TRENDS

Association of Schools Advancing Health Professions

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HIGHLIGHTS

Trends is the official newsletter of the Association of Schools Advancing Health Professions (122 C St. NW, Suite 200, Washington, D.C., 20001. Tel: 202-237-6481) Trends is published 10 times each year and is available on the Association's website at www.asahp.org. For more information, contact the editor, Thomas W. Elwood, Dr.PH.

CALLING ALL CARS AND HEALTH DETECTIVES

If the novel COVID-19 pandemic happened to be considered a crime scene, then at some point health detectives, also known as epidemiologists, would be called to investigate. Apart from the heroic efforts of respiratory therapists, dietitians, physical therapists, and other health professionals, such as physicians and nurses who are on the front lines administering care to patients, the efforts of epidemiologists will be necessary to explain what happened at key stages of this disease and the subsequent havoc that it wreaked.

It is worth noting that the eminent biologist J.B.S. Haldane in 1963 (*Journal of Genetics*) described important stages of acceptance in the advancement of science:

- Stage 1: This is worthless nonsense.
- Stage 2: This is an interesting, but perverse point of view.
- Stage 3: This is true, but quite unimportant.
- Stage 4: I always said so.

Since the dawn of recorded history, humans have been confronted with infectious disease outbreaks that have ravaged the population. Throughout the millennia, it has been common for mistakes to be made in understanding the true nature of invading agents and how best to treat their dire effects. The situation this time is quite similar. Errors have been made in several nations regarding whether COVID-19 was deemed to be a problem of deadly significance and whether constructive responses were and are being made in a timely manner.

Some epidemiology models are developed on the basis of collecting data involving four key building blocks: **Susceptibility, Exposure, Infection, and Recovery** (SEIR). Data in each category can undergo changes on a daily basis. A report from the CDC on April 8, 2020 sheds light on the susceptibility aspect of COVID-19 by providing age-stratified, disease–associated hospitalization rates for patients in March 2020. Among patients hospitalized: 74.5% are aged ≥50 years; 54.4% are male, and among adult patients with data on underlying conditions, 89.3% have one or more of them with the most common being hypertension (49.7%), obesity (48.3%), chronic lung disease (34.6%), diabetes mellitus (28.3%), and cardiovascular disease (27.8%). Moreover, among patients where race/ethnicity data were available, 33.1% are non-Hispanic black.

Linking data from the **S** component of an epidemiology model to both the **E** and the **I** portions creates an opportunity to employ some prevention measures to reduce exposure and the likelihood of infection (e.g., social distancing). For the **R** part of the SEIR model, a serological test may prove that an antibody response occurred after infection of a patient. Still unknown is whether individuals who test positive will remain immune either to infection or reinfection. Also, if the virus mutates, will those antibodies produce a comparable level of protection? Someday, epidemiologists will have answers for all these questions. It also will be interesting to see if any pundits eventually migrated from Haldane's Stage 1 to Stage 4.

PRESIDENT'S CORNER

By ASAHP President Phyllis King

CONTINUITY, CONNECTIVITY, AND CONVERGENCE

We have been thrust into the digitization of healthcare. The pandemic has fast-forwarded our adoption of technologies to serve the healthcare industry in almost every way. The convergence of technology, digitalization, additive manufacturing, machine learning and 3D modeling is here. Innovations as a result of these changes will significantly impact the patient experience, businesses, and the modeling of education to prepare the next generation healthcare workforce.

The question for higher education is how fast can we understand, adapt, anticipate and project patient care needs and healthcare innovations to prepare our students and meet the needs of this new world? Digital literacy has become a necessity. Data-informed decision-making offers us a superior advantage. Collaborations and partnerships are critical.

ASAHP supports, informs, guides, leads, and works with you to advance education, practice, and research, and influence policies through partnerships. Let's work together to shape our future. ASAHP is adapting to a more virtual reality and virtual forms of engagement with members to be more responsive to members. Join a community of learning and conversations on our website at community.asahp.org.

More frequent webinar offerings on important topics to the health professions are being developed. The first webinar on "Clinical Education in the Time of COVID-19" received an overwhelmingly positive response with 245 participants from 96 institutions. The webinar is posted on the ASAHP website in case you were not able to attend. We will continue to bring you the latest news and information via multiple communication channels. Join us when you can.

