

10 STEPS FOR IMPROVING DIABETES CARE IN NEW HAMPSHIRE:

A PRACTICAL GUIDE FOR CLINICIANS
AND COMMUNITY PARTNERS



Institute for Health
Policy and Practice

Partners

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Dear Colleagues:

If you have read and used the blood pressure control guide *10 Steps for Improving Blood Pressure Control in New Hampshire*, developed by the UNH Institute for Health Policy and Practice, you know that measurable improvement in clinical outcomes at the practice level is possible. The blood pressure guide, available for free at <https://www.dhhs.nh.gov/dphs/cdpc/documents/tensteps-bpcontrol.pdf>, has been used successfully by rural and urban health professionals across New England and beyond.

The *10 Steps for Improving Diabetes Care in New Hampshire* grew out of a belief that an approach similar to the one developed to improve blood pressure control could be translated to diabetes care. In *10 Steps for Improving Diabetes Care in New Hampshire*, you will find an easy-to-follow stepwise format of practical, best-practice strategies that are feasible to implement in any primary care setting. These strategies are applicable to planning for prediabetes, as well.

While working with the New Hampshire Rural Health Clinic Action Learning Collaborative (2015-2018), the NH Citizens Health Initiative documented success in the use of quality improvement strategies to improve clinical care for patients with diabetes, including documentation of increased patient engagement and decreased hemoglobin A1c (HbA1c) values.

Using quality improvement processes to improve health care is difficult, especially with so many competing priorities for clinician and staff time. Yet, every health care professional wants to deliver the best care in the best ways to ensure the best outcomes for their patients. We believe that you will find *10 Steps for Improving Diabetes Care in New Hampshire* to be a sensible and rewarding road map to success for you and your patients.

Sincerely,

NH Citizens Health Initiative

Institute for Health Policy and Practice at the University of New Hampshire



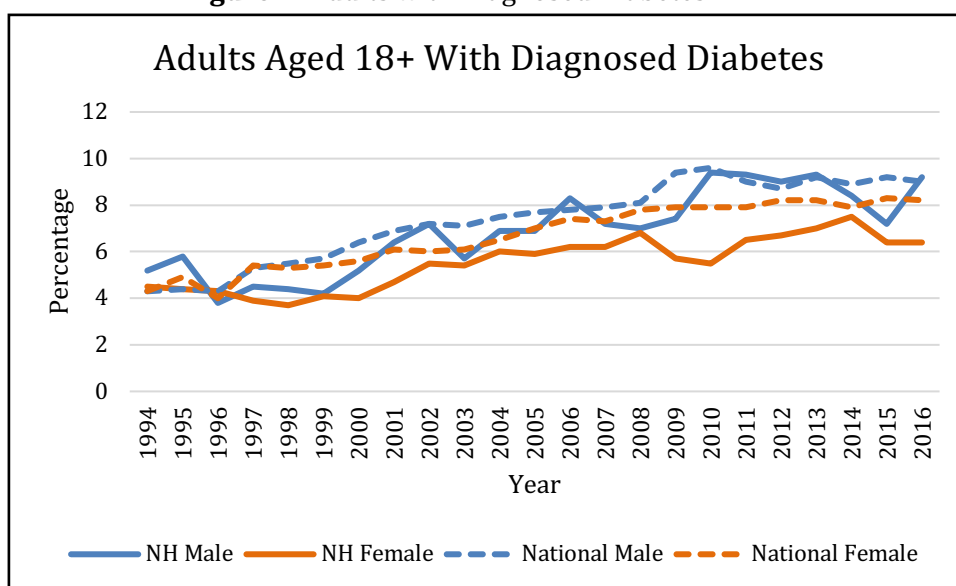
**Institute for Health
Policy and Practice**

Focusing on Diabetes Makes Sense

Over the past 20 years, the number of American adults diagnosed with diabetes has more than doubled.¹ The majority of these diagnoses were for type 2 diabetes. Additionally, more than 84 million adults (over a third of the U.S. adult population) have prediabetes, many of whom are unaware of their status.¹ Annually, 5 to 10% of people with prediabetes develop type 2 diabetes.²

Across the United States, the percent of men with diabetes has increased from 7.7% in 2005 to 9% in 2016.³ For women, the prevalence has increased from 6.5% in 2005 to 8.2% in 2016. Comparatively, the percent of men in New Hampshire with diabetes has increased from 6.9% in 2005 to 9.2% in 2016. The percent of women in New Hampshire with diabetes has increased from 5.9% in 2005 to 6.4% in 2016.⁴ These increases correlate with a rise in adult obesity.³ It is estimated that more than 130,000 New Hampshire residents have diabetes, including more than 34,000 who are undiagnosed.⁵

Figure 1. Adults with Diagnosed Diabetes³



Diabetes is a major cause of disability and is the seventh leading cause of death in the U.S.¹ People with diabetes are twice as likely to be diagnosed with heart disease or stroke compared to those who do not have diabetes.¹ Diabetes is the leading cause of chronic kidney disease, lower limb amputations, and adult-onset blindness in the U.S.¹ Medical costs and lost work wages among people with diabetes total \$327 billion yearly. In New Hampshire, these costs top \$1.4 billion each year.⁵ Medical costs for people with diabetes are 2.3 times as high as those who do not have diabetes.⁵

Although there is currently no cure for diabetes, weight loss, healthy eating, and increased physical activity, among other lifestyle modifications, can cut the risk of developing diabetes and related complications and lessen the need for medication. Taking medication and monitoring blood glucose levels, as directed by a health care provider, will optimize medical management. Taking full advantage of Diabetes Self-Management Education and Support (DSMES) is an important way for patients to take control of their condition and reduce the impact of diabetes on their lives.

Implementing *10 Steps for Improving Diabetes Care in New Hampshire*, in coordination with other efforts by care teams, public health entities, health systems, advocacy groups, patients, and their families, moves New Hampshire toward reducing the burden of diabetes and preventing complications. The strategies outlined below have been tested in primary care practices around the state and have demonstrated practice-based improvements.

How to Use This Guide

Similar to *10 Steps for Improving Blood Pressure Control in New Hampshire*, this manual is based on the premise that improving a complicated health condition like diabetes requires solutions based on a person-centered approach involving a care team. To affect change, care teams and public health practitioners must:

- Understand the current health burden;
- Evaluate existing policies, protocols, and workflows;
- Assess possible best-practice interventions;
- Focus on data-driven decision-making; and
- Engage a community of stakeholders

The 10 steps of this manual include easy to follow, pragmatic steps to implement a comprehensive approach to diabetes care that is modeled after an analogous methodology shown to be successful in improving hypertension control throughout New Hampshire.

The first seven steps are best implemented sequentially, whereas steps eight through ten can be completed at any time, as they involve patient and community engagement. However, considering that each practice and community is unique, the steps can be customized to accommodate the degree of readiness and/or available resources for taking action.

The steps are not intended to provide a thorough review of the pathophysiology and clinical care of diabetes, but rather are formatted to provide actionable steps and practical resources to help achieve quality improvement goals, such as increasing the number of referrals to DSMES Programs. Each chapter in *10 Steps for Improving Diabetes Control in New Hampshire* includes the following two sub-topics:

What You Can Do

Describes actionable steps you can take to implement this guide in your practice.

Tools You Can Use

Provides examples of best-practice tools that could be used to improve patient outcomes.

Step 1: Engaging Providers and Staff

Collecting feedback and forming a team helps engage providers and staff leading to change.

What You Can Do

Successful quality improvement activities at the practice level depend on genuine engagement from the care team, staff, and other stakeholders. Early involvement of key individuals will help them feel invested in the project and will encourage them to become agents of change. Two things that will help gain and grow provider and staff commitment to the work are:

1. **Provider and Staff Feedback Survey:** Administer a short survey to allow the care team an opportunity to share their perspectives on effective treatment strategies, barriers, and potential solutions.
2. **Diabetes Care Team Charter:** Use a project charter to make the case for change, assemble a multi-disciplinary team, and set a measurable goal.

Tools You Can Use

See **Appendix A** for a blank Provider and Staff Feedback Survey.
See **Appendix B** for a blank Diabetes Care Team Charter template.

PROVIDER AND STAFF FEEDBACK SURVEY:

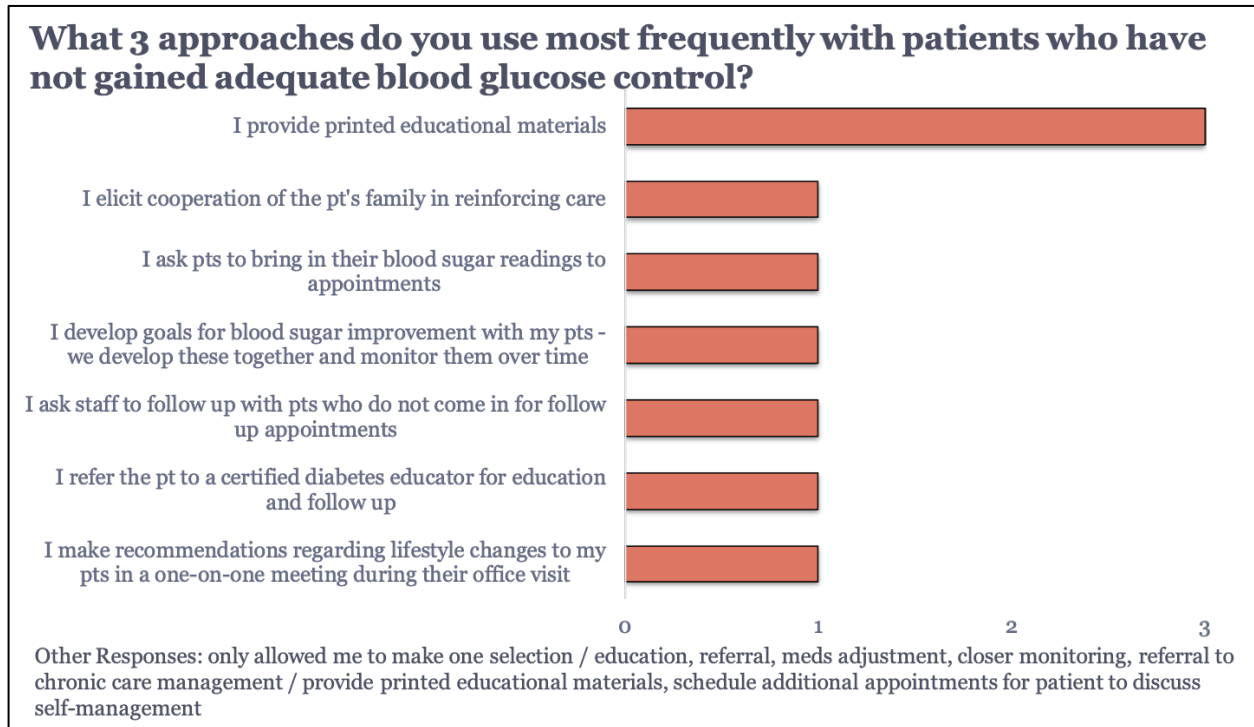
The purpose of a Provider and Staff Feedback Survey is to use perspectives and ideas shared by the care team to help plan interventions around the prevention and control of diabetes. Survey responses should remain anonymous and results should be aggregated.

