department, ward, hospital, or other organizational unit) pre-post studies, case series, and time series (more than one point before/after).

Evidence Map Data Extraction Variables

The following information was extracted to display the evidence in a visual overview and a comprehensive evidence table: study ID and publication year, participant type (e.g., health care providers, first responders), sample size, study design (e.g., RCT), intervention type, setting (e.g., health care, military), and effectiveness signal (positive, unclear, no effect).

Evidence Map Synthesis

The evidence map for peer-to-peer interventions documents three dimensions. The x-axis indicates the setting or target population (e.g., health care). The y-axis shows the study design (e.g., RCTs). The size of the bubbles reflects the study size (number of participants). The color or shape of the bubble displays the effectiveness signal.

Review C: Systematic Review

The systematic review was guided by one overarching question: What are the effects of provider-to-provider interventions on organizational measures and mental health and emotional support outcomes in providers? The systematic review was limited to a particular group of professionals: health care providers. In addition, the systematic review addressed whether effects vary by the professional field, by organizational features, by personal characteristics of
professionals, by the health care setting (e.g., military setting), and/or by mode of delivery of the intervention (e.g., in-person)

**Systematic Review Eligibility Criteria**

Study inclusion and exclusion criteria were summarized in the following framework (participants, interventions, comparators, outcomes, timing, settings, and study design):

- **Participants:** Studies of health care providers (physicians, physician assistants, and nurse providers) and of social workers, psychologists, and pharmacists were eligible. We included mixed samples that included eligible participants but excluded studies only addressing other professionals, such as nurses and support staff, and we excluded providers in training (i.e., medical students) unless they were medical residents already involved in care.
- **Interventions:** Studies evaluating peer-to-peer interventions providing support in a formalized interaction (rather than ad-hoc support) were eligible. Interventions for colleagues, co-workers, or career-to-career (i.e., support from members on the same organizational level) were included. Studies needed to report on an organizational initiative (facilitated and/or conducted by the professional organizations, not by personal social networks).
- **Comparators:** There were no restrictions on the type of comparators.
- **Outcomes:** Studies reporting on turnover, productivity measures, absenteeism, mental health (stress, depressive symptoms, burnout, resilience indicators, suicide), and experiences of emotional support of the professionals were eligible.
- **Timing:** There were no restrictions related to publication year, the length of the intervention, or the length of the follow-up period.
- **Setting:** U.S. studies.
- **Study Design:** Parallel group, individual- or cluster-RCTs, non-randomized controlled trials, cohort studies (comparing two cohorts), and large (e.g., 100 participants) or widespread (interventions addressing a large number of participants or affecting an entire site, department, ward, hospital, or other organizational unit) pre-post studies, case series, and time series (more than one point before/after) were eligible. Deviating from the original protocol, we also included post-only studies given the small number of existing studies. We excluded studies reported in an abbreviated format (e.g., conference abstracts, letters to the editor).

**Systematic Review Data Extraction Variables**

We extracted the study ID and publication year and the study design (e.g., RCT) used to evaluate the provider-to-provider intervention. We documented participant details (professional type), health care setting (e.g., military health system), and organizational features (context in which the intervention is implemented). The implementation information (how was the intervention introduced in the organization), status of the peers (e.g., volunteers), support for the peers (e.g., initial training, professional backup), peer intervention details (including type, format, duration), specific roles and responsibilities of the peers (e.g., counseling), specific
functions of the peers (e.g., validating emotions), spread, sustainability information (any information on plans to expand or maintain the intervention, costs or organizational commitments), and barriers to fully rolling out the intervention as planned were abstracted in detail. We abstracted the outcomes measures (e.g., intervention feasibility, uptake, and acceptability; turnover; productivity measures; absenteeism in the organization; mental health; experiences of emotional support, self-efficacy, resilience) and results of the intervention, any adverse or unintended consequences (e.g., peers misjudged situation, in-over-their-head), and the authors’ conclusion.

The data extraction aimed to provide sufficient detail to assess the effects of the intervention as well as context information relevant to other organizations interested in implementing provider-to-provider interventions.

Publications reporting on the same outcome for the same study population were consolidated so that individual studies enter the analyses for each outcome of interest only once.

Systematic Review Risk of Bias Assessment

For the systematic review, the two reviewers assessed the risk of bias of included studies using an adapted version of the Cochrane Risk of Bias Tool (RoB 2) (Sterne et al., 2019) that accommodates a wide range of study designs, including RCTs, non-RCTs, and studies that use historical or concurrent comparators. Specifically, the reviewers assessed risks of bias related to the following:

- selection bias and risk of bias arising from the randomization process
- reporting bias and bias in selection of the reported results
- performance bias and bias due to deviations from intended interventions
- attrition bias and bias due to missing outcome data
- detection bias and bias in measurement of the outcome
- other sources of bias.

For selection bias, we assessed the randomization sequence and allocation concealment in RCTs, as well as baseline differences and potential confounders in all studies. Selection bias assessed whether intervention and control populations differ in other aspects than the intervention allocation. Reporting bias assessment included an evaluation of whether a prespecified analysis plan exists (e.g., a published protocol), whether the numerical results likely had been selected on the basis of the results, and whether key outcomes were not reported (e.g., an obvious effectiveness indicator is missing) or inadequately reported (e.g., anecdotal adverse event reporting). Performance bias evaluated whether patient or caregiver knowledge of the intervention allocation or circumstances, such as the trial context, may have affected the outcome and whether any deviations from intended interventions were balanced between groups. Attrition bias considered the number of dropouts, any imbalances across study arms, and whether missing values may have affected the reported outcomes. Detection bias assessed whether outcome assessors were aware of the intervention allocation, whether this knowledge could have
influenced the outcome measurement, and whether the outcome ascertainment could differ between the intervention and the control group. In addition, we assessed other sources of bias, such as inadequate reporting of intervention details and lack of intention-to-treat analyses.

Systematic Review Synthesis

This systematic review aimed to synthesize the evidence on peer-to-peer interventions to support health care providers. The specific outcome measures in the included studies varied widely, from feasibility to measures such as turnover, productivity, and absenteeism. Key outcomes were the experienced effects on providers, such as experience of emotional support, but studies may report other provider outcomes, such as mental health outcomes (e.g., stress, depressive symptoms). The primary outcome for the systematic review was emotional support of the professionals.

Review findings were discussed narratively and summarized in tables organized by key outcomes reflecting the key questions for this systematic review. When studies had sufficiently similar designs and examine similar outcomes (e.g., trials of interventions that examine depressive symptoms), we performed a meta-analysis to pool results across included studies for each of the outcomes of interest, and we present forest plots for these meta-analyses. We used the Hartung-Knapp-Sidik-Jonkman method for random effects meta-analysis (Hartung and Knapp, 2001; Hartung, 1999; Sidik and Jonkman, 2006; IntHout, Ioannidis and Borm, 2014). Studies with a concurrent comparator were analyzed separately from studies reporting on a historical comparator (i.e., pre-post studies). We differentiated passive comparators (e.g., no treatment) and active comparators (e.g., an alternative treatment).

We conducted subgroup analyses and meta-regressions to address the subquestions of this systematic review, describing results of head-to-head comparisons of interventions where available and indirectly comparing studies in meta-regressions where head-to-head comparisons were not available. We conducted subgroup analyses based on the provider types, differentiating professional groups, such as physicians and psychologists (preplanned subgroup analysis). In addition, we assessed whether the effects vary by the professional field/type of the providers, running meta-regressions to examine modification of the effects of interventions by their professional field (e.g., mental health professionals versus other professions) to address Key Question 3a. Second, we assessed whether the effects vary by the organizational features (Key Question 3b). This work was informed by the broad framework of interventions. Third, we explored differences associated with the personal characteristics of the providers (e.g., age, gender) to address Key Question 3c. We described results of head-to-head comparisons of interventions where available and did a subgroup analysis to compare interventions that targeted providers with different characteristics. We also aimed to examine variation of effects by the health care setting studied to determine whether, for example, there were different effects in military and civilian populations. We also aimed to explore whether effects varied by the mode of delivery of the intervention, differentiating in-person from other models (e.g.,
telecommunication support).

We planned sensitivity analyses to assess the robustness of study results as data allow. This involved excluding studies with high risk of bias and excluding clear outliers. We assessed publication bias using the Begg test (Begg and Mazumdar, 1994) and the Egger test (Egger et al., 1997) where sufficient studies were available. We applied the trim and fill method for adjusted effect estimates (Duval and Tweedie, 2000) where there was appropriate evidence of publication bias. The method evaluates the potential for publication bias, estimates the number of missing studies, and adjusts the effect size for potentially missing studies.

The summary of findings and the quality of the evidence was documented in a comprehensive table. Where appropriate, we aimed to translate effect sizes into clinically meaningful results, such as improvement on common scales or relate results to minimally important differences.

**Systematic Review Quality Of Evidence**

We assessed the quality of the body of evidence for the effect estimate of each outcome using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach (Guyatt et al., 2008; Puhan et al., 2014; Salanti et al., 2014). This approach entails assessing eight domains related to a body of evidence. Five criteria may downgrade the quality of evidence: limitations of included studies, indirectness, inconsistency, imprecision, and publication bias. Three domains may upgrade the quality of evidence: large effect size, dose-response relationship, and plausible residual confounding would suggest a spurious effect. Based on these assessments, we rated the quality of evidence for each analysis as falling into one of four categories:

- **High** indicates that we are very confident that an effect estimate lies close to the true effect for a given outcome, as the body of evidence has few or no deficiencies. We believe the findings are stable and that further research is very unlikely to change confidence in the effect estimate.
- **Moderate** indicates that we are moderately confident that an effect estimate lies close to the true effect for a given outcome, as the body of evidence has some deficiencies. We believe that the findings are likely to be stable, but further research may change confidence in the effect estimate and may even change the estimate.
- **Low** indicates that we have limited confidence that an effect estimate lies close to the true effect for a given outcome, as the body of evidence has major or numerous (or both) deficiencies. We believe that additional evidence is needed before concluding either that the findings are stable or that the effect estimate lies close to the true effect.
- **Very low** indicates that we have very little confidence that an effect estimate lies close to the true effect for a given outcome, as the body of evidence has very major deficiencies. The true effect is likely to be substantially different from the estimated effect; thus, any estimate of effect is very uncertain.
3. Results

In this chapter, we describe the results of the key informant interview and the findings of the three literature reviews.

Key Informant Interviews

We conducted seven interviews with key informants about peer-to-peer support programs in health care. Key informants were selected based on recommendations provided by project members. Sites at which programs were established included university hospitals, a trauma center, a public health department, professional organizations (e.g., American College of Physicians, American Medical Association), and a local government agency. Key informants included physicians, a psychologist, and a social worker:

- Charles Benight, PhD: University of Colorado, Colorado Springs Support-Net Program
- Jo Shapiro, MD: Center for Professionalism and Peer Support at Brigham and Women’s Hospital
- Daisy Smith, MD, and Chrissy Walter: American College of Physicians Well-Being Program
- Kevin Taylor, MD: Organizational Transformation American Medical Association
- Albert Wu, MD: Resilience in Stressful Events (RISE) peer support program

The semistructured interviews focused on type of situations prompting the need for support, manner of referral to the program, whether support was provided by volunteers, the training and selection process for peer supporters, the type of support provided, efforts to evaluate the program, and the existence of published papers describing the program. The described peer support programs varied with respect to the situations prompting support, the manner of referral to the program, potential participants, and the program components.

The Support Net Program, developed to identify secondary trauma and burnout, was designed for military mental health providers who could access the program for use with patients and their families and for their own workplace trauma exposure. The goal was to develop a technology-based trauma-informed web intervention system that could be peer-supported. The peer-to-peer aspects of the program were multilevel and included a social network and coaching. Peer support functioned in the context of goal-setting, which allowed the participant to set goals of strength and empowerment, to develop a supportive social network to help achieve those goals, and to receive coaching. The coach’s objectives were to guide the participant and be someone that the participant could talk to and discuss challenges with. There were six coaching sessions. Little peer-supporter training was needed because there were coaches who were mental
health providers; however, more training might be required for coaches from other clinical disciplines. In the Support Net Program, an entire team supported the peers and visited on a weekly basis to discuss the status of the peer clients. One barrier to implementing this type of program is that there should be full organizational commitment to the mental health and wellness of the population being assessed. Repeated efforts may be required to convince organizations that these types of programs are valuable.

The Brigham and Women’s Program is set up for anyone in an organization, usually the health care team (e.g., nurses, therapists, pharmacists, physicians), who could be involved in an emotionally traumatic event (e.g., medical error, illness of a colleague or patient, chronic stress, depression, being named in a lawsuit). Support is offered as soon as a traumatic event occurs. The program is set up as a “reach out” program. Most of the participating physicians get their support by phone. An estimated two dozen programs use this type of model. Access to the program is determined by the organization. Potential weaknesses of the peer-support program are that some individuals will be missed because they suffer silently and chronically. Strengths of the program are that it is not expensive, it is easy to set up, and the individuals who provide the peer support are volunteers. Enough people are trained so that they are not overburdened, and the support is well received. The training program usually is planned for 20 to 30 individuals from various disciplines who have been chosen by peer nomination from their department divisions. Candidates are trained in a type of peer support that is between mental health support and informal peer support and is referred to as “formal peer support.” Training does not vary by specialty type or type of provider.

The American College of Physicians (ACP) Physician Well-Being and Professional Fulfillment Program provides a positive psychology, “appreciative inquiry” approach; seeks to identify the strengths of the program participants; and does not focus only on what is not working for the participants. There are 75 ACP chapters with at least one “well-being champion” (i.e., a coach). The individual doing the coaching cannot have a hierarchical relationship with the individual being coached. ACP uses the well-being index created by Martin Seligman, a psychology professor at the University of Pennsylvania, to assess how well the program is working. There is a 16-person task force involved in training well-being champions during a live two-day pre-meeting session at the annual ACP internal medicine meeting. Also, physician well-being sessions, outside of the program, are held for all physicians who want to attend. Physicians take the best practices they have learned into their own communities; over 160 well-being champions have been trained. The ACP is tracking the needs, activities, and well-being of the well-being champions, but ACP does not track the mental health outcomes of the participants.

The Stanford Physician Support Network was created to help physicians respond to difficult clinical events that result in loneliness, self-doubt, depression, and anxiety. The program also addresses burnout, resilience, stress, and trauma. Unpaid, volunteer, trained physicians from a variety of departments and with different levels of experience provide support. Conversations are confidential, and the participant and peer supporter are not from the same department. After a
difficult clinical event, all involved physicians are contacted. In addition, concerned colleagues or supervisors can ask for a physician to be contacted and physicians can refer themselves. Physicians and peer supporters are matched by hospital or organization, by medicine versus surgery, and by position in the organization. Conversations are usually held over the phone but can also be held in person. The contact is usually a one-time event, but an occasional follow-up contact may be scheduled. Physician participation is voluntary. The role of the peer supporter is to listen, offer perspective, emphasize self-care, provide resources, and identify options. The program also provides litigation support and psychology backup as needed. Peer supporters are nominated to join the program, and self-nomination does not occur. Support for the peer supporters includes training, a one-page handout on recognizing stress, a private website, psychological backup provided 24/7, a psychiatrist group session, a manual, and training on how to handle potentially suicidal physicians.

The American Medical Association STEPS Forward™ program is an interactive practice transformation series that provides strategies for physicians to redesign their practices to minimize stress and increase fulfillment. It consists of over 50 online educational modules that address practice challenges and provide continuing medical education credit. The modules include information about implementation, case studies, downloadable videos, tools, and resources. The modules address practice efficiency and patient care, patient health, physician health, and technology and innovation. There are six modules that address physician burnout and include information on developing a supportive environment, including peer support, in the workplace for physicians and residents. These include Physician Suicide and Support, Resident and Fellow Burnout, Physician Burnout, Physician Well-Being, Hospitalist Well-Being, Creating the Organizational Foundation for Joy in Medicine™.

The Johns Hopkins University Resilience in Stressful Events (RISE) Program is essentially an autonomous team of about 35 to 40 trained peer responders from different clinical specialties who function on an on-call basis to respond to calls of distress from hospital workers who experience, either individually or cumulatively, stressful events and who want to speak to someone. The on-call system is run close to 24 hours per day and promises a response within 30 minutes. Peer responders meet face-to-face in a confidential manner; either one or at least two peer responders meet, depending on the number of distressed hospital workers. The meeting is usually a one-time intervention lasting 30 to 60 minutes, and no reports are made to anyone. Peer responders do not contact potential participants unless they express their need by contacting the RISE program. The intervention is described as about 80 percent psychological first aid. The perceived strengths of the program are the immediate response to the request for help and the approach of saying “How are you doing?” rather than asking for a description of what happened. Of note, there is very little evaluation of the RISE program within the organization; the program does not take names and does not do follow-up with participants. Staff only ask the peer responders how the interaction went and how it could be done better. Peer responders are volunteers, initially self-selected, who undergo a further selection process and then training.
There is a weekly debriefing call to discuss any requests for assistance made during the prior week. There are two days of training six months apart. The first day of training is for the hospital and department/unit leaders. The goals are to convince the leaders that the program is needed and that they need to finance it even though it is a voluntary program, to identify and screen a team to lead the program, and to create a publicity plan and call schedule. The second day of training focuses on training the responders. Thirty organizations had been trained in 2019. The developers of the RISE program also run a training program called Caring for the Caregiver.

The Veteran Peer Access Network program is a peer support initiative, funded by Los Angeles County in November 2019, to reduce barriers and wait time for veterans and their family members in accessing resources for housing, mental health care, substance abuse treatment, job placement, and legal services. The program is not designed to develop peer support for health care professionals. The peer support approach is a navigator and outreach function rather than a more traditional support function of helping someone through the steps of a recovery plan. The plan for the program is to obtain the appropriate technology to set up a referral platform to track self-referrals and referrals by others and the length of time for the veterans to receive the appropriate services. Networking and engagement planning will be a significant part of setting up the program. The network collaborates with first responders, courts and jails, hospitals, National Guard and reserve units, universities, and temporary housing programs. The initial goal is to hire peer teams consisting of veterans, military family members, and caregivers. This program is the “first publicly-funded, community-driven support network serving Veterans and their families in the US” (Los Angeles County of Public Health, 2019).

All key informants agreed that there is little peer-reviewed information available on mental health outcomes in participants for these types of programs. The response to all interview questions are documented in Appendix B.

**Published Literature**

Figure 3.1 describes the literature flow across all identified literature for the three literature reviews. The list of excluded studies, with reasons for exclusion, can be found in Appendix C.
Across reviews, we identified 114 studies that contributed to at least one of the literature reviews.

**Scoping Review Results**

The scoping review focused on identifying publications on workplace peer-to-peer interventions that are relevant to the development of peer-to-peer support interventions in health care settings. In total, 75 publications met inclusion criteria.

The identified publications were empirical studies and theoretical papers that applied peer-to-peer principles to address workplace challenges for professional caregivers or were broadly applicable to the health sector. Table D.1 in Appendix D documents all included publications. As
Table D.1 shows, workplace peer-to-peer interventions have been used to promote safety practices, reduce occupational stresses, ameliorate effects of trauma, enhance professional performance, and promote resilience and empowerment. Other identified publications included theoretical elements relevant to health care workplace peer-to-peer interventions; 27 of the included publications referenced a theoretical model. In many cases, the model was specific to an intervention proposed by the publication (Olson et al., 2015; Vinson and Randel, 2018; El Hechi et al., 2020; Cunningham and Zlotos, 2019).

Participants of the majority of the studies were physicians or nurses. However, across all identified studies, participants varied broadly and included clinical teachers and university faculty, police, and federal bureau of investigation employees, first responders, other health professionals, home care workers, or school counselors.

Scoping Review—Key Question 1: What Are the Roles and Functions of Professional Peers in Peer-to-Peer Interventions in Health Care Settings?

The included publications suggested several roles of peers. A large proportion (54 of 75) of studies highlighted support, such as providing informal and unstructured support (e.g., providing reminders, reinforcement, encouragement, or coaching, and sharing personal experiences or narratives as a ‘buddy” or “partner”).

Other peer-to-peer publications indicated that a key role of peers is being a mentor (20 of 75). This included approaches where peers formally oversaw and provide feedback on clinical activities and/or organizational productivity to help set and/or reach goals or the peer serves as a “role model.” Peers as facilitator of group interactions (e.g., group discussions, team-building activities) to create or strengthen relationships to help set and reach goals together were also suggested (15/75). A smaller proportion of publications (11 of 75) mentioned the peer serving a counselor role, i.e., peers providing knowledge, guidance, and concrete tools to help set and/or reach goals. Similarly, some studies (11 of 75) mentioned peers serving as educator for the peer.

Publications also addressed the functions the peer serve in their roles. One clear function of peers is to provide the coworker with resources and this function was mentioned in almost all included publications (72 of 75). Examples were connecting the intervention recipient to crisis hotlines or wellness groups; finding help for grief and loss in the workplace, substance and alcohol use problems, spiritual care services, ombudsman services, compliance, and ethics helplines; or identifying anonymous self-testing sites, mental health professionals, physical and behavioral health programs, trainers, and professionals. A substantial proportion of publications (34 of 75) highlighted the valuable function of peers as individuals to whom coworkers can express concerns to because they have a unique insight into the work circumstances. This may include the peer listening with empathy, asking open-ended questions, offering support, and paraphrasing what is said. Importantly, this also included avoiding trying to “fix” the situation; a challenging task, particularly for health care providers who are used to solving clinical problems for their patients.
A further function of peers was to provide help to identify options for recovery (20 of 75). This entails developing healthy behavioral responses to stress, developing family/friend support networks and professional support as needed, or open communication with supervisors to improve workplace performance. Other functions of peers that were highlighted in publications were to provide perspective for the receiver of the support intervention (8 of 75). This may include helping the intervention recipient understand and gauge stressful situations or triggers and recognizing how stress is experienced and what the response is to the events.

Scoping Review—Key Question 1a: Have Specific Considerations for Health Care Providers in Military Settings Been Suggested?

A subquestion of the scoping review was whether there are existing frameworks for military health providers or publications suggesting that peer-to-peer support interventions need to be adapted to because of the unique work situation professionals in the military health system face. We identified two programs specifically designed for the military health context.

The SupportNet program was designed to provide peer support to military mental health providers (Bock, 2016). In the program, a peer provider assisted as a telephonic coach. Outside the web-based system, a peer coach could also reach out on a weekly or biweekly basis to help the peer participant stay focused. The objective of the SupportNet program was to develop a coaching rather than a therapeutic relationship, where the coach could guide the participant and be someone that the participant could talk to and discuss challenges with. Although initially designed for mental health providers, the aim was to develop a program that could be implemented with coaches that were not mental health providers. The coaching program was highly structured and continued over six weeks, and the peer leaders used a manual to guide their interactions with the peer participants.

The UK Royal Marines have made extensive use of Trauma Risk Management (TRiM), a peer-support system that operates through practitioners embedded within operational units (Frappell-Cooke et al., 2010). TRiM aims to promote recognition of psychological illness and to facilitate social support. It aims to promote recognition of psychological illness and to keep personnel functioning after traumatic events by enhancing the understanding and acceptance of stress reactions within an appropriate environment. Both SupportNet and TRiM are based on the assertion that military health care providers require support tailored to their unique situation and stressors in a military context.