STUDENT UNCERTAINTY ABOUT RE-ENROLLING IN FALL 2020

Now that colleges and universities across the nation have closed their doors for the current semester, a question worth pondering is what can be expected to happen in the Fall and will all students return to campus if able to do so? A national survey commissioned by the American Council on Education (ACE) and the American Association of Collegiate Registrars and Admissions Officers (AACRAO) administered to more than 2,000 currently enrolled U.S. college students finds that nearly one in five are uncertain about their plans for re-enrolling in the fall, or definitely are not going at all. Eighty-two percent of students say, however, that they will be able to complete all or most of their spring coursework as planned, while just 5% indicated they will not be able to complete any courses as planned.

Some 12% are uncertain or no longer plan to enroll at all. An additional 3% say they are planning to enroll in the fall to make up classes not completed in the spring due to COVID-19, meaning it is not clear they are planning to re-enroll fully. Finally, 3% say they were not planning to enroll previously and that has not changed. Hence, students who are uncertain or definitely not returning present a mixed picture for institutions already suffering significant financial losses due to the pandemic and adding to an uncertain portrait of what fall enrollment might look like. An Infographic containing more information can be obtained at https://www.acenet.edu/News-Room/Pages/AACRAO-ACE-Survey-Finds-Uncertainty-About-Current-College-Student-Fall-Enrollment-Plans-Optimism.aspx.

FAST CHANGING LEGISLATIVE ENVIRONMENT

Similar to other initiatives expressed in major battle-like terminology, governmental responses to the coronavirus pandemic have been stated as declaration of a war on COVID-19. Legislators and government administrators throughout the U.S. have been working assiduously to mount an effective series of initiatives to combat and repel this deadly disease. Although not having a particulary strong record for crafting legislation when control of the two congressional chambers is divided between the political parties, especially during an election year, the year 2020 is monumental in significant ways. Many pieces of legislation can languish for months and even years prior to being passed. The existence of a pandemic can change the timetable quite dramatically.

As of late April, the **Trump** Administration and Congress were busy negotiating the next stage of economic recovery legislation. The purpose of the bill is to provide additional funds for the *Paycheck Protection Program* for small businesses and nonprofits since the money supply was exhausted on April 16. Once enacted, companies that continue paying their employees will be eligible to receive forgivable loans underwritten by the federal government. House and Senate Democrats are in favor of directing some funding to minority-owned and rural businesses, and to add more for hospitals and enhanced COVID-19 testing capacity. Not as large as the $2 trillion CARES Act that became law in late March, the new infusion of funding would represent a sorely needed stimulus to an economy that is sagging from this disease.

This legislation proceeded at a rapid pace albeit being accompanied by serious disagreements regarding its contents. One controversial provision revolved around the issue of diagnostic testing. Democrats favor establishment of a national strategy for testing while Republicans are more inclined to place authority for making decisions at the state level.

The Senate on April 21 unanimously passed a $484 billion package that renews funding for a small-business loan program, boosts aid for hospitals, and expands testing for COVID-19. The bill then went to the House for approval. The aid deal includes more than $320 billion for the Paycheck Protection Program for small businesses, $60 billion for the small-business disaster fund, $75 billion for hospitals and $25 billion to increase COVID-19 testing. President **Donald Trump** then signed the legislation (H.R. 266) into law (P.L. 116-139) on April 24, 2020. As pandemic events continue to unfold. It remains possible that efforts will be made on Capitol Hill to add more money to deal with the effects of this disease.

Until recently, an increased pace of globalization has characterized economies around the world. A pandemic helps to change the focus by making it necessary for nations to ensure that individuals are protected within their respective borders. Immigration and travel policies become more restrictive. Manufacturing of essential medicines for domestic use no longer can be viewed as a luxury that is left to other nations to provide. COVID-19 has heightened a perceived threat that the U.S. has become too dependent on letting other countries be the main suppliers of health products needed here. Bipartisan interest is being renewed in S. 1317, the American Mineral Securities Act, as a way of enhancing production of dozens of minerals, including rare earth elements used in pharmaceuticals and medical devices. The bill would require nationwide assessments of more than 50 minerals and boost the U.S. workforce needed to produce the substances.

