TARGET: TYPE 2 DIABETES$^\text{SM}$ HONOR ROLL

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DISCLOSURES

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TODAY’S AGENDA

1. Know Diabetes by Heart Overview
2. Science and Rationale of Know Diabetes by Heart and Target: Type 2 Diabetes
3. Target: Type 2 Diabetes Honor Roll
4. Upcoming Patient Management Tool changes to address type 2 diabetes
5. Q&A
AHA, ADA and Industry Leaders Unite

Know Diabetes by Heart™

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Leading organizations collaborate on new initiative to combat growing diabetes and cardiovascular disease threat.
Reducing CV deaths, heart attacks, strokes and heart failure in people living with type 2 diabetes.
Shared Vision & Initiative Architecture

**Our Purpose:** To reduce cardiovascular deaths, heart attacks and strokes in people living with type 2 diabetes.

- Bolster Science
- Clinical Quality Improvement
- Health Technology Solutions
- Professional Outreach
- Patient Support & Education
- Consumer Activation Campaign
- Policy Agenda
- Strategic Alliances

Community Engagement
Science Drives All Activities
Know Diabetes by Heart

Consumer Activation Campaign
• New initiative with a full scale communications campaign
• Increase awareness and understanding of the link between CVD and type 2 diabetes
• Encourage people with diabetes to have a conversation with their doctor
• Initial Call-To-Action:
  - knowdiabetesbyheart.org
  - Take the quiz to learn about your risk
  - Download the discussion guide

Patient Resources & Support
• Know Diabetes By Heart Website
• Living with Type 2 Program
• Ask the Expert Q &A Series
• Patient Education and information
• Support Network: New social networking diabetes portal, content & blogs, survey
• Self-management tools for lifestyle and medication management

Professional Resources & Education
• Webinars & non-CME/CE training for Healthcare Providers, including a podcast series
• Tools and Resources to support adherence to guidelines
• AHA Guidelines-on-the Go App
• ADA Standards of Care App
• Providers Tracking Survey

Quality & Systems Improvement
• Get With The Guidelines inpatient diabetes measure improvement and honor roll
• Ambulatory diabetes measure and recognition program
• Diabetes INISIDE

Center for Health Metrics and Evaluation: Baseline Market Research, Tracking Studies, Ongoing Program Evaluation
Science and Rationale
DIABETES AND CARDIOVASCULAR DISEASE

- Atherosclerotic complications responsible for:
  - 80% of mortality among patients with diabetes
  - 75% of cases due to coronary artery disease (CAD)
- Results in >75% of all hospitalizations for diabetic complications
- 50% of adult patients with type 2 diabetes have preexisting CAD
- 1/3 of patients presenting with myocardial infarction have undiagnosed diabetes mellitus

Lewis GF. Diabetic dyslipidemia: a case for aggressive intervention in the absence of clinical trial and cost effective data. Can J Cardiol. 1995;11(suppl C):24C-28C.
50-year-old with diabetes died, on average, 6 years earlier than those without diabetes (58% attributable to vascular, 9%, cancer, 30% other causes)

Reduction in life expectancy from long-term cigarette smoking ~10 years
Mortality and Cardiovascular Disease in Type 2 Diabetes

“...data from 1998 to 2014 showed marked reductions in mortality (all cause and cardiovascular disease) among adults with type 2 diabetes”.

“There remains a substantial excess overall rate of all outcomes analyzed among persons with type 2 diabetes as compared with the general population.”
Framingham Heart Study 30-Year Follow-up of CVD Events in Patients With Diabetes


*K<.001 for all values except *P<.05.

Wilson PWF, Kannel WB. Am J Cardiol 1974; 34:29-34
Heart Failure and Type 2 Diabetes Mellitus

22%, HFpEF  
21%, HFmrEF  
57%, HFrEF  
\( \sim 25\% \) of each type of HF

2017 U.S. Statistics:
- 1 in 11 Americans has diabetes.
- 1 of every two adults has diabetes or prediabetes
- Type 2 diabetes accounts for 90 to 95% of all diabetes cases in the U.S.\(^2\)
Prevalence of CV Risk Factor in US Adults
Heart Disease and Stroke Statistics 2018 At-a-Glance

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTN</td>
<td>45.60%</td>
</tr>
<tr>
<td>Prediabetes</td>
<td>33.90%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>12.20%</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>39.70%</td>
</tr>
</tbody>
</table>

Age-Adjusted Prevalence of Obesity and Diagnosed Diabetes Among US Adults

1995

Obesity (BMI≥30 kg/m^2)

