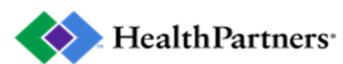
Meeting the Challenges of Diabetes

Updates with the Pharmacists August 17, 2021



MN Health Plans Collaborative

















Diabetes Care & Medication Therapy Management

August 17, 2021

Kaylin Maddy, PharmD

Grant Shaft, PharmD



Introductions



Kaylin Maddy, PharmD Clinical Pharmacist – MTM at UCare



Grant Shaft, PharmD Clinical Pharmacist – MTM at UCare



Objectives

- Review notable changes to diabetes medications and treatment guidelines
- Describe how Medication Therapy Management (MTM) plays a role in diabetes care



Agenda

- American Diabetes Association (ADA) Updates
- Diabetes Drug Updates
- Diabetes + OTC's
- Continuous Glucose Meters (CGMs)
- Statin Use in Diabetes
- Medication Therapy Management (MTM) Overview



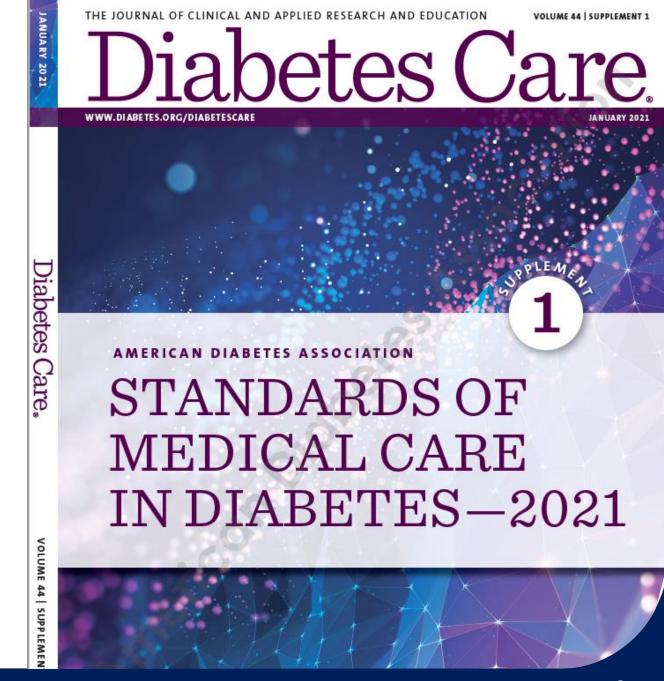
American Diabetes Association (ADA) Updates

Kaylin Maddy, PharmD

ADA Guidelines

ADA Standards of Medical Care in Diabetes – 2021

- Updated in December 2020
- Focus on medication updates





2021 ADA Guidelines - Goals

A1c Frequency

- At Goal: Every 6 months
- Not At Goal OR recent dose changes: Every 3 months

Expected SMBG Readings for A1c < 7%		
Fasting	80-130 mg/dL	
Postprandial	<180 mg/dL	

