NCMEDR POLICY BRIEFS

Physician Implicit Bias Policy Brief

Title: Medical Education Efforts to Reduce Implicit Physician Bias towards Vulnerable Populations

Stakeholders

- Curriculum planners in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)
- Medical students, residents, clinical fellows and patients

Key messages

- The physician implicit bias (PIB) policy brief could provide information on how to access learning resources for trainees, educators and patients.
- The PIB policy brief can help government organizations, care providers, and facilities to adopt and popularize the recommendations.
- This policy brief can contribute to policy-making for provision of high-quality care to vulnerable populations, which include lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals, people experiencing homelessness and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals be mindful of the impact implicit bias have across the life course, how it affects vulnerable populations, and how failure to address implicit bias deprives vulnerable populations the opportunities to receive quality healthcare.

Policy options

- Evaluation of existing educational content on PIB training should be considered prior to proposing and accepting the existing curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, patient advocates, community advocacy groups and care providers) is necessary to develop the objectives before policy making at government, healthcare system, and medical school levels.

Policy Relevance

Physician Implicit Bias has been identified as one of the topics that has not received enough attention in medical education or residency training resulting in a shortage of culturally competent providers who are sensitive to gender, sexual orientation, ethnicity, and social factors. This issue may negatively impact interventions with patients resulting in a delay or avoidance of necessary medical care resulting in adverse health consequences and contributing to health disparities.

Executive Summary

Medical students and residents lack adequate training on how to provide culturally competent care to LGBTQ patients and other vulnerable groups, who are afflicted with several diseases/disorders, which are either unrecognized or misdiagnosed. Additionally, the healthcare services are also not being able to identify these issues and address the patient's needs. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on PIB will end discrimination (based on sexual orientation, race, ethnicity, social status) resulting in perceived and quantifiable improvements in patient care.

Introduction/Statement of the Problem

LGBTQ individuals experience higher rates of health disparities, which in part, are driven, by lack of cultural awareness, personal discomfort and/or explicit and implicit bias encountered and exhibited in the health care environment. Over the last three decades, there has been a growing recognition that biased attitudes and beliefs of health care providers towards LGBTQ patients in the healthcare system contribute to disparities through its impact on healthcare access and quality of clinical care[1,2] Little is known about how medical students are trained to identify, confront, and reduce personal bias towards LGBTQ persons and other vulnerable populations.

LGBTQ individuals face significant disparities in physical and mental health outcomes.[3] LGBTQ patients have higher rates of anal cancer[4], asthma, cardiovascular disease[5-8], obesity[9], substance abuse[10-12], cigarette smoking[13], and suicide[14]. Additionally, the sexual and gender minority women report fewer lifetime Pap tests[21]; transgender youth have less access to physical and mental health care[15]; and LGBTQ individuals are more likely to delay or avoid necessary medical care, compared to heterosexual individuals. These disparities have been attributed, in part, to lower health care utilization by LGBTQ individuals[16,17]. Perceived discrimination from physicians and denial of health care altogether are common experiences among LGBTQ patients and have been identified as contributing to disparities[18,19]. Implicit biases among health care providers towards LGBTQ persons have been linked to lower quality of care[20-22], are rarely assessed[23], and can be resistant to change. Previous studies that addressed physician implicit bias towards patients from racial/ethnic minority groups have found that implicit bias continues to persist despite an absence of negative explicit attitudes[24]. Even when providers make an explicit commitment to equitable care, implicit biases operating outside of their conscious awareness may undermine that commitment. The disparities in access to care and health outcomes often are compounded by vulnerabilities linked to gender, racial identity[25-27] and geographic location[28].The percentage of the LGBTQ population lacking a regular primary care provider is significantly higher than among heterosexuals (30% versus 10%, respectively)[17,29]. One survey of health care providers found that over half expressed discomfort caring for LGBTQ patients[30]. The importance of physician implicit bias as a contributor to the health disparities that confront LGBTQ individuals is highlighted in professional competency objectives generated by the Association of American Medical Colleges Advisory Committee on Sexual Orientation, Gender Identity, and Sex Development [31]. These competencies include the need for understanding that implicit LGBTQ-related bias may negatively impact interactions with patients and for including strategies to mitigate implicit bias in health care settings[31]. Unfortunately, little curriculum time of medical schools currently is allotted to addressing the bias against primary care needs of vulnerable populations.[32] Training medical

students to be aware of and how to address their own implicit biases towards LGBTQ persons and other vulnerable populations provides a critical opportunity for promoting equal access to quality health care and, ultimately, for eliminating health disparities.

Methods/Approaches

In order to identify studies that focused on reducing health professions student or provider biases towards LGBTQ individuals, we have conducted a systematic review of literature from March 2005 until February 2017. We used PRISMA guidelines[33] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with patients who experienced PIB. Our search included the databases such as PubMed, Psych INFO, Web of Science, Scopus, Ingenta, Science Direct, and Google Scholar. The search strategy cross-referenced keywords for *lesbian, gay, bisexual, transgender, questioning, homosexual, men who have sex with men, MSM, women who have sex with women, WSW, sexual minority*; and keywords for medical students and residents (*medical student, medical resident*), and medical education (*medical school curriculum, basic science, clinical, rotations, OSCE, standardized patient, problem-based learning, high fidelity simulation training*) and keywords for bias (*bias, implicit bias, explicit bias, debiasing, cultural competence, cultural competency, discrimination, prejudice, stereotype; stigma; health disparity*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a committee of authors using published recommendations.[32]

Results

Out of a total of 639 articles screened and subjected to various inclusion and exclusion criteria, and full text review, 13 articles were identified that had educational intervention component and focused on medical students and/or residents. Study quality over all was low to moderate and limited to quasi and pre-experimental designs. The majority of the studies focused on medical student training, and few included residents. The educational/training methods described included kind of sample (i.e., medical, nursing, or dental students or health care providers); program format (e.g., readings lectures, small group discussions, patient panels or interviews); program targets (i.e., knowledge, comfort level, attitudes, implicit bias). Overall, combining a variety of training methods appears to hold more promise in PIB training at the undergraduate- (UME) and graduate medical education (GME) levels.

Limitations/Challenges

- Medical and allied health professions schools and residency programs may be resistant to additional curriculum demands.
- Studies conducted thus far do not directly address the impact of training on students' implicit bias or on patient outcomes.
- Studies were not designed to address questions regarding the timing and dosage of debiasing programs.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., objective structured clinical examinations [OSCEs] and practice observations) are lacking in the studies that were reviewed.

- There is a greater need for graduate medical education (GME) training in PIB.
- There were no articles addressing PIB elimination training experienced by other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize measures to assess learning outcomes regarding PIB.
- Develop curriculum modules on "physician implicit bias training" and plot test these modules in medical and other allied health professions schools.
- Engage LGBTQ individuals with legal, health care, social work and community engagement backgrounds as part of clinical network & working groups.
- Monitor health outcomes of vulnerable populations to assess the quality of care received both in outpatient and inpatient care settings.
- Encourage experienced clinicians (those from the subspecialties of primary care, psychiatry, family medicine, gynecology, endocrinology, internal medicine, gender transformation surgery) to mentor less experienced students and clinicians (during clerkship, residency and early years of practice) in PIB.
- Design programs to assess the impact and measure the outcomes of bias elimination strategies adopted.
- Promote planning, training and organizational change at all levels including direct care staff, managers, directors, administration and boards of directors towards creating health care programs that are culturally competent.
- Emphasize importance of creating welcoming environment (cultural humility) in healthcare settings to eliminate actions resulting from implicit bias.

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Pre-Exposure Prophylaxis Policy Brief

Title: Training of Medical Students and Residents in the Administration of Pre-Exposure Prophylaxis

Stakeholders

- Curriculum planners in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)

Key messages

- The Pre-Exposure Prophylaxis (PrEP) policy brief provides information on how to access learning resources for trainees, educators and patients.
- The PrEP policy brief can help government organizations, care providers, and facilities to adopt and popularize the recommendations.
- This policy brief can contribute to policy-making for provision of high-quality care to vulnerable populations, which include lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals, people experiencing homelessness and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals be mindful of non-compliance with PrEP recommendations, and how failure to implement PrEP impacts the incidence of HIV of vulnerable populations and people who inject drugs (PWID).

Policy options

- Evaluation of existing educational content on PrEP training should be considered prior to proposing and accepting existing curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, patient advocates, community advocacy groups, care providers, health insurance providers, and pharmaceutical companies) is necessary to develop the objectives and policies at government, healthcare system, and medical school levels.

Policy Relevance

Pre-Exposure Prophylaxis has been identified as one of the topics that has not received enough attention in medical education or residency training resulting in a shortage of culturally competent providers who are qualified to provide PrEP services, while also being sensitive to gender, sexual orientation, ethnicity, and social factors. This issue may negatively impact PrEP implementation and other HIV prevention interventions and contributing to health disparities.

