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Recent Faculty Appointments

Adjunct Fellows
Rachele Hendricks-Sturrup, DHSc, MSc, MA, Research Fellow, Harvard Medical School and Harvard Pilgrim Health Care Institute

Kudos

Peter Lindenauer, MD, MSc, gave the keynote address at the 2019 University of Vermont College of Medicine Hospital Medicine course

Elizabeth Schoenfeld, MD, MS, gave Grand Rounds at the University of Alabama-Birmingham on Shared Decision-Making

Studying the effects of Shared Decision-Making in the Emergency Department

We interviewed Elizabeth Schoenfeld, MD, MS, Assistant Professor of Emergency Medicine at UMMS-Baystate and Fellow in the Institute for Healthcare Delivery and Population Science (IH DPS), about her newly awarded K08 grant from the Agency for Healthcare Research and Quality. This five-year Career Development award enables investigators to both carry out a multi-aim research project and spend time developing their research skills under the supervision of a team of mentors.

What are the objectives of your research project?

I am studying the use of Shared Decision-Making in the Emergency Department. Specifically, I am looking at how physicians can use Shared Decision-Making with patients who may have a kidney stone. About 2 million people in the US go to the ED every year for kidney stone pain. Kidney stones can be very scary because the pain starts abruptly and is very severe. The problem with our current management of kidney stones is that almost all patients get a CT scan, but the majority of patients do not benefit from that scan nor do they have a change in their management based on that CT scan. These CT scans expose people to radiation and increase the cost and length of stay of their visit. Although CT scan and ultrasound are acceptable options for the diagnosis of kidney stones, physicians often choose CT scan without discussing the options with the patient, despite the fact that there are safety benefits to ultrasound. Our research shows that patients want to be involved in this decision, and that when they are fully informed, they are more likely to understand the risks of CT scan. With support from the grant, we will carry out a pilot randomized trial involving 100 patients with suspected kidney stones in order to test whether we can increase Shared Decision-Making, improve knowledge, and decrease radiation exposure.

How have your other studies contributed to advancing Shared Decision-Making in the ED?

One of the big questions about Shared Decision-Making is whether it will increase or decrease physicians’ liability. For example, if a physician and a patient decided together to use a “wait and see” approach as opposed to getting a CT and there is a missed or delayed diagnosis, what are the implications for liability? We took this question to 800 participants via a vignette-based survey. Participants received one of three scenarios, and each scenario had an ED visit for belly pain and no CT was obtained. At the end of each scenario the participant learns that there was a delayed diagnosis because of not obtaining the CT scan. The three scenarios are each different in the way the decision is made. In the first scenario, the doctor tells the patient that they are not getting a CT scan because they do not think the patient has appendicitis. In the second scenario, the doctor and patient engage in Shared Decision-Making and together decide not to get the CT scan. In the third scenario the physician and patient...
Upcoming events

Weekly seminar, 12-1pm, MM5

Mar 6: Katherine Dixon-Gordon, PhD, MA
Diagnosis and treatment of patients with mental health and substance use disorders in emergency contexts: a pilot study

Mar 13: no meeting

Mar 20: Erica Spatz, MD, MHS
TBD

Mar 27: no meeting

April 3: Theodore ‘Jack’ Iwashyna, MD, PhD
Critical care

April 10: Mihaela Stefan, MD, PhD
Interprofessional education for NIV

April 17: Joshua Wherry, MIS & Thomas Sotolotto
Introduction to the data warehouse

April 24: Richard Greene, MD
Transgender health

For a full listing of events, see here

engage in an extensive conversation about the risks and benefits of a CT scan, and again decide not to get one at this time. What we found was that patients exposed to Shared Decision-Making were 80% less likely to consider contacting a lawyer than the patients who did not have Shared Decision-Making. Shared Decision-Making should not be used as a tool to decrease one’s liability, but doctors should be assured that it probably does not increase their liability when used.

