NDPP Webinar Series
DDT EHRs
September 24, 2019
Webinar Transcript

Slide 1 – Title – No Text

Slide 2 – Welcome and Speaker Introductions

MICHELLE KNIGHT: Thank you for joining us for this webinar titled Using Electronic Health Records to Support Diabetes Management and Type 2 Diabetes Prevention. Our presenter is Stephanie Rutledge who is a Health Scientist with the Centers for Disease Control and Prevention.

I am Michelle Knight, with ICF Next, and I will be your moderator today. The recording and transcript, as well as the PowerPoint slide deck, will be available on the CDC website later this year.

Slide 3 – Learning Objectives

For the next 60 minutes, we will share information that will help you understand the importance of EHRs in supporting type 2 diabetes prevention and diabetes management.

We will also discuss how state and local health departments can talk with health care providers about the benefits of using EHRs, while being able to acknowledge the limitations of EHR. We'll provide examples from the field to aid in learning and understanding. Finally, we will wrap up by sharing additional resources.

The companion guide for this webinar is titled "Using Electronic Health Records to Support Diabetes Management and Type 2 Diabetes Prevention" and will be available on the CDC website later this year.

I will now turn the webinar over to Stephanie, Stephanie…

STEPHANIE RUTLEDGE: Thank you Michelle.

Slide 4 – What is an EHR?

An EHR is a digital version of a patient's medical chart.

A typical individual EHR may include a patient's medical history, diagnoses, treatment plans, pharmacy records, and laboratory and/or test results.

EHRs are real-time records that make information available securely to authorized users—ideally including users from multiple organizations.

Slide 5 – Importance of EHRs

Electronic Health Record systems are in common use in both hospital systems and community-based health care provider offices.

EHRs can help streamline communication among providers, including community-based providers. EHRs automate and streamline provider workflows and allow providers access to evidence-based tools to help them make patient care decisions.

Because of the cost of diabetes care, improving the quality of diabetes management and type 2 diabetes prevention is an important priority. EHRs are one promising tool in these efforts, and EHRs

can support efforts to increase awareness, referral, enrollment, and retention in the National Diabetes Prevention Program also called National DPP lifestyle change programs LCPs and in diabetes self-management education and support, or DSMES, programs.

Slide 6 – EHRs Can Assist Health Care Providers

For type 2 diabetes prevention and diabetes management, EHRs can help support the patient journey, which we will further define later in the webinar. For example, EHRs can assist health care providers to Educate patients about prediabetes and type 2 diabetes risks, Screen or test for prediabetes and type 2 diabetes, and Refer patients to type 2 diabetes prevention or diabetes management programs.

Slide 7 - Other Ways EHRs Assist Health Care Providers

EHRs can also be used to send health care providers information about patient participation and progress in the National DPP Lifestyle Change Programs and Diabetes Self-Management Education and Support programs.

Slide 8 - Who Uses EHRs?

Health care providers are the primary users—and owners—of EHRs. Providers include large health systems and hospitals, office-based practices, and pharmacies. Although almost all hospitals use EHRs, not all providers use EHRs. These differences in EHR use can lead to challenges in interoperability, or the secure exchange of information between authorized EHR users, which can limit the flow of information between providers and other users. We will discuss interoperability in more detail later in the webinar.

Individual patients are secondary users of EHRs. Patients access their health records that are stored in an EHR through a secure website, usually called a patient portal.

Community or clinically based organizations may also be secondary users of EHRs. Use by these organizations can happen when they receive referrals to their type 2 diabetes prevention and diabetes management programs through an EHR. In limited cases, such organizations may also use EHRs to provide feedback on patient progress to the provider making the referral.

Slide 9 - Who creates EHRs?

Most EHRs are created by independent companies, or EHR vendors. EHR vendors create a variety of EHR products and platforms, with varying features and costs. On this slide are just a few of the common vendors used by hospitals and individual health care professionals.

