



DHDPS News

Department of Healthcare Delivery & Population Sciences

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DHDPS in the News

DHDPS Faculty Dr. Lauren Westafer was interviewed by [WBUR](#), [WSHU Public Radio](#), and [NEPM](#) for her [recent publication](#) studying the experiences of transgender and nonbinary physicians.

DHDPS Faculty Dr. Bill Soares was interviewed for a recent [WBUR](#) article about the increased presence of xylazine, an animal tranquilizer, in both cocaine and fentanyl.

Increasing Access to Cardiopulmonary Rehabilitation Among Rural Elders

By Dr. Liana Fraenkel, MD, MPH

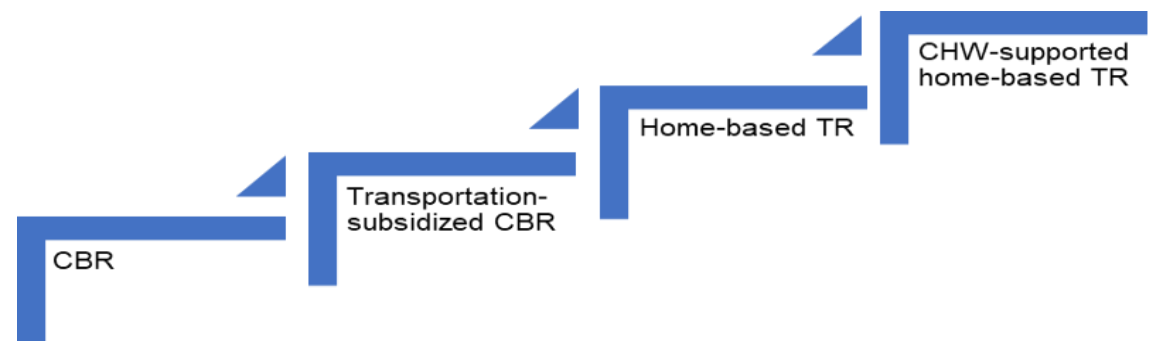


Heart and lung disease are the first and third leading causes of mortality in the US, respectively. Cardiac rehabilitation (CR) decreases mortality and both CR and pulmonary rehabilitation (PR) improve function, quality of life, and decrease readmission rates. Despite their proven efficacy, both programs are grossly underutilized, with fewer than 20% of eligible persons participating. Patients living in rural communities have even lower rates of participation.

Home-based CR and PR has been developed with the goal of improving uptake, and low to moderate strength evidence indicates that these programs are as effective as center-based programs. Further work is needed, however, to examine how best to increase utilization of CR and PR in rural communities. While several studies have examined approaches to improve referral and enrollment, there is little evidence on how to optimize adherence to CR, and no evidence how to optimize adherence to PR. Our long-term objective is to provide hospital systems with high quality evidence on how best to allocate resources to optimize uptake of CR and PR for the increasing number of older frail adults living in rural communities.

The objective of our R34 proposal is to test the feasibility of performing a full-scale randomized controlled trial to compare the effectiveness and value (cost-effectiveness) of a SC model versus treatment as usual (TAU) in older frail adults living in rural counties. Stepped care (SC) is a model in which patients have access to a hierarchy of interventions, from the least to the most intensive. Patients begin with the least resource intensive treatment. Those failing to respond advance to more intensive treatment options; thus, SC enables a patient-centered approach by matching intensity of treatment with individual patient needs. This model is particularly appealing to rural hospital systems with limited resources, because it prevents over-servicing for those with lower levels of need and under-servicing for people with higher levels of clinical need.

In this R34, TAU refers to center-based rehabilitation (CBR). The SC model (see Figure below) includes initial enrollment in CBR followed by possible step up to three interventions based on prespecified non-response criteria: 1) Transportation-subsidized



CBR, 2) Home-based telerehabilitation (TR), and 3) Community health worker-(CHW) supported home-based TR.

To the best of our knowledge, this will be the first trial to examine the potential value of SC to improve utilization of CR and PR.



School Based Intervention to Improve Care for Children with Diabetes



We interviewed Ksenia Tonyushkina MD, Associate Professor of Pediatrics, UMass Chan-Baystate about her [recent publication](#) in *Health Behavior and Policy Review*.