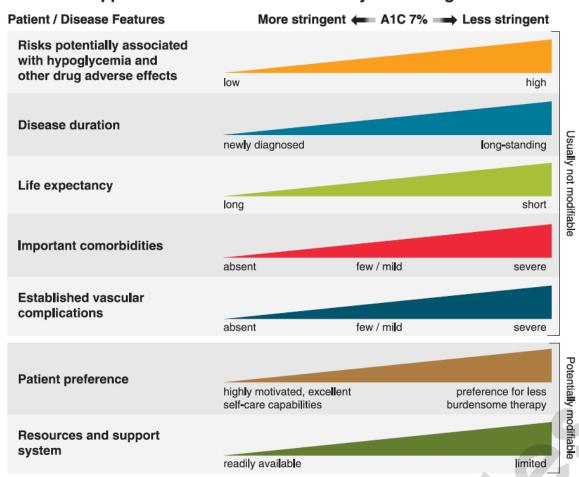
SMBG = self-monitoring of blood glucose



2021 ADA Guidelines - Individualized Goals

Approach to Individualization of Glycemic Targets

Figure 6.2





2021 ADA Guidelines - Estimating A1c

Table 6.1—Estimated average glucos (eAG)				
A1C (%)	mg/dL*	mmol/L		
5	97 (76–120)	5.4 (4.2–6.7)		
6	126 (100–152)	7.0 (5.5–8.5)		
7	154 (123–185)	8.6 (6.8–10.3)		
8	183 (147–217)	10.2 (8.1–12.1)		
9	212 (170–249)	11.8 (9.4–13.9)		
10	240 (193–282)	13.4 (10.7–15.7)		
11	269 (217–314)	14.9 (12.0–17.5)		
12	298 (240–347)	16.5 (13.3–19.3)		



2021 ADA Guidelines - Hypoglycemia

Glucagon Recommended

	Glycemic criteria/description
Level 1	Glucose <70 mg/dL (3.9 mmol/L) and ≥54 mg/dL (3.0 mmol/L)
Level 2	Glucose <54 mg/dL (3.0 mmol/L)
Level 3	A severe event characterized by altered mental and/or physical status requiring assistance for treatment of hypoglycemia



Figure 9.1

NO



INDICATORS OF HIGH-RISK OR ESTABLISHED ASCVD, CKD, OR HF

CONSIDER INDEPENDENTLY OF BASELINE A1C, INDIVIDUALIZED A1C TARGET, OR METFORMIN USE*

+HF

Particularly HFrEF

SGLT2i with proven

benefit in this

population5,6,7

(LVEF <45%)

+ASCVD/Indicators of High Risk Established ASCVD

 Indicators of high ASCVD risk (age ≥55 years with coronary, carotid, or lower-extremity artery stenosis >50%, or LVH)

GLP-1
RA with proven
CVD benefit¹

ETHERV
OR
SGLT2i
with proven
CVD benefit¹

If A1C above target

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

- For patients on a GLP-1 RA, consider adding SGLT2i with proven CVD benefit and vice versa¹
- TZD²
- DPP-4i if not on GLP-1 RA
- Basal insulin³
-

SU⁴ 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
- Choose later generation SU to lower risk of hypoglycemia; glimepiride has shown similar CV safety to DPP-4i
- Be aware that SGLT2 labelling varies by region and individual agent with regard to indicated level of eGFR for initiation and continued use
 - 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 fallure outcome data.

+CKD DKD and Albuminuria⁶ **PREFERABLY** SGLT2i with primary evidence of reducing CKD progression OR SGLT2i with evidence of reducing CKD progression in CVOTs5,8,8 OR GLP-1 RA with proven CVD benefit1 if SGLT2i not tolerated or contraindicated For patients with T2D and CKDs (e.g., eGFR

<60 mL/mln/1.73 m²) and

thus at increased risk of

cardiovascular events

ETHER/

SGLT2i

with

proven

CVD

benefit1,7

GLP-1

RA with

proven

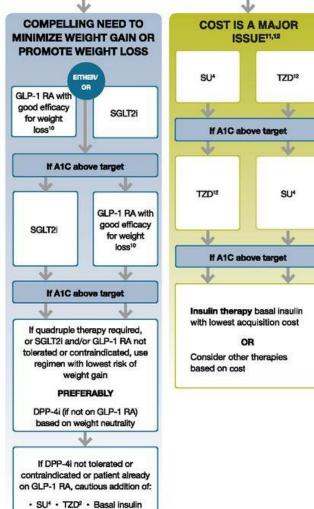
CVD

benefit1

COMPELLING NEED TO MINIMIZE **HYPOGLYCEMIA** DPP-4i GLP-1 RA SGLT2i TZD HA1C H A1C If A1C HA1C above above above above target target target target GLP-1 RA SGLT2i SGLT2i SGLT2i OR OR OR DPP-4i DPP-4i OR OR TZD TZD TZD GLP-1 RA If A1C above target Continue with addition of other agents as outlined above If A1C above target Consider the addition of SU4 OR basal insulin: · Choose later generation SU with lower risk of hypoglycemia Consider basal insulin with lower risk of hypoglycemia[®]

 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
- Semaglutide > liraglutide > dulaglutide > exenatide > lixisenatide
- 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)
- Consider country- and region-specific cost of drugs. In some countries TZDs are relatively more expensive and DPP-4i are relatively cheaper.