- Missing Data
- 14.0%–17.9%
- 22.0%–25.9%

Diabetes

- Missing data
- 4.5%–5.9%
- 6.0%–7.4%
- 7.5%–8.9%
- ≥9.0%

Age-Adjusted Prevalence of Obesity and Diagnosed Diabetes Among US Adults

2005

Obesity (BMI≥30 kg/m²)

Diabetes

Age-Adjusted Prevalence of Obesity and Diagnosed Diabetes Among US Adults

2015

Obesity (BMI≥30 kg/m²)

Diabetes

Age-Adjusted Prevalence of Diabetes Awareness, Treatment and Control in US Adults (20+ years):

NHANES
Multiple Chronic Conditions (MCC)

> 1 in 4 Americans have 2+ concurrent chronic conditions including hypertension, diabetes, and heart disease
Prevalence of multiple chronic conditions among individuals increases with age.

As the number of chronic conditions rises, the risks of the following outcomes also increase:
• Mortality,
• Poor functional status; unnecessary hospitalizations
• Adverse drug events; duplicative tests; conflicting medical advice.

66% of total health care spending is directed toward care for the approximately 27% of Americans with MCC.

Individuals with MCC face financial challenges related to:
• Out-of-pocket costs of care, including:
  • Higher costs for prescription drugs and total out-of-pocket health care
Chronic Comorbidities – US Medicare Population, 2005

### Diabetes and Multiple Comorbidities, 2012

3841 MIDDLE AGED AND OLDER ADULTS; Mean age, 68 (9.5) years

<table>
<thead>
<tr>
<th>N</th>
<th>Diabetes</th>
<th>Arthritis</th>
<th>HTN</th>
<th>CVD</th>
<th>Cancer</th>
<th>Lung Disease</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>694 (18.1)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>481 (12.5)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>383 (10.0)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>173 ( 4.5)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>171 ( 4.5)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>155 ( 4.0)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>124 ( 3.2)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>103 ( 2.7)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>103 ( 2.7)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Cardiovascular (CV) Risk Factor Targets and CV Disease Event Risk in Diabetes

POOLED ANALYSIS

• Atherosclerosis Risk in Communities (ARIC)
• Multi-Ethnic Study of Atherosclerosis (MESA)
• Jackson Heart Study (JHS)

2018 ADULTS AGES 28-86 WITH DIABETES AND NO CVD INITIALLY

Cardiovascular (CV) Risk Factor Targets and CV Disease Event Risk in Diabetes

Percent at target level among the 2018 persons with diabetes for each of the measures:

<table>
<thead>
<tr>
<th>Blood pressure</th>
<th>LDL-C</th>
<th>HBA1c</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.8%</td>
<td>32.1%</td>
<td>41.9%</td>
</tr>
</tbody>
</table>

Percent at target levels for any one, two, or all three factors among the 2018 persons with diabetes:

<table>
<thead>
<tr>
<th>Any 1 of 3</th>
<th>Any 2 of 3</th>
<th>3 of 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.1%</td>
<td>26.5%</td>
<td>7.2%</td>
</tr>
</tbody>
</table>

### Cardiovascular (CV) Risk Factor Targets and CV Disease Event Risk in Diabetes

**Percent CVD risk reduction** for being at target level among the 2018 persons with diabetes for each of the measures:

<table>
<thead>
<tr>
<th>Blood pressure</th>
<th>LDL-C</th>
<th>HBA1c</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>33%</td>
<td>37%</td>
</tr>
</tbody>
</table>

**Percent lower adjusted risk of CVD events** with one, two, or three risk factors at target level:

<table>
<thead>
<tr>
<th>Any 1 of 3</th>
<th>Any 2 of 3</th>
<th>3 of 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>36%</td>
<td>52%</td>
<td>62%</td>
</tr>
</tbody>
</table>

Wong, et al. Diabetes Care 2016 May; 39(5) 668-676. Incident of CVD was defined as MI, CHD death, cardiac procedure (PCI, CABG, or coronary revascularization), stroke, or HF.
### Number and rate of hospitalizations among adults aged ≥18 years with Diabetes for selected causes, US, 2014