The sample Provider and Staff Feedback Survey in **Appendix A** was designed to take no more than five minutes to complete and can be administered in paper or electronic format. With minor adjustments, this survey could be administered to both primary care providers and practice staff that support the same patient population. Questions and multiple-choice answers can be customized based on the unique needs of practices.

Survey Results

Figure 2 displays a sample of the distribution of answers received for a question asking caregivers what approaches they most frequently use to help patients gain adequate blood glucose control.

Figure 2. Sample Results for a Provider and Staff Feedback Survey



Diabetes Care Team Charter

The template below suggests an effective way to convene a diverse project team and ensure that everyone has a common understanding of the work ahead. The document can be adapted depending on the scope of the project. **Figure 3** provides a sample team charter. See **Appendix B** for a blank document to use with your team.

Figure 3. Sample Diabetes Care Team Charter

Sample Diabetes Care Team Charter		
Project Description / Opportunity Statement	Project Scope	Team
To improve care and management of patients with diabetes. To improve access to and participation in diabetes self-management and lifestyle change education and support for our patients.	In Scope: Adult patients ages 18-75 who are assigned to our practice and who have a diagnosis of diabetes.	Project Lead(s):
Business Case	Goal Statement	Project Sponsor:
In New Hampshire, the percent of men with diabetes has increased from 6.9% in 2005 to 9.2% in 2016. The percent of women with diabetes has increased from 5.9% in 2005 to 6.4% in 2016 (CDC). These increases correlate with a rise in adult obesity. It is estimated that more than 130,000 New Hampshire residents have diabetes, including more than 34,000 who are undiagnosed.	By 6/30/20: 1. We aim to improve HgbA1c values of our patients by enrolling all patients with HgbA1c > 9 or missing in a Diabetes Self-Management Education and Support (DSMES) program with the goal of decreasing the HgbA1c for the cohort by 0.6. 2. All eligible patients will receive an annual referral to DSMES, 60% will attend and 30% will have a person-centered diabetes education plan documented within the EHR.	Suggested Team Members
Diabetes is a major cause of disability and is the 7th leading cause of death in the US. In 2017, the total costs of diagnosed diabetes in the United States was \$327 billion.	Measures	Provider(s)
By improving the care of our patients with diabetes, we expect to improve patients' health and lower their long term risk of complications due to diabetes including heart disease and accordingly expect to lower their health costs.	% of patients with HgbA1c > 9 or missing % patients referred in DSMES in the past 12 months % patients attended DSMES % attended DSMES with education plan noted in EHR % of patients with documentation of closed loop referral	RN (s)
	Monitor closed loop process workflow for efficiency and reliability (number of days until referral is complete and number of days to receipt of education plan in EHR) Weekly practice huddles held to review diabetes registry	MA/LPN(s)
		Dietitian
		Certified Diabetic Educator
		Data Analyst
		Registry Coordinator(s)
		Behavioral Health
		Patient Representative
		Pharmacist
		Community Partner
		Student Intern
		Facilitator/Coach
		Contact Information for Project Lead:
		Timeline
		Project Start – June 2019 Full Implementation – January 2020

Step 2: Agreeing on a Shared Vision and Measures

Aim statements and defined measures can provide a common goal for all stakeholders.

What You Can Do

When an overall aim is defined and supporting data or measures are tracked, trended, and displayed, they provide a shared understanding of the status of selected measures (e.g., HbA1c levels) among patients and serve as a resource to drive change, confirm progress, and validate success. Two things that can help work toward a shared vision and change are:

1. **Aim Statement:** A well-crafted aim statement can provide a clear, shared vision to provide direction to the overall direction of the improvement effort.
2. **Shared Measure:** A shared measure is a metric identified by the team to quantify a health care process or clinical outcome. Measures should focus on the highest priorities to improve patient care.

Tools You Can Use

See Appendix C for a blank Aim Statement Template.

AIM STATEMENT: Create a concise aim statement by answering these four guiding questions:

1. What will improve? *(Be concrete and detailed)*
2. When will it improve? *(When will the outcome be accomplished?)*
3. How much will it improve? *(How much change do you expect?)*
4. For whom will it improve? *(Identify the target population)*

Figure 4. Sample Aim Statements

<p>Sample 1</p> <p>Improve glycemic control among patients with a diagnosis of diabetes by decreasing the proportion of patients with diabetes with a HbA1c >9% from baseline of 23.3% to 16.2% by 2020. This target represents a 30% improvement in control and is based on the Healthy People 2020 targets and national data.</p>
<p>Sample 2</p> <p>By June 2020, all eligible patient with a HbA1c >9% will receive an annual referral to DSMES, 60% will attend, and 30% will have a person-centered diabetes education plan documented within the EHR.</p>

CHOOSE A SHARED MEASURE: The National Quality Forum (NQF) is a not-for-profit, nonpartisan, membership-based organization that works to catalyze improvements in health care.⁶ The NQF #0059 Measure for Diabetes Mellitus is a commonly used measure that can be shared across an organization to assess diabetes care. Practices may already capture and report this measure for quality purposes.

Measure #0059: Percentage of patients with diabetes with most recent HbA1c greater than 9% or missing from their medical record.⁷

- Numerator: Number of active patients age 18-75 years with diabetes with HbA1c greater than 9% on their most recent measurement, or most recent HbA1c result is missing or older than 12 months
- Denominator: Total number active patients age 18-75 with a documented diagnosis of diabetes obtained from the patient's medical record

Step 3: Understanding the Current Process and Workflow

Outlining current processes around the detection, treatment, and referral for DSMES can identify inconsistencies and offer opportunities for improvement.

What You Can Do

An important early step in envisioning change is to examine existing processes and practices to help understand what is working and what needs to be added, abandoned, or optimized.

Tools You Can Use

There are a variety of quality improvement tools to help examine current approaches to care and to support organizations in envisioning and implementing change. Two such tools are:

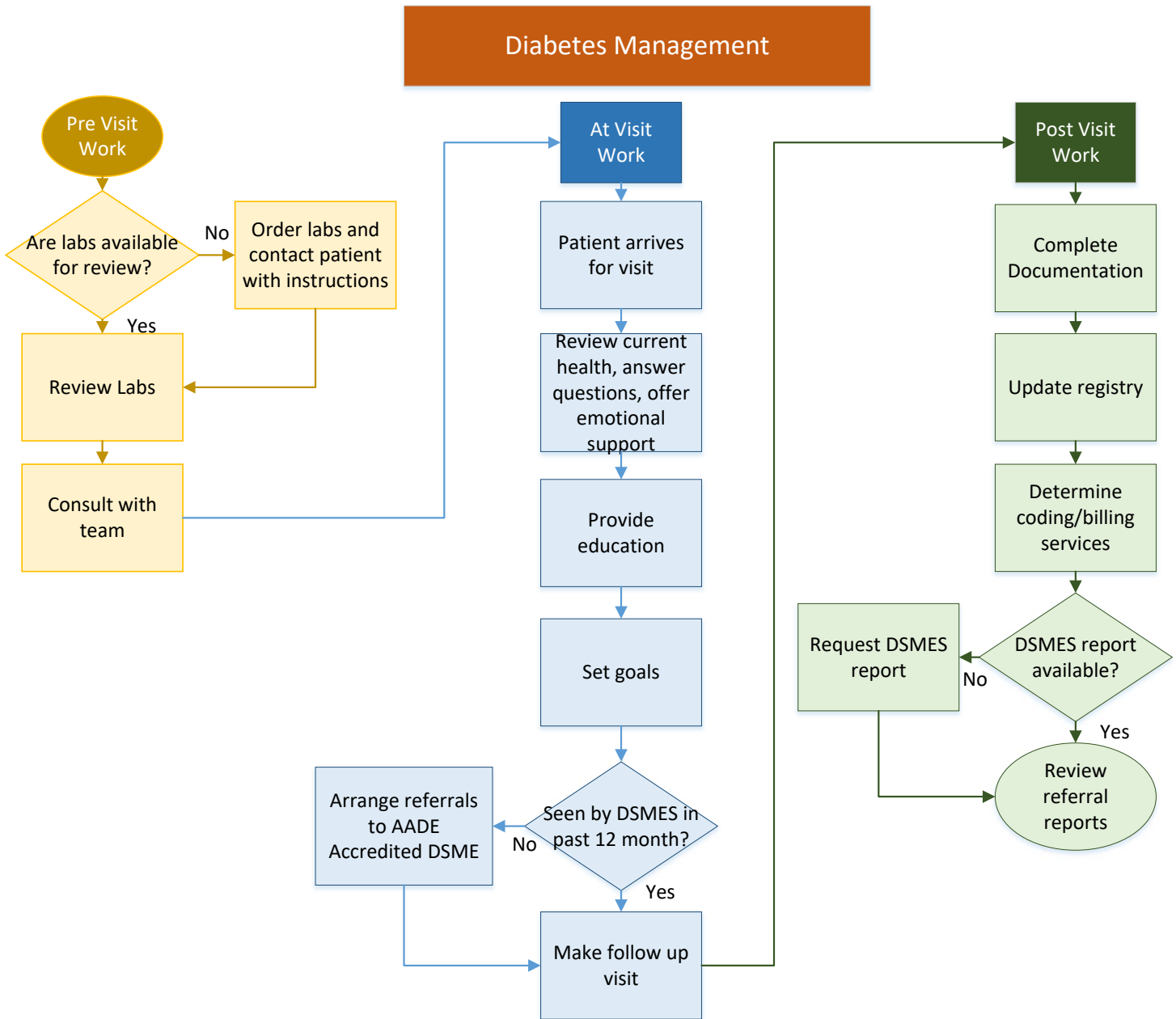
1. **Flowcharts:** Flowcharts use simple symbols to diagram processes and workflows. It is best for flowcharts to be created by individuals who are on the front lines of the workflow, such as the medical assistants, nurses, and providers involved in the daily delivery of services. Once the current flow is completely diagramed, deviations from the ideal (redundancies, inefficiencies, barriers) are often apparent. See **Figure 5**.
2. **Cause and Effect “Fishbone” Diagrams:** These help the team describe all possible contributors to a given problem or desired outcome. It is best for these diagrams to be created by those on the front line of services. See **Figure 6**.