IF A1C ABOVE INDIVIDUALIZED TARGET PROCEED AS BELOW

- † 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.



High Risk Groups

ASCVD/Indicators of High Risk

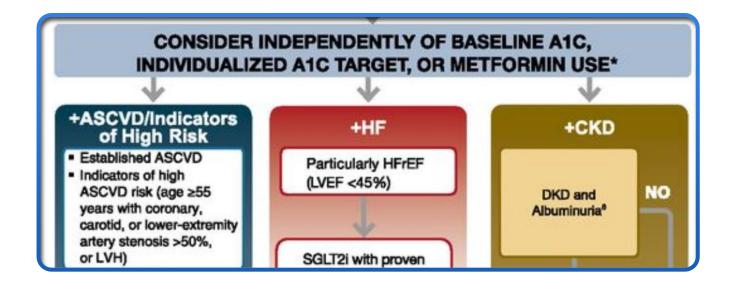
 Established ASCVD OR risk factors (age >55 years with coronary, carotid, or lower extremity artery stenosis >50%, or LVH)

• **HF**

- HFrEF: LVEF <45%

CKD

- DKD + Albuminuria
- CKD



ASCVD = atherosclerotic cardiovascular disease

HF = heart failure

HFrEF = heart failure with reduced ejection fraction

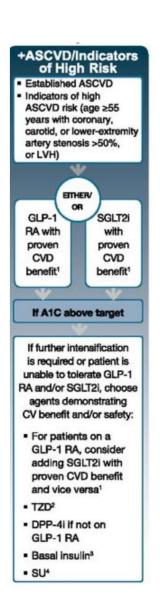
LVEF = left ventricular ejection fraction

CKD = chronic kidney disease

DKD = diabetic kidney disease

What To Recommend? ASCVD

- GLP1 OR SGLT2 WITH PROVEN CVD BENEFIT
 - If on one & still above target: add the other



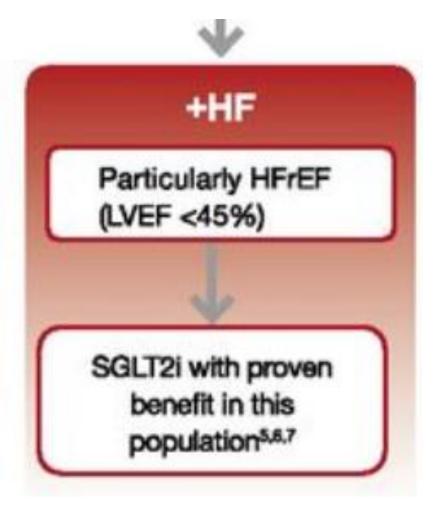




What To Recommend? HF

SGLT2

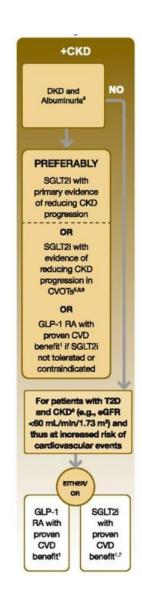
- Primary HF Outcome Data
 - Dapagliflozin (Farxiga)
 - Empagliflozin (Jardiance)
- Reduction in HF
 - Dapagliflozin (Farxiga)
 - Empagliflozin (Jardiance)
 - Canagliflozin (Invokana)



What To Recommend?