Slide 10 - Current EHR Systems

Health care providers have many options when choosing EHR vendors and products. The American Medical Association provides a detailed guide to selecting and purchasing EHRs.

There are complete and modular EHRs. One major distinction is a complete EHR is a complete package that has been certified as meeting all of the federal government's criteria for Promoting Interoperability, or PI, Programs. A practice with a complete EHR has one vendor and one system to work with, which can make it easier to get support.

A modular EHR combines multiple EHR modules that are individually certified for PI Programs. A modular approach allows providers to use preferred applications, and it can be less expensive than buying a complete EHR.

When complete EHRs or combinations of EHR modules meet federal government criteria for PI programs, they are referred to as Certified EHR technology.

Slide 11 - The Health Insurance Portability and Accountability Act (HIPAA) and EHRs

HIPAA Privacy and Security Rules protect individually identifiable health information, sometimes referred to as protected health information or PHI. EHRs must comply with HIPAA regulations since they are electronic repositories of PHI.

EHRs must be HIPAA compliant and providers are responsible for taking the steps needed to protect confidentiality, integrity, and the availability of electronic PHI. You can learn more in The Guide to Privacy and Security of Health Information.

Slide 12 - Federal Guidelines Associated with the Use of EHRs

The 2009, American Reinvestment and Recovery Act included the HITECH Act that supported Electronic Health Records Meaningful Use, an effort led by CMS and the Office of the National Coordinator for Health IT ONC-HIT. Providers had to show meaningful use, in other words, that their EHR was being used in a meaningful way – specifically to improve quality, safety, efficiency, and reduce health disparities, engage patients and families in their health, improve care coordination, improve population and public health and, ensure adequate privacy and security protection for PHI.

In 2018, CMS announced a new phase of the electronic health record incentive programs with an increased focus on interoperability, including the exchange of data between health care providers, and patient access to health data. CMS renamed the EHR incentive programs as the Promoting Interoperability PI Programs.

In 2019, CMS introduced the Interoperability and Patient Access Proposed Rule, to expand access to health information and improve the exchange of health care data.

Starting in 2019, CMS and ONC require all eligible health care providers and hospitals to use the 2015 edition criteria for certified EHR technology to qualify for the PI Programs.

Slide 13 - What is the Role of a Health Department in EHRs?

Health departments play an essential role in partnering with health care providers to support EHR use to better manage and prevent type 2 diabetes in patients at high risk. In some cases, you will also need to partner with organizations offering type 2 diabetes prevention and diabetes management programs.

EHR strategies can be used to increase patient awareness, identify risk, appropriately refer patients to evidence-based programs, and help support better diabetes management. When your health care provider partners implement specific EHR strategies, you can provide support towards improved outcomes.

Slide 14 - Consider Your Diabetes Management and Type 2 Diabetes Prevention Objectives

Let's talk about how EHR interventions and partnerships with local health systems and health care providers can help you achieve your type 2 diabetes prevention and management objectives. To focus your efforts, consider your overall objectives, especially as they relate to the patient journey. Are you focused on improving patient awareness and education related to either prediabetes or type 2 diabetes? Increasing patient risk assessment, to identify patients with prediabetes or undiagnosed diabetes? Increasing the rates of appropriate physician referral to type 2 diabetes prevention and diabetes management programs? Increasing enrollment in CDC-recognized LCPs or DSMES programs? Or, improving diabetes management and clinical quality of care.

Slide 15 – Engage with Potential Health Care Provider Partners

Once you review your objectives and begin to identify where to focus your efforts, you will want to engage with potential health care provider partners to see what is feasible.

You may want to survey or interview providers to understand what providers in your targeted area are already doing with EHRs, and which EHR platforms they use.

This slide and the next slide include several potential questions you could ask in interviews or surveys, including, do you use EHRs? What vendors and specific platforms? What subpopulations does your office or hospital serve? What special considerations should we be aware of? Can the EHR vendor accommodate EHR changes?