See **Appendix D** for an illustration of simple flowcharting symbols and a blank Cause and Effect “Fishbone” Diagram template.

Diabetes Management Flowchart

Creating a flowchart for your current office workflow is a valuable way to uncover inconsistencies, bottlenecks, or points where care can be delivered more efficiently.

Figure 5. Sample Flowchart



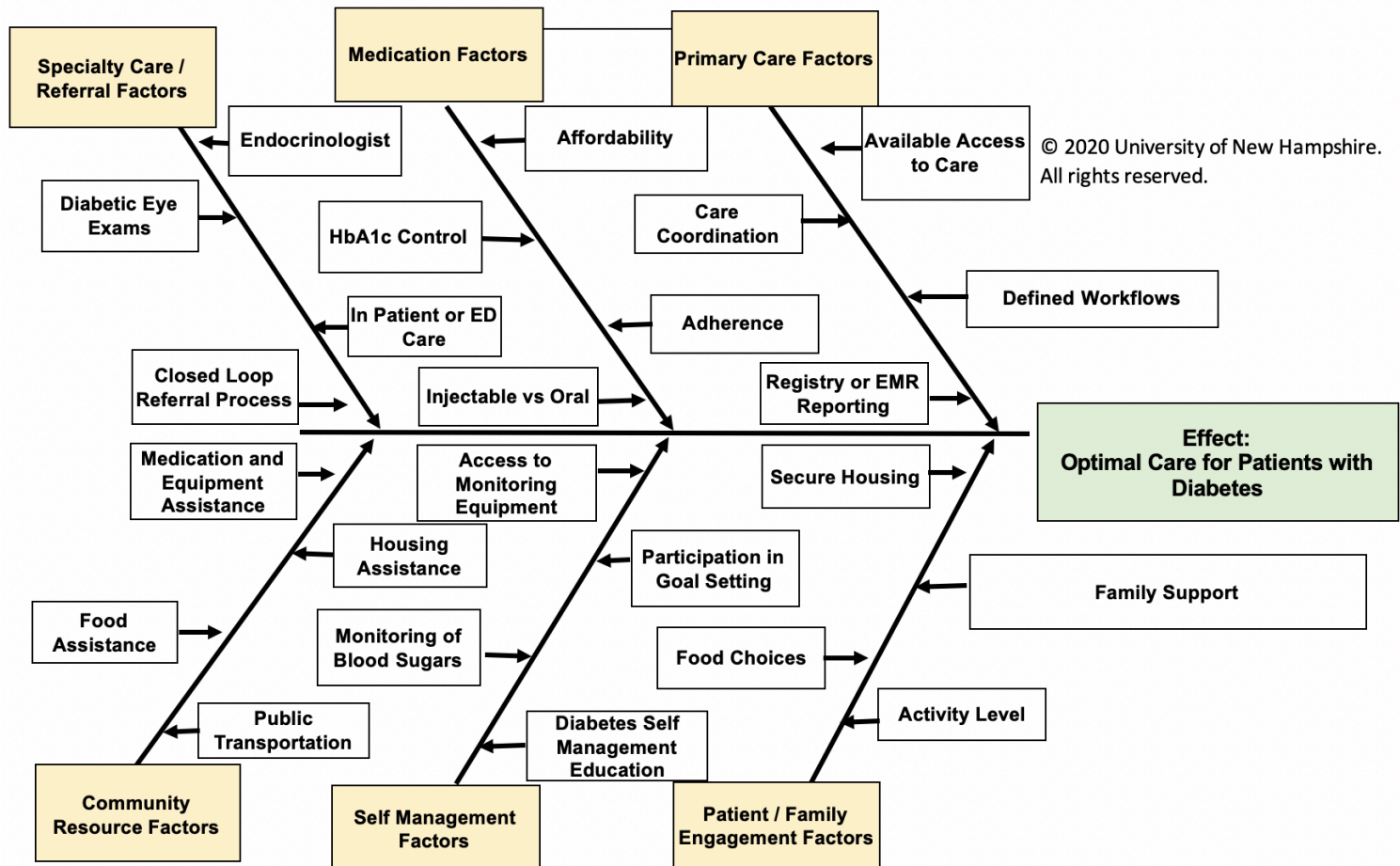
Fishbone Diagram

These diagrams are constructed with the main arms (or “bones”) of the diagram labeled as *Main Categories of Influence*. The example below was created by a team brainstorming all the factors they believed contribute to optimal diabetes care across six main categories:

- Specialty Care
- Medication Factors
- Primary Care Factors
- Community Resources
- Self-Management Education
- Patient and Family Engagement

Since each practice and/or community is unique, each needs to generate its own diagram.

Figure 6. Sample Fishbone for Optimal Diabetes Care



Step 4: Creating Standardized Operational Processes

Guidelines provide consistency and application of best practices across care settings.

What You Can Do

Use evidence-supported guidelines for self-management education and support, determination of glycemic targets, and pharmacologic treatment. Consistency in care leads to cost-effective treatment for patients and improved patient outcomes.

To improve consistency of care:

1. Adopt evidence-based protocols to establish intervals for DSMES.
2. Use standardized operations procedures for closed loop referrals.
3. Individualize the approach to glycemic targets over time.
4. Utilize medical management protocols to ensure patients receive evidence-supported care across care settings.

Tools You Can Use

1. The American Diabetes Association (ADA) Algorithm for DSMES (**Figure 7**) recommends that all patients be assessed and referred for diabetes self-management education and support at four critical times.⁸
2. Process maps can be used to standardize procedures for closed-loop referrals (**Figure 8**).
3. Approach to Individualization of Glycemic Targets depicts patient and disease factors used to determine optimal HbA1c targets (**Figure 9**).⁹
4. Clinical Diabetes Treatment Guidelines: Standards for Antihyperglycemic Therapy in Adults with Type 2 Diabetes (**Figures 10 and 11**).⁸

Diabetes Treatment Guidelines:

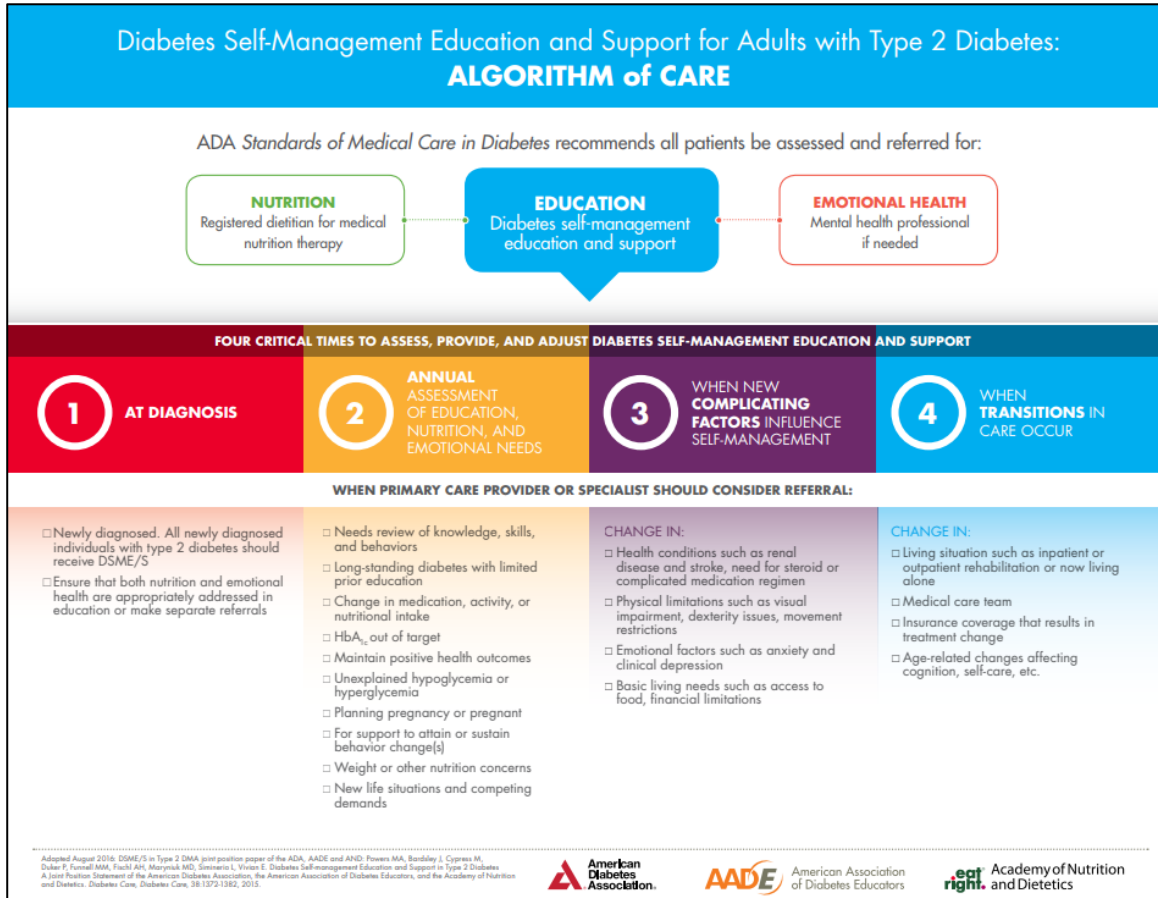
https://care.diabetesjournals.org/content/41/Supplement_1

The 2018 ADA Standards of Medical Care in Diabetes (Standards of Care) provides comprehensive standards for the medical care of patients with diabetes. For example, Chapter 8 of the Standards of Care provides pharmacologic approaches to glycemic treatment, displayed in **Figure 10** and **Figure 11**.