- DKD + Albuminuria
 - SGLT2
 - Primary Renal Outcome Data
 - Empagliflozin (Jardiance)
 - Canagliflozin (Invokana)
 - Reduction in CKD Progression
 - Dapagliflozin (Farxiga)
 - Empagliflozin (Jardiance)
 - Canagliflozin (Invokana)
- CKD
 - GLP1 OR SGLT2





DPP-4i

H A1C

above

target

SGLT2i

OR

TZD

NO

HYPOGLYCEMIA

SGLT2i

If A1C

above

target

GLP-1 RA

OR

DPP-4i

OR

TZD

If A1C above target

Continue with addition of other agents as outlined above

If A1C above target

Consider the addition of SU⁴ C R basal insulin:

Consider basal insulin with lower risk of hypoglycemia[®]

8. Refer to Section 11: Microvascular Complications and Foot Care

Choose later generation SU with

reducing heart failure in this population

lower risk of hypoglycemia

TZD

If A1C

above

target

SGLT2i

OR

DPP-4i

OR

GLP-1 RA

GLP-1 RA

If A1C

above

target

SGLT2i

TZD





INDICATORS OF HIGH-RISK OR ESTABLISHED ASCVD, CKD, OR HF

CONSIDER INDEPENDENTLY OF BASELINE A1C. INDIVIDUALIZED A1C TARGET, OR METFORMIN USE*

+ASCVD/Indicators of High Risk Established ASCVD Indicators of high ASCVD risk (age ≥55 years with coronary. carotid, or lower-extremity artery stenosis >50%,

or LVH)

ETTHER GLP-1 SGLT2i RA with proven proven CVD CVD benefit1 benefit1

If A1C above target

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

- · For patients on a GLP-1 RA, consider adding SGLT2i with proven CVD benefit and vice versa1
- TZD²
- DPP-4i if not on GLP-1 RA
- Basal insulin³

· SU⁴

- 1. Proven CVD benefit means it has label indication of reducing CVD events
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+CKD +HF

Particularly HFrEF (LVEF <45%)

SGLT2i with proven benefit in this population5.6.7

PREFERABLY

DKD and

Albuminuria⁸

SGLT2i with primary evidence of reducing CKD progression

OR

SGLT2i with evidence of reducing CKD progression in CVOTs5,8,8

OR

GLP-1 RA with proven CVD benefit1 if SGLT2i not tolerated or contraindicated

For patients with T2D and CKDs (e.g., eGFR <60 mL/mln/1.73 m²) and thus at increased risk of cardiovascular events

7. Proven benefit means it has label indication of ETHER/ GLP-1 SGLT2i RA with with proven

CVD

benefit1

proven CVD benefit1.7

9. Degludec / glargine U-300 < glargine U-100 / determir < NPH insulin 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.

COMPELLING NEED TO MINIMIZE

IF A1C ABOVE INDIVIDUALIZED TARGET PROCEED AS BELOW

COMPELLING NEED TO MINIMIZE WEIGHT GAIN OR PROMOTE WEIGHT LOSS

EITHER/

GLP-1 RA with good efficacy for weight

If A1C above target

SGLT2i

GLP-1 RA with good efficacy SGLT2 for weight loss10

If A1C above target

If quadruple therapy required, or SGLT2i and/or GLP-1 RA not tolerated or contraindicated, use regimen with lowest risk of weight gain

PREFERABLY

DPP-4i (if not on GLP-1 RA) based on weight neutrality

If DPP-4i not tolerated or contraindicated or patient already on GLP-1 RA, cautious addition of: TZD² • Basal insulin

ISSUE11,12 SU4 TZD12 If A1C above target SU⁴ TZD12 If A1C above target Insulin therapy basal insulin

with lowest acquisition cost

Consider other therapies

based on cost

COST IS A MAJOR

- † 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.



