



Clinical Decision Support Practice Module

February 2020

Hypertension, Diabetes, and High Cholesterol
Prevention and Management



This publication was supported by the
Cooperative Agreement Number
NU58DP2018006563 from the Centers for
Disease Control and Prevention. Its
contents are solely the responsibility of the
authors and do not necessarily represent
the official views of the Centers for
Disease Control and Prevention.
Publication number DEDPH-HD-021120

Table of Contents

Purpose of Module.....	1
Awareness	2
Four Ways CDS Can Improve Outcomes.....	2
Understanding the Basics of CDS	3
The CDS Five Rights Model	3
What Qualifies as a CDS Tool	4
Alerts & Reminders.....	5
Order Sets	6
Info Buttons.....	6
Data Displays.....	7
Documentation Templates as CDS.....	7
Use of Structured Data Fields and Smart Forms in Clinical Workflow	7
Smart Forms in Clinical Workflow	7
Basics of CDS with IT Operability.....	8
Assessment.....	8
AHRQ Resources for Getting Started with CDS.....	8
CDC Best Practices.....	9
CDS Guidebook.....	9
CDC and Million Hearts: Hypertension Control Change Package for Clinicians	10
CDS Starter Kit: Diabetes Follow-Up Care.....	10
CDS: Cloud-Based Decision Support.....	10
Action	11
AHRQ Resources for Implementing and Improving Use of CDS	11
Take the Challenge: Become a Million Hearts Hypertension Control Champion.....	11
Million Hearts: Treatment Protocols.....	12
Using CDS to Help Identify and Manage Patients with Prediabetes.....	12

Decreasing Alert Fatigue.....	13
Implementation and Evaluation Using the GUIDES Checklist	13
Example: Capturing Lifestyle Referrals to Lifestyle Change Programs.....	13
Resources for Providers	15
Just Released: New Enhancements to CDC's Diabetes Self-Management Education and Support Services (DSEMES) Toolkit	15
Resources for Developing a Diabetes Self-Management Education and Support Program (DSMES).....	15
Improve your Practice with these Clinical Decision Support Workflow Modifications.....	16
Practice Module from Quality Insights	16
Appendix A: Care Team Interventions to Implement American Heart Association CVD Primary Prevention Guidelines.....	17

Purpose of Module

This module contains a high-level overview of various electronic health record (EHR) actions intended to promote and supplement your current population health and quality improvement efforts.

Areas of focus include:

- **Clinical Decision Support (CDS):** Encompasses a variety of tools to enhance decision-making in the clinical workflow. These tools can include computerized alerts and reminders to care providers and patients; clinical guidelines; condition-specific order sets; focused patient data reports and summaries; documentation templates; diagnostic support, and contextually relevant reference information.¹
- **Structured Data:** Opposite of unstructured data (i.e. “free text”), structured data follows a prescribed data model and value set, constraining the users to only be able to enter or choose pre-determined values. Computers and EHR’s can usually readily process information entered in structured data fields.²
- **Provider-Level Data Sharing:** For the purpose of this module, refers to providing clinic-level data reports (i.e. CQMs, NQF 0018 and CMS 347 reports and/or other relevant data) to providers for the purpose of increased awareness and engagement in quality improvement activities.



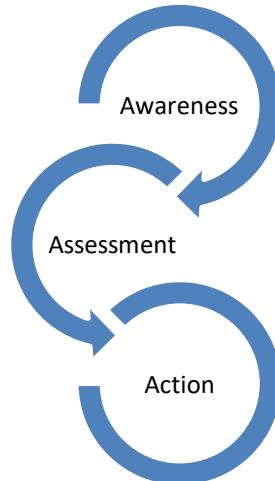
Please Note: Recommendations referenced in this module are to be used in alignment with clinic/health system protocols in combination with physician/clinician judgment, treatment and based on the unique needs of patients.