Establish Guidelines for Referral to DSMES

The “Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes: Algorithm of Care” recommends that all patients are assessed and referred for DSMES. **Figure 7** summarizes the recommended intervals for education and support throughout the continuum of care.¹⁰

Figure 7. ADA Algorithm for DSMES



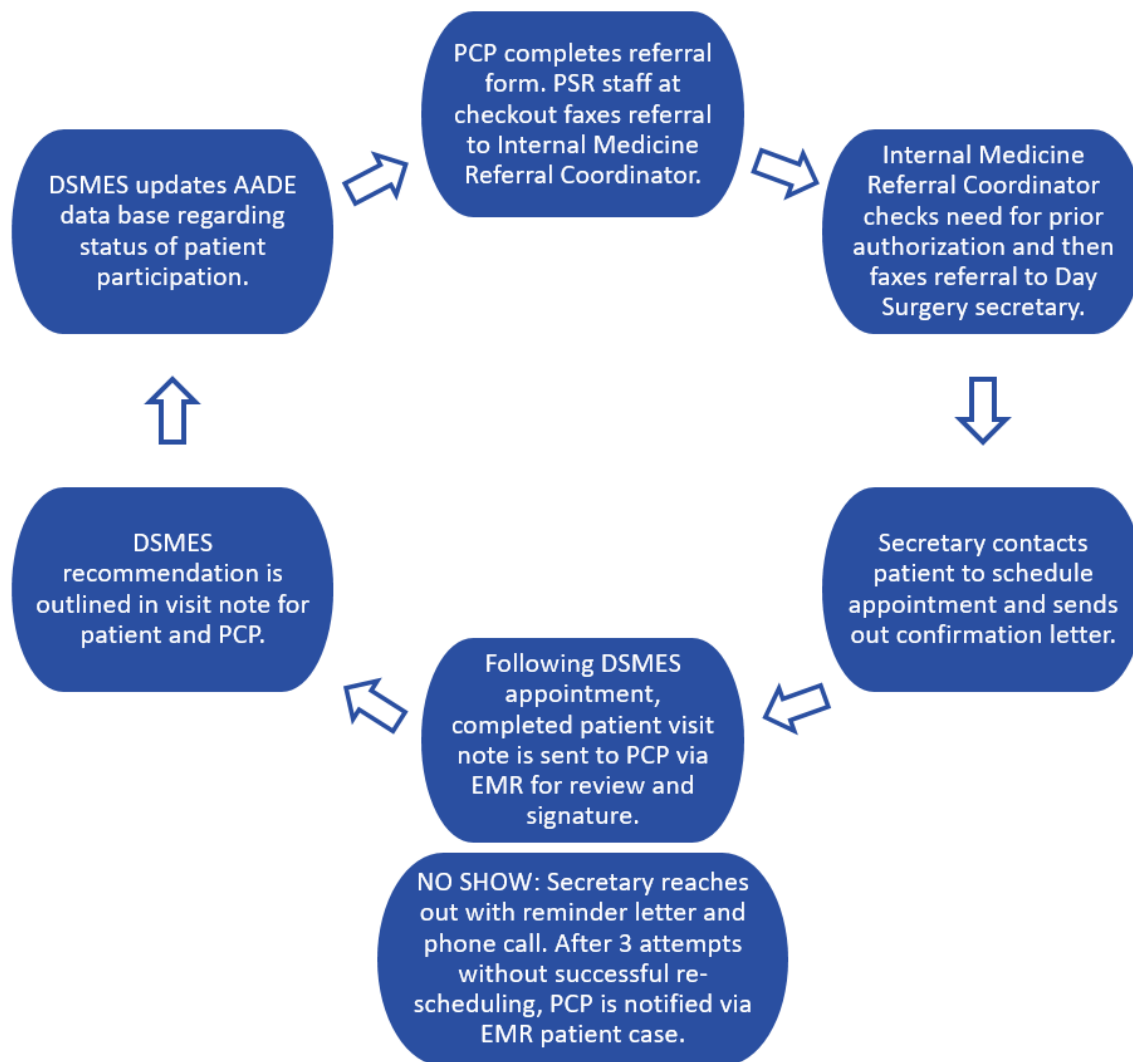
American Diabetes Association Diabetes Self-Management Education and Support for Adults with Type 2 Diabetes: Algorithm of Care., American Diabetes Association, 2016. Copyright and all rights reserved. Material from this publication has been used with the permission of American Diabetes Association.

Process Maps for Closed-Loop Referral

Example of Standardizing Operations Processes: A closed-loop referral process is an established workflow that is determined between the primary care team, diabetes educator, and patient that tracks communication and workflow between all team members. The closed-loop process ensures that connections are made and provides a foundation for seamless transitions and feedback.

Figure 8 is an example of a process map from Rowe Health Center, Cottage Hospital in Woodsville, NH. They recognized the importance of DSMES and undertook a project aimed to develop a closed-loop referral to a certified diabetes educator and then utilized a new tracking system for a cohort of patients with a goal to decrease their average HbA1c by 0.6%.

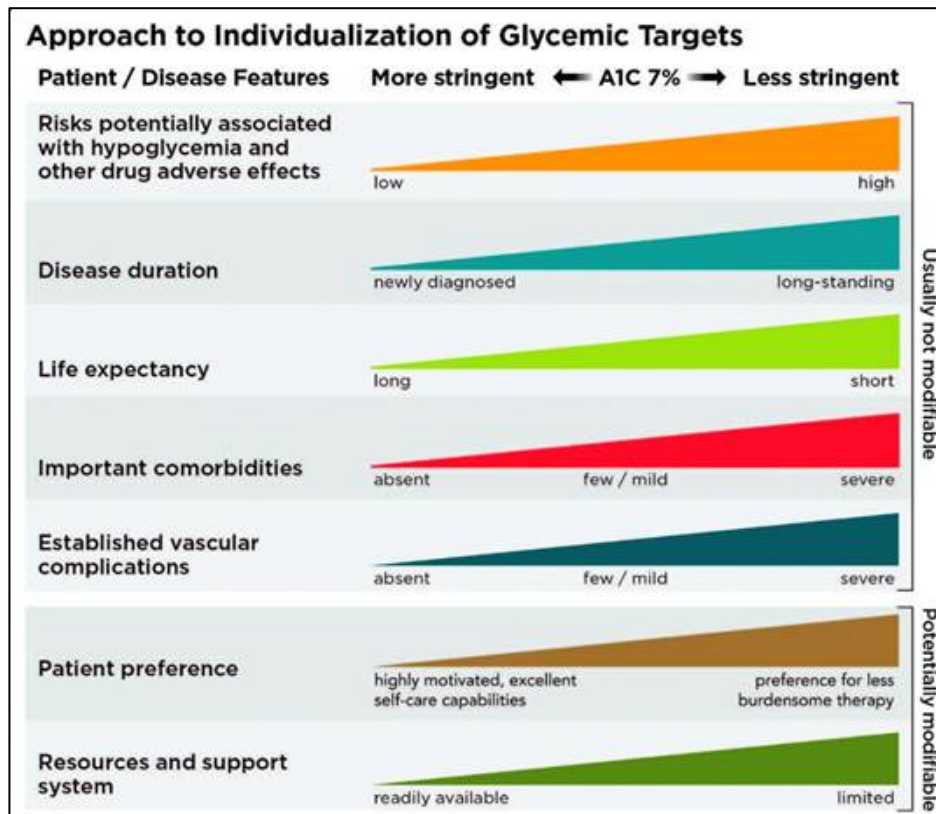
Figure 8. Example of a Process Map for Closed-Loop Referral



Approach to Individualization of Care

Figure 9 shows disease factors that can be used for determining individualized optimal HbA1c targets.⁹ The left side of the diagram displays characteristics that justify more stringent efforts to lower a patient’s HbA1c, while the right displays less stringent efforts.