In addition, our relevance assessment also showed that only 12 out of all included publications were classified as not relevant to the military health setting. While the large majority of interventions was not specific to the setting, the intervention approaches were determined to be equally relevant to the military health system than civilian settings.
As part of this project, we iteratively developed a framework for peer-to-peer support in health care settings (shown in Figure 3.2). We first developed an initial framework based on the conversations with the key informants, identified background articles (see Appendix C), and the scoping review results. In a second step, we tested the content validity and usability of the framework. For this step, we abstracted framework elements from a subset of publications (Beckman et al., 2012; Benson et al., 2002; Chen et al., 2016; Dyess and Parker, 2012; Eagle, Creel, and Alexandrov, 2012; Edrees et al., 2016; El Hechi et al., 2020; Fornari et al., 2018; Fox, 2010; Graham et al., 2019; Gray-Toft and Anderson, 1983; Lewis et al., 2017; Marks et al., 2017; Mayer et al., 2014; McDermott, Brook, and Ben-Isaac, 2017; Merandi et al., 2017; Mills and Mullins, 2008; Mundt, 2001; Olson et al., 2016; Olson et al., 2015; Palamara et al., 2015; Peterson et al., 2008; Pololi et al., 2002; Ripp, Fallar, and Korenstein, 2015; Rohatinsky, Cave, and Krauter, 2020; Schwartz et al., 2020; Shanafelt et al., 2017; Shoji, Benight, and Stearns, 2016b; Tuzzio et al., 2017). The selected publications used to test the developed framework all addressed interventions, and these were evaluated in a broader health care setting. Hence the test subset included only publications that also contributed to the evidence map and, in some cases, also the systematic review of provider-to-provider intervention evaluations. The roles and functions described in these studies were used to modify the framework and established the final framework.

The framework was designed as a menu of roles and functions that can appear in studies in different combinations or alone and can be related to study goals and outcomes. In terms of context, peer participant professional roles may include a range of health care professionals, including frontline clinicians, physicians, physician assistants, nurse practitioners, marriage and family therapists, social workers, psychologists, and home care workers. A further important aspect of the context is the participants’ levels of training. In many identified published approaches, peer-to-peer models included pairings of novice and established coworkers or interventions specifically addressing support for new staff members. Examples include dyads of experienced and more junior clinicians and medical school faculty members and interventions specifically supporting medical residents (Chen et al., 2016; Kitts et al., 2015; Calder-Sprackman et al., 2018). All described interventions were directed at support for colleagues, co-workers, or individuals in career-to-career professional development activities. However, peer leaders were not necessarily at the same organizational level or from the same medical discipline as the peers receiving support (Krzan et al., 2015).
Part of the context for peer-to-peer support is the organizational setting, such as hospitals or primary care clinics. For the context, the differentiation between civilian and military health setting is equally important. Finally, we developed the model with health care as an occupational setting in mind. However, the nature of the support interventions can also cover law enforcement and the fire department, in particular in the context of first responders. As Table D.1 shows, some of the identified publications addressed peer-to-peer support in other than health care settings while using the same rationale and support mechanisms indicated in health care settings (Marks et al., 2017; Alvarez et al., 2007; Gouveloos-Trines et al., 2017).

The framework also focused on describing the roles of the peer leader who delivers, and sometimes develops, the content of the intervention for the peer participant, who receives the support, education, and/or referral that the intervention provides. Figure 3.3 unpacks this aspect further and provides concrete examples of the roles and responsibilities of the peer providing the support.
The framework assumes that the interaction between the peer leader(s) and peer participant(s) may be in a dyadic or group setting. Peer participants in a group setting may have permanent, rotating, or guest leaders who may use workbooks or manuals provided by the sponsoring organization. Peer leaders are often trained by the sponsoring organization and provided with written material to use during the intervention.

*Emotional debriefing* provides relatively short-term personal and/or professional support, requested or recommended, for health care or trauma care professionals experiencing a traumatic or stressful workplace event. The support is independent of disciplinary processes. In the key informant interviews, three of the programs described focused on the peer leader emotional debriefing role:

- The Brigham and Women’s program is set up for anyone who could be involved in an emotionally traumatic event (e.g., medical error, illness of a colleague or patient, chronic stress or depression, or being named in a lawsuit). Support is offered as soon as a traumatic event occurs, and the program is set up as a “reach out” program.
- The Stanford Physician Support Network program was created to help physicians respond to difficult clinical events that result in loneliness, self-doubt, depression, and anxiety. After a difficult clinical event, all involved physicians are contacted. In addition, concerned colleagues or supervisors can ask for a physician to be contacted and physicians can refer themselves. Physicians and peer supporters are matched by hospital or organization, by medicine vs. surgery, and by position in the organization.
- The RISE program is essentially an autonomous team of trained peer responders from different clinical specialties who function on an on-call basis to respond to calls of distress from hospital workers who experience, either individually or collectively, stressful events and who want to speak to someone. Peer responders do not contact
potential participants unless they express their need by contacting the RISE program. An essential part of the project is psychological first aid.

Among the 27 peer-to-peer health care intervention studies that were used to validate the model, emotional debriefing was seen as the peer leader role alone in five studies (Edrees et al., 2016; El Hechi et al., 2020; Graham et al., 2019; Krzan et al., 2015; Marks et al., 2017; Merandi et al., 2017), with coaching in one study (Shanafelt et al., 2017); and with facilitation in one study (McDermott, Brook, and Ben-Isaac, 2017).

Coaching is a structured, performance-driven, measurable collaborative process in which coaches and clients partner to achieve the client’s goals. The International Coaching Federation defines peer coaching as “partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and professional potential” (International Coaching Federation, undated). Coaching tends to be more short-term. Coaches provide reinforcement, encouragement, sharing of personal experiences or narratives to help participants reach their goals. In the key informant interviews, two of the programs described focused on the coaching peer leader role:

- The SupportNet program is a peer-supported technology-based trauma-informed web intervention system. In the program, a peer provider assisted as a coach with the objective to develop a coaching rather than a therapeutic relationship, where the coach could guide the participant and be someone that the participant could talk to, and discuss challenges with, in the context of a structured program.
- The American College of Physicians Physician Well-Being and Professional Fulfillment program has over 70 chapters with at least one “well-being champion” (or coach). The program provides a positive psychology, “appreciative inquiry” approach; looks to identify the strengths of the program participants; and does not focus only on what is not working for the participants.

Among the 27 peer-to-peer health care intervention studies, coaching was seen as the peer leader role alone in two studies (Shoji, Benight, and Stearns, 2016b; Palamara et al., 2015), with mentoring in one study (Tuzzio et al., 2017), and with emotional debriefing in one study (Shanafelt et al., 2017) as described above, for a total of four studies.

Counseling provides a more formal type of mental health and emotional guidance and advice focusing on a specific problem or issue (e.g., difficulty managing stress, family problems). It is more likely to be “why-oriented” and theory-driven. It may be diagnostic and focus on recovery from past traumas. Boundaries with therapy may be somewhat blurred. Among our test set of 27 peer-to-peer health care intervention studies, counseling appeared to be the peer leader role with facilitation in two studies (Gray-Toft and Anderson, 1983; Schwartz et al., 2020):

- The Gray-Toft study addressed role conflict and ambiguity in hospital hospice nurses, and participant groups were led by the PhD senior author, a chaplain, and two facilitators.
- The Schwartz study addressed development of physical and procedural infrastructure to promote physician wellness. Curricular content in the program included strengthening
emotional balance, tracking and regulating stress responses, interpersonal boundaries, priorities in interpersonal conflict, and managing disruptive patients.

**Mentoring** in identified approaches tends to be a more long-term, formal or informal, interaction occurring in the context of developing co-workers in which the mentor provides feedback to the mentee on organizational activities and productivity to improve performance. The mentor serves as a role model and usually fills a more senior role in an organization than the mentee. The mentor and mentee may still be peers with respect to challenges arising from gender and/or being a member of an under-represented community. The mentor does not fulfill a disciplinary or supervisory role with respect to the mentee, but instead provides support for personal and/or professional challenges. In the approaches we identified, mentors can be recommended, selected by the mentee, or assigned and can either come from the same or from a different organization as the mentee. In some cases they were matched with the mentee based on gender or on being a member of an under-represented community. In our test set, mentoring was seen as the peer leader role alone in four studies (Benson et al., 2002; Fox, 2010; Mills and Mullins, 2008; Mundt, 2001), was combined with facilitation in three studies (Chen et al., 2016; Dyess and Parker, 2012; Files et al., 2008; Lewis et al., 2017; Lewis et al., 2016; Mayer et al., 2014; Rohatinsky, Cave, and Krauter, 2020), and with coaching in one study (Tuzzio et al., 2017) in the 27 reviewed studies. Mentoring programs may include activities carried out in dyadic or group sessions.

**Facilitation** takes place in a group setting in which the peer leader facilitates group interactions (e.g., group discussions, team-building activities), with the primary purpose of creating or strengthening relationships between and among individuals by encouraging collegiality, sharing of experiences, mutual support, a sense of community and connectiveness, and giving meaning to work. The facilitator can fill the role on a permanent basis, be an alternating member of the peer group, or be a guest speaker internal or external to the organization. The facilitator may or may not participate in the group discussions and may or may not guide the peer group using workbooks or manuals provided by researchers or the sponsoring organization. Among the 27 peer-to-peer health care intervention studies, facilitation was the most commonly seen peer leader role. The facilitation role was seen alone in eight studies (Beckman et al., 2012; Davidson et al., 2017; Eagle, Creel, and Alexandrov, 2012; Fornari et al., 2018; Olson et al., 2016; Peterson et al., 2008; Pololi et al., 2002; Ripp, Fallar, and Korenstein, 2015), with mentoring in six studies (Chen et al., 2016; Dyess and Parker, 2012; Files et al., 2008; Lewis et al., 2017; Lewis et al., 2016; Mayer et al., 2014; Rohatinsky, Cave, and Krauter, 2020) as described above, and with emotional debriefing in one study (McDermott, Brook, and Ben-Isaac, 2017) also as described above.

In the framework, we differentiate five peer leader functions or tasks: listens with empathy, provides perspective, identifies resources, is alert for referral indicators, and helps select, prioritize, and reach goals. Figure 3.4 provides more details outlining these functions.
The functions and responsibilities can be applied alone or in combination with any of the peer leader roles. Peer leader functions were reported in some published articles, described during key informant interviews, and often described on websites addressing the peer-to-peer intervention programs. For example, the emotional debriefing peer leader role can be accomplished by listening with empathy, providing perspective, identifying resources, and being alert for referral indicators. The coaching peer leader role can be accomplished by identifying resources, being alert for referral indicators, and helping the intervention participant select, prioritize, and reach goals.

Furthermore, the potential deliverables of the peer-to-peer interventions suggested in the framework are support, education, and referral (as needed) for the participating peers, as shown in Figure 3.5.
Support was the most frequently provided deliverable in existing publications of peer-to-peer support in the work context. In some empirical studies, the focus was on personal support (e.g., emotional debriefing), and in some studies the focus was on professional support (e.g., mentoring). In others, both personal and professional support for challenges was provided.

The framework also includes potential program-level outcomes and workplace goals. We differentiated workplace, behavioral, and mental health outcomes as described in more detail in Figure 3.6.

The outcomes are meant to be the direct results of the interventions and include efforts that intervention participants make to improve their physical health, self-efficacy, and resilience. Potential workplace achievable goals may include participant increased retention (e.g., increased satisfaction; decreased burnout, absenteeism, depression, anxiety, and suicide risk) and enhanced participant performance (e.g., increased productivity and professional performance such as promotions, articles published, grant proposals funded).
Evidence Map Results

The evidence map includes 72 evaluations of peer-to-peer interventions in the work context. Table D.2 in Appendix D provides a broad overview.

Of these evaluations published in the international literature, 33 studies were pre-/post-intervention comparisons, i.e., reporting on the status before and after the peer-to-peer intervention had been implemented. In total, 21 studies were post-intervention studies, i.e., provided no comparator to the status without or before the intervention. We also included 15 RCTs that reported on a concurrent control group and randomly assigned participants to the intervention and control group. In addition, we identified two clinical trials that compared a peer-to-peer intervention with a control group but that did not use random assignment to the groups.

Sample sizes of the studies ranged widely from four to 1,559 participants. This included six studies that included ten or fewer participants; often, these were qualitative interviews assessing the experiences of individual participants with the peer-to-peer interventions (Tuzzio et al., 2017; Reyes Ortega et al., 2019; Agarwal, Brooks and Greenberg, 2020; Schwartz et al., 2020; Barron, Abdallah and Heltne, 2017; Boyle and Kochinda, 2004; Fox, 2010). We also identified four studies that reported on more than 1,000 participants that had access to the program (Tamers et al., 2011; Pisarski et al., 2006; Greenberg et al., 2010; Flannery et al., 2011).
Evidence Map—Key Question 2: What Are the Approaches of Professional Peer-to-Peer Interventions for Mental Health and Emotional Support?

The evidence map shows evaluations of a wide variety of interventions involving peer-to-peer support. The description of the intervention approaches for the included studies is documented in detail in Table D.2 in Appendix D. All interventions had a peer component—i.e., colleagues provide a supporting role for each other—but several interventions had multiple components in addition to the peer-to-peer support. Approaches included peer support for personal and professional needs for health care professionals (Shanafelt et al., 2017), peer coaching in education (Johnson et al., 2017b), peer-to-peer mentoring in sports (Hoffmann and Loughead, 2016), team support in business (Jungert et al., 2018), psychological services for firefighters (Alvarez et al., 2007), peer supporter training in public organizations (Agarwal, Brooks, and Greenberg, 2020), and faculty mentoring in academia (Benson et al., 2002).

Types of participants in the included studies were office employees, health care workers, firefighters, nurses, physicians, school counselors, physicians, military mental health providers, medical school faculty, disaster responders, hospital social workers, special educators, dementia service staff, military personnel, prehospital providers, intercollegiate athletes, manufacturing workers, banking sector employees, research assistants, pharmacy staff, midwives, home care workers, first responders, anesthetists, health care workers, and mental health therapists. The interventions had been implemented in health care settings, fire departments and first responder agencies, schools, public and private organizations, the military, academia, sports, the manufacturing industry, the banking industry, the service industry, and businesses. The vast majority (53 of the 72) of the studies evaluated interventions for health care settings.

Authors of 64 studies reported positive (beneficial) effects of the evaluated peer-to-peer intervention. The remaining studies reported no effects or positive results for certain subgroups of participants. Of the 15 RCTs, 11 indicated positive effects of the tested intervention. This included beneficial effects in home care (Olson et al., 2016), primary care clinicians in health care (Linzer et al., 2015), special educators in education (Cooley and Yovanoff, 1996), nurses and midwives in health care (Lundeen et al., 2019), medical school faculty (Lewis et al., 2017), health care workers in health care (Peterson et al., 2008; Sijbrandij et al., 2020), service industry (McCance et al., 2013), military personnel in the military (Greenberg et al., 2010), and military mental health providers in the military (Shoji, Benight, and Stearns, 2016b) and disaster responder (Cheung, 2016) settings.

Figure 3.7 is a visualization of the existing evidence base.
Figure 3.7. Bubble Plot Professional Peer-to-Peer Interventions

NOTE: The effectiveness signal is based on study-specific outcomes (e.g., satisfaction, engagement) reported by the authors.
The evidence map includes all identified evaluations of peer-to-peer interventions for professionals. The studies are represented by bubbles on the plot, and the size of the bubbles is proportionate to the size of the study. The x-axis orders the existing evidence by study design, indicating the large number of studies without baseline or comparator data. Studies addressed a variety of health care personnel. The y-axis shows the broad settings, indicating the large concentration of research in the health care setting.

The shading in the circles indicates the effectiveness signal as reported by the authors, often based on study specific outcomes (satisfaction, engagement, feasibility). It should be noted that this is only a very broad indication of the effect of the intervention, as most studies did not report statistically significant differences between intervention and control groups in key outcomes such as experienced emotional support, relevant mental health outcomes (e.g., stress, depressive symptoms), or workforce related outcomes (e.g., turnover or absenteeism). Instead, studies often reported on study-specific outcomes, participant satisfaction with the intervention, successful engaging participants, or feasibility of establishing the intervention in the workplace.

**Systematic Review Results**

The systematic review was focused on U.S. health care providers, i.e., provider-to-provider interventions. In total, 21 studies met inclusion criteria (Beckman et al., 2012; Benson et al., 2002; Boyle and Kochinda, 2004; Eagle, Creel, and Alexandrov, 2012; Edrees et al., 2016; El Hechi et al., 2020; Flannery et al., 2011; Fornari et al., 2018; Graham et al., 2019; Linzer et al., 2015; Marks et al., 2017; McDermott, Brook, and Ben-Isaac, 2017; Merandi et al., 2017; Palamara et al., 2015; Penson et al., 2010; Ripp, Fallar, and Korenstein, 2015; Schwartz et al., 2020; Shanafelt et al., 2017; Shoji, Benight, and Stearns, 2016b; Smith and Hough, 2011; Tuzzio et al., 2017).

We were specifically interested in studies that addressed health care professionals that may have to make difficult decisions without much support in the situation—for example, because they carry the ultimate responsibility of clinical decisions during a shift. We accepted studies in mixed samples, such as services available to all clinical personnel, but only studies that included physicians, physician assistants, nurse providers, psychologists, social workers, and first responders were eligible.

Of these 21 identified studies, three used an RCT design (Ripp, Fallar, and Korenstein, 2015; Shoji, Benight and Stearns, 2016b; Linzer et al., 2015) We also identified a study with a cohort design comparing participants that had taken advantage of the provider intervention with those that did not participate (Benson et al., 2002). As documented in Table D.3, 11 further studies used a pre-post design and had, at least for some outcomes, baseline data to estimate the size of the change since the implementation of the intervention. We also included six post-only studies. This inclusion was a deviation from the registered inclusion criteria. However, it was in response to studies reporting relevant and important interventions and the assurance from content experts
and our own literature review findings that useful provider-to-provider interventions may not have yet been assessed in formal research studies.

**Risk of Bias**

The methodological rigor of the included studies varied widely, especially because a broad range of study designs and analyses were eligible. We assessed all included studies for their potential of common sources of bias that can distort the findings of research studies. Figure 3.8 shows the risk of bias across studies.

![Figure 3.8. Risk of Bias Assessment](image)

The risk of *selection bias* and confounding was rated high for a large number of studies. The nature of the study often suggested that the reported intervention effects may not be free from confounding—for example, in pre-post studies, effects of the intervention are indistinguishable from secular effects, i.e., other changes co-occurring regardless of the intervention. *Reporting bias* was high in a number of studies—for example where studies did not report on key outcomes that tested the effectiveness of the intervention using psychometric measures but instead commented on the feasibility of the intervention. We rated many studies as unclear with regard to *performance bias* (whether the knowledge of receiving the intervention may have influenced the assessment). *Detection bias* was often rated as high, given that participants were not blinded and most studies used self-reports only to assess the intervention effects. With regard to *attrition bias*, many studies did not report on the proportion of eligible participants that contributed to the
outcome assessment. For most studies, no other sources of bias were detected. The ratings of the individual studies are shown in Appendix D.

**Systematic Review—Key Question 3: What Are the Effects of Provider-to-Provider Interventions on Emotional Support, Organizational Measures, or Mental Health Outcomes in Providers?**

The systematic review set out to answer what the effect of the provider-to-provider interventions are. The primary outcome was emotional support, i.e., were the support interventions successful in providing the health care professionals with more support. As outlined, several studies had no historical or concurrent comparator, hence could not meaningfully contribute to this question. Table 3.1 documents all identified studies and provides a description of the intervention, includes all relevant outcomes reported by the authors, and shows the authors’ conclusion.
### Table 3.1. Evidence Table Provider-to-Provider Interventions