Slide 16 – Engage with Potential Health Care Provider Partners (Continued)

Here on this slide are more questions you can ask in interviews or surveys. Would you be able to identify leadership or staff champions to support widespread adoption?

What barriers or challenges to implementation do you anticipate? In summary, use these and other questions to explore whether strategies you want to implement are feasible – given cost, time, and other constraints.

Slide 17 – Identify EHR Strategies: The Patient Journey

Let's explore how you can talk with health care providers about EHR use from the perspective of the patient journey. The concept of the patient journey has developed as a way to describe how a patient with type 2 diabetes or prediabetes interfaces with the health care system. It is shown as a linear process in this webinar; however, an individual patient might experience the parts of the journey iteratively or in a different order.

The patient journey includes these parts, awareness & education, when a patient learns about prediabetes or type 2 diabetes, including risk and available programs. Risk Assessment & Diagnosis, when a patient learns they have prediabetes or type 2 diabetes or learns about diabetes complications. Referral, when a provider refers a patient to a type 2 diabetes prevention or diabetes self-management education and support program. Program Enrollment, when a patient enrolls in a type 2 diabetes prevention or diabetes self-management education and support program. And management,

when a patient works with health care providers to manage their condition and prevent type 2 diabetes or diabetes complications.

Slide 18 – Awareness & Education

One part of the patient journey is patient awareness of and education about prediabetes or type 2 diabetes, including awareness of individual risk and programs that can help prevent or manage these conditions.

Slide 19 - Using Patient Portals to Increase Awareness

To improve patient awareness and education, providers can strategically use patient portals, which are secure websites through which patients access health information stored in the EHR. Patient portals can increase access to health records, by allowing patients to download, share, and otherwise engage with their health data. A patient might collect data manually or with a tracking device and upload the information via the patient portal. Examples include blood sugar readings, medication-taking, body weight, and physical activity or nutrition logs. Providers review health data that a patient captures and records the data in EHRs. Providers can then better understand their patients' behaviors, habits, and health risks.

To educate patients, providers can use patient portals to increase patient awareness of a disease and reduce the risk of the patients using unreliable information. They can also provide tailored information and educational resources to involve patients in shared decision-making regarding treatments, care plans, or tests.

Slide 20 – From the Field: Using Patient-Generated Health Data in EHRs

Let's discuss an example from the field. The University of California Davis Health System initiated a project to integrate patient-generated data into EHRs. One part of the project focused on improving the health of patients with type 2 diabetes.

UC Davis integrated fitness tracker data such as steps, activity, sleep, and caloric information from patients into their EHR. This application of patient-generated data made it easier for providers to compare this data to metrics like A1cs and have conversations with patients about how behavior change impacts their disease management.

Slide 21 - How State Health Departments Can Facilitate Awareness and Education Using EHRs

How state health departments can facilitate awareness and education using EHRs? First, you will need to determine the awareness and education opportunities and limitations of the specific EHR system used by the health care provider partner. The following areas can be explored during your conversation: Find out whether your potential health care provider partners currently use or would promote the use of patient portals. More patients access their records when prompted by a provider. Identify the limitations of what kinds of data and information can be uploaded and integrated into the EHR. You can provide patient-tailored educational resources that providers can share through a patient portal to promote awareness and education.

Slide 22 - From the Field: Using Patient Portals to Provide Educational Awareness

Using another example from the field, Epic Systems and the Mayo Clinic collaborated so that users of Epic System's MyChart patient portal can access patient-facing educational resources relevant to diabetes, developed by the Mayo Clinic. The resources are available in English and Spanish. Mayo Clinic medical experts regularly review and update the resources as needed.

Slide 23 - Risk Assessment & Diagnosis

Another part of the patient journey is risk assessment and diagnosis—when a patient learns that they have prediabetes or type 2 diabetes. The primary challenge for health care providers and health departments is to identify those patients with undiagnosed type 2 diabetes or diabetes complications.

