COMMUNITY HEALTH CARE ASSOCIATION of New York State

Strategies to Treat Diabetes & Prediabetes and Reduce Cardiovascular Disease Risk

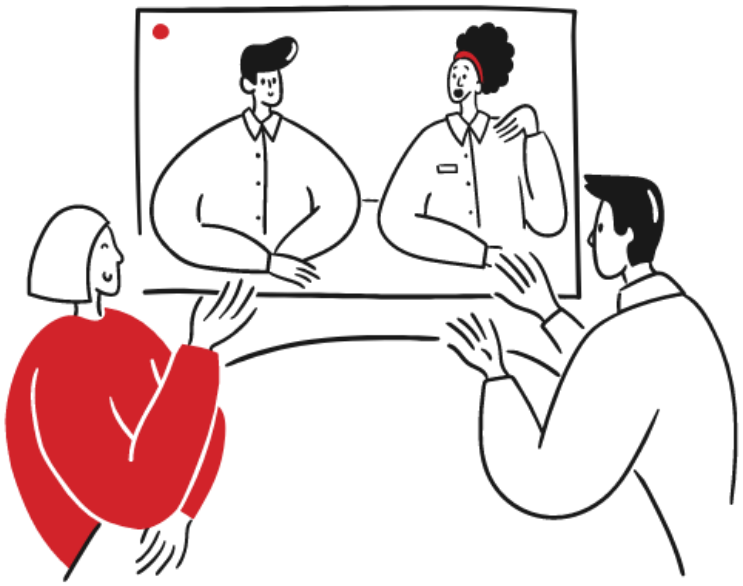
Cohort 2 End Year Event
June 24th, 2021

Diabetes and Cardiovascular Disease Prevention and Control Project

NEW YORK STATE | Department of Health

Housekeeping

- Phones have been muted to prevent background noise
- Use the chat box to type questions during the webinar
- This webinar is being recorded and will soon be available to all participants
- A webinar evaluation will be shared with participants



Objectives

- Review clinical guidelines and implementation strategies that incorporate a team-based model of care;
- Learn how partnerships with community-based organizations can augment clinical care and treatment of diabetes, prediabetes and reduction of cardiovascular disease risk
- Experience DCPC Cohort 2 Promising Practices around diabetes and cardiovascular disease prevention and management

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Part I: Strategies to Treat Prediabetes/Diabetes and Reduce Cardiovascular Disease Risk

June 24, 2021

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Disclosure

- UpToDate Author

Objectives

Review clinical guidelines and relevant implementation strategies in a federally qualified health center setting;

Identify opportunities to incorporate team-based care/roles in patient care (NPs, RNs, Pharmacists, CHWs, etc.) while implementing diabetes, hypertension and cholesterol treatment guidelines;

Explore case studies that support the implementation of clinical guidelines in patient care;

Learn how partnerships with community-based organizations can augment clinical care and treatment of diabetes, prediabetes and reduction of cardiovascular disease risk.

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Cardiovascular Health

Cardiovascular Health (CVH)

- Characterized by 7 components (Life's Simple 7)
  - Health behaviors: diet quality, physical activity, smoking
  - Health factors: blood cholesterol, BMI, blood pressure, blood glucose
- Ideal cardiovascular health: absence of clinical CVD + presence of optimal levels of all 7 CVH components
  - Absence from smoking
  - Healthy diet score
  - Sufficient physical activity
  - Normal body weight
  - Normal levels of TC, BP, FPG

Virani SS et al., *Circulation*. 2021;143:e00–e00. DOI: 10.1161/CIR.0000000000000950

Significance of Ideal Cardiovascular Health

- Several studies show strong inverse associations of the number of CVH components at ideal levels with:
  - all-cause mortality, CVD mortality, CVD, stroke, and HF
  - subclinical measures of atherosclerosis such as carotid IMT, arterial stiffness, and CAC prevalence and progression
  - physical functional impairment and frailty
  - cognitive decline and depression
  - longevity

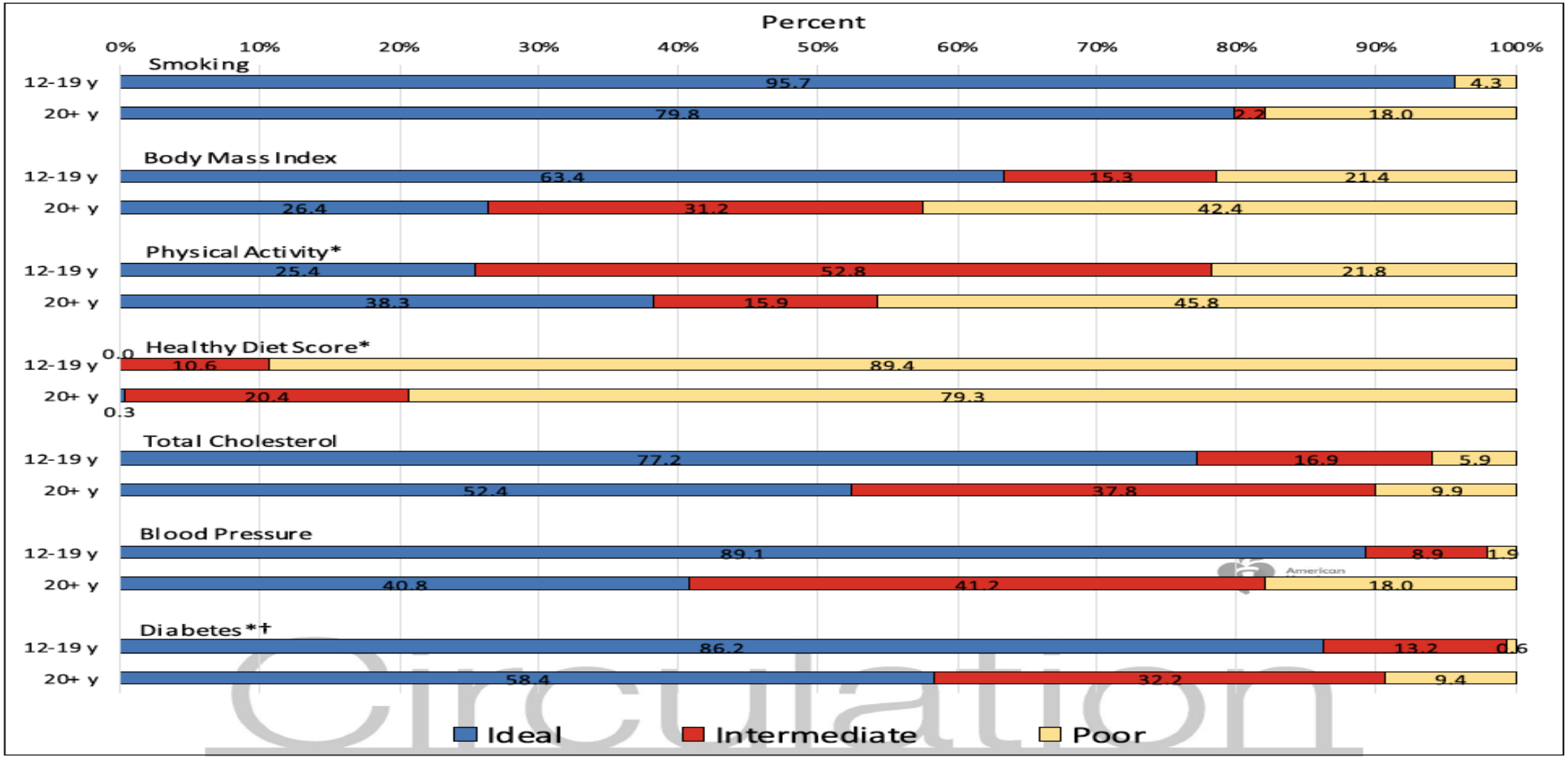
Virani SS et al., *Circulation*. 2021;143:e00–e00. DOI: 10.1161/CIR.0000000000000950

Significance of Ideal Cardiovascular Health

- Investigators assign individuals a CVH score ranging from 0 to 14 on the basis of the sum of points assigned to each component of CVH (poor=0, intermediate=1, ideal=2 points)
- Example:
    - With this approach, data from the Reasons for Geographic and Racial Differences in Stroke (REGARDS) cohort showed an inverse association between a higher CVH score and lower incidence of stroke.
        - Every unit increase in CVH was associated with an 8% lower risk of incident stroke (HR, 0.92 [95% CI, 0.88–0.95]) – results were similar in blacks and white participants

Kulshreshtha A et al., *Stroke*. 2013;44:1909–1914. doi: 10.1161/STROKEAHA.111.000352

Prevalence estimates of poor, intermediate, and ideal cardiovascular health (CVH) for each component of CVH among US children 12 to 19 years of age and US adults ≥20 years of age, 2015 to 2016 and 2017 to 2018



Unpublished American Heart Association tabulation using National Health and Nutrition Examination Survey, 2015 to 2016 and 2017 to 2018

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Clinical Practice Guidelines

Purpose of Clinical Practice Guidelines

- To decrease the variability between research and current practice;
- To synthesize the best available evidence to support clinical decision-making
- Improve quality of care, patient outcomes, and cost-effectiveness
- To reduce inappropriate disparity in clinical practice.

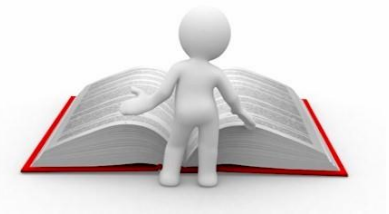
Fischer F et al., *Healthcare* 2016; 4:36; doi:10.3390/healthcare4030036

Application of Guidelines into Practice

- Guideline publication does not guarantee guideline implementation and provider adherence.
  - Often a slow and complex process
  - Numerous barriers have been identified
  - Non adherence leads to suboptimal care, poorer outcomes, and increased cost
    - Adherence to multiple therapies (ACEI/ARBs, statins, beta blockers) and all-cause mortality after MI: 65% higher mortality among nonadherers
    - In secondary prevention patients, statin adherence was associated with fewer hospitalizations and 10.1%-17.8% lower cost

Korhonen MJ et al., *J Am Coll Cardiol* 2017;70:1543-1554.
Bitton A et al., *Am J Med* 2013;126:357.e7-357.e27.

Barriers to Guideline Implementation



- Lack of clinician awareness and familiarity with guideline and its recommendations
- Lack of clinician agreement, self-efficacy, skills, outcome expectation, and motivation
- Greater complexity, poor layout, lengthy guideline
- Unclear intervention goals
- Organizational constraints, e.g., poor standardization of processes and procedures, lack of resources, time restrictions, heavy workload
- Lack of interdisciplinary collaboration

Adapted from Fischer F et al., *Healthcare* 2016; 4:36; doi:10.3390/healthcare4030036

Strategies to Overcome Guideline Implementation Barriers

- Clinician dissemination strategies
  - Multimodality education: Grand rounds, face-to-face scientific meetings, webinars, print journal articles, social media, practical educational tools, small group discussions, interactive case-based learning, journal clubs
  - Active learning from experts/opinion leaders, identifying practice or organizational champion
  - Application of educational strategies to all clinician types: physicians (cardiology, primary care, OB gyne, endocrinology, etc.), nurses and NPs (including primary care and women's health), PAs, PharmDs
  - Consideration of patient involvement

Blood Cholesterol: Guideline on the Management of

publish date: **Nov 10, 2018**

Go to JACC article | Download PDF

Quick Reference

These items break the guidelines down into easy-to-use summaries.

- 2018 Executive Summary
- 2018 Systematic Review
- 2018 Data Supplement
- 2018 Guideline Perspectives
- 2018 Special Report on Risk Assessment
- *JACC* Blood Cholesterol Guideline Hub

Slides

Find all the guideline recommendations in PowerPoint format here.

- 2018 Slide Set

Education

Test your in-depth knowledge of this guideline with CME, CE and MOC educational activities.

- Guideline Education

Apps and Tools

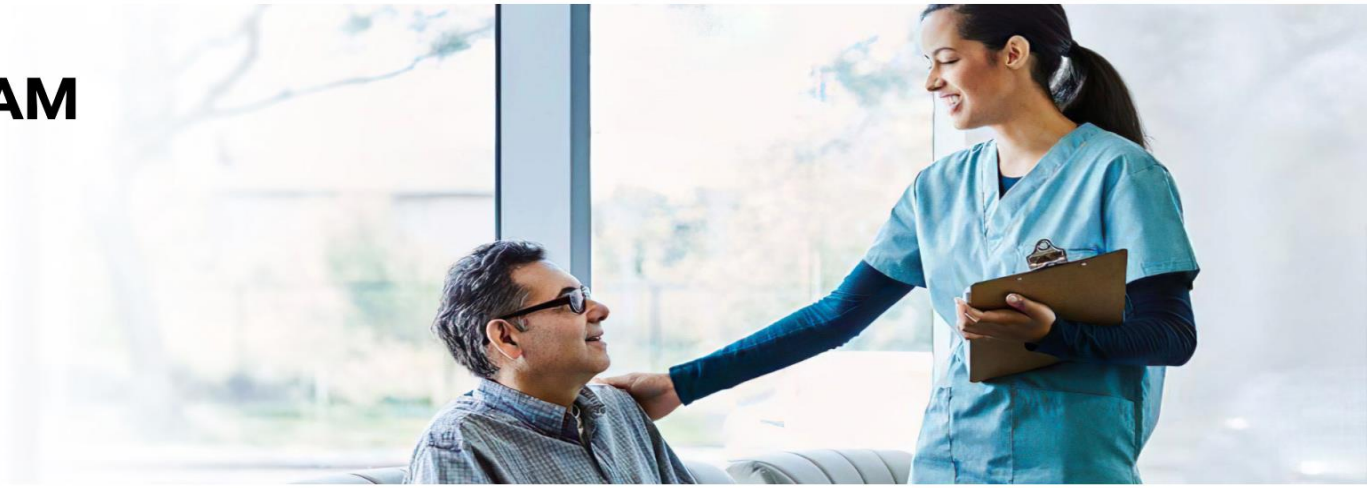
Use these for critical decision making at the point-of-care.

- ASCVD Risk Estimator Plus
- 2018 Guidelines Made Simple: Blood Cholesterol
- Comparison Tool: 2013-2018
- PCSK9 Prior Authorization Tool
- LDL-C Manager
- Statin Intolerance App

BP IMPROVEMENT PROGRAM

This is your chance—the moment to take action.

Explore the Program



The latest prevalence estimates show that 46% of adults in the United States have high blood pressure. Despite the serious risk of heart attack, stroke, and even death, and the fact that we've made significant progress improving high blood pressure control rates in the US, blood pressure control remains far from ideal.

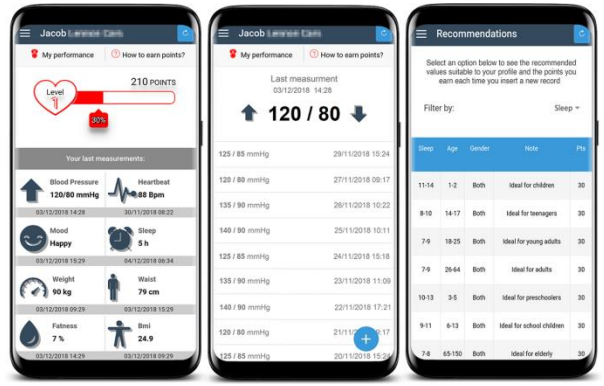
It's time to fight back harder, with better tools—including the practical, evidence-based steps this program offers.

"This program is simple and straightforward—and it works."

You Can Make a Difference

Strategies to Overcome Guideline Implementation Barriers

- Guideline-related strategies
  - Must be evidence-based; appraisal of evidence; regular updates
  - Short and user-friendly: *Top 10 Take Home Messages*
  - Simplicity and ease of use; easy access to guideline
  - Decision support systems
  - Use of mobile apps to facilitate guideline use
  - Consideration of subgroups and patients with comorbidities in guideline, e.g., children, young adults, older adults, race/ethnicity
  - Setting clear intervention goals relevant to LOE



Strategies to Overcome Guideline Implementation Barriers

- Organizational or external strategies
  - Standardization of processes and procedures
  - Creation of protocols, standard order sets, etc.
  - Consideration of the care setting
  - Link to quality improvement activities
  - Audit and feedback of individual performance
  - Financial incentives
  - Leverage capability of EHR (identify patients not receiving guideline-directed care; prompts/pop-ups)
  - Education on documentation short-cuts
  - Multiprofessional collaboration, consensus groups

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Diabetes and CVD Risk

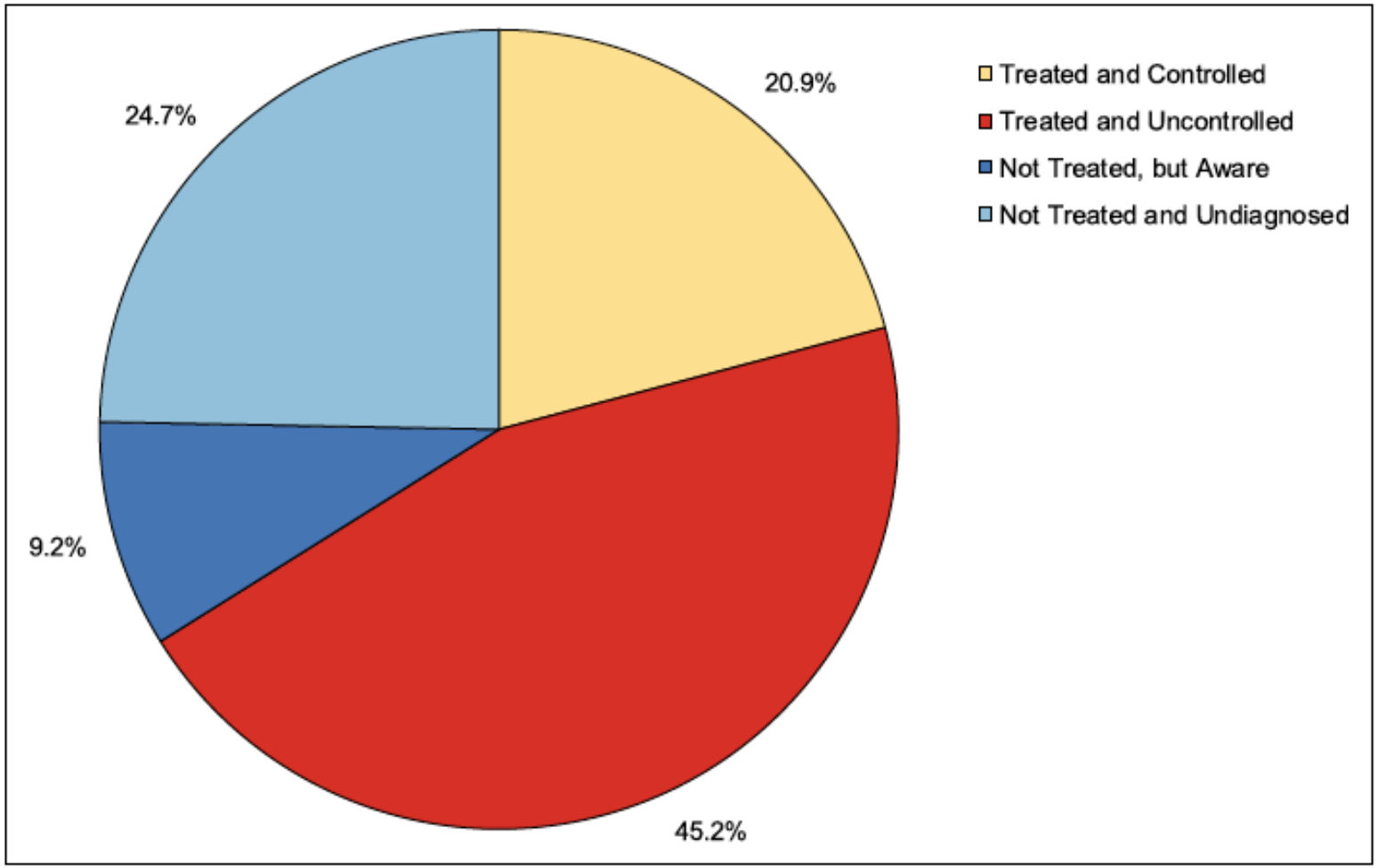
- Background
- ADA Guideline
- Integration of related guidelines: Primary prevention of CVD, Cholesterol Management, Blood Pressure

Diabetes

- Prevalence (2013-2016, age ≥ 20 yrs)
  - Diagnosed diabetes: 26 million (9.8%)
  - Undiagnosed diabetes: 9.4 million (3.7%)
  - Prediabetes: 91.8 million (37.6%)
- Multi-Ethnic Study of Atherosclerosis (MESA) → lower diabetes risk was associated with more ideal CVH factors (Asian, Hispanic, NH Black, and NH White people)
- Risk of diabetes increases with prediabetes, family history of diabetes, obesity, insulin resistance, BMI in childhood, consumption of SSBs, physical inactivity, and history of gestational diabetes.

Virani SS et al., *Circulation*. 2021;143:e00–e00. DOI: 10.1161/CIR.0000000000000950
Joseph JJ et al., *Diabetologia*. 2016;59:1893–1903. doi: 10.1007/s00125-016-4003-7

Awareness, treatment, and control of diabetes in US adults ≥20 years of age (NHANES, 2013–2016)



Diabetes, Mortality, and CVD

- Diabetes → major risk factor for CVD
- Diabetes → 7th leading cause of death in 2018
  - Diabetes death rates higher in NH Black, Hispanic, NH American Indian/Alaska Native men and women versus NH white men and women
- Among NHIS participants enrolled in 2000 to 2009 and followed up through 2011, diabetes was associated with increased risk for:
  - Men: HD mortality (HR, 1.72 [95% CI, 1.53–1.93]); cerebrovascular mortality (HR, 1.48 [95% CI, 1.18–1.85]), CVD mortality (HR, 1.67 [95% CI, 1.51–1.86])
  - Women: HD mortality (HR, 2.02 [95% CI, 1.81–2.25]); cerebrovascular mortality (HR, 1.43 [95% CI, 1.15–1.77]):CVD mortality (HR, 1.85 [95% CI, 1.69–1.96]).

Virani SS et al., *Circulation*. 2021;143:e00–e00. DOI: 10.1161/CIR.0000000000000950
Liu L, et al., *World J Diabetes*. 2016;7:449–461. doi: 10.4239/wjd.v7.i18.449

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Team-Based Collaborative Care

Chronic Care Model.

The Chronic Care Model includes six core elements to optimize the care of patients with chronic disease

1. Delivery system design (moving from a *reactive* to a *proactive* care delivery system where planned visits are coordinated through a team-based approach)
2. Self-management support
3. Decision support (basing care on evidence-based, effective care guidelines)
4. Clinical information systems (using registries that can provide patient-specific and population-based support to the care team)
5. Community resources and policies (identifying or developing resources to support healthy lifestyles)
6. Health systems (to create a quality-oriented culture)

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Diabetes and Population Health.

1.1 Ensure treatment decisions are timely, rely on evidence-based guidelines, and are made collaboratively with patients based on individual preferences, prognoses, and comorbidities. B

1.2 Align approaches to diabetes management with the Chronic Care Model. This model emphasizes person-centered team care, integrated long-term treatment approaches to diabetes and comorbidities, and ongoing collaborative communication and goal setting between all team members. A

1.3 Care systems should facilitate team-based care and utilization of patient registries, decision support tools, and community involvement to meet patient needs. B

2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease

I	A	1. A team-based care approach is recommended for the control of risk factors associated with ASCVD.[S2.1-1–S2.1-14]

Arnett DK et al. *Circulation* 2019;140:e596–e646. DOI: 10.1161/CIR.0000000000000678

Team-Based Collaborative Care Definition

- Adding new staff or changing the roles of existing staff to work with a primary care provider[1]
- The provision of health services to individuals, families, and/or their communities by at least 2 health providers who work collaboratively with patients and their caregivers – to the extent preferred by each patient – to accomplish shared goals within and across settings to achieve coordinated, high quality care.[2]

[1]Proia KK et al., *Am J Prev Med* 2014;47:86-99.
[2]Mitchell P et al., Institute of Medicine, http://www.iom.edu/tbc.

