Improving Diabetes Outcomes

Curated Expert Guidance, Tools + Resources

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As of CDC's 2017 National Diabetes Statistics Report, 30.3 million people, or **9.4% of the total U.S. population, have diabetes**. Of these 30.3 million, only 23.1 million are diagnosed—while the other estimated 7.2 million are undiagnosed. Additionally, more than 1 in 3 adults or 84.1 million people in the U.S. have prediabetes, including nearly half of people age 65 and older.

According to 2016 UDS data, **an estimated 14.3% of Federally Qualified Health Center patients nationwide have diabetes**. Of these 2 million plus patients living with diabetes, approximately 32% have uncontrolled diabetes, with HbA1c equal to or above 9% or have had no test in the prior year.

This illustrates the need for targeted quality improvement and implementation of promising practices to address diabetes and needs of diabetic patients.

QUALITY IMPROVEMENT APPROACH

HITEQ recommends a structured Quality Improvement approach. The HITEQ Guide for Improving Care Processes and Outcomes provides strategies and tools that health centers and their partners can use to enhance care processes and outcomes for diabetes control, preventive care, and many others targets for improvement.

The approach provides a framework and tools for documenting, analyzing, sharing and improving key workflows and information flows that drive performance on important care performance measures, and related improvement imperatives.

After determining current performance on diabetes control and setting a realistic goal, health centers are urged to take the following six steps:

Step 1: Check/ Reinforce Foundations— Successful health IT-enabled QI efforts must have firm foundation of people, process, and technology supported by reliable, verifiable data.

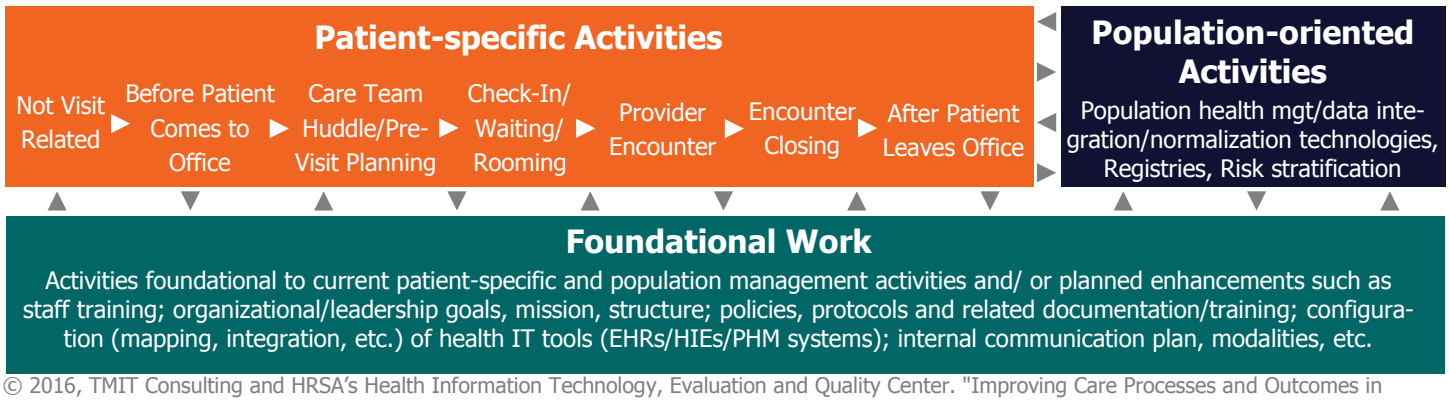
Step 2: Understand Health IT Enabled QI— Based on the CDS 5 Rights Framework.

Step 3: Select Targets/ Initiate QI Project— Use analytics to understand current diabetes-related outcomes and define a reasonable goal.

Step 4: Document/ Analyze Flows, Identify Improvements— Use Essential or Enhanced QI Worksheet to identify current information/clinical flows and opportunities for implementation of best practices.