Ksenia, can you describe some of the challenges of achieving optimal diabetes care in a pediatric population and why you sought to partner with school nurses?

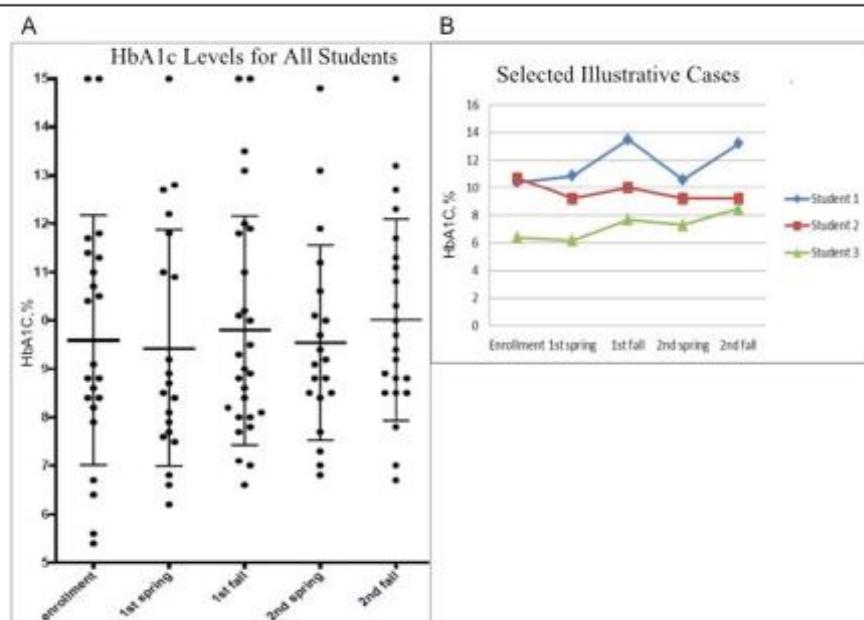
Despite recent dramatic innovations in diabetes technology, pediatric diabetes care remains highly operator dependent and the majority of children are not able to reach their goals for HbA1C <7%. Timely

frequent adjustments of insulin doses related to growth and puberty, on-going diabetes education, as well as engagement and motivation from the child and the family are the key to success. Unfortunately, less than 50% of families in our clinic adhere to quarterly visit recommendations, recognize signs of uncontrolled diabetes and make insulin dose adjustments themselves or call for help. Our clinic has long-term established connections with the Springfield public school (SPS) nurses who have been our “eyes and ears” alerting our clinic on diabetes management troubles and providing extra support for children struggling with care.

Can you tell us about your study?

The aim of this study was to gain insight into the feasibility of monthly insulin dose adjustments facilitated by school nurses as an enhancement to routine diabetes care for school-aged children with T1DM residing in Springfield. This was a 2-part mixed-methods pilot study. For part 1, school nurses were trained to download glucose meters and insulin pumps. Glycemic data was reviewed by our clinic team who then made recommendations for insulin adjustment. Care plans were communicated back to school nurses who discussed them with families. Part 2 was a qualitative study to seek feedback from school and clinic nurses on the program implementation. We performed 2 focus groups with participating school and clinic nurses to identify opportunities and challenges of the intervention and brainstorm possible solutions. Iterative improvements were made throughout the study to address issues of feasibility as they were identified.

HbA1C Changes during the School Year



Note.

HbA1C levels decreased at the end of the school year and increased at the end of the summer contrary to the previously established seasonal trends.^{20,21}

A: HbA1C levels for all students

B: HbA1C levels for selected illustrative patients (N = 3)

Kudos

Dr. Quinn Pack was recently awarded an R01 grant from NIA focused on improving cardiac rehab outcomes in older adults.

Drs. Lindenauer and Pack are Co-Investigators on a recently funded R01, led by Dr. Michael Rothberg, conducting a randomized trial of assisted ambulation for elderly patients in the hospital.

What were the main findings?