Executive Summary

Medical students and residents lack adequate training on how to how to prescribe PrEP for patients who are at risk for HIV and at the same time provide culturally competent care to LGBTQ patients and other vulnerable groups, including PWID. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on PrEP will rekindle physician interest and ability in encouraging PrEP uptake, adherence and persistence resulting in a reduction in HIV transmission rates and significant improvements in patient outcomes.

Introduction/Statement of the Problem

Although the incidence of Human Immunodeficiency Virus (HIV) has been declining over the past decade, approximately 50,000 new infections are diagnosed annually in the United States.[1] Men who have sex with men (MSM) and transgender women continue to have higher rates of infection in the US. MSM make up 58% of people living with HIV, although they only account for 2% of the population.[2] People who inject drugs (PWID) account for an additional 8% of newly diagnosed HIV infections[3] while African American women account for 19%.[4] A growing body of research has shown high levels of Pre-exposure prophylaxis (PrEP) efficacy in reducing HIV acquisition. PrEP, a once-daily combination antiretroviral medication (tenofivir and emtricitabine) has been found to reduce the risk of infection between 44% and 86%,[5] and with greater adherence, effectiveness is even higher.[6,7]

The efficacy of PrEP as a preventative measure, has been tested in multiple studies,[8-14] and meta-analyses[15,16] and findings suggest that, when used consistently, PrEP results in significantly decreased rates of HIV infection. A meta-analysis of PrEP efficacy confirmed that PrEP was equally effective for men and women.[17] Despite the high level of efficacy of PrEP, less than 4.2% of persons in the US who would benefit from it, currently have a PrEP prescription. In order for PrEP to reach its full potential in reducing HIV, those individuals at highest risk must gain widespread access. This access will only be achieved by increasing the pool of willing and able prescribing physicians and consumers. While barriers to PrEP prescribing to at-risk populations have been noted in the literature,[18-27] training medical students to prescribe will be critical to the full realization of PrEP's preventive possibilities. Integrating PrEP prescription training into the curriculum will aid in the fight to end the HIV epidemic. The PrEP cascade was identified as a framework for teaching medical students and residents the requisite knowledge and skills to deliver PrEP in their future practice and for assessing PrEP delivery and adherence.[28] The PrEP cascade include the following elements: Identify populations at risk for HIV; Identify PrEP candidate; Train medical students about PrEP prescription; Link to PrEP; Initiate PrEP prescription; Track PrEP adherence; and Achieve adherence and persistence. While PrEP is an important tool for ending the HIV epidemic, yet, there is no evidence that US medical schools currently are training students how to administer PrEP. Knowledge among primary care providers about PrEP is low and medical students are not being taught to prescribe it. To reduce the incidence of HIV infection, accrediting bodies should take a position on making the integration of PrEP prescription training mandatory in all all-US medical schools.

Methods/Approaches

In order to gain an understanding of determining prescribing practices of primary care physicians, how prescribing was taught in medical schools, and physician-identified barriers to PrEP provision, we have conducted a scoping review of literature from March 2005 until February 2017. We used PRISMA guidelines[29] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with patients, and intent to deliver PrEP to at-risk populations with the long term aim of ending the HIV epidemic. Our search included the databases such as PubMed, Web of Science, CINAHL, and Psych INFO. The search strategy cross-referenced keywords for using the following search terms: *(HIV)* plus any of the following: (*Prevention* OR *Pre Exposure prophylaxis* (PrEP) OR *Biomedical HIV prevention* OR *oral preexposure prophylaxis* OR *Pre-exposure prophylaxis* OR *Healthcare provider* OR *primary care providers* OR *early adopters* OR *primary care* OR *health services research* OR *education, medical* OR *implementation* OR *Medical Field Training* OR *Training, Medical Field* OR *Studies, Medical Field*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a committee of authors using published recommendations.[30]

Results

Out of a total of 639 articles screened and subjected to various inclusion and exclusion criteria, and full text review, 13 articles were identified that had educational intervention component and focused on medical students and/or residents. Study quality over all was low to moderate and limited to quasi and pre-experimental designs. The majority of the studies focused on medical student training, and few included residents. The educational/training methods described included kind of sample (i.e., medical, nursing, or dental students or health care providers); program format (e.g., readings lectures, small group discussions, patient panels or interviews); program targets (i.e., knowledge, comfort level, attitudes, implicit bias). Overall, combining a variety of training methods appears to hold more promise in PIB training at the undergraduate- (UME) and graduate medical education (GME) levels.

Limitations/Challenges

- Medical and allied health professions schools and residency programs may be resistant to additional curriculum demands.
- At-risk patients from vulnerable populations may not readily identify themselves in a primary care setting, thus prescribing PrEP and follow-up of patients from these groups is missing.
- There were no studies that have examined the rate of at-risk patients who may benefit from PrEP prescription in primary care.
- There is a lack of studies that have examined the effectiveness of PrEP training to medical students on increasing PrEP prescription behavior
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., objective structured clinical examinations [OSCEs] and practice observations) are lacking in the studies that were reviewed.
- There is a greater need for graduate medical education (GME) training in PrEP.
- There were no studies addressing PrEP adherence or persistence experienced by other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize measures to assess learning outcomes regarding PrEP.
- Monitor health outcomes of vulnerable populations who were diagnosed with HIV and who were to assess the quality of care received both in outpatient and inpatient care settings.
- Design programs to assess the adherence to PrEP and measure the outcomes.
- If PrEP is to be a viable preventive measure and realize its potential in ending the HIV epidemic, physicians must be trained to deliver PrEP, and barriers to prescribing PrEP must be addressed in training.
- Medical schools should adapt a universal PrEP curriculum for its patient population using the PrEP cascade model
- Medical students should be taught how to universally screen candidates for PrEP appropriateness (MSM, transgender women, discordant couples, African American women, young persons who have multiple partners, and PWID).
- Medical students need to be familiar with patient medication assistance programs
- Medical students need to be trained in how to monitor PrEP adherence.
- Because mental health and substance abuse are factors, which impact adherence and retention, medical students should receive training in screening and intervention approaches to ensure these barriers do not affect medication adherence.
- Primary care residency training programs need to focus on low-cost methods (i.e., self-report for monitoring adherence in the patient-centered medical home clinical setting to ensure cost of PrEP remains low and available to promote patient adherence.

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Adverse Childhood Experiences Policy Brief

Title: Addressing Adverse Childhood Experiences (ACEs) in Medical Education Curriculum

Stakeholders

- Curriculum coordinators, directors, and deans in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)

Key messages

- The Adverse Childhood Experiences (ACEs) policy brief could provide information on how to access learning resources for trainees, educators and patients.
- The ACEs policy brief can help government organizations, care providers, and facilities to adopt and popularize the recommendations.
- This ACEs policy brief can contribute to policy-making for provision of high-quality care to vulnerable populations, which include lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals, people experiencing homelessness and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals be mindful of the impact ACEs have across the life course, how they affect vulnerable populations, and how failure to screen for ACEs results in missed opportunities to improve patient health.

Policy options

- Evaluation of existing educational content on ACEs and trauma-informed care (TIC) training should be considered prior to proposing and accepting the existing curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, patient advocates, community advocacy groups and care providers) is necessary to develop the objectives before policy making at government, healthcare system, and medical school levels.

Policy Relevance

Adverse Childhood Experiences (ACEs) have been identified as one of the topics that has not received adequate attention in medical education or residency training resulting in a shortage of culturally competent providers who are sensitive to gender, sexual orientation, ethnicity, age, and other patient differences and who are highly attuned to their own responses to cultural, gender and other `differences in relation to their clients.

Executive Summary

Medical students and residents lack appropriate and adequate training on how to provide culturally competent care to LGBTQ patients and other vulnerable groups, who have gone through traumatic experiences over the course of their life, which are either unrecognized or misdiagnosed, and healthcare services not addressing the trauma victims' needs. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on ACEs will result in perceived and quantifiable improvements in trauma-informed patient care.

