CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Guide for Engaging Patients with Prediabetes to Improve Population Health

CDPH California Department of PublicHealth

INTREPID ASCENT

Guide for Identifying and Engaging Patients with Prediabetes to Improve Population Health[1]

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Intrepid Ascent

Wendy Jameson, MPP, MPH

Rupinder Colby, MPH

John Weir, MS

Mark Elson, PhD

California Department of Public Health Chronic Disease Control Branch

Jessica Núñez de Ybarra, MD, MPH, FACPM

Caroline Peck, MD, MPH, FACOG

Laurel Cima-Coates, MPP

Alexandria Simpson, BS

Laurissa Haydu, BA

Mary Rousseve

Vanessa Lopez

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Contents

1. "The Guide for Identifying and Engaging Patients with Prediabetes to Improve Population Health" is an updated version of a publication created by Intrepid Ascent for the San Joaquin County Public Health Department's Lifetime of Wellness (1422) program. This document was updated to include information on engaging patients with prediabetes, specifically in relation to the National Diabetes Prevention Program.

Introduction & Background

Prediabetes is a medical condition defined as blood sugar levels higher than normal but not high enough to be classified as type 2 diabetes mellitus. In 2014, the Centers for Disease Control and Prevention (CDC) indicated that 86 million Americans, more than one out of three adults, have prediabetes yet nine out of ten of them do not know they have the condition.[2] Without intervention, prediabetes is likely to become type 2 diabetes within five years or less.[3] For individuals who have prediabetes, the damage—especially to the heart and circulatory system—may have already begun.[4] Fortunately, lifestyle change and early treatment may return blood glucose levels to the normal range.[5]

Because prediabetes can often be asymptomatic, patients are usually unaware of the condition and may not discuss it with their health care providers. Even while following best practices and providing the highest level of care, providers may have patients who have undetected prediabetes. Therefore, it is critical that health care providers proactively identify patients with prediabetes.

This guide may be used by health care facility leadership as a tool during the decision making and planning processes to implement disease management and reporting programs and to make improvements associated with prediabetes. This guide was created for Medical Directors and Information Technology (IT) management

2. Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2017. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2017. https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf
3. Centers for Disease Control and Prevention. "About Prediabetes & Type 2 Diabetes." U.S. Department of Health & Human Services. https://www.cdc.gov/diabetes/prevention/prediabetes-type2/index.html
4. Mayo Clinic. "Prediabetes symptoms & causes." Mayo Clinic. 02 August 2017. http://www.mayoclinic.org/diseases-conditions/prediabetes/basics/definition/con-20024420
5. American Diabetes Association. "Diagnosing Diabetes and Learning about Prediabetes." American Diabetes Association. 21 November 2016. http://www.diabetes.org/diabetes-basics/diagnosis/?referrer=https://www.google.com/#sthash.gJmD3YsY.dpuf

tasked with implementing electronic reporting, and quality improvement leadership focused on making improvements in care for patients at risk of hypertension and diabetes, and additionally to management teams directing strategies. Specifically, this guide will aid organizations in:

- Identifying eligible patients at the point-of-care
- Identifying eligible patients who do not have an upcoming visit, using data from electronic medical records or in-house disease registry
- Implementing best practices such as pre-visit planning and outreach to patients to ensure that patients who have prediabetes are identified, regardless of whether they have a visit scheduled, and engaged in appropriate, effective and timely preventive care
- Increasing adoption of electronic tools and automated quality reporting, including the use of electronic health records (EHR) and health information exchange (HIE)

This guide incorporates best practices for reporting of patients with prediabetes, as well as engaging with patients in learning about and preventing diabetes through best practices such as those incorporated into the National Diabetes Prevention Program (National DPP).

Building a Program to Address Prediabetes

When planning a program to improve the health of patients with prediabetes, three major steps must be considered: patient population identification, intervention design, and program implementation—including tracking and reporting of data. This guide provides information to help health care organizations undertake each of these steps, make key decisions along the way, and build an effective program tailored to the strengths the needs of organizations and communities.

1. Patient Population Identification

a. Who is the target population and how do we use standard automation for identification within the existing system?

i. Level of engagement with health system

1. Active patients? How defined?
2. Inactive patients?
3. Assigned members?

ii. Which condition(s)?

