virtual Roundtables

Identifying Patients with Undiagnosed Hypertension

2016

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NATIONAL ASSOCIATION OF
CHRONIC DISEASE DIRECTORS
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The National Association of Chronic Disease Directors (NACDD) launched a series of interactive events in February 2016 called fireside chats and virtual roundtables. Fireside chats, developed in coordination with Centers for Disease Control and Prevention's Division for Heart Disease and Stroke Prevention, provide a new format that enables state health departments to hear from content experts on a number of issues pertaining to cardiovascular health and 1305 priority areas. The series of virtual roundtables, developed with support from the Association of State and Territorial Health Officials (ASTHO), offer fireside chat attendees an opportunity to continue discussion on the same topic in a more informal way.

The inaugural fireside chat, held Feb. 23, 2016, highlighted innovative strategies for identifying patients with undiagnosed hypertension. Speakers included Hilary Wall, Senior Health Scientist and Million Hearts® Science Lead at CDC's Division for Heart Disease and Stroke Prevention; Dr. Ian Brissette from the New York State Department of Health; and Dr. James Schultz from Neighborhood Healthcare in San Diego, Calif. The fireside chat audio recording and slides are available online (http://www.chronicdisease.org/?Webinar_Firesidechat).

During the follow-up virtual roundtables on March 7 and 8, 2016, state health departments could ask questions about what was presented and share their experience in identifying patients with undiagnosed hypertension. The states could also ask questions to content experts and other states to see if they faced challenges when addressing this issue. Several states gave small presentations during each call including Montana, Massachusetts and Texas.

Questions Shared for Consideration During Virtual Roundtables

- How do public health departments convince practices that it's worthwhile to identify and reevaluate their patient population?
- Why does public health need to be at the table with this work that has traditionally been in clinical care?
- What data sources and clinical criteria did they use?
- How are you using your HIE to mine the data?
- Were you able to look at disparities between different populations - age/gender etc.?
- What other partner relationships were key to the success of this project?
- What additional partners came to the table as a result of this work?
- What resources and technical assistance did you provide? How did you serve as a translator and a convener?
- How do you get clinicians on board in this health system transformation?

Highlights from the Fireside Chat

From Hilary Wall, CDC

- Identifying undiagnosed hypertension is a clinical quality improvement issue and a surveillance issue.
- States have a lot of questions regarding the role of public health in clinical care. Wall described undiagnosed hypertension as a topic that nicely marries the two fields, especially with the advent of electronic health records as this couldn't have been done with paper records. With population health data, public health is bringing data skills and awareness to clinical medicine.
- As states talk to clinics about hypertension control, they can ask about prevalence rates to start the conversation. Do clinics know if they have patients with hypertension who aren't diagnosed?
- Many state health departments are serving as conveners for hypertension learning collaboratives.
- Many states are using the JNC 7 definition of adults with two or more values ≥140/90mmHg. Wall recommends working with practices on a rapid quality improvement process using PDSA cycles. Applying a more conservative measure of 180/120mmHg will produce a higher positive predictive value.
- Practices can use an ICD-10 code for patients who have a high blood pressure reading but have not been found to have hypertension on re-evaluation to avoid counting them in the denominator (ICD-10-CM-R03.0 - Elevated blood-pressure reading, without diagnosis of hypertension).
- States can work with practices to look at disparities among different populations such as by age or zip codes.

Highlights from the Fireside Chat

From Dr. Ian Briquette, NY State Department of Health

- New York State has active learning communities on identifying undiagnosed hypertension.
- Dr. Brissette emphasized the role of the public health department in using surveillance to identify the extent of the problem over person, place and time.
- This work was completed in response to a request from the Albany County Department of Health and a federally qualified health center (FQHC) interested in knowing the rates of hypertension and undiagnosed hypertension.
- The Department of Health worked with a Regional Health Information Organization (RHIO) which is a repository of information and data from electronic health records. New York funds a network of RHIOs that cover the entire state.
- Dr. Brissette worked with one RHIO - the Health Information eXchange of New York (HIXNY). He recommends that if a state health department approaches a RHIO or health information exchange (HIE) it is important to make sure the RHIO/HIE has the capacity to do this work. Key requirements would include ensuring the RHIO has connections to primary care practices as some are connected only to hospitals.
- Dr. Brissette used CDC's "Guidelines for Evaluating Data Systems" (http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5013a1.htm).