We enrolled 30 out of 59 students with T1DM in the SPS district from 19 schools. The median HbA1c on enrollment was 8.8%. The rate of glucose meter/insulin pump downloads was 27% over 18 mos. At least one-third of recommendations on insulin changes, particularly in the first year of the study, were never implemented. School nurses reported that families were lacking skills to change pump settings. An amendment was placed and school nurses started to make pump changes themselves. Glycemic records also indicated that about one-third of our students were taking most of their total daily insulin dose at school guided by school nurses and missing insulin in the afternoon/evening. This led to several new recommendations for diabetes care at school – to administer long-acting insulin at school, to switch to degludec insulin with longer half-life, and to use intermediate acting insulin (NPH) at lunch or at dismissal to substitute for after school care deficiencies. Most notably, there was a trend in HbA1c levels to decrease during the school year and increase over the summer vacation supported by selective illustrative cases (Figure above). Qualitative analysis indicated that feasibility obstacles were grounded in lack of time for nurses, high turnover of school nurses and difficulties in overcoming diabetes fatigue in patients and their families. We identified better communication between the school and clinic nurses and ongoing diabetes education for school nurses as strengths of the pilot.

What are the implications for our patients?

Our study showed that school nurses could be instrumental in caring for children with T1DM from low - income communities. Due to challenges identified, we proposed this routine intervention could be reserved for children with uncontrolled BG levels or those struggling with adherence to care plans and particularly in need of intensive diabetes care and supervision as opposed to all students with T1DM. With further increase in the use of diabetes technology (insulin pumps and continuous glucose monitoring) and development of automated uploading protocols, the role of a school nurse, as a member of the diabetes care team will need to be expanded. Future interventions should focus on connecting with families to build mutual trust between students with chronic conditions, their parents, school nurses, and clinic team to facilitate chronic disease management. Supporting racial/cultural diversity of clinic and school care teams to reflect the population demographics may further strengthen connection with families and community.

In addition, I would like to add that diabetes care can be very stressful - not only for patients and families - but for members of the care teams. This was brought up during the focus groups and on-going interactions between school and clinic nurses. Together we brainstormed the options to support each other and requested coaching on communication strategies as well as help recognizing behavioral problems and addressing social determinants of health to be able to be better caregivers for our community.

Population Health Spotlight: Current and Future Strategies to Close Gaps in Care

By Addie Seiler, MD, Baystate's Chief Clinical Integration Officer

System level population health management requires fundamentals for clinical integration across care silos and patient populations. Foundations of collaborative leadership, aligned incentives, clinical improvement programs, and infrastructure related to technology and operations must be aligned if we are going to move the needle on improving the health and wellness of our patients.

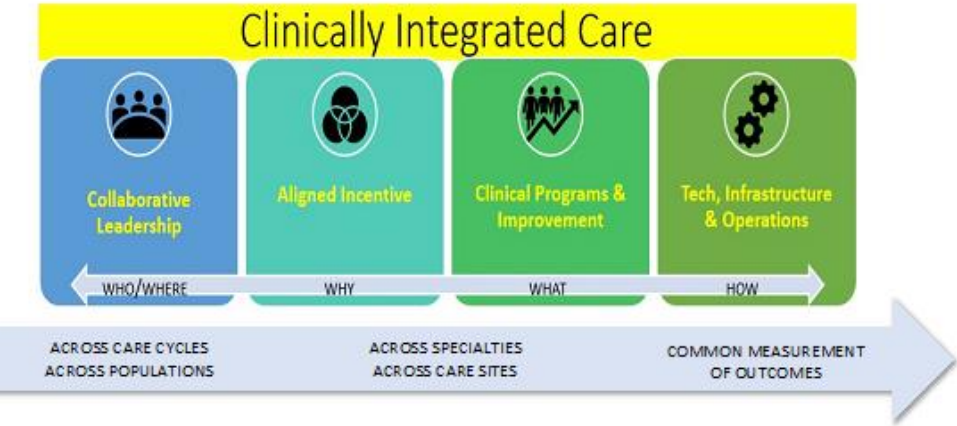
The successful implementation of clinical quality programs and improvement, the core of population health, requires significant attention to processes, workflows, and the ability to measure if the actions we are taking are working. To date at BH, we have achieved great things with limited population health tools. To reach the next level of performance we require improved technology and tools that make it easier to “do the right thing” and track if our efforts are effective.