1. Undetected prediabetes, patients diagnosed with diabetes, or both?

iii. Sub-populations by risk/level of engagement. The following are examples (not an exhaustive list):

1. People with potential prediabetes or diagnosed diabetes who have not had a visit in >1 year.
2. People with potential prediabetes or diagnosed diabetes with uncontrolled blood sugars at two separate medical visits during a defined period.
3. People with elevated blood pressure and other major risk factors (such as obesity, cardiovascular disease, or socio-demographic risk factors that may assist in reducing the risk of diabetes if identified, and counseled to reduce the risk of disease).

Note: Performing an initial data analysis to determine the size of the target population can inform decision-making.

b. Extract data on patients meeting criteria using electronic EHR, data analytics tools and/other database(s), providing visibility to data analysts and extended care team personnel.

i. Which algorithm(s) will be adopted?

ii. How will this algorithm be converted into a data extraction report (for pulling patient lists) and/or an alert or flag in the EHR (for use at point-of-care)?

iii. What is the process for ongoing data extraction and identifying patients pre-visit who meet the criteria?

2. Intervention Design

a. What are best practices for detecting, treating, and partnering with patients to prevent the progression of prediabetes to diabetes? e.g.:

i. huddles;

ii. panel management;

iii. health coaching; and/or

iv. referral to a CDC or other-recognized lifestyle change program.

b. What resources can be deployed in this effort? e.g.:

i. non-physician care team members;

ii. training on health coaching, motivational interviewing, etc.; and/or

iii. community resources.

c. What can be tried on a small scale (e.g., Plan-Do-Study-Act cycles[6]), tested, and spread only once it shows promise as an effective and feasible intervention?

3. Implement, Track and Report Data on Utilization and Outcomes

a. How will the interventions/best practices be rolled-out?

b. How will intervention data and effectiveness be tracked and reported?

6. Agency for Healthcare Research and Quality. "Health Literacy Universal Precautions Toolkit, 2nd Edition: Plan-Do-study-Act (PDSA) Directions and Examples." U.S. Department of Health & Human Services. https://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/healthlittoolkit2-tool2b.html

Identifying Patients with Prediabetes

STEP 1:

Use of Guidelines to Screen Individuals at the Point-Of-Care

Screening patients for potential prediabetes at the point of care is an excellent strategy to uncovering a population unaware of the risk of diabetes. The CDC has provided a free screening test[7] that organizations may adopt as a self-assessment tool for patients. Providers can use this test to screen for risk factors that may lead to diabetes. The CDC also provides a flow diagram[8] outlining key steps in identifying patients with potential prediabetes. Providing patients with a simple self-assessment test is a valuable tool to assist providers in determining whether to counsel a patient on diabetes risk factors.

The CDC defines prediabetes as "...a blood sugar level higher than normal, but not high enough for a diagnosis of diabetes. He or she is at higher risk for developing type 2 diabetes and other serious health problems, including heart disease, and stroke. A person with certain risk factors is more likely to develop prediabetes and type 2 diabetes. These risk factors include: age, especially after 45 years of age; being overweight or obese; a family history of diabetes; having an African American, Hispanic/Latino, American Indian, Asian American, or Pacific Islander racial or ethnic background; a history of diabetes while pregnant (gestational diabetes) or having given birth to a baby weighing nine pounds or more; and being physically active less than three times a week."[9]