<table>
<thead>
<tr>
<th>Cause of Hospitalization</th>
<th>No. in Thousands</th>
<th>Crude Rate per 1,000 Persons with Diabetes (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes as any listed diagnosis</td>
<td>7,490</td>
<td>342.4 (325.8 – 59.1)</td>
</tr>
<tr>
<td>Major cardiovascular disease</td>
<td>1,614</td>
<td>60.3 (59.5 – 61.2)</td>
</tr>
<tr>
<td>• Ischemic heart disease</td>
<td>417</td>
<td>12.5 (11.4 – 12.9)</td>
</tr>
<tr>
<td>• Stroke</td>
<td>261</td>
<td>7.2 (6.8 – 7.6)</td>
</tr>
<tr>
<td>• Heart Failure</td>
<td>414</td>
<td>11.6 (11.0-12.3)</td>
</tr>
<tr>
<td>Lower-extremity amputation</td>
<td>112</td>
<td>4.5 (4.1 – 4.8)</td>
</tr>
<tr>
<td>Diabetic ketoacidosis</td>
<td>168</td>
<td>21.9 (21.6 – 28.1)</td>
</tr>
</tbody>
</table>

Number and percentage of outpatient chronic condition visits by physician type in the past year: 2008 National Ambulatory Medical Care Survey

Deaths Due to Diabetes Complication Continue at Alarming Rate

IN THE US, DIABETES\textsuperscript{a} CONTRIBUTES TO, ON AVERAGE\textsuperscript{1}:
- 1 stroke every 2 minutes
- 1 case of ischemic heart disease 80 seconds
- 1 case of kidney failure every 10 minutes
- 1 lower limb amputation every 5 minutes

WORLDWIDE, 1 PERSON DIES EVERY 8 SECS. FROM DIABETES\textsuperscript{a} AND ITS COMPLICATIONS\textsuperscript{2}

That’s more than 11,000 people a day

OPIOID OVERDOSE CRISIS IN THE UNITED STATES, IN 2016, 1 PERSON DIES EVERY 52 MINS. FROM OPIOID OVERDOSE\textsuperscript{3}

That’s more than 46 people a day

\textsuperscript{a}Type 1 or Type 2 diabetes.
## Causes of Death: USA (2016)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>635,260</td>
</tr>
<tr>
<td>Cancer</td>
<td>598,038</td>
</tr>
<tr>
<td>Accidents (unintentional injuries)</td>
<td>161,374</td>
</tr>
<tr>
<td>Chronic lower respiratory diseases</td>
<td>145,596</td>
</tr>
<tr>
<td><strong>Stroke (cerebrovascular diseases)</strong></td>
<td>142,142</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>116,103</td>
</tr>
<tr>
<td>Diabetes</td>
<td>80,058</td>
</tr>
<tr>
<td>Nephritis, nephrotic syndrome, and nephrosis</td>
<td>50,046</td>
</tr>
<tr>
<td>Influenza and pneumonia</td>
<td>51,537</td>
</tr>
<tr>
<td>Intentional self-harm (suicide)</td>
<td>44,965</td>
</tr>
</tbody>
</table>
Major CV Outcome Trials in Type 2 Diabetes

- **SAVOR-TIMI 53** (n = 16,492) 1222 MACE3
- **CAROLINA** N = 6041 MACE4
- **CARAMELINA** N = 8300 MACE4
- **TECOS** (n = 14,723) 1400 MACE4
- **EXAMINE** (n = 5380) 621 MACE3
- **CAMELS** (n = 14,000) MACE3
- **SUSTAIN-6‡** (n = 3260) MACE3
- **EXCSEL§** (n = 14000) MACE3
- **FREEDOM§** (n = 4000) ? MACE4
- **DECLARE-TIMI 58** (n = 27,000) MACE3
- **REWIND#** (n = 9622) MACE3
- **CREDENCE (n = 3627)** Cardiorenal
- **Ertugliflozin CVOT (n = 3900)** MACE3
- **EMPA-REG OUTCOME** N = 7034 MACE3
- **CANVAS-R** (n = 5700) Alb.uria
- **EMPA-REG 01** (n = 4339) MACE3

* lixisenatide (Sanofi, post-ACS).
† liraglutide (Novo Nordisk).
‡ semaglutide (Novo Nordisk).
§ exenatide (Amylin).
¶ once-weekly DPP4i (Merck).
# dulaglutide (Eli Lilly).