Medication Adherence

Open Ended Questions

- How many tablets do you take per day?
- How do things go with remembering to take your medicines each day?
- In a given week or two, how many doses of your medicines do you miss?

Combination Pills

- Metformin + DPP4
- Metformin + SGLT2
- DPP4 + SGLT2
- Metformin + DPP4 + SGLT2



Diabetes Drug Updates

Kaylin Maddy, PharmD



Drug Updates: Indications - SGLT2

Brand	Generic	CV Prophylaxis	Renal	CHF
Jardiance	empagliflozin	X		
Invokana	canagliflozin	X	X	
Farxiga	dapagliflozin	X	X	X
Steglatro	ertugliflozin			

X = FDA Approval



Drug Updates: Indications - GLP1

Brand	Generic	CV Prophylaxis	Renal	CHF	Obesity
Byetta /Bydureon	exenatide				
Adlyxin	lixisenatide				
Victoza	liraglutide	X			
Trulicity	dulaglutide	X			
Ozempic	semaglutide	X			X
Rybelsus	semaglutide				

X = FDA Approval



Drug Updates: Indications - DPP4

- NO ADDITIONAL BENEFITS
 - Januvia (sitagliptin)
 - Tradjenta (linagliptin
 - Onglyza (saxagliptin)
 - Nesina (alogliptin)







- FDA approval September 2020
 - -Previous: 0.75 mg; 1.5 mg
 - -New: **3 mg; 4.5 mg**
- AWARD-11
 - -Higher dose = lower A1c + more weight loss





AWARD-11 Results: Adverse Effects

Adverse Reaction	Trulicity 1.5 mg	Trulicity 3 mg	Trulicity 4.5 mg
Nausea	13.4	15.6	16.4
Diarrhea	7	11.4	10.7
Vomiting	5.6	8.3	9.3
Dyspepsia	2.8	5	2.6

Differences not statistically significant



Conclusions

- Higher dose Trulicity is a great option if close to goal
- Similar tolerance to lower doses or Ozempic

TAKEAWAY: If tolerating well & additional A1c reduction is needed, MAXIMIZE dose

- Reduce burden of adding another medication



Drug Updates - Semglee

- FIRST insulin biosimilar
- Interchangeable with Lantus





FDA NEWS RELEASE

FDA Approves First Interchangeable Biosimilar Insulin Product for Treatment of Diabetes

Availability of Insulin Products Will Help Increase Access and Potentially Lower the Cost of Insulin for People with Diabetes



Diabetes & OTC's

Grant Shaft, PharmD



OTC - Cough, Cold, & Allergies

- Recommend "sugar free" versions (liquids/syrups, cough drops, lozenges, etc)
- Avoid decongestants with hypertension
 - Examples to avoid: Sudafed, pseudoephedrine, phenylephrine, [allergy pill]-"D"
 - Reason to avoid: increases BP
- Antihistamines are safe
 - Examples to use: Allegra, Claritin, Zyrtec
- Considerations with prescription steroids
 - Examples include dexamethasone, prednisone, methylprednisolone
 - Try to use for a short period because they increase blood sugars



OTC - Pain

- Pain
 - Avoid long-term NSAIDs if possible
 - Examples to avoid: Advil (ibuprofen), Aleve (naproxen), aspirin (higher doses)
 - Reasons to avoid:
 - Hard on kidneys and stomach
 - Increase blood pressure and high-doses long-term increases risk of cardiac events
 - Drug-interactions
 - Take aspirin 81 mg at least 30 min prior to NSAID
 - Taking with aspirin increases risk of bleeding
 - Taking with an ACE/ARB can be damaging to kidneys
 - Safest option: Tylenol (acetaminophen)