Introduction/Statement of the Problem

ACEs are a cumulative index of 11 adverse types of events that combine five measures of child abuse and child neglect (i.e., physical abuse, emotional abuse, sexual abuse, physical neglect, and emotional neglect) associated with six measures of household dysfunction (i.e., exposure to household intimate partner violence, parental divorce or separation, parental incarceration, a household member with substance abuse problems, and a household member with mental illness).[1] From an operational standpoint ACEs were defined as childhood events, varying in severity and often chronic, occurring in a child's family or social environment that cause harm or distress, thereby disrupting the child's physical or psychological health and development.[2] A revised definition of ACEs proposed in 2015 include experiences during adolescence, another developmental period of rapid physical and cognitive development. The adolescent experience included childhood bullying and peer victimization, isolation and peer rejection, poverty and deprivation, and exposure to community violence.[3] Adverse health outcomes that have been associated with ACEs include: alcoholism and alcohol abuse, chronic obstructive pulmonary disease, cardio-metabolic disease, depression, fetal death, early initiation of sexual activity, illicit drug use, risk for intimate partner violence, liver disease, sexually transmitted diseases, smoking, suicide attempts, and unintended pregnancies.[4,5] Yet, research on the adverse effects of ACEs on health outcomes has yet to be translated into clinical practice. Trauma-informed care (TIC) is a strength-based, life course approach used to identify and respond to the needs of patients who have been exposed to multiple and/or complex trauma, such as ACEs. TIC views symptoms as expected and adaptive reactions to traumatic childhood. Core principles of TIC include the creation of an environment in which the patient feels `safety', `trustworthiness', `choice', `collaboration', and `empowerment'[2]. TIC recognizes that the effects of trauma on the brain, body and subsequent functioning underlies a significant component of effective trauma therapy experiences and form part of patient psycho-education. TIC requires culturally competent providers who are sensitive to gender, sexual orientation, ethnicity, age, and other patient differences. Lack of attention to ACEs by physicians is attributed to a lack of training, familiarity with ACEs screening, and knowledge about how to respond when positive results are found.[6] Failure to screen for ACEs leaves several missed opportunities to provide quality care. Little curriculum time of medical schools currently is allotted to addressing the unique, primary care needs of vulnerable populations especially the gender and sexual minorities who have experienced ACEs.[7]

Methods/Approaches

In order to identify and assess how medical students and residents are being trained to provide gender affirming care to transgender patients, we have conducted a systematic review of literature from January 1998 until March 2019. We used PRISMA guidelines[8] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with patients who experienced ACEs. Our search included the databases such as PubMed, ERIC, SCOPUS, Web of Science, OVID, CINAHL, and Psych INFO. The search strategy cross-referenced keywords for adverse childhood experiences, adverse childhood exposures, adulthood survivors of childhood adverse events, life change events, and childhood trauma, with keywords for medical students and residents (*medical student, medical resident*), and medical education (*medical school curriculum, basic science, clinical, rotations, OSCE, standardized patient, problem-based learning, high fidelity simulation training*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a committee of authors using published recommendations.[7]

Results

Out of a total of 715 articles screened and subjected to various inclusion and exclusion criteria, and full text review, 13 articles were identified that had educational intervention component and focused on medical students and/or residents. Study quality over all was low to moderate and limited to quasi and pre-experimental designs. The majority of the studies focused on medical student training, and few included residents. The educational/training methods described included didactic sessions, patient panels, standardized patients, small group discussions, and student-delivered presentations. Overall, combining a variety of training methods appears to hold more promise in affirming/inclusive care training at the undergraduate medical education (UME) level.

Limitations/Challenges

- Medical schools and residency programs may be resistant to additional curriculum demands.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., objective structured clinical examinations [OSCEs] and practice observations) are lacking in the studies that were reviewed.
- There is a greater need for graduate medical education (GME) training in ACEs and TIC.
- There were no articles addressing training in ACEs experienced by other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize both institutional and LCME measures to assess learning outcomes regarding ACEs and TIC.
- Develop curriculum modules on “ACEs” and pilot test these modules in medical and other allied health professions schools.
- Engage LGBT individuals with legal, health care, social work and community engagement backgrounds as part of clinical network & working groups.
- Monitor health outcomes of vulnerable populations to assess the quality of care received both in outpatient and inpatient care settings.

- Encourage experienced clinicians (those from the subspecialties of primary care, psychiatry, family medicine and internal medicine) to mentor less experienced students and clinicians (during clerkship, residency and early years of practice) in TIC.
- Encourage patient- centered medical homes which provide access to mental health clinicians and behaviorist teams towards increasing primary care capacity to help patients and family physicians care for patients with ACE histories and improve patient quality of life.
- Promote planning, training and organizational change at all levels including direct care staff, managers, directors, administration and boards of directors towards creating health care programs that are trauma-informed and culturally competent.

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Interpersonal Violence Policy Brief

Title: Teaching Medical Students and Residents to address Interpersonal Violence across the Life Course

Stakeholders

- Curriculum planners in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)

Key messages

- The Interpersonal Violence (IV) policy brief could provide information on how to access learning resources for trainees, educators and patients.
- The Interpersonal Violence policy brief can help government organizations, care providers, and facilities to adopt and popularize the recommendations.
- This policy brief can contribute to policy-making for provision of high-quality care to vulnerable populations, which include lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals, people experiencing homelessness and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals be aware of interpersonal violence, how it affects vulnerable populations, and how failure to address this issue increases the risk of vulnerable populations and people who have pre-existing psychosocial issues the opportunities to receive quality healthcare.

Policy options

- Evaluation of existing educational content on Interpersonal Violence should be considered prior to proposing and accepting the existing curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, patient advocates, community advocacy groups, care providers, health insurance providers, and pharmaceutical companies) is necessary to develop the objectives before policy making at government, healthcare system, and medical school levels.

Policy Relevance

Interpersonal Violence occurs across the life course and threatens the health and happiness of thousands of persons each year in the United States. Despite recommendations from the AAMC, the CDC, and the WHO,[1-4] there is a lack of consistency in how medical schools teach students about IV or training residents resulting in a shortage of culturally competent providers who are not well-equipped with the skills necessary for addressing IV. This issue may negatively impact interventions with patients resulting in a delay or avoidance of necessary medical care resulting in adverse health consequences and contributing to health disparities.

Executive Summary

Medical students and residents lack adequate training on how to treat patients who experienced IV and at the same time provide culturally competent care to LGBTQ patients and other vulnerable groups, and healthcare services not addressing the patient's needs. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on IV will stimulate physician interest and ability in adopting therapeutic and psychosocial interventions resulting in improved treatment options and a reduction in IV cases and significant improvements in patient care.

Introduction/Statement of the Problem

Interpersonal violence (IV), also referred to as intentional injury, is "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, stunted emotional development, or deprivation".[5] Interpersonal Violence encompasses a wide range of incidents from child abuse and neglect by caregivers, to youth violence (violence by adolescents and young adults aged 10 to 29 years that includes bullying, dating violence, cyber violence, gang violence, etc.), intimate partner violence, sexual violence, elder abuse, and gun violence.[6-10] The U.S.-based Centers for Disease Control and Prevention first identified IV as a leading public health problem in the mid-1980s and early 1990s[11,12] as did the World Health Assembly in 1996 (Resolution WHA49.25).[13] A public health perspective addresses how IV presents at different stages of the life course;[14,15] the role of context, including social and physical environments; the ways in which exposure to IV early in life can shape health across one's lifetime and potentially across generations,[16,17] and the recommended role of health care providers.[18] Yet, despite the ubiquitous nature of IV, little systematic attention has been given to ensuring future physicians are adequately trained to screen for, treat, and prevent IV and alter the health and mental health trajectories of people who have experienced IV, are at risk, or are currently experiencing IV.[19–23] While numerous health professions organizations such as the American Medical Association,[24] the Joint Commission on Accreditation of Healthcare Organizations (JCAHO),[25] the American Academy of Family Medicine,[26] the American Academy of Pediatrics,[27] the American College of Emergency Physicians,[28] and the American College of Obstetricians and Gynecologists[29] have identified the role of physicians in responding to violence, there is not yet a consensus among medical schools on how to teach students to address it.[30,31]

Methods/Approaches

In order to identify original studies that focus on the effectiveness of medical student and resident training to appropriately diagnose and treat IV, we conducted a systematic review of the literature for articles published prior to December 2020. We used PRISMA guidelines[32] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with patients, and intent to treat patients, who over use opioids. The search strategy cross-referenced keywords for interpersonal violence, medical education (both allopathic and osteopathic), and interventions. Our search included the databases such as PubMed, OVID, Google Scholar, SCOPUS, Web of Science, CINAHL, and PsychInfo. The MeSH terms used included: education, medical, undergraduate and domestic violence; child abuse; elder abuse; spouse abuse; intimate partner violence; physical abuse; rape. Boolean terms used for the search of all databases were: "medical students" OR

"medical schools" OR "osteopathic schools" OR "resident physicians" OR "undergraduate programs" OR "students, medical" OR "medicine, osteopathic" OR "education, medical" AND education OR "clinical training" OR didactic OR curriculum OR simulation OR "active learning" OR "problem based learning" OR lectures OR education OR preceptorship OR "education, professional" OR "clerkships, clinical" OR curriculum OR teaching OR lectures OR screening OR treatment OR "trauma informed care" OR referral AND "interpersonal violence" OR "intimate partner violence" OR violence OR "child abuse" OR "child neglect" OR "youth violence" OR "gang violence" OR "gun violence" OR "sexual violence" OR "sexual assault" OR rape OR "elder abuse" OR "domestic violence" OR "family violence" OR trauma OR "sex offenses." Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a committee of authors using published recommendations.[33]

Results

Out of a total of 1,237 articles screened and subjected to various inclusion and exclusion criteria, and full text review, 34 articles were identified that had educational intervention component and focused on medical students and/or residents. Study quality over all was low to moderate and limited to quasi and pre-experimental designs. The majority of the studies addressed domestic, and intimate partner violence while the others dealt with sexual violence/rape, child abuse, adolescent violence and family violence. None addressed elder abuse. A greater number of the studies focused on medical student training, and few included residents. The educational/training methods described included participant level of education sampled (i.e., medical, nursing, or dental students or health care providers); program format (e.g., readings lectures, small group discussions, patient panels or interviews); or program metrices (i.e., knowledge, comfort level, attitudes, implicit bias). In summary, our systematic review revealed that combining a variety of training methods appears to hold more promise in IV training at the undergraduate- (UME) and graduate medical education (GME) levels.

