Cleveland Clinic

Center for Value-Based Care Research

Value Added

CVCR Newsletter 2020

December 2020

Welcome to this quarter's issue of Value Added.

The Center for Value-Based Care Research (CVCR) conducts novel research on interventions that improve value in healthcare. With a mission of making quality healthcare possible for all Americans by conducting research to identify value in healthcare, CVCR seeks to deliver the right care, at the right time, to the right patients, at lower costs.

In this issue, we report on two of our recent research initiatives:

Dr. Aphrodite Papadakis discusses her experience with Shared Medical Appointments (SMAs) and pre-diabetic patients. Her work with this population laid the groundwork for her publication entitled "Shared Medical Appointments and Pre-Diabetes: The Power of the Group," in which she offers a unique perspective on shared medical appointments in at-risk populations.

In ongoing work, CVCR is investigating whether patients are making informed decisions about anticoagulation. Dr. Kathryn Martinez will determine the connection, if any, between how informed patients are and how likely they are to choose anticoagulation therapy and type.

We hope you enjoy this quarter's updates!

Featured Publication

Variation in Patient Smoking Cessation Rates among Health Care Providers: An Observational Study.

Almaaitah S, Ciemins EL, Joshib V, Arora A, Meskowb C, Rothberg MB

CHEST

CVCR CELEBRATIONS

- **Drs. Pfoh, Rothberg, Martinez, Hohman and Giuliano** received a two-year grant from Cleveland Clinic's Healthcare Delivery & Implementation Science Center (HDISC) for their project, "Understanding the Impact of Messaging on Care Management and Provider Workload." This two-year project has two goals: 1) to describe changes in messaging content and volume over time and across primary care physicians, and 2) to describe patient factors associated with sending messages to physicians. The Healthcare Delivery and Implementation Science Center is led by Dr. Misra-Hebert. For further information on all six of the funded projects, read more at: http://portals.ccf.org/gme/EDN-Master/Articles/ArtMID/130963/ArticleID/33102/Six-caregiver-proposals-chosen-for-funding.

- **Dr. Elizabeth Pfoh** received a KL2 award from Case's Clinical and Translational Science Collaborative (CTSC) for her project entitled "Understanding the Impact of Integrated Treatment of Obesity and Depression on Healthy Aging." The award will provide her with 75% protected time for up to four years and allow her to take courses and interact with other promising investigators from the Cleveland Clinic, MetroHealth and University Hospitals.

- Congratulations to **Dr. Abhishek Deshpande** on being named a Fellow of the Infectious Disease Society of America. Fellowship in IDSA is the highest honor awarded in the field of infectious diseases. It is given to those who have achieved professional excellence and provided significant service to the profession.

- Resident **Dr. Eden Bernstein** received the Daniel E. Ford Award by Johns Hopkins Division of General Internal Medicine for his abstract entitled "Characterizing the Variation of Alcohol Cessation Pharmacotherapy in Primary Care." This award, one of seven Hopkins GIM Housestaff Research Awards, recognizes Dr. Bernstein's achievement in outcomes research.

Featured Study: Shared Medical Appointments and Pre-Diabetes: The Power of the Group

Aphrodite Papadakis, MD

As a practicing family physician for 18 years, I've observed that motivating change in patient behavior is a fundamental aspect of medicine. In primary care, preventing disease and promoting health is a main focus. I've always been interested in motivating patients to pursue a healthy lifestyle. Knowing that group support can provide the foundation for significant change, I became interested in shared medical appointments as a vehicle for promoting change in health behaviors.

In 2012, I started a shared medical group focusing on patients with pre-diabetes or insulin resistance. This population seemed ripe for intervention, as more than one in three adults have pre-diabetes, and nearly three-quarters of them will progress to diabetes. Our shared medical group consists of six to ten patients, my co-facilitator, and myself.[1,2] We start by reviewing each patient's lab work, evaluating his or her baseline health habits, and discussing ways to make meaningful change. The group members share in each other's successes and challenges, and offer encouragement. After focused time with each patient, we ask everyone to commit to one concrete goal for their next appointment. Patients return in one to six months, depending upon their needs and disease status. Over the years, many of our patients have successfully lost weight and improved or reversed their pre-diabetes.