For additional information, read the story in NACDD's *What's Working Database:* http://chronicdisease-whatsworking.org/page/?id=522.

From Dr. Jim Schultz, Neighborhood Healthcare

- Dr. Schultz used the Million Hearts® Hypertension Prevalence Estimator tool to compare rates of hypertension to the national average (https://nccd.cdc.gov/MillionHearts/Estimator/).
- A health information technology expert in his office wrote the code for an app that alerts the physician if a patient has potentially undiagnosed hypertension since their electronic health record (EHR) vendor was not able to do this.
- Dr. Schultz shared data from the "Hiding in Plain Sight" article to raise awareness with other physicians in his clinic (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4596255/pdf/nihms725559.pdf).
- His clinic enlisted the help of population health staff such as advanced medical assistants, nurses and care coordinators to identify and follow up with the patients.
- The clinic initiated protocols so physicians all prescribed the same initial medications for patients. There are so many to choose from that they wanted to make prescribing easy and consistent for all staff.
- Follow up with patients included phone calls because locating patients by mail is difficult when they are indigent and move frequently.

Highlights from the Virtual Roundtables

Over the course of the two virtual roundtables, states exchanged information on how they are identifying undiagnosed hypertension. Short presentations from several states highlighted ways how the state health departments are working with providers to develop relationships; collect data; determine definitions for undiagnosed hypertension; follow up with patients; and provide technical assistance. We highlight these activities below and added resources for additional information within the text and at the end of the document.

Montana Works with PCMHs to Identify Undiagnosed Hypertension

The Montana Department of Public Health and Human Services (DPHHS) worked with patient-centered medical home (PCMH) clinics to identify undiagnosed hypertensive patients within their patient population. In the first year, they conducted a pilot with one PCMH to demonstrate the feasibility of the project. In the second year, five PCMHs were funded at $5,000 for the first year and in the third year, another seven were funded. They used metrics from the state's Commissioner of Securities & Insurance office to help identify likely sites (http://csimt.gov/wp-content/uploads/2015PCMHPublicReport_Final.pdf).

Definition

Clinics worked with their electronic health records (EHR) vendor to construct a hypertension algorithm specific to their EHR that identifies patients using this definition: patients who had two blood pressure (BP) readings >140/90mmHg in the past year without receiving a hypertension diagnosis. All clinics use the same definition. Out of 455 patients who met the criteria for potentially undiagnosed hypertension, 294 returned for a re-check and 100 were subsequently diagnosed with hypertension. In the third year, nearly 1,000 patients were identified by EHR algorithms and clinics are currently working on setting up return visits for re-evaluation for these patients.

Data Collection

MDPHHS received aggregate data on hypertension from funded PCMH clinics. In their final report, clinics will report NQF 0018 which helps Montana meet performance measure 3.1.05 for 1305.

Follow up

Clinics followed up with the identified patients in a number of ways: mail, email, patient portal, direct phone outreach, and other methods patients identified as "preferred" to set up recheck of their BP. Providers were given guidance as to where to place information in the correct field within the EHR.

Technical assistance

With partners including Health Technology Services, MDPHHS provides technical assistance on how to apply a hypertension algorithm within the EHRs to create quarterly reports. MDPHHS offers clinics BP cuffs that clinics can lend to patients for home blood pressure measurement (funded by the Master Settlement Agreement), along with guidance on setting up a protocol for the cuff loaner program and patient education materials.

For additional information, read the story in NACDD's *What's Working Database*: http://newscribemedia.net/apps/NACDD/WWCDPC/display.php?id=520.

Texas Collaborates with their Association of Community Health Centers to Develop Algorithm

In part with the support of the ASTHO Million Hearts® Learning Collaborative, the Texas Department of State Health Services (DSHS) has a contract with the Texas Association of Community Health Centers' Health Center Controlled Network (TACHC HCCN) to develop an algorithm for undiagnosed hypertension. They are in the process of connecting with them to get a copy of the algorithm and obtain the number of patients with undiagnosed HTN who have been identified since the algorithm launched.

Partnership

DSHS has had a long-standing relationship with the TACHC. TACHC, in turn, maintains strong relationships with many of the state's federally qualified healthcare centers, and provides significant IT support to individual FQHCs to incorporate the undiagnosed hypertension algorithm.