Limitations/Challenges

- Medical and allied health professions schools and residency programs may be resistant to additional curriculum demands.
- At-risk patients from vulnerable populations may not readily identify themselves in a primary care setting, thus prescribing medication/introducing interventions for addressing IV and follow-up of patients from these groups is missing.
- The majority of educational intervention studies conducted thus far focused on medical school educators only, but there are not many studies on other allied health professions.
- Quantitative analysis of the outcome of educational interventions suggested thus far is difficult to assess owing to the heterogeneity of study samples, interventions, topics, and outcome measures.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., objective structured clinical examinations [OSCEs] and practice observations) are lacking in the studies that were published.
- There is lack of uniformly adapted nomenclature for addressing interpersonal violence in the clinical environment.
- There is a greater need for graduate medical education (GME) training in IV.

- There were no studies addressing IV experienced by other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Assessment of learning outcomes are needed to standardize measures regarding IV.
- Develop curriculum modules on IV and pilot test these modules in medical and other allied health professions schools.
- Monitor health outcomes of vulnerable populations who experienced IV to assess the quality of care received both in outpatient and inpatient care settings.
- Design programs to assess the efficacy of medical and psychosocial interventions to address IV and measure the outcomes.
- Barriers to recognizing and treating IV must be addressed in training.
- Uniformity in measures of competency is needed to strengthen training across all medical schools.
- Studies using standardized measures and experimental designs are needed to understand the outcomes of IV treatment training in health professions schools.
- Efforts are needed to adopt a trauma-informed system of care within the clinical environment provide a host of new opportunities for medical education research, including designing interventions that tie medical education interventions to patient outcomes.
- Primary care residency training programs need to focus on cost effective intervention methods in the patient-centered medical home clinical setting.

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Opioid Policy Brief

Title: Training of Medical Students and Residents in Opioid Abuse

Stakeholders

- Curriculum planners in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)

Key messages

- The Opioid Abuse policy brief could provide information for trainees, educators and patients to more readily access learning resources.
- The Opioid Abuse policy brief can help government organizations, care providers, and facilities to adopt and implement the recommendations.
- This policy brief can contribute to policy-making for provision of high-quality care to vulnerable populations, which include lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals, people experiencing homelessness and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals be mindful of the opioid use disorder (OUD), how it affects vulnerable populations, and how failure to treat this disorder increases the risk of vulnerable populations and people who inject drugs (PWID) the opportunities to receive quality healthcare.

Policy options

- Evaluation of existing educational content on OUD training should be considered prior to proposing and accepting the existing curricular interventions.
- Multidisciplinary engagement of stakeholders at every level (general public, patients/consumers, patient advocates, community advocacy groups, care providers, health insurance providers, and pharmaceutical companies) is necessary to develop the objectives before policy making at government, healthcare system, and medical school levels.

Policy Relevance

Opioid use and overdose represent a major public health crisis in the United States. Opioid use disorder (OUD) has been identified as one of the topics that has not received enough attention in medical education or residency training. This lack of attention has resulted in a shortage of culturally competent providers who are not well-equipped with the skills necessary for opioid use disorder treatment and at the same time to being sensitive to sexual orientation, ethnicity, and social factors. This issue may negatively impact interventions with patients resulting in a delay or avoidance of necessary medical care resulting in adverse health consequences and contributing to health disparities.

Executive Summary

Medical students and residents lack adequate training on how to how to prescribe opioids for patients who are at risk for addiction and at the same time provide culturally competent care to LGBTQ patients and other vulnerable groups, and healthcare services not addressing the patient's needs. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on OUD will reinvigorate physician interest and ability in adopting psychosocial interventions resulting in improved treatment options that reduce OUD rates while significantly improving patient care.

Introduction/Statement of the Problem

Rates of substance use disorders, including opioid misuse, continue to rise despite national initiatives. Effective treatments for opioid use disorder (OUD) include several medications to treat overdose, craving, and withdrawal, as well as psychosocial interventions. Opioid overdose fatalities include deaths from natural opioids (morphine and codeine), semi-synthetic opioids (oxycodone, hydrocodone), synthetic opioids (prescription and illicit fentanyl, tramadol), methadone, and heroin.[1-5] From 1999 to 2017, there were 399,230 deaths attributed to opioids in the U.S.1 In 2017, a total of ~47,600 opioid overdose deaths occurred, accounting for 67.8% of all overdose deaths, an increase of 9.6%, from 19.8 to 21.7 deaths per 100,000.[1] From 2015 to 2016, rates of overdose deaths for synthetic opioids, natural/ semisynthetic opioids, and heroin increased by 100%, 12.8%, and 19.5%, respectively.[4] Medication-assisted treatments using methadone, buprenorphine, naltrexone, clonidine and naloxone have resulted in increased involvement by physicians in the treatment of OUD and other substance use disorders. However, psychosocial interventions such as motivational interviewing[6] and cognitive behavioral therapy[7] are also important and effective tools in the treatment of OUD. Medical schools and teaching hospitals are on the front lines in our communities dealing with the opioid epidemic: responding with new approaches to prevent, identify, and treat pain and substance use disorders, delivering pain management and addiction education, and leading efforts in this area to advance medical research and promote innovations in clinical care. Managing the opioid epidemic includes a wide breadth of knowledge and skills, including pain management, opioid prescribing, risk mitigation and stratification, medical assisted treatment, treating overdoses, alternative pain therapies, interprofessional team-based care, and prevention counseling. Yet, there remains no consensus on how to teach medical students and residents about their role and responsibilities in managing the opioid epidemic.

Methods/Approaches

In order to identify original studies that focus on the effectiveness of medical student and resident training to improve physician delivery of OUD treatments, we have conducted a systematic review of the OUD treatment training literature from January 2000 until May 2020. We used PRISMA guidelines[8] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with patients, and intent to treat patients, who over use opioids. We adopt a broad definition of treatment to include medication-assisted treatments, harm-reduction approaches, psychosocial treatments, and treatment of co-occurring OUD and other mental and physical health disorders. Our search included the databases such as Google Scholar, PubMed,

OVID, ERIC, SCOPUS, Web of Science, CINAHL, and PsychInfo. We used a search string including: (opioids OR opioid addiction OR opioid use disorder OR opioid related disorders) AND (medical students OR residents OR medical education OR training OR curriculum). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a committee of authors using published recommendations.[9]

Results

Out of a total of 13,061 articles screened and subjected to various inclusion and exclusion criteria, and full text review, 33 articles were identified that had educational intervention component and focused on medical students and/or residents. Study quality over all was low to moderate and limited to quasi and pre-experimental designs. The majority of the studies focused on medical student training, and few included residents. Sample size of the participants ranged from seven to 120 for medical students and from 93 to 160 residents. The educational/training methods described included kind of sample (i.e., medical, nursing, or dental students or health care providers); program format (e.g., readings lectures, small group discussions, patient panels or interviews); program targets (i.e., knowledge, comfort level, attitudes, implicit bias). Overall, combining a variety of training methods appears to hold more promise in OUD training at the undergraduate- (UME) and graduate medical education (GME) levels.

Limitations/Challenges

- Medical and allied health professions schools and residency programs may be resistant to additional curriculum demands.
- At-risk patients from vulnerable populations may not readily identify themselves in a primary care setting, thus prescribing medication/introducing interventions for addressing OUD and follow-up of patients from these groups is missing.
- The limited number of educational intervention studies conducted thus far focused on medical school educators only, but there are not many studies focused on other allied health professions such as physicians' assistant and nursing student training.
- Quantitative analysis of the outcome of educational interventions suggested thus far is difficult to assess owing to the heterogeneity of study samples, interventions, topics, and outcome measures.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., objective structured clinical examinations [OSCEs] and practice observations) are lacking in the studies that were reviewed.
- There is a greater need for graduate medical education (GME) training in OUD.
- There were no studies addressing OUD experienced by other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize measures to assess learning outcomes regarding OUD.
- Develop curriculum modules on "opioid use and overdose" and pilot test these modules in medical and other allied health professions schools.