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Design</th>
<th>Participants</th>
<th>Setting</th>
<th>Intervention; Roles; Functions of Peers; Support for Peers</th>
<th>Other Organizational Changes; Implementation; Sustainability</th>
<th>Barriers; Co-intervention; Comparator</th>
<th>Effectiveness Results</th>
<th>Unintended Consequences</th>
<th>Authors’ Conclusion</th>
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<tbody>
<tr>
<td>Beckman, Wendland, and Mooney, 2012</td>
<td>Pre-Post</td>
<td>Primary care physicians</td>
<td>Primary care</td>
<td>Mindfulness communication integrating meditation, written narratives, appreciative inquiry, didactic content, and discussion; group sessions, 8 weekly sessions with a silent retreat and 10 monthly sessions</td>
<td>Other changes: N/A Implementation: Series of mailed and electronic communications Sustainability: N/A Barriers: N/A Co-intervention: N/A Comparator: No comparator</td>
<td>Three themes were identified: professional isolation and desire to share experiences, acquisition of attentiveness, listening, honesty, and presence skills, and taking time for professional and personal development. Unintended consequences: Not reported</td>
<td>The Mindful Communication course had benefits both at work and at home: self-awareness, presence, authenticity, greater effectiveness and meaning.</td>
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<td>Benson et al., 2002</td>
<td>Cohort</td>
<td>Physician faculty at medical school</td>
<td>Medical school</td>
<td>Mentorship/preceptorship, first year, was a preceptoring program and a mentoring program offered after junior faculty selected their preceptor/mentor, which allowed for accountability in mentorees’ own professional growth and to match needs with the expertise of senior faculty. 1-on-1 delivery. 67% met monthly, and the preceptoring program was 1 year in length. Roles: Preceptoring, mentoring Function: Role model, counseling, coaching Support: N/A</td>
<td>Other changes: Major organizational reorganization Implementation: Senior faculty were invited to participate; junior faculty were invited through a personalized letter from Dean and Center of Leadership directors. Sustainability: Mentoring added to criteria for faculty promotion, inclusion in orientation for new chairs and faculty, career development programs, and initiation of mentoring award. Barriers: Funding, time limitations, physical distance between medical campuses Co-intervention: Major organizational reorganization bankruptcy Comparator: Control group</td>
<td>Psychosocial functions were rated higher than career functions by preceptees and mentees. The majority of participants rated the program as having a positive or very positive impact on professional life, being worth the effort, and increasing productivity. There was a greater retention rate among junior faculty who participated in the preceptoring program (15% who participated left versus 38% who did not, p = 0.12). Unintended consequences: Not reported</td>
<td>Voluntary mentoring programs can have positive impact on productivity and retention. Selection of preceptor/mentor by junior faculty was successful.</td>
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<td>Boyle and Kochinda, 2004</td>
<td>Pre-Post</td>
<td>Medical directors and nurse managers</td>
<td>Intensive care units in 2 hospitals</td>
<td>Peer support, educational program consisting of 6 core training modules for leadership, communication, conflict resolution, adapting to change, teams, and trust. Group sessions. Training was provided in 2- to 4-hour sessions over 8 months for a total of 23.5 hours. Roles: Peer support, training, provide skills Function: Improve communication between unit leaders Support: Training modules</td>
<td>Other changes: N/A Implementation: N/A Sustainability: N/A Barriers: Hospital merger and turnover in high level leadership Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>Scores for communication skills improved after the intervention (56.67 pre-test, 75.33 post-test). Improvements were seen in problem-solving, in perceptions of the nursing leadership, and in personal stress. Intervention modules were rated as highly useful, and attendance was more than 90% for all sessions. Unintended consequences: Not reported</td>
<td>Intervention was feasible, and collaborative communication can be improved.</td>
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<td>Eagle, Creel, and Alexandrov, 2012</td>
<td>Pre-Post</td>
<td>Pediatric intensive care unit physicians, nurses, social workers, respiratory therapists, and medical students</td>
<td>Pediatric intensive care unit</td>
<td>Burnout and grief support. Facilitated peer support sessions. Sessions focused on coping and grief in relation to peer support and expressions of grief among health care providers and provision of palliative care to pediatric patients. Interactive facilitated peer support. Sessions, duration not reported. Roles: Facilitating sessions Function: Administration of pre-test and post-test instruments, facilitate sessions and group interaction Support: Researchers familiar with study led sessions</td>
<td>Other changes: 18 children died in the pediatric intensive care unit in 2009 at the institution, with 656 discharged, often with chronic illnesses and potentially life-limiting conditions. Implementation: N/A Sustainability: Staff at the institution were open and enthusiastic and felt that sessions were helpful. Barriers: N/A Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>No change in mean Hogan Grief Reaction Checklist scores. Total and domain subscores for the Copenhagen Burnout Inventory were not statistically significant. Unintended consequences: Not reported</td>
<td>Facilitated peer support did not reduce grief and burnout scores, but many factors could have affected results, including small sample size, potentially different participants across sessions, timing of sessions, and the timing of administration of post-test instruments.</td>
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<td>Edrees et al., 2016 Pre-Post</td>
<td>Health care providers Academic medical center</td>
<td>Second victim peer support program designed to provide timely access for employees to receive support that would complement the faculty and staff assistance program. Peers provide support before, during, and after a stressful events. 1-on-1 or group meetings. Roles: Peer support Function: Provide support, coping strategies, and reassurance to employees Support: Initial 6-hour training session with monthly 1-hour meetings. Included lectures, role-playing, and group discussions, 1-hour debriefing meetings after a stressful event encounter, annual refresher training sessions.</td>
<td>Other changes: Patient safety leader identified a gap in the ability to provide consistent and timely second victim support following a significant adverse patient-related event. Implementation: Awareness campaign and pilot program in pediatric center Sustainability: N/A Barriers: Lack of awareness on how to access the program, overcoming concern about confidentiality, risk of exposure to legal or disciplinary actions Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>68.7% of survey respondents preferred a multidisciplinary peer group to offer support, 15.5% preferred a nurse manager, and 13.3% preferred pastoral care. 70.7% preferred individual support. 48.2% preferred to access support a couple of days after the event happened. 88% of cases were reported to be successful by peer responders and 83.3% were reported to have met the caller’s needs. Unintended consequences: Not reported</td>
<td>A majority of calls were reported as successful, and the volume of calls increased each year with increased awareness of the program.</td>
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<td>El Hechi et al., 2020</td>
<td>Post-Only</td>
<td>Surgeons and surgical trainees</td>
<td>Large academic teaching hospital</td>
<td>Surgery second victim peer support program. Formalized peer support program for surgeons and surgical trainees to deal with intraoperative adverse events, catastrophic patient outcomes, and/or long-term litigation cases. Confidential outreach email with offer to speak to peer supporter in 1-on-1 informal meeting. Roles: Listen and help, offer empathy and share personal experiences, review emotions, create plan with coping strategies and existing support, discuss need for continued support Function: Acknowledge experience and validate feelings, refer to employee assistance program if needed Support: Protected 4-hour intensive session with peer support experts with a review of the literature for second victim phenomenon, interactive role-playing, and resource education</td>
<td>Other changes: Research conducted regarding psychological burden related to occurrence of intraoperative adverse events; study showed that colleagues were the most frequently used support system. Implementation: N/A Sustainability: Areas for improvement identified were a process to identify events requiring outreach, improving departmental awareness, and proactive outreach by an affected individual. Barriers: N/A Co-intervention: N/A Comparator: No comparator</td>
<td>In 1 year, 47 outreach interventions were conducted. 81% felt that the program had a positive impact on department culture. 89% were satisfied with the confidentiality, 73% with safe/trusting environment, and 83% with timeliness of intervention. Unintended consequences: Not reported</td>
<td>Successfully designed and implemented program was highly used and well received.</td>
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<td>Flannery et al., 1991; Flannery, 1995; Flannery et al., 1995; Flannery and Penk, 1996; Flannery et al., 2000; Flannery et al., 2001; Flannery et al., 2007; Flannery, 2008; Flannery et al., 2011; Flannery, 2012a; Flannery, 2012b; Flannery, 2016 Post-Only Massachusetts department of mental health inpatient hospitals, community mental health centers, homelessness shelter program, community residences, and general hospital employees Mental health facilities</td>
<td>Assaulted Staff Action Program. A voluntary, system-wide peer-help, crisis intervention program to assist staff victims of patient assaults in coping with the psychological distress Roles: Team member offers program services, assures confidentiality (unless a crime is reported; if accepted, team member works to restore good health domains (mastery, caring attachments, purposeful meaning in life) and monitors psychological trauma symptoms. Check-in 3 and 10 days later to determine progress and to assess the need for additional services. Function: Restore good health, assess the need for further action Support: N/A</td>
<td>Other changes: Multiple settings, program supported by the Department of Mental Health Implementation: N/A Sustainability: The program has been ongoing for 25 years, and the number of team members is growing (400 at 10-year mark, 1,600 at 20-year mark). Barriers: Barriers not stated, but study notes that not everyone accepts the offer. Co-intervention: N/A Comparator: No comparator</td>
<td>87% of assault victims accepted. Disruption in health domains and symptomatology declined within 10 days ( p &lt; 0.001 ) for mastery, attachment, meaning, physical, intrusive, avoidant). Unintended consequences: N/A</td>
<td>The interventions provided needed support for staff victims.</td>
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<td>Fornari et al., 2018</td>
<td>Pre-Post</td>
<td>Nurses and physicians</td>
<td>Health care</td>
<td>Humanistic interprofessional mentoring and professionalism program. Facilitator-led program for high-potential mentors. Group sessions. 10-module curriculum with 90-minute monthly sessions. Roles: Peer mentoring Function: Guide mentees toward a more humanistic approach in clinical practice, improve professional interactions with patients and colleagues Support: Interactive small group sessions, curriculum topics in modules, objective structured teaching encounters</td>
<td>Other changes: N/A Implementation: N/A Sustainability: Not reported as planned, discussion about expanding to participants who were not preselected Barriers: N/A Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>High potential mentors felt that they had an improvement in their humanistic teaching skills. Self-reported and observer-reported mentoring skills were improved. Unintended consequences: Not reported</td>
<td>The intervention may enhance mentoring and self-care skills of nurses and physicians and may improve the quality of patient care.</td>
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<td>Graham et al., 2019 Davidson et al., 2017</td>
<td>Pre-Post</td>
<td>Staff and physicians from telemetry, emergency department, neonatal intensive care unit, and medical/neurologic intensive care unit</td>
<td>Academic medical center</td>
<td>Caregiver support team for peer support. Proactive emotional first aid was provided by team of colleagues to improve job satisfaction, professional quality-of-life scores, and feeling cared for in the work environment. Peer-to-peer support, 3 months. Roles: Peer support for colleague in need of an intervention Function: Respond to emotional needs of colleagues Support: 8-hour educational workshop with exercises led by psychologist and a clinical nurse specialist. Escalation to Tier 3 support for staff if needed to Employer Assistance Program counseling and referral service for physicians to counselors through the Healer, Education, Assessment, and Referral medical staff committee.</td>
<td>Other changes: Continuation of Code Lavender initiative at the institution; initiative based on observation that health care professionals may develop unhealthy attitudes in stressful work environments. Implementation: N/A Sustainability: Request for group debriefings after significant events that affected the entire department. Organization budgeted for hospital-wide implementation. Barriers: No. Co-intervention: This was phase 2 of an ongoing initiative Comparator: Pre-intervention status</td>
<td>59% (44/75) at baseline reported experiencing stress in the workplace. 40% (30/75) received help from Caregiver Support Team. 100% felt that the support was helpful, and 100% would recommend peer support to their peers. No improvement was seen in professional quality-of-life scores or job satisfaction, but there was an increase in the emotion of feeling cared for in the workplace. Unintended consequences: Turning away volunteers for Caregiver Support Team who were not nominated. More male physicians were nominated despite the workplace being 86% female. Prevented one suicide.</td>
<td>Positively received. Welcome addition to the Tier 1 Code Lavender intervention.</td>
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<td>Linzer et al., 2015 RCT</td>
<td>Primary care clinicians (physicians, nurse practitioners, physician assistants)</td>
<td>Primary care settings—34 clinics in upper Midwest and New York City</td>
<td>Improving interpersonal communication and teamwork, improving communication among providers, monthly clinician meetings to improve collegiality</td>
<td>Other changes: Researchers identified the need to test the effect of primary care work conditions on clinician outcomes. Implementation: List of topics or interventions was generated following discussions at sites to address work conditions—communication, workflow, quality improvement</td>
<td>Interventions for workflow redesign, improved communication, and quality improvement projects led to improvements in clinician outcomes, including burnout and job satisfaction. There was no significant improvement in stress or intent to leave. Unintended consequences: Not reported</td>
<td>Program that measure outcomes may address physician burnout.</td>
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<td>Marks et al., 2017 Pre-Post</td>
<td>First responders</td>
<td>Public safety agencies</td>
<td>Peer support, train-the-trainer model. The Recognize, Evaluate, Advocate, Coordinate, and Track (REACT) training program was held to train the peer support provider for peer support. Group session with classroom format and small-group breakout sessions, 6-hour session.</td>
<td>Other changes: Address prevention of stress injuries and negative psychological outcomes</td>
<td>Training showed increased knowledge by the peer-support providers for the ability to identify stress injuries, initiate and maintain conversations, and provide acute stress management for peer support recipients. Knowledge was maintained over 3 months post-training session. Unintended consequences: Not reported</td>
<td>The training program provided skills and knowledge to support peers in addressing the psychological impact when experiencing potentially traumatic events.</td>
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<td>Roles: Peer support Function: Provide support to help prevent stress injuries following traumatic events Support: Training was held at the local fire department training center with four training modules, lectures and small-group breakouts, workbooks</td>
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<td>McDermott, Brook, and Ben-Isaac, 2017</td>
<td>Pre-Post</td>
<td>Pediatric residents</td>
<td>Children’s hospital</td>
<td>Physician-facilitated workshop with option for pre- and post-workshop survey; 60-minute workshop with didactic slide presentation, role-play peer-debriefs, and group discussion</td>
<td>Other changes: Needs assessment identified desire of pediatric residents to have a training in peer-debriefing following a distressing patient care event</td>
<td>Implementation: Workshop introduced into regularly scheduled educational curriculum of the pediatric residency program</td>
<td>Improvement in trainees reporting as being comfortable in leading peer-debriefing session (32% pre- and 83% post-workshop, ( p = 0.0003 ))</td>
<td>Improvement in perceived likelihood of leading future sessions in appropriate clinical setting (36% pre- and 88%, ( p = 0.0006 ))</td>
<td>Well-received instructional tool; skills to use in practice to improve own wellness</td>
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<td>Roles: Facilitate workshop</td>
<td>Function: Improve comfort with leading a peer-debriefing session</td>
<td>Support: Facilitator leading discussion should be familiar with workshop materials</td>
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<td>Unintended consequences: Difficulty in continuing didactic teaching with memory of distressing patient care event</td>
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<td>Support: Facilitator leading discussion should be familiar with workshop materials</td>
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<td>Merandi et al., 2017; Krzan et al., 2015</td>
<td>Pre-Post Pediatric health care professionals Pediatric academic medical center</td>
<td>Scott Three-Tiered Interventional Model (local support, trained peer supporters, expedited referral network). All staff were trained to identify and provide essential support to a second victim. Further assistance was referred to trained peer supporters and, if need, to trained professionals. One-on-one interviews. Duration not specified. Roles: Peer support Function: Provide further assistance to second-victim through discussions and listening and collect data through SharePoint about interactions Support: Training consisted of didactic lectures, small-group work, and group discussions over 4 hours. Education included second victim phenomenon and history, overview of literature, skills for responding to second victims, process of referrals and escalation of care, and legal/confidentiality considerations. SharePoint database used for collection of data and sharing information.</td>
<td>Other changes: Unit leaders at hospital asked for the development of a second victim program after learning about a system-wide support network at another institution. Implementation: Pilot study was successfully completed in the pharmacy department leading to a hospital-wide expansion to inpatient areas, clinics, and outpatient areas. Sustainability: Recruitment of new members and to study the effectiveness of the program. Barriers: N/A Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>More than 300 trained peer-supporters, 232 peer and 21 documented group encounters, 30 leaders identified. Most common reasons for peer encounters were patient death (71), emotional stress (38), trauma (28), cardiac arrest (19), medication error (8), and alleged child abuse cases (4). Unintended consequences: Not reported</td>
<td>Validated and generalizable to other health care institutions</td>
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<td>Palamara et al., 2015</td>
<td>Pre-Post</td>
<td>Internal medicine interns</td>
<td>Academic medical center</td>
<td>Coaching. Professional development coaching program for interns using principles of positive psychology, small groups of 2–3 interns per coach. Duration not specified but met quarterly. Roles: Peer mentoring Function: Provide support, reduce burnout Support: 2 hour training with lectures, hands-on coaching exercises as online supplemental material</td>
<td>Other changes: Lack of clearly defined support and guidance for interns was identified by program leadership Implementation: Program leadership buy-in, program introduced during internship orientation Sustainability: Continuation of program Barriers: N/A Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>94% of interns rated coaching program as good or excellent. 96% of interns would recommend to others. 65% of interns rated quality of communication with coach as excellent. Emotional exhaustion was rated high in 33% of interns at the end of the program compared with 47% for the prior year. Unintended consequences: Not reported</td>
<td>Coaching program based on positive psychology is feasible and acceptable to interns and coaches, and interns reported less exhaustion and burnout.</td>
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<td>Penson et al., 2010; Mann et al., 2009</td>
<td>Post-Only</td>
<td>Clinical hospital staff</td>
<td>Hospitals</td>
<td>Schwartz Round. Multidisciplinary forum in which doctors, nurses, chaplains, social workers, and other staff reflect on important psychosocial issues that arise in caring for patients. Starts with brief presentation, then 2–3 clinicians from different disciplines speak, a panelist presents a very brief clinical history of the patient, and each panelist describes their perspective, narrating their experience and the psychosocial issue that will be the topic of the day's discussion. Ends on an open-group discussion. 1-hour sessions. Roles: Provide their own perspective and experience Function: Providing a safe space, feedback, and support Support: N/A</td>
<td>Other changes: 10 hospitals implemented Schwartz Rounds. Implementation: N/A Sustainability: Schwartz Rounds started at 1 hospital in 1997. The Rounds have been replicated at 195 other medical institutions in 31 U.S. states and 2 in the UK in 2010; the Massachusetts General Hospital had Rounds for 12 years. Barriers: N/A Co-intervention: N/A Comparator: No comparator</td>
<td>Respondents reported increased insight into psychosocial aspects of care, enhanced compassion, increased ability to respond to patients’ social and emotional issues, enhanced communication among caregivers and a greater sense of teamwork, greater appreciation of colleagues' roles and contributions, and decreased feelings of stress and isolation. Participants also reported that discussions often led to specific changes in institutional practices or policies, though measurable and sustained changes in behavior have not been evaluated. More than 50,000 clinicians attend monthly Schwartz Rounds. Unintended consequences: Not reported</td>
<td>The fact that the rounds have thrived in diverse environments, from academic medical centers to community hospitals to chronic care facilities, demonstrates that they can be replicated effectively and that they are fulfilling a tremendous need.</td>
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<td>Ripp, Fallar, and Korenstein, 2015</td>
<td>RCT</td>
<td>Internal medicine residents</td>
<td>Academic medical center</td>
<td>Facilitated discussion group. Leaders were psychotherapists with experience in facilitating group discussion. Groups met twice a month for 1 hour for a total of 18 sessions over 9 months. Roles: Lead group discussions Function: Provide information related to specific themes to reduce burnout Support: Sessions were each based on a theme and had a session guide with teaching points, discussion questions, and associated readings.</td>
<td>Other changes: Effort to reduce burnout in first-year internal medicine residents Implementation: Randomly assigned as part of the residency program Sustainability: N/A Barriers: N/A Co-intervention: N/A Comparator: Control group</td>
<td>No difference in burnout rates. Higher year-end depersonalization scores in the intervention arm (86% vs. 53%). Unintended consequences: Residents were not free from clinical or educational responsibilities.</td>
<td>Facilitated group discussion intervention did not reduce burnout in internal medicine residents.</td>
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<td>Schwartz et al., 2020</td>
<td>Post-Only</td>
<td>Primary care physicians and hospitalists</td>
<td>Veterans Affairs hospital and primary care clinics</td>
<td>Balint-like facilitator-led peer group discussions. Group sessions. Each session was 75 minutes, held every 2 weeks for a 9-month period. Roles: Peer support, lead group discussions Function: Facilitate group discussions Support: N/A</td>
<td>Other changes: Researchers explored factors contributing to the wellness of the physicians and the challenges and joy of their work life. Implementation: Announcements at staff meetings, emails to staff, and word-of-mouth Sustainability: N/A Barriers: N/A Co-intervention: N/A Comparator: No comparator</td>
<td>Balint-like interventions had a benefit in improved competency and reduced distress. Themes that emerged included relationship between resource constraints and physician frustration/distress. Unintended consequences: Not reported</td>
<td>Targeted solutions can help to mitigate sources of physician distress.</td>
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<td>Shanafelt et al., 2017 Post-Only</td>
<td>Physicians, scientists, and senior health care administrators Large medical system</td>
<td>Peer-to-peer support for personal and professional issues. Program was initially set up as a financial advising resource but expanded to include personal and career concerns. Staff must initiate contact with the office for support. 1-on-1 sessions, 1-hour session. Roles: Peer support, professional coaching, counseling Function: Serve as resource and refer for additional services as needed Support: N/A</td>
<td>Aims to provide a support structure to help the staff with specific time demands so that they can focus on patient care Implementation: New hires meet with the financial planning team, office is publicized on the intranet site for the organization, and brochures containing information about the services and staff for the office are mailed annually to the home addresses for the targeted groups. Sustainability: 15-year program at the time of evaluation. Proactive strategy will be implemented fully at the larger campus and piloted at the smaller campuses. Barriers: N/A Co-intervention: N/A Comparator: No comparator</td>
<td>In the first 15 years, 75% of eligible individuals had financial services interaction, and each year 5–7% eligible individuals seek peer support interventions. In a pilot, 26 invited staff members scheduled a meeting with the office; 24 completed a post-visit survey, with 24 for financial planning, 9 for work/life integration, 7 for professional/career topics, and 2 for self-care topics. 75% believed that these meetings should be annual. Unintended consequences: Not reported</td>
<td>Pilot was successful, and proactive check-ups will be implemented to help promote professional and personal well-being.</td>
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<td>Shoji, Benight, and Stearns, 2016; Bock and Benight, 2016</td>
<td>RCT</td>
<td>Military mental health providers</td>
<td>US military installations around the world</td>
<td>Peer-support program. RCT to evaluate a social media-based web system and telephonic peer coaching intervention designed to provide self-care skills and social support. 1-on-1 sessions. Duration of sessions not specified. Roles: Peer support, peer counseling Function: Assist mental health providers in setting self-care goals and increasing self-coping skills, help with website utilization and networking Support: Coaching manual with education on burnout and self-care</td>
<td>Reduction in burnout Implementation: Recruited by email and phone from group who had participated in previous prevalence study or others located at U.S. military installations worldwide Sustainability: N/A Barriers: Low enrollment but potential reason not stated Co-intervention: No Comparator: Control group</td>
<td>Significant improvement in overall job burnout, exhaustion, and depersonalization subscales for coaching and website compared with website alone Unintended consequences: Not reported</td>
<td>Burnout symptoms were significantly reduced in the coaching/website intervention group.</td>
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<td>Smith and Hough, 2011</td>
<td>Pre-Post</td>
<td>Internal medicine residents</td>
<td>Academic medical center</td>
<td>Peer support, behavioral intervention study was conducted to examine the effects of Death Rounds on interns’ perceived proficiency on end-of-life care and discuss emotional issues surrounding patient death. Roles: Peer support Function: Ask open-ended questions, validate emotions Support: N/A</td>
<td>Other changes: Improve perceived proficiency in end-of-life care and address emotional needs of interns caring for patients who are at the end of life Implementation: Offered as alternative to weekly intern report Sustainability: N/A Barriers: N/A Co-intervention: N/A Comparator: Pre-intervention status</td>
<td>Being somewhat or very comfortable discussing end-of-life issues was 95% in the intervention group (76% comparator). 41% of the intervention group reported increased stress with insufficient end-of-life care education (55% comparator). 21% of the intervention group reported symptoms of depression and/or burnout (21% comparator). Unintended consequences: Not reported</td>
<td>Death Rounds provide a supportive environment and is valuable for the resident curriculum.</td>
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<td>Tuzzio et al., 2017</td>
<td>Post-Only</td>
<td>Primary care physicians</td>
<td>Group Health primary care clinics</td>
<td>Peer-to-peer coaching. Peer coaches intended to reduce unnecessary referrals to specialists by the primary care physicians. Weekly physician dyad meetings. Roles: Peer coaching, share referral data for participant Function: Reduce unnecessary referrals to specialists, provide strategies for patient management Support: Meetings with peer coaches to discuss the program, possible reasons for referrals, sharing clinical experiences, and coaching techniques, honorarium</td>
<td>Other changes: Organization wanted to address the high rates of referrals by primary care physicians to specialists. Implementation: Participants were identified by mid- to high-range referral rates when compared with other physicians in their clinic with the clinic chief then inviting two physicians each to work with a coach. Sustainability: Physicians reported that the program could be sustained and spread if time for mentoring conversations was provided and/or nonfinancial incentives or compensation was offered. Barriers: Lack of time Co-intervention: N/A Comparator: No comparator</td>
<td>Successful in engaging physician dyads to have weekly meetings. Unintended consequences: Not reported</td>
<td>Dyads provided opportunity for learning and the opportunity to have clinical discussions with peers; physician-based mentoring program is feasible.</td>
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Table C.1 shows the variation in intervention approaches. Although all included a peer-to-peer component, that was not always the main component of the intervention, and the approaches were not always peer-led (in some approaches, peer exchange was the exchange between fellow participants of the intervention). In some cases, the peer-to-peer intervention was part of a larger organizational change, i.e., the co-intervention affecting the evaluation was an ongoing practice reorganization. We also abstracted any information on the implementation of the intervention, i.e., how the intervention was introduced.