Step 5: Implement/ Evaluate Changes— Use a structured QI process such as PDSAs and feedback loops.

Step 6: Harvest/ Spread Results-- Embed resulting processes and implement keys from Institute for Healthcare Improvement's Ensuring Improvements Stick.



BEST PRACTICES AND RECENT RESEARCH IN EACH SECTION FROM QI WORKSHEET

The Enhanced QI worksheet that is at the center of the Guide for Improving Care Processes and Outcomes encourages detailed examination of current information and work flow in three areas: patient-specific activities, population-oriented activities, and foundational work.

Below, literature, tools, and best practice resources are provided in each of the three areas (patient-specific activities, population-oriented activities, and foundational work) for consideration when determining potential enhancements.

Patient-Specific Activities

Information and workflow that relate to individual patients along the care path, including before the patient comes into the office, during the care team huddle, at check-in or in the waiting room, during the provider encounter, closing out that encounter, and after the patient leaves the office.

AMA Steps Forward Managing Type 2 Diabetes: A Team-Based Approach

This module helps improve glycemic control and prevent complications in patients with type 2 diabetes:

1. Outlines six steps for developing an efficient team-based approach to managing diabetes
2. Provides answers to common questions about diabetes management for patients with type 2 diabetes
3. Provides examples from other practices on how they are helping patients achieve their glycemic goals

Health Center Takeway: Consider using time spent in the waiting room to reconcile medications, using paper forms or tablets, and ensure that patients know (and understand!) their numbers. Consider data visualization concepts to improve understanding. Additionally, consider specific parts of patient care where your health center can make a meaningful difference, rather than attempting to overhaul many parts at the same time.

Mayo Clinic's Diabetes Medication Choice Decision Aid helps engage patients in care

Lessons learned: Patients are more likely to adhere to their treatment plan if they helped design it. The Mayo Clinic has developed decision aids to support shared decision-making conversations between clinicians and patients with diabetes about treatment options related to diabetes medication and statin therapy to reduce cardiovascular risk.

Health Center Takeaways: Using visual, web-based tools (this and/or others) to engage patients in their own care can improve shared understanding and thereby improve adherence.

Center for Care Innovations' results from testing multi-faceted online health coaching with diabetic patients

Lessons learned from online coaching test:

- The most successful participants used all [facets] of the platform.
- It's important to find a balance between the desires of some groups to meet in person, and participation online. [Online tools] are most useful for individuals or groups that can't meet regularly, and instead need to connect to their health coaching remotely.
- Some employees were interested in being in a group with their coworkers, while others preferred to share health goals with strangers. (Be sure to take patient preference into account.)
- Signing up can be a big barrier for some patients, and thus can benefit from some handholding by health center.

Health Center Takeway: Multi-faceted online coaching can have a positive impact for diabetic patients. It is most successful as a compliment to other programs (such as chronic disease self-management), and when patient preference is taken into account. Allow for staff time to assist patients in getting started with signing up and using an online platform to maximize participation.

New Study Questions Accuracy of mHealth Devices for Diabetes

Conclusions: An independent study of 18 FDA-approved mHealth devices that measure blood glucose in diabetic users has found that two-thirds aren't accurate, potentially putting the user at risk.

Health Center Takeway: While patient generated data is an emerging area that affords many opportunities, until results are known to be reliably accurate, be sure to use other historically reliable information for key decisions.

Mobile Phone Diabetes Project Led To Improved Glycemic Control And Net Savings For Chicago Plan Participants

Conclusions: The University of Chicago Medicine's experience with a mobile health diabetes program suggests that connected health solutions hold promise for supporting chronic disease self-care, improving clinical outcomes, and reducing costs. This study offers early evidence that mHealth can enable healthcare organizations to effectively support patients beyond the traditional health care setting and achieve the triple aim of better health, better health care, and lower costs. Although a business case for the use of mHealth was identified, the diffusion and sustainability of mHealth depends on a supportive policy environment. Accelerated movement toward accountability for population health, increased interoperability with electronic health records, and clearer regulatory guidance will be important for unlocking mHealth's potential to support behavior change and chronic care.