- Monitor health outcomes of vulnerable populations who were diagnosed with OUD to assess the quality of care received both in outpatient and inpatient care settings.
- Design programs to assess the efficacy of medical and psychosocial interventions to address OUD and measure the outcomes.
- Barriers to treat OUD must be addressed in training.
- Addiction medicine training need to be incorporated as a standard part of medical and allied health professions education, and standard competencies for all addiction medicine should be developed.
- Measures of competency need to be standardized to strengthen training across all medical schools.
- Studies using standardized measures and experimental designs are needed to understand the outcomes of OUD treatment training in health professions schools.
- Medical students need to be familiar with patient medication assistance programs
- Because mental health disorders can increase the risk of substance abuse as well as impact patient adherence and retention in detoxification programs, medical students should readily identify this interaction when it occurs.
- Primary care residency training programs need to focus on low-cost methods (i.e., self-report for monitoring adherence in the patient-centered medical home clinical setting to ensure cost of OUD treatment remains low.

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Sexual Violence Policy Brief

Title: Teaching Medical Students and Residents to address Sexual Violence

Stakeholders

- Curriculum planners in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)

Key messages

- The Sexual Violence policy brief could provide information on how to access learning resources for trainees, educators and patients.
- The Sexual Violence policy brief can help government organizations, care providers, and facilities to adopt and popularize the recommendations.
- This policy brief can contribute to policy-making for provision of high-quality care to vulnerable populations, which include lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals, people experiencing homelessness and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals be aware of Sexual Violence, how it affects vulnerable populations, and how failure to address this issue increases the risk of vulnerable populations and people who have pre-existing psychosocial issues the opportunities to receive quality healthcare.

Policy options

- Evaluation of existing educational content on Sexual Violence should be considered prior to proposing and accepting the existing curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, patient advocates, community advocacy groups, care providers, and health insurance providers) is necessary to develop the objectives before policy making at government, healthcare system, and medical school levels.

Policy Relevance

Sexual Violence threatens the health and happiness of thousands of persons each year in the United States. Despite recommendations from the AAMC, the CDC, and the WHO, there is a lack of consistency in how medical schools teach students about sexual violence or training residents resulting in a shortage of culturally competent providers who are not well-equipped with the skills necessary for addressing sexual violence. This issue may negatively impact interventions with patients resulting in a delay or avoidance of necessary medical care resulting in adverse health consequences and contributing to health disparities.

Executive Summary

Medical students and residents lack adequate training on how to treat patients who experienced sexual violence and at the same time provide culturally competent care to LGBTQ patients and other vulnerable groups, and healthcare services not addressing the patient's needs. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on sexual violence will stimulate physician interest and ability in adopting therapeutic and psychosocial interventions resulting in improved treatment options and a reduction in sexual violence cases and significant improvements in patient care.

Introduction/Statement of the Problem

Sexual violence is a common experience in the lives of both men and women.[1] Factors such as race, class, ethnicity, gender, sexual identity and social conditions, such as sex workers, homelessness, and migrant farm work may make persons particularly vulnerable to sexual assault. Marginalized populations are often the most vulnerable for sexual violence and often face the greatest obstacles to gaining protection and necessary services.[2] Sexual violence crosses all socioeconomic, racial, gender, and cultural boundaries and can have psychological, emotional, and physical effects on a survivor.[3] Current estimates suggest that one in six women and one in 33 men will experience attempted or completed rape (i.e., forced oral, anal, or vaginal penetration) in his or her lifetime.[4] While studies have shown that most female patients want to be asked about their experiences with sexual violence by their health care providers,[5] few medical professionals screen any patients, female or male, for such trauma.[6] This may be due to a lack of training, time, or comfort on the part of the health care provider.[7] The effects of sexual violence aren't always easy to deal with, but when diagnosed and with the right help and support they can be managed by the primary care team. Having a non-abusive relationship with a healthcare provider fosters mutual trust and promotes long-term health by allowing a survivor to feel taken care of in a relationship that is based on trust.[8] Sexual assault of both men and women has received increased media attention in recent years, particularly in light of the Me2Movement and the surge of sexual abuse cases that have been uncovered in both the Catholic Church and the Boy Scouts. The enduring impact of sexual violence on the lives of survivors has been well documented. People who have been sexually victimized have been found to be more likely to suffer from chronic physical and mental health problems than those who have not been victimized, and believe that their health is fair or poor.[9] Other physical consequences of sexual violence include unintended pregnancy, chronic pain, gastrointestinal disorders, gynecological complications, genital injuries, and sexually transmitted disease.[3] Psychological response to being a victim of sexual assault include depression, anxiety, stress and fear, making it difficult to adjust or cope for some time afterward.[10] Female survivors of sexual violence visit the doctor more often than women who have not been victimized.[11]

Certain populations are at greater risk for sexual assault than others. Women, children, persons who are LGBTQ, experiencing homelessness, and/or migrant farmworkers all are at heightened risk for sexual violence due to social conditions such as stigma, discrimination, and segregation; social forces, including addictions, family breakdown, and mental illness; and structural forces such as lack of available low-cost housing, poor economic conditions, and insufficient mental health services. Despite their heightened risk, the unique needs of vulnerable

populations experiencing sexual violence rarely are addressed in medical education due to "small numbers."

Many factors influence a survivors' decision making in relation to reporting sexual violence. These include the individuals' access to good medical care provided by knowledgeable and empathetic clinicians. Yet, it remains unclear how many medical schools provide teaching about sexual assault to undergraduate students, how it is carried out, and what impact it has. More research is needed that focuses upon measuring the effectiveness of sexual violence education in changing medical students' negative attitudes and misperceptions about sexual violence.

Methods/Approaches

In order to identify original studies that focus on the effectiveness of medical student and resident training to appropriately diagnose and treat Sexual Violence, we have conducted a systematic review of the literature for articles published prior to December 2017. We used PRISMA guidelines[12] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with patients, and intent to treat patients, who experienced sexual violence. The search strategy cross-referenced keywords for sexual violence, medical education (both allopathic and osteopathic), and interventions. Our search included the databases such as PubMed, PsycINFO, Web of Science, Scopus, Ingenta, Science Direct, and Google Scholar. The MeSH terms used included: education, medical, undergraduate and domestic violence; child abuse; spouse abuse; intimate partner violence; physical abuse; rape. Boolean terms used for the search of all databases were: "medical students" OR "medical schools" OR "osteopathic schools" OR "resident physicians" OR "undergraduate programs" OR "students, medical" OR "medicine, osteopathic" OR "education, medical" AND education OR "clinical training" OR didactic OR curriculum OR simulation OR "active learning" OR "problem based learning" OR lectures OR education OR preceptorship OR "education, professional" OR "clerkships, clinical" OR curriculum OR teaching OR lectures OR screening OR treatment OR "trauma informed care" OR "intimate partner violence" OR violence OR "child abuse" OR "sexual violence" OR "sexual assault" OR rape OR "sex offenses." Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc.

Results

Four studies were identified whose purpose was to teach medical students how to address sexual violence in their patients. Three administered an intervention while none used a high-quality research design to assess impact. Two of these studies used a pre-post no control intervention while the other used a time series design without a control group. Significant changes in student knowledge and attitudes were found at post exam for three studies but the change was not sustained at time point three in the study that used a multiple time series design. Two of the interventions were 2–3-hour lectures and the third used three downloadable modules. Interventions were administered to students across all four years of medical school. None of the articles addressed the social circumstances, forces, and structures that increase risk for sexual violence among vulnerable populations. Overall, combining a variety of training methods appears to hold more promise in IV training at the undergraduate- (UME) and graduate medical education (GME) levels.

Limitations/Challenges

- Medical and allied health professions schools and residency programs may be resistant to additional curriculum demands.
- At-risk patients from vulnerable populations may not readily identify themselves in a primary care setting, thus prescribing medication/introducing interventions for addressing sexual

violence and follow-up of patients from these groups is missing.
- The majority of educational intervention studies conducted thus far focused on medical school educators only, but there are not many studies on other allied health professions.
- Quantitative analysis of the outcome of educational interventions suggested thus far is difficult to assess owing to the heterogeneity of study samples, interventions, topics, and outcome measures.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., objective structured clinical examinations [OSCEs] and practice observations) are lacking in the studies that were published.
- In the United States, sexual violence is more commonly addressed in residency training programs than in undergraduate medical education. Therefore, there is a greater need for graduate medical education (GME) training in sexual violence.
- There were no studies addressing sexual violence experienced by other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize measures are needed to assess learning outcomes regarding sexual violence.
- Develop curriculum modules on sexual violence and pilot test these modules in medical and other allied health professions schools.
- Monitor health outcomes of vulnerable populations who experienced sexual violence to assess the quality of care received both in outpatient and inpatient care settings.
- Design programs to assess the efficacy of medical and psychosocial interventions to address sexual violence and measure the outcomes.
- Barriers to treat sexual violence must be addressed in training.
- Uniformity in measures of competency is needed to strengthen training across all medical schools.
- Studies using standardized measures and experimental designs are needed to understand the outcomes of sexual violence treatment training in health professions schools.
- While the American Medical Association has issued a policy statement on Family and Intimate Partner Violence (H-515.965), it has not specifically addressed the need for medical education to include sexual violence in the curriculum. A statement by the AMA and other medical professional associations about the importance of addressing sexual violence in the medical education curriculum would bring greater importance to this critically important topic.