¹ <https://www.healthit.gov/topic/safety/clinical-decision-support>

² <https://www.phii.org/resources/view/9242/understanding-clinical-data-and-workflows>

The module is organized into three sections for **AWARENESS**, **ASSESSMENT**, and **ACTION**:

- **AWARENESS** - Explain different types of CDS , the 5 rights, and the use of structured data fields in clinical workflow
- **ASSESSMENT** – For practices considering implementing or at early stage of implementation of CDS: best practices, primers, and guides
- **ACTION** – For practices considering how best to utilize established CDS: resources from AHRQ, Million Hearts, and more



Awareness

Four Ways CDS Can Improve Outcomes

CDS is not intended to replace clinician judgment, but rather to provide an accurate tool utilizing structured patient data and evidenced-based tool to analyze the data and to assist care team members in making timely, informed and higher quality decisions. When providers remain in control of decisions while avoiding issues that can arise when critical information is unknown, the advantages of using a CDS system fall into four general “reducing” categories³:

1. **Reducing the rate of medical errors:** Facts about a patient’s current condition and clinical history that can impact patient safety are often buried in EHR free-text. If the CDS system is capable of accurately interpreting and retrieving data wherever it resides, it can provide broad assistance that ranges from helping to avoid dangerous medication interactions and contraindications to avoiding catastrophic misdiagnoses.
2. **Reducing unnecessary or duplicate testing:** Because they are informed by a comprehensive view of the patient’s clinical condition and history, CDS systems can reduce care costs by eliminating duplicate and unnecessary tests.
3. **Reducing length of stay and instances of hospital-acquired conditions:** CDS systems can issue alerts when they detect deviations from the evidence-based best practices

³ <https://www.managedhealthcareexecutive.com/business-strategy/four-ways-clinical-decision-support-can-improve-outcomes>

embodied in a hospital system's clinical guidelines. By promoting more uniform adherence to clinical guidelines among all of its clinicians, a CDS system can ensure those best practices and guidelines achieve maximum benefit.

4. **Reducing hospital readmissions:** Reducing hospital readmissions is largely a matter of ensuring that quality care continues after the patient is discharged. If the CDS is capable of issuing alerts to outpatient settings, especially for patients with chronic disease, it can assist in post-discharge patient management. This can include such simple measures as promoting medication adherence and making sure that follow-up appointments for preventive care happen when they should.



Understanding the Basics of CDS

To understand the basics of CDS, it is important to identify common types of tools and to understand the use of structured data fields and “smart forms” to aid in clinical workflow. The five rights of clinical decision support provide an important foundation as providers develop and customize CDS for their individual practice and population.



The CDS Five Rights Model

Decision-making guidelines, prompts, and assists, (i.e., CDS tools that deliver the best available information seamlessly and effectively to the point of clinical decisions), are necessary for improved and efficient patient care. The “CDS Five Rights”⁴ concept provides a best practice framework that may be helpful when considering CDS options appropriate for a practice.

⁴ <https://healthit.ahrq.gov/ahrq-funded-projects/current-health-it-priorities/clinical-decision-support-cds/chapter-1-approaching-clinical-decision/section-2-overview-cds-five-rights>

The CDS Five Rights concept states that in order to provide benefits (while avoiding [alert fatigue](#)⁵), CDS interventions must provide:

The CDS Five Rights Model	
The Right Information	Evidence-based, suitable to guide action, pertinent to the circumstance
To the Right Person	Considering all members of the care team, including clinicians, patients, and their caretakers
In the Right CDS Intervention Format	Such as an alert, order set, or reference information to answer a clinical question
Through the Right Channel	For example, a clinical information system (CIS) such as an electronic medical record (EMR), personal health record (PHR), or a more general channel such as the Internet or a mobile device
At the Right Time in Workflow	For example, at time of decision/action/need

What Qualifies as a CDS Tool?

While many providers may associate CDS with pop-up alerts, alerts are not the only, or necessarily the best, method of providing support. For example, a pop-up alert can only fire *after* an event has occurred (e.g., a provider has ordered a contraindicated medication). CDS is **not** simply an alert, notification, or explicit care suggestion.⁶ **CDS encompasses a variety of tools including, but not limited to:**

- Computerized alerts and reminders for providers and patients
- Clinical guidelines
- Condition-specific order sets
- Focused patient data reports and summaries
- Documentation templates
- Diagnostic support
- Contextually relevant reference information

⁵ <https://psnet.ahrq.gov/primer/alert-fatigue>

⁶ https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIIncentivePrograms/Downloads/ClinicalDecisionSupport_Tipsheet-.pdf

Most CDS tools fall into one of five major categories:

1. Alerts & Reminders
2. Order Sets
3. Info Buttons
4. Data Displays
5. Documentation Templates as CDS

Each of the five categories is described in terms of what they are designed to do; what they look like, and examples of how they are applied.