Health Center Takeway: Mobile health programs (such as apps that support traditional care) show promise, but health centers should first be sure that appropriate Health IT

integration is possible so that mHealth does not exist in a vacuum and supports overall goals such as population health management. Policy structures such as value based payment and privacy laws may support or inhibit implementation.

A clinic-based pilot intervention to enhance diabetes management for elderly Hispanic patients

Conclusions: The need for assistance with basic social services is high in the elderly Hispanic health center population. The rate of referral uptake (50%) is high for a relatively low intensity intervention. Since the completion of the pilot, the program has trained 21 volunteers and helped over 220 patients in a primary care clinic. Using a volunteer model and creating connections to existing community resources is a cost-conscious way to deliver needed services to patients.

Health Center Takeaways: Building community partnerships, referral networks, and volunteer programs that support patient's social service needs can be a cost efficient way to support improved care and outcomes. Be sure to incorporate into your health IT systems to every extent possible, so the EHR can be a reliable source of holistic information.

Population-Oriented Activities

Population oriented activities include those activities that monitor or support the care of the whole patient panel, not just the individual patient being seen. This may include population health management/ data integration technologies, registries and reports, and risk stratification among other activities.

NACHC's Value Transformation Framework Action Guide Population Health Management:

Risk Stratification

Diabetic patients living with diabetes often live with several other co-occurring conditions such as high blood pressure, obesity, depression and heart disease. As such, often controlling diabetes is not possible without addressing the full range of conditions. Identifying the portion of the patient population that are most complex to those that are at lesser risk facilitates appropriate care planning.

Health Center Takeaway: Using a structured approach, either through your population health analytic system or following the guidance in this or similar tools, identify risk groups and match each group with internal capabilities and external resources to meet the unique patient needs of each group. Doing so will allow you to connect highly complex diabetic patients with a more intensive array of services that are more likely to lead to controlled diabetes, and those who are at lower risk can receive appropriate supports,

Development and Validation of a Tool to Identify Patients With Type 2 Diabetes (T2D) at High Risk of Hypoglycemia-Related Emergency Department or Hospital Use

Conclusions: The tool offered in this article provides a practical, EMR-based method to stratify patients with T2D by their 12-month risk of hypoglycemia-related ED or hospital utilization. This tool could be integrated with targeted preventive interventions to facilitate population management, which ultimately could reduce future hypoglycemia risk and improve patient safety. The 2 criteria indicating high risk are easily memorized (i.e., ≥3 previous episodes of hypoglycemia-related utilization, or 1 or 2 episodes if treated with insulin). The criteria for intermediate risk are more nuanced and therefore may be less likely to provoke clinical action in primary care

without prompting. Healthcare systems could adopt a 2-level intervention, with intensive (more expensive) interventions reserved for high-risk patients and less intensive (lower cost) interventions for the intermediate-risk patients. Implementation of this tool could conceivably increase clinician awareness of patients' hypoglycemia risk.

Health Center Takeaway: Consider using this or similar tools or criteria to create a registry or report to identify groups of patients within your patient population who may be at increased risk of hypo-glycaemia related hospital use, and consider supporting those patients with additional care management and wraparound services.

Predictors of Diabetic Retinopathy (DR) in a Community Health Center Population

Conclusions: Among patients with diabetes, use of insulin therapy, longer duration of diabetes, presence of kidney disease, and higher A1C values increase the odds of DR. These preliminary data may suggest patients who are at higher risk of DR [in order to] further prioritize screening for DR with a newly implemented telemedicine program.

Health Center Takeaway: Consider using these criteria to create a registry or report to identify patients who may be ideal candidates for telemedicine, electronic patient engagement, or similar initiatives that extend patient care beyond the health center walls.