Figure 9. Approach to Individualization of Glycemic Targets

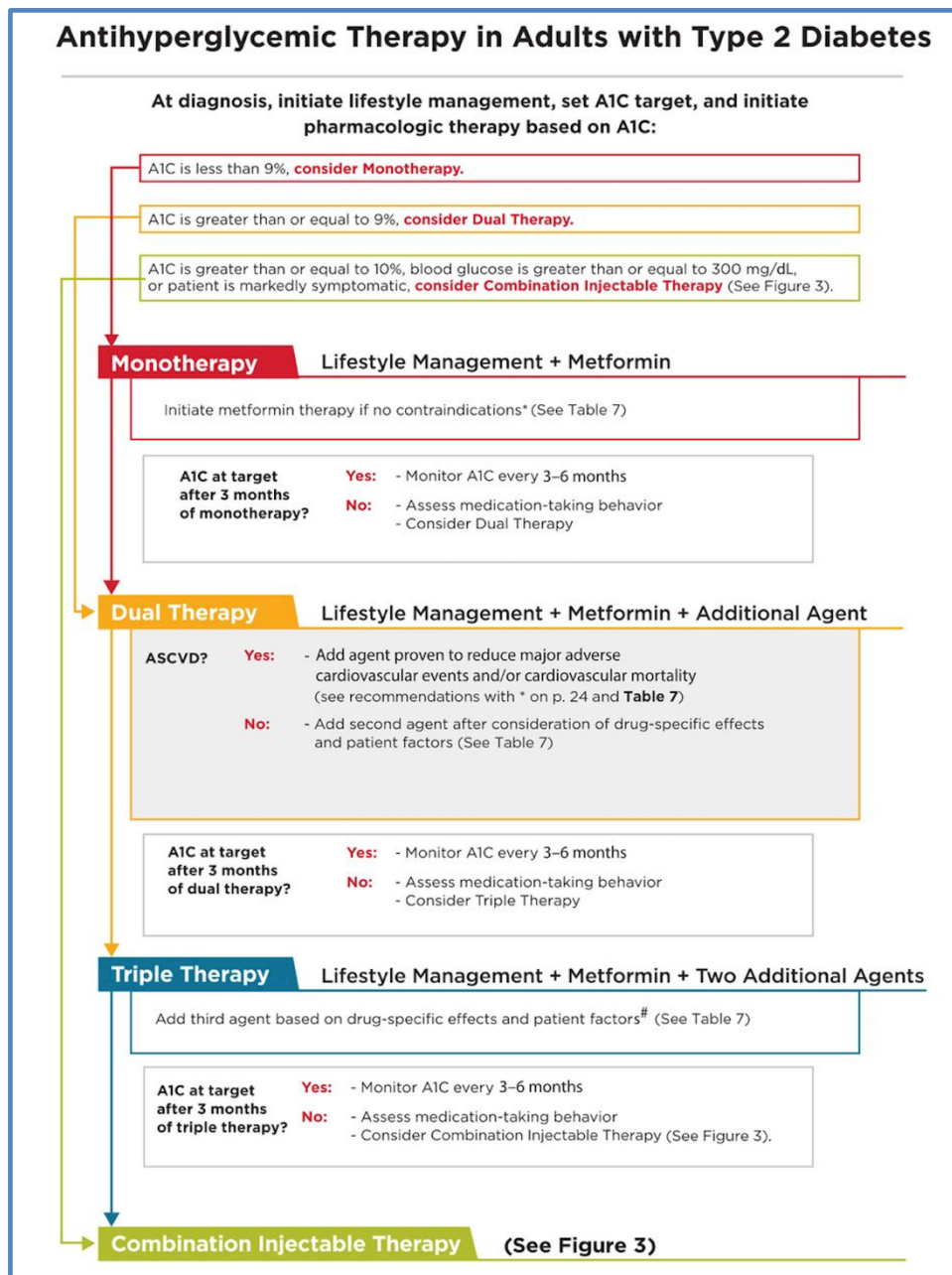


American Diabetes Association Standards of Medical Care in Diabetes—2019 Abridged for Primary Care Providers, American Diabetes Association, 2019. Copyright and all rights reserved. Material from this publication has been used with the permission of American Diabetes Association.

Pharmacologic Approaches to Glycemic Treatment in People with Type 2 Diabetes

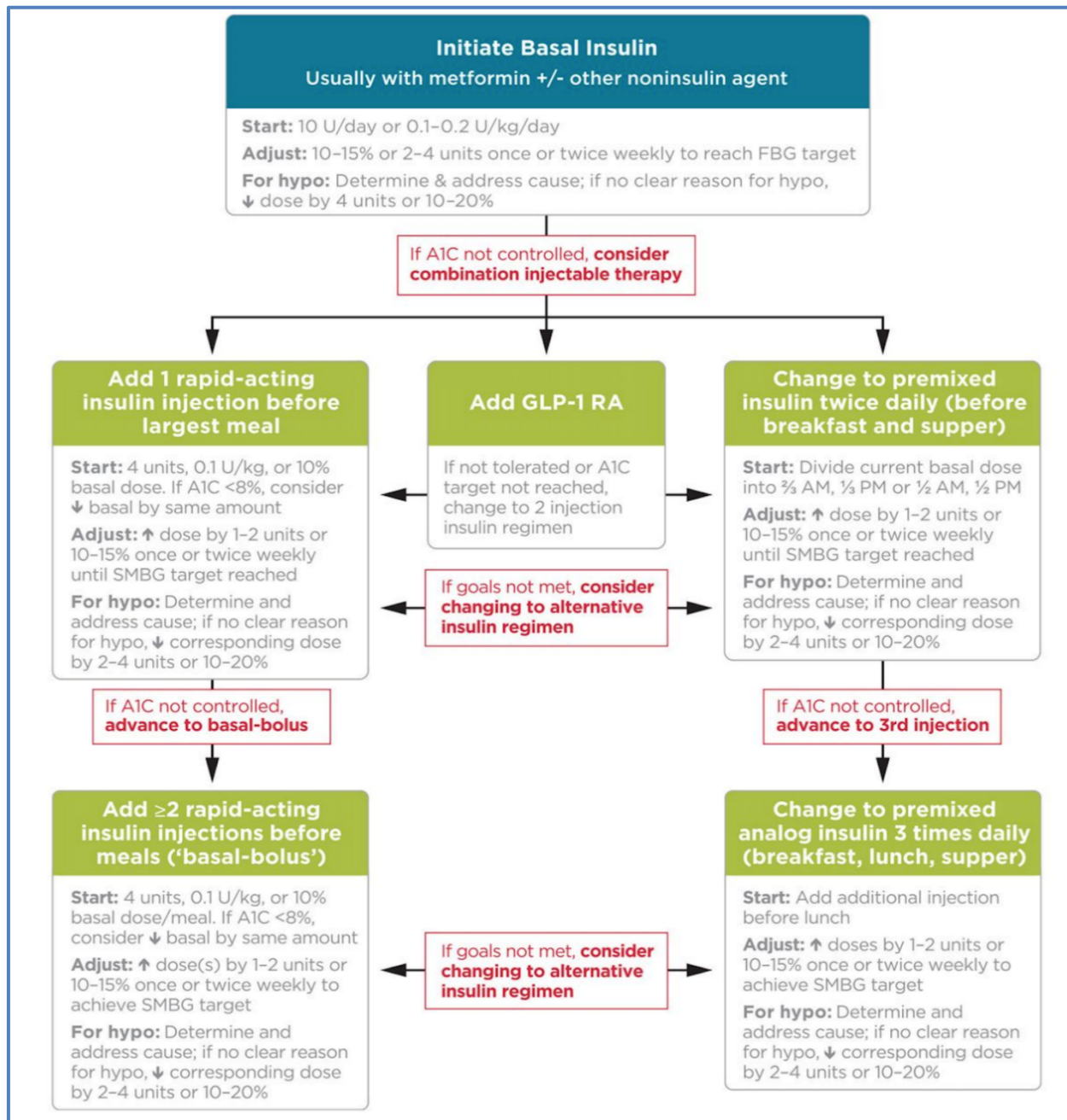
Figures 10 and 11 show the ADA’s 2018 recommendations for the selection of pharmacological treatment for type 2 diabetes. Continuous reevaluation of medication allows for the incorporation of patient experience and medication adjustment as needed.⁷

Figure 10. Antihyperglycemic Therapy for Type 2 Diabetes



American Diabetes Association 2018 Standards of Care Update: Pharmacologic Approaches to Glycemic Management in People With Type 2 Diabetes, American Diabetes Association, 2018. Copyright and all rights reserved. Material from this publication has been used with the permission of American Diabetes Association.

Figure 11. Combination Injectable Therapy for Type 2 Diabetes



American Diabetes Association 2018 Standards of Care Update: Pharmacologic Approaches to Glycemic Management in People With Type 2 Diabetes, American Diabetes Association, 2018. Copyright and all rights reserved. Material from this publication has been used with the permission of American Diabetes Association.

Step 5: Strategy for Measuring What Matters for Diabetes

Measuring outcomes helps ensure patients with diabetes receive the best care and avoid complications.

What You Can Do

Patients depend on their providers to deliver the best care in the best ways to ensure the best outcomes. Guiding staff through steps that help improve the quality of health care (quality improvement) delivered will empower them to set an aim, choose a measure, identify a change, and test that change.

One approach to quality improvement is to use a tool known as a:

1. Plan-Do-Study-Act or PDSA Cycle.

Tools You Can Use

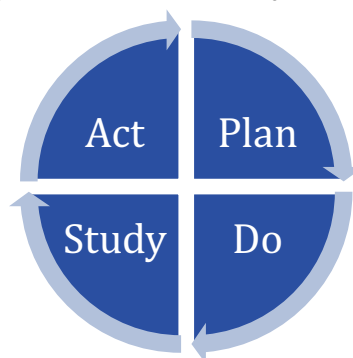
- 1. Plan-Do-Study-Act Cycle:** As illustrated in **Figure 12**, the PDSA cycle is an iterative approach to quality improvement where an idea for a change can be tested and refined.¹¹ For example, in addition to focusing on lowering HbA1c, a practice might plan and test a change intended to improve other important measures of care for patients with diabetes, such as:

- Increase the % of patients referred to DSMES with a HbA1c >9%.
- Increase the % of patients attending DSMES after initial diagnosis.

The four elements of PDSA are:

- P for Plan - Plan the change by deciding Who? What? When? Where? What needs to be done and what data need to be collected?
- D for Do - Try out the change on a small scale.
- S for Study - Analyze the data, summarize the results and compare the findings to your initial predictions.
- A for Act - Refine the change, based on what was learned from the test and prepare for the next PDSA iteration.

Figure 12. Plan-Do-Study-Act Cycle



Step 6: Using Dashboards to Improve Care

Sharing data among care team members leads to positive outcomes.

What You Can Do

Timely and actionable data are invaluable in uncovering areas for improvement and gaps in care. As important as health data are, they can sometimes be difficult to retrieve from the electronic health record (EHR). Some practices need to manually extract data using registries or spreadsheets. Regularly sharing data gives care teams an objective picture of the health of their patient populations over time.