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Immunization Disparities Policy Brief

Title: Opportunities for Addressing Immunization Disparities in Medical Professions Training

Stakeholders

- Curriculum coordinators, directors, and deans in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration, National Institutes of Health, Association American Medical Colleges, Liaison Committee on Medical Education, Southern Association of Colleges and Schools, Council on Education for Public Health, National Medical Association and medical societies)

Key messages

- This immunization disparity training policy brief provides guidance on how to improve training for medical students and residents to increase immunization rates and decrease immunization hesitancy.
- Immunization disparity training helps government, care providers, educators and facilities to adopt and popularize the recommendations.
- Immunization disparity training policy brief contributes to policy making in regard to providing equal access to high quality care.
- This policy brief also calls for ensuring that healthcare professionals' practice cultural humility, particularly with vulnerable populations, in addressing the health issues towards achieving health equity.

Policy options

- Existing information on immunization disparity training should be considered and evaluated before proposing and accepting curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, community advocacy groups and care providers) is necessary to develop agreed upon training objectives before policy making.

Policy Relevance

Health care for vulnerable populations regarding immunization disparities has been identified as an emerging area which has not received adequate attention in medical education or residency training resulting in a workforce that is ill-prepared to provide culturally responsive and appropriate care for these populations.

Executive Summary

Medical students and residents currently lack appropriate and adequate training to provide address immunizations and immunization hesitancy. This lack is even more pronounced when considering vulnerable populations such as gender and sexual minorities, persons experiencing homelessness and migrant farm workers. This policy brief advocates for equipping students and residents with

knowledge and skills to address vaccine hesitancy and decrease immunization disparities. It is expected that curricular interventions will result in perceived and quantifiable improvements in patient care for vulnerable populations.[1]

Introduction/Statement of the Problem

The topic of immunization is a critical issue at this time due to the availability of the SARS-CoV-2 vaccine, and the high levels of vaccine hesitancy.[2] Vaccines have been shown to be an effective method to reduce the transmission of disease, however, they are often under-utilized.[3-5] Lack of confidence in vaccine efficacy, concerns about side effects are two factors that have led to non-compliance with vaccine recommendations.[1] These factors are often compounded among vulnerable populations due to general medical mistrust, lack of insurance, and/or lack of knowledge regarding availability.[6]

In recent years the number of vaccine-preventable illness outbreaks have increased.[7] There is an increasing number of healthcare providers that are non-compliant with vaccinations, potentially lowering the public trust in these vaccinations.[8] Currently, little curriculum time in medical school is allotted to addressing immunization disparities and ways to address the needs of vulnerable populations when it comes to receiving immunizations.[9,10]

Methods/Approaches

In order to identify effective training methods for medical professionals to decrease disparities among vaccine recipients, we conducted a systematic review of literature from 1990 until 2020. We used PRISMA guidelines to identify original studies that focused on improving knowledge surrounding vaccines. Our search included 7 databases, including Google Scholar, PubMed, OVID, ERIC, Web of Science, CINAHL, and MedEd Portal. The search strategy cross referenced keywords for immunizations (*immunization, vaccinations)* with keywords for medical training (*medical students, residents, medical education, curriculum*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by authors using published recommendations.

Results

Out of a total of 1,266 articles screened, subjected to various inclusion and exclusion criteria, and full text review, 20 articles were identified that reported on an educational intervention and focused on medical students and residents. Study quality overall was moderate with mainly quasi and pre-experimental designs. Training interventions for medical students were the most common focus of study (12 articles); followed by residents (4); a combination of students and residents; (2) and students and faculty (2). Interventions used included didactic sessions, patient panels, standardized patients, simulated patient encounters, small-group discussions, and student led presentations. Overwhelmingly, interventions increased knowledge about immunizations, as well as changing beliefs and attitudes related to vaccination and improving patient communication regarding vaccines and related hesitancy.

Limitations/Challenges

- Lack of causality between educational interventions and vaccination outcomes
- Disparities were not addressed using a social vulnerabilities perspective
- None of the studies focused on vulnerable populations (LGBTQ+, people experiencing homelessness, and migrant farm workers)

Policy Recommendations

- Standardize measures to assess learning outcomes regarding immunization knowledge, attitudes, and beliefs.
- Develop curriculum modules on immunization knowledge and pilot test these modules in medical schools and during residency.
- Engage people with legal, health care, finance, social work and community engagement backgrounds as part of clinical networks and working groups.
- Monitor health outcomes of patients as well as healthcare provider behaviors to assess the quality of care received both in outpatient and inpatient care settings.
- Encourage experienced clinicians multiple years' experience post residency to mentor less experienced students and clinicians (during clerkship, residency and early years of practice) in immunization knowledge and misconceptions.
- Establish privacy, confidentiality, and cultural humility guidelines in patient care settings.
- Consider childhood immunization in combination with COVID-19 vaccinations, minding the suggested time frames between COVID-19 vaccination and other immunizations.

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Gender Affirming Care Policy Brief

Title: Transforming Medical Education to Provide Gender Affirming Care (GAC) for Transgender and Gender Diverse (TGD) Patients.

Stakeholders

- Curriculum coordinators, directors, and deans in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (HRSA, NIH, AAMC, LCME, SACS, CEPH, NMA, AMA and other medical societies)

Key messages

- The Gender Affirming Care (GAC) policy brief could provide information on how to access learning resources for trainees, educators and patients.
- The GAC policy brief can help government organizations, care providers, and facilities to adopt and popularize the recommendations.
- This GAC policy brief can contribute to policy-making for provision of high quality care to sexual and gender minorities (SGM).
- This policy brief also calls for ensuring that healthcare professionals practice cultural humility in addressing the health issues of SGM towards achieving health equity.

Policy options

- Existing information on GAC should be considered and evaluated before proposing and accepting the curricular interventions.
- Input from stakeholders (public, patients, community advocacy groups and care providers) is necessary to address the objectives before policy making.

Policy Relevance

Transgender health care has been identified as an emerging area that has not received adequate attention in medical education or residency training resulting in a workforce that is ill-prepared to provide culturally appropriate care for this population.

Executive Summary

Medical students and residents lack appropriate and sufficient training on how to provide gender-affirming and inclusive care to transgender and gender diverse (TGD) patients. The proposed policy brief advocates for equipping medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the curricular interventions on GAC will result in perceived and quantifiable improvements in transgender patient care.

Introduction/Statement of the Problem

Transgender people have a gender identity that differs from their assigned sex at birth.[1] Because transgender medicine is not adequately covered in medical curricula, few care providers are comfortable with providing care, including gender affirming care to TGD patients.[2,3] While there has been an increasing call for medical schools to ensure students are trained to provide culturally appropriate care for LGBTQ patients, there is a lacuna in provision of gender affirming care to future health care providers in medical school education and residency training programs.[4-6]

A 2009-2010 survey administered to medical school deans about LGBTQ-related content in medical education found that the median reported time dedicated to LGBTQ-related topics was small (e.g., approximately or average 5 hours) and that the dedicated amount of time, covered content, and perceived quality of instruction varied substantially.[7] There is an increasing number of medical residency specialty and subspecialty programs, including OB/GYN, Endocrinology, Urology, Surgery and Psychiatry that have identified the need for residents to receive training in gender affirming care for transgender patients.[7-11] However, medical education curriculum time and materials tends to focus on medical management of gender-affirming hormones which are typically beyond the scope of the general primary care provider and lack primary care considerations. Little curriculum time of medical schools currently is allotted to addressing the unique, gender affirming, primary care needs of transgender patients.[8]

Methods/Approaches

In order to identify and assess how medical students and residents are being trained to provide gender affirming care to transgender patients, we have conducted a systematic review of literature from 2000 until 2020. We used PRISMA guidelines[12] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with SGM patients. Our search included the databases such as Google Scholar, PubMed, OVID, ERIC, SCOPUS, Web of Science, CINAHL, PsychInfo, and MedEdPortal. The search strategy cross-referenced keywords for transgender populations (*transgender, gender identity, transsexual, gender reassignment, gender affirmation, gender queer, gender nonconforming, gender dysphoria,* transgender non-conforming/TGNC) with keywords for medical students and residents (*medical student, medical resident*), and medical education (*medical school curriculum, basic science, clinical, rotations, OSCE, standardized patient*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a group of authors using published recommendations.[13]

Results

Out of a total of 21059 articles screened and subjected to various inclusion and exclusion criteria, and full text review, 32 articles were identified that had educational intervention component and focused on medical students and/or residents. Study quality over all was low to moderate and limited to quasi and pre-experimental designs. The majority of the studies focused on medical student training, and few included residents. The educational/training methods described included didactic sessions, patient panels, standardized patients, small group discussions, and student-delivered presentations. Overall, combining a variety of training methods appears to hold more promise in affirming/inclusive care training at the undergraduate medical education (UME) level.