Roles of Team Members

- Complement the activities of the primary care provider
- Provide process support
- Share care responsibilities

  -Medication management
  -Active patient follow-up
  -Adherence and self-management support

Proia KK et al., *Am J Prev Med* 2014;47:86-99.

Team-Based Care and Improved BP Control: A Community Guide Systematic Review

- 28 studies (1980-2003) and an additional 52 studies (2003-2012)
- Studies included a comparison group or had an interrupted time-series design with at least 2 measurements before and after the intervention
- BP outcomes:
  - Proportion of pts with controlled BP improved by a median 12 percentage points
  - SBP decreased median 5.4 mmHg
  - DBP decreased median 1.8 mmHg
- Key features of interventions that improved BP outcomes ➔ team-based care especially when pharmacists and nurses were part of the care team

Proia KK et al., *Am J Prev Med* 2014;47:86-99.

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Social Determinants of Health

Tailoring Treatment for Social Context

1.5 Assess food insecurity, housing insecurity/homelessness, financial barriers, and social capital/social community support and apply that information to treatment decisions. A

1.6 Refer patients to local community resources when available. B

1.7 Provide patients with self management support from lay health coaches, navigators, or community health workers when available. A

2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease

I	B-NR	3. Social determinants of health should inform optimal implementation of treatment recommendations for the prevention of ASCVD.[S2.1-19–S2.1-25]

Arnett DK et al. *Circulation* 2019;140:e596–e646. DOI: 10.1161/CIR.0000000000000678

Example Considerations for Addressing Social Determinants of Health to Help Prevent ASCVD Events

Diet	In addition to the prescription of diet modifications, body size perception, as well as social and cultural influences, should be assessed.[S2.1-37,S2.1-38]
	Potential barriers to adhering to a heart-healthy diet should be assessed, including food access and economic factors; these factors may be particularly relevant to persons from vulnerable populations, such as individuals residing in either inner-city or rural environments, those at socioeconomic disadvantage, and those of advanced age*.[S2.1-39]
Exercise and physical activity	In addition to the prescription of exercise, neighborhood environment and access to facilities for physical activity should be assessed.[S2.1-30,S2.1-40,S2.1-41]

Arnett DK et al. *Circulation* 2019;140:e596–e646. DOI: 10.1161/CIR.0000000000000678

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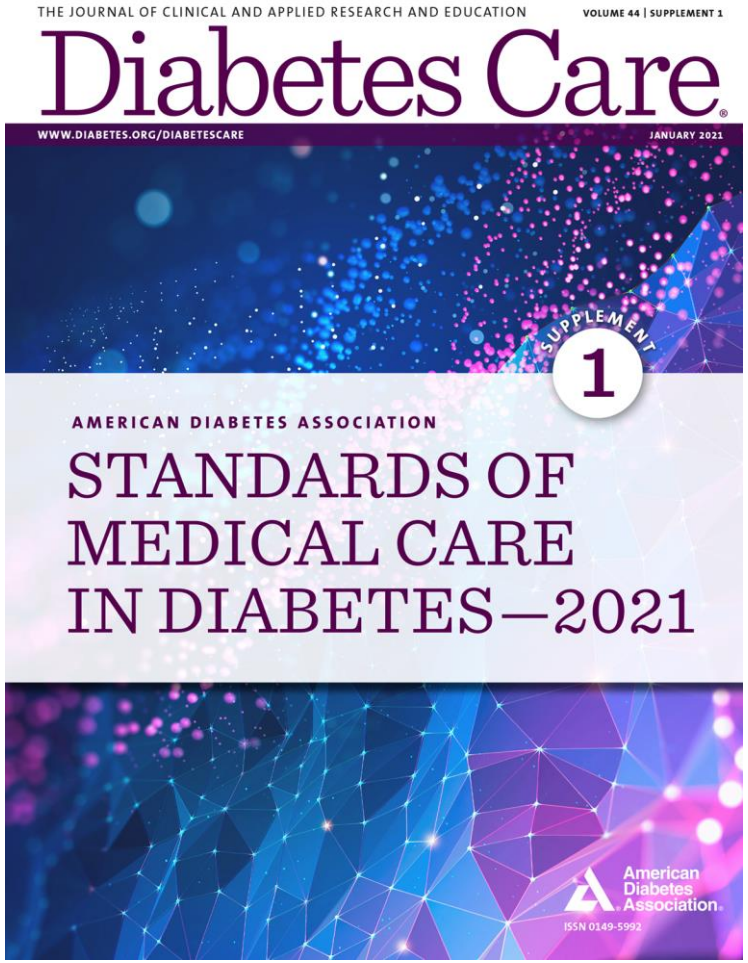
Guidelines



Section 2.

Classification and Diagnosis of Diabetes

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Table 2.2—Criteria for the diagnosis of diabetes

FPG ≥126 mg/dL (7.0 mmol/L). Fasting is defined as no caloric intake for at least 8 h.*
OR
2-h PG ≥200 mg/dL (11.1 mmol/L) during OGTT. The test should be performed as described by WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.*
OR
A1C ≥6.5% (48 mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay.*
OR
In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥200 mg/dL (11.1 mmol/L).

DCCT, Diabetes Control and Complications Trial; FPG, fasting plasma glucose; OGTT, oral glucose tolerance test; WHO, World Health Organization; 2-h PG, 2-h plasma glucose. *In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.

Classification and Diagnosis of Diabetes:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S15-S33

Prediabetes and Type 2 Diabetes

2.6 Screening for prediabetes and type 2 diabetes with an informal assessment of risk factors or validated tools should be considered in asymptomatic adults. B

2.7 Testing for prediabetes and/or type 2 diabetes in asymptomatic people should be considered in adults of any age with overweight or obesity (BMI $\geq$25 kg/m^2 or $\geq$23 kg/m^2 in Asian Americans) and who have one or more additional risk factors for diabetes (Table 2.3). B

2.8 Testing for prediabetes and/or type 2 diabetes should be considered in women with overweight or obesity planning pregnancy and/or who have one or more additional risk factor for diabetes (Table 2.3). C

Prediabetes and Type 2 Diabetes (continued)

2.9 For all people, testing should begin at age 45 years. B

2.10 If tests are normal, repeat testing carried out at a minimum of 3-year intervals is reasonable, sooner with symptoms. C

2.11 To test for prediabetes and type 2 diabetes, fasting plasma glucose, 2-h plasma glucose during 75-g oral glucose tolerance test, and A1C are equally appropriate (Table 2.2 and Table 2.5). B

2.12 In patients with prediabetes and type 2 diabetes, identify and treat other cardiovascular disease risk factors. A

Table 2.3—Criteria for testing for diabetes or prediabetes in asymptomatic adults

1. Testing should be considered in adults with overweight or obesity (BMI ≥25 kg/m^2 or ≥23 kg/m^2 in Asian Americans) who have one or more of the following risk factors:
   - First-degree relative with diabetes
   - High-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)
   - History of CVD
   - Hypertension (≥140/90 mmHg or on therapy for hypertension)
   - HDL cholesterol level <35 mg/dL (0.90 mmol/L) and/or a triglyceride level >250 mg/dL (2.82 mmol/L)
   - Women with polycystic ovary syndrome
   - Physical inactivity
   - Other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
2. Patients with prediabetes (A1C ≥5.7% [39 mmol/mol], IGT, or IFG) should be tested yearly.
3. Women who were diagnosed with GDM should have lifelong testing at least every 3 years.
4. For all other patients, testing should begin at age 45 years.
5. If results are normal, testing should be repeated at a minimum of 3-year intervals, with consideration of more frequent testing depending on initial results and risk status.
6. HIV

CVD, cardiovascular disease; GDM, gestational diabetes mellitus; IFG, impaired fasting glucose; IGT, impaired glucose tolerance.

Classification and Diagnosis of Diabetes:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S15-S33

Table 2.4—Risk-based screening for type 2 diabetes or prediabetes in asymptomatic children and adolescents in a clinical setting (202)

Testing should be considered in youth* who have overweight (≥85th percentile) or obesity (≥95th percentile) **A** and who have one or more additional risk factors based on the strength of their association with diabetes:

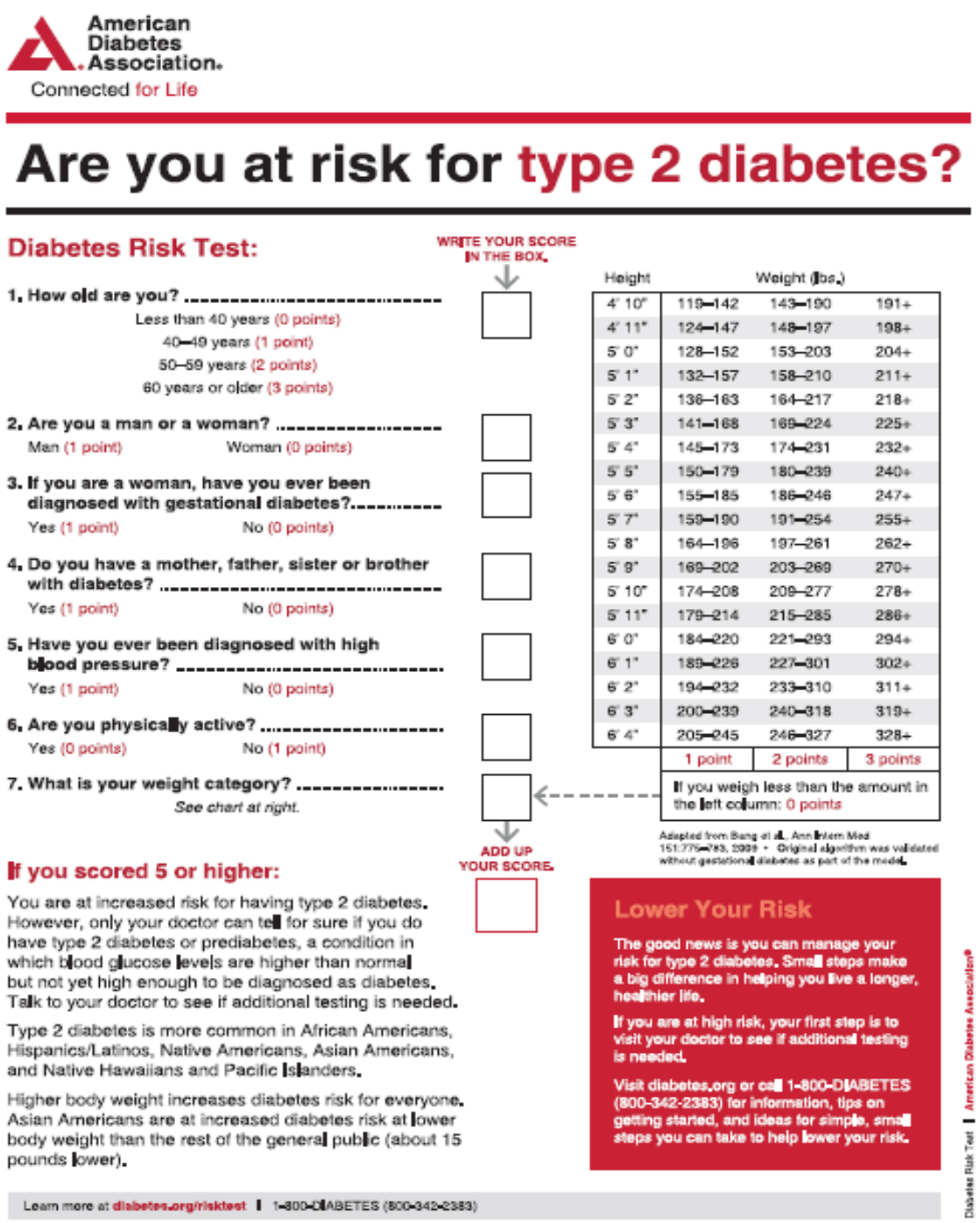
- Maternal history of diabetes or GDM during the child's gestation **A**
- Family history of type 2 diabetes in first- or second-degree relative **A**
- Race/ethnicity (Native American, African American, Latino, Asian American, Pacific Islander) **A**
- Signs of insulin resistance or conditions associated with insulin resistance (acanthosis nigricans, hypertension, dyslipidemia, polycystic ovary syndrome, or small-for-gestational-age birth weight) **B**

GDM, gestational diabetes mellitus. *After the onset of puberty or after 10 years of age, whichever occurs earlier. If tests are normal, repeat testing at a minimum of 3-year intervals (or more frequently if BMI is increasing or risk factor profile deteriorating) is recommended. Reports of type 2 diabetes before age 10 years exist, and this can be considered with numerous risk factors.

Classification and Diagnosis of Diabetes:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S15-S33

diabetes.org/socrisktest

Classification and Diagnosis of Diabetes:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S15-S33



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Are you at risk for type 2 diabetes?

Diabetes Risk Test:

WRITE YOUR SCORE IN THE BOX.

1. How old are you?
Less than 40 years (0 points)
40–49 years (1 point)
50–59 years (2 points)
60 years or older (3 points)

2. Are you a man or a woman?
Man (1 point) Woman (0 points)

3. If you are a woman, have you ever been diagnosed with gestational diabetes?
Yes (1 point) No (0 points)

4. Do you have a mother, father, sister or brother with diabetes?
Yes (1 point) No (0 points)

5. Have you ever been diagnosed with high blood pressure?
Yes (1 point) No (0 points)

6. Are you physically active?
Yes (0 points) No (1 point)

7. What is your weight category?
See chart at right.

ADD UP YOUR SCORE.

Height	Weight (lbs.)		
4' 10"	119–142	143–190	191+
4' 11"	124–147	148–197	198+
5' 0"	128–152	153–203	204+
5' 1"	132–157	158–210	211+
5' 2"	136–163	164–217	218+
5' 3"	141–168	169–224	225+
5' 4"	145–173	174–231	232+
5' 5"	150–179	180–239	240+
5' 6"	155–185	186–246	247+
5' 7"	159–190	191–254	255+
5' 8"	164–196	197–261	262+
5' 9"	169–202	203–269	270+
5' 10"	174–208	209–277	278+
5' 11"	179–214	215–285	286+
6' 0"	184–220	221–293	294+
6' 1"	189–226	227–301	302+
6' 2"	194–232	233–310	311+
6' 3"	200–239	240–318	319+
6' 4"	205–245	246–327	328+
	1 point	2 points	3 points

If you weigh less than the amount in the left column: 0 points

Adapted from Bang et al. Ann Intern Med 151:775–783, 2009 • Original algorithm was validated without gestational diabetes as part of the model.

If you scored 5 or higher:

You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes, a condition in which blood glucose levels are higher than normal but not yet high enough to be diagnosed as diabetes. Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, Native Americans, Asian Americans, and Native Hawaiians and Pacific Islanders.

Higher body weight increases diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weight than the rest of the general public (about 15 pounds lower).

Lower Your Risk

The good news is you can manage your risk for type 2 diabetes. Small steps make a big difference in helping you live a longer, healthier life.

If you are at high risk, your first step is to visit your doctor to see if additional testing is needed.

Visit diabetes.org or call 1-800-DIABETES (800-342-2383) for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.

Learn more at diabetes.org/risktest | 1-800-DIABETES (800-342-2383)

Diabetes Risk Test | American Diabetes Association®

Section 3.

Prevention or Delay of Type 2 Diabetes

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Overall Recommendation

3.1 At least annual monitoring for the development of type 2 diabetes in those with prediabetes is suggested. E

Lifestyle Behavior Change for Diabetes Prevention

3.2 Refer patients with prediabetes to an intensive lifestyle behavior change program modeled on the Diabetes Prevention Program to achieve and maintain 7% loss of initial body weight and increase moderate-intensity physical activity (such as brisk walking) to at least 150 min/week. A

3.3 A variety of eating patterns can be considered to prevent diabetes in individuals with prediabetes. B

Reducing Disparity in Lifestyle Programs

- Addressing unmet social needs improves management of risk factors
- Involvement of clinicians, community health workers, community organizers and leaders, clinics, health systems, voluntary health organizations, faith communities, senior centers, organized lifestyle programs
- Assessment of SDH that can affect delivery of lifestyle programs, individual uptake and adherence
- Individual advice and program recommendations tailored to a patient's SES, education, culture, work, home and community environment, barriers (food, housing, transportation, etc)
- Conduct of programs where people live and/or gather

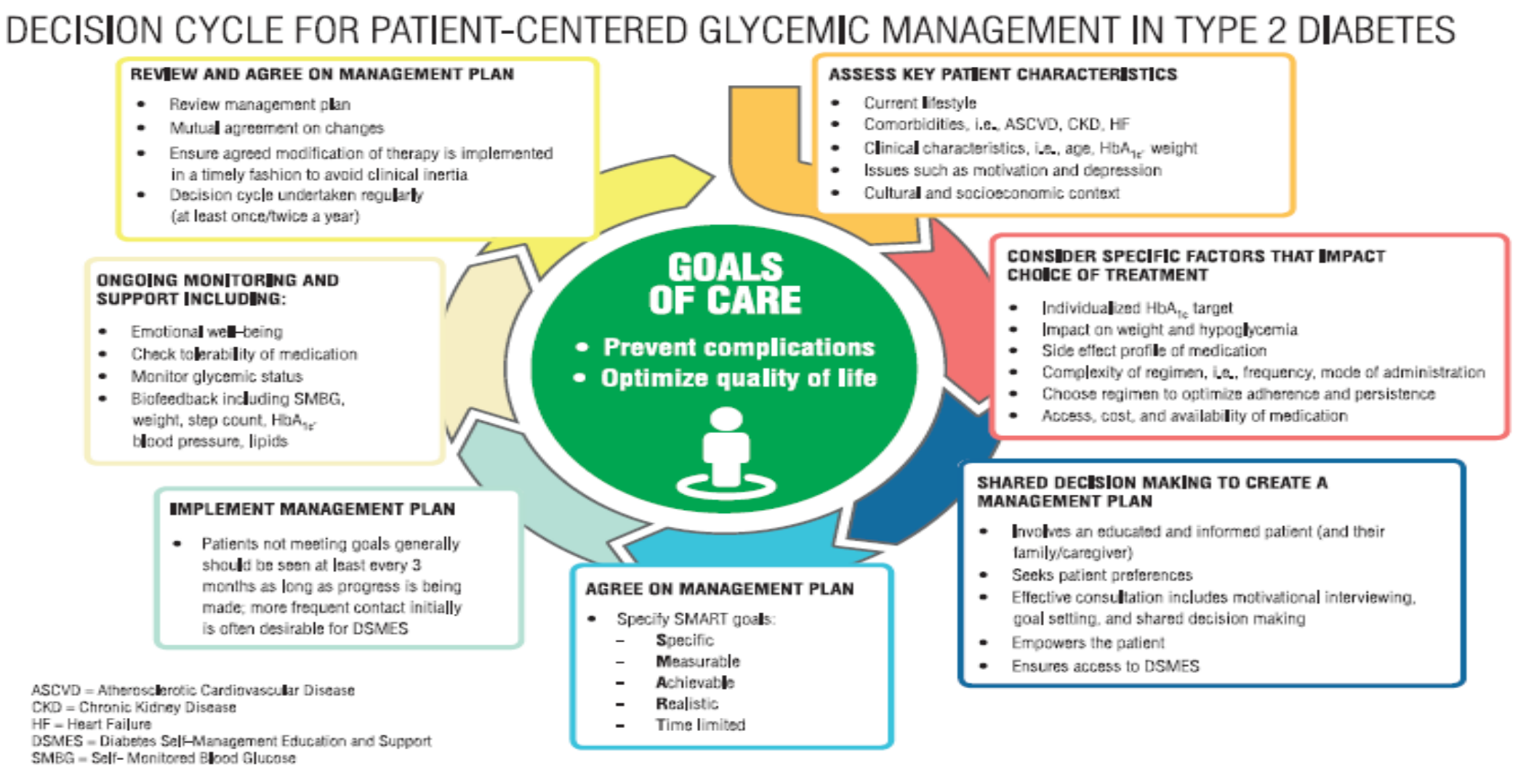
Havranek EP et al., *Circulation* 2015;132:873-898.
Beauchamp A et al., *Eur J Carciovasc Prev Rehabil* 2010;17:599-606.

Patient-centered Collaborative Care

4.1 A patient-centered communication style that uses person-centered and strength-based language and active listening; elicits patient preferences and beliefs; and assesses literacy, numeracy, and potential barriers to care should be used to optimize patient health outcomes and health-related quality of life. B

4.2 People with diabetes can benefit from a coordinated multidisciplinary team that may draw from diabetes care and education specialists, primary care providers, subspecialty providers, nurses, dietitians, exercise specialists, pharmacists, dentists, podiatrists, and mental health professionals. E

COMPREHENSIVE MEDICAL EVALUATION AND ASSESSMENT OF COMORBIDITIES



Comprehensive Medical Evaluation and Assessment of Comorbidities:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S40-S52

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Section 5.

Facilitating Behavior Change and Well-being to Improve Health Outcomes

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Poll 1

1. Do you currently refer your patients to a diabetes self-management program?

- **Yes**
- **No**

2. Is the program you refer patients to a CDC recognized program?

- **Yes**
- **No**
- **N/A**

Diabetes Self-Management Education and Support

5.1 In accordance with the national standards for diabetes self-management education and support, all people with diabetes should participate in diabetes self-management education and receive the support needed to facilitate the knowledge, decision-making, and skills mastery necessary for diabetes self-care. A

Diabetes Self-Management Education and Support

Four critical time points have been defined when the need for DSMES is to be evaluated by the medical care provider and/or multidisciplinary team, with referrals made as needed:

1. At diagnosis
2. Annually and/or when not meeting treatment targets
3. When complicating factors (health conditions, physical limitations, emotional factors, or basic living needs) develop that influence self-management
4. When transitions in life and care occur

Diabetes Self-Management Education and Support (continued)

5.3 Clinical outcomes, health status, and well-being are key goals of diabetes self management education and support that should be measured as part of routine care. C

5.4 Diabetes self-management education and support should be patient centered, may be given in group or individual settings and/ or use technology, and should be communicated with the entire diabetes care team. A

5.5 Because diabetes self-management education and support can improve outcomes and reduce costs B, reimbursement by third-party payers is recommended. C

Goals of Nutrition Therapy for Adults With Diabetes

1. To promote and support healthful eating patterns, emphasizing a variety of nutrient-dense foods in appropriate portion sizes, to improve overall health and:
    - achieve and maintain body weight goals
    - attain individualized glycemic, blood pressure, and lipid goals
    - delay or prevent the complications of diabetes
2. To address individual nutrition needs based on personal and cultural preferences, health literacy and numeracy, access to healthful foods, willingness and ability to make behavioral changes, and existing barriers to change

2019 Primary Prevention Guideline: Nutrition and Diet

To decrease ASCVD risk:

- Emphasis of vegetables, fruits, legumes, nuts, whole grains, and fish
- Replacement of saturated fat with dietary monounsaturated and polyunsaturated fats
- Reduced amounts of cholesterol and sodium

Arnett DK, Blumenthal RS et al., *Circulation* 2019; DOI: 10.1161/CIR.0000000000000678

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2019 Primary Prevention Guideline: Nutrition and Diet

- Minimize intake of processed meats, refined carbohydrates, and sweetened beverages
- Avoid intake of trans fats to reduce ASCVD risk.

Physical Activity

5.26 Children and adolescents with type 1 or type 2 diabetes or prediabetes should engage in 60min/day or more of moderate- or vigorous-intensity aerobic activity, with vigorous muscle-strengthening and bone-strengthening activities at least 3 days/week. C

5.27 Most adults with type 1 C and type 2 B diabetes should engage in 150 min or more of moderate to vigorous-intensity aerobic activity per week, spread over at least 3 days/week, with no more than 2 consecutive days without activity. Shorter durations (minimum 75min/week) of vigorous intensity or interval training may be sufficient for younger and more physically fit individuals.

