Confronting Workforce Shortages and Health Worker Well-Being: Harnessing Lessons from Rural Health Settings
Monday, December 4th, 2023
11:00 AM – 4:00 PM CT

Suggested Additional Readings

1. **Physician and Nurse Well-Being and Preferred Interventions to Address Burnout in Hospital Practice: Factors Associated With Turnover, Outcomes, and Patient Safety** (Aiken et al., 2023)
   This cross-sectional survey study of physicians and nurses practicing in US Magnet hospitals found that hospitals characterized as having too few nurses and unfavorable work environments had higher rates of clinician burnout, turnover, and unfavorable patient safety ratings. Clinicians wanted action by management to address insufficient nurse staffing, insufficient clinician control over workload, and poor work environments; they were less interested in wellness programs and resilience training.

2. **A repeated cross-sectional study of nurses immediately before and during the COVID-19 pandemic: Implications for action** (Aiken et al., 2023)
   The study objective was to determine whether hospital nursing care shortages are primarily due to the pandemic and thus likely to subside or due to hospital nurse understaffing and poor working conditions that predated it. The findings showed no evidence that large numbers of nurses left health care or hospital practice in the first 18 months of the pandemic. Nurses working in hospitals with better nurse staffing and more favorable work environments prior to the pandemic reported significantly better outcomes during the pandemic.

3. **Breaking barriers to diversify the physician workforce** (Santiago et al., 2023)
   This editorial examines the history of diversity, equity, and inclusion in academic medicine in the US. It considers the progress and efforts made to increase attention in this important area. The article incorporates literature, practices, and perspectives that impact the diversification of the physician workforce.

4. **Improving Healthcare Workforce Diversity** (Zou, 2023)
   This article discusses the importance of diversity and inclusion since the world is becoming a “global village.” It highlights the need to develop a culturally competent workforce that can appreciate these differences and incorporate them during patient care. Some strategies recommended to improve health workforce diversity include incorporating policy and legislative measure and culturally specific programs.
5. **Promoting Access to Medical School and Physician Workforce Diversity** (Aysola & Ibrahim, 2019)
   This editorial examines current strategies employed by leading medical organizations to address inequities in healthcare. The authors discuss upstream processes from the application and matriculation that must be addressed to advance parity in medical school access. This study calls for greater precision and intentionality in diversifying medical schools and the US physician workforce.

6. **Racial and Ethnic Differences in Barriers Faced by Medical College Admission Test Examinees and Their Association With Medical School Application and Matriculation** (Faiz et al., 2023)
   The objective of this study is to examine racial and ethnic differences in barriers faced by students taking the Medical College Admission Test (MCAT). In this cross-sectional study of MCAT examinees, American Indian or Alaska Native, Black, and Hispanic students reported lower parental educational levels, greater educational and financial barriers, and greater discouragement from pre health advisers than White students. These barriers may deter groups underrepresented in medicine from applying to and matriculating at medical school.

7. **The impact of California’s staffing mandate and the economic recession on registered nurse staffing levels: A longitudinal analysis** (Dierkes et al., 2022)
   This study compared hospital nurse staffing in California and in other states over 20 years to examine differences before and after the California mandate and within the post-mandate period, before, during, and after the Great Recession of 2008. The findings showed that staffing differences increased during the post-mandate period due to faster growth in California staffing compared to other states, except during the Great Recession, when staffing remained stable in California but declined in other states.

8. **Resilient Mindsets in Medicine** (American Association of Colleges of Osteopathic Medicine, 2022)
   The American Association of Colleges of Osteopathic Medicine (AACOM), in collaboration with Motivate Lab, designed a course to equip administrators, course designers, and faculty to create more motivationally-supportive learning environments. Participants learn how to leverage the power of learning mindsets in ways that can support students to be more resilient and less likely to burnout.

9. **Education policies to increase rural physicians in Japan: a nationwide cohort study** (Matsumoto et al., 2021)
   This was a nationwide prospective cohort study of newly licensed physicians 2014–2018 (n = 2454) of the four major types of the programs—Jichi Medical University (Jichi); regional quota with scholarship, non-quota with scholarship (scholarship alone), and quota without scholarship (quota alone)—and all Japanese physicians in the same postgraduate year (n = 40,293) with follow-up workplace information from the Physician Census 2018, Ministry of Health, Labor and Welfare. In addition, an annual cross-sectional survey for prefectural governments and medical schools 2014–2019 was conducted to obtain information on the results of the National Physician License Examination and retention status for the contractual workforce. The study concluded that Japan’s education policies to produce rural physicians are effective, but the degree of
effectiveness varies among the programs. Policymakers and medical educators should plan their future rural workforce policies with reference to the effectiveness and variations of these programs.

10. **Redesigning the Learning Environment to Promote Learner Well-Being and Professional Development** (Dyrbye et al., 2020)
This invited commentary discusses the negative implications of the high prevalence of burnout and depression among medical students and residents (or learners). The authors outline strategies institutions and affiliated training sites responsible for educating learners can take to pursue the recommended goal related to learners, their well-being, and the learning environment in the National Academies of Sciences, Engineering, and Medicine consensus study report, Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being.

11. **The Time is Now: Transforming Recruitment and Retention of American Indian and Alaska Native Medical Students Using the Medicine Wheel Model** (Guzman et al., 2020)
This paper describes the diverse approaches at these four medical schools from an Indigenous worldview perspective. To address this, American Indians and Alaskan Natives (AI/AN) faculty at four U.S. medical schools established innovative programs to successfully recruit AI/AN medical students and retain them through graduation. The authors presented a culturally rooted framework for medical schools to build upon and emulate. Each medical school’s approach to increase matriculation and graduation of more AI/AN medical students emphasized a different quadrant in the Medicine Wheel model (an Indigenous metaphor for the various components of a person) whereby Mental = Academic; Spiritual = Cultural; Physical = Financial; and Emotional = Social.

