DIABETES AND CVD MANAGEMENT: TRANSLATING SCIENCE INTO PRACTICE
"TRANSLATING GUIDELINES INTO PRACTICE"

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HIGHLIGHTS FROM 2019 ACC/AHA GUIDELINE ON THE PRIMARY PREVENTION OF CVD

• A team-based care approach is an effective strategy for the prevention of cardiovascular disease.
• Health care providers should evaluate social determinants of health on individuals to inform treatment decisions.
• Adults who are at least age 40 and are being evaluated for CVD prevention should undergo 10-year ASCVD risk estimation and have a clinician-patient risk discussion before starting on pharmacologic therapy.
• Aspirin should infrequently be used in the routine primary prevention of ASCVD.
• All adults should be assessed at every visit for tobacco use.
• All adults should consume a healthy diet.
• Adults should engage in at least 150 min. per week of accumulated moderate intensity or 75 min. per week of vigorous intensity physical activity.
• For adults who have been identified as overweight or obese, counseling and caloric restriction are recommended for achieving and maintaining weight loss.
• Nonpharmacological interventions are recommended for all adults with elevated blood pressure or hypertension.
• Statin therapy is first-line treatment for primary ASCVD prevention in:
  o Patients with elevated LDL-C levels (>190 mg/dl),
  o Those with diabetes, who are aged 40-75 years
  o Those at sufficient ASCVD risk following a clinician-patient risk discussion
• For adults with T2DM, lifestyle changes such as improving dietary habits and achieving exercise recommendations are crucial. If medication is indicated, metformin is first-line therapy followed by consideration of an SGLT-2 inhibitor or a GLP-1 receptor agonist.
ASCVD RISK CALCULATOR (10-Year & Lifetime Risk)

- Age, sex, race
- Measure blood pressure (systolic blood pressure)
- Measure lipid levels (total cholesterol, LDL cholesterol, HDL cholesterol)
- Blood pressure lowering medication use
- Determine diabetes status
- Assess tobacco use (smoking status)

KnowDiabetesByHeart.org/riskcal
COMPREHENSIVE CARDIOMETABOLIC HEALTH MANAGEMENT MODEL FOR PERSONS WITH T2DM

LIFE’S SIMPLE 7 ASSESSMENT

1. Measure height, weight, waist circumference
2. Measure blood pressure
3. Measure A1C
4. Measure lipid levels (total cholesterol, LDL, HDL)
5. Assess tobacco use
6. Assess physical activity level
7. Assess dietary pattern
PUTTING THE PATIENT WITH TYPE 2 DIABETES AT THE CENTRE OF CARE

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

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

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

GOALS OF CARE
- Prevent complications
- Optimise quality of life

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

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

SHARE 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

STEP 1: ASSESS CARDIOVASCULAR DISEASE

PRESENCE OF CARDIOVASCULAR DISEASE IS COMPELLING INDICATION

ASCVD predominates

HF or CKD predominates

GLP-1 receptor agonist with proven cardiovascular benefit

- Liraglutide > semaglutide > exenatide LAR

SGLT2 inhibitor with proven cardiovascular benefit

- Empagliflozin > canagliflozin
CHOOSING GLUCOSE-LOWERING MEDICATION IN THOSE WITH ESTABLISHED ASCVD OR CKD

ASCVD PREDOMINATES

GLP-1 RA with proven CVD benefit¹

EITHER/OR

SGLT2i with proven CVD benefit¹, if eGFR adequate²

If HbA₁c above target

If further intensification is required or patient is now unable to tolerate GLP-1 RA and/or SGLT2i, choose agents demonstrating CV safety:

• Consider adding the other class (GLP-1 RA or SGLT2i) with proven CVD benefit
• DPP-4i if not on GLP-1 RA
• Basal insulin³
• TZD⁴
• SU⁵

HF OR CKD PREDOMINATES

PREFERABLY

SGLT2i with evidence of reducing HF and/or CKD progression in CVOTs if eGFR adequate³

OR

If SGLT2i not tolerated or contraindicated or if eGFR less than adequate² add GLP-1 RA with proven CVD benefit¹

If HbA₁c above target

• Avoid TZD in the setting of HF
• Consider adding the other class with proven CVD benefit¹
• DPP-4i (not saxagliptin) in the setting of HF (if not on GLP-1 RA)
• Basal insulin³
• SU⁵

¹. GLP-1 RA therapy also provides CV benefit
². SGLT2i reduces CV events and death from all causes
³. SGLT2i reduces CV events and death from all causes
⁴. DPP-4i reduces CV events and death from all causes
⁵. SU reduces CV events and death from all causes
⁶. TZD reduces CV events and death from all causes
⁷. There is no evidence for the use of SU in patients with diabetes and CKD

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