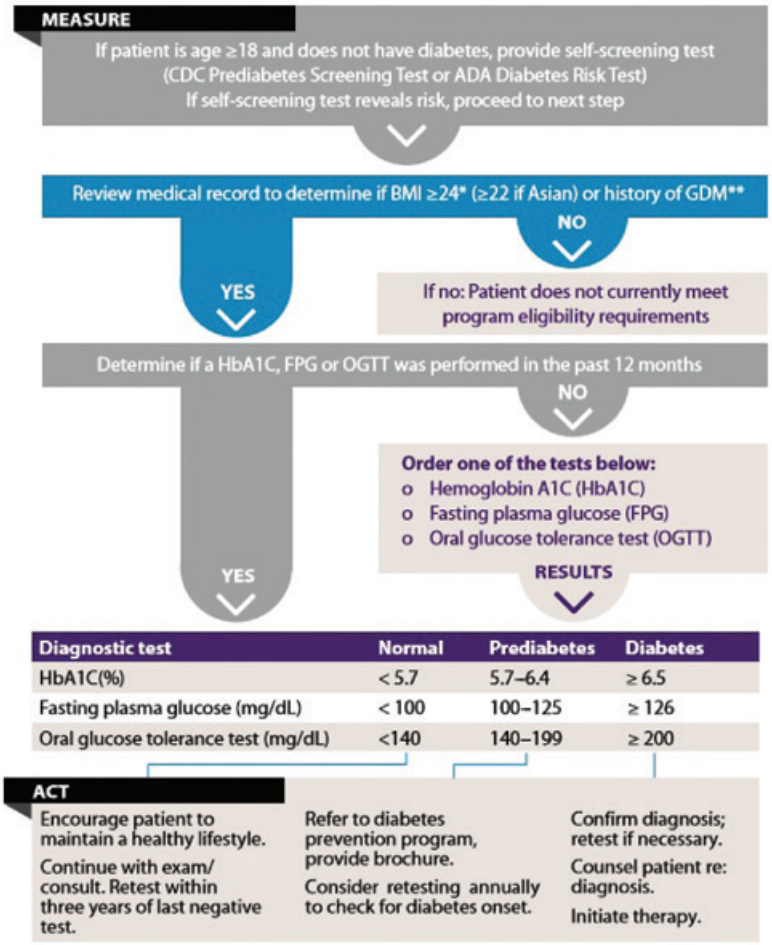
Per the CDC and American Diabetes Association (ADA) guidelines, patients should be screened for the following criteria:

- Physical inactivity
- First-degree relative with diabetes (sibling or parent)
- High-risk race/ethnicity
- Women who delivered a baby >9 lb or were diagnosed with gestational diabetes
- HDL-C <35 mg/dL 3 TG >250 mg/dL
- Hypertension (≥140/90 mm Hg)
- A1C ≥5.7%, Impaired Glucose Tolerance, or Impaired Fasting Glucose on previous testing
- Conditions associated with insulin resistance: severe obesity, Acanthosis Nigricans, Polycystic Ovarian Syndrome (PCOS)
- History of cardiovascular disease

Screening should be performed on adults of any age who are overweight or obese, and who have one or more of the above diabetes risk factors. If screening test is normal, repeat at least every three years. The flow chart below outlines a sample workflow to assist providers in identifying patients for possible prediabetes.

Once the protocol is mapped-out based on review of best practices and feedback from clinicians within the facility, this information may be used to identify critical parameters in the automated identification of patients using reports.

7. Centers for Disease Control & Prevention. "National Diabetes Prevention Program: CDC Prediabetes Screening Test." U.S. Department of Health & Human Services http://www.cdc.gov/diabetes/prevention/pdf/prediabetestest.pdf
8. Prevent Diabetes STAT. "Point-of-care prediabetes identification." The American Medical Association and the Centers for Disease Control and Prevention. http://www.cdc.gov/diabetes/prevention/pdf/point-of-care-prediabetes-identification-algorithm_tag508.pdf
9. Centers for Disease Control & Prevention. "Diabetes Basics: Prediabetes." U.S. Department of Health & Human Services. http://www.cdc.gov/diabetes/basics/prediabetes.html



POINT OF CARE POSSIBLE FOR PREDIABETES AND DIABETES IDENTIFICATION[10]

STEP 2:

Data Extraction from EHRs or Disease Registry to Identify Patients for Outreach

Data extraction can take place using various levels of sophistication based on the capabilities and systems available to the health care facility. Extracted data can include relevant information such as age, ethnicity, socio-economic status, gender, and insurance coverage. Data is often tiered into three layers:

1. Disease registries offer a linear view into the patients' health history using pre-determined algorithms and/or reported disease information. This can be used to track patient progress and management.
2. Electronic Health Records (EHRs) offer reporting like registries, with the additional data associated with patient comorbidities. This allows for in-depth analysis in the event the health care organization has the technical wherewithal to support desired reporting requirements.