2020 ASSOCIATION CALENDAR OF EVENTS

May 1, 2020—ASAHP Webinar 2:00-3:00 PM Eastern Time

May 14-15, 2020—ASAHP Leadership Development Program Part I in Columbus, OH Postponed

October 26-27, 2020—ASAHP Leadership Development Program Part II in Long Beach, CA

October 28-30, 2020—ASAHP Annual Conference in Long Beach, CA

HEALTH REFORM DEVELOPMENTS

Ten years ago, the Affordable Care Act became law in order to reduce health care costs by encouraging doctors, hospitals, and other health care providers to form networks that coordinate patient care and become eligible for bonuses when they deliver that care more efficiently. Formation of accountable care organizations (ACOs) in the Medicare program was a centerpiece of this approach. Results of a survey conducted in April 2020 by the National Association of ACOs (NAACOS) indicate that ACOs are highly concerned about the effects of COVID-19 on their organizations. Nearly 60% of respondents in risk-based models reported they are likely to quit the ACO program to avoid financial losses stemming from the pandemic, and 77% reported they are "very concerned" about the impact of COVID-19 on their ACO's 2020 performance.

A likely driver for ACOs to exit the program is the uncertainty about costs, quality, and utilization for 2020. COVID-19 has upended normal utilization and care patterns, disrupting ACOs' ability to employ successful population-health strategies and causing tremendous uncertainty about costs. Notable uncertainty exists on how the pandemic will affect other aspects of the ACO program, such as changes to acuity or risk scores, diminished opportunities to meet quality requirements related to preventive care, and which patients the ACO will be accountable for this year. This uncertainty was strongly noted by survey respondents in comments, with 65% reporting that the scope of the effects of COVID-19 will make it difficult for them to predict their ACO's 2020 performance accurately.

Loosening By CMS Of Telehealth And Scope Of Practice Regulations

April 2020 marked a temporary suspension of certain regulations by the Centers for Medicare & Medicaid Services (CMS) to make it possible for providers, such as hospitals to have more flexibility in offering clinical services in response to the current pandemic. Physicians will be able to furnish care for patients across state lines using telehealth and online communication to coordinate with nurse practitioners at rural clinics without having to be physically present. The agency also is making it possible for nurse practitioners to perform some medical exams on Medicare patients at skilled nursing facilities. Other providers, such as occupational therapists will be allowed to offer as much care as their licenses will allow. An example is that these clinicians will be able to perform initial assessments on certain homebound patients, allowing these services to begin earlier.

U.S. Constitution's Fourth Amendment And COVID-19 Digital Surveillance And Privacy

South Korea and Israel are examples of nations that have employed digital surveillance measures using cell phone location data, among other means, in an effort to track and limit the transmission of COVID-19. In the U.S., the federal government and some state and local governments reportedly have begun to gather geolocation data voluntarily provided by the mobile advertising industry to assess how individuals are continuing to move and congregate during the pandemic. This development has led to speculation about the potential in this country for more invasive, obligatory data collection and tracking practices emulating the measures taken in some other parts of the world. A legal sidebar issued by the *Congressional Research Service (CRS)* on April 16, 2020 provides an overview of the Constitution's Fourth Amendment, along with certain relevant doctrines and exceptions before discussing how the relevant legal frameworks could apply to coronavirus-related government surveillance.

The Fourth Amendment protects against "unreasonable searches and seizures" and provides that "no Warrants shall issue, but upon probable cause," among other things. The Supreme Court has recognized that the fundamental purpose of the Amendment "is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials." The question of whether official action has run afoul of the Amendment's dictates entails consideration of at least two distinct analytical components: (1) the existence of a search or seizure, and (2) the reasonableness of that search or seizure. Not only does the federal government play a central role in the provision and payment of health services, it has a duty to protect the inhabitants of the U.S. when their lives are threatened. What may need to be resolved at some future juncture is how extensive such protective efforts can be while contining to adhere to provisions of the U.S Constitution.

DEVELOPMENTS IN HIGHER EDUCATION

ASAHP conducted a webinar on April 17, 2020 that attracted 245 participants from 96 institutions. Discussions occurred on several topics that included the following:

- How are academic programs and clinical partnerships meeting mutual needs?
- What disciplines are allowed to remain on service and which are prohibited?
- What criteria will determine when settings will again take students?