Alerts & Reminders

What are they? Alerts and reminders deliver information at the point of care in a way that gets the provider's attention.



What do they look like? Alerts and reminders can appear as pop-up boxes, strategically placed reminder lists, or changes in visual presentation such as font or color. The design of an alert or reminder will vary with the type of information being presented and its relative importance. For instance, an alert for a severe medication allergy would appear as a pop-up box, and a less severe alert, such as an indicator for generic vs. name brand medications could appear as a change in font.

How are they used? Alerts and reminders are commonly used to support prescribing and time-sensitive care like annual preventive care screenings. Many CDS prompts are tied directly to Clinical Quality Measures (CQMs). Responding appropriately to a clinical reminder will also help improve your CQM data.

Patient reminders are written (letter, postcard, email, portal message) or telephone messages advising people that they are due for preventive screening. Client reminders may be enhanced by:

- Follow-up printed or telephone reminders
- Additional text or discussion with information about indications for, benefits of, and ways to overcome barriers to screening
- Assistance in scheduling appointments

These interventions can be customized to address the overall target population or tailored with the intent to reach one specific person, based on characteristics unique to that person, related to the outcome of interest, and derived from an individual assessment.



Order Sets

What are they? Order sets are pre-specified bundles of orders grouped by a clinical purpose. Order sets eliminate the need to specify each individual test, medication, etc., for a given situation. This makes the ordering process more efficient and can reduce human error.

What do they look like? After an order set is created or specified, it may not appear to be different from any other order, with the exception that an order set will group multiple orders for a particular purpose as defined above.

How are they used? Order sets are used to make the ordering process more efficient and to standardize a level of care across the practice. Providers should work together to identify which order sets are most relevant to their practice.

Info Buttons

What are they? Info buttons provide clickable links to reference information for selected terms or phrases that appear in the EHR. Providers can seek out information using info buttons, as opposed to alerts and reminders, which automatically deliver information to the provider.

What do they look like? Info buttons appear as a small button or icon next to key words in the EHR, such as problem statements or lab results. An info button icon may look something like this:

Alert

How are they used? Info buttons can be used in any situation where more information might be needed. For instance, an info button might appear after the name of a condition or medication and link to more information on that topic.

Data Displays

What are they? Data displays are reference, guidance or patient specific information provided at appropriate times during ordering or chart review. Unlike alerts and reminders, data displays are not triggered by specific user-action, but are triggered by information.



What do they look like? A data display health information for a particular disease, such as a diabetes flow sheet, or the display of allergy status when writing a new prescription. They may also appear as a dashboard or could even be a unit tracking system like an ED monitor.

How are they used? A data display will support decision making, not by providing an alert/reminder or facilitating ordering, but by providing information which may guide the clinician toward making a more informed decision.

Documentation Templates as CDS

What are they? Documentation templates are structured, electronic forms (sometimes known as “smart forms”) that collect clinical information. Documentation templates are considered a type of CDS if they are used to support general documentation purposes, other CDS tools later in the workflow, or other clinical purposes like quality measurement.

What do they look like? Documentation templates look like an electronic form with areas where the provider can enter information. Depending on the template and its purpose, information can be entered in a variety of methods, including free text or from a drop-down menu.

How are they used? Documentation templates can support any data collection effort that the practice wants to standardize.

Use of Structured Data Fields and Smart Forms in Clinical Workflow

[Findings and Lessons from AHRQ’s Clinical Decision Support Demonstration Projects](#) describes the advantages of structured data field smart forms, including:

- Recognizing care needs
- Identifying and addressing care gaps
- Accessing patient education and materials

Basics of CDS with IT Operability

A December 2017 article from [Health IT Analytics](#) describes how the basics of CDS can deliver patient safety and care quality improvement while ensuring health IT operability. Top priorities include reducing clinical variation and duplicative testing, ensuring patient safety and avoiding complications that may result in expensive hospital readmissions in the modern regulatory and reimbursement environment – and harnessing the hidden insights of big data is essential for achieving these goals.