One way to use data to promote change is:

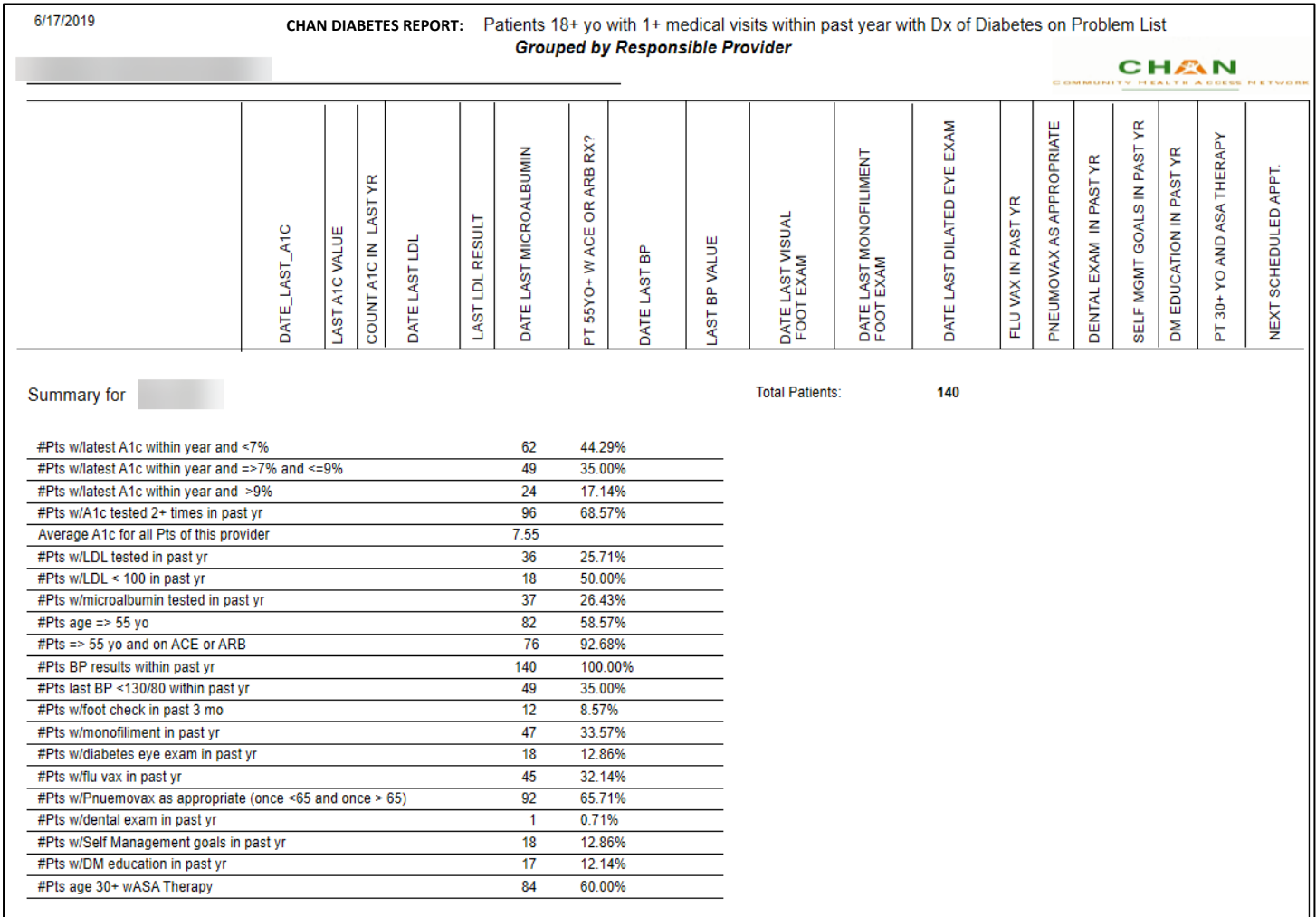
1. **Provider Data Dashboard:** A provider dashboard visibly displays patient panel outcomes in a public way. “Public” can be defined as narrowly or as widely as desired, whether it is internal to a care team, an entire practice, or more broadly to patients.

Tools You Can Use

1. **DATA DASHBOARD:** Data are easier to act on as a team when they are shared openly. Sharing monthly or quarterly care team data, such as the percent of patients that have met their target HbA1c, or the number of patients who have been referred to DSMES, helps identify care team successes as well as opportunities for improving patient-centered care.

Dashboards provide an opportunity to show data over time. **Figure 13** is an example of a provider dashboard from the Community Health Access Network in New Hampshire. See **Appendix E** for a blank provider dashboard template.

Figure 13. Example Provider Dashboard



Step 7: Patient Registries

Using real-time patient listings can focus care team attention on opportunities for improvement.

What You Can Do

A registry is an actionable list of timely, patient-level information organized to highlight gaps in evidence-supported care, whereas a dashboard is a summary of the information gathered in a registry/spreadsheet.

To get a population-level overview of patient care needs, use patient registries. These customized lists identify subsets of patients in need of care and allow for proactive outreach and can be used as a foundation for quality improvement work. Below are examples of metrics that may be included in a diabetes registry:

- Age
- Diabetes Diagnosis
- Diabetes Self-Management Education and Support and referral to DSMES program
- Self-Management Goals established
- Last HbA1C Value
- Body Mass Index (BMI)
- Date of Last Visit
- Date of Next Appointment
- Last Blood Pressure Value
- Hypertension Diagnosis
- Lipid Profile
- Eye exam
- Foot exam

A designated care team member can coordinate the development and management of patient registries. Example responsibilities for registry coordination can be found in **Appendix F**.

Tools You Can Use

PATIENT REGISTRIES: **Figure 14** is an example registry provided by the Community Health Access Network in New Hampshire. See **Appendix G** for a blank registry template.

Figure 14. Example of a Diabetes Registry

CHAN DIABETES REPORT: Patients 18+ yo with 1+ medical visits within past year with Dx of Diabetes on Problem List
Grouped by Responsible Provider

CHAN
COMMUNITY HEALTH ACCESS NETWORK

DATE_LAST_A1C	LAST A1C VALUE	COUNT A1C IN LAST YR	DATE LAST LDL	LAST LDL RESULT	DATE LAST MICROALBUMIN	PT 55YO+ W ACE OR ARB RX?	DATE LAST BP	LAST BP VALUE	DATE LAST VISUAL FOOT EXAM	DATE LAST MONOFILAMENT FOOT EXAM	DATE LAST DILATED EYE EXAM	FLU VAX IN PAST YR	PNEUMOVAX AS APPROPRIATE	DENTAL EXAM IN PAST YR	SELF MGMT GOALS IN PAST YR	DM EDUCATION IN PAST YR	PT 30+ YO AND ASA THERAPY	NEXT SCHEDULED APPT.
02/04/2019	6.6	2	04/10/2015	54		Y	03/04/2019	194 /81	12/06/2016	12/06/2016	04/12/2014	N	N		N	N	Y	
05/15/2019	7.0	3	09/12/2014	122		Y	05/15/2019	178 /70	07/23/2018	07/23/2018		N	N		Y			Y
10/29/2018	8.6	2	06/14/2016	121	06/14/2016	Y	10/29/2018	124 /82	07/06/2015	07/06/2015		N	Y		N	N	N	
04/09/2019	9.2	2	05/01/2017	27	04/18/2018	Y	04/09/2019	131 /76	10/03/2018	10/03/2018	02/20/2018	N	N		N	N	N	7/2/19
04/22/2019	6.4	1	04/22/2019	164	05/20/2019	Y	05/03/2019	125 /73	05/03/2019	05/03/2019	06/13/2017		Y				Y	7/29/19
04/15/2019	6.4	3	04/11/2018	76	04/11/2018	Y	04/15/2019	166 /82	10/20/2016	02/10/2016	05/25/2016	Y	Y	N	N	N	Y	6/19/19
12/10/2018	6.1	1	06/07/2012	119		N	02/04/2019	121 /86	09/22/2011			Y	Y				Y	
04/03/2019	6.0	2	11/28/2016	58	02/12/2018	Y	06/03/2019	116 /74	06/03/2019	03/12/2015	08/04/2016	N	N		N	N	Y	6/26/19
04/30/2019	7.3	4	04/07/2017	71	06/12/2018	N	04/30/2019	124 /87	01/18/2019	12/11/2015	06/04/2018	N	Y	N	N	N	Y	7/30/19
04/16/2019	9.1	3	05/23/2014	84	06/08/2018	N	04/16/2019	144 /95	04/16/2019	04/16/2019	01/03/2012	N	Y	N	N	N	N	6/19/19
01/11/2019	6.8	2	10/11/2018	122		N	06/10/2019	116 /73	09/11/2015			N	N	Y		N	Y	6/19/19
04/15/2019	6.8	3	07/13/2018	40	07/13/2018	N	04/23/2019	145 /84	07/07/2017	07/07/2017	06/22/2017	N	Y	N	N	N	Y	7/15/19
05/06/2019	11.2	3	07/10/2018	134	05/07/2019	N	05/06/2019	114 /74	09/11/2018	09/11/2018	06/30/2003	N	Y		N	N	N	
05/11/2018	6.2		12/06/2017	42	02/19/2018	N	04/17/2019	138 /76	08/31/2017	08/31/2017		N	Y		N		Y	8/16/19
04/12/2019	7.2	2	11/28/2016	60	05/13/2016	Y	05/20/2019	112 /64	09/05/2018	09/05/2018	06/11/2015	N	Y		Y	N	Y	7/2/19
08/22/2018	6.1	1	10/02/2015	115	03/19/2018	Y	03/27/2019	136 /60	04/10/2012			N	Y	N			Y	
03/29/2019	8.1	4	11/07/2017	49	11/07/2017	Y	03/29/2019	125 /67	05/03/2018	05/03/2018	01/18/2018	Y	Y		N	N	Y	
02/05/2019	6.3	3	02/05/2019	96	07/23/2018	Y	04/04/2019	121 /76	03/28/2018	03/28/2018	10/13/2011	N	N	N	N	N	N	
04/03/2019	8.1	2	04/03/2019	41	04/03/2019	Y	04/03/2019	121 /79	07/31/2017	07/31/2017	05/03/2017	N	N	N	N	N	Y	7/3/19
05/10/2019	7.2	5	05/11/2019	154	10/16/2017	Y	05/28/2019	123 /71	10/16/2017	10/16/2017	10/23/2018	Y	Y	N	Y	Y	Y	8/20/19
05/08/2019	6.7	2	04/21/2018	78	05/09/2019	Y	05/08/2019	129 /85	04/18/2018	07/14/2015	06/20/2017	N	N		N		Y	
02/05/2019	10.5	2	05/18/2017	87	10/11/2017	N	05/09/2019	120 /76	08/20/2018	08/20/2018	06/28/2018		N	N		N	Y	
03/20/2019	8.7	3	04/03/2019	69	10/24/2017	Y	03/20/2019	123 /75	09/21/2016	09/21/2016	06/08/2018	Y	Y	N	N	N	Y	
01/07/2019	7.7	2	12/23/2016	120	07/22/2018	Y	01/07/2019	154 /83	07/24/2018	07/24/2018		N	Y		N	N	N	7/1/19
04/29/2019	9.7	3	01/17/2018	43	09/23/2016	N	04/29/2019	130 /80	12/14/2018	12/14/2018			N			N	Y	

Step 8: Constant and Consistent Communication

Clear patient communication and education can lead to positive outcomes.