10. Prevent Diabetes STAT. "Point-of-care prediabetes identification." The American Medical Association and the Centers for Disease Control and Prevention. http://www.cdc.gov/diabetes/prevention/pdf/point-of-care-prediabetes-identification-algorithm_tag508.pdf

3. Data Analytics and Population Health Management (PHM) solutions enhance reporting capabilities by offering a combination of on-demand reporting across multiple conditions and often the ability to establish care management protocols for tracking and monitoring patients. Further automated follow-up may be performed when appointments are required or care team interaction is necessary. This often requires a level of sophistication that involves data extraction, transformation, and loading of the data into the PHM tools.

While there is no national standard algorithm for extracting data to identify patients with prediabetes using EHRs, there are several algorithms available as references. The key to a successful initiative is to begin small and build the program as resources allow. Extracting data from the EHR may result in an overwhelming amount of information, prioritizing and narrowing the scope of the extraction and/or subsequent outreach effort can help mitigate the impact on the organization. The first and simplest dataset to examine may be patients with prediabetes or a diabetes diagnosis who have not received appropriate treatment or follow-up testing.

Many tools and options exist to support extraction of actionable data. Organizations may choose to use pre-programmed population health tools or the specific population health tool within the EHR. Some organizations have opted to employ a data analyst to conduct Extract, Transform, Load (ETL) programming to extract, cleanse, interpret and display the data. The following information from the American Diabetes Association offer data attributes that should be considered with querying an electronic system to identify patients.

American Diabetes Association

The American Diabetes Association[11] suggests querying the EHR for the following criteria to identify patients with prediabetes.

Query inclusion criteria:

- Age ≥18, and
- BMI ≥25 (BMI ≥22 for Asian individuals), and
- Any of these test values (test performed within 12 months):
  - » HbA1C (5.7–6.4%), and/or
  - » Fasting plasma glucose (100–125 mg/dL), and/or
  - » Oral glucose tolerance test (140–199 mg/dL)

Query exclusion criteria may include insulin use and previous diagnosis of diabetes.

As an organization's program expands, the EHR query can be broadened to identify patients who meet the first two inclusion criteria but do not have the appropriate diagnostics tests on file.

When using a registry or EHR system to create reports for these algorithms, knowledge of the database structure is necessary, unless the vendor offers a visual tool that allows for point and click functionality when generating reports. Where multiple systems may be used or more sophistication is required, often the use of Extract, Transform, and Load (ETL) process is necessary as a means of creating consistency associated with data coming from a variety of sources. This is common when considering PHM tools.

STEP 3:

Train Care Team Members to Identify Patients during Pre-Visit Planning

Steps 1 and 2 provide suggestions and best practices around the types of EHR data and clinical values an organization can use to help flag patients who are at risk of prediabetes. The objective of Step 3 is to outline model practices to adopt and promote.

11. Tsai A. "Everything You Need to Know About Electronic Health Records." Diabetes Forecast. May 2015. http://www.diabetesforecast.org/2015/may-jun/everything-you-need-to-know.html

Pre-visit planning[12] and panel management[13] are two tools that enable organizations to ensure:

- Patients receive appropriate confirming diagnostic tests
- Proper diagnoses are entered into medical record accurately
- Patients engage in developing an updated care plan and/or receive referral to community resources to prevent further exacerbation, and proper management, of chronic diseases

Pre-visit planning offers opportunities to improve patient care and to identify gaps in care for patients with upcoming visits. Common pre-visit planning steps include:

- Gathering the necessary information for upcoming visits
- Planning the current patient visit and preparing for the next
- Pre-populating the next day's visit notes with diabetes risks (e.g., abnormal blood sugar, lifestyle risks, high blood pressure, etc.)
- Arranging for pre-visit lab testing

The American Medical Association has an interactive tool to assist practices in implementing pre-visit planning, available at:

https://www.stepsforward.org/modules/pre-visit-planning

In Panel Management (also known as 'recall') patients are systematically identified for gaps in care, preventive services, and/or chronic condition management. Panel Management allows organizations to proactively identify and contact patients who are currently accessing the health care system but may be unaware of risk factors or medical conditions. This approach allows clinical staff to improve care for patients who are not physically in the office.