Assessment

CDS can help providers standardize (where appropriate) and optimize patient care. In addition, as we move into a pay-for-value world, clinical quality measures are increasingly important as value based programs rely on these measures to evaluate a practice's performance. Most EHRs current CDSs are set up to capture or check if these measures are being met. CDSs are a great way to evaluate if the practice is documenting clinical quality measures properly to get credit for the measures. This section of the module is designed to help providers considering whether and how to get started with CDS.

ASSESSMENT:

For practices considering or in the early stages of implementing CDS: best practices, primers, and guides



If you need assistance establishing CDS within your electronic health record (EHR), Quality Insights can assist you at **no cost**. Contact your Quality Insights Practice Transformation Specialist to learn more.

AHRQ Resources for Getting Started with CDS

[The Agency for Healthcare Research and Quality](#) (AHRQ) has long supported efforts to develop, adopt, implement, and evaluate the use of CDS to improve health care decision making and

significantly impact improvements in quality, safety, efficiency, and effectiveness. An [AHRQ CDS primer](#) explains the background, evidence of effectiveness, and current context.

An AHRC white paper, [Clinical Practice Improvement and Redesign: How Change in Workflow Can be Supported by CDS](#) will help readers to better understand how CDS automation can fit within the multi-level healthcare system. Learn how CDS can support ambulatory care clinicians' workflow by:

1. Exploring why CDS is important for ambulatory care
2. Reviewing evidence for the effectiveness of CDS in ambulatory settings
3. Discussing the relationship between CDS and workflow
 - a. Providing a framework for thinking about CDS-workflow fit
 - b. Recommending steps for designing and implementing CDS to better fit the realities of clinical workflow



CDC Best Practices

The Centers for Disease Control and Prevention (CDC) [Best Practice Guide for Implementing Clinical Decision Support Systems \(CDSS\)](#) examines the effectiveness and evidence of impact of CDSS in health, health disparities, and economics, noting “the evidence base demonstrating the effectiveness of CDSS is very strong. Research studies that examined CDSS had strong internal and external validity, the Community Preventive Services Task Force concluded that CDSS is effective, and CDSS trials have been replicated with positive results. Implementation guidance on CDSS is available from several sources.”

Applied to cardiovascular (CVD) prevention, CDSS can be used to facilitate care in various ways—for example, by reminding providers to screen for CVD risk factors, flagging cases of hypertension or hyperlipidemia, providing information on treatment protocols, prompting questions on medication adherence, and providing tailored recommendations for health behavior changes.

CDS Guidebook

The [Healthcare Information and Management Systems Society](#) (HIMSS) published a guidebook series on improving care delivery and outcomes with CDS. These guidebooks can help you apply

the CDS Five Rights framework to ensure that all the right people (including patients) get the right information in the right formats via the right channels at the right times to optimize health-related decisions and actions. The guidebooks help health care practices and their partners set up programs that reliably deliver outcome-improving CDS interventions. They also provide detailed guidance on successfully developing, launching, and monitoring such interventions so that all stakeholders benefit.

CDC & Million Hearts: Hypertension Control Change Package for Clinicians

This [action guide](#) will help providers design CDS for hypertension and put systems in place to care for patients with HTN more efficiently and effectively. It presents change concepts, change ideas, and further tools and resources.

CDS Starter Kit: Diabetes Follow-Up Care

Another good resource for starting CDS in a practice, this starter kit from [HealthIT.gov](#) is designed to facilitate the delivery of high quality diabetes care. Given that many recommendations for diabetes care are relatively well defined, diabetes follow-up care is a good opportunity to use clinical decision support and begin combining different types of CDS to aid workflow transformation and improve patient care. While the examples provided are specific to Nextgen and Cerner, the concepts can be applied to any EHR.

CDS: Cloud-Based Decision Support

The Clinical Decision Support Consortium (CDSC) is one of two projects funded by AHRQ to demonstrate how clinical decision support can be implemented effectively at scale to diverse locations.

This [Cloud-Based Decision Support](#) video shares the story of a small rural health care practice that participated in the CDSC project and helped show that CDS created at a large teaching hospital could be effectively disseminated to health care providers using different electronic health records (EHRs) anywhere in the country.