The Winter 2019 issue of the *Journal of Allied Health* featured the article entitled, "Clinical Education in Transition: Recommendations and Strategies," which offered five recommendations that stem from a review of literature pertaining to current changes in the healthcare sector and higher education that challenge the availability of allied health clinical education. The paper can be obtained at http://www.asahp.org/journal-of-allied-health.

Statement Of Principles On Acceptance Of Academic Credit

The American Council on Education and other major educational organizations joined together to write about one particular issue that they all will face: how to manage and evaluate academic credit and assess student transcripts that have been affected by the current crisis and, indeed, by their substantial efforts to provide flexibility to students and faculty. Institutions already are deciding how best to manage credit within their own educational contexts and that is wholly appropriate. One size does not fit all, however, and that is not and should not be an aspiration. Similarly, there is no single approach or one system that should apply to how institutions evaluate and accept credits when students seek to transfer between institutions, seek approval for nontraditional coursework, or apply to graduate and professional programs. Nevertheless, there is a set of common principles that institutions should keep in mind when developing policies regarding credit acceptance. They are:

(1) Institutional policies and the evaluation of grades and credit should recognize the extraordinary burden placed on students during this time. (2) Institutional policies and practices should recognize that traditional inequities are exacerbated in the current crisis and that "equal" treatment of students' transcripts is unlikely to result in "equitable" outcomes. (3) Institutional policies and practices should, therefore, be as holistic as possible, taking into account the range of situational and behavioral circumstances in which students find themselves. (4) Institutional policies should, wherever practicable, provide flexibility in the timely reporting of grades and other markers of achievement, understanding that the aforementioned dislocations also are present for faculty, staff, and others. (5) Institutional policies should aim for complete transparency. (6) This transparency should extend inside as well as outside the institution. (7) Institutional decision-making regarding individual students should be swift and definitive. Finally, (8) Institutions should clarify their policies as soon as possible.

Should Regional Accreditation Go National?

The publication *Inside Accreditation* by the Council for Higher Education Accreditation (CHEA) features an article by **Judith Eaton**, that organization's President, on the issue of whether regional accreditation should go national. During negotiated rulemaking in 2019, the U.S. Department of Education indicated that regional accrediting organizations could now be free to accredit anywhere in the United States to achieve the goal of opening up the institutional accreditation system to competition. Reasons she identified for having these organizations remain regional include: composition, culture, additional workloads, and it could lead to institutions embarking on "accreditation shopping" or a "race to the bottom." Reasons for going national include: becoming national is acknowledgment of reality since they all operate outside their regions; increased growth opportunities; further affirming the commitment to creativity and innovation in higher education; and competition may not be negative and could emerge as valuable to strengthening accreditation.

QUICK STAT (SHORT, TIMELY, AND TOPICAL)

Lifetime Prevalence Of Self-Reported Work-Related Health Problems Among U.S. Workers
The April 3, 2020 issue of the CDC's *Morbidity and Mortality Weekly Report* indicates that approximately 2.8 million nonfatal workplace illnesses and injuries were reported in the United States in 2018. Current surveillance methods might underestimate the prevalence of occupational injuries and illnesses. One way to obtain more information on occupational morbidity is to assess workers' perceptions about whether they have ever experienced health problems related to work. Using data from the 2018 version of the *SummerStyles survey*, overall, 35.1% of employed respondents had ever experienced a work-related health problem. The most commonly reported work-related problem was back pain (19.4%). Among industries, construction (48.6%) had the highest prevalence of any work-related health problems. A conclusion is that workplace injury and illness prevention programs are needed to reduce the prevalence of work-related health problems, especially in higher-risk industries.

National Health Expenditure Projections, 2019-2028
According to an article in the April 2020 issue of the journal *Health Affairs*, national health expenditures are projected to grow at an average annual rate of 5.4% for 2019–28 and to represent 19.7% of gross domestic product by the end of the period. Meanwhile, growth in the gross domestic product during the projection period is expected to average 4.3%. Price growth for medical goods and services is projected to accelerate, averaging 2.4% per year for 2019–28, which partly reflects faster expected growth in health-sector wages. Among all major payers, Medicare is expected to experience the fastest spending growth (7.6% per year), largely as a result of having the highest projected enrollment growth, reflecting the continued shift of the baby-boom generation out of private health insurance and into Medicare. The share of health care spending financed by federal, state, and local governments is expected to increase by two percentage points during 2019–28, reaching 47% in 2028.