This book discusses the challenges of students who have grown up in the 21st century, as well as the advantages these students have. The authors of the book collate resources and discuss ways to ensure the success of the future generations.

13. **Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being**
( prepared by the National Academies of Sciences, Engineering and Medicine, 2019)
This National Academies consensus study calls upon leaders in health care organizations and health professions educational institutions as well as within the government and industry to prioritize major improvements in clinical work and learning environments in all settings and for all disciplines to prevent and mitigate clinician burnout and foster professional well-being for the overall health of clinicians, patients, and the nation.

14. **Closing the Gap — Making Medical School Admissions More Equitable** (Talamantes et al., 2019)
The authors highlight the underrepresentation of certain racial and ethnic minorities in the US physician workforce in this perspectives article. A call to action is made to address structural barriers within institutions that limit the success of students and faculty from underrepresented
groups. The authors emphasize the importance of ensuring that the next generation of US physician workforce is diverse and inclusive.

15. **The dynamics of poverty, educational attainment, and the children of the disadvantaged entering medical school** (Baugh et al., 2019)
In this study, the authors argue that significant barriers must be overcome for the children of the disadvantaged to gain admission to medical school. The authors conclude that absent significant and sustained intervention, medical school applicants from disadvantaged backgrounds will remain few, and workforce issues affecting the care patients receive will not be resolved. The role of physicians and medical schools in advocating for necessary societal changes to alleviate this dynamic is highlighted.

16. **A Pragmatic Approach for Organizations to Measure Health Care Professional Well-Being** (Dyrbye et al., 2018)
This National Academy of Medicine discussion paper provides tools and resources that organizations can use to measure healthcare professionals' burnout and overall well-being. The study also discusses the strengths and limitations of various tools.

17. **Community College Pathways to Medical School and Family Medicine Residency Training** (Talamantes et al., 2018)
This study examined whether community college attendance is associated with family medicine residency training in a national sample of US medical school graduates by performing a cross-sectional analysis using the Association of American Medical Colleges matriculant files of residency trainees who graduated from medical school between 2010 and 2012. The conclusion was that US medical school graduates who attended community college were more likely to train in family medicine, suggesting community college is an important pathway for increasing the primary care workforce.

18. **Examining the predictors of academic outcomes for indigenous Māori, Pacific and rural students admitted into medicine via two equity pathways: a retrospective observational study at the University of Auckland, Aotearoa New Zealand** (Curtis et al., 2017)
The objective of this study was to determine associations between admission markers of socioeconomic status, transitioning, bridging program attendance, and prior academic preparation on academic outcomes for indigenous Māori, Pacific, and rural students admitted into medicine under access pathways designed to widen participation. Findings were compared with students admitted via the general (usual) admission pathway. It was concluded that there were varied associations between admission variables and academic outcomes across the three admission pathways. Equity-targeted admission programs inclusive of variations in the academic threshold for entry may support a widening participation agenda. However, additional academic and pastoral support are recommended.
19. **Impact of medical student origins on the likelihood of ultimately practicing in areas of low vs high socio-economic status** (Puddey et al., 2017)
   The authors highlighted that The University of Western Australia Medical School has been progressively widening the participation of students from a broader spectrum of the community both through expanded selection criteria and quota-based approaches for students of rural, indigenous, and other socio-educationally disadvantaged backgrounds. The authors proposed that medical students entering medical school from such backgrounds would ultimately be more likely to practice in areas of increased socio-economic disadvantage. They concluded that widening participation in medical school to students from more diverse socio-educational backgrounds is likely to increase the distribution of the medical workforce to ultimate service across areas representative of a broader socio-economic spectrum.

20. **American Indian Health Policy: Historical Trends and Contemporary Issues** (Warne & Frizzell, 2014)
   This study discusses a long-standing history of underfunding of the Indian Health Service (IHS), which has led to significant challenges in providing services. Twentieth-century laws, including the Snyder Act, Transfer Act, Indian Self-Determination and Education Assistance Act, and Indian Health Care Improvement Act (IHCIA), have had an effect on the way health services are provided. IHCIA was reauthorized as part of the Patient Protection and Affordable Care Act (ACA). Several provisions in the ACA allow for potential improvements in access to services for AI/AN populations and are described herein. Although policy developments have been promising, IHS underfunding must be resolved to ensure improved AI/AN health.

21. **Minority Physicians’ Role in the Care of Underserved Patients** (Marrast et al., 2014)
   This article iterates the need for increasing racial and ethnic diversity in the physician workforce, as it may be key to meeting the national goals of eliminating health disparities. The study was a cross-sectional analysis of 7070 adults in the 2010 Medical Expenditure Panel Survey who identified a medical provider (not a facility) as their usual source of care. The likelihood of having a nonwhite physician for patients who were racial and ethnic minorities, low income, Medicaid enrollees, uninsured, and non-English home language speakers were estimated.

22. **Implications of the California Nurse Staffing Mandate for Other States** (Aiken et al., 2010)
   The study objectives were to determine whether nurse staffing in California hospitals, where state-mandated minimum nurse-to-patient ratios are in effect, differs from two states without legislation and whether those differences are associated with nurse and patient outcomes. The principal findings were that California hospital nurses cared for one less patient on average than nurses in the other states and two fewer patients on medical and surgical units. Lower ratios are associated with significantly lower mortality. When nurses' workloads were in line with California-mandated ratios in all three states, nurses' burnout and job dissatisfaction were lower, and nurses reported consistently better quality of care.