STEP 4:

Train Care Team Members to Accurately and Consistently Record Data in Electronic Systems

When developing reports using electronic health records, it is important to ensure the data is accurate, reliable and complete to ensure it is useful. Clinical practices often include faxes and paper medical reports as part of a patient's file and neglect to add all relevant information that otherwise may be available via electronic methods of recording and distributing data, causing that information to be omitted from the automated reports. Therefore, organizations must ensure that data associated with paper-based laboratory results, manual readings associated with blood pressure, and other information is added to the electronic file so that a complete picture of the patient's health is possible.

Within point of care tools, it is possible to make certain fields required, selectable from lists and dropdown values and, in many cases, codified as a means of offering consistency and ease of input, while reducing manual and free-text entry where numerical values may be required. This process is not foolproof, for example, EHRs offer considerable flexibility regarding data input, including free-text note taking and scanning of paper documentation. If point-of-care tools are properly designed and users are properly trained, users should be able to understand which data elements are acceptable to use with the system and the correct processes to follow to ensure that data elements are accurately entered into the system.

This may require small tests of change that invoke the Plan-Do-Study-Act (PDSA) cycles to determine the best practices for specific clinics and how teams interact with one another and with systems.

12. Sinsky C. "StepsForward: Pre-Visit Planning." American Medical Association. https://www.stepsforward.org/modules/pre-visit-planning

13. Bodenheimer T, Ghorob A, Margolius D. "StepsForward: Panel Management." American Medical Association. https://www.stepsforward.org/modules/panel-management

The process of being able to identify prediabetes in patients starts with consistently capturing and entering blood sugar levels, body mass index (BMI), family history, and, lifestyle information and comparing it against previous data to see if there is a trend. Taking and entering the readings at the start of the visit, prior to the clinician conducting the main exam, may be a way to allow time for the clinician to see a potential issue and highlight it during the visit, instead of waiting until a later date for a report to highlight a potential problem.

EHRs also have a myriad of clinical decision support tools that offer alerts associated with certain warning signs and conditions. It is recommended that organizations coordinate their quality improvement activities with IT capabilities to maximize the ability to flag items for clinicians to consider while ensuring that false positive alerts are not a hindrance to workflow.

For example, dashboard views of patient data may offer visibility at the point-of-care into blood sugar trends. This would allow the clinician to ask pertinent lifestyle questions, or advise or prescribe medications or possible lifestyle changes that may aid the patient in preventing or reducing the effects of a disease.

Engaging Patients with Prediabetes

Outreach/Panel Management/ Recall

Today, patients and providers communicate with each other with a greater sense of ease than in the past, which helps to bridge the communication gap between clinical visits. However, the use of electronic systems (including EHRs) by clinicians to identify patients with varying risks of disease or advise patients on ways to manage a disease, will further enhance communications between providers and their patients. Clinicians are also able to use electronic systems to intervene with patients on their behalf for low-level activities, such as reports, which provide phone call reminders to patients flagged with certain risk levels or disease attributes that require extra attention. This can be particularly beneficial for patients who do not schedule regular check-ins with their providers. Through such tools, care teams can reduce overhead costs associated with administrative tasks and proactively manage their patients.

The following scenario illustrates how reporting and automation can help with panel management. Consider an overweight male aged 40 with one HbA1C reading of 6.1 percent during the last 12 months. This patient was not identified as an individual with prediabetes prior to the new process and software solution being implemented within the clinic. The office's new process for patient outreach and use of a population health management system now flags that patient and places an automated call requesting the patient to schedule an office visit. For this example, the patient makes the appointment and has an HbA1C test repeated prior to showing up, allowing the care team to observe a continuing high A1c reading. The patient is diagnosed with prediabetes and given a treatment regime and a follow up schedule where they should visit the practice every 90-days until further notice. The patient is also granted access to a data-reporting tool, tracking information including their physical activity, nutritional intake and self-management associated with Prediabetes.