Data Collection

TACHC developed an undiagnosed algorithm, based on North Shore's, and added it to the HCCN. FQHCs that participate in the HCCN can now view patients with uncontrolled blood pressure who do not have a diagnosis and bring them in for follow-up (HTN registry). Patients with certain chronic conditions like diabetes and chronic kidney disease are flagged so that FQHCs can prioritize them for follow-up.

Challenges

It has taken a year and a half to accomplish this due to a change of leadership at TACHC but they worked with them to see the value. Coordination can be challenging because of this.

For additional information, read the story in NACDD's *What's Working Database*: http://newscribemedia.net/apps/NACDD/WWCDPC/display.php?id=520.

Texas Partnership between Local Public Health District and Hospital to Address Common Goal

With the support of the ASTHO Million Hearts® Learning Collaborative, one of Texas' public health districts is working with their hospital and United HealthCare, a payer, to identify patients with hypertension. The hospital's goal is to reduce the number of inpatients with hypertension and to reduce the number of clients being seen in the ER with hypertension by offering prescription medications, education, and referral to primary care services through partners including the public health district.

Partnerships

Data highlighting the extremely high prevalence of hypertension in this community served as the catalyst for community partners to urge the partnership among the public health district, hospital, and United HealthCare.

Data Collection

United HealthCare is using claims data to identify the number of patients with hypertension and is in the process of releasing this data to the hospital and public health district. The hospital and health district will develop a process for contacting the identified individuals to schedule follow-up services as needed.
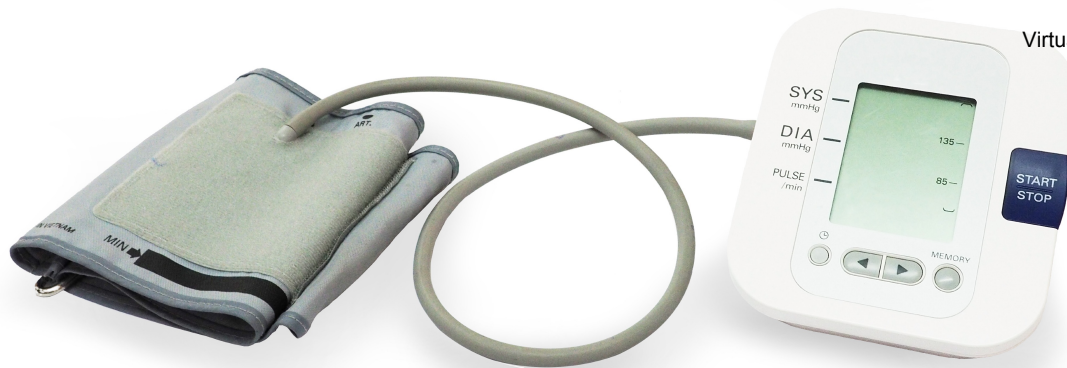
Massachusetts Leverages Statewide Health Reform and Develops Comprehensive TA Program

The Massachusetts Department of Public Health (DPH) initially mapped out various projects already under way across the state to avoid duplication and also to enhance efforts around the Massachusetts Diabetes Prevention Program. They looked at many initiatives including a medical school quality improvement initiative, a state Medicaid project, the Prevention and Wellness Trust Fund and the quality innovation network/quality improvement organization (QIN-QIO).

Partnerships

They worked with 16 health centers; had conversations with health plans and health centers to let them know that 14,000 citizens could potentially be undiagnosed and these people could be their plan members. This resonated with the partners and generated buy-in from the providers. DPH worked with a health plan that has a hypertension effort and became a champion as they talked with other health plans. This champion offered BP cuffs, attended meetings, and created a poster for physician offices describing proper BP measurement technique. They are now working with several other DPH programs to coordinate efforts. They are also working with organizations identified in their original mapping (QIN-QIO, universities, health plans, etc.) to share information.

Data Collection

DPH worked with the state primary care association to pull data from their community health centers (CHCs), identifying 1.2 million records which were then used to identify ~ 1.5 percent of patients ages 30-60 and 2.4 percent of patients over the age of 60 with potentially undiagnosed hypertension. They used this data to build the case for recruiting CHCs. DPH contracted with an electronic medical record specialist with expertise in working with multiple EHR vendors to help them communicate with providers and generate buy-in for the project (contact information on the specialist is available).

Definition

Two BPs in past year ≥ 140/90mmHg without a HTN diagnosis.