Need help with your research?

We are available for consultation with an appointment – in person, through video conference, or phone.

For more information, see [here](#)



Currently we have enhanced “dynamic worklists” available in Cerner. These allow our clinical teams to view real-time lists of patients with care gaps such as out of control blood pressure or in need of screening mammography. The power of actionable, real-time data is put into the hands of provider teams within their Cerner workflows. Now they can efficiently do what they care most about, engaging and caring for their patients. This is a substantial workflow enhancement compared with previous static and quickly outdated excel-based worklists accessible only outside of clinicians’ EMR workflows.

MAMMOGRAPHY

Journey objective
Drive women with a breast cancer screening gap in care to make an appointment to get a mammogram.

Suggested HealtheCRM data

Demographics	Preferred name, pronouns, contact preference, etc.
Appointment	Historical and upcoming for inclusion/exclusion/escalation (if no show)
Comprehensive Adult Wellness Registry	Breast cancer screening measure

Targeted messaging

- Importance of a mammogram
- Importance of a self-exam
- Talk to your PCP if you have a family history
- How to prepare for a mammogram
- What to search for when picking a location to have a mammogram

Baystate Health
ADVANCING CARE. ENHANCING LIVES.

1 in 8
will be diagnosed

Take control of your odds by detecting breast cancer early

Mammograms are the most effective form of early detection, and it's not easier than ever to get one. Baystate Health offers several locations nearby for your convenience.

Schedule now

Schedule today and let's protect your health, together.

Questions? Contact us at (413) 794-2222

In the future, care gap closure processes will be enhanced through the ongoing HealtheIntent and Cerner IMPACT work. Specifically, this includes technology for more reliable and provider-friendly workflows to capture our patients’ chronic illnesses (critical for chronic disease management and accurate risk adjustment), as well as more effective methods for patient outreach to partner around their health and wellness gaps. Care gaps will be closed using more contemporary CRM (customer relationship management) technology that is the standard in most other consumer facing industries. The technology will help us touch and interact with our current and potential patients in a more effective way. Effective, in this case, meaning a method that is more patient-centered, standardized, integrated, scalable, and measurable. We will not be restricted to relying on the limited tools of phone calls and mass mailings to reach and engage our patients.

This is just the start. Enhancements will be necessary on our population health journey with a purpose of enabling not only our clinical teams, but also our patients to meet our shared health and wellness goals in an efficient, effective, and sustainable manner.

Contact us

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[www.baystatehealth.org/
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Welcome to Dr. Eddie Núñez!



Eduardo (Eddie) Núñez, MD, MS is a Pulmonary and Critical Care physician at Baystate Health and Health Services Researcher in DHDPS. He attended undergrad at University of Florida (Go Gators!), and completed medical school at the University of Pittsburgh in 2015. Since then, Eddie has been in New England and completed Internal Medicine residency at Brown University and just finished Pulmonary and Critical Care Medicine Fellowship at Boston University. Eddie's research interests include addressing disparities in lung cancer screening to improve mortality from lung cancer overall, and among underserved populations. He also has interests in improving communication with patients through shared decision-making in lung cancer screening and in end-of-life

conversations.

In his spare time, Eddie enjoys spending time with his dog Sable and his wife, Kelly Benabou, who is a Baystate Health gynecologist. Eddie was born in Puerto Rico and moved to the mainland US at the age of 9, spending his formative years in Miami where he still has many family members (feel free to message for recommendations for either). Additionally, he enjoys many outdoor activities including cycling, running, hiking, and skiing which is one of the many reasons he already loves Western Mass. Eddie has recently dabbled in triathlon and recently completed the Lake Placid Ironman triathlon (2.4 mile swim, 112 mile bike, 26.2 mile run). Feel free to reach out to him to do any outdoor activities!

DHDPS Publications: June - July

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Outcomes Research in Depression: Final Report [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2022 Jun. Report No.: 21(22)-EHC032. PMID: 35834618. [PubMed](#)

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