Action

Providers can optimize their use of CDS to improve patient care and quality measure performance, including for hyperlipidemia, hypertension, and diabetes. In this section, providers can learn how to improve existing CDS with best practice recommendations and standard treatment protocols. **Quality Insights can help you implement any workflow improvement related to hypertension and diabetes CDS documentation.**

ACTION:

For practices considering how best to utilize established CDS: resources from AHRQ, Million Hearts, and more



AHRQ Resources for Implementing and Improving Use of CDS

[AHRQ](#) offers a diverse selection of resources including:

- [A Roadmap for National Action on Clinical Decision Support](#)
- [Structuring Care Recommendations for Clinical Decision Support](#)
- [Clinical Decision Support Systems: State of the Art](#)
- [Community Connections: Linking Primary Care Patients to Local Resources for Better Management of Obesity](#)

Take the Challenge: Become a Million Hearts® Hypertension Control Champion

The Million Hearts® Hypertension Control Champions are clinicians, practices, and health systems that have successfully completed the [Million Hearts® Hypertension Control Challenge](#)⁷. Champions demonstrate clinical excellence by reaching 80% control rates among their hypertensive patients, as well as improved performance by implementing health information technology, home blood pressure monitoring and medication adherence.



Two Pennsylvania Practices Recognized as 2019 Hypertension Control Champions

Quality Insights is excited and proud to share that two of the practices that our Pennsylvania team works with were named 2019 Million Hearts

⁷ <https://millionhearts.hhs.gov/partners-progress/champions/challenge.html>

Hypertension Control Champions. Those practices are **Burstein Medical Associates**, located in Philadelphia, PA, and **Larry S. Hahn, DO**, Pinnacle Physicians Group, located in Trevose, PA. Want to know how they did it? [Read their stories](#) by visiting the Hypertension Control Champs page on the Quality Insights website.

Learn more by [reading about the Challenge here⁸](#) and contact your local Quality Insights Practice Transformation Specialist to review the steps necessary to determine your eligibility, discuss options for meeting Control Champion targets and assist you with the application process.

Million Hearts: Treatment Protocols

This resource outlines [standardized treatment protocols](#) to improve blood pressure control by clarifying titration intervals revealing new treatment options and expanding the types of staff that can assist in timely follow-up with patients. When embedded in EHRs, treatment protocols can serve as CDS at the point of care so no opportunities are missed to achieve control. Included are protocol templates, elements of effective protocols, and numerous examples of hypertension evidence-based protocols used by healthcare leaders today.



Using CDS to Help Identify and Manage Patients with Prediabetes

The [American Medical Association](#) recommends using CDS to help identify and manage patients with prediabetes. To be notified if a patient is eligible for abnormal glucose screening or prediabetes management during an office visit, develop point-of-care advisories. The advisory should link to a relevant order set. Consider incorporating abnormal glucose screening recommendations into the health maintenance or prevention feature of the EHR.

Another option is to develop order sets for abnormal glucose screening and prediabetes management. Depending on your EHR, your order set might include other relevant activities or

⁸ <https://millionhearts.hhs.gov/partners-progress/champions/rules.html>

documentation, such as patient education and documentation templates. For prediabetes management, some example orders to include are:

- Referral to a CDC-recognized lifestyle change program
- Metformin medication order
- Referral to medical nutrition therapy
- Future laboratory order for monitoring in 6-12 months

Decreasing Alert Fatigue

Alert fatigue can be a problem within practices as more reminders and alerts are found in each patient's chart. [Making EHR Alerts Work for Your Practice](#), from *Medical Economics*, offers ideas on how to avoid alert fatigue that may come from too many alerts, pop-ups, and reminders in patient charts.



Implementation and Evaluation Using the GUIDES Checklist

Whether you belong to a healthcare organization that is brand new to CDS or has been using it for many years, knowing what questions to ask and how to evaluate current effectiveness can help ensure the long-term success of your CDS strategy.

The [GUIDES Checklist](#), developed June 2017 by the Norwegian Institute of Public Health, the GUIDES checklist provides an overview of success factors for guideline-based CDS and supports professionals to reflect over these factors in a structured way. Implementation teams can answer the targeted questions included in the checklist to evaluate a number of factors that impact CDS success.