2019 Primary Prevention Guideline: Exercise and Physical Activity

- Adults should be routinely counseled in healthcare visits to optimize a physically active lifestyle.
- Engage in at least 150 minutes per week of accumulated moderate-intensity or 75 minutes per week of vigorous-intensity aerobic physical activity (or an equivalent combination of moderate and vigorous activity)

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2019 Primary Prevention Guideline: Exercise and Physical Activity

- For adults unable to meet the minimum physical activity recommendations, engaging in some moderate- or vigorous-intensity physical activity, even if less than this recommended amount, can be beneficial to reduce ASCVD risk.
- Decrease sedentary behavior to reduce ASCVD.

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Smoking Cessation: Tobacco & E-cigarettes

5.32 Advise all patients not to use cigarettes and other tobacco products or e-cigarettes. A

5.33 After identification of tobacco or e-cigarette use, include smoking cessation counseling and other forms of treatment as a routine component of diabetes care. A

5.34 Address smoking cessation as part of diabetes education programs for those in need. B

Section 6.

Glycemic Targets

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Glycemic Assessment

6.1 Assess glycemic status (A1C or other glycemic measurement) at least two times a year in patients who are meeting treatment goals (and who have stable glycemic control).E

6.2 Assess glycemic status at least quarterly, and as needed, in patients whose therapy has recently changed and/or who are not meeting glycemic goals. E

Glycemic Goals

6.5a An A1C goal for many nonpregnant adults of <7%(53 mmol/mol) without significant hypoglycemia is appropriate. A

6.5b If using ambulatory glucose profile/glucose management indicator to assess glycemia, a parallel goal is a time in range of >70% with time below range <4% (Fig. 6.1). B

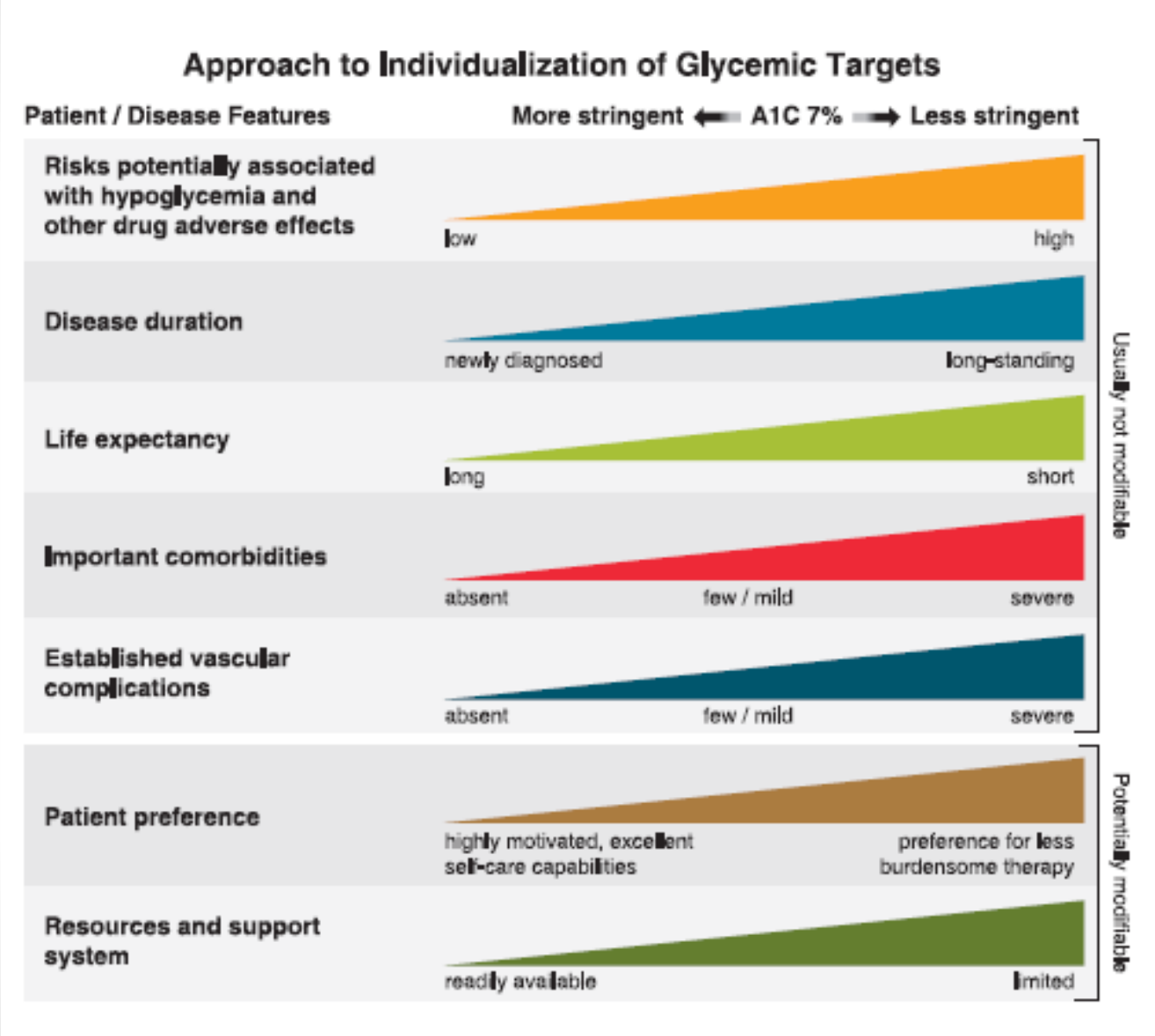
6.6 On the basis of provider judgment and patient preference, achievement of lower A1C levels than the goal of 7% may be acceptable, and even beneficial, if it can be achieved safely without significant hypoglycemia or other adverse effects of treatment. C

Glycemic Goals (continued)

6.7 Less stringent A1C goals (such as <8% [64 mmol/mol]) may be appropriate for patients with limited life expectancy, or where the harms of treatment are greater than the benefits. B

6.8 Reassess glycemic targets over time based on the criteria in Fig. **6.2** and in older adults (**Table 12.1**). E

GLYCEMIC TARGETS



Glycemic Targets:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S73-S84

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Section 9.

Pharmacologic Approaches to Glycemic Treatment

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Pharmacologic Therapy for Type 2 Diabetes

9.4 Metformin is the preferred initial pharmacologic agent for the treatment of type 2 diabetes. A

9.5 Once initiated, metformin should be continued as long as it is tolerated and not contraindicated; other agents, including insulin, should be added to metformin. A

9.6 Early combination therapy can be considered in some patients at treatment initiation to extend the time to treatment failure. A

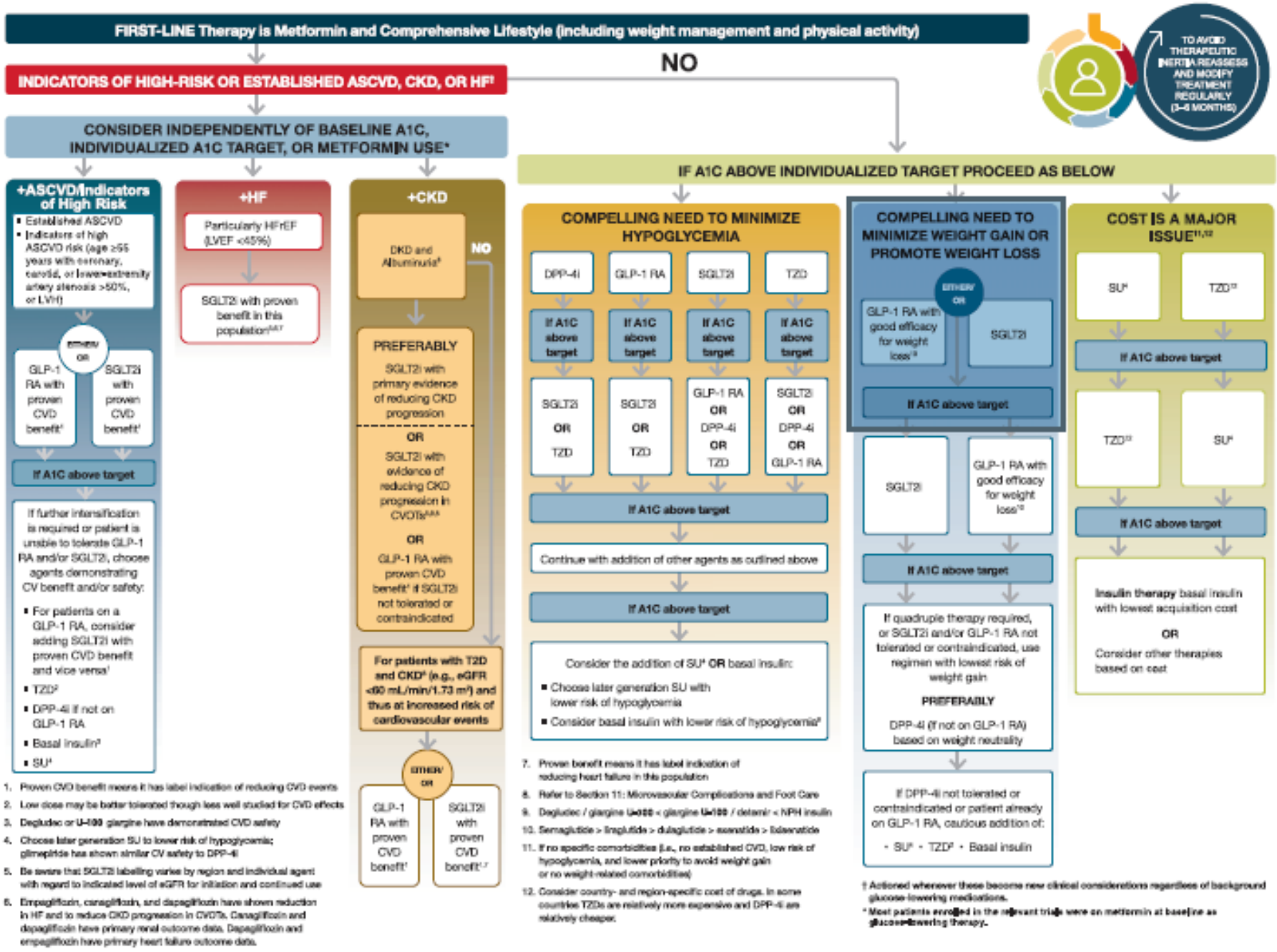
9.7 The early introduction of insulin should be considered if there is evidence of ongoing catabolism (weight loss), if symptoms of hyperglycemia are present, or when A1C levels (>10% [86 mmol/mol]) or blood glucose levels (≥300 mg/dL [16.7 mmol/L]) are very high. E

Pharmacologic Therapy for Type 2 Diabetes (continued)

9.8 A patient-centered approach should be used to guide the choice of pharmacologic agents. Considerations include effect on cardiovascular and renal comorbidities, efficacy, hypoglycemia risk, impact on weight, cost, risk for side effects, and patient preferences(Table 9.1 and Figure 9.1). E

9.9 Among patients with type 2 diabetes who have established atherosclerotic cardiovascular disease or indicators of high risk, established kidney disease, or heart failure, a sodium–glucose cotransporter 2 inhibitor or glucagon-like peptide 1 receptor agonist with demonstrated cardiovascular disease benefit (Table 9.1, Table 10.3B, Table 10.3C) is recommended as part of the glucose-lowering regimen independent of A1C and in consideration of patient-specific factors (Fig. 9.1 and Section 10).A

Glucose-lowering Medication in Type 2 Diabetes: 2021 ADA Professional Practice Committee (PPC) adaptation of Davies et al. and Buse et al.



1. Proven CVD benefit means it has label indication of reducing CVD events
2. Low dose may be better tolerated though less well studied for CVD effects
3. Degludec or U-100 glargine have demonstrated CVD safety
4. Choose later generation SU to lower risk of hypoglycemia; glimepiride has shown similar CV safety to DPP-4i
5. Be aware that SGLT2i labelling varies by region and individual agent with regard to indicated level of eGFR for initiation and continued use
6. Empagliflozin, canagliflozin, and dapagliflozin have shown reduction in HF and to reduce CKD progression in CVOTs. Canagliflozin and dapagliflozin have primary renal outcome data. Dapagliflozin and empagliflozin have primary heart failure outcome data.
7. Proven benefit means it has label indication of reducing heart failure in this population
8. Refer to Section 11: Microvascular Complications and Foot Care
9. Degludec / glargine U-300 < glargine U-100 / detemir < NPH insulin
10. Semaglutide > liraglutide > dulaglutide > exenatide > lixisenatide
11. If no specific comorbidities (i.e., no established CVD, low risk of hypoglycemia, and lower priority to avoid weight gain or no weight-related comorbidities)
12. Consider country- and region-specific cost of drugs. In some countries TZDs are relatively more expensive and DPP-4i are relatively cheaper.

† Actioned whenever these become new clinical considerations regardless of background glucose-lowering medications.
* Most patients enrolled in the relevant trials were on metformin at baseline as glucose-lowering therapy.

Pharmacologic Approaches to Glycemic Management: *Standards of Medical Care in Diabetes - 2021*. *Diabetes Care* 2021;44(Suppl. 1):S111-S124

Section 10.

Cardiovascular Disease and Risk Management

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Screening and Diagnosis

10.1 Blood pressure should be measured at every routine clinical visit. Patients found to have elevated blood pressure (≥140/90 mmHg) should have blood pressure confirmed using multiple readings, including measurements on a separate day, to diagnose hypertension. B

10.2 All hypertensive patients with diabetes should monitor their blood pressure at home. B

Categories of BP in Adults (ACC/AHA Guideline)

BP Category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120–129 mm Hg	and	<80 mm Hg
Hypertension			
Stage 1	130–139 mm Hg	or	80–89 mm Hg
Stage 2	≥140 mm Hg	or	≥90 mm Hg

*Individuals with SBP and DBP in 2 categories should be designated to the higher BP category.
BP indicates blood pressure (based on an average of ≥2 careful readings obtained on ≥2 occasions, as detailed in DBP, diastolic blood pressure; and SBP systolic blood pressure.

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Whelton PK et al., *J Am Coll Cardiol* 2018;71:e127-e248.

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Treatment Goals

10.3 For patients with diabetes and hypertension, blood pressure targets should be individualized through a shared decision-making process that addresses cardiovascular risk, potential adverse effects of antihypertensive medications, and patient preferences. **C**

10.4 For individuals with diabetes and hypertension at higher cardiovascular risk (existing atherosclerotic cardiovascular disease [ASCVD] or 10-year ASCVD risk ≥15%), a blood pressure target of, 130/80 mmHg may be appropriate, if it can be safely attained. C

10.5 For individuals with diabetes and hypertension at lower risk for cardiovascular disease (10-year atherosclerotic cardiovascular disease risk <15%), treat to a blood pressure target of <140/90 mmHg. A

Treatment Strategies—Lifestyle Intervention

10.7 For patients with blood pressure >120/80 mmHg, lifestyle intervention consists of weight loss when indicated, a Dietary Approaches to Stop Hypertension (DASH)-style eating pattern including reducing sodium and increasing potassium intake, moderation of alcohol intake, and increased physical activity. A

Best Proven Nonpharmacological Interventions for Prevention and Treatment of Hypertension*

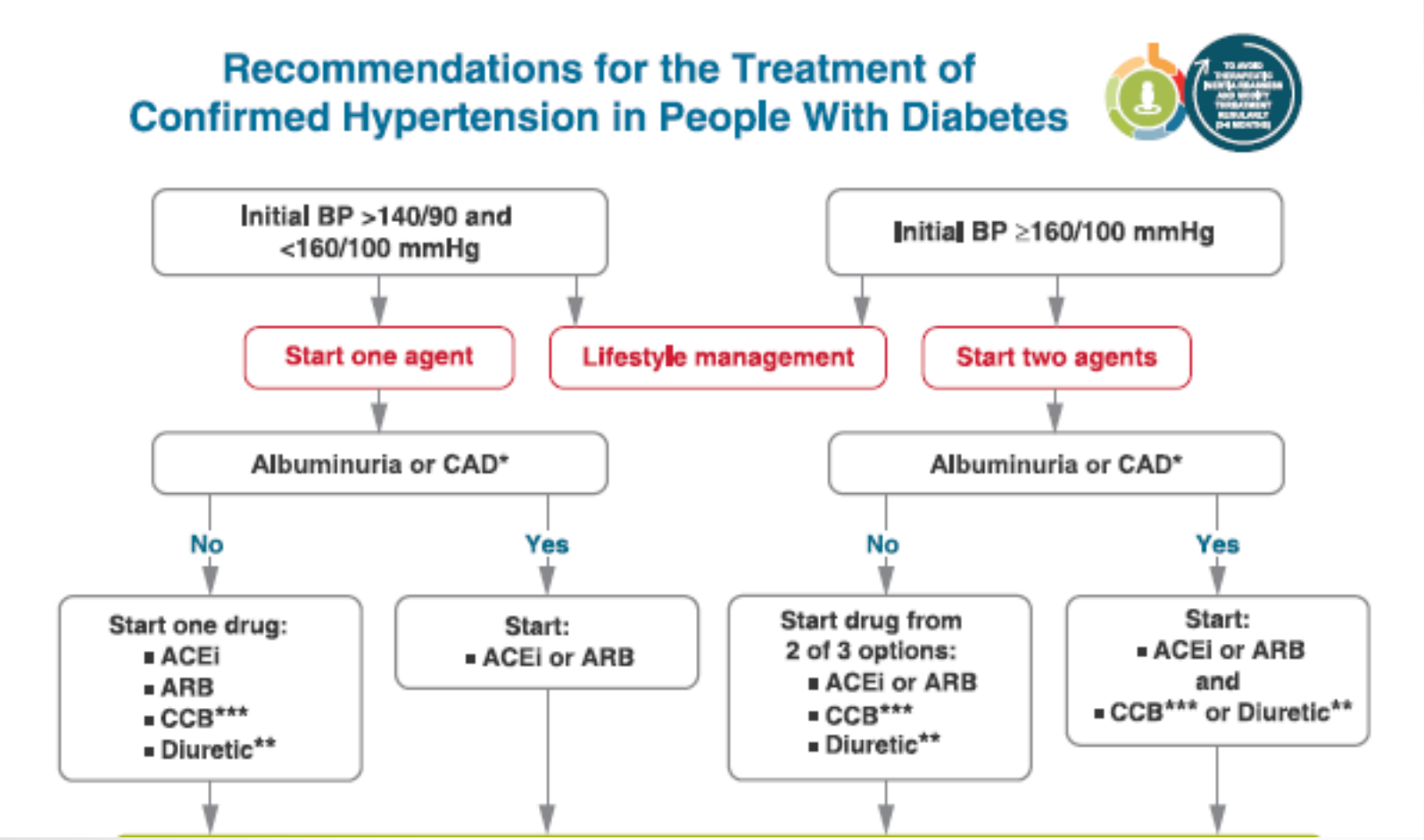
	Nonpharmacological Intervention	Dose	Approximate Impact on SBP	
			Hypertension	Normotension
Weight loss	Weight/body fat	Best goal is ideal body weight, but aim for at least a 1-kg reduction in body weight for most adults who are overweight. Expect about 1 mm Hg for every 1-kg reduction in body weight.	-5 mm Hg	-2/3 mm Hg
Healthy diet	DASH dietary pattern	Consume a diet rich in fruits, vegetables, whole grains, and low-fat dairy products, with reduced content of saturated and total fat.	-11 mm Hg	-3 mm Hg
Reduced intake of dietary sodium	Dietary sodium	Optimal goal is <1500 mg/d, but aim for at least a 1000-mg/d reduction in most adults.	-5/6 mm Hg	-2/3 mm Hg
Enhanced intake of dietary potassium	Dietary potassium	Aim for 3500–5000 mg/d, preferably by consumption of a diet rich in potassium. *	-4/5 mm Hg	-2 mm Hg

Whelton PK et al., *J Am Coll Cardiol* 2018;71:e127-e248.

Best Proven Nonpharmacological Interventions for Prevention and Treatment of Hypertension* (cont.)

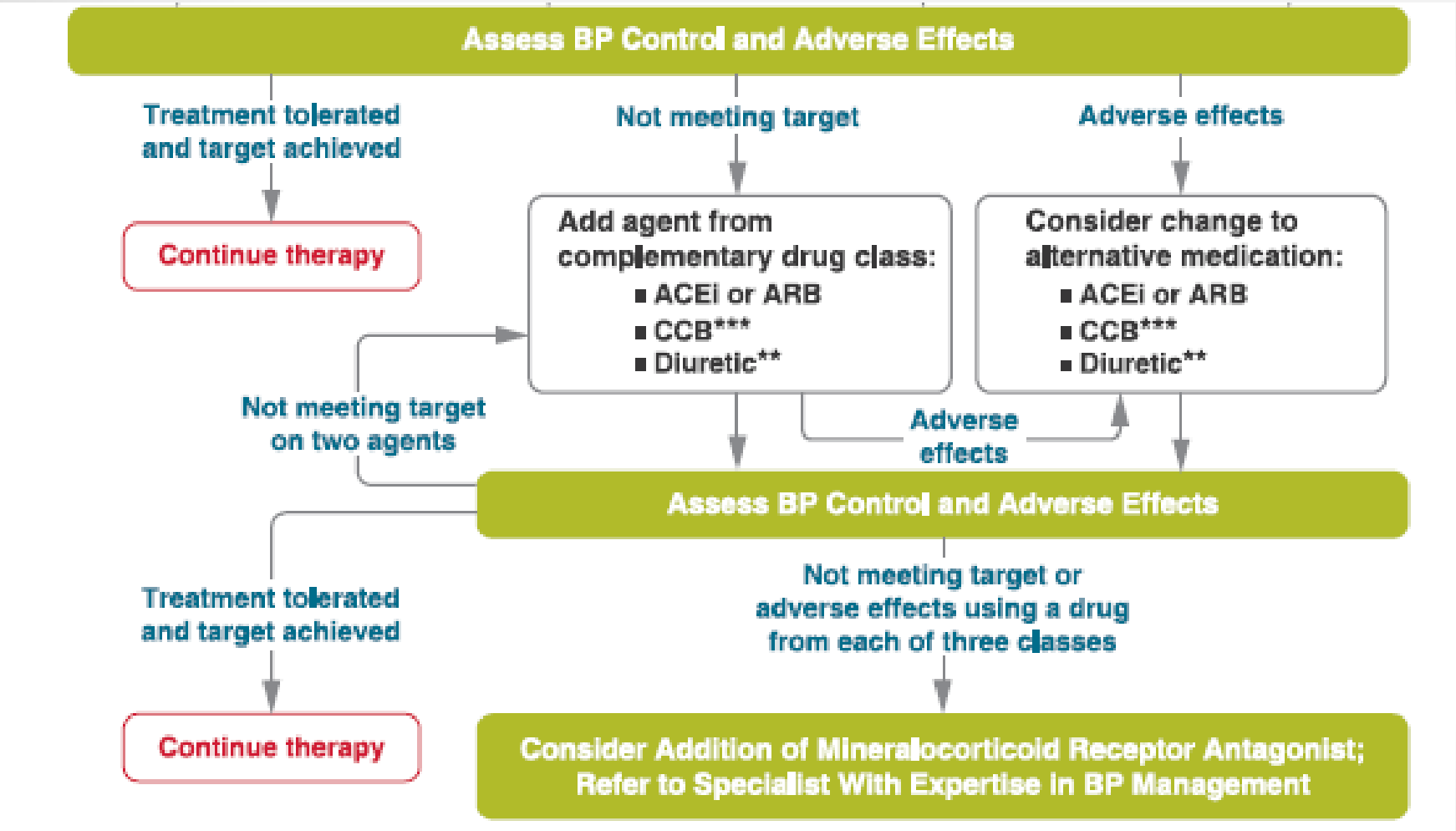
	Nonpharmacological Intervention	Dose	Approximate Impact on SBP	
			Hypertension	Normotension
Physical activity	Aerobic	● 90–150 min/wk ● 65%–75% heart rate reserve	-5/8 mm Hg	-2/4 mm Hg
	Dynamic resistance	● 90–150 min/wk ● 50%–80% 1 rep maximum ● 6 exercises, 3 sets/exercise, 10 repetitions/set	-4 mm Hg	-2 mm Hg
	Isometric resistance	● 4 × 2 min (hand grip), 1 min rest between exercises, 30%–40% maximum voluntary contraction, 3 sessions/wk ● 8–10 wk	-5 mm Hg	-4 mm Hg
Moderation in alcohol intake	Alcohol consumption	In individuals who drink alcohol, reduce alcohol† to: ● Men: ≤2 drinks daily ● Women: ≤1 drink daily	-4 mm Hg	-3 mm

*Type, dose, and expected impact on BP in adults with a normal BP and with hypertension.
†In the United States, one “standard” drink contains roughly 14 g of pure alcohol, which is typically found in 12 oz of regular beer (usually about 5% alcohol), 5 oz of wine (usually about 12% alcohol), and 1.5 oz of distilled spirits (usually about 40% alcohol).