Technical assistance

- Training on QI 101 through an online course.
- Training on accuracy of BP measurement through the Maine Cardiovascular Health Program.
- Webinars on hypertension change package; how to use data in EHR to develop a registry; and a webinar on "Hiding in Plain Sight" presented by Hilary Wall. A webinar with staff from the Institute for Healthcare Improvement (IHI) staff is planned.
- A public awareness campaign that included materials on salt and on BP awareness that coordinated with radio ads; targeted the 40-60 age group with social media.

Wisconsin

The Wisconsin Division of Public Health (DPH), Chronic Disease Prevention Unit works with many partners on several projects statewide. One lead partner is the WI Collaborative for Health Care Quality (WCHQ) who has established three Quality Improvement Steering Teams – Hypertension (HTN), Diabetes, and Colorectal Cancer. The HTN QI Steering Team guides the development, dissemination and monitoring of goals, strategies, medical groups and clinics within their WCHQ's membership, which is about 65 percent of the state's providers. During the first year, the steering teams developed three toolkits, which are all available at the website listed below. During this second year the teams are spreading improvement goals set by each QI Steering Team; providing support to lower performing organizations with HTN rates < 72 percent; evaluating progress toward goal achievement; and exploring medication adherence for HTN by identifying gaps in processes and offering potential strategies to address.

Explore a Toolkit for Improving High Blood Pressure Care and Outcomes

The Wisconsin Collaborative for Healthcare Quality (WCHQ) designed the toolkit for administrators, clinicians, and staff within health care organizations who are seeking evidence-based strategies and tools to improve high blood pressure control among their patients. View the toolkit by creating a free account with HIPxChange (www.hipxchange.org/HypertensionCare).

The DPH is currently working with the WCHQ and a data analyst to identify those patients who are undiagnosed and have two high blood pressure readings within their member data. These data will help to guide future strategies and approaches with clinics and health systems. They are using the CDC's "Hiding in Plain Sight" resources to develop a process to analyze the clinical data submitted by its 38 member organizations including health systems, medical groups, hospitals and clinics that collectively represent approximately 65 percent of primary care providers statewide. The WCHQ will query its Repository Based Submission (RBS) data system, in order to report the following metrics to the WI Department of Health Services by June 29, 2016:

- The number of patients with documented high blood pressure who have not been diagnosed with hypertension.
- The number of patients diagnosed with hypertension.

Colorado 1305 Programs Work Corroboratively on Quality Improvement

Colorado is working on clinical quality improvement related to hypertension screening and control, diabetes prevention and management, and cancer screening. They began using the Million Hearts® Hypertension Prevalence Estimator Tool in one clinic and are evaluating its usefulness for other clinics (https://nccd.cdc.gov/MillionHearts/Estimator/). They are working with federally qualified health centers, local public health agencies and health system clinics using funding pooled from their 1305 grant (diabetes and heart disease and stroke prevention), WISEWOMAN, and cancer control. Part of this comprehensive approach includes a small amount of funding for the clinics' time, effort and process change, implementing Plan-Do-Study-Act cycles with them and providing technical assistance on how to best utilize their EHRs and how to implement best practice protocols.

Maine

The Maine Cardiovascular Health (CVH) Program and Diabetes Prevention & Control Program runs a learning collaborative for both hypertension and diabetes called the Chronic Disease Improvement Collaborative, which is a collaborative effort with Maine Quality Counts (QC). The collaborative is aimed at strengthening the connections between primary care practices and their communities, as well as implementing standardized policies and/or protocols, such as the Million Hearts® algorithm, to streamline and better treat their patients. They will begin the third cohort of this project in July 2016 and will work with 10-15 practices within a health system.

Maine is developing a hypertension toolkit; the contents of the toolkit will focus on building a functional team within the practice with a focus on hypertension diagnosis and treatment. They created an infographic on hypertension (https://vimeo.com/136615637). Hilary Wall from CDC has worked with Maine to help them focus on the four simple steps to improve hypertension control within practices and identifying those who are "hiding in plain sight."

The Cardiovascular Program was also approached by the Employee Health and Benefits Office around potential cardiovascular diseases initiatives. Hypertension and other cardiovascular diseases are among the highest cost drivers for the state of Maine health insurance claims. A postcard was developed and mailed to 16,000 households of state of Maine health plan members educating them on hiding in plain sight and hypertension and the fact that they are entitled to 26 visits with a nutritionist with a diagnosis. Currently, the next steps are looking at getting self-measured blood pressure cuffs as a covered benefit to those who have a hypertension diagnosis.