HEALTH TECHNOLOGY CORNER

Skin-Interfaced Biosensors For Wireless Physiological Monitoring In Neonatal And Pediatric Intensive-Care Units
Standard clinical care in neonatal and pediatric intensive-care units (NICUs and PICUs, respectively) involves continuous monitoring of vital signs with hard-wired devices that adhere to the skin and, in certain instances, can involve catheter-based pressure sensors inserted into the arteries. These systems entail risks of causing iatrogenic skin injuries, complicating clinical care and impeding skin-to-skin contact between parent and child. Described in the March 2020 issue of the journal *Nature Medicine* is a wireless, non-invasive technology that not only offers measurement equivalency to existing clinical standards for heart rate, respiration rate, temperature, and blood oxygenation, but also provides a range of important additional features, as supported by data from pilot clinical studies in both the NICU and PICU. These new modalities include tracking movements and body orientation, quantifying the physiological benefits of skin-to-skin care and capturing acoustic signatures of cardiac activity.

Bacterial Colonization Reprograms The Neonatal Gut Metabolome
A team of researchers at Children's Hospital of Philadelphia has characterized how the gut microbiome develops in the first hours of infancy, providing a critical baseline for how changes in this environment can have an impact on health and disease later in life. The findings were published on April 13, 2020 online by the journal *Nature Microbiology*. The gut in children eventually will hold hundreds of different species of bacteria, but at birth, there might only be 10 or fewer species. The investigation aimed to understand why those particular bacteria are the first to emerge and what they are doing in those first hours of life. The researchers evaluated the gut microbiome, proteome, and metabolome in 88 African-American newborns using faecal samples collected in the first few days of life. Detailed analysis of the three most common species, *Escherichia coli*, *Enterococcus faecalis,* and *Bacteroides vulgatus*, did not suggest a genomic signature for neonatal gut colonization. Evidence is provided that fermentation of amino acids provides a mechanism for the initial growth of *E. coli*, the most common early colonizer, under anaerobic conditions.

AVAILABLE RESOURCES ACCESSIBLE ELECTRONICALLY

Brain Health Across The Lifespan

Brain health affects Americans across all ages, genders, races, and ethnicities. Enriching the body of scientific knowledge around brain health and cognitive ability has the potential to improve quality of life and longevity for many millions of Americans and their families. To explore issues related to brain health throughout the life span, from birth through old age, a public workshop entitled *Brain Health Across the Life Span* was convened on September 24-25, 2019, by the Board on Population Health and Public Health Practice in the Health and Medicine Division of the National Academies. The Centers for Disease Control and Prevention estimate that as many as five million Americans were living with Alzheimer's disease in 2014. That same year, more than 800,000 children were treated for concussion or traumatic brain injuries in U.S. emergency departments. Each year, more than 795,000 individuals in the United States have a stroke. Developing more effective treatment strategies for brain injuries and illnesses is essential, but brain health is not focused exclusively on disease, disorders, and vulnerability. It is equally important to better understand the ways human brains grow, learn, adapt, and heal. Addressing all these domains to optimize brain health will require consideration about how to define brain health and resilience and about how to identify key elements to measure those concepts. A summary of the workshop can be obtained at https://www.nap.edu/read/25703/chapter/1.

Leading In A Time Of Crisis: Corporate America And COVID-19

New research from the Global Strategy Group reveals the opportunities and risks facing corporate leaders as they respond to COVID-19. While the economics of the pandemic will come into view in the months and years to come, right now, individuals in the U.S. are focused squarely on the safety, health, and well-being of their family, friends, communities, and the nation at large and they believe that corporations must do likewise. CEOs must counter the existing perception that they are focused most on the bottom line and work to support their employees and beyond by providing important benefits like paid leave; producing needed equipment and materials; and working in close cooperation with the government to respond to the pandemic. Companies are viewed as needing to tell the story of what they are doing and who they are helping with the stimulus dollars they receive to overcome negative perceptions. Eventually, they will be defined by what they do now. The reputational costs could be high. Research results can be obtained at https://www.globalstrategygroup.com/wp-content/uploads/2020/04/Leading_in_time_of_crisis_Corporate_America_COVID19_FINAL.pdf.