Recommendations for the Treatment of Confirmed Hypertension in People with Diabetes (1 of 2)

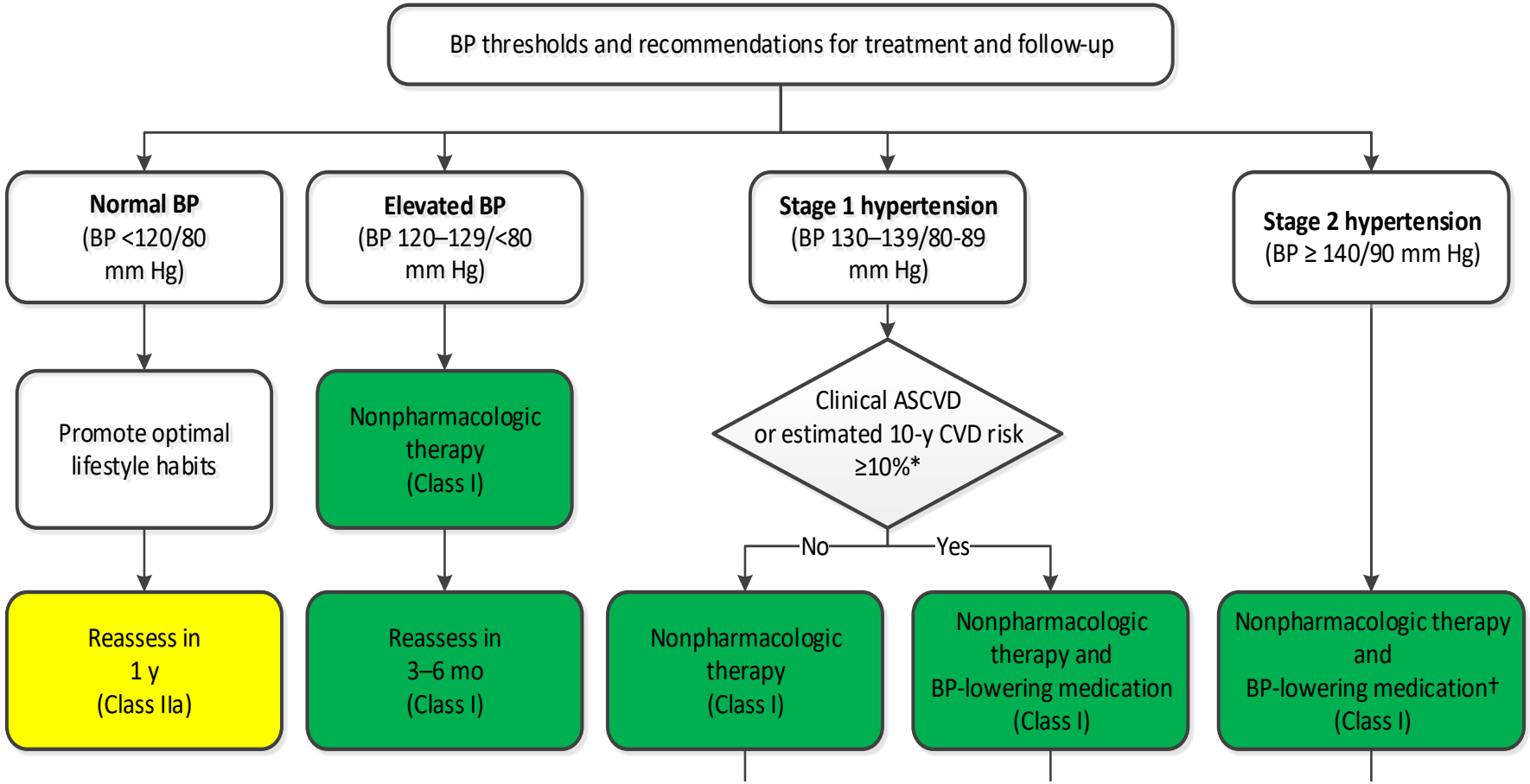
Cardiovascular Disease and Risk Management:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S111-S150



Recommendations for the Treatment of Confirmed Hypertension in People with Diabetes (2 of 2)

Cardiovascular Disease and Risk Management:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S111-S150

ACC/AHA Blood Pressure (BP) Thresholds and Recommendations for Treatment and Follow-Up (continued on next slide)



Whelton PK et al., *J Am Coll Cardiol* 2018;71:e127-e248.

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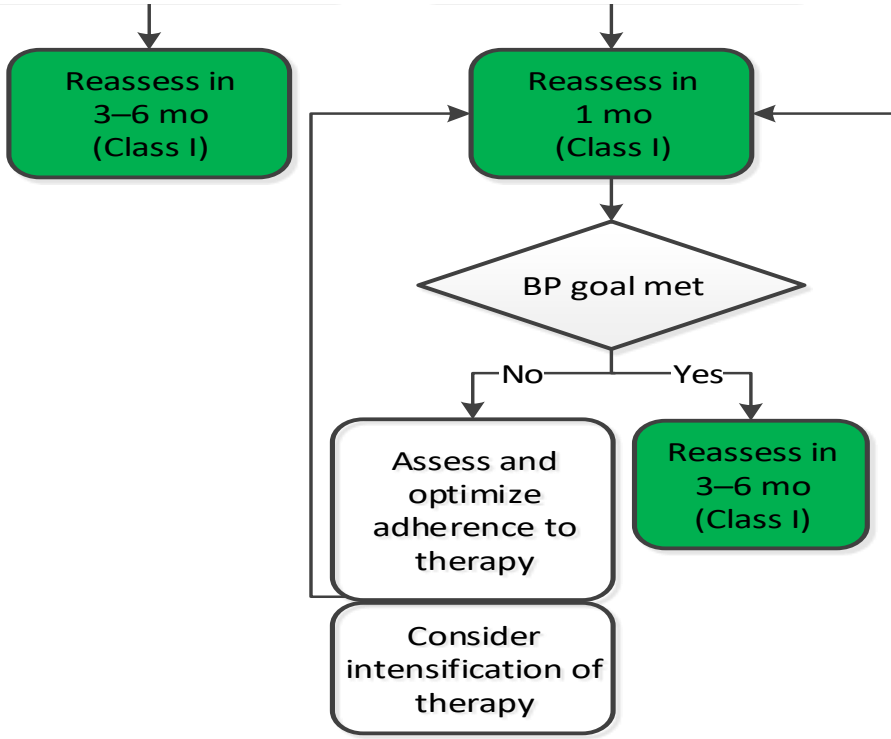


Colors correspond to Class of Recommendation in Table 1.

*Using the ACC/AHA Pooled Cohort Equations. Note that patients with DM or CKD are automatically placed in the high-risk category. For initiation of RAS inhibitor or diuretic therapy, assess blood tests for electrolytes and renal function 2 to 4 weeks after initiating therapy.

†Consider initiation of pharmacological therapy for stage 2 hypertension with 2 antihypertensive agents of different classes. Patients with stage 2 hypertension and BP ≥160/100 mm Hg should be promptly treated, carefully monitored, and subject to upward medication dose adjustment as necessary to control BP. Reassessment includes BP measurement, detection of orthostatic hypotension in selected patients (e.g., older or with postural symptoms), identification of white coat hypertension or a white coat effect, documentation of adherence, monitoring of the response to therapy, reinforcement of the importance of adherence, reinforcement of the importance of treatment, and assistance with treatment to achieve BP target.

Lipid Management—Ongoing Therapy and Monitoring with Lipid Panel

10.17 In adults not taking statins or other lipid-lowering therapy, it is reasonable to obtain a lipid profile at the time of diabetes diagnosis, at an initial medical evaluation, and every 5 years thereafter if under the age of 40 years, or more frequently if indicated. E

10.18 Obtain a lipid profile at initiation of statins or other lipid lowering therapy, 4–12 weeks after initiation or a change in dose, and annually thereafter as it may help to monitor the response to therapy and inform medication adherence. E

Statin Treatment—Primary Prevention

10.19 For patients with diabetes aged 40–75 years without atherosclerotic cardiovascular disease, use moderate-intensity statin therapy in addition to lifestyle therapy. A

10.20 For patients with diabetes aged 20–39 years with additional atherosclerotic cardiovascular disease risk factors, it maybe reasonable to initiate statin therapy in addition to lifestyle therapy. C

10.21 In patients with diabetes at higher risk, especially those with multiple atherosclerotic cardiovascular disease risk factors or aged 50–70 years, it is reasonable to use high-intensity statin therapy. B

10.22 In adults with diabetes and 10-year ASCVD risk of 20% or higher, it may be reasonable to add ezetimibe to maximally tolerated statin therapy to reduce LDL cholesterol levels by 50% or more. C

Diabetes Mellitus (AHA/ACC Guideline)

In patients 40 to 75 years of age with diabetes mellitus and LDL-C ≥70 mg/dL, start moderate-intensity statin therapy without calculating 10-year ASCVD risk. (I,A)

In patients with diabetes mellitus at higher risk, especially those with multiple risk factors or those 50 to 75 years of age, it is reasonable to use a high-intensity statin to reduce the LDL-C level by ≥50%. (IIa, B-R)

Grundy SM, Stone NJ, et al. *J Am Coll Cardiol* 2018, doi: https://doi.org/10.1016/j.jacc.2018.11.003.

Case: Medication + Lifestyle

Helen is a 48-year old woman with newly diagnosed type 2 diabetes and HTN. The physician recommends metformin 500 mg bid, atorvastatin 20 mg daily, as well as a lifestyle program. The nurse counsels her and refers her to a community program adapted from the DPP.

- Helen's baseline LDL-C was 144 mg/dL.
- 2 mo. later, her repeat LDL-C decreased to 86 mg/dL (40% LDL-C reduction); Helen hasn't started lifestyle program. She was contacted by a CHW to facilitate participation in a community-based lifestyle program.
- 4 mo. later after a rigorous diet and exercise program, Helen's LDL-C was 72 mg/dL (additional 16% LDL-C reduction or 50% from baseline)
- HbA1c decreased from 7.3% to 6.9%.

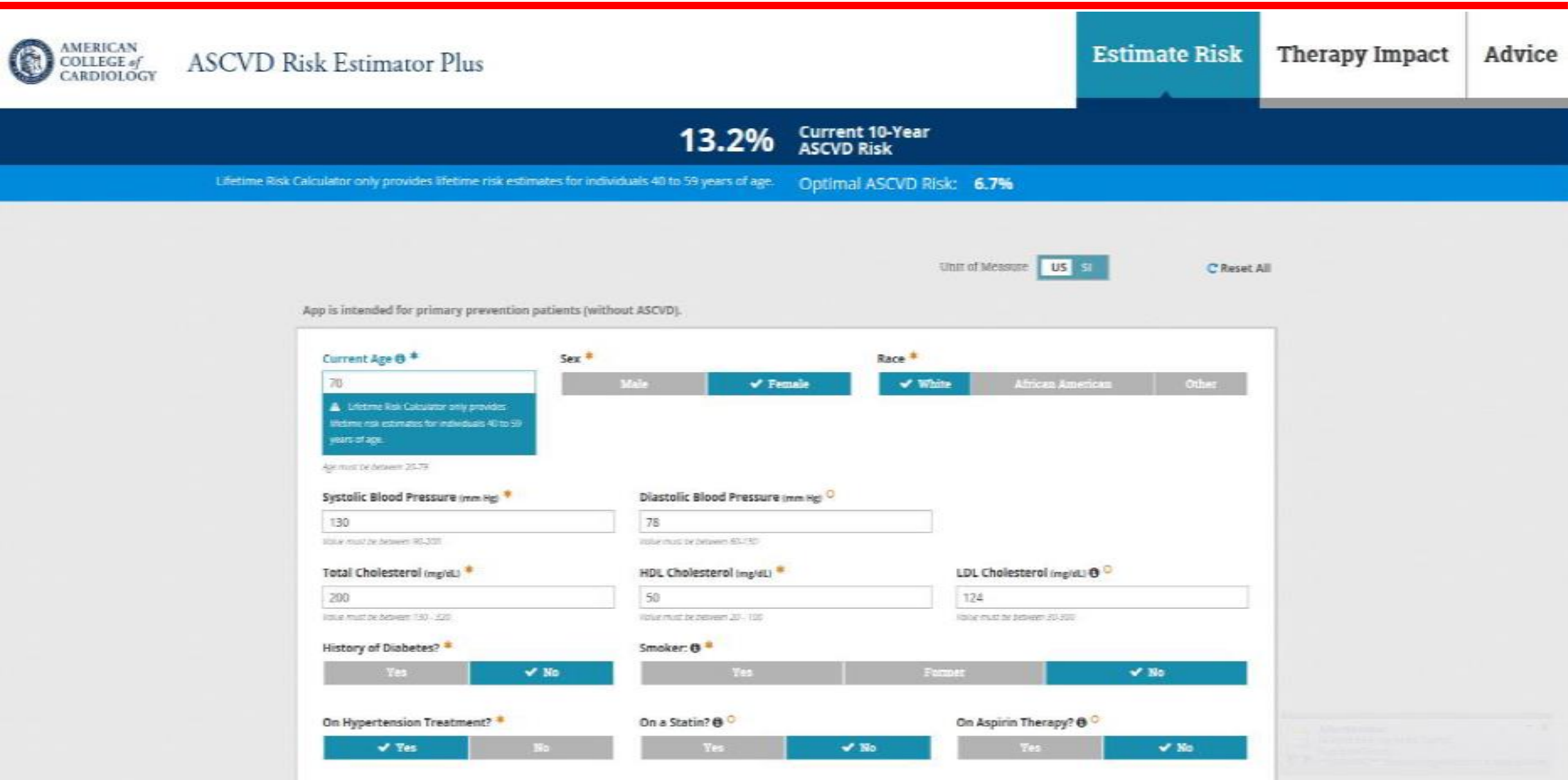
Primary ASCVD Prevention (AHA/ACC Guideline)

In adults evaluated for primary ASCVD prevention, have a clinician–patient risk discussion before starting statin therapy. (I, B-NR)

Risk discussion should include: review of major risk factors, estimated 10-year risk of ASCVD, as well as:

- The presence of risk enhancing factors;
- The potential benefits of lifestyle and statin therapies;
- The potential for adverse effects and drug-drug interactions;
- The consideration of costs of statin therapy;
- Patient preferences and values in shared decision-making.

ASCVD Risk Estimator (download from phone/tablet)



Primary ASCVD Prevention

In adults without diabetes and a 10-year ASCVD risk of ≥7.5%, start a moderate-intensity statin if a discussion of treatment options favors moderate-intensity statin therapy. (I,A)

- The presence of risk-enhancing factors especially favors initiation of statin therapy. (IIa, B-R)

Risk Enhancing Factors

- Family history of premature ASCVD;
- Persistently elevated LDL-C levels ≥160 mg/dL:
- Metabolic syndrome;
- Chronic kidney disease;
- History of preeclampsia or premature menopause (age <40 yrs)
- Chronic inflammatory disorders (e.g., rheumatoid arthritis, psoriasis, or chronic HIV);
- High-risk ethnic groups (e.g., South Asian);
- Persistent elevations of triglycerides ≥ 175 mg/dL.

<u>If measured in selected individuals:</u>

- Apolipoprotein B ≥130 mg/dL;
- High-sensitivity C-reactive protein ≥2.0 mg/L;
- Ankle-brachial index <0.9;
- Lipoprotein (a) ≥50 mg/dL or 125 nmol/L, especially at higher values of lipoprotein (a).

Case: High-Risk Primary Prevention

The patient is a 48-year old South Asian man with pre-diabetes, HTN, obesity, and family history of premature CAD.

- HbA1c 6.3%, BP 146/84 mmHg treated with lisinopril 10 mg daily, waist circumference 42 inches
- Total chol 220 mg/dL, HDL-C 38 mg/dL, TG 180 mg/dL, LDL 146 mg/dL
- Metabolic syndrome → elevated TG, low HDL-C, HTN, increased waist circumference
- NP discussed 10-year ASCVD risk 6.5%
- Risk enhancing factors: South Asian ancestry, family history of CVD, metabolic syndrome
- NP-patient risk discussion: potential benefit of statin therapy, urgent need for lifestyle intervention
- Shared decision-making → statin, increase lisinopril, lifestyle program
- Nurse contacted patient by phone in 2 weeks to address questions/concerns and to refer patient to a lifestyle program

Section 12.

Older Adults

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Overall

12.1 Consider the assessment of medical, psychological, functional (self management abilities), and social geriatric domains in older adults to provide a framework to determine targets and therapeutic approaches for diabetes management. B

12.2 Screen for geriatric syndromes (i.e., polypharmacy, cognitive impairment, depression, urinary incontinence, falls, and persistent pain) in older adults as they may affect diabetes self-management and diminish quality of life. B

Treatment Goals

12.6 Older adults who are otherwise healthy with few coexisting chronic illnesses and intact cognitive function and functional status should have lower glycemic goals (such as A1C <7.0–7.5% [53–58 mmol/mol]), while those with multiple coexisting chronic illnesses, cognitive impairment, or functional dependence should have less stringent glycemic goals (such as A1C <8.0–8.5% [64–69 mmol/mol]). C

12.7 Glycemic goals for some older adults might reasonably be relaxed as part of individualized care, but hyperglycemia leading to symptoms or risk of acute hyperglycemia complications should be avoided in all patients. C

Table 12.2—Considerations for treatment regimen simplification and deintensification/deprescribing in older adults with diabetes (75,79)

Patient characteristics/ health status	Reasonable A1C/ treatment goal	Rationale/considerations	When may regimen simplification be required?	When may treatment deintensification/ deprescribing be required?
Healthy (few coexisting chronic illnesses, intact cognitive and functional status)	A1C <7.0–7.5% (53–58 mmol/mol)	• Patients can generally perform complex tasks to maintain good glycemic control when health is stable • During acute illness, patients may be more at risk for administration or dosing errors that can result in hypoglycemia, falls, fractures, etc.	• If severe or recurrent hypoglycemia occurs in patients on insulin therapy (even if A1C is appropriate) • If wide glucose excursions are observed • If cognitive or functional decline occurs following acute illness	• If severe or recurrent hypoglycemia occurs in patients on noninsulin therapies with high risk of hypoglycemia (even if A1C is appropriate) • If wide glucose excursions are observed • In the presence of polypharmacy
Complex/intermediate (multiple coexisting chronic illnesses or 2+ instrumental ADL impairments or mild-to-moderate cognitive impairment)	A1C <8.0% (64 mmol/mol)	• Comorbidities may affect self-management abilities and capacity to avoid hypoglycemia • Long-acting medication formulations may decrease pill burden and complexity of medication regimen	• If severe or recurrent hypoglycemia occurs in patients on insulin therapy (even if A1C is appropriate) • If unable to manage complexity of an insulin regimen • If there is a significant change in social circumstances, such as loss of caregiver, change in living situation, or financial difficulties	• If severe or recurrent hypoglycemia occurs in patients on noninsulin therapies with high risk of hypoglycemia (even if A1C is appropriate) • If wide glucose excursions are observed • In the presence of polypharmacy

Table 12.2—Considerations for treatment regimen simplification and deintensification/ deprescribing in older adults with diabetes. (1 of 2)

Older Adults:
Standards of Medical Care in Diabetes - 2021. *Diabetes Care* 2021;44(Suppl. 1):S168-S179

Primary Prevention in Older Adults (AHA/ACC Guideline)

- **In adults 75 years of age or older with an LDL-C level of 70 to 189 mg/dL, initiating a moderate-intensity statin may be reasonable.** (IIb-BR)
- **In adults 75 years of age or older, it may be reasonable to stop statin therapy when functional decline (physical or cognitive), multimorbidity, frailty, or reduced life-expectancy limits the potential benefits of statin therapy.** (IIb, B-R)

Grundy SM, Stone NJ, et al. *J Am Coll Cardiol* 2018, doi: https://doi.org/10.1016/j.jacc.2018.11.003.

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Select Studies/Programs in FQHCs and Other Settings

Shared Medical Appointments: ***An Academic-Community Partnership to Improve Care Among Adults with Type 2 Diabetes in California Central Valley Region***

- Purpose was to evaluate the effectiveness of a shared medical appointment (SMA) intervention compared to usual primary care (UPC) for the treatment of type 2 DM over a 6-mo period
- Quasi-experimental design with a non-randomized matched control group
  - Receiving primary care at 2 FQHCs with HbA1C > 9%
- ALDEA → culturally tailored SMA program; peer support; behavioral approaches to DSME (SMART goals and problem-solving); medical management
- Teams → NP or MD lead, MAs, health educators, office administrator
- HbA1C reductions > in the ALDEA SMA intervention group at 6 mos in both FQHCs

Noya C et al., *The Diabetes EDUCATOR* 2020;46:197-205.

Cultural Adaptation of ALDEA Shared Medical Appointment Model

Issues to Consider		Adaptation
Philosophy		• Empowerment model • Patient driven; patient as experts
Patient education		• Patient-driven curriculum • Adapted for low health literacy • Behavioral approaches (motivational interviewing, SMART goals, problem solving)
Social determinants	Low SES/insurance status	• Low-cost pharmacy • Low-cost/free diabetes supplies
	LHL	• Screening for LHL included in intake form
	Food insecurity	• Food distribution established on site
	Language barriers	• Bicultural and bilingual team
Cultural considerations	*Respeto*	• Cultural humility training for bicultural and bilingual team
	Familismo	• Family members invited to participate • Consideration of family in planning and execution of SMART goals
	Time orientation	• Flexible schedule, late arrival normalized
	Herbal medicine	• Use of herbal medicine integrated into intake form

Abbreviations: LHL, low health literacy; SES, socioeconomic status.

Improving CV Health of Underserved Populations in the Community with LS7

- NP-led initiative in 2 inner-city underserved communities
  - -Senior center servicing AA older adults, residential facility servicing homeless women
- Implementation of a 6-month lifestyle behavior change program by trained coaches (RNs or NPs)
  - -My Life Check report with summary recommendations
  - -Education on LS7 health factors
  - -Self monitoring tools
  - -Goal setting worksheet
- Older adults in senior center showed a 37% increase in MLC score (↓ BP and glucose)

Murphy MP et al., *J Am Assoc Nurse Pract* 2015;27:615-623.