The sustainability of the evaluated interventions was unclear in several studies. However, there are some initiatives that have been going on for a long time, including Flannery’s Assaulted Staff Action Program (Flannery et al., 2011), Balint group approaches (Schwartz et al., 2020), Shanafelt’s professional needs program (Shanafelt et al., 2017), and Schwartz Rounds (Penson et al., 2010). Barriers to interventions were rarely reported, but when reported consisted of funding, turnover, lack of awareness of how to access the program, and lack of time (Benson et al., 2002; Boyle and Kochinda, 2004; Edrees et al., 2016; Tuzzio et al., 2017).

In the RCTs, outcomes reported to be beneficially influenced by the tested peer-to-peer support interventions included improved job burnout in military mental health providers (Shoji, Benight, and Stearns, 2016b) and in primary care physicians/nurses/physician assistants (Linzer et al., 2015). Improved exhaustion was reported in military mental health providers (Shoji, Benight and Stearns, 2016b), improved depersonalization in military mental health providers (Shoji, Benight, and Stearns, 2016b), and improved job satisfaction in primary care physicians/nurses/physician assistants (Linzer et al., 2015). RCTs reported no significant improvement as a result of the peer-to-peer support interventions on intent to leave in primary care physicians/nurses/physician assistants or stress (Linzer et al., 2015) and burnout rates in first-year internal medicine residents (Ripp, Fallar, and Korenstein, 2015).

Authors’ conclusions commented on several strengths of the tested peer-to-peer support interventions for health care providers, including decreased distress, enhanced self-awareness, enhanced mentoring and self-care skills, lower burnout, increased productivity, increased retention, improved communication, improved skills, improved wellness, and decreased exhaustion. However, some studies concluded that the impact of the tested program did not yield significant benefit on the pre-specified outcomes (Eagle, Creel, and Alexandrov, 2012; Ripp, Fallar, and Korenstein, 2015).

Authors of several studies concluded that the tested interventions were well received. One study reported its intervention to be cost-effective (Shoji, Benight, and Stearns, 2016b), and other studies commented on the low cost of its intervention as a strength (Graham et al., 2019).

Summary of Findings

Table 3.2 provides a summary of findings across studies and the quality of evidence.
<table>
<thead>
<tr>
<th>Effects of Provider-to-Provider Interventions</th>
<th>Number of Studies and Study Design</th>
<th>Reasons for Downgrading or Upgrading Quality (study limitations, inconsistency, indirectness, imprecision, reporting bias)</th>
<th>Findings: Direction and Magnitude of Effect</th>
<th>Absolute Effect Difference</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Provider-to-Provider interventions: emotional support</td>
<td>3 (2 post-only, 1 pre-post)</td>
<td>Study limitation, imprecision</td>
<td>Graham reported that respondents felt that support was helpful and there was an increase in the emotion of feeling cared for in the workplace. Schwartz indicated reduced distress. Penson reported decreased feelings of stress and isolation.</td>
<td>N/A</td>
<td>Very low</td>
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<tr>
<td>Provider-to-Provider interventions: organizational outcomes</td>
<td>2 (1 RCT, 1 cohort study)</td>
<td>Inconsistency, imprecision</td>
<td>Linzer reported no significant improvement in the intent to leave. Benson reported greater retention rates among faculty who participated in the intervention ($p = 0.12$)</td>
<td>N/A</td>
<td>Very low</td>
</tr>
<tr>
<td>Provider-to-Provider interventions: mental health outcomes</td>
<td>5 (3 RCTs, 2 pre-post)</td>
<td>Inconsistency, imprecision</td>
<td>Linzer reported improvements in burnout. Smith reported no difference in symptoms of depression and/or burnout. Ripp reported no difference in burnout rates. Shoji reported improvement in burnout, exhaustion, and depersonalization. Palamara reported emotional exhaustion as high in 33% of interns compared to 47% in the prior year.</td>
<td>N/A</td>
<td>Very low</td>
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<tr>
<td>Provider-to-Provider interventions: other outcomes</td>
<td>21 (6 post-only, 11 pre-post, 1 cohort, 3 RCTs)</td>
<td>Study limitations, inconsistency, imprecision</td>
<td>See Table 3.1</td>
<td>N/A</td>
<td>Very low</td>
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</table>

Emotional support was addressed in three identified studies (Graham et al., 2019; Penson et al., 2010; Flannery et al., 2011), but none of them were RCTs, so the effect has not yet been demonstrated in a study design that allows strong evidence statements. In addition, the reported results lacked detail to determine a precise estimate of the intervention effect. Hence, the quality of evidence was rated very low.
Two studies addressed organizational outcomes (Benson et al., 2002; Linzer et al., 2015), but they used different measures (intention to leave, retention), and the quality of evidence was determined to be very low. Five studies (Eagle, Creel, and Alexandrov, 2012; Linzer et al., 2015; Ripp, Fallar, and Korenstein, 2015; Shoji, Benight, and Stearns, 2016b; Palamara et al., 2015) reported on mental health outcomes, but results varied across studies and it is unclear whether the interventions have positive effects on mental health (very low quality of evidence).

The systematic review also set out to answer the questions whether the effects vary by professional field, organizational feature, personal characteristics of professionals, or health care setting. However, we found only a small number of studies, and all the interventions were unique and assessed outcomes varied. Hence, it was not possible to meaningfully comment on these subquestions.
4. Discussion

This series of literature reviews augmented by key informants shows a growing literature on professional peer-to-peer support, including successful interventions for health care providers. In this chapter, we summarize the findings and limitations of the literature reviews conducted, discuss the results of our reviews in the context of existing reviews, and describe important knowledge gaps to be addressed in future research.

Summary of Findings and Limitations

After having received valuable input from key informants, we conducted three literature reviews: a scoping review, an evidence map, and a systematic review, all with distinct methodological strengths and weaknesses.

Scoping Review

First, we conducted a scoping review to identify conceptual and theoretical underpinnings, as well as empirical examples of peer-to-peer approaches. This scoping review focused on identifying publications on workplace peer-to-peer interventions that are relevant to the development of peer-to-peer support interventions in health care settings. Most peer-to-peer interventions in the medical literature are efforts to promote patients’ healthy lifestyles, life-work balance, and understanding of chronic conditions and their treatments (Ramchand et al., 2017) and involve patient-to-patient support. However, a smaller body of work applies peer-to-peer principles to address workplace challenges for professional caregivers.

How to define peer leader roles and functions is a critical planning step for peer-to-peer interventions. Our review and framework development used a broad definition of what constitutes a peer-to-peer relationship, including interventions addressing colleagues, co-workers, and individuals participating in career-to-career professional development activities. Within a given intervention, a peer-to-peer leader might carry out more than one role (such as mentor and facilitator or mentor and coach). The menu of peer leader functions was substantially the same across the identified roles in our framework (e.g., listening with empathy and identifying resources). All roles and functions we identified in our article set stopped short of the delivery of evidence-based therapies for treating mental health conditions, even when the peer leader was a mental health specialist. In included studies, mentors did not fulfill a disciplinary or supervisory role with respect to the mentee but instead provided support for personal and/or professional challenges.

Among the peer-to-peer health care intervention studies, we found that intervention participation–related outcomes, such as attendance at activities, promoted by the program
appeared to be more commonly assessed than more distal health or workplace outcomes, such as burnout or workplace functioning. Some workplace functioning–related outcomes focused on professional productivity (e.g., promotions received, articles published, proposals funded), and some focused on measures of turnover or employee retention. Participation-related outcomes included, for example, attendance at specified activities or on initiating and maintaining healthy habits or stress reduction techniques. They also included participant progress on actions directed at addressing alcohol and substance use disorders and at completing intervention-encouraged mental health professional referrals. Finally, participation-related outcomes included satisfaction with the program or with self-assessed achievement of goals such as self-efficacy or reduced isolation. Of note, a recent scoping review of early post-trauma interventions suggested that peer group processes are important as a prelude to formal therapy for management of stressful incidents (Richins et al., 2020). The authors suggested that within the initial window of opportunity (before formal therapy), peer group processes are important in the management of post-incident stress. The authors concluded that recovery was more likely (i.e., participants less likely to need formal occupational health intervention or referral to clinical treatment) when emergency responders supported one another and suggested that peer group processes appear to be well received. The authors also note that the positive benefits are not always captured in objective measures such as PTSD scores but that employees derive subjective satisfaction and appreciate the opportunity to discuss their experiences.

Confidentiality was an especially common focus for studies of interventions that incorporated emotional debriefing, suggesting that stigma was a particularly important concern for participants in these interventions. With the exception of two train-the-trainer interventions, only one of the other studies collected systematic individual participant mental health or workplace outcomes data. In coaching programs, in contrast, although confidentiality was also a concern, some studies reported on reduction of burnout, increased satisfaction, and increased retention of employees. Attention to confidentiality may also have special significance in military settings. As recently suggested (Richins et al., 2020), an understanding of organizational culture and hierarchies, as well as consideration of effects on stigma, are requirements for early posttrauma interventions in the military. For example, military officers preferred debriefing to be classified as primary care rather than as a mental health appointment, as it lessened the stigma surrounding help-seeking (Cigrang et al., 2017). In addition to endorsements from the military hierarchy, military interventions may need to reflect organizational culture around frequent transfers and unanticipated demands. Interventions that provide flexibility may be more likely to be successful given that military populations are often transferred between units and separated from support networks available to other professionals (Rudd et al., 2015).

For our review, we also took into account differences between military and typical nonmilitary health care settings by broadening our review to include articles on peer-to-peer interventions for workplaces likely to expose workers to trauma, such as those directed at fire fighters or police. Unlike most health care worker settings, military health care environments
may be within war-torn areas, may involve catastrophic emergencies without full health care resource availability, frequently involve trauma-affected patients, and may result in personal exposure to trauma. Health care workers are also frequently redeployed to different locations, resulting in additional stress and loss of networks and familiar resources. Exposure to trauma is within the types of conditions for which peer-to-peer interventions have been used. We identified a key approach for military health providers. The SupportNet peer-to-peer coaching intervention, carried out in the military, emphasized the distinction between peer-to-peer support and therapeutic treatment. The developers did not want to “pathologize” the intervention recipient’s effort to participate in the peer-to-peer program (Shoji, Benight, and Stearns, 2016b). The developers wanted the program guidelines to clearly identify the differences between therapy and their program. This would help to remove the stigma of acknowledging the desire or need for support. Even though both the peer leaders and the peer recipients were mental health providers, the peer leader-to-peer recipient relationship was designed as a coaching role, not a therapeutic one.

Military health care systems confront unique challenges that make peer-to-peer interventions potentially attractive if there is evidence to suggest developing and trialing them for military setting use. In addition to battlefield care, the Military Health System of the U.S. Department of Defense delivers care to more than 9 million individuals through more than 50 military hospitals and more than 600 clinics, as well as a network of private-sector providers. Like nonmilitary health care workers, military health care delivery professionals are at risk for developing burnout, accompanied by reduced capacity for helping patients, worsened health care team functioning, and increased rates of turnover. Peer-to-peer interventions are potentially feasible for assuring accessible support to military health care workers in far-flung locations that may have limited mental health specialist access. These interventions may also have advantages in providing help in a way that avoids the stigma related to mental health care, a known concern among military personnel. The SupportNet program (Shoji, Benight, and Stearns, 2016b) was the most thoroughly described military-based program. The SupportNet program used telephonic coaching with trauma-informed web-based resources. In a small randomized controlled trial, significant reductions in burnout symptoms were found; however, burnout symptoms were not improved with access to web resources alone. The program’s coaching process was relatively short-term, with only six coaching sessions. Peer leaders were mental health providers; however, the coaching material was designed to be used by peer leaders other than mental health providers with links to mental health providers as backup. The peer coaches could be in contact with a licensed mental health provider who would be available to provide support or accept or arrange a referral. The sessions focused on increasing awareness of burnout and secondary traumatic stress, setting goals and considering challenges, obstacles faced in achieving goals, awareness of satisfaction and self-care status; promotion of social support, and consolidation of new skills and changes to empower participants to continue forward. The highly structured coaching sessions were coordinated with material on the website and with a coaching manual. The program
focused on achieving improvement in participation-related outcomes, including peer participants’ self-ratings of progress toward individually identified goals. We used the scoping review to develop a conceptual framework to tie the intended roles that peer support individuals might play with the desired outcomes that might be achieved and the features that characterize the type and level of peer-to-peer interaction. Existing peer-to-peer literature is very fragmented and describes many different functions of peers, such as providing social support, education, or mental health counseling. In addition, current research often does not describe or provide a rationale for what the desired outcome of peer interaction is and how it may be linked to the intent or outcome of the study. We developed, tested, and iteratively revised the initial framework for supporting abstraction of literature on peer-to-peer workplace interventions in health care settings. We used a prior framework (Ramchand et al., 2017) that was developed for non-workplace peer-to-peer interventions as the basis for a new framework focused on workplace peer-to-peer interventions. Our final framework integrated frameworks for peer support among health care professionals. The resulting framework describes factors and possible functions of peers in interventions and outlines how processes linking peer interaction to the desired outcomes could be conceptualized. We found that our final framework, tested as the basis for abstraction of articles reporting on a selection of relevant studies, served well for categorizing the key peer-to-peer intervention elements reported by the authors. We consider our final framework to be a first step toward a more fully developed conceptual framework for peer-to-peer health care workplace interventions. As is, the framework is sufficiently developed to be used by intervention developers as a way to identify important intervention design decisions and as a path to review of relevant studies for additional information. The framework is also ready for further development and rigorous testing for use as the basis for systematic review abstraction of articles on peer-to-peer health care workplace interventions.

**Evidence Map**

Second, we built an evidence map of empirical evaluations that evaluated peer-to-peer interventions for professionals. The evidence map was designed to provide an overview of the research area. Based on a thorough bibliometric analysis, the map combined systematic searches and explicit eligibility criteria with a visualization of the evidence base. The evidence map was not limited to health care providers and instead included professional interactions where learning or support is provided through peers. The evidence map concentrated on professionals already working in their profession, rather than including peer learning frameworks used in education. Peer support may have been primarily directed at junior staff and may have an educational component, but all interventions were directed at professionals dealing with their professional roles and responsibilities. The evidence map provides an overview of the existing research literature and includes many interesting intervention approaches directed at coworker support. Although the evidence map can only provide a very broad overview of the existing interventions, we found that most existing peer-to-peer interventions use supportive modalities
(i.e., emotional debriefing, coaching, counseling, and mentoring) rather than treatment modalities (e.g., medications, psychotherapy). The interventions aim to address common symptoms of distress (e.g., burnout, stress, isolation) rather than diagnoses—the focus of treatment-oriented modalities. Depression, PTSD, substance abuse, and other mental health concerns may arise but require links to appropriate treatment resources. The tension between supportive and treatment modalities was apparent in many publications. This tension clearly requires careful attention in program design to assure that the supportive, peer-to-peer component remains the core of the peer-to-peer intervention activities.

The results of the evidence map regarding protective interventions to support professionals can provide insights into military and veteran providers. However, we acknowledge that the topic of peer support to improve mental health of professionals is complex and must take into account discipline-specific stressors; systems-level dimensions, including organizational structure and processes; and the fact that peer-support interventions are often tested as a part of a larger program that includes other types of interventions or is designed to examine quality of care outcomes rather than provider health.

An important caveat to the evidence map is that, although it includes an effectiveness signal, this is only a very broad indication. We used the signal as reported by study authors, and most studies did not report statistically significant differences between an intervention and a concurrent control group. Sometimes positive results were based on marginally relevant outcomes or addressed feasibility rather than measurable health outcomes on participants. Also, many studies were “post-only” studies, lacking a comparator altogether. Most studies were not RCTs—i.e., did not include concurrent control groups with random assignment of participants to intervention and control groups, a study design that allows strong evidence statements.

**Systematic Review**

Finally, we conducted a systematic review to synthesize the existing evidence on health care provider peer-to-peer support. It was limited to provider-to-provider interactions providing support in a formalized interaction (rather than ad hoc support). The systematic review used standard evidence synthesis methods to arrive as effect estimates of interventions, embedded in a conceptual framework for peer-to-peer interventions developed as part of the scoping review. We used a rigorous critical appraisal process and documented the available evidence using internationally recognized quality of evidence criteria to guide clinicians and policymakers. The systematic review provided treatment effects of provider-to-provider interventions for critical outcomes of the organization and the mental health of, as well as emotional support for, providers. Our review assessed experiences of emotional support of the professionals as the primary outcome of the review but identified only a limited evidence base. We were also interested in workforce outcomes such as staff turnover, productivity measures, suicide, and absenteeism. Mental health outcomes of interest included burnout, and we reviewed depressive symptoms and identified more relevant data in this area. However, as Table D.3 shows, most
studies used unique outcomes to assess the provider-to-provider intervention. The systematic review also aimed to address the impacts of the professional field, organizational features, personal characteristics, and health care setting. However, because of the heterogeneity in interventions, study designs, and outcome reporting, we were not able to meaningfully address the outcome.

In addition, the evidence base is developing, and the existing evidence volume is limited. One reason may be that confidentiality regarding participation in existing programs is a central concern, given that the programs aim to meet needs potentially associated with worsened workplace functioning or stigma. Ensuring that participants can easily and relatively informally access these programs is central to their goals. Evaluation may be restricted to asking the peer leaders how the program went, whether it was well-received, and how the program could be improved. This review, however, summarizes study authors’ views of what their interventions accomplished in terms of outcomes for each role in our framework. Thus, someone wishing to review empirical studies on workplace peer-to-peer interventions can consult our results on key intervention features and their associated intended outcomes and use it to inform intervention or evaluation design decisions.

Only three of the 21 identified studies included in the systematic review used an RCT design, and rigor of the included studies varied widely. Selection bias, reporting bias, performance bias, detection bias, and/or attrition bias were identified in several studies. The lack of comparators hampers the ability to meaningfully assess the effect of provider-to-provider intervention on the primary outcome (emotional support). The quality of evidence regarding emotional support was very low. Also, because many tested interventions were part of a larger organizational change, it is difficult to separate the effects of peer-to-peer intervention per se. We could not determine whether effects of interventions varied by professional field because all interventions tested were unique, and summary measures of effectiveness across studies were not possible.

Results in the Context of Existing Reviews

Across the series of literature reviews, we conclude that support systems for health care providers are in need of improvement (Rodriquez and Scott, 2018; Schwappach and Boluarte, 2009). Our reviews provide an innovative perspective in its focus on mental health and emotional support of professionals—health care providers especially, with particular emphasis on military health care providers. It is important to fill this knowledge gap, as previous systematic reviews on the topic of peer programs have focused on influences of specific peer roles on health domains more generally, rather than mental health outcomes (Ramchand et al., 2017). Other existing systematic and narrative reviews focused on more logistical and intersectional aspects of policy, organizational, care team, and individual factors without focusing on mental health care outcomes per se (Mulvale, Embrett, and Razavi, 2016; Kent, 2019). Several systematic reviews exist that did focus on health care settings had more of a focus
on preceptorship and mentorship of health professionals where mental health was not a central facet of study design (Nowell et al., 2017; Rush et al., 2019; Kashiwagi, Varkey, and Cook, 2013; Lim et al., 2019; Radha Krishna et al., 2019; Cullen et al., 2017).

At the other end of the spectrum are narrative reviews restricted to peer support solely within the mental health setting itself, rather than more general health care settings (Kent, 2019), or systematic reviews focused on implementing peer support after a substance use disorder or co-occurring psychological disorder is identified, rather than in a preventive setting (Eddie et al., 2019; Ibrahim et al., 2020). It is of course not possible to say whether those interventions can be successfully implemented to improve mental health in more settings other than the specific mental health settings in which they were developed. For example, it is unclear whether specific aspects of staffing, training, equipment, collective bargaining, and legislation for reducing workplace violence among K–12 teachers (Landsbergis et al., 2018), or the use of peer support to improve health in the agriculture and fishery industries (McBain-Rigg et al., 2017) can successfully apply to peer support to improve mental health for health care providers. Sometimes research has focused on identifying work stressors (Chang et al., 2005) or adverse mental health consequences of stress on health outcomes (Golding et al., 2017), rather than the effects of peer support interventions themselves.

We also acknowledge that work stressors may be specific to a particular field, such as psychiatry (Fothergill, Edwards, and Burnard, 2004), and interventions tailored to other fields are lacking. For certain outcomes that may be (perhaps more indirect) indicators of mental health, such as employment retention of primary care doctors, systematic reviews have reported an absence of RCTs (Verma et al., 2016). As was the case with the current systematic review, previous systematic reviews likewise document the paucity of psychosocial intervention programs that were evaluated in two or more studies for mental health promotion (Czabala, Charzynska, and Mrziak, 2011; Romppanen and Haggman-Laitila, 2017), as well as the challenges posed by marked heterogeneity in outcomes across studies (Romppanen and Haggman-Laitila, 2017). Finally, previous systematic reviews have highlighted the potential role of peer support as part of combined structured programs (MacMillan et al., 2017), so that often it is difficult to tease out the separate effects of peer support interventions.

**Future Research**

Future research should evaluate the specific peer-to-peer support interventions that were found most promising in certain settings (e.g., for teachers) for testing in health care–related settings. Also, additional systematic reviews specifically designed to compare the efficacy of identical interventions across other settings will be invaluable (Whybrow, Jones, and Greenberg, 2015). It is likewise important to further examine the facilitators and barriers to implementation of peer support interventions (Ibrahim et al., 2020). Care should be taken to using high methodological quality in future intervention studies, since systematic reviews have found
methodological study quality in this domain to be generally low (Fox et al., 2018; Clough et al., 2017; Pezaro, Clyne, and Fulton, 2017), which might contribute to generally more null than positive effects across peer interventions (with some exceptions) (Ramchand et al., 2017). Finally, future studies should examine potential gender and racial/ethnic differences in the benefits of peer support programs, which could inform the refinement of interventions in the future. This possibility is suggested by systematic reviews that found mentoring programs designed specifically for women to be successful, and these programs often contain a component of peer support (Farkas et al., 2019). Systematic reviews have also found evidence of gender differences in uptake of peer support interventions (Voltmer and Spahn, 2009),

**Implications and Conclusions**

If policy is to be changed, then additional data demonstrating the effectiveness of peer-to-peer interventions are needed. Often, organizational interventions, and the multi-component nature of interventions, are complex. In addition, the unique situations of military health service providers characterized by a stressful environment during deployment in addition to the stressors of other health care providers require special attention in future studies. Furthermore, many studies investigated interventions that provided psychological first aid after adverse incidences. Practitioners and policymakers should determine the relative importance of preventive steps, such as programs that address preventative structural and system challenges supporting health care providers, in addition to providing post-incidence support.