Foundational Work

Activities foundational to patient-specific and population-oriented activities and/or planned enhancements such as organizational and leadership goals, mission, structure; policies, protocols and related documentation and training; configuration (mapping, integration, etc.) of health IT tools (EHRs/HIEs/PHM systems); internal communication approaches; and staff training plans, objectives, and approaches.

Institute for Healthcare Improvement's Six-Part Chronic Care Model. Used by 3,400 Health Center sites, this includes tips for success in each of the following areas:

- Self-Management
- Decision support
- Clinical information system
- Delivery system design
- Organization of health care
- Community

American Diabetes Association: Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes

- Algorithm of Care: Outlines four critical times to assess, provide, and adjust diabetes self-management education and support (Algorithm Action Steps) as well as when primary care provider or specialist should consider referral.

From Maine Quality Counts, Pre-Diabetes Identification and Intervention Algorithm

This identification and intervention algorithm creates a structured protocol and agreed upon set of steps to follow to identify and intervene where the risk of pre-diabetes or diabetes is high.

Health Center Takeaway: This algorithm can be implemented as a workflow in health IT systems, used as a part of provider training, or as a beginning point for discussions with health center providers about how patients at high risk of pre-diabetes or diabetes can be better identified and treated.

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From the Healthcare for the Homeless Clinicians' Network, Adapting your Practice: Treatment and Recommendations for Patients who are Homeless with Homeless with Diabetes Mellitus

Conclusions: Diabetes occurs at approximately the same rate in the homeless and general populations; however, diagnosis and management of diabetes in individuals experiencing homelessness remains greatly challenging, according to the research. Homelessness creates additional difficulties when patients are trying to manage diabetes within the constraints of living in a shelter or on the streets. Healthy meals can be hard to find, refrigerating insulin may be impossible, and medications for other illnesses may have a negative impact on metabolism. Clinicians who provide care to these individuals face complex challenges to adapt their practices to address the rigors of diabetes treatment while accommodating for the realities of their patients' lives.

Health Center Takeaway: Ensuring health center services are appropriate to the populations being served is essential to success. Best practices must be tailored to the reality of patients' experiences such as language literacy, transportation availability, housing, communication preferences or options, etc.

From the Safety Net Medical Home Initiative's Quality Improvement Strategy Implementation Guide: Using Action Reports to Guide Team Care Management Activity and Outcomes Reports to Monitor Processes of Care and Population Outcomes. Key best practices, including the following, are found on Pages 18 through 20:

- Process Goals
- Workflow Requirements
- Health IT Technical Requirements

Oregon PCA Peer Sharing: Diabetes Best Practices and Chronic Disease Management

Health Center improvements implemented:

1. Cross-trained staff to cover the lab and add the ability of labs to be drawn prior to the patient leaving the office.
2. Modified standing orders for point of care A1C to be completed by medical assistant at least every 3 months.
3. Addition of registered dietician to staff via grant funding, to supplement Self-Management programs.

Pharmacist-Managed Diabetes Mellitus Program in the Underserved Population: Improving Care Through a Comprehensive Patient-centered Approach

Objectives: Developed and implemented a pharmacist-managed diabetes program and provided comprehensive patient-centered care to enhance diabetes self-management in the underserved.

Conclusions: A higher percentage of patients enrolled in the pharmacist-managed diabetes program met A1C goal compared to standard PCP care. Strategies such as appointment reminders, walk-in appointments, flexible scheduling, assistance with housing and food, daily medication dispensing, and frequent follow-ups contributed to the success in managing diabetes in this complex population. The results of this study suggest that the incorporation of pharmacy services into primary care setting may positively impact the management of diabetes and other chronic disease states.

Health Center Takeaway: Engaging multidisciplinary staff, particularly those providers who may see the patient more regularly, to enroll and support patients in diabetes management programs can increase uptake and improve outcomes.

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