Poll 2

1. Do you currently refer your patients to the National Diabetes Prevention Program (NDPP)?

- **Yes**
- **No**

2. Is the NDPP you refer to an internal program or with an external partner?

- **Internal Program**
- **External Partner**
- **N/A**

National Diabetes Prevention Program (NDPP)

- Evidence-based intervention to prevent diabetes in at-risk populations
  - Disseminated nationwide since 2010 under CDC leadership
  - Translation of intensive lifestyle intervention from the DPP (58% reduction in incidence over 3 yrs; benefits persisting up to 15 yrs)
- NDPP promotes ≥ 5% wt loss over 1 yr
  - In-person classes, distance learning, online programming, combo
  - > 1500 sites
- Addressing disparities in reach
  - Men & younger individuals are under-represented
  - "No shows" higher for racial/ethnic minority, low-income, younger participants

Ritchie ND et al., *Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy 2020;13:2949-2957.*

National Diabetes Prevention Program (NDPP)

- To increase reach:
  - Encouraging enrollment with a partner or family member
  - Including more education & motivational interventions at referral and/or enrollment
  - Providing childcare and transportation
  - Offering classes tailored to specific population
  - Flexible and interactive class format

Community Linkages in Diabetes Care

- 60% of diabetes cases & 30% of complications can be prevented through lifestyle modification
- Innovations that use technology as a vehicle for leveraging community assets in diabetes care
  - FoodRx (a food prescription program): collaborative partnerships with Walgreens, local farmers markets, & various health centers on Chicago's Southside; physicians electronically prescribe vouchers for healthy food from local vendors
    - Prescription is a powerful endorsement for behavior change
  - ExerciseRx: electronic prescriptions for community fitness resources; collaborative partnership with Chicago Park Districts to offer 6 mos. free services at 64 community-based locations

Tung EL & Peek ME, *Curr Diab Rep* 2015;15:614 doi:10.1007/s11892-015-0614-5

Community Linkages in Diabetes Care

- Community Health Workers (CHWs) → educate pts, help pts navigate complicated healthcare system, work with pts to set individually tailored health goals, match pt needs to community resources
  - City Health Works (East Harlem, NY)
    - Funded by Healthcare Innovation award: tagline “Unleashing sustainable behavior change”
    - CHW intervention using mobile decision-support to help pts manage their disease
    - Vast network of community partners to which CHWs can connect pts in real time mobile support (fitness centers, cooking demonstrations, faith-based org, health education classes, etc.)
- Social networking → mobile interface that gives pts the opportunity to make connections & share info with other users
  - Self management & support tools: My Diabetes Wellness Portal, eHealthyStrides

Summary

- In general, guidelines by the ADA, AHA, and ACC complement one another.
- Social determinants of health, team-based care, and shared decision-making are important components of guideline implementation in a FQHC.
- Structured implementation will help improve clinician adherence to guidelines.
- Barriers to guideline implementation and adherence in a given setting must be analyzed.
- Integration of guideline recommendations in FQHC's quality initiatives → improved provider performance and better patient health outcomes.
- Team-based collaborative care actively engages patients in their own care through health education, adherence support, and resources for self-management.

Q&A

Part II: Panel Presentation

Jewish Association Serving the Aging | Preventative Lifestyle Assistance Network | Western New York Integrated Care Collaborative

DCPC End of Year Session

JASA's Chronic Disease Management Programs

June 24th, 2021

JASA Overview

- Brief history: Founded in 1968 – 52 years of service to New Yorkers.
- Neighborhoods served: Brooklyn, Bronx, Manhattan, and Queens with 50+ locations reaching over 43,000 older adults; 10+ languages spoken by staff.
- Services offered:
  - Quality housing for low-to-moderate income older New Yorkers;
  - Homecare tailored to meet individual needs;
  - Comprehensive home and community-based services:

    Senior Centers, NORC Support Service Centers, Home Delivered Meals, Case Management, Adult Protective Services/Community Guardianship, Elder Abuse Preventions and Legal Representation, Care Transitions, Chronic Disease Management, Mental Health Services and Palliative Care.

Chronic Disease Management Programs

Evidence-Based Chronic Disease Management Programs:

Stanford/Self-Management Resource Center Programs:

- Chronic Disease Self-Management (CDSMP) Program in English/Spanish/Haitian Creole
- Diabetes Self-Management Program (DSMP) in English/Spanish
- Chronic Pain Self-Management Program (CPSMP) in English
- Cancer Thriving and Surviving (CTS) in English

The CDC-Recognized National Diabetes Prevention Program:

- Available in English and Spanish
- Reimbursed through Medicaid
- Pending recognition for reimbursement through Medicare
- Healthfirst Network Provider

	CDSMP	DSMP	CPSMP	CTS
Program Participants	People with Chronic Conditions/Caregivers	People with Diabetes/Caregivers	People with Chronic Pain/Caregivers	People with Cancer/Caregivers
Shared Topics	• Healthy Eating • Action Plan • Feedback/Problem Solving • Making Decisions • Dealing with Difficult Emotions • Positive Thinking • Communication Skills • Working with Health Care Professionals	• Healthy Eating • Action Plan • Feedback/Problem Solving • Making Decisions • Dealing with Difficult Emotions • Positive Thinking • Communication Skills • Working with Health Care Professionals	• Healthy Eating • Action Plan • Feedback/Problem Solving • Making Decisions • Dealing with Difficult Emotions • Positive Thinking • Communication Skills • Working with Health Care Professionals	• Healthy Eating • Action Plan • Feedback/Problem Solving • Making Decisions • Dealing with Difficult Emotions • Positive Thinking • Communication Skills • Working with Health Care Professionals
Unique Topics	• Preventing Falls and Improving Balance • Pain and Fatigue Management • Better Breathing • Endurance Exercise • Making Healthy Food Choices • Medication Usage	• What is Diabetes • Monitoring • Dealing with Stress • Preventing Hypoglycemia • Focusing on Fat • Preventing or Delaying Complications • Strategies for Sick Days • Foot Care	• What is Pain • Moving Easy Program • Pacing and Planning • Stress & Relaxation-Guided Imagery	• Fatigue Management and Getting Help • Managing Pain • Living with Uncertainty • Future Plans for Health Care • Cancer & Body Changes • Cancer & Relationships • Guided Imagery
Outcomes	• Improved self-efficacy demonstrated, reductions in hospital use	• Reduced A1C demonstrated, reductions in hospital use	• Improvements in pain, life satisfaction and self-efficacy	• Decreased depression, pain, problems related to stress and sleep

National Diabetes Prevention Program

The National Diabetes Prevention Program (NDPP) is an evidence-based lifestyle change program for adults who have prediabetes or are at risk for type 2 diabetes.

- ✓ Year long program, with 22 sessions throughout the year
- ✓ Uses the Prevent T2 curriculum, approved by the Centers for Disease Control and Prevention (CDC)
- ✓ Non-didactic, small group workshops
- ✓ Workshops led by CDC certified lifestyle coaches

The primary goals of this year long program are for participants to:

- ✓ Lose at least 5 to 7 percent of starting weight
- ✓ Get at least 150 minutes of physical activity each week
- ✓ Adopt healthier lifestyle

Health Outcomes:

- ✓ Reduced risk of diabetes by 58%*
- ✓ Aged 60+ reduced risk by 71%*
- ✓ Prevention or delay of diabetes with lifestyle intervention can persist for at least 10 years**

*Diabetes Prevention Program Research Group, Knowler WC, Fowler SE, Hamman RF, Christophi CA, Hoffman HJ, Brenneman AT, Brown-Friday JO, Goldberg R, Venditti E, Nathan DM. 10-year follow-up of diabetes incidence and weight loss in the Diabetes; Prevention Program Outcomes Study. Lancet. 2009;374(9702).
**Diabetes Prevention Program Research Group. (2009). 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. The Lancet,

Contact Us!

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Laura Brea

JASA Project Director, Chronic Disease Management Program

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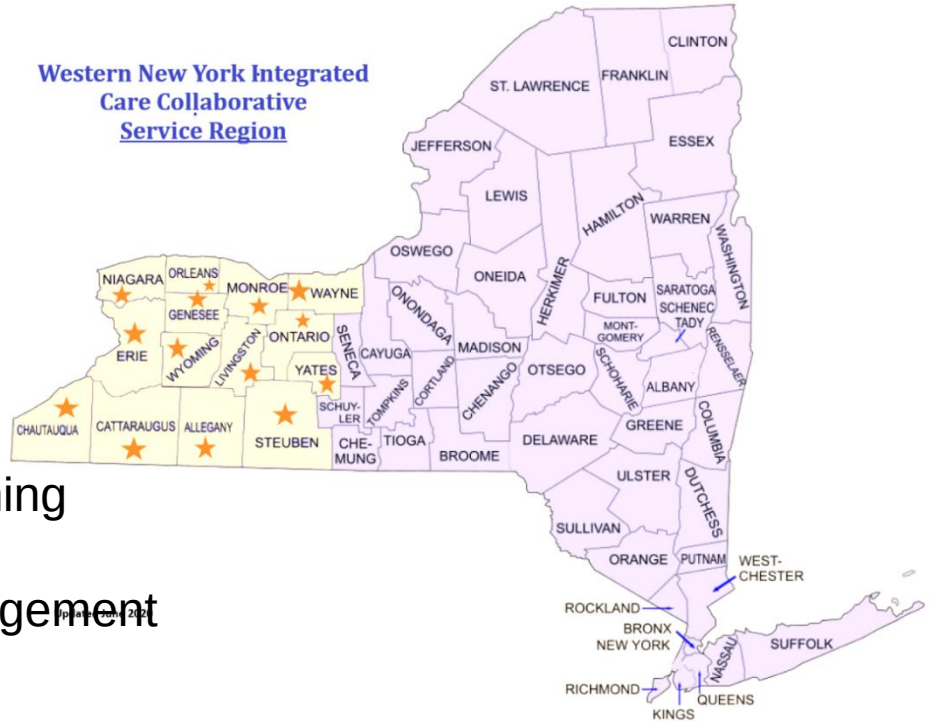
Western New York Integrated Care Collaborative

Community Integrated Health Network: since 2016

28 Network Members

- 2 Departments of Health
- 1 Independent Living Agency
- 6 Area Agencies on Aging (AAA)
- 19 Social Care Agencies (non-profits)



Services Provided:

- Community Care Management:
  - SDoH Assessment and Health Coaching
- Healthy IDEAS
  - 1:1 Depression/Social Isolation Management
- Diabetes Programs: DSMT / DPP

Referral Process:

- Secure Fax: 1-844-620-0739
- HEALTHeLINK Mirth Mail
- Referral forms on website: **www.wnyicc.org**

Contact:

Nikki Kmicinski, Executive Director
nkmicinski@wnyicc.org

Western New York Integrated Care Collaborative

PREVENTIVE LIFESTYLE ASSISTANCE NETWORK

YOUR RISK
CheckYourRisk.org

WHY PLAN?

The National Diabetes Prevention Program (DPP) is ALL we do.

PLAN/IFH DPP Participant Testimonial

"I *have gotten to a point where I actually do not miss sugar or anything sweet anymore, as I have managed to find healthier ways to cook my meals and healthier ways to prepare my coffee in the morning. The biggest change for me has been to quit drinking soda and juice with all the added sugar. Now I drink a lot of water and prepare my own natural juices or smoothies, without any added sugar. This program has definitely helped me build better and healthier habits, and I am very grateful for it.*" - Robelkys V. (who has lost 13lbs to date)

THE PLAN APPROACH TO DPP

PLAN's DPP Referral Partnerships-A New Game, A Long Game

- PLAN and the Institute for Family Health (IFH) Collaboration
- Customizing partnerships to meet the institution and client needs

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PLAN's DPP Recruitment. Retention. Results.

- Collaborative Referral Partnerships
- Technology/Software
- Private Facebook Group
- Accountability Partnerships between Participants
- Session Zero (Orientation)
- "Champions" Return to Share Their PLAN/DPP Testimonials
- Constant Contact (emails, texts, calls)
- Group Recognition for Victories
- Educational Health Webinars (Monday, July 12th, 6-7 pm)
- Check Your Risk (CYR)-diabetes awareness campaign w/ Influencers

(November is American Diabetes Awareness Month)

PLAN is a Harlem-based, Medicaid-certified NDPP Provider with CDC Preliminary Recognition

Contact: Marci Kenon, PLAN Founder/DPP-certified Lifestyle Coach
Cellphone. +1-917-499-8282/Email. mkenon@JoinPLANglobal.com
Https://JoinPLANglobal.com
Https://CheckYourRisk.org

Part III: Health Center Success Stories

Category A: Diabetes	Category B: Cardiovascular Disease
Community Health Center of Buffalo	Finger Lakes Community Health
Trillium Health	Jericho Road Community Health Center
The Chautauqua Center	Bedford-Stuyvesant Family Health Center
Hudson Headwaters Health Network	Boriken Neighborhood Health Center
East Hill Medical Center	Institute for Family Health

Your Partner for Quality Care

CHCB

COMMUNITY HEALTH CENTER OF BUFFALO, INC.

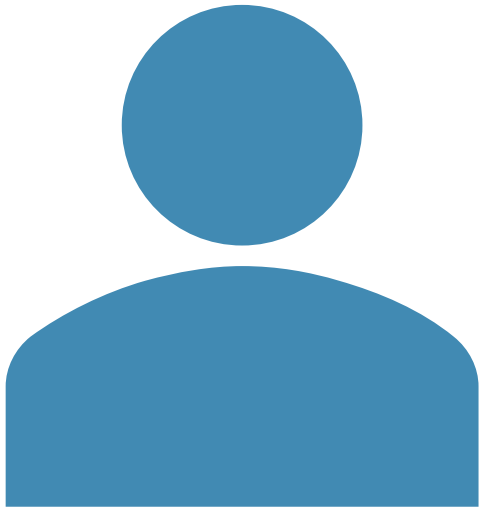
BUFFALO · NIAGARA FALLS · CHEEKTOWAGA · LOCKPORT

PREVENTION AND WELLNESS INITIATIVE

Chronic Disease Management

BACKGROUND

- There is a heavy burden of chronic diseases such as diabetes within the underserved community
- There is an opportunity to provide a preventative comprehensive approach for patients who are either prediabetic or diabetic with both lifestyle modifications and medication management
- At CHCB we organized a multidisciplinary team to implement a Chronic Disease Management program to improve diabetes management and prevention



PATIENT IDENTIFICATION

Data team ran a report using data from our EMR (ECW) to identify patients :

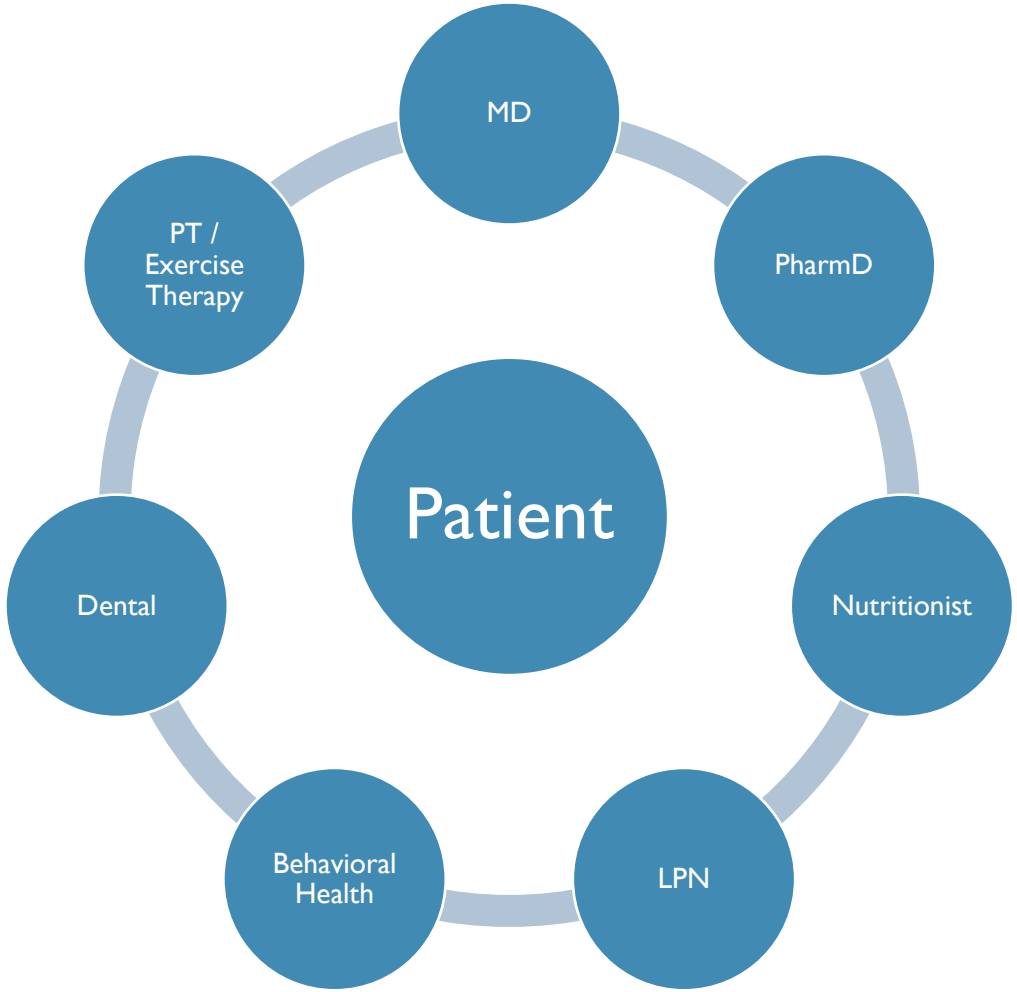
- 18 years and older
- Last A1c within the past year 5.7%- 7.5%
- Patients at our Buffalo and Cheektowaga site (For pilot project, plans to expand to other sites)

Internal referral process:

- Providers may also refer their patients to the CDM program. This includes all 4 clinical sites. Patient may be prediabetic or uncontrolled diabetic (A1c > 9%)

Outbound calls made by PharmD or Nutritionist to discuss program and schedule patients

MULTIDISCIPLINARY TEAM



MD
- Clinical oversight and review of therapy recommendations

PharmD
- Medication Reconciliation
- Medication & disease state education
- Device counseling
- Therapy recommendations ;Therapy modifications with CDTM agreement
- BG fingerstick monitoring

Nutritionist
- Dietary counseling
- Meal planning
- Lifestyle modifications discussion

LPN
- BP, weight, A1c, immunizations

Behavioral Health
- Addressing SDOH barriers (housing, transportation etc)
- Mental health counseling

Dental
- Scheduling routine preventative cleanings

PT/Exercise
- New weight loss exercise program

VISITS

- Patients will be followed for at least 3 months. Telehealth services utilized.
- Visit frequency at minimum:
  - Biweekly x 1 month
  - Monthly x 2 months
  - Telephonic follow up PRN

<u>Initial Visit (1 hour)</u>
- With PharmD
- Intake assessment
  - Baseline weight, BP, A1c
  - Preventative screenings : vaccines, statin, dental, eye exam, podiatry, labs (Microalbumin/Cr)
  - Diabetes education, medication education, lifestyle discussion
  - Referrals as needed (behavioral health, dental, PT)
  - Set goals that patient would like to achieve

<u>Second visit (45 min- 1 hr)</u>
- With nutritionist
- Dietary counseling and meal planning

Follow up visits individualized based on patients identified needs

EXAMPLE SUCCESS STORIES

- C.G is a 65 y.o female with type 2 diabetes. Prior to enrollment in CDM program ger A1c was 8.1% and was on basal insulin with large fluctuations in her blood glucose. Her blood pressure was 168/86 mmHg at baseline.
  - Patient met with PharmD and nutritionist at least monthly.
  - PharmD Medication changes : Basal insulin stopped and Trulicity started. Benefit of weight loss with Trulicity, cardiovascular protection present with Trulicity. Patient has a history of cardiovascular disease.
  - Nutrition changes: patient reduced carbohydrates intake and met with nutritionist regularly
  - Post CDM :
    - A1c : 6.5%
    - BP: 147/65

- R.A is a 54 y.o female with diabetic with an A1c of 6.6%. She was highly motivated to reduce her A1c with lifestyle modifications and no medications. She met with PharmD and nutritionist monthly. Her weight at baseline was 156 lbs. Patient has changed her diet and reduced carbohydrate and sugar intake. She has increased her physical activity.
- Post CDM
  - A1c decreased to 6%
  - Weight reduced to 151 lbs.

EXAMPLE SUCCESS STORIES

- E.T is a 28 y.o male, newly diagnosed diabetic. Baseline A1c was 12.4%. Patient refused insulin therapy and was not following a diabetic diet. Followed by CDM team for 4 months. Counseled regarding diabetic diet. Metformin and Trulicity started. A1c reduced to 5.6%

- M.F is a 41 y.o female with type 2 diabetes and obesity. Her diet consisted mostly of carbohydrates. She was not exercising. Patient met with PharmD and nutritionist at least monthly. She reduced her carbohydrate intake and increased physical activity. Started on Metformin and Trulicity
  - Baseline
    - A1c 8.1%
    - BP 141/82 mmHg
    - Weight 285 lbs

  - Post CDM program
    - A1c 5.7%
    - BP 130/83
    - Weight 254 lbs

QUESTIONS ?

Thank you for your time

DCPC-Trillium Health Cohort Success Story

trillium HEALTH

Quality Improvement During A Year Of Challenges

COVID-19 Challenges

- Staffing Shortages:
  - Staff out due to COVID-19 related reasons

- Trillium opened a RETA (Respiratory Evaluation Treatment Area) which required us to shifted resources to meet the community needs for COVID-19 testing and vaccinations

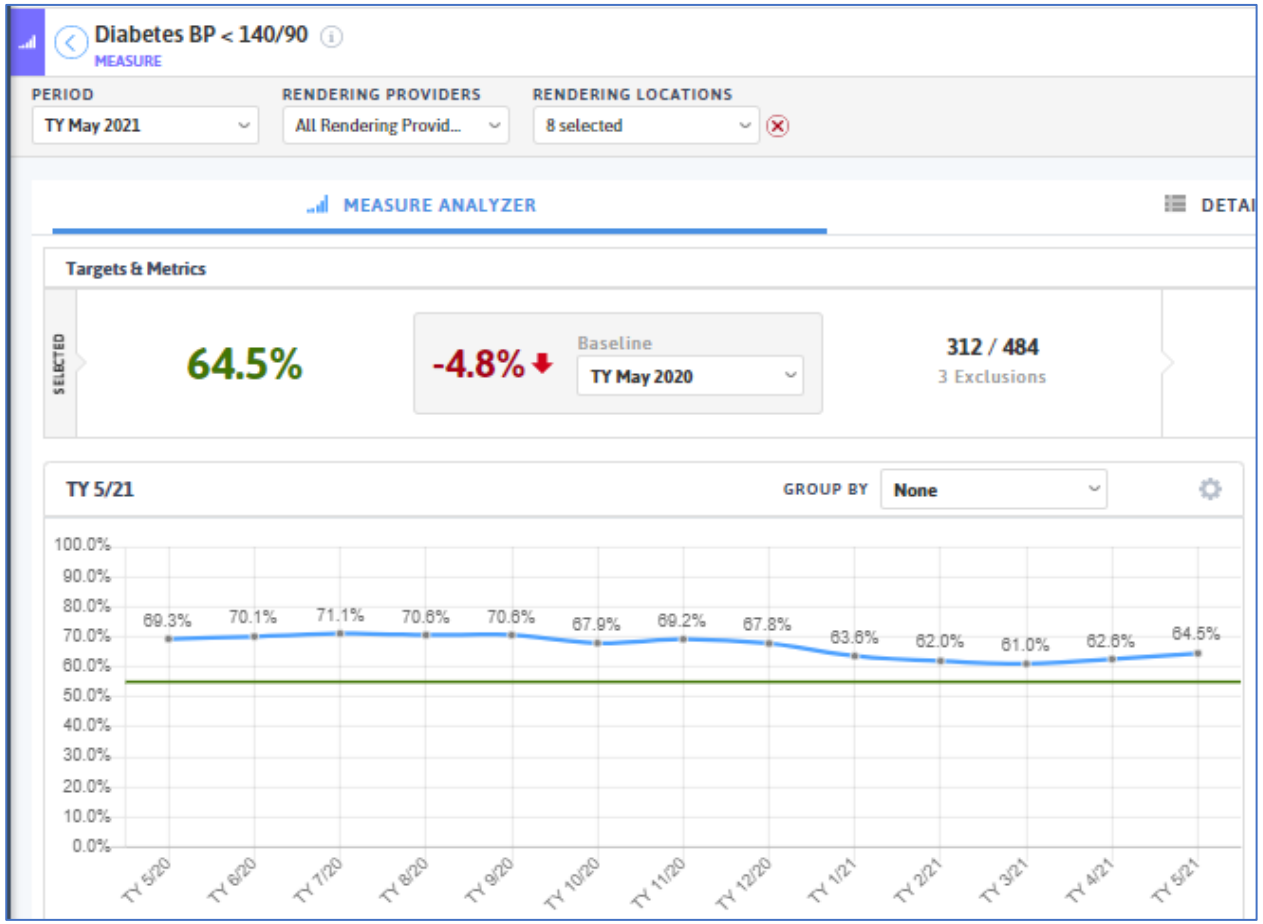
- Limited onsite patient visits: We quickly converted to Telehealth visits in March of 2020