[1] *Lifetime risk of developing impaired glucose metabolism and eventual progression from prediabetes to type 2 diabetes: a prospective cohort study*

Symen Ligthart, Thjis TW van Herpt, Maarten JG Leening, Maryam Kavousi, Albert Hofman, Bruno HC Stricker, Mandy van Hoek, Eric JG Sijbrands, Oscar H Franco, Abbas Dehghan

Lancet Diabetes Endocrinology

As there was no literature on SMAs in the pre-diabetic population, I was interested in exploring how shared medical care compared to traditional one-on-one care in a number of areas, including weight loss. I was offered a position in the CCF research fellowship that allowed me time and mentorship to take my interest from idea to implementation. We retrospectively compared patients who attended shared medical appointments to those who received one-on-one care. We used propensity score matching to control for baseline age, race, sex, body mass index (BMI), smoking status, statin use, metformin use, HbA1C and zip code (to estimate median income). The SMA patients lost more weight, and had greater reduction in HgbA1C and systolic blood pressure over a 24-month period. Our study limitations were the retrospective design, the single location of the study (one suburban family health center), and possibility that those who attend SMAs may be more motivated than patients attending individual appointments.

Despite the limitations, our results strongly suggest that the SMA is useful in diabetes prevention. The support provided within the group is likely an essential ingredient that cannot be reproduced in a traditional office-based visit.

I hope to implement pre-diabetes SMAs in other settings with different patient populations. Ideally, I will study this intervention prospectively and with patients of more varied socioeconomic and ethnic backgrounds. The positive effect on lifestyle changes coupled with the efficiency of seeing more patients in shorter time is a win-win for healthcare.

References:
1. Ligthart, Symen, Thijs TW van Herpt, Maarten JG Leening, Maryam Kavousi, Albert Hofman, et al. Lifetime risk of developing impaired glucose metabolism and eventual progression from pre diabetes to type 2 diabetes: a prospective cohort study. Lancet Diabetes Endocrinology 2016; 4:44-51.
2. CDC 2017 Diabetes Report Card Statistics.

This article will be available January, 2021 in *Annals of Family Medicine.*

Ongoing Work: Informed Decision Making for Anticoagulation

Kathryn Martinez, PhD

Why are you interested in understanding how physicians talk to atrial fibrillation patients about anticoagulation?

Atrial fibrillation patients face two important decisions regarding anticoagulation. First, they must decide if they want to take it at all. Second, if they do want to take it, they have to choose which type to take. While anticoagulation reduces risk of stroke in atrial fibrillation patients, it also increases the risk of problematic bleeding. Thus, patients need to be informed of the risks and benefits of taking an anticoagulant. Once a patient decides to take anticoagulation, they then face the decision of which type to take: warfarin or a direct oral anticoagulant (DOAC). These drug types are similarly effective at preventing stroke, but vary with respect to bleeding risk, convenience, and cost. However, we don't know if patients are being informed by their physicians about the risks and benefits of anticoagulation overall, or about the tradeoffs of DOACs versus warfarin. As a result, we don't know if patients are making informed decisions regarding anticoagulation.

What factors go into informed decision-making?

For our study, we examined seven core elements of informed decision-making. These were 1) whether patients were informed of the decision to be made, 2) whether they were informed of their role in making that decision, 3) whether they were presented with the alternatives, 4) whether they were informed of the pros and cons of the alternatives, 5) whether their preferences were assessed, 6) whether uncertainties surrounding the decision were discussed, and 7) whether the physician assessed the patient's understanding of the decision. We used extremely liberal criteria to determine whether each of these elements were present (e.g. "Do you have any questions?" was considered sufficient for an assessment of patient understanding).