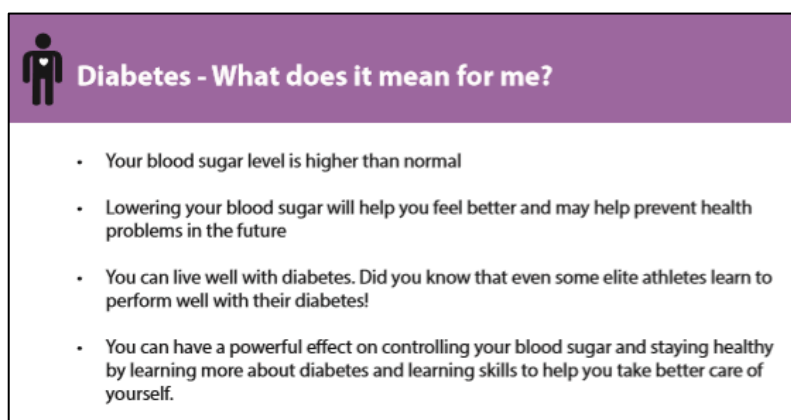
What You Can Do

Ensuring effective collaboration among multiple partners requires ongoing communication. Use of consistent written materials is an important strategy to ensure that care teams, staff, and patients alike share the same evidence-supported messaging and care expectations.

Tools You Can Use

- 1. Patient Education Materials: Figure 15** is an example of a patient education material from Cheshire Medical Center in Keene, New Hampshire. Visit https://www.cheshire-med.com/images/clinical_services/DiabetesPatientPacket.pdf for additional self-management-themed patient educational materials, which will complement the wallet card that will be introduced in Step 9.
- 2. National Resources for Diabetes Patient Education:**
 - National Institute of Diabetes and Digestive and Kidney Diseases
 - www.niddk.nih.gov/health-information/diabetes/overview/managing-diabetes/4-steps
 - American Diabetes Association
 - <https://www.diabetes.org/resources>
 - Centers for Disease Control and Prevention
 - <https://www.cdc.gov/diabetes/ndep/toolkits/index.html>
 - NH Division of Public Health Services
 - <https://www.dhhs.nh.gov/dphs/index.htm>

Figure 15. Sample Patient Education Material



Step 9: Engaging Patients and Celebrating Success

Simple tools support patient engagement.

What You Can Do

Opportunities to improve diabetes control, including promoting a healthy lifestyle, increasing patient understanding, and developing shared care goals can be achieved through patient engagement.

Celebrating early successes can help to maintain the momentum and grow patient, staff, and community engagement in shared achievement.


Tools You Can Use

- 1. Wallet Card: Figure 16** is an example of an 8-panel foldable card that can be distributed by care teams to patients with diabetes during clinical visits. Each panel is themed on a key component of self-management. The card is best used to prompt a brief shared goal-setting conversation between the patient and the care team about realistic improvement actions the patient can take between office visits. This card can be customized to match each practice's goals. This example is modeled after the hypertension wallet cards developed at Cheshire Medical Center in 2011 in collaboration with the Health Promotion Research Center at Dartmouth.

Figure 16. Diabetes Care Wallet Card

MONITOR Your Blood Sugar

- Get your blood pressure and weight checked at every visit.
- Check your blood sugar levels at least **daily** to see how your eating affects your blood sugars.
- Talk to your health care team if you have any **questions** about how or when to check your blood sugar.
- Learn about your medications.




Know your ABC's:

A1c: *In general, goal is near 7%*
 Blood Pressure: *Goal - less than 140/90*

	Date & Result	Date & Result	Date & Result
A1c			
Blood Pressure			
Weight			
Flu/Pneum Vaccine			
Foot Exam			
Eye exam			

Healthy MONADNOCK 2020

Coaching for BETTER HEALTH...



TIPS to help MANAGE YOUR DIABETES


Cheshire Medical Center
Dartmouth-Hitchcock Keene

What is Type 2 Diabetes?

Diabetes is a condition where your blood sugar (glucose) levels rise higher than normal. Insulin works to move glucose from your blood into your cells, but in Type 2 Diabetes, your body does not use insulin properly and leaves glucose in the blood.

What can you do?

- 1) See your provider every 3-6 months.
- 2) Visit your eye doctor as recommended.
- 3) See your dentist at least once per year.
- 4) Get a foot exam every year.



Eat HEALTHY

- Avoid sodas, candy and fast food.
- Fill half of your plate with vegetables.
- Eat whole grains and lean proteins, such as fish and skinless chicken.
- Other suggestions:




Be More ACTIVE

Start small:

- Walk the dog
- Take your kids or grandkids to the park
- Ride a bicycle
- Take a walk before breakfast, after lunch or after dinner

Talk with your doctor before beginning physical activity.



Know Your MEDICATION

- Some people need medication no matter how carefully they eat and exercise. If your doctor prescribes medication, be sure you know the **correct way to take it.**
- List your diabetes medications:



QUESTIONS to ask your healthcare provider

- What is a **healthy weight**?
- What type and how much activity is right for me?
- How often should I see you?
- Who can I talk to about healthy eating?
- What if I can't afford my medication?

Learn MORE

www.cheshiremed.org/diabetes
www.myDH.org



Step 10: Fostering Community-Clinical Collaboration

Integrating health care with community-based partnerships in areas such as chronic disease self-management, fitness, and nutrition leads to maximum impact.

What You Can Do

Creating sustainable, effective linkages between clinical and community settings can improve patients' access to preventive and chronic care services that support making healthy lifestyle choices and, ultimately, can improve quality of life for patients.

Community linkages can be as simple as providing information in your waiting room about local walking trails, farmers markets, and food banks, or promoting a discount on programs at the local fitness center. Clinical-community linkages offer opportunities for patients to get more help and support in changing unhealthy behaviors.

In more formalized community linkages, care teams and medical office staff direct patients to relevant programs either within the community or within the health care system. Ideally, connections should fit together so closely that from the patient's perspective, the health care diabetes care resource seem comprehensive and seamlessly integrated. A critical component of community-clinical linkages is follow-up to ensure that the connections were made and that the plan of care is coordinated between the clinical entity and the community organization.

Tools You Can Use

WORKSHEETS: The worksheet examples below can be customized to your organization's needs.

1. **Partner Worksheet: Figure 17** is an example of a worksheet that can help identify partner organization's assets, such as resources, services, and expertise that may not be readily available within your clinical practice. Such assets may include diabetes educators, YMCAs, and weight loss programs. Staff and care teams can complete this worksheet and compare results to develop a master list of community resources.

Figure 17. Example Partner Worksheet

Building a Culture of Health: Potential Partner Worksheet

Ask all members of the care team to help brainstorm a list of organizations in your community that could be potential partners for:

- Diabetes Self-Management Education and Support classes
- Healthy lifestyle opportunities (nutrition, fitness, farmers markets, parks and recreation departments and more!)

Types of Possible Partner Organization	Organization in your community	Organizational Assets	Contact Information	In our Service Area? yes/No
<i>Diabetes Education/Support Group</i>	<i>Happy Hill Hospital Endocrine Services Department</i>	<i>Four week DSME classes for newly diagnosed (sliding scale fee) Free support group every Tuesday Diabetes Prevention Program</i>	<i>Jane Dow jdow@gmail.com</i>	<i>yes</i>
<i>Parks and Rec Dept</i>				
<i>Fitness Facilities</i>				
<i>YMCA</i>				
<i>Farmers Markets</i>				
<i>Weight Loss Programs</i>				
<i>Community Organizations</i>				

Appendix A: Provider and Staff Feedback Survey¹²

We are exploring ways to improve diabetes care for adults. Your responses to this survey will help us plan future interventions and community messaging around the prevention and control of diabetes. We anticipate that the survey will take less than 5 minutes to complete.

ANSWERS ARE ANONYMOUS AND RESPONSES WILL BE AGGREGATED.

1. Considering your patients with poorly controlled diabetes (HbA1c >9%) and using the list below, please choose 3 areas of self-management that you feel contribute most to inadequate control.

- Taking medication incorrectly
- Inadequate physical activity
- Not eating a healthy diet
- Not implementing problem solving skills (i.e. responding to day-to-day fluctuations in health)
- No access to home monitoring of monitoring blood glucose levels
- Not understanding how to reduce risks (i.e. smoking cessation, eye and foot exams)
- Not implementing healthy coping/stress management

2. Considering your patient population with poorly controlled diabetes and using the list below, please select what you feel are the top 5 barriers for achieving adequate control for these patients.