To address this challenge, health care providers and health departments can use EHR data to apply risk scores to identify individuals with prediabetes or type 2 diabetes, such as the prediabetes patient risk assessment. Use EHR phenotyping, a practice of developing algorithms or formulas that use EHR data, to identify population characteristics associated with prediabetes or type 2 diabetes. Embed or use computerized disease registry data – which is a list of patients with a certain disease or condition – within EHRs to aid with identification of patients with prediabetes or type 2 diabetes, or risk for diabetes complications. Use clinical decision support systems, which combine clinical knowledge with person-specific data, to help providers identify and treat high-risk patients, for instance.

Slide 24 - EHR Phenotyping

EHR Phenotyping can be used to screen for prediabetes or potentially undiagnosed type 2 diabetes. Phenotyping can also be used to identify non-traditional risk factors associated with type 2 diabetes development. Non-traditional risk factors may include diet, markers of chronic inflammation, metabolic abnormalities, genetic markers, or other factors.

If you're implementing EHR phenotyping, here are some possible considerations. As a state health department, consider working with health care partners to identify an appropriate algorithm for data the provider has collected. You can also collaborate with your health care provider partner to add the algorithm and to provide appropriate training on the use of the algorithm.

Slide 25 - From the Field: Using EHR Phenotyping to Identify Risk Factors for Type 2 Diabetes

In another example from the field, researchers at the University of California, Los Angeles predicted patients' type 2 diabetes risk by using an algorithm applied to information in de-identified electronic health records. They also identified previously unknown risk factors for type 2 diabetes. The researchers estimated that, in the United States, using EHR phenotype screening could identify an additional 400,000 people with active and untreated type 2 diabetes compared with conventional approaches.

Slide 26 - Clinical Decision Support (CDS) Systems

The purpose of Clinical Decision Support, or CDS, systems is to help providers get the right information at the right time, reducing the likelihood of missed diagnoses or other errors. These systems help organize large volumes of EHR data. They combine scientific knowledge with person-

specific data and can assist providers to identify high-risk patients, consider alternative diagnoses, order specific tests, and more. A CDS system, integrated within an EHR, can be used to identify patients at high risk for developing type 2 diabetes or to help in the early detection of diabetes complications such as chronic kidney disease.

Here are some considerations for implementation of Clinical Decision Support systems. You can learn the specific challenges your health care provider partner faces in identifying patients with prediabetes or undiagnosed type 2 diabetes – or in detecting diabetes complications and identify ways that a CDS system might be able to address these challenges. You can also determine how feasible it is to implement a CDS system within the EHR system.

Slide 27 – Referral

In the referral part of the patient journey, EHRs can be used to refer patients to appropriate treatment. This can include referral to a type 2 diabetes prevention or diabetes management program. The referral process can be streamlined by using EHRs for electronic referral using embedded referral forms. We will now turn our attention to the various ways that EHRs can be used in the patient referral process.

Slide 28 – Types of Referral

EHRs can be designed to allow health care provider partners to electronically refer or e-Refer patients to a community health program, such as a type 2 diabetes prevention or diabetes management program.

Bi-directional eReferral occurs when a provider refers a patient to a type 2 diabetes prevention or diabetes management program through an EHR, and the organization offering the program is able to provide feedback to providers through the EHR. This feedback means providers learn whether an enrolled patient participates and the details of their progress, closing the information loop between the organization and the provider.

Here are some considerations for implementation regarding referrals. For eReferral, you can work with the health care provider partner to understand why and how they refer patients to programs, and how they access up-to-date information about available programs.

Try to determine how electronic referrals can be part of the EHR and provider workflows. You can also learn how community or clinically based organizations will receive the referrals.

For Bi-directional eReferral, recognize that access to EHRs is rare for community-based programs compared to clinic-based, and that workarounds to direct access to EHRs may be needed for community-based programs to provide feedback. Consider working with partner organizations to understand existing referral practices and communications.