Legend:
- : DPP4i
- : SGLT2i
- : GLP1
NEW CONSENSUS REPORT

Management of Hyperglycemia in Type 2 Diabetes, 2018.
A Consensus Report by the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD)

Melanie J. Davies,1,2 David A. D’Alessio,3
Judith Fradkin,4 Walter N. Kernan,5
Chantal Mathieu,6 Geltrude Mingrone,7,8
Peter Rossing,9,10 Apostolos Tsapas,11
Deborah J. Wexler,12,13 and John B. Buse14
DECISION CYCLE FOR PATIENT-CENTRED GLYCAEMIC MANAGEMENT IN TYPE 2 DIABETES

GOALS OF CARE
- Prevent complications
- Optimise quality of life

REVIEW AND AGREE ON MANAGEMENT PLAN
- Review management plan
- Mutual agreement on changes
- Ensure agreed modification of therapy is implemented in a timely fashion to avoid clinical inertia
- Decision cycle undertaken regularly (at least once/twice a year)

ONGOING MONITORING AND SUPPORT INCLUDING:
- Emotional well-being
- Check tolerability of medication
- Monitor glycaemic status
- Biofeedback including SMBG, weight, step count, HbA1c, BP, lipids

IMPLEMENT MANAGEMENT PLAN
- Patients not meeting goals generally should be seen at least every 3 months as long as progress is being made; more frequent contact initially is often desirable for DSMES

ASSESS KEY PATIENT CHARACTERISTICS
- Current lifestyle
- Comorbidities i.e. ASCVD, CKD, HF
- Clinical characteristics i.e. age, HbA1c, weight
- Issues such as motivation and depression
- Cultural and socio-economic context

CONSIDER SPECIFIC FACTORS WHICH IMPACT CHOICE OF TREATMENT
- Individualised HbA1c target
- Impact on weight and hypoglycaemia
- Side effect profile of medication
- Complexity of regimen i.e. frequency, mode of administration
- Choose regimen to optimise adherence and persistence
- Access, cost and availability of medication

SHARED DECISION-MAKING TO CREATE A MANAGEMENT PLAN
- Involves an educated and informed patient (and their family/caregiver)
- Seeks patient preferences
- Effective consultation includes motivational interviewing, goal setting and shared decision-making
- Empowers the patient
- Ensures access to DSMES

AGREE ON MANAGEMENT PLAN
- Specify SMART goals:
  - Specific
  - Measurable
  - Achievable
  - Realistic
  - Time limited

ASCVD = Atherosclerotic Cardiovascular Disease
CKD = Chronic Kidney Disease
HF = Heart Failure
DSMES = Diabetes Self-Management Education and Support
SMBG = Self-Monitored Blood Glucose

Diabetes Care https://doi.org/10.2337/dci18-0033
Figure 1

DECISION CYCLE FOR PATIENT-CENTRED GLYCAEMIC MANAGEMENT IN TYPE 2 DIABETES

ASSESS KEY PATIENT CHARACTERISTICS

- Current lifestyle
- Comorbidities i.e. ASCVD\(^1\), CKD\(^2\), HF\(^3\)
- Clinical characteristics i.e. age, HbA\(_{1c}\), weight
- Issues such as motivation and depression
- Cultural and socio-economic context

REVIEW AND AGREE ON

IMPLEMENT MANAGEMENT PLAN

CREATE A MANAGEMENT PLAN

AGREE ON MANAGEMENT PLAN
Step 1: Assess cardiovascular disease

PRESENCE OF CARDIOVASCULAR DISEASE IS COMPELLING INDICATION

- ASCVD predominates
- HF or CKD predominates
GLUCOSE-LOWERING MEDICATION IN TYPE 2 DIABETES: OVERALL APPROACH

FIRST-LINE THERAPY IS METFORMIN AND COMPREHENSIVE LIFESTYLE (INCLUDING WEIGHT MANAGEMENT AND PHYSICAL ACTIVITY) IF HbA1c ABOVE TARGET PROCEED AS BELOW

ESTABLISHED ASCVD OR CKD

NO

WITHOUT ESTABLISHED ASCVD OR CKD

ASCVD PREDOMINATES

OR

HF OR CKD PREDOMINATES

PREFERABLY

SGLT2i with evidence of reducing HF and/or CKD progression in CVOTs if eGFR adequate

If SGLT2i not tolerated or contraindicated or if eGFR less than adequate, add GLP-1 RA with proven CVD benefit

COMPPELLING NEED TO MINIMISE HYPOGLYCAEMIA

- Avoid TZD in the setting of HF
- Consider adding another class with proven CVD benefit
- DPP-4i (not saxagliptin) in the setting of HF (if not on GLP-1 RA)
- Basal insulin
- SUs

If HbA1c above target

Continue with addition of other agents as outlined above

If HbA1c above target

If HbA1c above target

If HbA1c above target

If HbA1c above target

If HbA1c above target

If HbA1c above target

If HbA1c above target

If HbA1c above target

If HbA1c above target

CONSIDER THE ADDITION OF SUs OR BASAL INSULIN:
- GLP-1 RA with good efficacy for weight loss
- SUs
- TZDs