In conclusion, the set of reviews described in this report identified the roles and functions of professional peers in peer-to-peer interventions in health care settings (key informant interviews and scoping review), the approaches of professional peer-to-peer interventions for mental health and emotional support (evidence map), and the effects of provider-to-provider interventions on emotional support, organizational measures, and mental health outcomes of health care providers (systematic review). We also developed and tested a framework to tie the intended roles that peer support individuals might play with the desired outcomes that could be achieved, in addition to the features that characterize the type and level of peer-to-peer support intervention. When tested, the framework served well for characterizing the key peer-to-peer intervention elements reported by authors. In the scoping review, we found that distal workplace outcomes, such as burnout or workplace functioning, were rarely assessed. To address challenges unique to military health care systems, we separately report results of the scoping review pertinent to military health care settings. The evidence map provides a broad overview of existing interventions and underscores the need for peer-to-peer support interventions to take into account discipline-specific stressors, systems-level characteristics (structure, process), and the fact that peer-support interventions are often part of a larger intervention that includes interventions other than peer-to-peer support. The systematic review highlights the fact that evidence regarding the effects of provider-to-provider support on our primary outcome, emotional support, is limited; that the
quality of evidence for that outcome was very low; and that we could not meaningfully address this outcome because of heterogeneity in interventions, study designs, and outcome reporting.
Appendix A. Search Strategy

This appendix provides the details of the search strategies used for the scoping review, evidence map, and systematic review and outlines the eligible professions for the evidence map.

Scoping Review Search

PubMed
No restrictions
Searched 3/10/2020

AND
NOT
(RCT OR “clinical trial” OR “randomized controlled trial”))
Results: 1,127

PsycINFO
Limiters: Publication Type: All Journals, Peer Reviewed Journal, Peer-Reviewed Status-
Unknown, Dissertation Abstract
Searched 3/10/2020

TI ((colleague OR co-worker) AND support) OR AB ((colleague OR co-worker) AND support)
AND
TI (Histor* OR theor* OR model* OR construct* OR evolution OR framework* OR conceptual*)
AND
TI (“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Marriage Therapist*” OR “Family Therapist*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant” OR “Occupational Therapy Assistant*” OR “Occupational Therapy Aide*” OR
Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator” )

AND

TI ( intervention OR initiative OR program* OR strateg* ) OR AB ( intervention OR initiative OR program* OR strateg* )

NOT

RCT OR “controlled trial*” OR “randomized control trial*”

Results: 246

Web of Science
Indexes: SCI-EXPANDED, SSCI, A&HCI
Document Types: (ARTICLE OR EARLY ACCESS OR REVIEW OR EDITORIAL MATERIAL)
Searched 3/10/2020

TOPIC: (“peer-to-peer” OR “provider-to-provider”) OR TOPIC: ((colleague OR co-worker) AND support)

AND

TOPIC: (Histor* OR theor* OR model* OR construct* OR evolution OR framework* OR conceptual*)

AND

TOPIC: (“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Marriage Therapist*” OR “Family Therapist*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic
Medical Sonographer*" OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR
“Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical
Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR
Practitioner* OR “Nursing Assistant” OR “Occupational Therapy Assistant*” OR “Occupational
Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist*
OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR
“Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR
Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR
Sociologist* OR Farmer OR Farmers OR Rancher OR Ranchers OR “Postsecondary Education
Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News
Analyst*” OR “Enlisted Personnel” OR “military officer*” OR “army officer*” OR “navy
officer*” OR “naval officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal
Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR
“Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service* Worker*”
OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR
Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot*
OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR
Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR
Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR
Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR
Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR
Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR
Physiatrist* OR Psychiatrist* OR psychologist* OR Pulmonologist* OR Radiologist* OR
Rheumatologist* OR Urologist* OR “health administrator”)

AND

TOPIC: (intervention OR initiative OR program* OR strateg*)

NOT

TOPIC: (RCT OR “clinical trials” OR “randomized control trial*”)

Results: 358

DTIC
12 March 2020
Distribution A – Approved for Public Release
Technical Reports and Projects

CST (((peer OR mentor OR mentors OR “peer-to-peer” OR “provider-to-provider”) OR
(colleague near/5 support) OR (“co-worker” near/5 support)) AND (((“social workers”) OR
(teachers) OR (dentists) OR (paramedics) OR (nurses) OR (therapists) OR (“medical assistants”)
OR (anesthetists) OR (midwife OR midwives) OR (practitioners) OR (pharmacists) OR
(physician near/5 (assistants)) OR (physicians) OR (surgeons) OR (pathologists) OR
(veterinarians) OR (reporters) OR (judges) OR (lawyers) OR (paralegals) OR (psychologists)
OR (sociologists) OR (interpreters) OR (translators) OR (photographers) OR (“enlisted personnel”) OR ((military OR army OR navy OR naval OR “marine corps” OR “air force”) near/5 (officers)) OR (barbers) OR (hairstylists) OR (cosmetologists) OR (“childcare workers”) OR (manicurists) OR (pedicurists) OR (skincare near/5 (specialists)) OR (bailiffs) OR (firefighters) OR (police OR policeman OR policewoman OR policemen OR policewomen OR policeman OR “police officers”) OR (detectives) OR (guards) OR (“air traffic controllers”) OR (pilots) OR ((bus OR taxi OR “ride-hailing”) near/5 (drivers)) OR (“flight attendants”) OR (chauffeurs) OR (sales workers”) OR (allergists) OR (anesthesiologist) OR (cardiologist) OR (dermatologist) OR (gastroenterologists) OR (geriatricians) OR (hematologists) OR (hepatologists) OR (internists) OR (neurosurgeons) OR (neurologists) OR (obstetricians) OR (oncologists) OR (ophthalmologists) OR (orthopedists) OR (otolaryngologists) OR (pathologists) OR (pediatricians) OR (physicians) OR (psychiatrists) OR (psychologists) OR (pulmonologists) OR (radiologists) OR (rheumatologists) OR (urologists) OR (counselors) OR (farmers) OR (ranchers))

AND

TI (history OR histories OR theory OR theories OR model OR models OR construct OR constructs OR evolution OR framework OR frameworks OR conceptual)

Results: 49

Evidence Map Search

PubMed

Date run: 10 March 2020


AND

(intervention*[tiab] OR initiative*[tiab] OR program*[tiab] OR strateg*[tiab] OR RCT OR random* OR (“clinical controlled” AND trial*) OR (clinical AND trial*) OR “time series” OR pre-post OR before-after OR “case series”)

Results: 3,193

Web of Science
Indexes=SCI-EXPANDED, SSCI, A&HCI
Timespan=All years
Date run: 10 March 2020 (modified occupational terms for remaining databases)

TS=(peer-to-peer OR provider-to-provider) OR TS=((colleague OR co-worker OR coworker) AND support) AND TS=(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR
Results: 150 – duplicates = 102

PsycINFO
Academic Journals
Date run: 10 March 2020
  (TI(peer-to-peer OR provider-to-provider) OR AB(peer-to-peer OR provider-to-provider)
OR (TI((colleague OR co-worker or coworker) OR AB((colleague OR co-worker or coworker)
AND (TI(support) OR AB(support))
  AND
  TI(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR
Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted Personnel” OR “military officer*” OR “army officer*” OR “navy officer*” OR “naval officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator*” OR AB (“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR
Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted Personnel” OR “military officer*” OR “army officer*” OR “navy officer*” OR “naval officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Orthopaedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Physiatrist* OR Psychiatrist* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator*”)

AND

(TI(RCT*) OR TI(“controlled trial*”) OR TI(“clinical trial*”) OR (AB(RCT*) OR AB(“controlled trial*”) OR AB(“clinical trial*”)) OR (TI(intervention OR initiative OR program* OR strat*) OR (AB(intervention OR initiative OR program* OR strat*)) AND (TI(“time series” OR pre-post OR before-after OR “case series”)) OR AB(“time series” OR pre-post OR before-after OR “case series”)) OR MR (clinical trial)

Results: 157 – duplicates = 113

CINAHL
Academic Journals
Date run: 10 March 2020

(TI(peer-to-peer OR provider-to-provider) OR AB(peer-to-peer OR provider-to-provider) OR (TI((colleague OR co-worker or coworker) AND (TI(support) OR AB(support))) AND (TI(support) OR AB(support)))

AND

TI(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*”
OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR
Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted Personnel” OR “military officer*” OR “army officer*” OR “navy officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service* Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator*”) OR AB(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR
Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted Personnel” OR “military officer*” OR “army officer*” OR “navy officer*” OR “naval officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service* Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Orthopaedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator*”

AND

(TI(RCT*) OR TI(“controlled trial*”) OR TI(“clinical trial*”) OR (AB(RCT*)) OR AB(“controlled trial*”) OR AB(“clinical trial*”)) OR (TI(intervention OR initiative OR program* OR strateg*) OR (AB(intervention OR initiative OR program* OR strateg*)) AND (TI(“time series” OR pre-post OR before-after OR “case series”)) OR AB(“time series” OR pre-post OR before-after OR “case series”))

Results: 244 – duplicates = 121

BSC

Academic Journals

Date run: 10 March 2020

(TI(peer-to-peer OR provider-to-provider) OR AB(peer-to-peer OR provider-to-provider) OR (TI((colleague OR co-worker or coworker) OR AB((colleague OR co-worker or coworker) AND (TI(support) OR AB(support)) AND (TI(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist*
OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted Personnel*” OR “military officer*” OR “army officer*” OR “navy officer*” OR “naval officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service* Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator*”) OR AB(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orthotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist* OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted
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AND

(TI(RCT*) OR TI(“controlled trial*”) OR TI(“clinical trial*”) OR (AB(RCT*) OR AB(“controlled trial*”)) OR (TI(intervention OR initiative OR program* OR strateg*) OR (AB(intervention OR initiative OR program* OR strateg*)) AND (TI(“time series” OR pre-post OR before-after OR “case series”)) OR AB(“time series” OR pre-post OR before-after OR “case series”))

Results: 24 – duplicates = 17

ASC
Academic Journals

Date run: 10 March 2020

(TI(peer-to-peer OR provider-to-provider) OR AB(peer-to-peer OR provider-to-provider) OR (TI((colleague OR co-worker or coworker) OR AB((colleague OR co-worker or coworker) AND (TI(support) OR AB(support)) AND TI(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR
Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service* Worker*” OR Manicurist* OR Pedicurist* OR Skincare Specialist* OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR Air Traffic Controller* OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Orthopaedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator*”

AND

(TI(RCT*) OR TI(“controlled trial*”) OR TI(“clinical trial*”) OR (AB(RCT*) OR AB(“controlled trial*”) OR AB(“clinical trial*”)) OR (TI(intervention OR initiative OR program* OR strateg*) OR (AB(intervention OR initiative OR program* OR strateg*)) AND (TI(“time series” OR pre-post OR before-after OR “case series”)) OR AB(“time series” OR pre-post OR before-after OR “case series”))

Results: 253 – duplicates = 73

Scopus

Date run: 10 March 2020

TITLE-ABS(peer-to-peer OR provider-to-provider) OR TITLE-ABS((colleague OR co-worker OR coworker) AND support) AND TITLE-ABS(“Loan officer*” OR “tax collector*” OR “Community Health Worker*” OR “Probation Officer*” OR “Correctional Treatment Specialist*” OR “Rehabilitation Counselor*” OR “School Counselor*” OR “Career Counselor*” OR “Social Worker*” OR “Substance Abuse Counselor*” OR “Behavioral Disorder Counselor*” OR “Mental Health Counselor*” OR Teacher* OR Archivist* OR Curator* OR “Museum Worker*” OR Librarian* OR “Library Technician*” OR “Library Assistant*” OR “Teacher Assistant*” OR “Athletic Trainer*” OR Audiologist* OR Chiropractor* OR “Dental Assistant*” OR “Dental Hygienist*” OR Dentist* OR “Diagnostic Medical Sonographer*” OR Paramedic* OR Physiologist* OR “Genetic Counselor*” OR “Home Health Aide*” OR “Personal Care Aide*” OR Nurse* OR Therapist* OR “Medical Assistant*” OR “Medical Transcriptionist*” OR Anesthetist* OR Midwife OR Midwives OR Practitioner* OR “Nursing Assistant*” OR “Occupational Therapy Assistant” OR “Occupational Therapy Aide*” OR Optician* OR Optometrist* OR Orhtotist* OR Prosthetist* OR Pharmacist* OR Phlebotomist* OR “Physician Assistant*” OR Physician* OR Surgeon* OR Podiatrist*

OR “Psychiatric Aide*” OR Pathologist* OR Veterinarian* OR “Veterinary Assistant*” OR Reporter* OR Judge* OR Lawyer* OR Paralegal* OR “Legal Assistant*” OR Psychologist* OR
Sociologist* OR Farmers OR Ranchers OR “Postsecondary Education Administrator*” OR Interpreter* OR Translator* OR Photographer* OR “Broadcast News Analyst*” OR “Enlisted Personnel” OR “military officer*” OR “army officer*” OR “navy officer*” OR “naval officer*” OR “marine corps officer*” OR “air force officer*” OR “Animal Care Worker*” OR “Service Worker*” OR Barber* OR Hairstylist* OR Cosmetologist* OR “Childcare Worker*” OR “Fitness Trainer*” OR “Fitness Instructor*” OR “Service* Worker*” OR Manicurist* OR Pedicurist* OR “Skincare Specialist*” OR Bailiff* OR Firefighter* OR Police* OR Detective* OR Guard* OR “Air Traffic Controller*” OR Pilot* OR “Bus Driver*” OR “Taxi Driver*” OR “Ride-Hailing Driver*” OR “Flight Attendant*” OR Chauffeur* OR “Sales Worker*” OR “Water Transportation Worker*” OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Orthopaedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Physician* OR Psychiatrist* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR “health administrator”) AND (ALL(RCT*) OR ALL(“controlled trial*”) OR ALL(“clinical trial*”)) OR ((TITLE-ABS(intervention OR initiative OR program* OR strateg*) AND TITLE-ABS(“time series” OR pre-post OR before-after OR “case series”))

Results: 103 – duplicates = 67

DTIC
20 March 2020
Distribution A – Approved for Public Release
Technical Reports and Projects

CST (((peer OR mentor OR mentors OR “peer-to-peer” OR “provider-to-provider”) OR ((colleague OR co-worker OR cowoker) AND (support))) AND (“social workers”) OR (teachers) OR (dentists) OR (paramedics) OR (nurses) OR (therapists) OR (“medical assistants”) OR (anesthetists) OR (midwife OR midwives) OR (practitioners) OR (pharmacists) OR (physician near/5 (assistants)) OR (physicians) OR (surgeons) OR (pathologists) OR (veterinarians) OR (reporters) OR (judges) OR (lawyers) OR (paralegals) OR (psychologists) OR (sociologists) OR (interpreters) OR (translators) OR (photographers) OR (“enlisted personnel”) OR ((military OR army OR navy OR naval OR “marine corps” OR “air force”) near/5 (officers)) OR (barbers) OR (hairstylists) OR (cosmetologists) OR (“childcare workers”) OR (manicurists) OR (pedicurists) OR (skincare near/5 (specialists)) OR (bailiffs) OR (firefighters) OR (police OR policeman OR policewoman OR policemen OR policewomen OR policeman OR “police officers”) OR (detectives) OR (guards) OR (“air traffic controllers”) OR (pilots) OR ((bus OR taxi OR “ride-hailing”) near/5 (drivers)) OR (“flight attendants”) OR (chauffeurs) OR (“sales workers”) OR (allergists) OR (anesthesiologist) OR (cardiologist) OR (dermatologist) OR (gastroenterologists) OR (geriatricians) OR (hematologists) OR
(hepatologists) OR (internists) OR (neurosurgeons) OR (neurologists) OR (obstetricians) OR (oncologists) OR (ophthalmologists) OR (orthopedists) OR (otolaryngologists) OR (pathologists) OR (pediatricians) OR (physicians) OR (psychiatrists) OR (psychologists) OR (pulmonologists) OR (radiologists) OR (rheumatologists) OR (urologists) OR (farmers) OR (ranchers)) AND ((“controlled trials” OR “clinical trials”) OR (“time series” OR pre-post OR before-after OR “case series”) near/5 (intervention OR initiative OR programs OR strategy OR strategies))

Results: 76

Evidence Map Eligible Professions

Labor relations specialists; claims adjusters, appraisers, examiners, and investigators; fundraisers; human resource specialists; loan officers; meeting, convention and event planners; tax examiners; collectors; revenue agents; training and development specialists; health educators; community health workers; marriage and family therapists; probation officers; correctional treatment specialists; rehabilitation counselors; school and career counselors; social and human service assistants; social workers; substance abuse, behavioral disorder, and mental health counselors; teachers; archivists; curators; museum workers; coordinators; librarians; library technicians and assistants; teacher assistants; athletic trainers; audiologists; chiropractors; dental assistants; dental hygienists; dentists; diagnostic medical sonographers and cardiovascular technologists and technicians; paramedics; physiologists; genetic counselors; home health aides; personal care aides; nurses; therapists; medical and clinical laboratory technologists and technicians; medical assistants; medical records and health information technicians; medical transcriptionists; nuclear medicine technologists; anesthesiologists; midwives; practitioners; nursing assistants and orderlies; occupational health and safety specialists and technicians; occupational therapists; occupational therapy assistants and aides; opticians; optometrists; orthotists and prosthetists; pharmacists; pharmacy technicians; phlebotomists; physical therapist assistants and aides; physician assistants; physicians and surgeons; podiatrists; psychiatric technicians and aides; radiation therapists; radiologic and MRI technologists; pathologists; surgical technologists; veterinarians; veterinary assistants and laboratory animal caretakers; veterinary technologists and technicians; arbitrators, mediators, and conciliators; court reporters; judges and hearing officers; lawyers; paralegals and legal assistants; psychologists; sociologists; survey researchers; administrative services managers; advertising, promotions, and marketing managers; architectural and engineering managers; compensation and benefits managers; computer and information systems managers; construction managers; elementary, middle, and high school principals; emergency management directors; financial managers; food service managers; human resources managers; industrial production managers; lodging managers; medical and health services managers; natural sciences managers; postsecondary education administrators; preschool and childcare center directors; property, real estate, and community association managers; public relations and fundraising managers; sales managers; social and community service managers; top executives; training and development
managers; interpreters and translators; photographers; public relations specialists; reporters, correspondents, and broadcast news analysts; enlisted personnel; officers; animal care and service workers; barbers, hairstylists, and cosmetologists; childcare workers; fitness trainers and instructors; funeral service workers; gaming services workers; manicurists and pedicurists; recreation workers; skincare specialists; correctional officers and bailiffs; fire inspectors; firefighters; police and detectives; private detectives and investigators; security guards and gaming surveillance officers; air traffic controllers; airline and commercial pilots; bus drivers; delivery truck drivers and driver/sales workers; flight attendants; taxi drivers, ride-hailing drivers, and chauffeurs; water transportation workers; clinicians; physicians; psychiatrists; surgeons; allergists; anesthesiologists; cardiologists; dermatologists; gastroenterologists; geriatricians; hematologists; hepatologists; internist; neurosurgeons; neurologists; obstetricians; oncologists; ophthalmologists; orthopedists; otolaryngologists; pathologists; pediatricians; physicians; physicists; psychiatrists; psychologists; pulmonologists; radiologists; rheumatologists; urologists.

**Systematic Review Search**

**OVID MEDLINE**

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily 1946 to 23 July 2020

Filter: English

Search date: 24 July 2020

(candor.ti,ab. OR “psychological first aid”.ti,ab. OR “appreciative inquiry approach”.ti,ab.)

AND

(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty).ti,ab.

AND

(RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study”) OR (“clinical controlled” AND trial*) OR (clinical AND trial*)

AND

“united states”.af. OR usa.af.

Results: 14

**PubMed**

Filter: English
Search run: 24 July 2020

Results: 12 – duplicates = 0

PsycINFO
Filter: English
Search run: 24 July 2020

TI(candor OR “psychological first aid” OR “appreciative inquiry approach”) OR AB(candor OR “psychological first aid” OR “appreciative inquiry approach”)

AND

TI(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty) OR AB(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty)

AND

(RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study”) OR (“clinical controlled” AND trial*) OR (“clinical trial” OR “clinical trials”)

Results: 20 – duplicates = 14

TOTAL: 34

PubMed
Filter: English; Systematic Review
Search run: 24 July 2020

(candor[tiab] OR “psychological first aid”[tiab] OR “appreciative inquiry approach”[tiab])
AND
Results: 6 – duplicates with primary study search = 6

PsycINFO
Filter: English
Search run: 24 July 2020
TI(candor OR “psychological first aid” OR “appreciative inquiry approach”) OR AB(candor OR “psychological first aid” OR “appreciative inquiry approach”)
AND
TI(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR "patient care team" OR "patient care teams" OR “managed care” OR “general practice” OR faculty) OR AB(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty)
AND
MR systematic review
Results: 2 – duplicates = 0
Total for both Review C searches: 6
Removed non-US citations in EndNote by hand.
Search in title: China, Japan, Great Britain, England, Ireland, Spain, Portugal, Italy, German, Switzerland, Belgium, the UK, United Kingdom, Singapore, Sweden, Hungary, Norway, Netherlands, Dominican Republic, Haiti, Zimbabwe, Canada, Canadian, Swedish, Italian, French, British, Chinese, Australia, New Zealand, Kenya, Rwanda, Sub-Saharan Africa, Uganda, Pakistan, Zambia, South Africa, Iran, Saudi Arabia, Costa Rica, Mozambique, Chinese, Cambodia, Dutch, Nepal, London, India, Mexico, Hong Kong, Taiwan, Korea, Afghanistan, Brazil, Bolivia, Iran, Finland, Poland

Search in abstract: German, Spain, England, Ireland, Sweden, France, Belgium, Scotland, China, Canada, Norway, Japan, Portugal, Netherlands, the UK, United Kingdom, Singapore, Taiwan, Hungary, Kenya, Sub-Saharan Africa, Haiti, Zimbabwe, Uganda, Pakistan, Zambia, South Africa, Iran, Saudi Arabia, Costa Rica, Cambodia, Nepal, Mexico, Dominican Republic, Hong Kong, Mozambique, London, Italian, French, British, Canadian, Chinese, Korea, Afghanistan, Brazil, Poland

TOTAL = 30
(Primary Studies:25; Systematic Reviews: 5)

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily 1946 to 11 March 2020
Filter: English
Search run: 12 March 2020

(“provider to provider”.ti,ab. OR Balint.ti,ab. OR “clinician support”.ti,ab. OR “provider support”.ti,ab. OR “schwartz rounds”.ti,ab. or “empathy forums”.ti,ab. or “physician engagement group”.ti,ab. or “physician engagement groups”.ti,ab. or “modeling physician action for culture transformation”.ti,ab.)
OR
((colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) adj5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”).ti,ab.)
AND
(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty).ti,ab.
AND
(RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study”) OR (“clinical controlled” AND trial*) OR (clinical AND trial*)
AND
“united states”.af. OR usa.af.
Results: 419