Limitations/Challenges

- Medical schools and residency programs may be resistant to additional curriculum demands.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess competency (e.g., OSCEs; practice observation) are lacking in the studies that were reviewed.
- There is a greater need for graduate medical education (GME) training in affirming care.
- There were no articles addressing training in affirming care regarding other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize measures to assess learning outcomes regarding affirming and inclusive care.
- Develop curriculum modules on "Affirming Care" and plot test these modules in medical schools.
- Engage TGD people with legal, health care, finance, social work and community engagement backgrounds as part of clinical network & working groups.
- Monitor health outcomes of TGD patients to assess the quality of care received both in outpatient and inpatient care settings.
- Encourage experienced clinicians to mentor less experienced students and clinicians (during clerkship, residency and early years of practice) in TGD healthcare.
- Emphasize privacy, confidentiality, and cultural humility in healthcare settings providing care to TGD patients.
- Emphasize importance of creating welcoming environment to eliminate micro/macroaggression and other actions resulting from implicit bias and transphobia.

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Telehealth Policy Brief

Title: Transforming Medical Education to Address the Health Issues of Vulnerable Populations Through Telehealth Training

Stakeholders

- Curriculum planners in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration-HRSA; National Institutes of Health-NIH; American Association of Medical Colleges-AAMC; Liaison Committee on Medical Education- LCME; Southern Association of Colleges and Schools-SACS; Council on Education for Public Health-CEPH; National Medical Association- NMA; American Medical Association-AMA and medical societies)

Key messages

- Telehealth policy brief could provide information for trainees, educators and patients on best practices in telemedicine.
- Telehealth policy brief can provide government and health care providers with guidelines on how to use telehealth to address the needs of vulnerable populations.
- Telehealth policy brief can provide policy makers with information on how telehealth can be used to provide equal access to high quality care by vulnerable populations (Lesbian, Gay, Bisexual, Transgender, Queer and/or Questioning-LGBTQ individuals, people experiencing homelessness and migrant farmworkers).
- This policy brief recommends that health professions training programs teach students how to practice cultural humility in addressing the health issues of gender and sexual minorities and other socially vulnerable populations via telehealth.

Policy options

- Evaluation of existing information on telehealth training should be considered prior to proposing and accepting the existing curricular interventions.
- Input from stakeholders about the use of telehealth to address the health issues of gender and sexual minorities and other socially vulnerable populations via telehealth (public, patients, community advocacy groups and care providers) should be obtained before policy making.

Policy Relevance

Health care delivery through telehealth has been identified as an emerging strategy for providing healthcare for vulnerable populations yet it has not received adequate attention in medical education or residency training resulting in an ill-prepared workforce. Cultural humility, mobility, language, literacy levels, health literacy levels and internet access to healthcare present challenges for how telehealth can be used to achieve health equity in socially vulnerable patients.

Executive Summary

Differences in social status and perceptions of being judged are barriers for socially vulnerable populations in accessing and receiving primary care services.

Medical students and residents currently are hindered by a lack of training on how to use telemedicine to provide socially and culturally appropriate care to LGBTQ patients and other vulnerable groups. The proposed policy brief promotes strategies to use telehealth to equip medical students and residents with knowledge and skills to provide culturally competent care. It is expected that the telehealth curricular interventions will result in improvements in qualitative and quantifiable care of patients from vulnerable populations.

Introduction/Statement of the Problem

Telehealth and other forms of health information technology including but not limited to the use of mobile devices can provide a new avenue of access to healthcare for vulnerable populations, especially those with chronic diseases, who otherwise might not seek or receive it. Telemedicine provides new opportunities for reducing barriers to health care, coordinating care, managing chronic conditions, enhancing medication adherence, and receiving quicker medication changes from their doctor, self-efficiency and decreasing costs.[1] Telehealth technology provides a safe option for both health care providers (HCP) and patients. It minimizes care barriers such as clinic hours, transportation and perceived discrimination, and creates opportunities for social engagement and a reduction of social isolation.[2] In recent times many providers are using interdisciplinary telemedicine to provide individualized patient-centered care.

The COVID-19 pandemic has highlighted the value of telehealth in providing primary care to patients. Difficulties in maintaining social distance and the concerns associated with spread of disease prevented many patients from seeking care. At the onset of the COVID-19 pandemic, the Centers for Medicare & Medicaid Services (CMS) broadened access to Medicare telehealth services so that beneficiaries can receive a wider range of services from their doctors without having to travel to a healthcare facility. These policy changes build on the regulatory flexibilities granted under the President's emergency declaration. CMS expanded this benefit on a temporary and emergency basis under the 1135 waiver authority and Coronavirus Preparedness and Response Supplemental Appropriations Act. The benefits are part of the broader effort by CMS and the White House Task Force to ensure that all Americans – particularly those at high-risk of complications from the virus that causes the disease COVID-19 – are aware of easy-to-use, accessible benefits that can help keep them healthy while helping to contain the community spread of this virus. Without further legislative action, however, these policy changes will expire when the pandemic is declared to be over.

Healthcare systems have had to modify the way they triage, evaluate, and care for patients during the current COVID 19 pandemic by using methods that do not rely on in-person services. Changes in the way that health care is delivered have been adapted to increase social distancing, reduce staff exposure to ill persons, preserve personal protective equipment (PPE), and minimize the impact of patient surges on facilities. Greater reliance on the use of telehealth services has enabled continued provision of necessary care to primary care patients while minimizing the transmission risk of COVID-19 between HCP and patients.[3] In addition to the general public benefitting from telemedicine, telehealth care has

been found to be very useful in supporting access to treatment for hundreds of people who were released from incarceration early due to the pandemic.[4] Telehealth presents exciting opportunities for new and innovative uses to address the unique needs of vulnerable populations, which are the target of this policy brief. Support for sustained telehealth services provides a long-term strategy for reducing real and perceived barriers to accessing primary care by vulnerable populations. However, it does not mask systemic problems of in-person care, such as discrimination in health care settings that discourages them from seeking or obtaining care. Discrimination in health care settings endangers LGBTQ people's lives through discouraging, delaying, or denying access to medically necessary care.[5] While there have been major advances in protecting the rights of LGBTQ persons in recent years, there are current efforts to make it easier for health care providers to discriminate against LGBTQ men and women. Telehealth may alleviate health challenges for gender and sexual minorities in the COVID-19 era.[6]

Another vulnerable population that could benefit from telehealth use are persons experiencing homelessness (PEH). PEH often have multiple complex health conditions, yet typically are disengaged from the primary health care system. They frequently experience multiple barriers to accessing services including lack of knowledge and awareness of the healthcare system, stigma and discrimination.[7] Barriers which prevent PHE from accessing primary care include but not limited to chronic illnesses and poor health, physical access to health services, difficulty in contacting services, and costs of care and prescription drugs. Telehealth case management intervention for homeless-experienced people living with HIV was found to be beneficial in the first wave of COVID pandemic.[8] Recently, students in the Dartmouth's Geisel School of Medicine used telehealth to treat people experiencing homelessness.[9]

Migrant Farm Workers (MFW) represent another vulnerable population group. MFW bear a disproportionate burden of poverty, health disparities, occupational hazards, and barriers to accessing healthcare.[10] Many MFW are foreign born seasonal workers, are not protected by sick leave, and risk losing their jobs if they miss a day of work. Cultural and language differences, lack of transportation, and deficient health insurance often discourage them from seeking care. Telehealth and related health information technologies offer exciting new opportunities for providing increased access to care by MFW. While some migrant farm workers have access to mobile phones and are willing to use mHealth devices[11], others who are seasonal workers in rural settings do not have access to mobile phones or internet.[12]

Use of telehealth to deliver quality health care must be integrated into medical education curriculum to prepare students to adapt to this new health care delivery model brought about by COVID 19.[13] There are an increasing number of medical residency specialty and subspecialty programs, including OB/GYN, Endocrinology, Urology, Surgery, Psychiatry, Otolaryngology etc., that have identified the need for residents to receive training in telehealth for vulnerable populations. Little curriculum time of medical schools currently is allotted to addressing the unique, needs of socially vulnerable populations. In such situations, telemedicine platforms are ideal as these allow interactive evaluation and treatment of patients in few interdisciplinary settings.[14] For e.g., transgender patients require specialists from reproductive medicine, endocrinology, surgery, mental health, internal medicine etc. Telehealth portals can facilitate consultation with all the specialists in one visit. This type of interaction works well both for patient, health care providers in addition to saving time and costs.

Situations imposed by the pandemic have challenged medical educators with finding ways to integrate trainees into virtual workflows and at the same time be able to provide patient-centered virtual care.[15] Towards this end, there is a greater need to assess how medical students and residents are being taught to use telehealth to manage acute and chronic health conditions.