- Documentation of patient's care in the medical record is inadequate to optimally coordinate care
- No convenient way to prompt regular re-assessment of patients
- Target of HbA1c <9% is unrealistic given medical complexity of patients
- National guidelines and current best-practices for diabetes care are not well known by providers and staff
- Staff are reluctant to accept standardized guidelines
- Clinic-wide protocols are not established to follow the guidelines
- Clinic-wide protocols are not adequate to meet guidelines
- Clinic protocols to address diabetes are not consistently followed
- There is not enough time to follow clinic protocols
- Lack of access to referral specialists (i.e. endocrinologists, eye and foot care specialists)
- Patient does not understand diabetes and its causes

- Patient does not understand health implications of diabetes
- Patient does not understand ways to reduce blood sugar
- Patient is not concerned about health implications of diabetes
- Patient does not understand importance of medication
- Patient does not understand importance of blood glucose monitoring
- Patient lacks financial resources to purchase medications or testing supplies
- Medication is not taken as prescribed
- Patient pressures provider into less aggressive medication dosing

Please list additional important barriers you feel have not been listed above:

3. What 3 approaches do you use most frequently with patients who have not gained adequate blood glucose control?

- I provide printed educational materials
- I make recommendations regarding lifestyle changes to my patients in a one-on-one meeting during their office visit
- I refer the patient to a certified diabetes educator for education and follow up
- I schedule additional appointments for the patient to discuss better self-management
- I ask staff to follow up with patients who do not come in for Follow-up appointments
- I develop goals for blood sugar improvement with my patients and we monitor them over time
- I ask patients to bring in their blood sugar readings to appointments
- I elicit cooperation of the patient’s family in reinforcing care

Other approaches that you use not listed above:

4. Choose up to 5 resources you feel would most improve the care of patients with diabetes?

- Community-wide messaging campaign about diabetes prevention and importance of optimal control
- Evidence-based patient education materials
- Targeted nurse follow-up education for patients
- Enhancing the role of nurses in delivering care for diabetes
- Medication assistance to help when patients are unable to afford medicines
- A self-management themed diabetes wallet card as a patient engagement tool
- Provider training regarding national treatment guidelines and algorithms
- Revised clinic protocols for patients with poorly controlled diabetes
- Agreed-upon clinic-wide protocols for patients with poorly controlled diabetes
- Assistance from pharmacists with patient consults and suggestions for providers
- Incorporating diabetes registry management to proactively reach out to patients
- Evidence-based self-management or group management programs
- Community-based lifestyle coaching available to patients
- Improvements in the medical record to better prompt patient recall and reminders
- Creating multidisciplinary care teams (i.e., to include podiatrists, eye care specialists, certified diabetes educators, case managers)
- Nutrition classes
- Additional community-based, accessible, affordable programs to promote exercise

Other resources that could help not listed above:

Appendix B: Diabetes Care Team Charter

Diabetes Care Team Charter – Date:			
Project Description / Opportunity Statement	Project Scope	Team	
	In Scope:	Project Lead(s):	
	Out of Scope:	Project Sponsor:	
Business Case	Goal Statement	Suggested Team Members	
			Provider(s)
			RN (s)
			MA/LPN(s)
			Dietitian
			Certified Diabetic Educator
			Data Analyst
			Registry Coordinator(s)
			Behavioral Health
			Patient Representative
			Pharmacist
			Community Partner
	Student Intern		
	Facilitator/Coach		
		Contact Information for Project Lead:	
	Measures	Timeline	
		Project Start – Date here	
		Full Implementation – Date here	

Appendix C: Aim Statement Template

We aim to _____

(increase/decrease/improve/etc.)

the _____

(number / percentage / score/ etc.)

of _____

(name the exact thing to be improved)

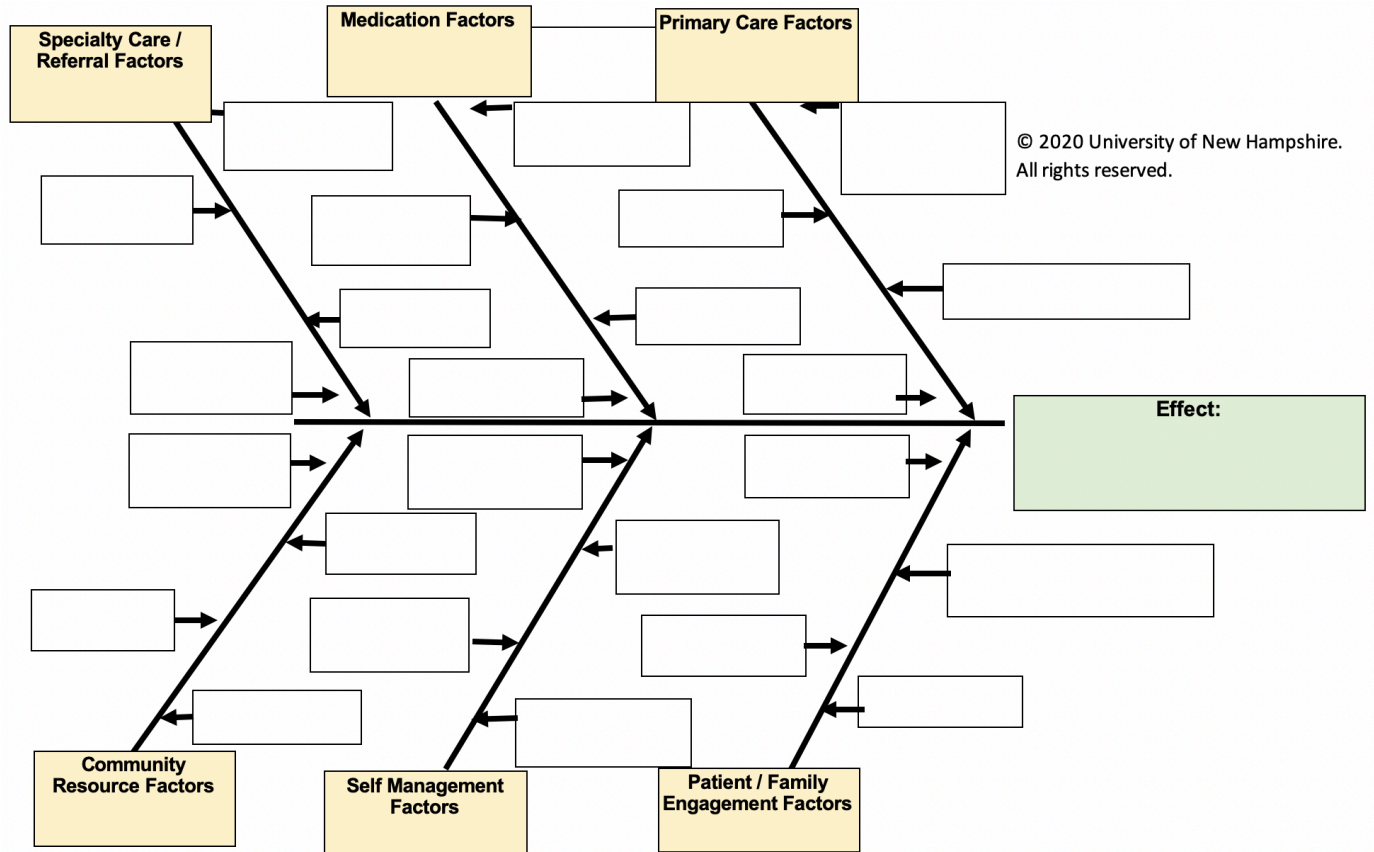
by / from _____

(enter the exact amount of improvement e.g. by 50% or from 30 to 80%)

by _____ (enter the month and year)

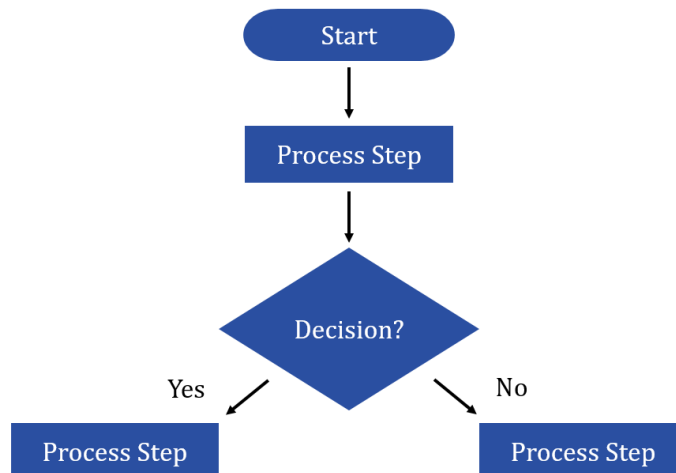
Appendix D: Quality Improvement Tools

The Cause and Effect “Fishbone” Diagram is a simple way to help stakeholders identify challenges and solutions.



Flowcharts use simple symbols to describe process. Flowcharts are best created by individuals who are on the front lines of the workflow.

Common Symbols



Appendix E: Provider Dashboard Template

Sample Provider Dashboard			
Month Ending:			
Provider Name	Number of patients with diabetes	% of patients with HBA1c >9 (current month)	% of patients with HBA1c >9 (previous month)

Appendix F: Sample Responsibilities for Registry Coordination

RESPONSIBILITIES:

- Analyze data from EHR and public/commercial payers to identify gaps in care and to identify patients who might benefit from care coordination
- Assimilate data from multiple sources into a format and display that is meaningful to use by clinical teams
- Distribute data to inform clinical teams about data collected
- Educate clinical teams on how to use data at the team level
- Work with teams to identify trends and best practices
- Provide teams with data they need/request to further their improvement efforts
- Meet with providers to review population health data and help identify opportunities for improvement
- Generate individual patient letters and mass mailings as needed for population health management
- Utilize scheduling system and/or EHR as appropriate to foster population health data coordination
- Prepare and send reminders to clinical teams as prompts to be used in preparation for patient visits
- Review reports to identify patients with scheduled appointments in need of preventive or chronic care
- Attend and participate in staff meetings as needed
- Routinely report trends in quality metrics and recommend improvement opportunities to leadership
- Perform other duties willingly as required or assigned

Appendix G: Registry Template

Sample Diabetes Care Registry													
Date:													
Patient Name	MR#	Age	Date of Last Visit	Date of Next visit	Date of Last HbA1c	Last HbA1c value	Date of Last Eye Exam	Date of Last Foot Exam	Referred to DSMES?	Smoking Status	BP at last visit	Recent Actions	Next Steps
Jane Doe	123456	67	2/13/2019	5/13/2019	2/13/2019	9.6	3/21/2018	2/13/2019	No	Yes	144/86	Increased BP and oral hypoglycemic meds at last visit	Schedule yearly eye exam and check adherence with meds

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