PubMed
Filter: English
Search run: 12 March 2020
  (“provider to provider”[tiab] OR Balint[tiab] OR “clinician support”[tiab] OR “provider
support”[tiab] OR “schwartz rounds”[tiab] or “empathy forums”[tiab] or “physician engagement
group”[tiab] or “physician engagement groups”[tiab] or “modeling physician action for culture
transformation”[tiab])
  OR
  ((colleague*[tiab] OR co-worker*[tiab] OR coworker*[tiab] OR peer[tiab] OR peers[tiab]
OR mentor*[tiab] OR peer-to-peer[tiab]) AND (intervention[tiab] OR initiative[tiab] OR
for”[tiab]))
  AND
  (provider[tiab] OR clinician*[tiab] OR physician*[tiab] OR psychiatrist*[tiab] OR
Dermatologist*[tiab] OR Gastroenterologist*[tiab] OR Geriatrician*[tiab] OR
Hematologist*[tiab] OR Hepatologist*[tiab] OR Internist*[tiab] OR Neurosurgeon*[tiab] OR
Neurologist* OR Obstetrician*[tiab] OR Oncologist*[tiab] OR Ophthalmologist*[tiab] OR
psychologist*[tiab] OR Pulmonologist*[tiab] OR Radiologist*[tiab] OR Rheumatologist*[tiab]
faculty[tiab])
  AND
  (RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR
“cohort study”) OR (“clinical controlled” AND trial*) OR (“clinical trial”[all fields] OR “clinical
trials”[all fields])
  AND

Results: 1,262 – duplicates = 976

PsycINFO
Filter: English
Search run: 16 March 2020

TI(“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” or “empathy forums” or “physician engagement group” or “physician engagement groups” or “modeling physician action for culture transformation”) OR AB(“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” or “empathy forums” or “physician engagement group” or “physician engagement groups” or “modeling physician action for culture transformation”) OR

(TI(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 TI(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”)) OR

OR
(AB(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 AB(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR

(TI(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 AB(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR

(AB(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 TI(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

AND

(TI(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty) OR

AB(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty)

AND

(RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study”) OR (“clinical controlled” AND trial*) OR (“clinical trial” OR “clinical trials”)

AND

(RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study”) OR (“clinical controlled” AND trial*) OR (“clinical trial” OR “clinical trials”)

Results: 16 – duplicates = 7

CINAHL
Filter: English
Search run: 16 March 2020

TI(“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” or “empathy forums” or “physician engagement group” or “physician
engagement groups” or “modeling physician action for culture transformation”) OR
AB(“provider to provider” OR Balint OR “clinician support” OR “provider support” OR
“schwartz rounds” or “empathy forums” or “physician engagement group” or “physician
engagement groups” or “modeling physician action for culture transformation”)
OR
(TI(coleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-
peer) N5 TI(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR
“secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))
OR
(AB(coleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-
peer) N5 AB(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR
“secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))
OR
(TI(coleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-
peer) N5 TI(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR
“secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))
OR
(AB(coleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-
peer) N5 TI(intervention OR initiative OR program* OR strateg* OR support OR facilitator OR
“secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))
AND
TI(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR
Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR
Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR
Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR
Otolaryngologist* OR Pathologist* OR Pediatrician* OR Psychologist* OR Pulmonologist* OR
Radiologist* OR Rheumatologist* OR Urologist* OR Therapist* OR Psychologist* OR “patient
care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty) OR
AB(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR
Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR
Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR
Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR
Otolaryngologist* OR Pathologist* OR Pediatrician* OR Psychologist* OR Pulmonologist* OR
Radiologist* OR Rheumatologist* OR Urologist* OR Therapist* OR Psychologist* OR “patient
care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty)
AND
(RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR
“cohort study”) OR (“clinical controlled” AND trial*) OR (“clinical trial” OR “clinical trials”)
Results:19 – duplicates = 0 (no unique citations)
TS= (“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” or “empathy forums” or “physician engagement group” or “physician engagement groups” or “modeling physician action for culture transformation”)

OR

(TS= (colleague* near/5 intervention) OR (Colleague* near/5 initiative) OR (colleague* near/5 program*) OR (colleague* near/5 strateg*) OR (colleague* near/5 support) OR (colleague* near/5 facilitator) OR (colleague* near/5 “secondary trauma”) OR (colleague* near/5 “second victim”) OR (colleague* near/5 burnout) OR (colleague* near/5 wellness) OR (colleague* near/5 “caring for”))

OR

(TS= (coworker* near/5 intervention) OR (Coworker* near/5 initiative) OR (coworker* near/5 program*) OR (coworker* near/5 strateg*) OR (coworker* near/5 support) OR (coworker* near/5 facilitator) OR (coworker* near/5 “secondary trauma”) OR (coworker* near/5 “second victim”) OR (coworker* near/5 burnout) OR (coworker* near/5 wellness) OR (coworker* near/5 “caring for”))

OR

(TS= (co-worker* near/5 intervention) OR (Co-worker* near/5 initiative) OR (co-worker* near/5 program*) OR (co-worker* near/5 strateg*) OR (co-worker* near/5 support) OR (co-worker* near/5 facilitator) OR (co-worker* near/5 “secondary trauma”) OR (co-worker* near/5 “second victim”) OR (co-worker* near/5 burnout) OR (co-worker* near/5 wellness) OR (co-worker* near/5 “caring for”))

OR

(TS= (peer near/5 intervention) OR (Peer near/5 initiative) OR (peer near/5 program*) OR (peer near/5 strateg*) OR (peer near/5 support) OR (peer near/5 facilitator) OR (peer near/5 “secondary trauma”) OR (peer near/5 “second victim”) OR (peer near/5 burnout) OR (peer near/5 wellness) OR (peer near/5 “caring for”))

OR

(TS= (peers near/5 intervention) OR (Peers near/5 initiative) OR (peers near/5 program*) OR (peers near/5 strateg*) OR (peers near/5 support) OR (peers near/5 facilitator) OR (peers near/5 “secondary trauma”) OR (peers near/5 “second victim”) OR (peers near/5 burnout) OR (peers near/5 wellness) OR (peers near/5 “caring for”))

OR

(TS= (mentor near/5 intervention) OR (Mentor near/5 initiative) OR (mentor near/5 program*) OR (mentor near/5 strateg*) OR (mentor near/5 support) OR (mentor near/5 “caring for”))
facilitator) OR (mentor near/5 “secondary trauma”) OR (mentor near/5 “second victim”) OR (mentor near/5 burnout) OR (mentor near/5 wellness) OR (mentor near/5 “caring for”)

OR

TS=(( peer-to-peer near/5 intervention) OR (Peer-to-peer near/5 initiative) OR (peer-to-peer near/5 program*) OR (peer-to-peer near/5 strateg*) OR (peer-to-peer near/5 support) OR (peer-to-peer near/5 facilitator) OR (peer-to-peer near/5 “secondary trauma”) OR (peer-to-peer near/5 “second victim”) OR (peer-to-peer near/5 burnout) OR (peer-to-peer near/5 wellness) OR (peer-to-peer near/5 “caring for”))

AND

TS=( (provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty))

AND

TS= ( (RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study” OR “clinical trial” OR “clinical trials”) OR (“clinical controlled” AND trial*))

Results: 493 – duplicates = 244

Scopus

Filters: English; Country/Territory: United States; article or review

Search run: 16 March 2020

TITLE-ABS (“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” OR “empathy forums” OR “physician engagement group” OR “physician engagement groups” OR “modeling physician action for culture transformation”)

OR

TITLE-ABS ( (colleague* w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))))

OR

TITLE-ABS ( (co-worker* w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))))

OR

TITLE-ABS ( (coworker* w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))))

OR
TITLE-ABS (( peer w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR

TITLE-ABS (( peers w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR

TITLE-ABS (( mentor* w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR

TITLE-ABS (( peer-to-peer w/5 (intervention OR initiative OR program* OR strateg* OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

AND

TITLE-ABS (( provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR Psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty))

AND

TITLE-ABS-KEY (RCT OR random* OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study”) OR (“clinical controlled” AND trial*) OR (“clinical trial” OR “clinical trials”)

Results: 582 – duplicates = 203

CENTRAL

Search Run: 17 March 2020

((“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” OR “empathy forums” OR “physician engagement group” OR “physician engagement groups” OR “modeling physician action for culture transformation”)):ti,ab,kw

OR

((( colleague* near/5 intervention) OR (Colleague* near/5 initiative) OR (colleague* near/5 program*) OR (colleague* near/5 strateg*) OR (colleague* near/5 support) OR (colleague* near/5 facilitator) OR (colleague* near/5 “secondary trauma”) OR (colleague* near/5 “second victim”) OR (colleague* near/5 burnout) OR (colleague* near/5

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((( coworker* near/5 intervention) OR (Coworker* near/5 initiative) OR (coworker* near/5 program*) OR (coworker* near/5 stratag*) OR (coworker* near/5 support) OR (coworker* near/5 facilitator) OR (coworker* near/5 “secondary trauma”) OR (coworker* near/5 “second victim”) OR (coworker* near/5 burnout) OR (coworker* near/5 wellness) OR (coworker* near/5 “caring for”)):ti,ab,kw

OR

((( co-worker* near/5 intervention) OR (Co-worker* near/5 initiative) OR (co-worker* near/5 program*) OR (co-worker* near/5 stratag*) OR (co-worker* near/5 support) OR (co-worker* near/5 facilitator) OR (co-worker* near/5 “secondary trauma”) OR (co-worker* near/5 “second victim”) OR (co-worker* near/5 burnout) OR (co-worker* near/5 wellness) OR (co-worker* near/5 “caring for”)):ti,ab,kw

OR

((( peer near/5 intervention) OR (Peer near/5 initiative) OR (peer near/5 program*) OR (peer near/5 stratag*) OR (peer near/5 support) OR (peer near/5 facilitator) OR (peer near/5 “secondary trauma”) OR (peer near/5 “second victim”) OR (peer near/5 burnout) OR (peer near/5 wellness) OR (peer near/5 “caring for”)):ti,ab,kw

OR

((( peers near/5 intervention) OR (Peers near/5 initiative) OR (peers near/5 program*) OR (peers near/5 stratag*) OR (peers near/5 support) OR (peers near/5 facilitator) OR (peers near/5 “secondary trauma”) OR (peers near/5 “second victim”) OR (peers near/5 burnout) OR (peers near/5 wellness) OR (peers near/5 “caring for”)):ti,ab,kw

OR

((( mentor near/5 intervention) OR (Mentor near/5 initiative) OR (mentor near/5 program*) OR (mentor near/5 stratag*) OR (mentor near/5 support) OR (mentor near/5 facilitator) OR (mentor near/5 “secondary trauma”) OR (mentor near/5 “second victim”) OR (mentor near/5 burnout) OR (mentor near/5 wellness) OR (mentor near/5 “caring for”)):ti,ab,kw

OR

((( peer-to-peer near/5 intervention) OR (Peer-to-peer near/5 initiative) OR (peer-to-peer near/5 program*) OR (peer-to-peer near/5 stratag*) OR (peer-to-peer near/5 support) OR (peer-to-peer near/5 facilitator) OR (peer-to-peer near/5 “secondary trauma”) OR (peer-to-peer near/5 “second victim”) OR (peer-to-peer near/5 burnout) OR (peer-to-peer near/5 wellness) OR (peer-to-peer near/5 “caring for”)):ti,ab,kw

AND

((( provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR psychiatrist* OR Pulmonologist* OR

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Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty)):ti,ab,kw

Results: 1377 – internal duplicates = 1327 – ictrp records removed = 1225 (232 ClinicalTrials.gov records) – duplicates = 966 (751 CENTRAL/215 CT.gov records)

**ClinicalTrials.gov**

Search run: 17 March 2020

Other:

“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” or “empathy forums” or “physician engagement group” or “physician engagement groups” or “modeling physician action for culture transformation”

Results 49 total = 21 in US – duplicates 15

TOTAL 2,830

**PubMed**

Filter: English; Systematic Review

Search run: 18 March 2020


OR


AND

Results: 706 – duplicates with primary study search = 597

PsycINFO
Filter: English
Search run: 16 March 2020

TI(“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” OR “empathy forums” OR “physician engagement group” OR “physician engagement groups” OR “modeling physician action for culture transformation”) OR
AB(“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” OR “empathy forums” OR “physician engagement group” OR “physician engagement groups” OR “modeling physician action for culture transformation”) 

OR
(TI(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 TI(intervention OR initiative OR program* OR stratég OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR
(AB(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 AB(intervention OR initiative OR program* OR stratég OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR
(TI(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 AB(intervention OR initiative OR program* OR stratég OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

OR
(AB(colleague* OR co-worker* OR coworker* OR peer OR peers OR mentor* OR peer-to-peer) N5 TI(intervention OR initiative OR program* OR stratég OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))

AND
TI(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR THERAPIST* OR psycolog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty) OR
AB(provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR
Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty) AND

Web of Science
SCI-Expanded; SSCI, A&HCI
English;
Date Run: 18 March 2020

Results: 10 – duplicates = 7

TS= (“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “schwartz rounds” or “empathy forums” or “physician engagement group” or “physician engagement groups” or “modeling physician action for culture transformation”)

OR

(TS=(( colleague* near/5 intervention) OR (Colleague* near/5 initiative) OR (colleague* near/5 program*) OR (colleague* near/5 stratag*) OR (colleague* near/5 support) OR (colleague* near/5 facilitator) OR (colleague* near/5 “secondary trauma”) OR (colleague* near/5 “second victim”) OR (colleague* near/5 burnout) OR (colleague* near/5 wellness) OR (colleague* near/5 “caring for”)))

OR

(TS=(( coworker* near/5 intervention) OR (Coworker* near/5 initiative) OR (coworker* near/5 program*) OR (coworker* near/5 stratag*) OR (coworker* near/5 support) OR (coworker* near/5 facilitator) OR (coworker* near/5 “secondary trauma”) OR (coworker* near/5 “second victim”) OR (coworker* near/5 burnout) OR (coworker* near/5 wellness) OR (coworker* near/5 “caring for”)))

OR

(TS=(( co-worker* near/5 intervention) OR (Co-worker* near/5 initiative) OR (co-worker* near/5 program*) OR (co-worker* near/5 stratag*) OR (co-worker* near/5 support) OR (co-worker* near/5 facilitator) OR (co-worker* near/5 “secondary trauma”) OR (co-worker* near/5 “second victim”) OR (co-worker* near/5 burnout) OR (co-worker* near/5 wellness) OR (co-worker* near/5 “caring for”)))

OR

(TS=(( peer near/5 intervention) OR (Peer near/5 initiative) OR (peer near/5 program*) OR (peer near/5 stratag*) OR (peer near/5 support) OR (peer near/5 facilitator) OR (peer near/5 “secondary trauma”) OR (peer near/5 “second victim”) OR (peer near/5 burnout) OR (peer near/5 wellness) OR (peer near/5 “caring for”)))

OR
TS=(( peers near/5 intervention) OR (Peers near/5 initiative) OR (peers near/5 program*) OR (peers near/5 strateg*) OR (peers near/5 support) OR (peers near/5 facilitator) OR (peers near/5 “secondary trauma”) OR (peers near/5 “second victim”) OR (peers near/5 burnout) OR (peers near/5 wellness) OR (peers near/5 “caring for”))

OR

TS=(( mentor near/5 intervention) OR (Mentor near/5 initiative) OR (mentor near/5 program*) OR (mentor near/5 strateg*) OR (mentor near/5 support) OR (mentor near/5 facilitator) OR (mentor near/5 “secondary trauma”) OR (mentor near/5 “second victim”) OR (mentor near/5 burnout) OR (mentor near/5 wellness) OR (mentor near/5 “caring for”))

OR

TS=(( peer-to-peer near/5 intervention) OR (Peer-to-peer near/5 initiative) OR (peer-to-peer near/5 program*) OR (peer-to-peer near/5 strateg*) OR (peer-to-peer near/5 support) OR (peer-to-peer near/5 facilitator) OR (peer-to-peer near/5 “secondary trauma”) OR (peer-to-peer near/5 “second victim”) OR (peer-to-peer near/5 burnout) OR (peer-to-peer near/5 wellness) OR (peer-to-peer near/5 “caring for”)))

AND

TS= ( (provider OR clinician* OR physician* OR psychiatrist* OR surgeon* OR Allergist* OR Anesthesiologist* OR Cardiologist* OR Dermatologist* OR Gastroenterologist* OR Geriatrician* OR Hematologist* OR Hepatologist* OR Internist* OR Neurosurgeon* OR Neurologist* OR Obstetrician* OR Oncologist* OR Ophthalmologist* OR Orthopedist* OR Otolaryngologist* OR Pathologist* OR Pediatrician* OR psychologist* OR Pulmonologist* OR Radiologist* OR Rheumatologist* OR Urologist* OR therapist* OR psycholog* OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty))

AND

TS=(systematic review)

Results:299 – duplicates = 146

Total for both Review C searches: 3580

Removed non-US citations in EndNote by hand.

Search in title: China, Japan, Great Britain, England, Ireland, Spain, Portugal, Italy, German, Switzerland, Belgium, the UK, United Kingdom, Singapore, Sweden, Hungary, Norway, Netherlands, Dominican Republic, Haiti, Zimbabwe, Canada, Canadian, Swedish, Italian, French, British, Chinese, Australia, New Zealand, Kenya, Rwanda, Sub-Saharan Africa, Uganda, Pakistan, Zambia, South Africa, Iran, Saudi Arabia, Costa Rica, Mozambique, Chinese, Cambodia, Dutch, Nepal, London, India, Mexico, Hong Kong, Taiwan, Korea, Afghanistan, Brazil, Bolivia, Iran, Finland, Poland

Search in abstract: German, Spain, England, Ireland, Sweden, France, Belgium, Scotland, China, Canada, Norway, Japan, Portugal, Netherlands, the UK, United Kingdom, Singapore, Taiwan, Hungary, Kenya, Sub-Saharan Africa, Haiti, Zimbabwe, Uganda, Pakistan, Zambia, South Africa, Iran, Saudi Arabia, Costa Rica, Cambodia, Nepal, Mexico, Dominican Republic,
Hong Kong, Mozambique, London, Italian, French, British, Canadian, Chinese, Korea, Afghanistan, Brazil, Poland

Removed Protocol papers from SR search
Search in title: protocol
TOTAL = 3,091

DTIC
20 March 2020
Distribution A – Approved for Public Release
Technical Reports and Projects

CST (((“provider to provider” OR Balint OR “clinician support” OR “provider support” OR “Schwartz rounds” OR “empathy forums” OR “physician engagement group” OR “physician engagement groups” OR “modeling physician action for culture transformation”) OR ((colleagues OR co-workers OR coworkers OR peer OR peers OR mentors OR mentored OR peer-to-peer) near/5 (intervention OR initiative OR programs OR strategy OR strategies OR support OR facilitator OR “secondary trauma” OR “second victim” OR burnout OR wellness OR “caring for”))) AND ((provider OR clinicians OR physicians OR psychiatrists OR surgeons OR Allergists OR Anesthesiologists OR cardiologists OR dermatologists OR gastroenterologists OR geriatricians OR hematologists OR hepatologists OR internists OR neurosurgeons OR neurologists OR obstetricians OR oncologists OR Ophthalmologists OR Orthopedists OR Otolaryngologists OR pathologists OR pediatricians OR psychologists OR pulmonologists OR radiologists OR rheumatologists OR urologists OR therapists OR psychologists OR “patient care team” OR “patient care teams” OR “managed care” OR “general practice” OR faculty)) AND ((RCT OR random OR randomized OR “time series” OR pre-post OR before-after OR “case series” OR “cohort study” OR “clinical controlled” OR “clinical trials” OR “systematic review”)))
Results: 43
Appendix B. Key Informant Summaries

This appendix provides a summary of the key informant interviews.

Table B.1. Program Summaries from Key Informant Interviews

<table>
<thead>
<tr>
<th>Program Name and Background</th>
<th>Program Description</th>
<th>Peer Selection, Training, and Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>SupportNet is a program developed to look for secondary trauma and burnout in military mental health providers. It is based on developer experience with peer-support programs for firefighters and a Queensland, Australia, program for an ambulance service. The objectives were to understand the effects of trauma exposure and to train peers to manage awareness of the after-effects of repeated trauma. The University of Colorado, Colorado Springs (UCCS), Center development group is now doing a similar program for a Colorado transportation division to support individuals constantly coming across trauma on the roadways.</td>
<td>The SupportNet program was designed for mental health providers who could access a program that could be used for patients and their families and for their own workplace trauma exposure. The goal was to develop a technology-based trauma-informed web intervention system that could be peer-supported. A peer provider assists as a coach and another provider identifies burnout rates, symptoms, and secondary trauma. There were several resources built into the system. One was called “Take Five” and provided quick supportive interventions for challenging situations and took only 5 minutes to access. There was also quick access to an annotated bibliography and to summarized evidence-based information. The peer-to-peer aspects of the program were multilevel and included a social media component in the web-based system, as well as a coaching component outside the system. Within the system, the participant could identify peers to share goals with and to support. The social media component fostered collective support. It functioned in the context of goal-setting, which allowed the participant to set goals of strength and empowerment and to develop a supportive social network to help achieve those goals. A self-assessment unit, which included a “Wellness Wheel,” could be used by the participant to identify areas in which more energy could be focused, such as nutrition and exercise. Goals could be set and supported by the social network.</td>
<td>Outside the web-based system, a peer coach could reach out on a weekly or biweekly basis to help the participant stay focused. The objective was to develop a coaching relationship, where the coach could guide the participant and be someone that the participant could talk to and discuss challenges with, rather than a therapeutic relationship. Within the SupportNet project, little training was needed because there were coaches who were mental health providers; however, more training might be required for coaches from other clinical disciplines (e.g., surgery). Also, in programs for firefighters and transportation employee, a 30-hour training program was used to prepare individuals who wanted to become coaches and commit to being resources for other people. In the SupportNet project, a research study, an entire team supported the peer coaches and visited on a weekly basis to discuss the status of the peer clients. In more typical ongoing programs developed by the UCCS Center, there is a designated clinical supervisor available 24/7 and a licensed mental health provider is available all the time for support. Peers get quarterly training. One barrier to implementing this type of program is that there should be full organizational commitment to the mental health and wellness of the population being addressed. Repeated efforts may be required to convince organizations that these types of programs are valuable. For organizations for which training peer coaches would be a burden, several trained mental health providers from the UCCS Center have been provided. There is little peer-reviewed information available on outcomes for these types of programs.</td>
</tr>
<tr>
<td>Program Name and Background</td>
<td>Program Description</td>
<td>Peer Selection, Training, and Support</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>The Center for Professionalism and Peer Support program at Brigham and Women's Hospital</td>
<td>The Brigham and Women's program is set up for anyone in an organization, usually the health care team (e.g., nurses, therapists, pharmacists, physicians), who could be involved in an emotionally traumatic event (e.g., medical error, illness of a colleague or patient, chronic stress or depression, being named in a lawsuit). Support is offered as soon as a traumatic event occurs. The program is set up as a “reach out” program. Most of the participating physicians get their support by phone. Probably about two dozen programs use this type of model. Access to the program is determined by the organization. Potential weaknesses of the peer-support program are that some individuals will be missed because they suffer silently and chronically and not everyone who needs support is being supported. Strengths of the program are that it is not expensive, it is easy to set up, and the individuals who do the peer support are volunteers. Enough people are trained so that they are not overburdened, and the support is well received.</td>
<td>The UCCS Center development group is moving toward focusing on the strengths and the empowerment of individuals and not as much on the symptoms of burnout and secondary trauma. The group is also working to establish a system in which individuals can self-volunteer. Volunteers would need to be cleared by their managers and undergo a vetting process. They would be interviewed, engage in a discussion about the roles of peer support, and have the desired characteristics for being a peer supporter.</td>
</tr>
<tr>
<td>American College of Physicians (ACP) Physician Well-Being and Professional Fulfillment program.</td>
<td>The ACP Physician Well-Being and Professional Fulfillment program has over 70 ACP chapters with at least one “well-being champion” (i.e., a coach). The program provides a positive psychology, “appreciative inquiry” approach, looks to identify the strengths of the program participants, and does not focus only on what is not working for the participants. The individual doing the coaching cannot have a hierarchical relationship with the individual being coached. ACP uses the well-being index created by Martin Seligman, a psychology professor at the University of Pennsylvania, to assess how well the program is working.</td>
<td>There is a 16-person task force involved in training well-being champions during a live 2-day pre-meeting session at the annual ACP internal medicine meeting. Also, physician well-being sessions, outside of the program, are held for all physicians who want to attend. Physicians take the best practices they have learned into their own communities; over 160 well-being champions have been trained. Mark Linzer plays a prominent role in the training program; he runs a well-being center in the Hennepin County Medical Center in the Minneapolis area. He is also involved in measuring the needs and activities of the well-being champions. The ACP is tracking the needs, activities, and well-being of the well-being champions, but they do not track the mental health outcomes of the participants.</td>
</tr>
<tr>
<td>Program Name and Background</td>
<td>Program Description</td>
<td>Peer Selection, Training, and Support</td>
</tr>
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<tr>
<td>This Stanford Support Network program was developed based on the results of a Physician Wellness Survey that identified the need for a formal peer-support program, and on a literature review and repeated physician requests.</td>
<td>The Stanford Physician Support Network program was created to help physicians respond to difficult clinical events that result in loneliness, self-doubt, depression, and anxiety. The program also addresses burnout, resilience, stress, and trauma. Unpaid, volunteer, trained physicians from a variety of departments and with different levels of experience provide support. Conversations are confidential, and the participant and peer supporter are not from the same department. After a difficult clinical event, all involved physicians are contacted. In addition, concerned colleagues or supervisors can ask for a physician to be contacted and physicians can refer themselves. Physicians and peer supporters are matched by hospital or organization, by medicine versus surgery, and by position in the organization. The program is also open to residents, fellows, and University Health Alliance members. The peer supporter is given contact information but no clinical details. Conversations are usually over the phone but can also be held in person. The contact is usually a one-time event, but an occasional follow-up contact may be scheduled. Physician participation is voluntary. The role of the peer supporter is to listen, offer perspective, emphasize self-care, provide resources, and identify options. The program also provides litigation support and psychology backup as needed.</td>
<td>Peer supporters are nominated to join the program, and self-nomination does not occur. Support for the peer supporters includes training, a one-page handout on recognizing stress, a private website, psychological backup 24/7, a psychiatrist group session, a manual, and training on how to handle potentially suicidal physicians.</td>
</tr>
</tbody>
</table>

The American Medical Association's AMA STEPS Forward program was launched in June 2015.