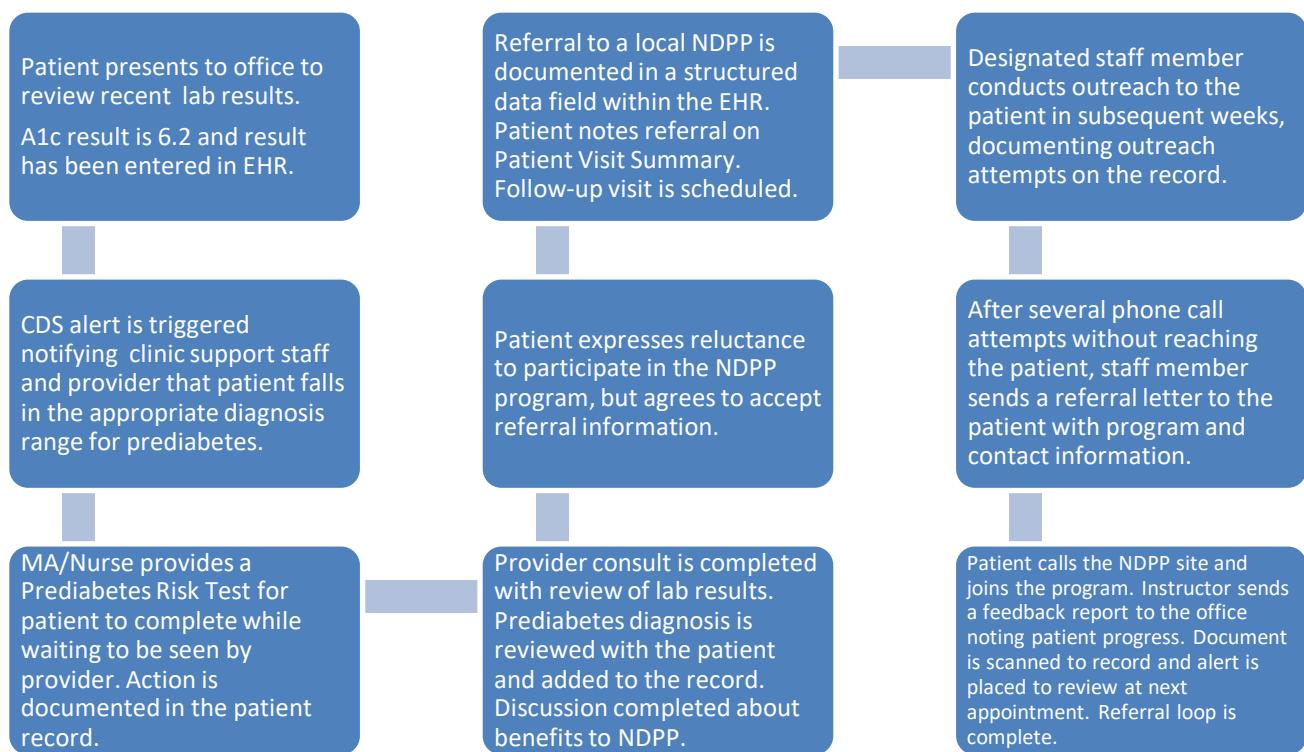
Visit the [Guides Project website](#) for free access to an electronic version that enables CDS implementation teams to complete the GUIDES checklist efficiently in a group.

Example: Capturing Referrals to Lifestyle Change Programs

Referring patients with prediabetes, diabetes, elevated blood pressure, and high cholesterol to CDC-approved, evidence-based lifestyle change programs is significantly important to delaying disease progression and improving a patient's overall health. Ensuring these referrals are

documented in structured data fields can be a great resource to monitor which patients are actively engaged, what programs they are attending and receiving important program feedback to discuss at future follow-up appointments.

The following pathway provides an example workflow detailing a complete referral process of a patient to a local National Diabetes Prevention Program (NDPP) utilizing several members of the care team and EHR tools discussed in this module:



Resources for Providers

Just Released: New Enhancements to CDC's Diabetes Self-Management Education and Support Services (DSMES) Toolkit

The CDC recently announced the addition of videos to the National Standards Section of the [DSMES Toolkit](#). These short videos provide an overview of each evidence-based standard a DSMES program must meet for recognition or accreditation. Use them to help program administrators, providers and other stakeholders understand the purpose of each standard. To view the videos, visit the [National Standards for DSMES](#) section of the toolkit and click on each standard.