- Red zone restrictions: Patients unable to go to labs
  - Once the red zone restrictions were lifted, patients were very reluctant to go for lab work and doctor visits

- Community based Diabetes Education/Management Programs were placed on hold during the pandemic / some still remain on hold

Remaining Focused On Our Diabetes Initiatives

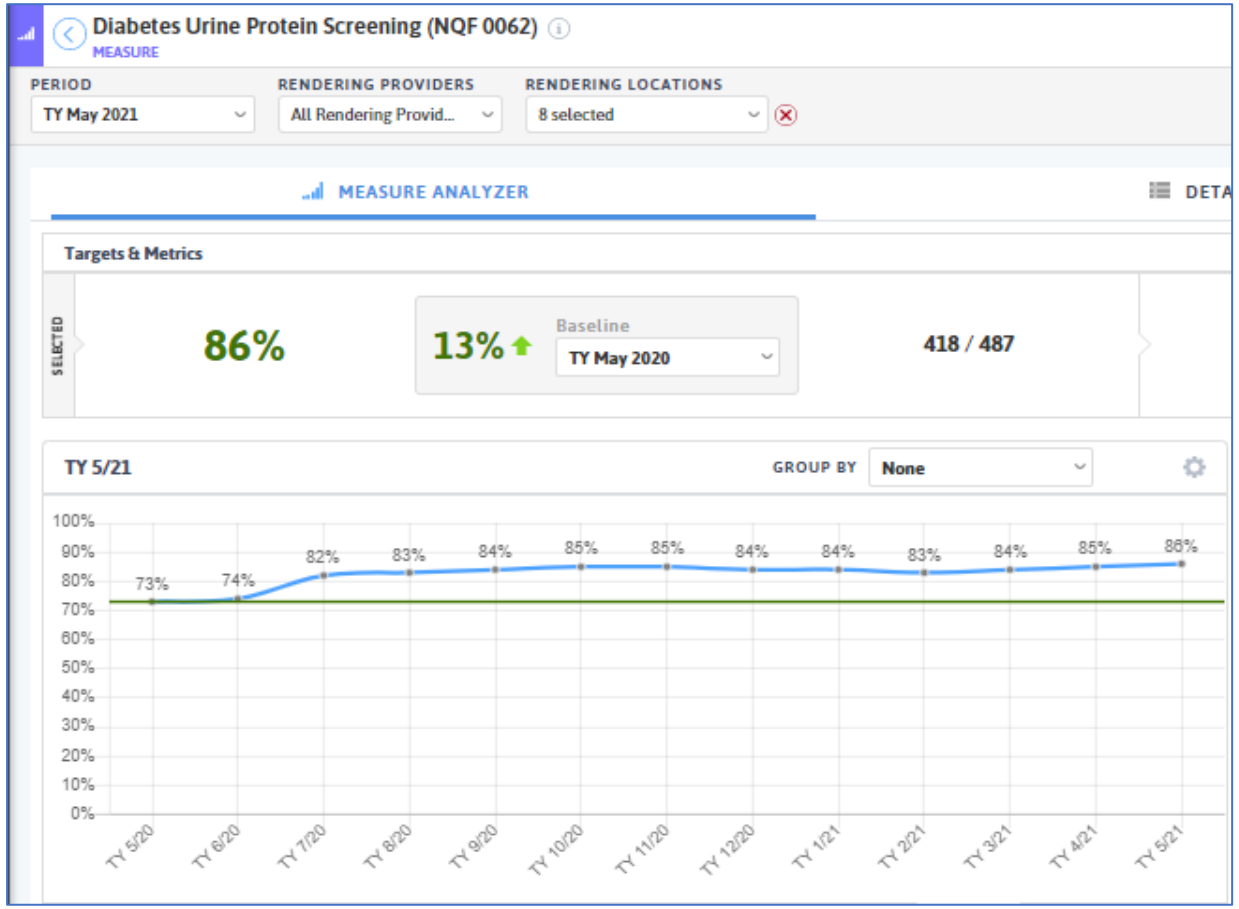
Diabetes Blood Pressure <140/90



Target 55%

Trillium Health was able to maintain and exceed our Diabetes Blood Pressure quality target despite the challenges brought on by the pandemic

Continued Focus On Diabetes Education During The Pandemic

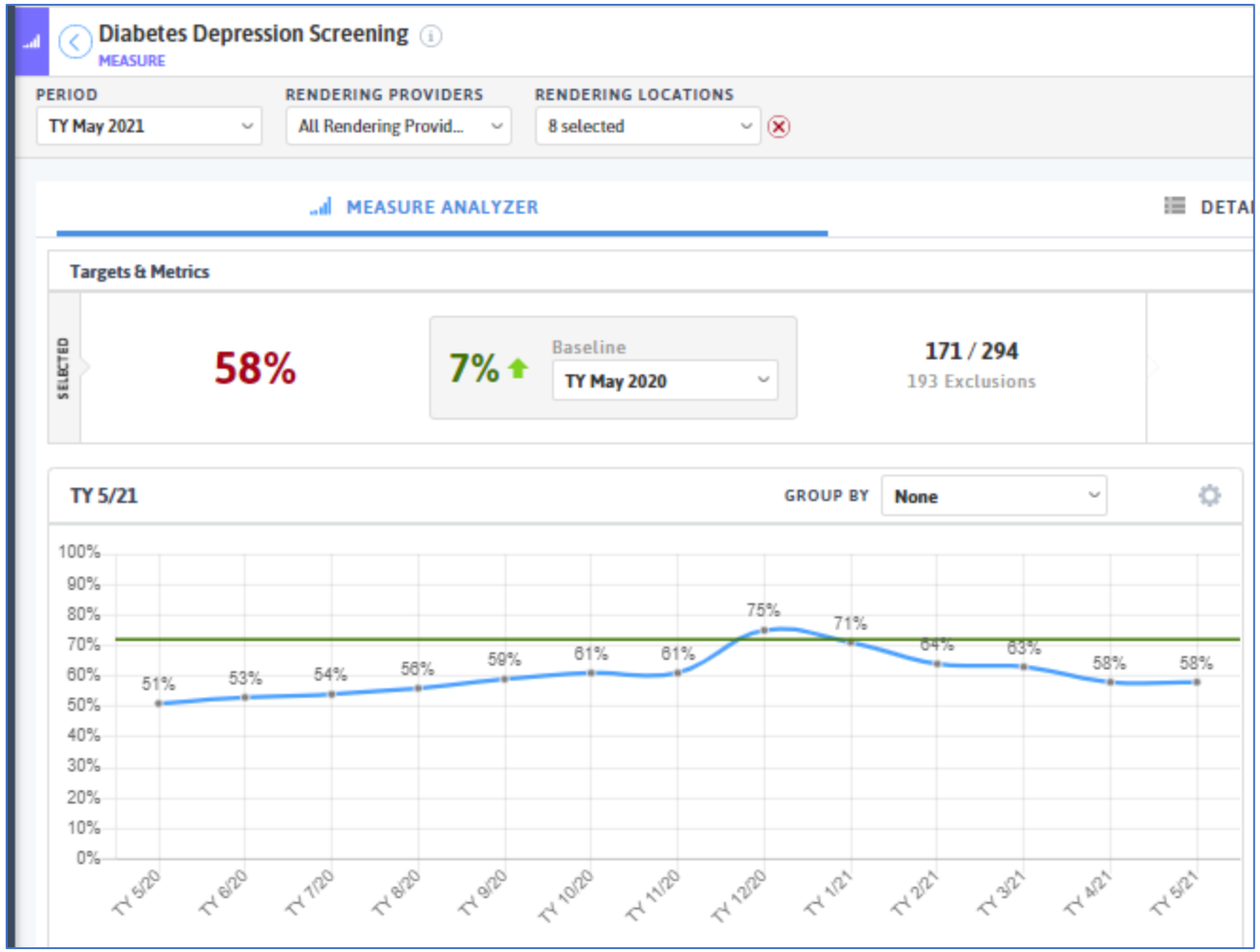


Target: 70%

During our patient encounters we continue to educate our patient on the importance of lab work

We surpassed our quality target and experienced an increase of 13% from our May 2020 baseline.

Diabetes Depression Screenings



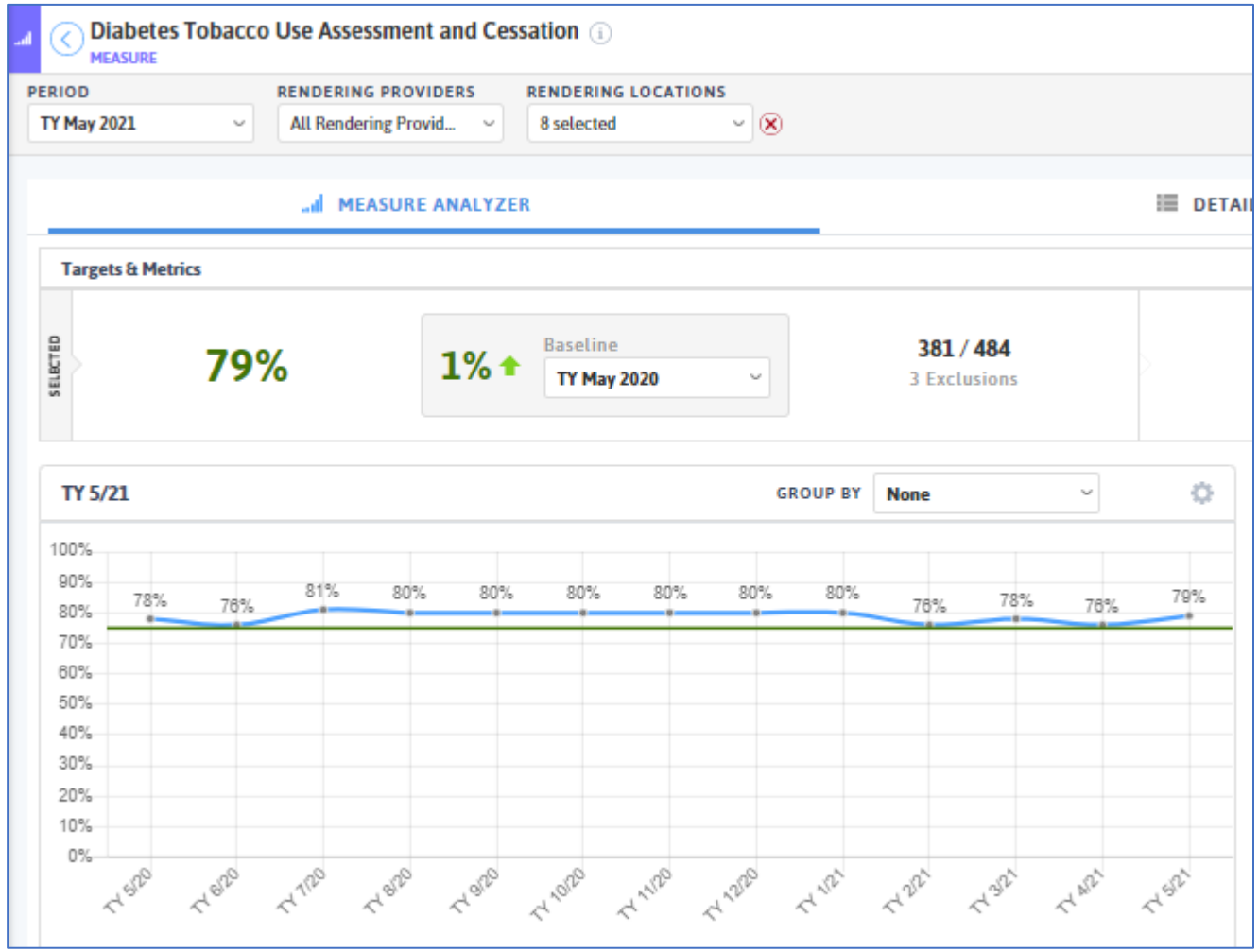
Target: 72%

Although we remain slightly below our target, we were able into increase 7 % from our May 2020 baseline

Depression screens became particularly important during the pandemic

Screenings were done telephonically and during patient video visits

Diabetes Tobacco Use Assessment & Cessation Screenings



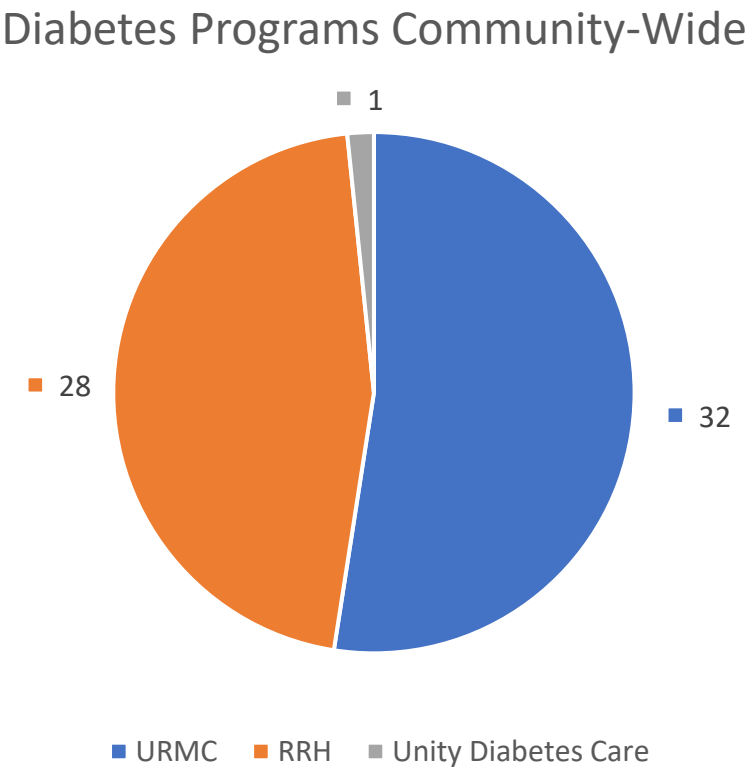
Target: 75%

We continued to meet & exceed our quality target and were able to increase 1% from our May 2020 baseline

Screenings continued to be conducted by our LPNS (in person and during telehealth visits)

Diabetes Program Referrals

- **Q2 2020:** 28 Referrals total
- **Q3 2020:** 1 Referral total
- **Q4 2020:** 14 Referrals total
- **Q1 2021:** 18 Referrals total
- Total Diabetes Program Referrals: **61**



COVID-19 Testing: We Provided 628 Test To Our Diabetic Patients

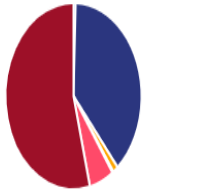
PERIOD: 2020 | RENDERING PROVIDERS: All Rendering Provid... | PATIENT DIAGNOSES: Diabetes

Tests

397

Completed

COVID Testing By Race



Testing by Age Range

AGE	LAB
<= 1	0
2-4	0
5-12	1
13-18	0
19-25	3
26-30	9
31-35	11
36-40	13
41-45	16
46-50	32
51-55	51
56-60	107
61-65	78
66-70	48
71-75	17
76 +	11
Totals	**397**

Testing By Race

RACES	LAB	% TOTAL
Asian	2	1
Black/African American	152	38
More than One Race	5	1
Pacific Islander	1	0
Unreported/Refused to Report Race	23	6
White	214	54
Totals	**397**	

PERIOD: 2021 | RENDERING PROVIDERS: All Rendering Provid... | PATIENT DIAGNOSES: Diabetes

Tests

231

Completed

COVID Testing By Race

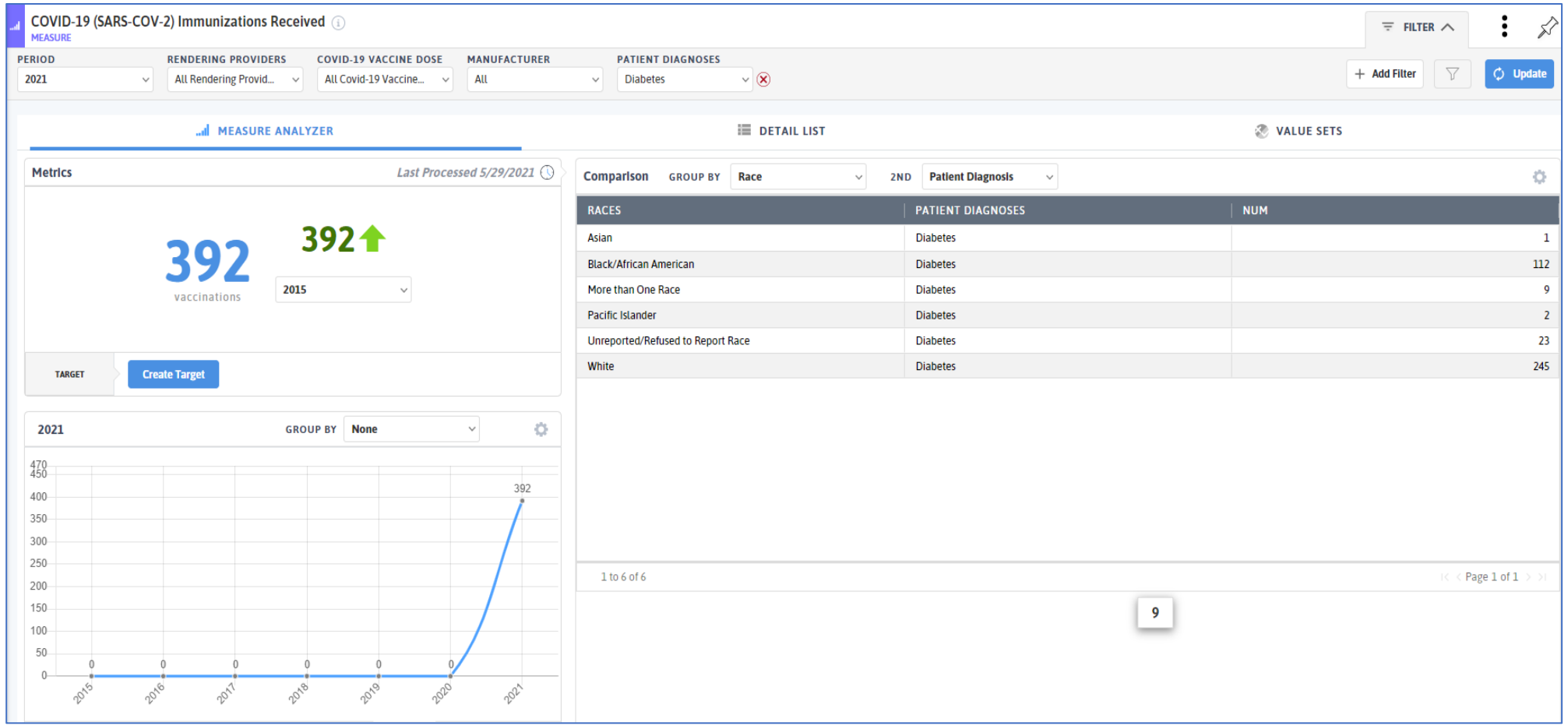
Testing by Age Range

AGE	LAB
<= 1	0
2-4	0
5-12	0
13-18	1
19-25	0
26-30	6
31-35	14
36-40	8
41-45	10
46-50	33
51-55	25
56-60	47
61-65	62
66-70	13
71-75	8
76 +	4
Totals	**231**

Testing By Race

RACES	LAB	% TOTAL
American Indian/Alaska Native	1	0
Asian	1	0
Black/African American	85	37
More than One Race	3	1
Pacific Islander	1	0
Unreported/Refused to Report Race	17	7
White	123	53
Totals	**231**	

COVID-19 Diabetic Patient Vaccinations



How Did We Do It?

Collaboration:

- Partnering with our clinic and pharmacy staff
- Shifted staff roles / responsibilities to meet the community needs
- Provided outreach calls to our patients
- Utilized our PHARMD
- Utilized our Registered Dietitian Nutritionist

Azara Tools:

- Patient Visit Planning Report
- Patient Registries
- Dashboards
- Gap Reports

Other Trillium Accomplishments

- Trillium Health Opened The RETA – A clinic within the clinic, that initially provided testing and then expanded to vaccinations

- Trillium Health partnered with Monroe County to provide COVID-19 testing and vaccinations. Which included using our MAC (Mobile Access Clinic) to bring testing and vaccinations to where the people work and live

- 22,012 COVID-19 Tests were performed (April 27, 2020 – June 6, 2021)

- 7,180 COVID-19 Vaccinations (as of June 7, 2021)

Diabetes - Next Steps

- Expand our partnership with agency partners and community wide stakeholders to ensure our diabetic patients are connected with the best resources and data possible

- Continue to educate diabetic patients the value of community based Diabetes Care/Management programs

- Continue to utilize Azara tools including but not limited to patient registries and cohorts to monitor our diabetic patients

thank you

The Chautauqua Center

Our Family Caring For Your Family

HRSA Health Center Program — Health Disparities Reducer — 2020 Awardee

HRSA Health Center Program — Access Enhancer — 2020 Awardee

HRSA Health Center Program — Advancing HIT for Quality — 2020 Awardee

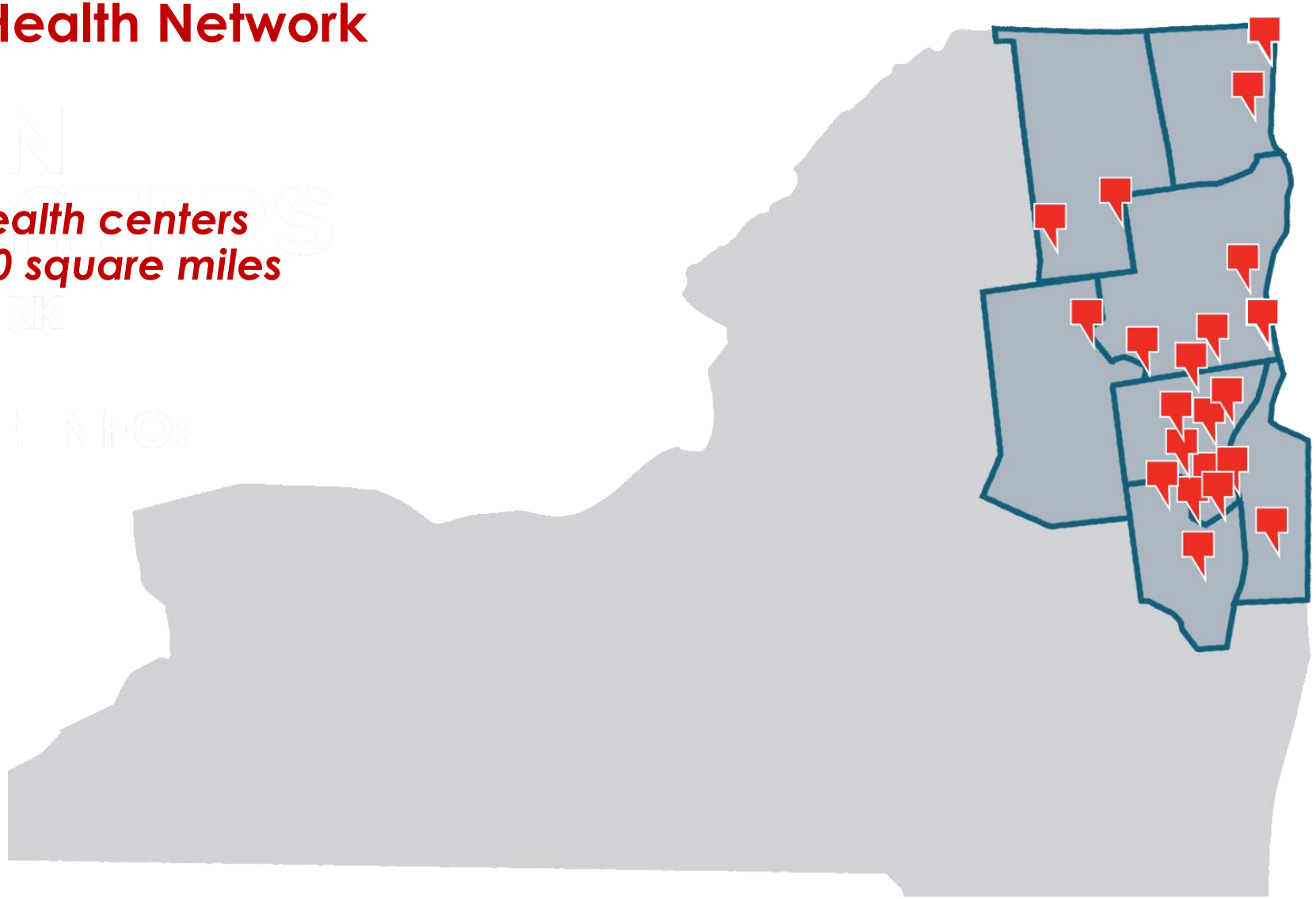
Personalized Care, From Our Family To Yours

Hudson Headwaters Health Network

Our Service Area

System of 21 community health centers providing care across 7,200 square miles and seven counties:

- Warren
- Clinton
- Essex
- Franklin
- Hamilton
- Saratoga
- Washington



Patient Population

- 97,000 patients seen annually
- 7,000 patients diagnosed with Diabetes
- 1,500 patients diagnosed with pre-diabetes

Services & Initiatives Targeting Diabetes

- **Diabetes & Nutrition Program**
  - Diabetes Nurse Champions – 18 nurses involved in the program
  - Individual Nutrition Counseling – 2 dietitians
  - Diabetes Education – 1 CDCES
- **Food Farmacy Program**
  - Patients with Diabetes or pre-diabetes diagnosis, BMI >30, one additional comorbidity, food insecurity
  - Program goals:
    - Increase fruit & veggie consumption,
    - Improve ability to prep and cook produce
    - Experiment with new produce for free
  - Patients receive: fresh box of produce (25-30 lbs.) every other week, healthy recipes, nutrition handouts, and nutrition counseling sessions
- **Point-of-care A1C machines & Nephropathy machines**
  - Purchasing and Installation of machines at each health center

Services & Initiatives Targeting Diabetes

- **2020 A1C outreach campaign:**
  - Coordinated by our population health team
  - Focused on patients with A1C > 9% and those diabetes patients not screened
  - Pop health team placed orders – front office staff reached out to patients – provider approved orders
  - 59% of those outreached came in for labs and 32% of patients had a new A1C < 9%
- **Clinical pharmacy services:**
  - Diabetes intervention: Pharmacist identifies patients with A1C >9%
    - Pharmacist reaches out to patients to discuss their medications, answer any questions, and reviews medications to make sure they are prescribed appropriately and patient is taking as prescribed
- **Chronic Disease Self-management Classes (CDSMP & DSMP)**
  - Provided virtual DSMP course to small cohort of patients
  - Plan to offer ongoing classes internally
  - Participating in Health Coalition Initiative – Referral system for the north country CDSMP classes

East Hill Medical Center

COMMUNITY HEALTH CARE ASSOCIATION of New York State

Category B: Cardiovascular Disease

Finger Lakes
COMMUNITY HEALTH

Self Measurement Blood Pressure

2021

SMBP and FLRx Program

- Most of the patients have been very successful on the SMBP program.
- The best improvement was noted when, the patients were able to taught about lifestyle changes to help them decrease their blood pressure readings in conjunction with medication adjustments and others without the use of medications.
- One of our greatest community partners was Cornell Cooperative Extension.