What does this research mean for patients cared for at Baystate?
Shared Decision-Making is a patient-centered method of communication that encourages patients to weigh in on medical decisions. Although some of our research focuses on using Shared Decision-Making for patients with kidney stones, the hope is to expand physicians’ use of Shared Decision-Making and facilitate patient engagement across different clinical sites and scenarios.

| Publication Spotlight: |
| Association of Antibiotic Treatment With Outcomes in Patients Hospitalized for an Asthma Exacerbation Treated With Systemic Corticosteroids |


We interviewed Mihaela Stefan MD PhD, Associate Professor of Medicine at UMMS-B and Associate Director of the IHDPS about her recent paper, which appeared in JAMA Internal Medicine.

Mihaela, what was the motivation behind this study?
Asthma is a common chronic condition which results in 1.7 million emergency department visits and 440,000 hospitalizations each year. The mainstays of treatment for asthma are systemic corticosteroids and beta-agonist bronchodilators; antibiotics are not recommended by the guidelines. However, inappropriate use of antibiotics in asthma exacerbation has been documented in the United States and elsewhere. In a prior study, we found that almost half of patients hospitalized with an asthma exacerbation received antibiotics. The evidence supporting the lack of benefit of antibiotics in asthma was limited to 6 trials, which only included a total of 681 adults and children, and most trials assessed symptoms or lung function, but not length of stay, need for mechanical ventilation, readmission, or death. This lack of data motivated us to compare the outcomes of patients treated with antibiotics in addition to systemic corticosteroids and bronchodilators to those treated with only corticosteroids and bronchodilators, in a large representative sample of patients hospitalized with an asthma exacerbation.

What were the main findings?
In this observational study of almost 20,000 patients from 500 hospitals, we found that patients treated with antibiotics did not have better outcomes; instead, they had significantly longer hospital stays (median, 4 vs 3), higher cost ($4776 vs $3641) and 60% greater risk for antibiotic-related diarrhea (OR: 1.6; 95% CI, 1.2-1.9). The rate of treatment failure (which included initiation of mechanical ventilation, transfer to the ICU, in-hospital death, or 30-day readmission) was similar among both groups. Our results remained consistent in several analyses which controlled for potential confounders including propensity-score matched analysis, multivariable adjustment, and instrumental variable analyses.

Our findings are novel and this is the largest study assessing the association of antibiotics with outcomes in patients hospitalized with asthma exacerbation. Our results support findings from several small RCTs that have failed to demonstrate that antibiotics are beneficial in patients with asthma exacerbations treated with systemic corticosteroids and bronchodilators. The results also support the current guidelines recommendations.
IHDPS in the News

Drs. Stefan, Shieh, Spitzer, Pekow, and Lindenauer’s recent article about antibiotic treatment in asthma exacerbations received significant media attention. A wide variety of sources provided coverage of the article, including ACP Hospitalist Weekly, Medwire News, NEJM Journal Watch, Healio, MDLinx, MedPage Today, MD Magazine, and Medscape.

Drs. Schoenfeld, Lindenauer, and Mazor’s recent article about shared decision making and lawsuits also received significant media attention. A wide variety of sources provided coverage of the article, including NEJM Journal Watch, HealthLeaders, MedPage Today, and ED Legal Letter.

How do the results apply to our patients at Baystate, and where do we go from here?

The high rates of antibiotic treatment and lack of benefit, together with the possibility of harm seen in this analysis, suggest that there are important opportunities in every healthcare system to improve antimicrobial stewardship and deliver high value care to this population. Thinking at the population-level, roughly 176,000 patients hospitalized with asthma receive antibiotics without need. This increases the risk for antibiotic resistance and antibiotic-related side effects. Clinicians should treat patients with asthma exacerbation with bronchodilators and steroids and should not deviate from the guidelines because of severity of presentation, comorbidities, or patients asking for antibiotics. Standard of care for asthma remains steroids and bronchodilators.

We just completed a qualitative study and interviewed clinicians to try to understand why they prescribe antibiotics. Our next step is to design, pilot, and implement strategies to reduce antibiotic prescribing to this population.