Want to learn more about the toolkit? Watch the webinar, "[The DSMES Toolkit: Your One Stop Shop for Successful Diabetes Self-Management Education and Support Services](#)." You'll learn how to use the DSMES Toolkit to establish, deliver, and increase participation in DSMES services.

The purpose of the DSMES toolkit is to increase use of DSMES services among people with diabetes and promote healthcare provider referrals. Expanded use of DSMES can help ensure that all people with diabetes receive the support they need. The toolkit provides resources and tools in one place to assist with the development, promotion, implementation, and sustainability of DSMES services. [Download the toolkit today.](#)



Resources for Developing a Diabetes Self-Management Education and Support Program (DSMES)

American Diabetes Association (ADA) and Association of Diabetes Care & Education Specialists (ADCES) describe two types of accredited/recognized programs to help you meet your patients' diabetes education needs. Each DSMES program is assigned as a primary multi-site with one program coordinator, and additional sites can be added as multi-site or expansions. Details and frequently asked questions are available from the [ADA](#) and the [ADCES](#). Contact your Quality Insights Practice Transformation Specialist for additional assistance.

ChristianaCare's Blood Pressure Ambassadors

The [Blood Pressure Ambassador Program](#) was developed by ChristianaCare to increase awareness of the consequences of untreated high blood pressure in the community. The goal is to reach at-risk neighbors in our community and improve cardiovascular health. Blood pressure screenings identify high-risk people and offer opportunities to provide health information and motivate people to take action with their health.

Specially trained community members volunteer to deliver key messages about high blood pressure, heart disease and stroke risk factors as well as healthy lifestyle choices. When needed, Ambassadors provide resources to connect individuals with a healthcare provider. To speak to a Blood Pressure Ambassador, call **302.320.5040**.

Practice Modules from Quality Insights

To access additional practice modules from Quality Insights that are focused on hypertension and diabetes care and prevention, visit

<https://tinyurl.com/s8h2bzq> or scan this QR code.



Appendix A: Care Team Interventions to Implement American Heart Association CVD Primary Prevention Guidelines*

The American Heart Association's 2019 Cardiovascular Disease (CVD) Primary Prevention Guidelines provides a list of the Ten Top Things to Know. All members of the primary care team can play a valuable role in helping patients to avoid cardiovascular disease.

AHA Guideline	Intervention	Care Team Member(s)	Resources
Prevent atherosclerotic vascular disease, heart failure, and atrial fibrillation by promoting healthy lifestyles throughout life.	Provide all patients with information about heart healthy programs.	All clinical staff, such as MAs during patient rooming.	<ul style="list-style-type: none">• CDC 6 Strategies to Live a Heart Healthy Lifestyle• AHA's Be Healthy for Good with Life's Simple 7
Use a team-based approach to prevent CVD. Evaluate the social determinants of health (SDOH) that affect individuals to inform treatment decisions.	Collect race/ethnicity from all patients. Implement validated SDOH screening tool.	Front desk staff. Depending on workflow preferred: front desk staff distribute paper screener; clinical staff verbally interview patients. Providers review responses and promote dietary changes and make referrals as needed.	<ul style="list-style-type: none">• Quality Insights practice module: Social Determinants of Health and Workflow Modifications• PRAPARE Tool Kit
Adults 40-75 years being evaluated for CVD prevention should undergo 10-year risk estimation and should have clinician-patient risk discussion before starting on pharmacological therapy, such as antihypertensive or statin.	Screen for risk factors and apply race- and sex-specific modifiers for asymptomatic adults. Manage hypertension and blood cholesterol, use clinical guidelines. Where appropriate, assess risk using coronary artery calcium scanning.	Provider	<ul style="list-style-type: none">• American College of Cardiology ASCVD Risk Estimator tool