FLRx Program

- Patients are enrolled in a series of 6 nutrition education classes that cover topics like healthy eating, exercise, and shopping on a budget.
- After patients complete each class, they are provided FVRx vouchers to use like cash for fresh fruits and vegetables at participating retailers.
- Anyone who would benefit from adding more fresh fruits & vegetables to their diet! Including, but not limited to those with:
    - Diabetes and Prediabetes
    - Obesity
    - Heart Disease
    - Kidney Disease
    - Metabolic Syndrome
    - Polycystic Ovarian Disease (PCOS)

Patient Success

- A patient was enrolled in the SMBP program in early February, and placed on a new blood pressure medication.
- He met with the provider and decided to try lifestyle modification and was referred to FLRx program.
- He voiced to us how having the machine at home and being able to see daily how his blood pressure readings were, he was able to feel better about having to be placed on a new blood pressure medication as he could see how it was affecting him in a positive way.

Patient Success

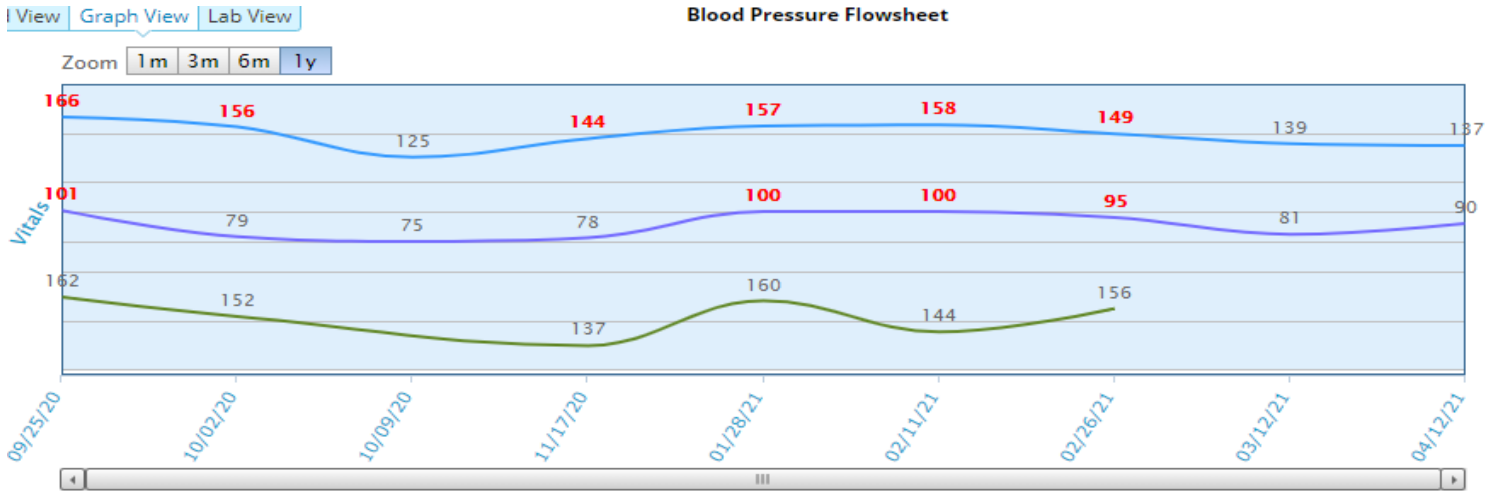
- We checked in every two weeks for the first two months and he was released from the program in April at his follow up appointment as his readings were within normal limits.

Grid View | Graph View | Lab View

Blood Pressure Flowsheet

New Flowsheet Enc | Notes

Name	04/12/2021	03/12/2021	02/26/2021	02/11/2021	01/28/2021	11/17/2020	10/09/2020	10/02/2020
Miscellaneous	137/90	139/81	149/95,156/96	158/100,144/98	157/100,160/78	144/78,137/81	125/75	156/79,152/78
Visit Blood Pressure	137/90	139/81	149/95	158/100	157/100	144/78	125/75	156/79
Visit Repeat Blood Pressure			156/96	144/98	160/78	137/81		152/78



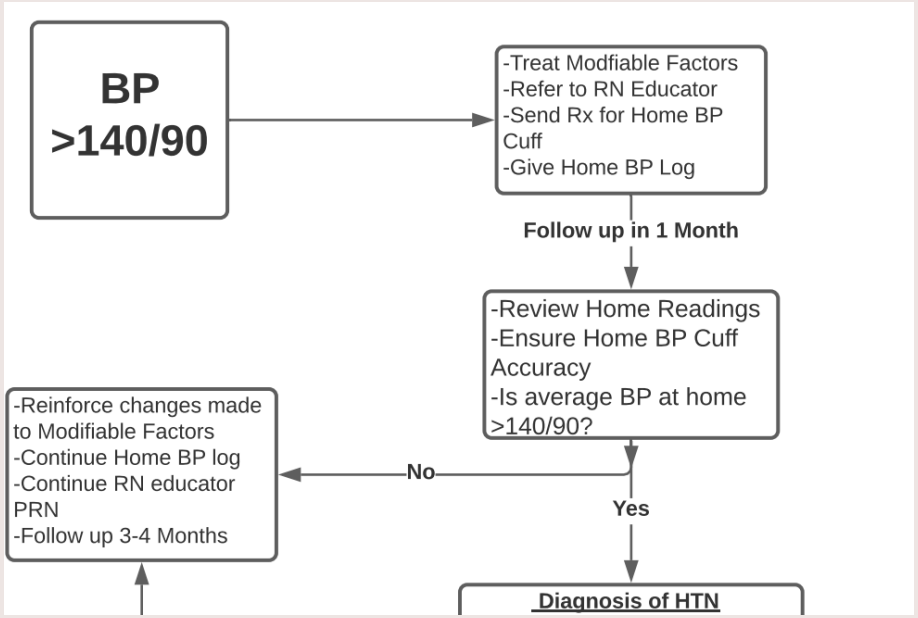
Total Referrals

- For our Ovid and Port Byron offices from January to now we have had 15 patients enrolled in the SMBP program
- Prior to creating electronic referrals Port Byron and Ovid had referred 48 patients to the FLRx 2020-2021 program and since we started electronic referrals in May Port Byron and Ovid have referred 61 patients to the FLRx program.

CHCANYS DCPC End of Year Peer Learning Session

June 24, 2021

Shajuana Day, Jericho Road Community Health Center, Buffalo, NY



Modifiable Factors

-Smoking Cessation
-Reduce Acohol Intake
-Reduce Salt Intake
-Offer DASH Diet
-Encourage Exercise
-Review Meds: OCPs, NSAIDs, Depo, Stimulants, SNRI, Cyslorsporine?
-Assess for OSA*, Refer for Sleep study

*STOP-BANG score on MDCalc is validated

Role of RN Educator

-Education about what Hypertension is; chronic nature of disease, not curable (typically), and often requires life long medication use
-Education about the role weight, smoking, alcohol, diet, exercise, and lifestyle can have on hypetension
-Refer as needed to Nutritionist for dietary interventions to treat hypertension
-Referral to Pharamcy as needed for adherence assessments, medipacks, etc.

Home BP Cuff Pearls

Pearls for selecting BP Meds

Data

- Azara/CPCI tool used to select patients
- Goal of ten patients per 2nd Year Resident (Forty total)
- Final count: Total of twenty-one patients with a diagnosis of uncontrolled HTN selected (uncontrolled HTN defined as > 140/90)
- Patient Demographics (Gender and Primary Language):
  - Male: 13
  - Female: 8
  - Burmese: 1
  - Dinka: 1
  - English: 10
  - French: 2
  - Karen: 1
  - Kirundi: 1
  - Nepali 1
  - Somali: 1
  - Sudanese: 1
  - Swahili: 2

Data (Continued)

- 66% of participants improved BP from baseline
- 50% of the 66% improved systolic and diastolic BP
- 14% of the 66% improved systolic BP
- 21% of the 66% improved diastolic BP

Next Steps:

- Add CHW's from HRSA HTN Grant to care team
- RD to continue to provide MNT and support
- 2nd Year Residents to present to Provider Team before the end of this year

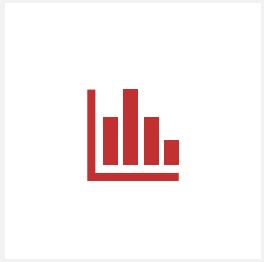
Thank You!

CHCANYS BP LOANER PROJECT

Bedford Stuyvesant Family Health Center

- Bringing together staff from multiple disciplines on a project.
- Creating a model for interdisciplinary project management and Quality Improvement
- Interdisciplinary approach to policy and procedure management.
- Introduction of SMART method of goal setting.

First project where so many members from different disciplines came together to provide input on a project.



Data Team

Case Management

Nutrition

Quality Improvement Team

Clinical Staff

Patient Selection

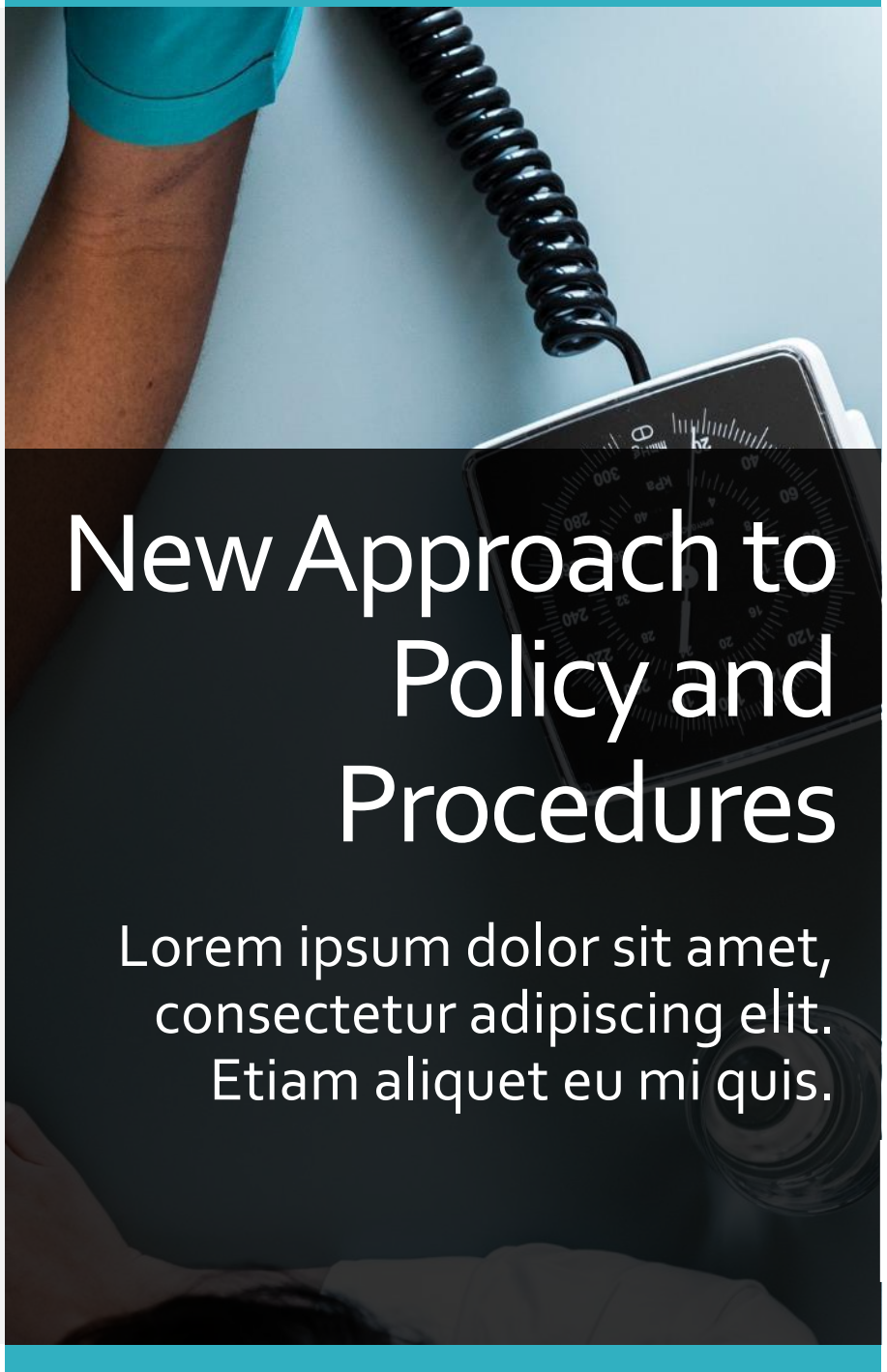
Data Review

Project Management

Division of Work

Able to create a model for future projects based on team approach to this one.

- Previously policies and procedures were worked on and developed by one or two people – person and leadership.
- New approach utilized input from various disciplines for development.



New Approach to Policy and Procedures

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam aliquet eu mi quis.


Specific
Achievable
Timely
SMART
Measurable
realistic

Thank You

Thomas Weir

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CHCANYS
CARDIOVASCULAR DISEASE PREVENTION AND CONTROL PROJECT

Janice Scobie, MD MS MS
Director of Cardiology

CVD Prevention and Control Project Successes

- Development of Home BP Monitoring Program
  - Increased patient engagement in self-management of HTN
- Hypertension Education
  - Providers
    - Hypertension Protocol
  - Staff (RNs/LPNs and MAs)
  - Patients
- Building Partnerships
- Improvement in Workflows and Procedures
  - Internal Clinical Referrals
    - Identification of patients at increased CVD risk
  - Internal Diagnostic Procedures
  - External Cardiology Referrals

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CVD Prevention & Control Project Successes: Development of Home BP Monitoring Program

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- Home BP Monitor Program (N=29)
  - Home BP monitors obtained for patients with and without insurance
  - Pharmacy Liaison obtains home BPM for patients
  - Gift of 15 Digital home BP monitors given to patients without insurance

- Workflows and Practices
  - Telephone encounter sent to clinical pharmacy liaison (CPL) via ECW along with written rx
  - CPL reviews patient chart
  - Rx and other info sent to participating DME Vendor to get PA
  - CPL follows-up in 1-2 weeks
  - After PA approval CPL sends patient HBPM via mail or patient pick-up at pharmacy
  - Patient instructed to bring HBPM into BNHC for set up and education on use

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CVD Prevention and Control Project Successes: Patient Education on Hypertension

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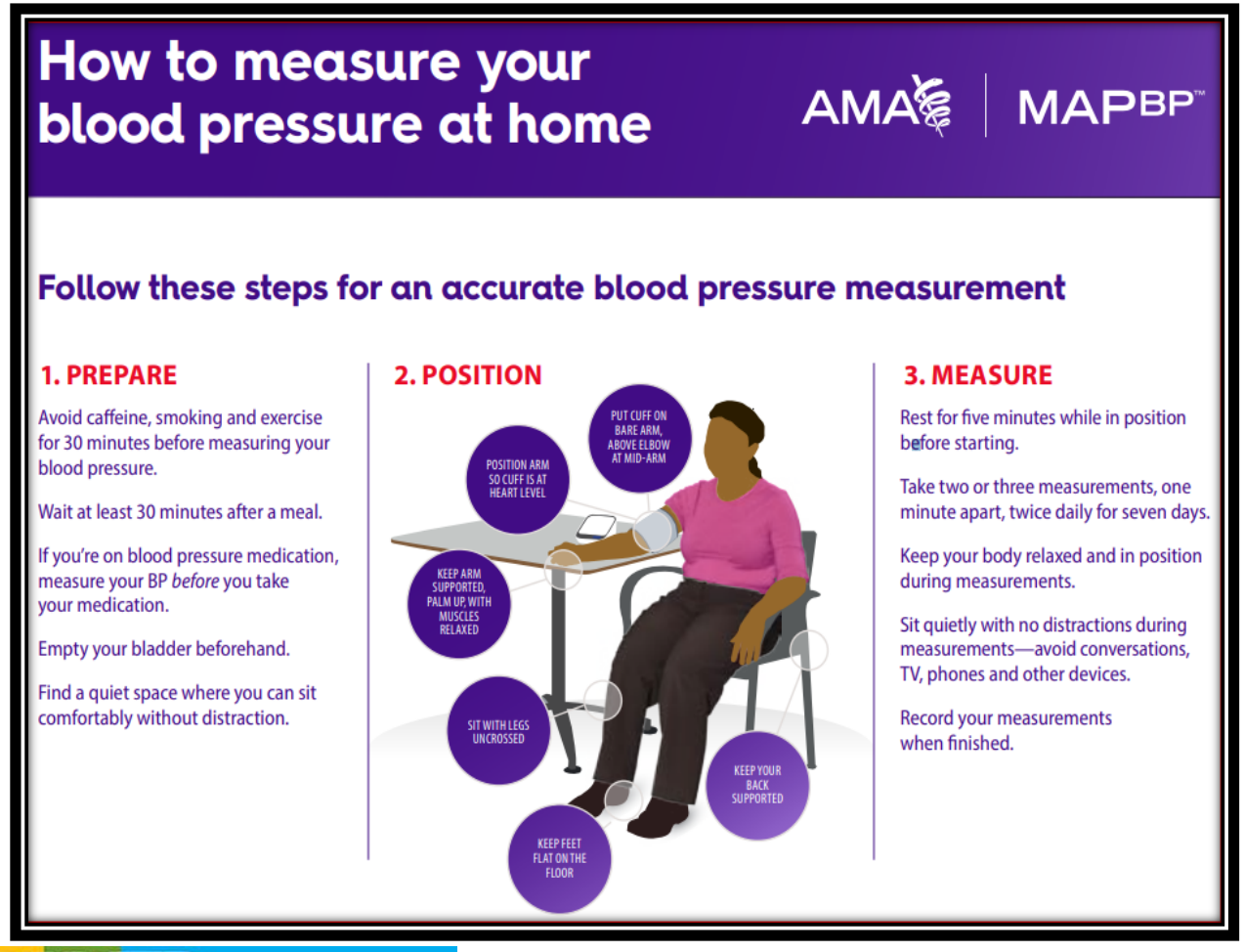
- Patients
  - Increased engagement in self-management of HTN
  - Proper technique of BP measurement
  - Proper use of home BP monitor
  - Factors that increase BP when taking BP with home monitor



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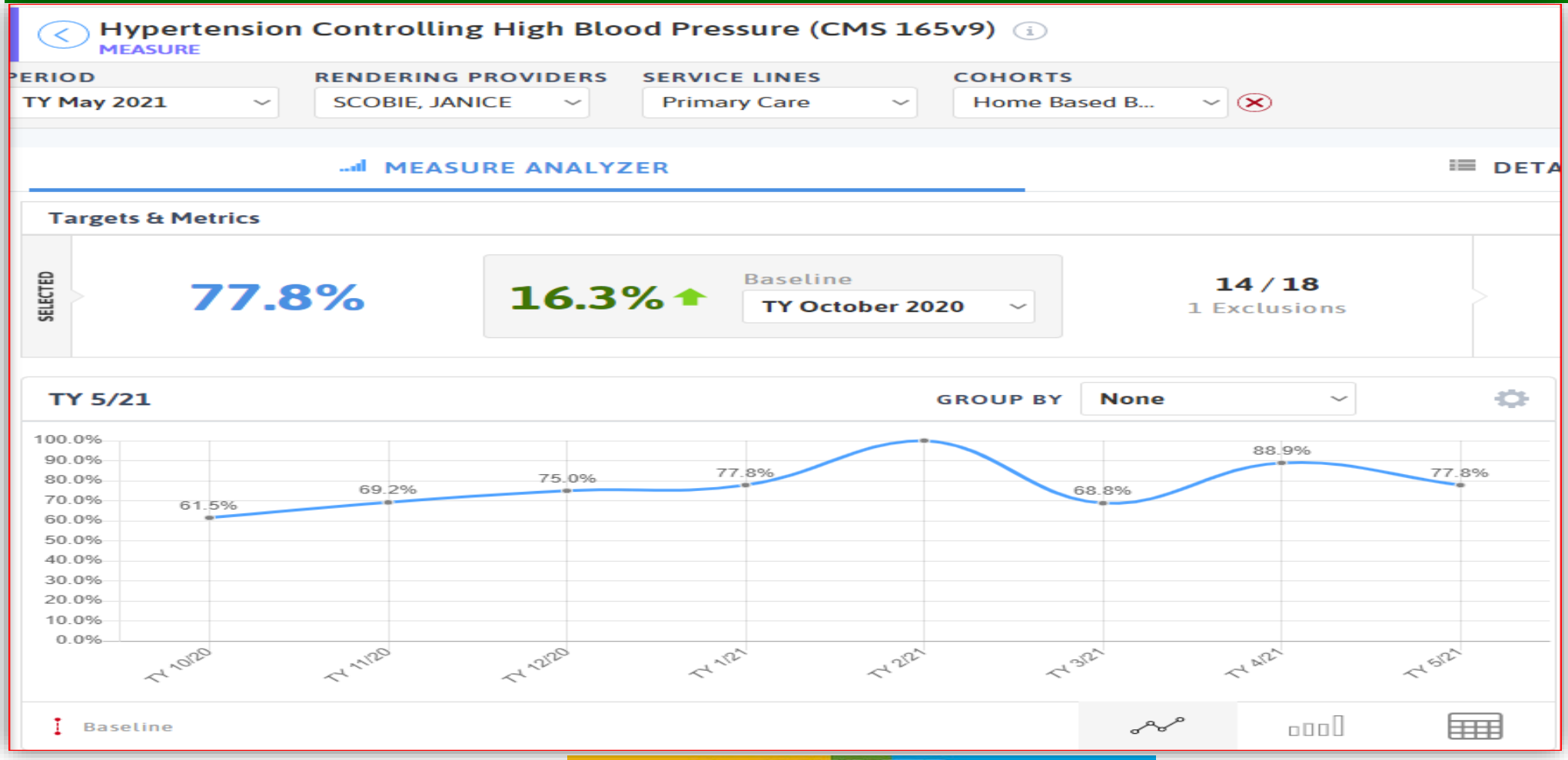
Cardiology Hypertension Control: (BP COHORT): TY May 2021