Population Health Snapshot: Social Determinants of Health in the BeHealthy Partnership Medicaid ACO

Medicaid Accountable Care Organizations (ACOs) are a new mechanism of health care reform to improve coordination and quality of care while reducing healthcare costs. One strategy of the Medicaid ACOs is to require that all patients are screened for social determinants of health (SDOH) and to prioritize innovative strategies to address social/environmental needs. SDoH are upstream of individuals and their behavior. Historical injustices and systematic structural inequities are associated with health disparities. Therefore, identifying adverse social/environmental factors can target efforts to address the “causes of the causes”\(^1\) of disease. A growing body of research assessing the impact of ACOs’ efforts to address SDoH to improve population health is emerging\(^3\)–\(^7\).

The Medicaid BeHealthy Partnership (BHP) ACO—including Health New England, Baystate’s four community health centers, and Caring Health Center—developed a 38-item Care Needs Screening (CNS) tool to assess demographics, SDoH, chronic disease, behavioral health, substance use disorder, and other key social and health indicators among all BHP ACO Medicaid patients. Preliminary demographic and SDoH data (N=11,700) indicate 60% of respondents were female. Respondents included 61% Latino, 14% African-American, 10% Asian, and 10% white. Nearly half (47%) reported a primary language other than English, including Spanish (32%) and other languages (15%).
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Over half of patients self-reported their health as fair (33%) or poor (22%). Nearly a third of patients reported their ability to read as “okay” (17%) or “poor” (13%). Approximately a quarter of patients reported being blind or having serious difficulty with vision (23%), and nearly 10% report being deaf or having serious difficulty hearing. Only a third of patients (35%) reported not needing help with daily activities. One-fifth of patients reported having less than a high school education (21%), having some high school (21%), or having completed high school (20%) and 9% reported some college.

Nearly one in ten patients reported having no housing (9%) and another 5% reported being worried about losing their housing—both recognized as forms of homelessness. Other housing-related issues reported include bugs (3.5%), mold and water leaks (5%), and having utilities shut off in the past 12 months (13%). Large household size of 4-5 (30%) and 6 or more (14%) was also reported.

Lack of transportation interfered with medical care among 17% of patients and interfered with non-medical needs among another 8%. In the last 12 months, 27% of patients reported often or sometimes worrying food would run out before having money to buy more.

As part of on-going process evaluation, the BHP ACO has learned from its community health workers (CHWs), Patient-Family Advisory Council (PFAC), and other front-line and care team members that patients frequently “choose not to reply” to certain questions based on fear that reporting information, such as lacking food, could have a negative impact on their family or household. Based on this feedback, efforts for increased patient engagement and education about the role of SDoH screening in healthcare are a priority. The BHP ACO has developed a revised SDoH screening tool containing only 5 items, which will allow regular assessment of time-varying SDoH-related needs.

Preliminary demographic and SDoH data from the BHP ACO illustrate an ethnically diverse patient population with high rates of low self-reported health status and a high prevalence of adverse SDoH including homelessness, food insecurity and lack of transportation. Building on community strengths and assets, the BHP ACO has prioritized hiring, training, and integration of CHWs into each health center. CHWs are members of the community, share in the cultural and linguistic capital of the patient population, and work closely as a liaison between patients their care teams, providers, and community service organizations to address social/environmental barriers and link patients with resources. Efforts to address “upstream” factors of housing, food, and transportation insecurity are being addressed in several ways. BHP ACO grants have been obtained to build cross-sectoral systems, like a Medical/Legal Partnership to address housing insecurity, and to test collaborative interventions, like home remediation for patients with asthma. A dedicated SDoH Committee, a Population Health Research Team, and a Patient-Family Advisory Council are a few of the strategies to address adverse SDoH among BHP ACO patients. Additional work by these and other BHP ACO efforts are critical to accurately describe the distribution of SDoH in the population, to
identify how SDoH are related to health and to demonstrate the role of the ACO in mitigating these factors. Each will help to inform healthcare reform and policy.

References


Recent IHDPS Publications: Dec-Jan