Slide 29 - From the Field: Partnering to Improve Electronic Referral Processes

In the Bronx, New York, Montefiore Health System partnered with the YMCA of Greater New York to deliver the YMCA's Diabetes Prevention Program, YDPP. They developed a referral system that

was fully integrated with their EHR. At first, the health system relied on paper referrals, but then shifted to electronic referrals integrated in the EHR.

One of the first challenges encountered in this partnership was getting Montefiore providers to agree to the referral workflow, which requires obtaining written patient consent, for the referral to be sent to the YMCA.

Slide 30 – Management

After program enrollment, the final part of the patient journey is prediabetes or type 2 diabetes management, in which the patient works with health care providers to manage diabetes and prevent complications.

When providers, patients, and programs can share information readily and close feedback loops, prediabetes or type 2 diabetes management can be a smoother process.

Patient portal use for patient data and feedback and bi-directional eReferral and EHR alerts can help stakeholders to learn when a patient enrolls, stay connected, and use available data for better management of prediabetes or type 2 diabetes.

Slide 31 - Management: Patient Portals

As we noted earlier in the presentation, patient portals are secure websites that allow patients to access their health records from an EHR. Patients can use portals to download, share, and otherwise engage with their health data. Patient portals can be used to support management of a patient's condition.

Examples include integration patient-generated health data, or data that a patient captures and records, in EHRs, such as blood sugar readings, body weight, or medication-taking. Such data can be used to monitor patient progress during a treatment program. This can help providers create more tailored strategies for the management of chronic conditions.

Another example is allowing patients to provide feedback via the patient portal during their type 2 diabetes treatment program. This can help patients feel a stronger sense of connection to their health care team. In addition, providers can use feedback from patients to adjust care plans.

As you're implementing patient portals, here are some considerations, as noted earlier. Find out whether your potential health care provider partners currently use or would promote the use of patient portals. More patients access their records when prompted by a provider.

Try to identify limitations for what kinds of data can be uploaded and integrated into the EHR.

Slide 32 - Management: EHR alerts

EHR alerts are reminders for providers that are integrated into the clinical workflow. Alerts can help with type 2 diabetes management and maintenance of treatment plans and ensure that critical points of patient care are not overlooked by patients or providers.

As a part of bi-directional eReferral, providers can receive alerts about a patient's progress in a community program. Alerts can help providers understand what tests are needed, problems that have been identified, and topics a patient needs more education on. Alerts and reminders may be part of a clinical decision support system within an EHR, or they may be separate.

Here are some considerations for implementation of EHR alerts. Learn how your health care provider partner already uses alerts to support type 2 diabetes management, if at all. You can determine whether providers would support the integration of alerts into the EHR system. You can also find out where alerts might offer the most benefit—are there specific areas where the provider can better support type 2 diabetes management? Such as ordering appropriate tests, following up with patients who miss tests or appointments, or identifying patients with prediabetes or undiagnosed diabetes.

Slide 33 – From the Field: Using EHR Alerts and Workflows for Type 2 Diabetes Management

In an example from the field, Reliant Medical Group took advantage of EHR features to ensure a comprehensive approach to type 2 diabetes management.

The EHR system includes alerts to inform diabetes education nurses about how a patient is doing in their type 2 diabetes self-management education and support program, alerts to remind providers to order needed tests, reminders to patients to have tests done—including automated phone calls triggered by the EHR, reminders to patients who miss appointments, and processes to follow up with patients who miss tests and appointments.

Slide 34 – Understanding EHR Limitations

EHRs have the potential to change provider workflows and improve patient care, including for type 2 diabetes prevention and diabetes management. However, there are limitations in how EHRs are used and perceived by providers, patients, and others. We will take a few moments now to provide an overview of these limitations.

Slide 35 – Technological Limitations

Technological limitations for EHRs include: Interoperability. EHR systems work in different ways; these differences can limit the ability to exchange information between EHR systems. Standardization, EHR data are recorded, stored, and exchanged in different ways; this lack of standardization can interfere with communication between EHRs, and adaptability. EHR vendors often do not provide customized EHR products; providers may be left with EHRs that don't work as well as expected.