Where did you get the data to assess how physicians communicate with patients about this?

It's often hard to get a realistic picture of how physicians discuss things with patients, as physicians may change the way they communicate when they're aware they are being observed. Verilogue is a company that collects recorded data of real-world medical encounters from physicians across the United States. These data are generally used by companies for marketing purposes. The strength of the Verilogue data is that while physicians are aware they're being recorded, they don't know which aspect of the encounter will be studied, as companies may be interested in different aspects. Thus, physicians in the Verilogue data would be unlikely to do a better job than usual at practicing informed decision-making with patients. We were lucky to get access to over 60 real-world encounters in which a physician discussed either initiating or changing anticoagulation types with atrial fibrillation patients. This allowed us to assess the extent to which they were engaging patients in informed decision-making.

What were your major findings?

Physicians in our study were largely not engaging patients in informed decision-making. Almost none met all seven criteria, and some didn't meet any. Most physicians presented the alternative between warfarin and DOACs to patients but emphasized the advantages of DOACs and the disadvantages of warfarin. Unsurprisingly, almost all patients were ultimately prescribed a DOAC. However, because physicians overall did such a poor job at informing patients about the tradeoffs between DOACs and warfarin, it wouldn't have been possible for patients to make an informed choice. Thus, the choice of a DOAC in the overwhelming majority of these encounters likely represents the physician's preference, not the patient's.

What are the implications of your findings for improving physician communication with patients?

First of all, I don't think any physician intends to not engage patients in informed decision-making for anticoagulation – many probably think they are! They may simply need more help doing so, particularly in discussing uncertainties with patients, which, according to research, makes many physicians uncomfortable. Increasing the use of decision or conversation aids is one potential way of improving informed decision-making for anticoagulation. Another is the use of clinical pharmacists, rather than physicians, to engage patients in decision-making. It may be that physicians – either consciously or subconsciously – have strong preferences for anticoagulation that inadvertently affect how they communicate with patients. Over the next year, we will be piloting a study to assess whether the quality of anticoagulation decisions can be improved by involving clinical pharmacists in the decision-making process.

Look for future publications related to 'Informed Decision Making for Anticoagulation' in 2021.

RECENT PUBLICATIONS

Taksler, G.B., Dalton, J.E., Perzynski, A.T., Rothberg, M.B., Milinovich, A., Krieger, N.I., Dawson N.V., Roach, M.J., Lewis, M.D., Einstadter, D. Opportunities, Pitfalls, and Alternatives in Adapting Electronic Health Records for Health Services Research. Med Decis Making. 2020 Sep 24.

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Lan, R.H., Yu, J., Samuel, L.T., Pappas, M.A., Brooks, P.J., Kamath, A.F. How are we measuring cost-effectiveness in Total Joint Arthroplasty Studies? Systematic Review of the Literature. J Arthroplasty. 2020 Nov;35(11):3364-3374.

Johnson, J.K., Hohman, J., Stilphen, M., Bethoux, F., Rothberg, M.B. Functional Recovery Rate: A Feasible Method for Evaluating and Comparing Rehabilitation Outcomes Between Skilled Nursing Facilities. J Am Med Dir Assoc. 2020 Nov 16;S1525-8610(20)3087-9.

Klompas, M., Imrey, P.B., Yu, P.C., Rhee, C., Deshpande, A., Haessler, S., Zilberberg, M.D., Rothberg, M.B. Respiratory viral testing and antibacterial treatment in patients hospitalized with community-acquired pneumonia. Infect Control and Hosp

Pfoh, E.R., Chaitoff, A.M., Martinez, K., Keenan, K., Rothberg, M.B. Association Between Pain, Blood Pressure, and Medication Intensification in Primary Care: an Observational Study. J Gen Intern Med. 2020 Dec;35(12):3549-3555.