Confronting Rural America's Health Care Crisis

The rapid spread of COVID-19 has awakened the nation to the dire access problems that have long plagued rural communities and has underscored the need for immediate change. The current pandemic has highlighted the fragility of the rural health care system, in which hundreds of hospitals have already closed or are in imminent risk of folding. The Bipartisan Policy Center's Rural Health Task Force has developed recommendations over the last year to stabilize and improve the urgent problems challenging rural communities and to do it permanently. The aim was to produce policy recommendations to stabilize and transform rural health infrastructure; promote the uptake of value-based and virtual care; and ensure access to local providers. These recommendations are contained in an April 2020 report. In addition to addressing telehealth, the task force recommendations include short-term stabilization for struggling rural hospitals and multiple pathways to transform into models that are customized to meet the needs of individual communities. The report can be obtained at https://bipartisanpolicy.org/wp-content/uploads/2020/04/WEB_BPC_Rural-Health-Care-Report.pdf.

RACIAL DISPARITIES IN AUTOMATED SPEECH RECOGNITION SYSTEMS

Automated speech recognition (ASR) systems, which use sophisticated machine-learning algorithms to convert spoken language to text, have become increasingly widespread, powering popular virtual assistants, facilitating automated closed captioning, and enabling digital dictation platforms for health care. This technology is employed in myriad applications used by millions of individuals worldwide. Some examples include virtual assistants built into mobile devices, home appliances, and in-car systems; digital dictation for completing medical records; automatic translation; automated subtitling for video content; and hands-free computing. Over the last several years, the quality of these systems has dramatically improved, due both to advances in deep learning and to the collection of large-scale datasets used to train the systems. Some concern exists, however, that these tools do not work equally well for all subgroups of the population.

As described in an article published in the April 7, 2020 issue of the journal *Proceedings of the National Academy of Sciences of the United States of America*, researchers examined the ability of five state-of-the -art ASR systems developed by Amazon, Apple, Google, IBM, and Microsoft to transcribe structured interviews conducted with 42 white speakers and 73 black speakers. This corpus in total spans five U.S. cities and consists of 19.8 hours of audio matched on the age and gender of the speaker. The study indicates that all five ASR systems exhibited substantial racial disparities, with an average word error rate (WER) of 0.35 for black speakers compared with 0.19 for white speakers. The investigators trace these disparities to the underlying acoustic models used by the ASR systems as the race gap was equally large on a subset of identical phrases spoken by black and white individuals in the corpus. They conclude by proposing strategies, such as using more diverse training datasets that include African American Vernacular English, to reduce these performance differences and ensure speech recognition technology is inclusive.

ESTABLISHING HIGH PERFORMING TEAMS: HEALTH CARE LESSONS

hy is it that teams following the same best practices can achieve different results? According to a study published on February 25, 2020 in the *MIT Sloan Management* Review, clinics took three prototypical approaches to establishing team-based care. An aim of this research was to obtain an understanding of why some teams succeed while others struggle. Deploying effective team-based care is recognized as an essential component of three organizational priorities in health care: high-quality, patient-centered care; continuous quality improvement; and enhanced clinical work satisfaction. These objectives broadly align with the three recognized objectives of teams more generally: achieving the team's shared goal, improving as a team, and growth of individual members. In this investigation, among clinics taking approaches to establishing team-based care, some groups pursued functional change only, with a focus on continuous improvement skills. Others pursued cultural change only, focusing on shifting team members' roles and relationships. Another set of groups blended the two, pursuing both functional and cultural change processes simultaneously.

Functional Change Processes concerned practical, operational aspects of teaming. Clinic staff were trained on continuous improvement skills**.** Some clinics strategically integrated continuous improvement into everyday work, encouraging staff to identify process improvement opportunities and test new team approaches. **Cultural Change Processes** indicate that in order to implement new continuous improvement practices, it will require changing old ideas about personnel roles; reexamining who had authority to take initiative and lead innovation; and how "lower status" team members' contributions were invited and valued by traditionally "higher status" colleagues. The results show that while both change processes were individually important, they were most effective when mobilized in tandem. The recursive, mutually reinforcing relationship between functional and cultural change processes was key to the effectiveness (or its lack) of team-based care.