AHA Guideline	Intervention	Care Team Member(s)	Resources
<p>All adults should consume a healthy diet.</p> <p>For adults with overweight/obesity, comprehensive lifestyle interventions, including counseling and caloric restrictions, are recommended for achieving and maintaining weight loss.</p>	<p>Provide all patients with nutrition information.</p> <p>For patients with hypertension, provide DASH diet information and promote self-monitoring of blood pressure.</p> <p>For patients with overweight/ obesity, administer prediabetes risk tests and offer information weight management.</p> <p>For patients with prediabetes, refer to National Diabetes Prevention Program (National DPP).</p>	<p>Clinical staff who weighs patients and document BMI data; clinical staff who take blood pressure.</p> <p>Providers review and promote dietary changes and refer to lifestyle change programming.</p>	<ul style="list-style-type: none"> • AHA's Life Simple 7 – Eat Better • AHA's Life's Simple 7 – Manage Weight • DASH Your Way to Lower Blood Pressure • Tips for Taking Your Own Blood Pressure Readings • CDC Prediabetes Risk Test • National Diabetes Prevention Program Referral Checklist • CDC Recognized Lifestyle Change Programs
<p>Adults should engage in at least 150 minutes per week of accumulated moderate-intensity physical activity or 75 minutes per week of vigorous-intensity physical activity.</p>	<p>Counsel all patients about physical activity recommendations. Provide educational materials.</p>	<p>Providers and clinical staff, such as MAs during rooming process.</p>	<ul style="list-style-type: none"> • AHA's Life's Simple 7 –Move More
<p>For adults with type 2 diabetes mellitus, lifestyle changes, such as improving dietary habits and achieving exercise recommendations, are crucial.</p>	<p>Refer patients to Diabetes Self-Management Education and Support (DSMES).</p>	<p>Clinical staff performing medication reconciliation.</p> <p>Providers review responses and promote dietary changes and refer to lifestyle change programming.</p>	<ul style="list-style-type: none"> • DSMES Referral Checklist for Primary Care Practices • Find a DSMES Program in PA
<p>All adults should be assessed at every healthcare visit for tobacco use, and those who use tobacco should be assisted and strongly advised to quit.</p>	<p>Ask every patient about tobacco use.</p> <p>Provide smoking cessation assistance.</p>	<p>Clinical staff, such as MAs during rooming process.</p> <p>Providers review responses and promote cessation and referrals to tobacco cessation program.</p>	<ul style="list-style-type: none"> • AHA's Life's Simple 7 – How to Quit Tobacco • PA Free Quitline

AHA Guideline	Intervention	Care Team Member(s)	Resources
Aspirin should be used infrequently in routine primary prevention of ASCVD because of lack of net benefit.	Evaluate use of aspirin therapy based on patient age and risk-enhancing factors such as family history, ability to achieve lipid, BP, or glucose targets.	Provider	<ul style="list-style-type: none"> • 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease
Statin therapy is first-line treatment for primary prevention of ASCVD in patients with elevated LDL-C, those with diabetes who are age 40-75, and those at sufficient ASCVD risk after clinician-patient risk discussion.	Assess LDL-C and related risk factors. Initiate risk/benefit discussion.	Provider	<ul style="list-style-type: none"> • 2018 Guideline on the Management of Blood Cholesterol • Statin Choice Decision Aid
Nonpharmacological interventions are recommended for all adults with elevated BP or HTN. For those requiring pharmacological therapy, target BP should generally be <130/80 mm Hg.	Assess BP for all patients and recommend evidence-based lifestyle programs where appropriate.	Clinical staff with provider reinforcement	<ul style="list-style-type: none"> • Million Hearts® Hypertension Control Change Package

*Arnett DK, Blumenthal RS, Albert MA, Buroker AB, Goldberger ZD, Hahn EJ, Himmelfarb CD, Khera A, Lloyd-Jones D, McEvoy JW, Michos ED, Miedema MD, Muñoz D, Smith SC Jr, Virani SS, Williams KA Sr, Yeboah J, Ziaeian B. [2019 ACC/AHA guideline on the primary prevention of cardiovascular disease: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines](#) [published online ahead of print March 17, 2019]. *Circulation*. 2019; DOI: 10.1161/CIR.000000000000678.

This publication was supported by the Cooperative Agreement Number NU58DP006516 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention. Publication number DEDPH-HD-092820