Slide 36 – Legal Limitations

Legal limitations of EHRs include HIPAA. The Health Insurance Portability and Accountability Act law presents real and sometimes perceived limits to sharing patient data to improve patient care. Another limitation is state regulations. Because states have different patient privacy and health data exchange laws, health care provider partners may be confused by varied state-level requirements. And meaningful use policies. Previous policies provided limited incentives to ensure collaborative

health care. As we discussed earlier, new proposals aim to expand incentives for collaboration and promoting interoperability.

Slide 37 – Clinical Workflow Limitations

Clinical workflow limitations for EHRs include interference with patient engagement. Use of EHRs can decrease provider engagement with patients and reduce the amount of time they spend with patients.

Information overload and lack of readily available information is another clinical workflow limitation. EHRs can be an administrative burden for providers – with too many alerts, decreased quality of care and job satisfaction, and missing test results. Providers also may not enter information into the EHR, or they may enter incorrect information.

Slide 38 – Access Limitations

There are also access limitations associated with EHRs. For instance, not all patients have access to providers who use EHRs. Some patients don't have access to portals, and even patients willing to access portals may not want to provide other personal data.

In addition, some patient populations prefer traditional communication methods. In many rural areas, EHR technology has been adopted more slowly. There are more infrastructure barriers, less electronic sharing of data, and less overall preventive care. Less buy-in, access, and exposure to EHRs occur in some urban areas as well.

Slide 39 - Collaboration Limitations

Collaboration limitations for EHRs include Standardization. Proprietary EHR platforms, antiquated data systems, and lack of standard referral processes and reporting standards make it hard for providers and community partners to use EHR platforms as bi-directional referral systems.

Another collaboration limitation is health care provider partner buy-in. A lack of buy-in and project champions leads to lags in referrals to community programs. Resistance to change on the part of health care provider partners can also be a factor. If health care provider organizations and community organizations do not have a shared vision and mission for how they will work together to use EHRs, success is more challenging.

Slide 40 - Keep Up with Changing Landscape of EHR Policy and Technology

One of the challenges in working with EHRs is the changing policy and technology landscape. Government policies and private sector technologies specifically address existing challenges and limitations of EHRs. CMS's focus on interoperability and the emergence of third-party apps are two areas that are rapidly changing. Keeping current with these changes will help you to keep your proposed interventions relevant and effective.

Slide 41 – CMS Policy Changes

As we mentioned earlier, CMS announced new proposed rules in 2018 and 2019, with an increased focus on promoting interoperability. Additional announcements and policy changes related to CMS's

focus on interoperability are emerging and expected. These changes should help overcome some of the current EHR interoperability challenges, allowing for better exchange of information between health care providers, patients, and potentially community organizations. You can stay current with updates by visiting the CMS website and The Office of the National Coordinator for Health Information Technology ONC website.

Slide 42 - Third-Party Apps

As the use of EHRs becomes increasingly common, the need for solutions to common EHR challenges is being recognized. Third parties are developing applications, or apps, to help health care provider partners to address specific EHR challenges.

One app platform is SMART Health IT, which is run by the not-for-profit institutions Boston Children's Hospital Computational Health Informatics Program and the Harvard Medical School Department for Biomedical Informatics. The platform was initially funded by the U.S. government to develop standards, open source technology, and a community of app developers. SMART Health IT apps are publicly accessible.

Slide 43 - Review of Learning Objectives

You should now be able to define EHRs, describe the importance of EHRs, discuss EHR capabilities with health systems and health care providers, identify EHR strategies to support type 2 diabetes prevention and diabetes management objectives, and describe the limitations of EHRs including the changing landscape of EHR policy and technology.

Slide 44 – Additional Resources

Here are some links to resources that you might find useful. Additional resources are available at www.cms.gov and www.cdc.gov.

Slide 45 – Thank You!

On behalf of the CDC, I want to thank you for participating in "Using Electronic Health Records to Support Diabetes Management and Type 2 Diabetes Prevention" webinar.