Cost is a Major Issue

- Insulin/therapy insulin with lowest acquisition cost
- Consider DPP-4i or SGLT2i with lowest acquisition cost

TODAY

TO AVOID CLINICAL MENTAL HEALTH ISSUES AND MODIFY TREATMENT ASSTAINED (3-6 MONTHS)

1. Proven CVD benefit means it has label indication of reducing CVD events for GLP-1 RAs regardless evidence of long-term use in ASCVD or CKD
2. Be aware that SGLT2i use is limited and individual agent use may be limited based on level of safety for initiation and continued use
3. Both long-term and weight loss have clear benefit in HF and reduction in CVD progression in CVDs
4. DPP-4i or 1000 mg/day have demonstrated CV safety
5. Low dose may be better tolerated though has well studied long-term effects
6. Choose later generation SU with lower risk of hypoglycaemia
7. Basal insulin (CSII) + rapid-acting insulin dose
8. Saxagliptin (long-term)
9. Non-sulphonylurea dual - biguanide + dipeptidyl peptidase-4 inhibitors
10. Basal insulin: long-acting (insulin glargine, insulin detemir) + rapid-acting insulin dose
11. Consider patient and regimen-specific cost of drugs, in some countries SU is relatively more expensive and DPP-4i relatively cheaper

Please note that the diagram contains a flowchart with various therapeutic options and decision points based on the stage of ASCVD or CKD and the level of HbA1c. The flowchart includes the use of metformin, SGLT2i, GLP-1 RAs, DPP-4i, TZDs, SUs, and basal insulin. It also highlights the importance of considering lifestyle modifications and the potential for future treatments based on clinical outcomes.
Consider the presence or absence of ASCVD, CKD and HF

Start with metformin if tolerated, then:

In patients with ASCVD a GLP-1 RA or SGLT2-i is recommended

In patients with ASCVD and HF SGLT2-i is recommended

In patients with CKD, with or without ASCVD consider an SGLT2-I agents with proven benefit are preferred

ASCVD, CKD and HF affects choice of additional glucose lowering medication
Key Points to Emphasize

• Update informed by evidence generated in the past 2 years

• Greater focus on lifestyle interventions, with increased emphasis on weight loss and obesity management, including metabolic surgery

• Greater focus on patient related issues and self-management which have a major impact on success of any pharmacological interventions

• Preferred choices of glucose-lowering agents driven by new evidence from CVOTs and consideration of areas of major clinical need (for example weight and risk of hypoglycaemia)

• GLP-1 RAs are preferred to insulin as first injectable
Beginning with the 2018 ADA Standards of Medical Care in Diabetes, the Standards document became a “living” document where notable updates are incorporated into the Standards.

Updates will be made in response to important events inclusive of, but not limited to:

• Approval of new treatments (medications or devices) with the potential to impact patient care;

• Publication of new findings that support a change to a recommendation and/or evidence level of a recommendation; or

• Publication of a consensus document endorsed by ADA that necessitates an update of the Standards to align content of the documents.

https://professional.diabetes.org/content-page/living-standards
TARGET: TYPE 2 DIABETES
HONOR ROLL
TARGET: TYPE 2 DIABETES℠ HONOR ROLL

RENEWED FOCUS ON PATIENTS WITH DIABETES:

• Initial phase of Target: Type 2 Diabetes Honor Roll will focus on Heart Failure and Stroke modules with potential to expand into new modules and measures in future years.

• First honor roll awardees will be announced with the 2020 award cycle.

• Year 1 utilizes existing achievement and reporting measures with a new onset or documented history of diabetes “Filter” to narrow measures to the diabetic population, ensuring targeted care.

• Target: Type 2 Diabetes Honor Roll will be based on data elements currently existing in the PMT.

• Improvements coming to PMT for enhanced management of type 2 diabetes. New measures and elements are slated to be added to PMT in late summer 2019.
HONOR ROLL STRUCTURE AND ELIGIBILITY

STRUCTURE

• Focuses on existing Target: Heart Failure and Target: Stroke achievement measures plus other applicable measures applied specifically to those patients with a new onset or documented history of diabetes.

• Achievement based on composite of the measure set for each module.

ELIGIBILITY

• Get With The Guidelines- Heart Failure or Stroke silver achievement award or higher in the applicable module.