Sixty days into the process, a care team member can easily check on any data reported to a portal or shared via other mechanism(s) to understand the patient's compliance and progress and determine any follow up actions necessary. At that time, a health coach contacts the patient and advises them to come in for an appointment within the next two weeks. Once

the appointment is scheduled, 24–72 hours prior to the appointment, the patient receives an automated appointment reminder informing them of the scheduled appointment that they can keep, change or cancel. Automation allows the care team to focus on more complex patient care issues by completing tasks normally executed by the care team. Assuming the patient keeps the appointment, prior to the visit during pre-visit planning, using flags and alerts from the EHR system, the care team can see other characteristics that may require follow up during the visit, such as obesity and a need for nutritional and dietician advice. The use of data analytics and automation can affect not only the patient but also the efficiency in which the care team practices medicine and interacts with each other and with the patient.

It is also important to note that the use of the patient portal after the patient's visit facilitates the sharing of information associated with the patient's vitals and laboratory readings and allows for both patient and clinicians to remain informed of the status. Furthermore, such tools offer the patient access to ask questions directly with their provider, using secure email messaging. By maintaining this line of communication that historically has not been available without the use of telephone or in-person visits, the clinical practice increases the quality of care and patient safety and supports improved patient outcomes.

In addition to increasing patient safety and quality of care, systems may assist providers with improvements associated with the following:

Risk Management by: [14]

- Providing clinical alerts and reminders
- Improving aggregation, analysis, and communication of patient information
- Making it easier to consider all aspects of a patient's condition
- Supporting diagnostic and therapeutic decision making
- Gathering all relevant information (lab results, etc.) in one place
- Providing support for therapeutic decisions
- Enabling evidence-based decisions at point-of-care
- Preventing adverse events
- Providing built-in safeguards against prescribing treatments that would result in adverse events
- Enhancing research and monitoring for improvements in clinical quality

Certified EHRs May Help Providers Prevent Liability Actions By:

- Demonstrating adherence to the best evidence-based practices
- Producing complete, legible records readily available for the defense (reconstructing what happened during the point-of-care)
- Disclosing evidence that suggests informed consent

National Diabetes Prevention Program

Practices can engage patients with prediabetes to make lifestyle changes to prevent or delay the onset of diabetes through team-based care services such as health-coaching or nutritional counseling, and/or referring patients to community-based resources. The National DPP is an evidence-based CDC-approved program effective in preventing or delaying type 2 diabetes among participants.[15] The National DPP provides in-person and online lifestyle change programs, known as Diabetes Prevention Programs (DPPs), nationwide to encourage participants to make lasting lifestyle changes, like eating healthier, adding physical activity, and improving coping skills; they are available in multiple locations in every state. For information on DPPs in your area, visit: https://nccd.cdc.gov/ddt_dprp/registry.aspx.

14. HealthIT.gov. "Benefits of EHRs: Improved Diagnostics & Patient Outcomes." U.S. Department of Health & Human Services. https://www.healthit.gov/providers-professionals/improved-diagnostics-patient-outcomes

15. Centers for Disease Control and Prevention. "National Diabetes Prevention Program." U.S. Department of Health & Human Services. https://www.cdc.gov/diabetes/prevention/index.html

Recent state and national budget and policy decisions have strengthened the spread and sustainability of the National DPP. On November 2, 2017, the Centers for Medicare & Medicaid Services (CMS) issued the Calendar Year (CY) 2018 Physician Fee Schedule (PFS) final rule that would expand the Medicare Diabetes Prevention Program (MDPP) model starting in 2018. In January 2018, CMS began offering an MDPP-specific enrollment application for interested suppliers.[16] CMS is using a performance-based payment structure that ties payment to performance goals based on attendance and/or weight loss.[17]

Additionally, on July 10, 2017, California's Governor signed legislation requiring California's Medicaid program (Medi-Cal) to pay for Medi-Cal beneficiaries who have prediabetes or a high risk of developing type 2 diabetes to participate in National DPP. The National DPP shall be made available to Medi-Cal beneficiaries no sooner than July 1, 2018, after receiving federal approval. California will become the third state to provide the NDPP as a Medicaid benefit, following Montana and Minnesota.