Additionally, the CVH Program continues to work with independent, community pharmacies. They are nearing the end of the first cohort, and are beginning to collect patient surveys that the patients fill out each time they pick up their medications. At the beginning of the project, each of the four pharmacies used their computer system to calculate the percent of days covered value for any patient in their system who was diagnosed with hypertension, and enroll a minimum of 25 patients with a PDC value below 80 percent. Each pharmacist obtained permission from the patient to participate in the project, and then based on the initial encounter with the patient selected a strategy to improve their adherence. Strategies included syncing the patient's medications, working with the prescriber to switch from immediate release to extended release medications where

appropriate, providing literature and additional counseling. Each pharmacy received a stipend based on the number of patients they were able to recruit, up to $2,000, to help offset the costs of the project.

Lastly, Maine created a video with real patients and a prescriber who had experienced the connection between high blood pressure and prediabetes. The patients discussed how lifestyle changes made a difference in their lives (https://vimeo.com/133056331).

Resources

"Hiding in Plain Sight: Finding Patients with Undiagnosed Hypertension." *School of Public Health, University at Albany*. University at Albany, State University of New York, 19 Feb. 2016. Web. <http://www.albany.edu/sph/cphce/phl_0216.shtml>.

Hypertension: Hiding in Plain Sight. 2015. Online video. <https://vimeo.com/136615637>.

Lifestyle Connections - High Blood Pressure. 2015. Online video. <https://vimeo.com/133056331>.

Million Hearts® Hypertension Prevalence Estimator Tool. Centers for Disease Control and Prevention, 2014. Web. <https://nccd.cdc.gov/MillionHearts/Estimator/>.

Million Hearts®: Undiagnosed Hypertension. Centers for Disease Control and Prevention, n.d. Web. <http://millionhearts.hhs.gov/tools-protocols/hiding-plain-sight/index.html>.

"Montana Patient-Centered Medical Home Program: 2015 Public Report." Office of the Montana State Auditor: Commissioner of Securities & Insurance. Montana Patient-Centered Medical Home Program and Commissioner of Securities & Insurance, Aug. 2015. Web. <http://csimt.gov/wp-content/uploads/2015PCMHPublicReport_Final.pdf>.

"NACDD Fireside Chat on Identifying Patients With Undiagnosed Hypertension." National Association of Chronic Disease Directors. Atlanta. Online video. <http://www.chronicdisease.org/general/custom.asp?page=Webinar_Firesidechat>.

National Association of Community Health Centers (NACHC) Change Package: Million Hearts®: Leveraging Health Information Technology (HIT), Quality Improvement (QI), and Primary Care Teams to Identify Hypertensive Patients Hiding in Plain Sight (HIPS) Consolidated Change Package. This change package is a deliverable of the NACHC Million Hearts® HIPS Project. It was produced by reviewing the details of the change ideas each health center team employed and any associated tools and resources; it's a compilation of items thought to be most valuable and that most clearly capture the best that emerged from this work. http://mylearning.nachc.com/diweb/fs/file/id/229350

The Million Hearts® "Hiding in Plain Sight" webpage has a set of tools and resources to help find patients with undiagnosed hypertension. On this page, you'll find:
- o "Finding Undiagnosed Hypertensive Patients" video: Viewers will learn four steps health systems and practices can take to find patients with potentially undiagnosed hypertension.
- o Partner Toolkit: Refer to this resource for social media messages, social cards, and newsletter content that you can easily share with your partners to help spread the word.

Toolkit for Improving Hypertension Care & Outcomes. HIPxChange, n.d. Web. 21 June 2016. <https://www.hipxchange.org/HypertensionCare>.

"Updated Guidelines for Evaluating Public Health Surveillance Systems." Morbidity and Mortality Weekly Report: Recommendations and Reports. Centers for Disease Control and Prevention, 27 July 2001. Web. <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5013a1.htm>.

Wall, MPH, Hillary K., Judy A. Hannan, RN, MPH, and Janet S. Wright, MD. "Patients With Undiagnosed Hypertension: Hiding in Plain Sight." The Journal of the American Medical Association. Centers for Disease Control and Prevention, Nov. 2014. Web. 17 June 2016. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4596255/pdf/nihms725559.pdf>.

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