• Demonstrate at least 90% compliance for 12 consecutive months (Calendar Year) for a composite of the required measures

• A minimum of 10 patients with a diagnosis of diabetes as part of your hospital’s total discharges.
<table>
<thead>
<tr>
<th>Measure Title</th>
<th>Measure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACEI/ARBs or ARNI at Discharge for Patients with Diabetes</strong>*</td>
<td>Percent of heart failure patients with diabetes and left ventricular systolic dysfunction (LVSD) and without angiotensin converting enzyme inhibitor (ACEI) and angiotensin receptor blocker (ARB) or angiotensin-receptor/neprilysin inhibitor (ARNI) contraindications who are prescribed an ACEI, ARB, or ARNI at hospital discharge.</td>
</tr>
<tr>
<td><strong>Evidence-Based Specific Beta Blockers for Patients with Diabetes</strong>*</td>
<td>Percent of heart failure patients with diabetes who were prescribed an evidence-based specific beta blocker (Bisoprolol, Carvedilol, Metoprolol Succinate CR/XL) at discharge.</td>
</tr>
<tr>
<td><strong>Measure LV Function (Patients with Diabetes)</strong></td>
<td>Percent of patients with heart failure and diabetes who have documentation in the hospital record that left ventricular function (LVF) was assessed before arrival, during hospitalization, or is planned for after discharge.</td>
</tr>
<tr>
<td><strong>Post Discharge Appointment for Heart Failure Patients with Diabetes</strong>*</td>
<td>Percent of eligible patients with heart failure and diabetes for whom a follow-up appointment was scheduled and documented including location, date, and time for follow up visits, or location and date for home health visit.</td>
</tr>
<tr>
<td><strong>Diabetes Treatment</strong></td>
<td>Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes treatment in the form of glycemic control (diet or anti-hyperglycemic medication) or follow up appointment for diabetes management scheduled at discharge.</td>
</tr>
<tr>
<td><strong>Lipid Lowering Medications at Discharge for Patients with Diabetes</strong></td>
<td>Percent of heart failure patients with diabetes who were prescribed lipid lowering medications at discharge.</td>
</tr>
<tr>
<td><strong>Smoking Cessation for Patients with Diabetes</strong></td>
<td>Percent of heart failure patients with diabetes and a history of smoking cigarettes, who are given smoking cessation advice or counseling during hospital stay.</td>
</tr>
</tbody>
</table>

* Denotes existing Target: Heart Failure achievement measure now specific to diabetes population
<table>
<thead>
<tr>
<th>Measure Title</th>
<th>Measure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Alteplase Arrive by 2 Hour, Treat by 3 Hour* (Patients with Diabetes)</td>
<td>Percent of acute ischemic stroke patients with diabetes who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom IV alteplase was initiated at this hospital within 180 minutes (3 hours) of time last known well.</td>
</tr>
<tr>
<td>Early Antithrombotics* for Patients with Diabetes</td>
<td>Percent of patients with ischemic stroke or TIA and diabetes who receive antithrombotic therapy by the end of hospital day two.</td>
</tr>
<tr>
<td>VTE Prophylaxis* for Patients with Diabetes</td>
<td>Percent of patients with diabetes and an ischemic stroke, or a hemorrhagic stroke, or stroke not otherwise specified who receive VTE prophylaxis the day of or the day after hospital admission.</td>
</tr>
<tr>
<td>Antithrombotics* for Patients with Diabetes</td>
<td>Percent of patients with an ischemic stroke or TIA and diabetes prescribed antithrombotic therapy at discharge.</td>
</tr>
<tr>
<td>Anticoagulant for AFib/Aflutter* for Patients with Diabetes</td>
<td>Percent of patients with an ischemic stroke or TIA with atrial fibrillation/flutter and diabetes discharged on anticoagulation therapy.</td>
</tr>
<tr>
<td>Smoking Cessation* for Patients with Diabetes</td>
<td>Percent of patients with ischemic or hemorrhagic stroke or TIA and diabetes and a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay.</td>
</tr>
<tr>
<td>Statin Prescribed at Discharge* for Patients with Diabetes</td>
<td>Percent of ischemic stroke or TIA patients with diabetes who are discharged on statin medication.</td>
</tr>
<tr>
<td>Diabetes Treatment</td>
<td>Percent of diabetic patients or newly-diagnosed diabetics receiving diabetes treatment in the form of glycemic control (diet or medication) or follow up appointment for diabetes management scheduled at discharge.</td>
</tr>
</tbody>
</table>

* Denotes existing Target: Stroke achievement measure now specific to diabetes population
HOW TO PARTICIPATE

TARGET: TYPE 2 DIABETES HONOR ROLL

• Participate and submit data for Get with the Guidelines – Heart Failure and/or Stroke

• No new registration or award application required. Target: Type 2 Diabetes Honor Roll will be incorporated into the AHA’s automated awards processes.