Using EHR or HIE, practices can provide electronic referral (also called e-Referral) to DPPs. Multiple options may exist for e-Referral based on whether referrals are being placed to internal health education specialists or external educators at community based organizations. Depending on the model, e-Referrals may be sent one of two ways:

1. Internal referrals: Using EHR templates, the referral to the DPP becomes another referral type, which is transmitted within the EHR.
2. External referrals: In the event referrals are sent externally from the organization's EHR, providers will most likely require the use of the Direct[18] messaging protocol, which offers a secure means of transmitting protected health information. There are two options in this scenario, both of which rely on the use of the Direct messaging protocol for referral message transmission:
   a. EHR to EHR: This involves using the EHR template to send a Direct message from one provider's EHR system to another EHR system. A referral template must be created within the initiating EHR and that system must have access to or store the Direct messaging address of the recipient provider(s).
   b. EHR to HIE: This scenario most likely involves communications with a community-based organization administering the DPP, which may not have access to an EHR system. However, where HIE exists, the community-based organization (CBO) may be able to gain membership to the HIE with limited access for purposes of administering data associated with the DPP, or the HIE may provide a Direct "inbox" to the CBO to facilitate referrals directly from participating provider organizations.

In the event e-Referrals are possible, provider practices and DPP staff should also work with EHR staff to incorporate tracking of attendance and compliance with the National DPP as a means of maximizing communication between patients and providers about DPP impact on health outcomes.

Benefit from Provider Referrals to National DPP

In a recent study from Denver Health on promoting provider referrals to National DPP, patient enrollment and participation in DPPs was significantly increased when providers endorsed participation and referred their patients to the program.[19] Patients referred by their providers were 5.52 times as likely to enroll as those

16. Centers for Medicare and Medicaid Services. "Welcome to the Medicare Provider Enrollment, Chain, and Ownership System (PECOS)." U.S. Department of Health & Human Services. https://pecos.cms.hhs.gov/pecos/login.do#headingLv1
17. Centers for Medicare and Medicaid Services. "Fact Sheet: Final Policies for the Medicare Diabetes Prevention Program Expanded Model in the Calendar Year 2018 Physician Fee Schedule Final Rule." U.S. Department of Health & Human Services. https://innovation.cms.gov/Files/fact-sheet/mdpp-cy2018fr-fs.pdf
18. The Direct Project. "The Direct Project Wiki." The Direct Project. http://wiki.directproject.org/
19. Richie ND and Swigert TJ (2016). "Establishing an Effective Primary Care Referral Network for the National Diabetes Prevention Program." AADE in Practice, 4(6): 14–16. http://journals.sagepub.com/doi/abs/10.1177/2325160316647707?journalCode=aipa

targeted for other types of outreach without a provider referral. The activities and support offered by the National DPP were well-received and welcomed among providers; they saw the resources as evidence-based and targeted towards high-need patients. Establishing a network of providers who encourage patients with prediabetes to enroll in DPPs also reduces the need for costly and less effective marketing and outreach such as mass mailings. The authors concluded that there is high interest in DPPs when patients are told of their provider's endorsement to take action, and that obtaining provider endorsements prior to offering enrollment in DPPs is a best practice to help patients engage in diabetes prevention resources.

Innovative Partnership: Public Health Department Feeds Data on Pre-Diabetic Patients to Providers at County Health Center to Increase Referrals to the Diabetes Prevention Program

In Solano County, public health staff have developed an innovative collaboration to increase referrals from health care centers into its DPP. When county public health DPP staff approached a county Family Health Center manager in 2015 to encourage providers to start referring pre-diabetic patients into the DPP, health center leadership were enthusiastic but had no one to pull data to identify patients appropriate for DPP referral. Therefore, public health staff figured out how to pull lists of Family Health Center patients who may have prediabetes, even though their access to the patient database was limited to billing data. Now, each morning public health staff run a query of the Family Health Center database to identify potential patients with prediabetes with an appointment that day. Public health sends a list of 2–5 patients per provider to the health center's referral coordinator, who then distributes the lists to the providers' medical assistants via an EHR alert. During the appointment, the care team (usually the medical assistant) has a conversation with the patient about their risk for developing diabetes and about the DPP. If the patient is interested, the medical assistant includes that patient on a list they send back to the public health staff. A certified DPP instructor in the public health department then reaches out by telephone to the patient to enroll them in an upcoming DPP class.