CVD Prevention and Control Project Successes: Provider Education on Hypertension

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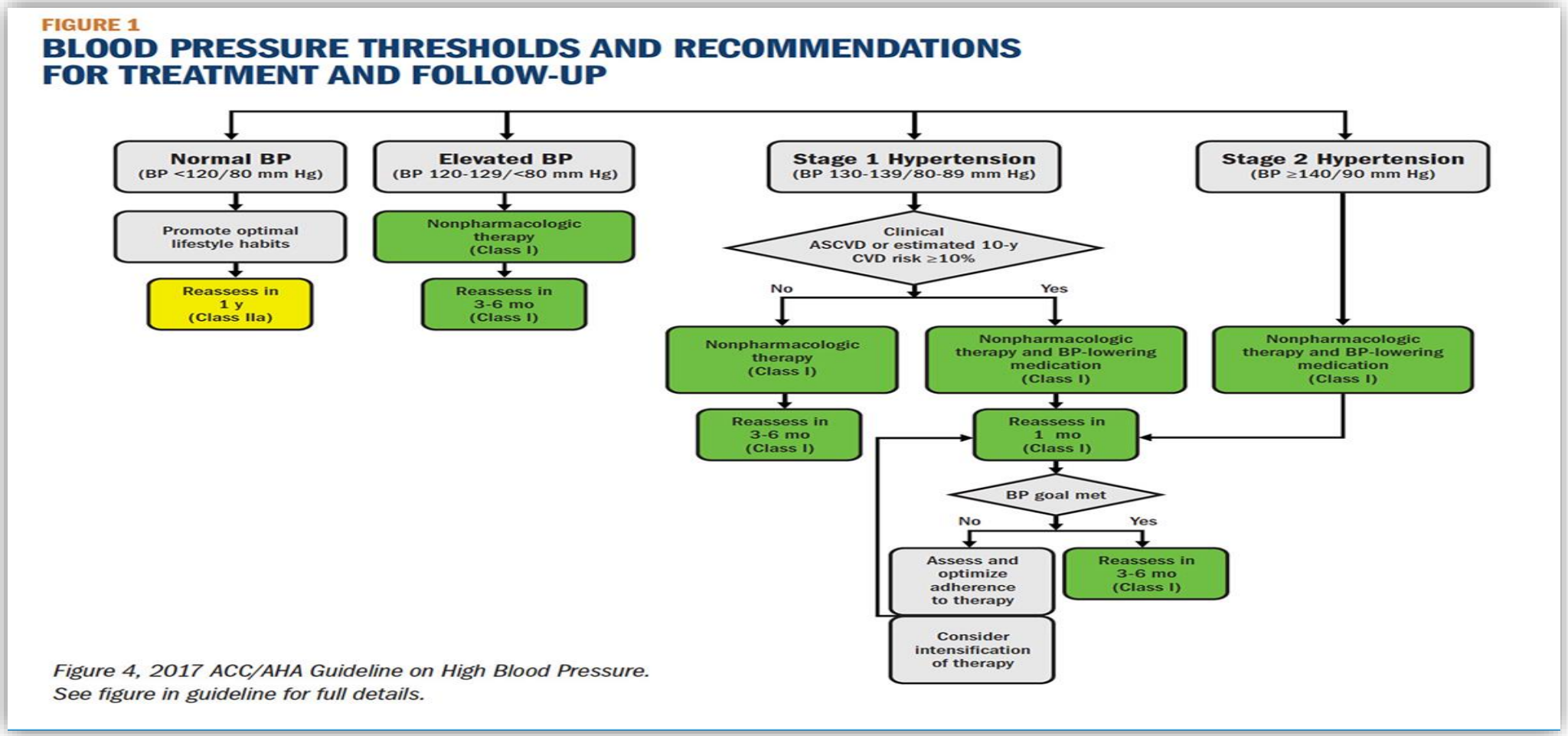

Figure 4, 2017 ACC/AHA Guideline on High Blood Pressure.
See figure in guideline for full details.

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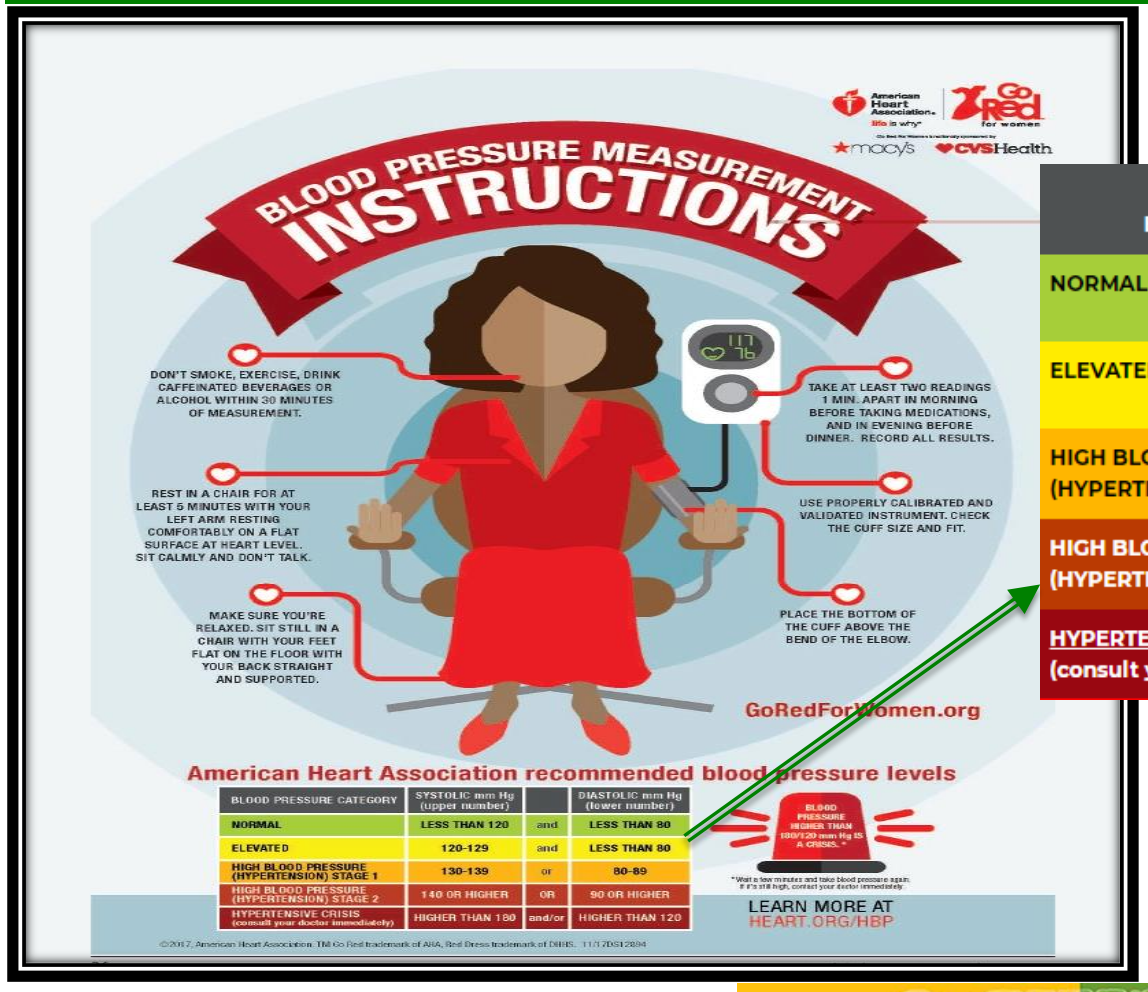
CVD Prevention and Control Project Successes: Provider Education on Hypertension



BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

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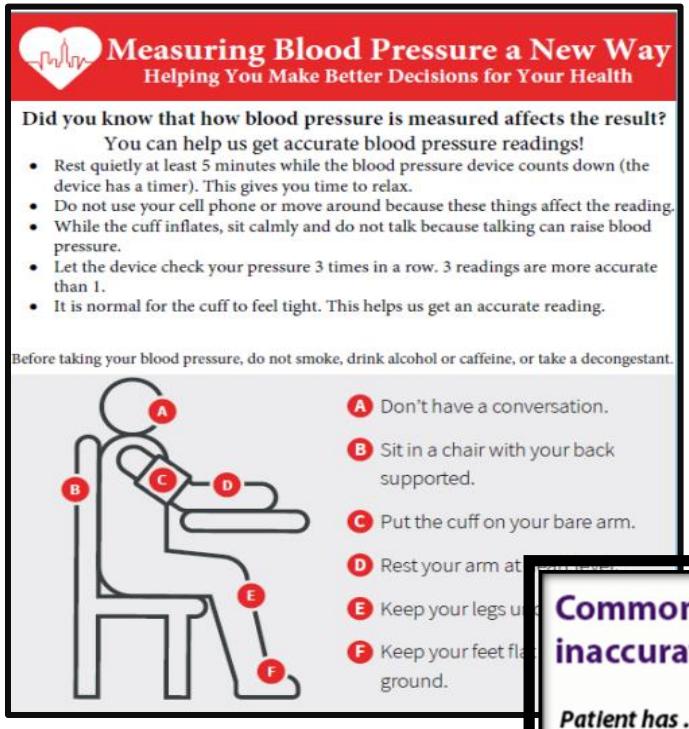
CVD Prevention and Control Project Successes: Staff Education on Hypertension

- Staff (RNs, LPNs, and Mas
  - Handouts on accurate BP Measurement
  - Training Video on Home BP monitoring
  - Video on proper technique for taking home BP



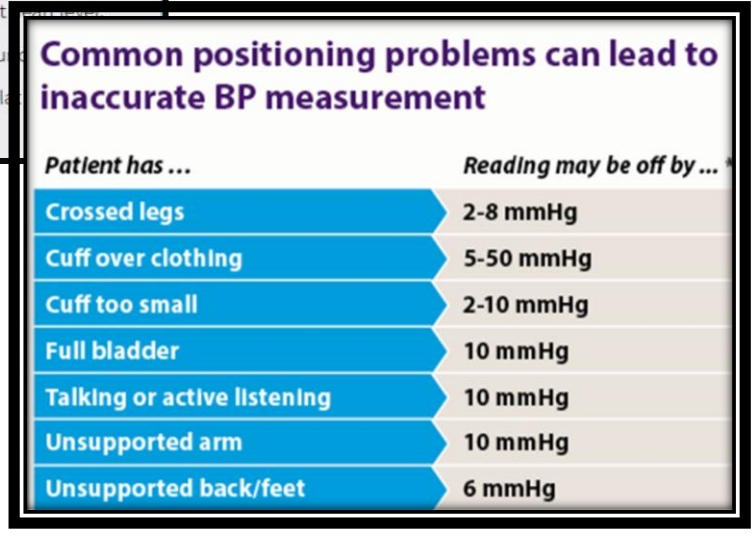
Measuring Blood Pressure a New Way
Helping You Make Better Decisions for Your Health

Did you know that how blood pressure is measured affects the result?
You can help us get accurate blood pressure readings!

- Rest quietly at least 5 minutes while the blood pressure device counts down (the device has a timer). This gives you time to relax.
- Do not use your cell phone or move around because these things affect the reading.
- While the cuff inflates, sit calmly and do not talk because talking can raise blood pressure.
- Let the device check your pressure 3 times in a row. 3 readings are more accurate than 1.
- It is normal for the cuff to feel tight. This helps us get an accurate reading.

Before taking your blood pressure, do not smoke, drink alcohol or caffeine, or take a decongestant.

A Don't have a conversation.
B Sit in a chair with your back supported.
C Put the cuff on your bare arm.
D Rest your arm at
E Keep your legs u
F Keep your feet fl
ground.



Common positioning problems can lead to inaccurate BP measurement

Patient has ...	*Reading may be off by ...*
Crossed legs	2-8 mmHg
Cuff over clothing	5-50 mmHg
Cuff too small	2-10 mmHg
Full bladder	10 mmHg
Talking or active listening	10 mmHg
Unsupported arm	10 mmHg
Unsupported back/feet	6 mmHg

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CVD Prevention and Control Project Successes: Building of Partnerships

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- AZARA Healthcare (DATA)
  - Database warehouse
  - ASVCD Risk Score
    - Azara in partnership with CHCANYS and the NYS Department of Health has developed an ASCVD 10-year Risk Calculator in CPCI/DRVS.
    - Identification of patients at high risk for CVD

1. **ASCVD Ten Year Risk- May 2021: 5**
2. CVD Events Patients 2021: 67
3. Home Based BP monitor: 29
4. UAOBPM: 55

NAME	# OF PATIENTS	CREATED DATE	CREATED BY	LAST UPDATED DATE
ASCVD Ten Year Risk January- May 2021	5	5/17/2021	jcollazo@boriken.org	5/17/2021
Co-Morbid HTN and DM	266	9/10/2020	aaponte@boriken.org	9/10/2020
CVD Event Patients 2021	67	5/17/2021	jcollazo@boriken.org	5/17/2021
Depression/Anxiety	408	5/12/2021	AzaraDeployScript	5/12/2021
Diabetics	318	5/26/2021	AzaraDeployScript	5/26/2021
DM A1C > 8.0 (TY April 2021 CMS122v8)	207	4/26/2021	Azara	4/26/2021
Home Based BP monitor	29	4/16/2021	jcollazo@boriken.org	4/16/2021
Unattend BPM	55	5/26/2021	jcollazo@boriken.org	5/26/2021

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CVD Prevention and Control Project Successes: Improvement in Workflows/Procedures

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- Internal Clinical Referrals
  - **Change from provider-based referrals to a proactive system of identifying patients with increased CVD risk**
  - Patient cohorts created
    - HTN ≥160/90 mmHg
    - LDL ≥190 mg/dL
    - *High 10-year ASCVD Risk Score*
- Workflows and Procedures
  - Patient list given to cardiology MA to schedule appointment
  - Letters mailed to patient indicating their appointment date and time
  - Patients instructed to reschedule appointment if not able to make designated date/time
  - Patients called the day before by MA to confirm appointments.
  - Patients receive letters and/or calls to reschedule their appointments (3x) if no-show

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CVD Prevention and Control Project Successes: Improvement in Workflows/Procedures

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- Internal Diagnostic Procedure Referrals (ABI/PVR and Holter/event Monitoring)
  - Creating referrals in EMR
  - Scheduling of diagnostic studies by Cardiology MA (not Patients Accounts Clerk)
  - Closing of referral by cardiology MA (not referral specialist)
  - External Cardiology Referrals
    - Subspecialty referrals
    - Diagnostic studies/procedures

- Workflows and Procedures
  - Referral created within ECW and assigned to cardiology MA who performs diagnostic procedure
  - Internal diagnostic procedure scheduled with cardiology MA directly after visit
  - If MA not available, MA subsequently calls patient to schedule appointment
  - Patients called by cardiology MA the day before to confirm appointment
  - All subspecialty consult notes and results of diagnostic tests given to Referral Specialist to close referrals

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CVD Prevention and Control Project Successes: Improvement in Workflows/Procedures

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- Internal Diagnostic Procedures
  - Holter/event monitoring
  - ABI/PVR
- Workflows and Procedures
  - ABI/PVR
    - Tests performed by Cardiology MA
    - Report printed and given to cardiologist for interpretation
    - Signed report given to MA to scan in ECW
    - Referral closed by cardiology MA in ECW
  - Holter/event Monitoring
    - Cardiology MA instructs patients about use and hooks up device
    - F/U appointment made by cardiology MA for results
    - Patients called the day before by cardiology MA to confirm appointment
    - Signed report given to MA and referral closed in ECW

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Boriken Cardiology Team

- Janice Scobie MD, MS, MS, Director
- Medical Assistants
  - Oristila Velasquez, CCMA
  - Yildiz Vellon, RMA
- Referral Specialist
  - Michelle Medina
- Clinical Quality Analyst
  - Jennifer Collazo, MPA
- Director of HIT
  - Milagros Torres, RHIT
- Social Work
  - Olga Victor, LCSW-R, Director
  - Yohanna Solano, LCSW, Clinical Therapist
  - Yolanda Morales, Case Manager
  - Marisol Van Duyne, Case Manager
- Nutrition
  - Andrea Hernandez, RDN, Dietitian
- Pharmacy
  - Yesenia Vasquez, Pharmacy Liaison
  - Shelby Frisa, PharmD, Pharmacist

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Boriken Cardiology Team: *Thank You!*

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Hypertension Project for 17th street

Daniel Napolitano, MD

VP of Population Performance

THE INSTITUTE FOR FAMILY HEALTH

Our team

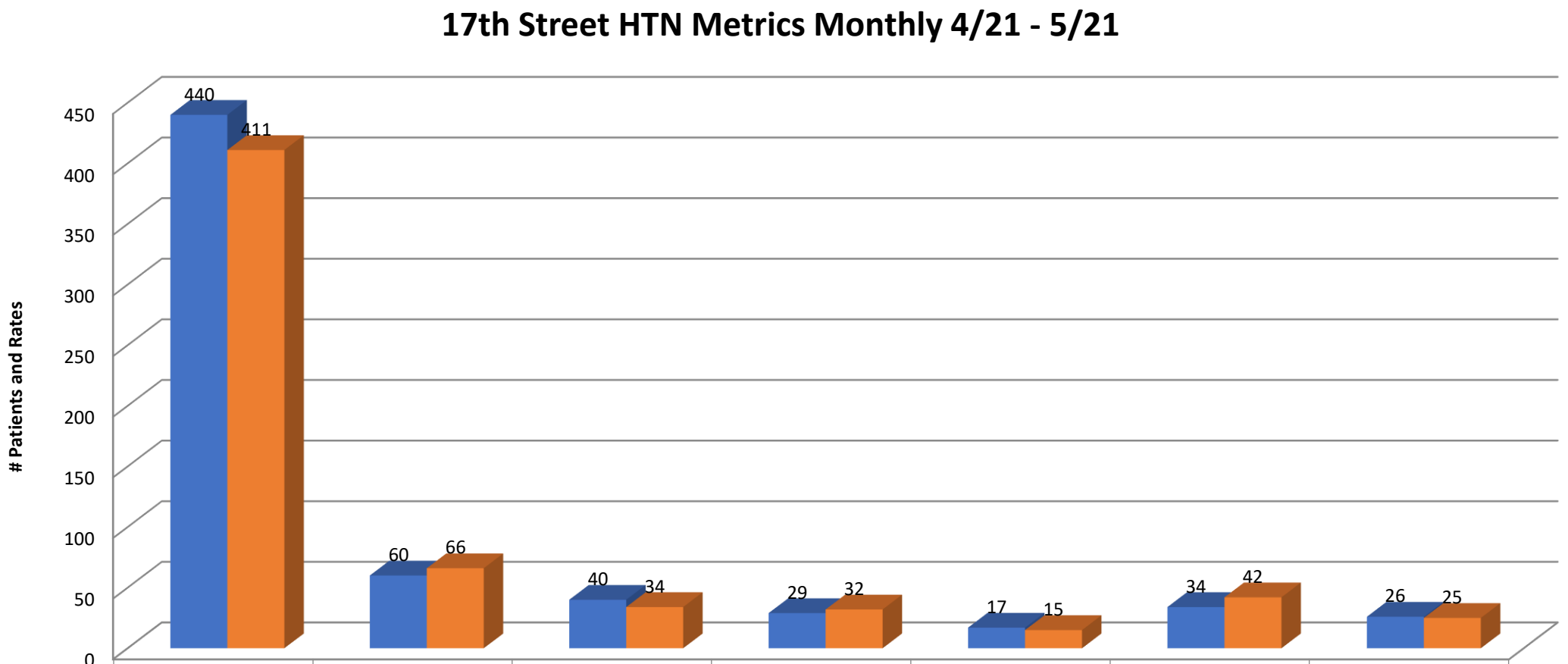
- Bill Bakey PA (Clinical Quality Director for Hypertension)
- Taylor Mrazek (Director for Population Performance)
- Alba Pumarol MD (Reginal Medical Director for Bronx offices)
- Regina Ginzburg Pharm PHD
- Cara Rabin DO (Family Medicine Resident)
- Sherry Jones RN (Nurse Manager 17th street)
- Terresa Engert (IFH Nurse Educator)
- Ginger Gilespie (Medical Director 17th street)
- CindyLou Killikelly (VP of Nursing)
- Daniel Napolitano MD (VP for Population Health)

Our metrics

- Process metrics
  - Nursing education on Proper BP technique
  - 2nd BP rates
  - Home BP monitor
  - Follow up < 3 weeks (scheduled and completed)

  - Outcomes metrics
    - Control rates
    - “Marginal BP” rates
    - “High risk” BP rates
    - HIPS rates ***

Some Recent Metrics



	Active HTN Patients	% C -HTN	% UC-HTN	% High Risk UC-HTN	% Marginal UC-HTN	2nd BP %	3 Wk Scheduled FU
4/2021	440	60	40	29	17	34	26
5/2021	411	66	34	32	15	42	25

BP Cuff Grants

- 50 Cuffs from United Healthcare Grant
- 12 Cuffs from CHCANYS
    - Educational to providers and nursing about importance of home blood pressure
    - Development of smart phrase to document distribution and patient education on home BP cuff use
    - Outreach from Pharm Phd of High risk patients

Pharmacy Outreach Program

- List of 100 patients with “high risk” HTN
  - Pharm PhD and Pharm students
    - Outreach
    - Education on BP targets / home BP monitoring /medications
    - Contact Providers with recommendations on medication titration
    - Offer patients Home BP monitor
    - Offer patients smoking cessation program if needed
    - Offer nutritionist consutation

Resident Run QI

- Reviewed “uncontrolled patient charts”
- Monitor for documented BP goal, BP cuff distribution and <3 week follow up
- In-basket providers on results
- Offer educational to providers on importance of these elements of BP program
- Follow up for change in behaviors / metric results

Developing internal and external referrals

- In collaboration with Care Management and internal existing programs

Closing Remarks

- Thank you to our NYS DOH Partners, Presenters, and Cohort 2 Teams!
- Attendees, please complete today's Webinar Evaluation
- Visit CHCANYS' eClinical Library for chronic disease management resources
- Join CHCANYS Remote Patient Monitoring learning series: Register Here

thank you
danke
謝謝
ngiyabonga
teşekkür ederim
gracias
merci
obrigado
bedankt
dziękuję
sukriya
kop khun krap
go raibh maith agat
terima kasih
grazie
arigatô
takk
dakujem
mochchakkeram
tapadh leat
спасибо
Баярлалаа
рахмат
dank je
misaotra
matondo
paldies
grazzi
mahalo
хвала
asante
manana
obrigada
tenki
murakoze
chokrane
mamnun
дякую
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nandri
kiitos
dankie
dhanyavad
faafetai lava
vinaka
спасибі
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