The AMA STEPS Forward program is an interactive practice transformation series that provides strategies for physicians to redesign their practices to minimize stress and increase fulfillment. It consists of over 50 online educational modules that address practice challenges and provide continuing medical education credit. The modules include information about implementation, case studies, downloadable videos, tools, and resources. The modules address practice efficiency and patient care, patient health, physician health, and technology and innovation. There are six modules that address physician burnout and include information on developing a supportive environment, including peer support, in the workplace for physicians and residents: Physician Suicide and Support [identify at-risk physicians and facilitate access to appropriate care]; Resident and Fellow Burnout [create a holistic, supportive culture of wellness]; Physician Burnout [improve patient satisfaction, quality outcomes and provider recruitment and retention]; Physician Well-Being [foster self-care and protect against burnout]; Hospitalist Well-Being [maximize engagement and minimize burnout for hospitalists]; and
The peer support program at Johns Hopkins University (JHU) began as a pilot program at the end of 2011. It started at the children’s hospital and then spread to the rest of the hospital. The program at JHU is called the Resilience in Stressful Events (RISE) program. A training program called Caring for the Caregiver is run by the developers of the RISE program, and the curriculum is based on the curriculum developed locally to JHU.

The RISE program is essentially an autonomous team of about 35 to 40 trained peer responders from different clinical specialties who function on an on-call basis to respond to calls of distress from hospital workers who experience, either individually or cumulatively, stressful events and who want to speak to someone. The on-call system is run mostly 24 hours per day and promises a response within 30 minutes. Peer responders meet face-to-face in a confidential manner; one or two peer responders meet, depending on the number of distressed hospital workers. It is usually a one-time intervention lasting 30 to 60 minutes, and no reports are made to anyone. Peer responders do not contact potential participants unless they express their need by contacting the RISE program. The intervention is about 80% psychological first aid, with some support and a little resourcing. Strengths of the program are the immediate response to the request for help and the approach of saying “How are you doing?” rather than asking for a description of what happened. There is very little evaluation in the RISE program; program administrators do not take names and do not do follow-up. They only ask the peer responders how meetings went and how they could be done better.

Peer responders are volunteers, initially self-selected, who undergo a further selection process and then training. There is a weekly debriefing call to discuss any requests for assistance made during the prior week. There are two days of training six months apart. The first day of training is for the hospital and department/unit leaders. The goals are to convince the leaders that the program is needed and that they need to finance it even though it is a voluntary program, to identify and screen a team to lead the program, and to create a publicity plan and call schedule. The second day of training focuses on training the responders. This training involves a lot of role-playing. The Maryland Practice Safety Center helped with the development of the two-day training materials for the RISE program. About 30 organizations have already been trained.

The Veteran Peer Access Network (VPAN) was funded by Los Angeles County in November 2019. The Veteran Peer Access Network (VPAN) program is a peer support initiative to reduce barriers and wait time for veterans and their family members to access resources for housing, mental health care, substance abuse treatment, job placement, and legal services. The program is not designed to develop peer support for health care professionals. The peer support approach is a navigator and outreach function rather than a more traditional support function of helping someone through the steps of a recovery plan. The plan for the VPAN is to obtain the appropriate technology to set up a referral platform to track self-referrals and referrals by others and the length of time for the Veterans to receive the appropriate services. Networking and engagement planning will be a significant part of setting up the program. The Network will collaborate with first responders, courts and jails, hospitals, national guard and reserve units, universities, and temporary housing programs. The initial goal is to hire peer teams consisting of Veterans, military family members, and caregivers. This program is the “first publicly-funded, community-driven support network serving Veterans and their families in the US” (Los Angeles County of Public Health, 2019). The program, at the
<table>
<thead>
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</thead>
<tbody>
<tr>
<td></td>
<td>time of the interview, was in a development stage. At the time of the interview, Keris Myrick was mentioned as the chief of peer support services at the LA County Department of Mental Health.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix C. Excluded Studies and Background Literature

This appendix provides the list of all the excluded studies together with the reason for exclusion. It also includes the list of references that were used as background literature, i.e., publications that provided background information for the topic or that were used for reference-mining to identify additional references.

Excluded Studies


Barclay, Rebecca P., Robert J. Hilt, and Michelle Garrison, “A Statewide Pediatric Psychiatry Consultation to Primary Care Program and the Care of Children with Trauma-Related Concerns,” *Journal of Behavioral Health Services & Research*, Vol. 43, No. 4, 2016, pp. 691–699. *Outcome*


Côté, L., and P. A. Laughrea, “Preceptors’ Understanding and Use of Role Modeling to Develop the CanMEDS Competencies in Residents,” Academic Medicine, Vol. 89, No. 6, June 2014, pp. 934–939. Intervention


Dela Cruz, Yurlene Sales, *A Developmental Disabilities Program: A Proposed Education Program for Direct Support Staff*, Walden University, 2014. *Study design*


Intervention


Intervention


CONCEPT


Intervention


Intervention


Participants


Intervention


Intervention


Outcome


Participants


Outcome
Fernandez, R. S., S. Sheppard-Law, and V. Manning, “Determining the Key Drivers and
Mitigating Factors That Influence the role of the Nurse and/or Midwife Consultant: A Cross-

Fiedler, Ruth, Emily S. Read, Kelly A. Lane, Frank D. Hicks, and Briana J. Jegier, “Long-Term
Outcomes of a Postbaccalaureate Nurse Residency Program,” *Journal of Nursing

Program for Academic Advancement of Female Medical Faculty,” *Journal of Women’s
Health (Larchmt)*, Vol. 17, No. 6, July–August 2008, pp. 1009–1015. *Duplicate*

Flannery, R. B., Jr., M. A. Hanson, and W. E. Penk, “Patients’ Threats: Expanding Definition of

Flannery, R. B., Jr., M. A. Hanson, W. E. Penk, G. J. Pastva, M. A. Navon, and G. J. Flannery,
1, Spring 1997, pp. 67–76. *Intervention*

Flannery, R. B., Jr., V. LeVitre, S. Rego, and A. P. Walker, “Characteristics of Staff Victims of
Psychiatric Patient Assaults: 20-Year Analysis of the Assaulted Staff Action Program,”

Foley, T., A. Jennings, S. Boyle, and W. H. Smithson, “The Development and Evaluation of
peer-Facilitated Dementia Workshops in General Practice,” *Education for Primary Care*,
Vol. 29, No. 1, January 2018, pp. 27–34. *Intervention*

Forde-Johnston, C., “Developing and Evaluating a Foundation Preceptorship Programme for

Foster, Kirsty, and Rodger Laurent, “How We Make Good Doctors into Good Teachers: A Short
Course to Support Busy Clinicians to Improve Their Teaching Skills,” *Medical Teacher*, Vol.
35, No. 1, 2013, pp. 4–7. *Intervention*

Fowler, J., “Supporting the SELF and others: From Staff Nurse to Nurse Consultant. Part 11: A
Strategic Model,” *British Journal of Nursing*, Vol. 20, No. 19, October 28–November 9,
2011, p. 1266. *Intervention*

Francois, P., A. C. Philibert, G. Esturillo, and E. Sellier, “[Peer Groups: A Model for the
Continuous Professional Development in General Practice],” *La Presse médicale*, Vol. 42,
No. 1, January 2013, pp. e21–27. *Participants*

Freeman, T., F. Baum, S. Javanparast, R. Labonte, A. Lawless, and E. Barton, “The Contribution
of Group Work to the Goals of Comprehensive Primary Health Care,” *Health Promotion


Participants


Intervention


*Intervention*

*Concept*

*Participants*

*Participants*

*Intervention*

*Outcome*

*Intervention*

*Intervention*

*Concept*

*Intervention*


Kim, Sung Eun, Vicarious Traumatization: The Impact of Therapists of Treating Trauma Clients, ProQuest Information & Learning, 2000. Intervention


Lenehan, Gail, *There but for the Grace of God: The Effects on Sexual Assault Nurse Examiners of Working with Rape Victims*, ProQuest Information & Learning, 1997. *Intervention*


McCabe, O. Lee, Charlene Perry, Melissa Azur, Henry G. Taylor, Mark Bailey, and Jonathan M. Links, “Psychological First-Aid Training for Paraprofessionals: A Systems-Based Model for Enhancing Capacity of Rural Emergency Responses,” Prehospital and Disaster Medicine, Vol. 26, No. 4, 2011, pp. 251–258. Intervention


Meir Medical Center, “Psychological Group Intervention to Reduce Stress and Burnout Among Cardiac Intensive Care Nurses,” ClinicalTrials.gov, NCT01412775, 2011. As of December 15, 2021:
https://clinicaltrials.gov/show/NCT01412775

Concept


**Intervention**


Shapiro, J., “Forgiving Ourselves for Being Human: Normalizing the Isolating Experience of Adverse Events,” webpage, Gold Foundation, October 17, 2014. As of July 24, 2021:
https://www.gold-foundation.org/forgiving-human-normalizing-isolating-experience-adverse-events/ **Intervention**


Shapiro, J., “Narrating Medicine: Offering a Shoulder When a Doctor Might Need It,” webpage, WBUR.org, October 13, 2016. As of July 24, 2021:
http://www.wbur.org/commonhealth/2016/10/13/narrating-medicine-peer-support. **Intervention**


Tedeschi, B., “As Patients Turn Violent, Doctors and Nurses Try to Protect Themselves,” *STAT*, November 20, 2015. *Intervention*


Valley, Morgan Anne, *Feasibility of a Mindfulness-Based Stress Reduction Intervention on Health Care Safety*, doctoral dissertation, Colorado State University, 2016. *Intervention*


VIA Institute on Character, homepage, undated. As of July 24, 2021: https://www.viacharacter.org/ *Intervention*


Background Studies

AMA STEPS Forward, “AMA STEPS Forward Catalogue,” webpage, undated. As of December 15, 2021:
https://edhub.ama-assn.org/steps-forward/by-topic. Background

American College of Physicians, “Optimal Team-Based Health Care Is Associated with Improved Patient Outcomes and Physician Well-Being,” webpage, 2018. As of May 22, 2019:


Beyerlein, Susan Tull, A Theoretical Model of Technical Professionals in Work Teams, ProQuest Information & Learning, 1995. Background


https://www.ted.com/talks/carol_dweck_the_power_of_believing_that_you_can_improve?language=en. Background


Fishel, Tobi, “Psychological First Aid & Peer Support Zoom Conference,” April 29, 2020. **Background**


Marine, A., J. Ruotsalainen, C. Serra, and J. Verbeek, “Preventing Occupational Stress in Healthcare Workers,” *Cochrane Database of Systematic Reviews*, No. 4, 2006, p. 34. *Background*


O’Neill, C., “Physician Well-Being Effort Aims to Strengthen Care,” webpage, Massachusetts General Hospital, 2019. As of July 24, 2021: https://giving.massgeneral.org/physician-well-being-effort/ *Background*


Royal College of Surgeons in Ireland, “Peer Support Debrief,” video, June 2019. As of July 24, 2021: https://vimeo.com/347543732/05d637f7f2 **Background**


Shapiro, J., “Peer Support Program Development Questionnaire,” 2019. *Background*


https://stti.confex.com/stti/congrs18/webprogram/Paper92375.html Background


Wisdom in Medicine, The Path Through Adversity, “Support from Others,” video, 2011. As of July 24, 2021:
https://www.youtube.com/watch?v=Y9RAYoBb9Xw. Background

Zenner, J., “Peer Support,” webpage, 2019. As of May 22, 2019, 2021:
https://www.thesoldiersproject.org/peer-support/ Background
This appendix shows the evidence tables for the studies that were abstracted for the scoping review (Table D.1) and the evidence map (Table D.2). In addition, Table D.3 provides the critical appraisal for each study included in the systematic review.