Two years later, about half of Solano County's DPP referrals come from the Family Health Centers, while the other half come from community outreach. Public health staff stressed the importance of: a) having an onsite clinical champion; b) engaging clinic managers, providers, and medical assistants in the importance of DPP in preventing diabetes; c) conducting regular in-services to keep health center staff and providers engaged and solicit feedback to continually improve the collaborative processes; and, d) having access to at least the billing component of the health center's patient database in order to pull lists of patients who would likely benefit from the DPP. Anecdotally, providers at the health center have indicated that they like this process as it relies on other members of the care team, which they see as more expedient, than relying on the primary care clinician to make the referrals.

Conclusion

From a public health perspective, electronic solutions such as EHRs and PHM tools provide a lens into the entire patient population for a health care facility, no matter how small or large. This management of populations facilitates various views into groups, such as those patients suffering from specific conditions (e.g. prediabetes); those patients who are controlling their conditions versus those who require varying levels of intervention; and what patients may not be optimizing their interaction with their health care provider and require more consistent follow-up to impact current status. Socio-economic, gender, and ethnicity factors also correlate across many chronic conditions allowing these factors to be considered, in addition to insurance coverage and age groups, in the analysis of patient groups. At-risk groups may then be allocated to care teams and care management. Using protocols established within the facility, team members may implement processes that consider the level of intervention required for the patient group in question, to consistently offer follow-up, education, and awareness, in addition to further touch points that allow for increasingly proactive care.

Additional Reading

Further reading associated with management of patients using EHRs, access to patient portal use and conducting patient centered care, along with Prediabetes and Diabetes management, may be found at:

Topic	URL
Impact of Electronic Health Records and Teamwork on Diabetes Care Quality	https://www.ajmc.com/journals/issue/2015/2015-vol21-n12/the-impact-of-electronic-health-records-and-teamwork-on-diabetes-care-quality
Prediabetes: Closing the Care Gap; Heather Readhead, M.D., MPH	https://wellness.inhs.org/uploadedFiles/Health_and_Wellness/Resources/Dr.%20Readhead%20presentation.pdf
Measuring the Impact of Patient Portals	http://www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/PDF%20M/PDF%20MeasuringImpactPatientPortals.pdf
Record-Based Screening, Prevention, and Management of Diabetes in New York City	http://www.cdc.gov/pcd/issues/2013/12_0148.htm
Prevent Diabetes STAT: Provider Toolkit on Preventing Diabetes	https://preventdiabetesstat.org/toolkit.html

Topic	URL
Using EHR's to Track Prediabetes Recognition and Treatment	http://www.diabetesincontrol.com/using-ehrs-to-track-prediabetes-recognition-and-treatment/
Registry-based Diabetes Risk Detection Schema for the Systematic Identification of Patients at Risk for Diabetes in West Virginia Primary Care Centers	http://perspectives.ahima.org/registry-based-diabetes-risk-detection-schema-for-the-systematic-identification-of-patients-at-risk-for-diabetes-in-west-virginia-primary-care-centers/
HealthIT.gov—FAQ for EHR (searchable)	http://www.jmir.org/article/viewFile/jmir_v17i2e44/2

Glossary of Terms

Panel management means ensuring that ALL the patients in a provider's panel get the recommended preventive and chronic care. This can include identifying patients, such as those with prediabetes or unmanaged diabetes, who do not know they need chronic care.

In-reach/scrubbing charts, also referred to as pre-visit planning, is done for active promotion of a service to patients already accessing the health care system. It involves reviewing charts before the visit to identify and ensure provision of preventive and chronic care management services needed for each patient. For example, a medical assistant scrubbing the charts of patients coming in the next day can use an algorithm to determine which patients may have risk of diabetes, and create a flag or alert in the EMR for the provider and medical assistant to see during the pre-visit huddle, to ensure they conduct additional diagnostic testing to confirm or rule out diabetes or a risk of diabetes.

Outreach/recall, refers to reaching out to assigned patients who do not have scheduled visits. For example, a data analyst can provide a list to the panel manager of patients assigned to a provider's panel who have care gaps—i.e., need a preventive screen or are overdue for a chronic care management lab, procedure or visit. Lists of patients who may have various levels of risk or existing diabetes, by provider panel, can be extracted from the EMR using an algorithm.

Patient Registry: A list of patients on a provider's panel who are due/overdue for needed preventive and chronic care services.

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