Methods/Approaches

In order to identify and assess how medical students and residents are being trained to provide socially and culturally health care to general- and socially vulnerable patients through telehealth, we have conducted a systematic review of literature from 2000 until 2020. We used PRISMA guidelines[16] to identify original studies that focused on medical school training to increase knowledge and comfort, as well as improve the attitudes and skills of medical students and residents working with GSM patients. Our search included the databases such as Google Scholar, PubMed, ERIC, Web of Science, CINAHL, PsychInfo, and MedED Portal. The search strategy cross-referenced keywords for *Telehealth* OR *telemedicine* OR *mobile health* OR *e-Health* OR *remote consultation* OR *telepathology* OR *telerehabilitation* separated by OR/AND with keywords for medical students and residents (*medical student, medical resident*), and medical education (*medical school curriculum, basic science, clinical, rotations, objective structured clinical examination [OSCE], standardized patient*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by a triad of authors using published recommendations.[17]

Results

Out of a total of 96 articles screened and subjected to various inclusion and exclusion criteria, and full text review, only 6 articles were identified that has a telehealth educational intervention that focused on medical students and/or residents. Study quality overall was low to moderate and limited to quasi and non-experimental designs. The majority of the studies focused on medical student training, and few included residents. The educational/training methods described included didactic sessions, small group discussions, and interactive livestreamed virtual videos. Overall, employing telehealth training methods are promising at the undergraduate medical education (UME) level.

Limitations/Challenges

- Medical schools and residency programs may be resistant to additional curriculum demands.
- There is a dearth of evaluation of training approaches that use longer term assessments of attitude, comfort, and belief changes in students and residents.
- Measures to assess objective skill (e.g., OSCE's; practice observation) are lacking in the studies that were reviewed.
- There is a greater need for graduate medical education (GME) training in telehealth.
- There were no articles addressing telehealth training aimed at other vulnerable populations, which include migrant farm workers or individuals experiencing homelessness.

Policy Recommendations

- Standardize measures to assess learning outcomes regarding telehealth.
- Develop curriculum modules on telehealth with emphasis on patient-centered telemedicine competencies and pilot test these modules in medical schools.

- Engage LGBTQ individuals, people experiencing homelessness and migrant farm workers and their advocacy groups with legal, health care, finance, social work and community engagement backgrounds as part of clinical network & working groups.
- Monitor health outcomes of patients to assess the quality of care received through telehealth.
- Emphasize privacy, confidentiality during patient consultations using telehealth and cultural humility especially in dealing with transgender patients.
- Embolden insurance companies, hospital administration, and government agencies to work together to reduce/eliminate barriers in reimbursement policies, state and federal regulations, cyber and Health Insurance Portability and Accountability (HIPAA) security acts, and train in technology education and utilization.
- Encourage academic medical centers and hospitals to partner with non-profit foundations to establish telehealth kiosks so that people experiencing homelessness and those in transitional housing could seek much needed care.
- Familiarize patients and support staff in care provider's organization regarding robotic system applications and remote monitoring technologies associated with telehealth.
- Seek regulatory guidance to develop safe, secure, provider and patient-friendly telehealth applications.

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Mental Health Policy Brief

Title: Systematic Review of Mental Health Training for Medical Students and Residents

Stakeholders

- Curriculum coordinators, directors, and deans in medical schools (undergraduate and graduate medical education programs), medical school faculty and academicians
- Education policy makers in government and advisory bodies (Health Resources Services Administration, National Institutes of Health, Association American Medical Colleges, Liaison Committee on Medical Education, Southern Association of Colleges and Schools, Council on Education for Public Health, National Medical Association and medical societies, as well as non-governmental organizations focusing on mental healthcare for vulnerable populations such as LGBTQ+, persons experiencing homelessness, and migrant farm workers)

Key messages

- This policy brief provides guidance on how to train medical students and residents in mental health in order to assess, identify and address mental health and improve care among gender and sexual minorities (GSM), people experiencing homelessness, and migrant farm workers.
- Mental health education can help government workers, care providers, and educators as well as healthcare systems to adopt recommendations that normalize the provision of mental health care.
- Mental health training can contribute to policy making in regard to providing equal access to high quality care for GSM, people experiencing homelessness, and migrant farm workers.
- This policy brief also calls for ensuring that healthcare professionals' practice cultural humility in addressing the health issues of GSM people experiencing homelessness, and migrant farm workers towards achieving health equity.

Policy options

- Existing information on mental health care should be considered and evaluated before proposing and accepting the curricular interventions.
- Multidisciplinary engagement of stakeholders (general public, patients/consumers, patient community advocacy groups and care providers) is necessary to develop the objectives for curricular changes before policy making.

Policy Relevance

- Mental health care specifically for LGBTQ+, people experiencing homelessness, and migrant farm workers has been identified as an emerging area which has not received adequate attention in medical education or residency training resulting in a workforce that is ill-prepared to provide culturally responsive and appropriate care for these populations.

Executive Summary

Medical students and residents currently lack appropriate and sufficient training on how to provide mental health treatment for LGBTQ+, people experiencing homelessness, and migrant farm workers. This policy brief advocates for equipping students and residents with knowledge and skills to provide culturally responsive and appropriate care. It is expected that the curricular interventions on mental health care will result in perceived and quantifiable improvements in patient care.

Introduction/Statement of the Problem

Mental health disorders in the United States remain undertreated.[1] This is further pronounced in LGBTQ+, homeless, and migrant farm working populations.[2-4] Training for medical students and residents to treat health conditions specific to these vulnerable populations is sporadically taught throughout medical schools leading to a scarcity of health care providers comfortable with the diagnosis and treatment of their needs.[5-6]

Surveys administered to medical school deans about LGBTQ+ related content in medical education found that the median reported time dedicated to LGBTQ+-related topics was small (e.g., 5 hours) and that the quantity, content covered, and perceived quality of instruction varied substantially.[7-9] This lack of experience with vulnerable populations has been shown to be correlated with negative attitudes[10] that can lead students and residents to be less effective when communicating and treating these patients. While some measures have been taken to increase the quality of care to vulnerable populations, the level of care remains lower than what is provided to other populations.[11]

Methods/Approaches

In order to identify and assess how medical students and residents are being trained to provide mental health care for LGBTQ+, people experiencing homelessness, and migrant farm workers, we conducted a systematic review of literature from 1990 to 2020. We used PRISMA guidelines to identify original studies that focused on medical education, including medical school and residency training, to increase knowledge and comfort, as well as improve attitudes, skills, and confidence of medical students and residents providing care to for LGBTQ+, people experiencing homelessness, and migrant farm workers. Our search included 6 databases (Google Scholar, PubMed, PsychInfo, ERIC, Web Of Science, and CINAHL). The search strategy cross-referenced keywords for mental health (*anxiety disorder, panic disorder, personality disorder, post-traumatic stress disorder, mood disorder, depression* with keywords for medical treatment; *adolescent psychiatry, child psychiatry, community psychiatry, or neuropsychiatry* and keywords for medical students or residents; *medical students, residents, medical education, training, curriculum*). Data extraction from the articles focused on criteria such as study description, study design, educational intervention etc. Study quality was evaluated by authors using published recommendations.

Results

A total of 2,449 articles were identified and screened by various inclusion and exclusion criteria and full text review; after which 13 articles were included that had an educational intervention component and focused on medical students and/or residents. Study quality overall was moderate with most studies using quasi-experimental or pre-experimental design. The educational methods described included didactic sessions, face-to-face and virtual discussions, workshops, seminars,

case presentations, ambulatory experiences, and student-run psychiatry clinics. Overall, training methods showed high satisfaction among students and residents, increased knowledge, and improved attitudes and confidence.

Limitations and Challenges

- Studies that assess skills such as Objective Structured Clinical Examinations are lacking
- Lack of research on outcomes of graduate medical education (GME) training in mental health
- Limited generalizability of findings due to small sample sizes
- Very few studies focused on vulnerable populations who are at elevated risk of mental health conditions

Policy Recommendations

- Standardize measures to assess learning outcomes regarding mental health care.
- More training intervention strategies should be employed in GME training
- Develop curriculum modules on "Mental Health Treatment" and pilot test these modules in medical schools and in residency.
- Engage LGBTQ+, people experiencing homelessness, and migrant farm workers with legal, health care, finance, social work and community engagement backgrounds as part of clinical networks and working groups.
- Monitor mental health outcomes of LGBTQ+, people experiencing homelessness, and migrant farm workers to assess the quality of care received both in outpatient and inpatient care settings.
- Encourage more experienced clinicians (multiple years of experience) to mentor less experienced students and clinicians (during clerkship, residency and early years of practice) in mental health healthcare.
- Establish privacy, confidentiality, and cultural humility guidelines in patient care settings.
- Establish and normalize interprofessional team-based care to address multifaceted needs of patients including mental health care.

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