• Ensure diabetes diagnosis is completed for all of your diabetes patients. Re-abstraction may be necessary for some cases if diabetes diagnosis fields were not previously completed.

EDUCATION AND RESOURCES

• Stay tuned for upcoming webinars on PMT releases, educational opportunities, best practices and more.

• Visit [www.heart.org/targettype2diabetes](http://www.heart.org/targettype2diabetes) and [www.knowdiabetesbyheart.org](http://www.knowdiabetesbyheart.org) for professional and patient resources

• Download the Know Diabetes by Heart Podcast Series

• Consult with your local AHA Quality Representative for additional opportunities and support
TARGET: Type 2 Diabetes™

CALL TO ACTION

1. Ensure your hospital has specified ways to identify and track patients with type 2 diabetes.
2. Begin to refine protocols and bring attention to addressing patients with type 2 diabetes within your care teams.
3. Ensure you are abstracting fully for patients with diabetes as not all data elements are currently required. Amending past abstraction may be necessary for some organizations who have not been abstracting Diabetes related fields.
PMT UPDATES
PMT UPDATE OVERVIEW

- Elements will be added and or updated in both standard and limited forms.
- Element will be enabled with a previous history of diabetes or new diagnosis of diabetes selected in the form.
- Diabetes measure set will be included in the configurable measure reports section for HF and Stroke.
# MEDICAL HISTORY

## Stroke and Heart Failure

<table>
<thead>
<tr>
<th>Previously known medical hx of:</th>
<th>Diabetes Mellitus</th>
<th>Previous Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>- None</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Atrial Fib/Flutter</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- CAD/Prior MI</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Carotid Stenosis</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Current Pregnancy (up to 6 weeks post-partum)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- DVT/PE</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Depression</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Drugs/Alcohol</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Dyslipidemia</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Family History of Stroke</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Familial hypercholesterolemia</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- **Diabetes Mellitus**
  - Type I
  - Type II
  - Duration:
    - < 5 years
    - 5 - < 10 years
    - 10 - < 20 years
    - >= 20 years
    - Unknown

- **Previous Stroke**
  - Ischemic stroke
  - ICH
  - SAH
  - Not Specified
  - Previous TIA
  - Prosthetic Heart Valve
  - PVD
  - Renal insufficiency – chronic
  - Sickle Cell
  - Sleep Apnea
  - Smoker

Duration and type are enabled when history of diabetes is selected.
**Target: Type 2 Diabetes™**

**MEDICATIONS PRIOR TO ADMISSION**

**CHANGE:** “Diabetic medication” will be replaced with “Anti-hyperglycemic medications”

**ADDED:** Multi-select specific medications

---

<table>
<thead>
<tr>
<th>Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antihypertensive</strong></td>
</tr>
<tr>
<td><strong>Cholesterol-Reducer</strong></td>
</tr>
<tr>
<td><strong>Anti-hyperglycemic medications</strong></td>
</tr>
<tr>
<td><strong>Diabetic medication</strong></td>
</tr>
<tr>
<td>If yes, select medications (select all that apply)</td>
</tr>
<tr>
<td>DPP-4 Inhibitors</td>
</tr>
<tr>
<td>GLP-1 receptor agonist</td>
</tr>
<tr>
<td>Insulin</td>
</tr>
<tr>
<td>Metformin</td>
</tr>
<tr>
<td>SGLT2 Inhibitor</td>
</tr>
<tr>
<td>Sulfonylurea</td>
</tr>
<tr>
<td>Thiazolidinedione</td>
</tr>
<tr>
<td>Other oral agents</td>
</tr>
<tr>
<td>Other injectable/subcutaneous agents</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heart Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antidepressant medication</strong></td>
</tr>
</tbody>
</table>

---

**Medications Used Prior to Admission**

Select all that apply:

- Other
- Antiplatlet agent (excluding aspirin)
- Aspirin
- Beta Blocker
- Ca channel blocker
- Diabetic Medications (Any)
- Anti-hyperglycemic Medications
  - DPP-4 Inhibitors
  - GLP-1 receptor agonist
  - Insulin
  - Metformin
  - SGLT2 Inhibitor
  - Sulfonylurea
  - Thiazolidinedione
  - Other oral agents
  - Other injectable/subcutaneous agent
HEIGHT, WEIGHT, AND BMI

**Stroke**

- Height: 64 in
- Weight: 170 lb
- Waist Circumference: ND
- BMI: 29.24

**Heart Failure**

- Height: 64
- Weight: 170
- Waist Circumference: ND
- BMI: 29.24

Existing elements:

- Required when previous history of diabetes or new diagnosis of diabetes
- BMI is auto-calculated when height and weight are entered.
NEW DIAGNOSIS OF DIABETES

- Stroke
- Heart Failure

Existing elements:
- Required when previous history of diabetes or new diagnosis of diabetes
### DIABETIC TREATMENT

**Stroke and Heart Failure**

<table>
<thead>
<tr>
<th>Diabetic Tx (select all that apply)</th>
<th>None prescribed/ND</th>
<th>Anti-hyperglycemic medications</th>
<th>Other subcutaneous/injectable agents</th>
<th>Insulin</th>
<th>Oral agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescribed?</td>
<td>Yes</td>
<td>No</td>
<td>NC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-hyperglycemic medications:</td>
<td>Class:</td>
<td>Medication:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class:</td>
<td>Medication:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class:</td>
<td>Medication:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class:</td>
<td>Medication:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there a documented reason for not prescribing a cardioprotective medication?</td>
<td>Yes</td>
<td>No/ND</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Change:** “Diabetic tx (select all that apply)” will be replaced with “Anti-hyperglycemic medications”

**Added:** Expanded options on class and medication name

- Required when previous history of diabetes or new diagnosis of diabetes

---

**American Heart Association**

**Target: Type 2 Diabetes**

---

**Know Diabetes by Heart**

---
FOLLOW-UP APPOINTMENT

Stroke and Heart Failure

New elements: Required when previous history of diabetes or new diagnosis of diabetes

<table>
<thead>
<tr>
<th>Follow-up appointment scheduled for diabetes management?</th>
<th>○ Yes</th>
<th>○ No/ND</th>
<th>○ NC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of scheduled diabetes follow-up appointment:</td>
<td><em><strong><strong>/</strong></strong></em>/_______</td>
<td>○ Unknown</td>
<td></td>
</tr>
</tbody>
</table>
**INTERVENTIONS**

**Stroke**

<table>
<thead>
<tr>
<th>Other Lifestyle Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing weight and/or increasing activity recommendations:</td>
</tr>
<tr>
<td>TLC Diet or Equivalent:</td>
</tr>
<tr>
<td>Anti-hypertensive Diet:</td>
</tr>
<tr>
<td>Was Diabetes Teaching Provided?</td>
</tr>
</tbody>
</table>

**Heart Failure**

<table>
<thead>
<tr>
<th>TLC (Therapeutic Lifestyle Change) Diet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

**Existing elements:**
Required when previous history of diabetes or new diagnosis of diabetes.
NEW CONFIGURABLE MEASURE REPORTS

Stroke

Heart Failure

New “Diabetes” section created in Additional Patient Population Measures section

New “Diabetes” section created in Standard Measures section
**MEASURE REPORTS**

**Stroke**

**ACHIEVEMENT MEASURES**
- IV Alteplase Arrive by 2 Hour, Treat by 3 Hour (Patients with Diabetes)
- Early Antithrombotics for Patients with Diabetes
- VTE Prophylaxis for Patients with Diabetes
- Antithrombotics for Patients with Diabetes
- Anticoagulant for AFib/AFlutter (Patients with Diabetes)
- Smoking Cessation for Patients with Diabetes
- Statin Prescribed at Discharge for Patients with Diabetes
- Diabetes Treatment
- Overall Diabetes Cardiovascular Initiative Composite Score

**QUALITY MEASURE**
- Therapeutic Lifestyle Recommendation for Patients with Diabetes

**REPORTING MEASURE**
- Cardioprotective Anti-Hyperglycemic Medication

**Heart Failure**

**ACHIEVEMENT MEASURES**
- ACEI/ARBs or ARNI at Discharge for Patients with Diabetes
- Evidence-Based Specific Beta Blockers for Patients with Diabetes
- Measure LV Function (Patients with Diabetes)
- Post Discharge Appointment for Heart Failure Patients with Diabetes
- Diabetes Treatment
- Lipid Lowering Medications at Discharge for Patients with Diabetes
- Smoking Cessation for Patients with Diabetes
- Overall Diabetes Cardiovascular Initiative Composite Score

**REPORTING MEASURE**
- Cardioprotective Anti-Hyperglycemic Medication
FINAL THOUGHTS -

• Target: Type 2 Diabetes Honor Roll utilizes existing data elements and measures narrowed to diabetes patients for a phase 1 kickoff.

• PMT updates are coming soon and will accompanied by a special release webinar.

• Additional phases of Target: Type 2 Diabetes will be rolled out in coming years as enhanced PMT functionality is adopted.

• As always, leverage your local AHA Quality Representative for additional opportunities and support
QUESTIONS?