### Table. D.1. Evidence Table Scoping Review: Roles and Functions of Peers in Peer-to-Peer Interventions

<table>
<thead>
<tr>
<th>Study ID</th>
<th>Participants and Setting</th>
<th>Roles and Functions</th>
<th>Model’s Relevance to Military Health Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMA Steps Forward, 2017 Theoretical paper</td>
<td>Physicians Initiatives: Policies Care to manage: Interdisciplinary</td>
<td>Roles: Support, Facilitation Functions: Concerns, Resources Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Angeini, 1995 Post-Only</td>
<td>Nurses and nurse managers Initiatives: Policies Care to manage: Acute care</td>
<td>Roles: Mentoring Functions: Resources Aid focus: Workplace</td>
<td>Model: Structural model; process model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Barron, Abdallah, and Heltne, 2017 Post-Only</td>
<td>School counselors Initiatives: Skill training Care to manage: Trauma recovery</td>
<td>Roles: Counseling, Support Functions: Resources Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Beckman et al., 2012 Krasner, 2009 Pre-Post</td>
<td>Physicians Initiatives: Program Care to manage: Primary care</td>
<td>Roles: Support Functions: Concerns, Resources Aid focus: Behavioral, Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Benson et al., 2002 Cohort</td>
<td>Physician faculty Initiatives: Performance Care to manage: N/A</td>
<td>Roles: Mentoring Functions: Resources Aid focus: Workplace</td>
<td>No model Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td>Boyle and Kochinda, 2004 Pre-Post</td>
<td>Medical directors and nurse managers Initiatives: Intervention Care to manage: Intensive care unit</td>
<td>Roles: Support Functions: Concerns, Perspective, Resources Aid focus: Mental health, Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Calder-Sprackman et al., 2018 Post-Only</td>
<td>Emergency residents Initiatives: Wellness program Care to manage: Emergency care</td>
<td>Roles: Support, Facilitation Functions: Concerns, Resources Aid focus: Mental health</td>
<td>Model: Ice cream rounds Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td>Study ID</td>
<td>Participants and Setting</td>
<td>Roles and Functions</td>
<td>Model’s Relevance to Military Health Care</td>
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</tr>
</tbody>
</table>
| Campbell et al., 2019       | Clinical teachers
Initiatives: Policies
Care to manage: Medical education                                                       | Roles: Support
Functions: Resources
Aid focus: Workplace                                                             | Model: Sociocultural model
Relevant to military health care: Relevant                                          |
| Castellano, 2012             | Clinicians
Initiatives: Policies
Care to manage: Mental health                                                          | Roles: Support, Facilitation
Functions: Concerns, Resources, Help
Aid focus: Behavioral, Mental health                                                 | Model: Reciprocal peer support
Relevant to military health care: Relevant                                            |
| Chakravarti et al., 2017     | Anesthesiology Residents
Initiatives: Policies
Care to manage: Anesthesiology                                                        | Roles: Support, Mentoring
Functions: Resources
Aid focus: Behavioral, Mental health                                                 | No model
Relevant to military health care: Not relevant                                        |
| Chen et al., 2016            | Junior physician faculty
Initiatives: Training
Care to manage: Academic pediatrics                                                    | Roles: Counseling, Support, Mentoring
Functions: Resources
Aid focus: Workplace                                                               | No model
Relevant to military health care: Not relevant                                        |
| Creamer et al., 2012         | None. Clinicians, researchers, and peer-support practitioners
Initiatives: None. This is a study of peer support.                                    | Roles: Support
Functions: Concerns, Resources, Help
Aid focus: Behavioral, Mental health                                                 | No model
Relevant to military health care: Relevant                                            |
| Cunningham and Zlotos, 2019  | General practitioners
Initiatives: Policies
Care to manage: No, just general care                                                   | Roles: Support
Functions: Resources
Aid focus: Workplace                                                               | Model: A general overview of the process behind a Practice-Based Small Group Learning meeting
Relevant to military health care: Relevant                                            |
| Dennis, 2003                 | Health professionals
Initiatives: None. This is a theoretical study.
Care to manage: General health care.                                                  | Roles: Counseling, Education, Support, Facilitation, Mentoring
Functions: Resources, Help
Aid focus: Behavioral, Mental health                                                 | Model: Concept analysis of peer support in health care
Relevant to military health care: Relevant                                            |
| Dixon, 1991                  | Nurses
Initiatives: Program
Care to manage: Diverse                                                               | Roles: Mentoring
Functions: Resources, Help
Aid focus: Workplace                                                               | No model
Relevant to military health care: Relevant                                            |
| Dowdall-Thomae, Culliney, and Piechura, 2009 | Firefighters
Initiatives: Policies
Care to manage: Mental health                                                        | Roles: Support, Facilitation
Functions: Concerns, Resources
Aid focus: Behavioral, Mental health                                                 | Model: Individual Crisis and Peer Support Model; Peer Support Mediation Model
Relevant to military health care: Relevant                                            |
<table>
<thead>
<tr>
<th>Study ID</th>
<th>Participants and Setting</th>
<th>Roles and Functions</th>
<th>Model’s Relevance to Military Health Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dyess and Parker, 2012 Pre-Post</td>
<td>Newly licensed nurses, Initiatives: Mentoring, facilitation, Care to manage: No</td>
<td>Roles: Education, Facilitation, Mentoring, Functions: Resources, Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Eagle, Creel, and Alexandrov, 2012 Pre-Post</td>
<td>Providers, Initiatives: Research, Care to manage: Pediatric intensive care units</td>
<td>Roles: Support, Functions: Resources, Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Edrees et al., 2016 Pre-Post</td>
<td>Providers, Initiatives: Policies, Care to manage: Trauma-related</td>
<td>Roles: Support, Functions: Concerns, Resources, Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>El Hechi et al., 2020 Post-Only</td>
<td>Surgeons, Initiatives: Policies, Care to manage: Tertiary care</td>
<td>Roles: Support, Functions: Concerns, Resources, Aid focus: Mental health</td>
<td>Model: The 5-step process of creating a “second victim” peer support program Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Erol, Upton, and Upton, 2016 Theoretical paper</td>
<td>Newly qualified practitioners, Initiatives: Policies, Care to manage: None, just general</td>
<td>Roles: Support, Functions: Resources, Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Fleming et al., 2015 Pre-Post</td>
<td>Junior physician faculty, Initiatives: Program, Care to manage: None</td>
<td>Roles: Support, Functions: Resources, Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Fornari et al., 2018 Pre-Post</td>
<td>Physicians and nurses, Initiatives: Program, Care to manage: Medical education</td>
<td>Roles: Support, Functions: Concerns, Resources, Aid focus: Workplace</td>
<td>Model: Mentoring and professionalism in training framework Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Fox, 2010 Pre-Post</td>
<td>Nurses, Initiatives: Retention initiative, Care to manage: None</td>
<td>Roles: Mentoring, Functions: Resources, Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Gilliland et al., 1990 Theoretical paper</td>
<td>Clinical nurses, Initiatives: Policies, Care to manage: Multi-disciplinary</td>
<td>Roles: Education, Support, Facilitation, Functions: Resources, Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Graham et al., 2019 Davidson, 2017 Pre-Post</td>
<td>Physicians and staff, Initiatives: Incentives, Care to manage: Acute care, emergency, neonatal, neurologic unit</td>
<td>Roles: Counseling, Support, Functions: Concerns, Perspective, Resources, Help, Aid focus: Mental health</td>
<td>Model: Caregiver Support Team Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Study ID</td>
<td>Participants and Setting</td>
<td>Roles and Functions</td>
<td>Model’s Relevance to Military Health Care</td>
</tr>
<tr>
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</tr>
<tr>
<td>Gray-Toft and Anderson, 1983 Clinical trial</td>
<td>Nurses Initiatives: Program Care to manage: Hospice</td>
<td>Roles: Support Functions: Concerns, Resources Aid focus: Mental health, Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Hale, 2018 Theoretical paper</td>
<td>Nurses Initiatives: No information Care to manage: No information</td>
<td>Roles: Mentoring: nurse-to-nurse mentoring Functions: Concerns, Perspective, Resources, Help Aid focus: Behavioral, Workplace</td>
<td>Model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Hale and Phillips, 2019 Theoretical paper</td>
<td>Nurses Initiatives: Support and training for nurses Care to manage: None</td>
<td>Roles: Mentoring Functions: Concerns, Perspective, Resources, Help Aid focus: Behavioral, Workplace</td>
<td>Model: Classical grounded theory Relevant to military health care: Model may be relevant to military health care system providers</td>
</tr>
<tr>
<td>International Nurses Society, 2014 Theoretical paper</td>
<td>All professional nurses Initiatives: Policies Care to manage: Professional nursing</td>
<td>Roles: Support Functions: Resources Aid focus: Behavioral</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Jenkins and Stevenson, 1991 Theoretical paper</td>
<td>Nurses Initiatives: Policies Care to manage: Psychiatric</td>
<td>Roles: Support, Facilitation Functions: Concerns, Resources Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Kim and Oh, 2016 Theoretical paper</td>
<td>Clinical nurses Initiatives: Communication Care to manage: Clinical settings</td>
<td>Roles: Support Functions: Help Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Kosoko-Lasaki, Sonnino, and Voytko, 2006 Theoretical paper</td>
<td>Students and faculty Initiatives: Performance Care to manage: None</td>
<td>Roles: Mentoring Functions: Resources Aid focus: Workplace</td>
<td>No model Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td>Study ID</td>
<td>Participants and Setting</td>
<td>Roles and Functions</td>
<td>Model’s Relevance to Military Health Care</td>
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</tr>
<tr>
<td>Ladyshewsky, 2010</td>
<td>Health professionals</td>
<td>Roles: Counseling, Support, Mentoring</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Theoretical paper</td>
<td>Initiatives: None. This is a theoretical study of peer coaching</td>
<td>Functions: Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: None</td>
<td>Aid focus: Workplace</td>
<td></td>
</tr>
<tr>
<td>Lane et al., 2018</td>
<td>Clinicians</td>
<td>Roles: Support</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Theoretical paper</td>
<td>Initiatives: Policies</td>
<td>Functions: Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: General</td>
<td>Aid focus: Mental health</td>
<td></td>
</tr>
<tr>
<td>Levenson et al. 2010</td>
<td>Police officers</td>
<td>Roles: Education, Support, Mentoring</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Theoretical paper</td>
<td>Initiatives: Policies</td>
<td>Functions: Perspective, Resources, Help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: Mental health</td>
<td>Aid focus: Mental health</td>
<td></td>
</tr>
<tr>
<td>Lewis et al., 2016; Lewis et al., 2017 RCT</td>
<td>Scientists</td>
<td>Roles: Education</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td></td>
<td>Initiatives: Unrepresented scholars</td>
<td>Functions: Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: Academia</td>
<td>Aid focus: Workplace</td>
<td></td>
</tr>
<tr>
<td>Linnan, 2013</td>
<td>Diverse professionals</td>
<td>Roles: Support</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Theoretical paper</td>
<td>Initiatives: None. This is a literature review of peer support.</td>
<td>Functions: Concerns, Resources, Help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: Diverse care</td>
<td>Aid focus: Behavioral, Mental health, Workplace</td>
<td></td>
</tr>
<tr>
<td>Marks et al., 2017</td>
<td>First responders</td>
<td>Roles: Support</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Pre-Post</td>
<td>Initiatives: Training</td>
<td>Functions: Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: Trauma-related</td>
<td>Aid focus: Workplace</td>
<td></td>
</tr>
<tr>
<td>Mayer et al, 2014; Files et al., 2008 Pre-Post</td>
<td>Physicians</td>
<td>Roles: Mentoring</td>
<td>No model Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td></td>
<td>Initiatives: Performance</td>
<td>Functions: Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: None</td>
<td>Aid focus: Workplace</td>
<td></td>
</tr>
<tr>
<td>McDermott, Brook, and Ben-Isaac 2017 Pre-Post</td>
<td>Pediatric residents</td>
<td>Roles: Support</td>
<td>Model: Peer-debriefing model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td></td>
<td>Initiatives: Policies</td>
<td>Functions: Resources</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: Pediatric</td>
<td>Aid focus: Mental health</td>
<td></td>
</tr>
<tr>
<td>McNally, 1999</td>
<td>FBI employees</td>
<td>Roles: Counseling, Support</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Theoretical paper</td>
<td>Initiatives: Policies</td>
<td>Functions: Concerns, Resources, Help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: None</td>
<td>Aid focus: Mental health</td>
<td></td>
</tr>
<tr>
<td>Merandi et al., 2017; Krzan et al., 2015 Pre-Post</td>
<td>Hospital staff</td>
<td>Roles: Support</td>
<td>Model: University of Missouri Health Care System second victim program Relevant to military health care: Relevant</td>
</tr>
<tr>
<td></td>
<td>Initiatives: Policies</td>
<td>Functions: Resources, Help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Care to manage: Pediatric</td>
<td>Aid focus: Mental health</td>
<td></td>
</tr>
<tr>
<td>Study ID</td>
<td>Participants and Setting</td>
<td>Roles and Functions</td>
<td>Model’s Relevance to Military Health Care</td>
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<td>--------------------------</td>
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<td>------------------------------------------</td>
</tr>
</tbody>
</table>
| Miller, 2006 Theoretical paper | Police officers  
Initiatives: Policies  
Care to manage: None                                         | Roles: Support  
Functions: Concerns, Resources  
Aid focus: Mental health                                          | Model: Critical incident stress debriefing  
Relevant to military health care: Relevant                             |
| Mills and Mullins, 2008 Post-Only | Nurses  
Initiatives: Training  
Care to manage: None                                             | Roles: Mentoring  
Functions: Resources  
Aid focus: Workplace                                                      | No model  
Relevant to military health care: Relevant                             |
| Moll et al., 2009 Theoretical paper | Peer support providers  
Initiatives: Policies  
Care to manage: Mental health                                      | Roles: Support, Facilitation  
Functions: Concerns, Resources, Hello  
Aid focus: Mental health                                               | No model  
Relevant to military health care: Relevant                             |
| Moll et al., 2015 Theoretical paper | Health care employees  
Initiatives: Education  
Care to manage: Mental health                                      | Roles: Education, Support, Facilitation  
Functions: Perspective, Resources, Hello  
Aid focus: Mental health, Workplace                                    | Model: Conceptual Model of Early Intervention  
Relevant to military health care: Relevant                             |
| Mull, 2019 Theoretical paper | Emergency physicians  
Initiatives: Policies  
Care to manage: Emergency                                         | Roles: Support  
Functions: Concerns, Help  
Aid focus: Mental health                                                 | No model  
Relevant to military health care: Relevant                             |
| Mundt, 2001 Post-Only | Faculty  
Initiatives: Career development  
Care to manage: None                                               | Roles: Mentoring  
Functions: Resources  
Aid focus:                                                        | No model  
Relevant to military health care: Not relevant                         |
| Olson et al., 2015 Pre-Post | Home care workers  
Initiatives: Policy  
Care to manage: Home care                                            | Roles: Education, Support, Facilitation  
Functions: Concerns, Resources  
Aid focus: Behavioral, Mental health, Workplace                      | Model: Community of Practice and Safety Support team meeting steps  
Relevant to military health care: Not relevant                           |
| Olson et al., 2016; Mabry et al., 2018 RCT | Home care workers  
Initiatives: Policies  
Care to manage: Home care                                            | Roles: Support, Facilitation  
Functions: Resources  
Aid focus: Behavioral, Workplace                                         | No model  
Relevant to military health care: Not relevant                           |
| Palamara et al., 2015 Pre-Post | Internal medicine interns  
Initiatives: Professional development  
Care to manage: Internal medicine                                 | Roles: Counseling  
Functions: Concerns, Resources, Hello  
Aid focus: Workplace                                                        | No model  
Relevant to military health care: Relevant                             |
| Peterson et al., 2008 RCT | Health care workers including psychologists  
Initiatives: Intervention  
Care to manage: Diverse                                           | Roles: Support  
Functions: Concerns, Resources  
Aid focus: Mental health, Workplace                                    | No model  
Relevant to military health care: Relevant                             |
<table>
<thead>
<tr>
<th>Study ID</th>
<th>Participants and Setting</th>
<th>Roles and Functions</th>
<th>Model’s Relevance to Military Health Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pololi et al., 2002</td>
<td>Medical school faculty Initiatives: Career development Care to manage: Medical school</td>
<td>Roles: Mentoring Functions: Resources Aid focus: Workplace</td>
<td>No model Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td>Ripp, Fallar, and Korenstein, 2015 RCT</td>
<td>Internal medicine residents Initiatives: Burnout initiative Care to manage: Internal medicine</td>
<td>Roles: Support Functions: Concerns Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Rohatinsky, Cave, and Krauter, 2020 Post-Only</td>
<td>Nurses Initiatives: Program Care to manage: Internal medicine</td>
<td>Roles: Mentoring Functions: Concerns, Resources Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Ryiz-Semmel et al., 2019 Theoretical paper</td>
<td>Ambulatory nurses Initiatives: Quality Improvement Care to manage: Ambulatory care</td>
<td>Roles: Counseling Functions: Resources Aid focus: Workplace</td>
<td>Model: Face-to-face peer feedback Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Schwartz et al., 2020 Post-Only</td>
<td>Physicians Initiatives: VHA Care to manage: Primary care</td>
<td>Roles: Support Functions: Concerns, Resources Aid focus: Mental health</td>
<td>Model: Themes addressing organizational, community, and individual-level physician wellness factors Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Shanafelt et al., 2017 Post-Only</td>
<td>Participants not described Initiatives: Program Care to manage: N/A</td>
<td>Roles: Education Functions: Concerns, Resources, Help Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Shapiro and Galowitz, 2016 Theoretical paper</td>
<td>Clinicians Initiatives: Policies Care to manage: No. Just general</td>
<td>Roles: Support Functions: Concerns, Resources Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Shapiro, 2018 Theoretical paper</td>
<td>Physicians Initiatives: Policies Care to manage: None, general care</td>
<td>Roles: Support Functions: Resources Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Shoji, Benight, and Stearns, 2016; Bock and Benight, 2016 RCT</td>
<td>Military mental health providers Initiatives: Self care Care to manage: Mental health</td>
<td>Roles: Counseling Functions: Concerns, Resources, Help Aid focus: Behavioral, Mental health, Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Sijbrandij et al., 2020 RCT</td>
<td>Health care workers Initiatives: Psychosocial training Care to manage: Primary health care</td>
<td>Roles: Education Functions: Perspective, Resources Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Study ID</td>
<td>Participants and Setting</td>
<td>Roles and Functions</td>
<td>Model’s Relevance to Military Health Care</td>
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</tr>
<tr>
<td>Sinclair and Levett-Jones, 2011 Theoretical paper</td>
<td>Nephrology nurse educators Initiatives: Policies Care to manage: Nephrology</td>
<td>Roles: Support Functions: Resources Aid focus: Workplace</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Soto and Walsh, 2019 Theoretical paper</td>
<td>Paediatric trainees Initiatives: Performance improvement Care to manage: Pediatric</td>
<td>Roles: Counseling, Support Functions: Resources Aid focus: Workplace</td>
<td>Model: Plan-Do-Study-Act Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td>Stone et al., 2016 Theoretical paper</td>
<td>Nurse Anesthetists Initiatives: Peer support for substance use disorder Care to manage: N/A</td>
<td>Roles: Education, Support Functions: Concerns, Resources Aid focus: Behavioral</td>
<td>No model Relevant to military health care: Not relevant</td>
</tr>
<tr>
<td>Strand, Felices, and Williams, 2010 Theoretical paper</td>
<td>First responders Initiatives: Policies Care to manage: N/A</td>
<td>Roles: Support, Facilitation Functions: Concerns, Perspective, Resources Aid focus: Mental health</td>
<td>No model Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Stutz, 2018 Theoretical paper</td>
<td>Sailors Initiatives: Policies Care to manage: Mental health</td>
<td>Roles: Support Functions: Concerns, Resources Aid focus: Mental health</td>
<td>Model: 7Cs (Caregiver Occupational Stress First Aid) Relevant to military health care: Relevant</td>
</tr>
<tr>
<td>Tuzzio et al., 2017 Post-Only</td>
<td>Primary care physicians Initiatives: Training Care to manage: Primary care</td>
<td>Roles: Counseling, Mentoring Functions: Resources Aid focus: Workplace</td>
<td>Model: Peer-to-peer coaching program Relevant to military health care: Relevant</td>
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<tr>
<td>Vinson and Randel, 2018 Theoretical paper</td>
<td>Physicians Initiatives: Policies Care to manage: General care</td>
<td>Roles: Support Functions: Resources Aid focus: Mental health</td>
<td>Model: Second victim recovery stage, Accreditation Council for Graduate Medical Education–approved training programs Relevant to military health care: Relevant</td>
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<tr>
<td>Wilson et al., 2004 Theoretical paper</td>
<td>General practitioner Initiatives: Policies Care to manage: Mental health</td>
<td>Roles: Support, Facilitation Functions: Resources Aid focus: Mental health</td>
<td>Model: Model of peer group support in mental health Relevant to military health care: Relevant</td>
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<td>Study ID</td>
<td>Participants and Setting</td>
<td>Roles and Functions</td>
<td>Model’s Relevance to Military Health Care</td>
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</table>
| Wittenberg-Lyles, Goldsmith, and Reno 2014 | Oncology nurses  
Initiatives: Self-organized Initiative  
Care to manage: Oncology | Roles: Support, Facilitation  
Functions: Concerns, Resources  
Aid focus: Mental health, Workplace | No model  
Relevant to military health care: Relevant |
<table>
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<tr>
<th>Study ID</th>
<th>Participants</th>
<th>Setting</th>
<th>Intervention Type</th>
<th>Effectiveness Signal</th>
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<tr>
<td>Agarwal, Brooks, and Greenberg, 2020 Post-Only</td>
<td>Office employees Sample size: 9</td>
<td>Public and private organizations</td>
<td>Peer supporter training</td>
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<td>Ahrens et al., 2020 Pre-Post</td>
<td>Health care workers Sample size: 500</td>
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<td>Alvarez et al., 2007 Post-Only</td>
<td>Firefighters Sample size: 121</td>
<td>Fire department</td>
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<td>Baggot and Hensinger, 2005 Pre-Post</td>
<td>Nurses Sample size: 196</td>
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<td>Barron, Abdallah, and Heltne, 2017 Post-Only</td>
<td>School counselors Sample size: 10</td>
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<td>Beckman et al., 2012; Krasner, 2009 Pre-Post</td>
<td>Physicians Sample size: 70</td>
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<td>Boyle and Kochinda, 2004 Pre-Post</td>
<td>Medical directors and nurse managers Sample size: 10</td>
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<td>Calder-Sprackman et al., 2018 Post-Only</td>
<td>Emergency residents Sample size: 20</td>
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<td>Chen et al., 2016 Pre-Post</td>
<td>Junior physician faculty Sample size: 79</td>
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<td>Cheung, 2016 RCT</td>
<td>Disaster responders Sample size: 802</td>
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<td>Cohen and Gagin, 2005 Pre-Post</td>
<td>Hospital social workers Sample size: 25</td>
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<td>Cooley and Yovanoff, 1996 RCT</td>
<td>Special educators Sample size: 92</td>
<td>Education</td>
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<td>Dawson et al., 1988 Post-Only</td>
<td>Nurses Sample size: 24</td>
<td>Health care</td>
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<td>Doyle et al., 2016 Pre-Post</td>
<td>Dementia service staff Sample size: 18</td>
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<td>Videoconferencing and telementoring</td>
<td>Positive high satisfaction</td>
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<td>Dyess and Parker, 2012 Pre-Post</td>
<td>Nurses Sample size: 109</td>
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<td>Eagle, Creel, and Alexandrov, 2012 Pre-Post</td>
<td>Health care providers Sample size: 50</td>
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<td>Edrees et al., 2016 Pre-Post</td>
<td>Health care providers Sample size: 57</td>
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<td>El Hechi et al., 2020 Post-Only</td>
<td>Surgeons Sample size: 47</td>
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<td>Surgery second victim peer support</td>
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<td>Fiedler et al., 2014 Post-Only</td>
<td>Nurses Sample size: 51</td>
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<td>1996; Flannery et al., 2000; Flannery et</td>
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<td>, 2008; Flannery et al., 2011; Flannery,</td>
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<td>Fleming et al., 2015</td>
<td>Junior physician faculty Sample size: 104</td>
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<td>Fornari et al., 2018</td>
<td>Physicians and nurses Sample size: 260</td>
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<td>Frappell-Cooke et al., 2010</td>
<td>Military personnel Sample size: 180</td>
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<td>Ghazal et al., 2019</td>
<td>Medical interns Sample size: 72</td>
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<td>Gouweloos-Trines et al., 2017</td>
<td>Prehospital providers Sample size: 813</td>
<td>Fire department</td>
<td>Support at work after critical incidents</td>
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<td>Graham et al., 2019; Davidson et al., 2017</td>
<td>Health staff and physicians Sample size: 75</td>
<td>Health care</td>
<td>Caregiver support team</td>
<td>Positive</td>
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<tr>
<td>Pre-Post</td>
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<td>Gray-Toft and Anderson, 1983</td>
<td>Nurses Sample size: 16</td>
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<td>Staff support</td>
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<td>Greenberg et al., 2010 RCT</td>
<td>Military personnel</td>
<td>Military</td>
<td>Trauma Management</td>
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<tr>
<td>Hoffmann and Loughead, 2016 Post-Only</td>
<td>Athletes</td>
<td>Sports</td>
<td>Peer-to-peer mentoring</td>
<td>Positive</td>
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<tr>
<td>Horita and Otsuka, 2015 Pre-Post</td>
<td>Manufacturing workers</td>
<td>Business</td>
<td>Interpersonal helping behavior enhancement</td>
<td>No effect; no change in psychological stress</td>
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<tr>
<td>Johnson et al., 2017 Pre-Post</td>
<td>Preschool teachers</td>
<td>Education</td>
<td>Peer Coaching</td>
<td>Positive strengthen student–teacher interactions</td>
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<tr>
<td>Jungert et al., 2018 Clinical trial</td>
<td>Employees</td>
<td>Business</td>
<td>Team support</td>
<td>Positive</td>
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<tr>
<td>Kitts et al., 2015 Post-Only</td>
<td>Research assistants</td>
<td>Academia</td>
<td>Development and Achievement</td>
<td>Positive</td>
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<td>Lefkowich et al., 2018 Post-Only</td>
<td>Mixed Health care providers</td>
<td>Health care</td>
<td>Training of Trainers program</td>
<td>Positive foster ownership</td>
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<td>Lewis et al., 2016; Lewis et al., 2017 RCT</td>
<td>Graduate students, fellows, and junior faculty</td>
<td>Education</td>
<td>Mentorship</td>
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<td>Linzer et al., 2015 RCT</td>
<td>Primary care clinicians</td>
<td>Health care</td>
<td>Communication improvement</td>
<td>Positive</td>
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<tr>
<td>Lundeen et al., 2019 RCT</td>
<td>Nurses and midwives</td>
<td>Health care</td>
<td>Group antenatal care and postnatal care</td>
<td>Positive</td>
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<tr>
<td>Marks et al., 2017 Pre-Post</td>
<td>First responders</td>
<td>Fire department</td>
<td>Paraprofessional training</td>
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<td>Mayer et al., 2014; Files et al., 2008 Pre-Post</td>
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<td>Health care</td>
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<td>McCance et al., 2013 RCT</td>
<td>Students assuming role of customer service employees</td>
<td>Business</td>
<td>Social sharing</td>
<td>Positive</td>
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<td>McDermott, Brook, and Ben-Isaac, 2017</td>
<td>Pediatric residents 31</td>
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<td>Merandi et al., 2017; Krzan et al., 2015</td>
<td>Children's hospital staff 232</td>
<td>Health care</td>
<td>Peer-based support program (YOU Matter)</td>
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<td>Mills and Mullins, 2008</td>
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<td>Olson et al., 2015</td>
<td>Home care workers 16</td>
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<td>Olson et al., 2016: Mabry, 2018</td>
<td>Home care workers 149</td>
<td>Health care</td>
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<tr>
<td>Palamara et al., 2015</td>
<td>Internal medicine interns 72</td>
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<td>Pan et al., 2019</td>
<td>Nurses 19</td>
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<td>Neutral; no quantitative effects; certain qualitative benefits</td>
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<td>Penson et al., 2010: Mann et al., 2009</td>
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<td>Pisarski et al., 2006</td>
<td>Nurses 1257</td>
<td>Health care</td>
<td>Shift-work intervention</td>
<td>Positive increase in psychological well-being and job satisfaction; reduction in physical health symptoms and turnover intention.</td>
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<td>Pololi et al., 2002</td>
<td>Medical school faculty 18</td>
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<td>Rodrigues et al., 2018 Pre-Post</td>
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<td>Burnout decrease</td>
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<td>Rohatinsky, Cave, ad Krauter, 2020 Post-Only</td>
<td>Nurses Sample size: 32</td>
<td>Health care</td>
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<td>Schwartz et al., 2020 Post-Only</td>
<td>Physicians Sample size: 9</td>
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<td>Shoji, Benight, and Stearns, 2016; Bock and Benight, 2016 RCT</td>
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<td>Health care</td>
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<td>Spence Laschinger et al., 2012 Pre-Post</td>
<td>Nurses Sample size: 755</td>
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<td>Effectiveness Signal</td>
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<td>Stewart, 2000</td>
<td>Nurses</td>
<td>Health care</td>
<td>Crisis training</td>
<td>Neutral effect on skill in crisis and perceived self-efficacy; no effect on stress levels</td>
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<td>Health care</td>
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<td>Neutral commented only on engaging, dyads met up</td>
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<td>Participatory intervention</td>
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<td>Ye and Wang, 2007</td>
<td>Nurses</td>
<td>Health care</td>
<td>Nursing peer support program</td>
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Table D.3. Risk of Bias

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<th>Study ID</th>
<th>Selection Bias and Confounding</th>
<th>Reporting Bias</th>
<th>Performance Bias</th>
<th>Detection Bias</th>
<th>Attrition Bias</th>
<th>Other Sources Of Bias</th>
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<tr>
<td>Beckman et al., 2012</td>
<td>High risk</td>
<td>Moderate/Unclear</td>
<td>Moderate/Unclear</td>
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<td>Moderate/Unclear</td>
<td>Moderate/Unclear</td>
<td>High risk</td>
<td>Moderate/Unclear</td>
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<td>Moderate/Unclear</td>
<td>Moderate/Unclear</td>
<td>Moderate/Unclear</td>
<td>Low risk</td>
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### Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ACP</td>
<td>American College of Physicians</td>
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<td>CENTRAL</td>
<td>Cochrane Central Register of Controlled Trials</td>
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<td>CINAHL</td>
<td>Cumulative Index to Nursing and Allied Health Literature</td>
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<td>DTIC</td>
<td>Defense Technical Information Center</td>
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<td>GRADE</td>
<td>Grading of Recommendations Assessment, Development and Evaluation</td>
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<td>PTSD</td>
<td>posttraumatic stress disorder</td>
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<td>RCT</td>
<td>randomized controlled trial</td>
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<td>RISE</td>
<td>Resiliency in Stressful Events</td>
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References


International Coaching Federation, “About,” webpage, undated. As of December 17, 2021: https://coachingfederation.org/about