Potentially Beneficial Supplements



Supplement	Dose	Notes
Chromium	200-1000 mcg/day	Hypoglycemia risk, binds to Synthroid (levothyroxine), consider lower dose if using with NSAIDs/aspirin
Garlic	600-1500 mg/day	Hypoglycemia risk, hypotension risk, CYP3A4 drug interactions, bleeding risk
Milk Thistle	420-600 mg daily (divided doses)	Hypoglycemia risk, may reduce statin efficacy, bleeding risk
Cassia cinnamon	120 mg – 6 grams daily	Hypoglycemia risk, no benefit in type 1 diabetes, avoid in liver disease
Flaxseed	Extracts with 600 mg (360 mg secoisolariciresinol diglucoside) three times daily	Hypoglycemia risk, may decrease absorption of Tylenol, Lasix, and metoprolol, don't take with antibiotics, may increase bleeding risk, hypotension risk
Fenugreek	Extracts of 0.6-1.2 grams daily	Hypoglycemia risk, hypotension risk, may increase bleeding risk and INR
Zinc	30 mg daily	Don't take with antibiotics (may decrease efficacy), avoid with cisplatin



Potentially Beneficial Supplements

- In general, all the supplements listed on the previous slide have shown some benefit in diabetes (A1c reduction or lowered blood sugars)
 - Usually take several weeks to months to work
 - Should not replace standards of care
- Alpha lipoic acid (diabetic neuropathy)
 - Dose: 600-1,800 mg daily (in 1-3 doses per day)
 - Note: may increase risk of bleeding, hypoglycemia risk (minor), may affect thyroid hormone drugs



Drug Interactions

Grant Shaft, PharmD



Hypoglycemia Risk

Low Risk	Higher Risk
Biguanides (metformin)	Sulfonylureas
GLP-1 agonists	Insulin
SGLT-2 inhibitors	
DPP-4 Inhibitors	
Thiazolidinediones	

- Multiple agents = higher risk of hypoglycemia, especially insulins with sulfonylureas
- Glimepiride & glyburide can cause prolonged hypoglycemia in older adults (preferred sulfonylurea is glipizide)



Heart Failure

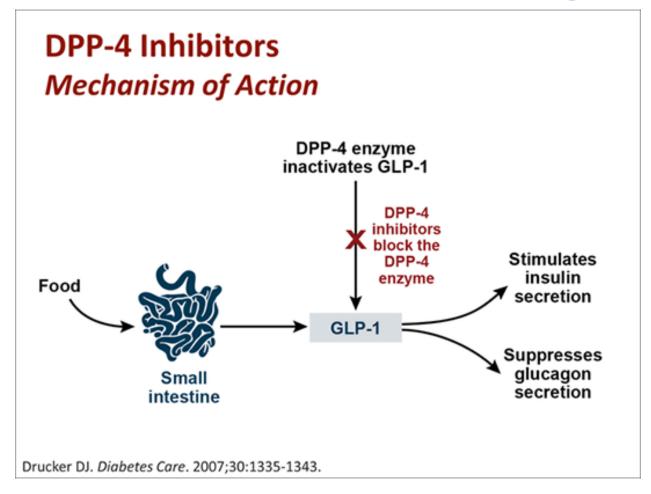


https://gifer.com/en/gifs/beating-heart https://cardiology2.com/fda-approves-new-treatment-for-a-type-of-heart-failure/

- Avoid rosiglitazone and pioglitazone
 - May worsen edema → worsen heart failure
- Dapagliflozin (Farxiga) recently was approved to reduce the risk of cardiovascular death and hospitalization for heart failure in adults with heart failure (NYHA class II-IV) with reduced ejection fraction



DPP-4 Inhibitors and GLP-1 Agonists





Continuous Glucose Meters (CGM's)

Grant Shaft, PharmD



New Medicare Rules - CGM

- After July 18, 2021, CMS made the following changes:
 - No longer require beneficiaries to be testing sugars four times daily
 - "Multiple daily injections" → changed to "multiple daily administrations" to account for inhaled insulin
- Association of Diabetes Care & Education Specialists (ADCES) calling for CGMs to be covered for:
 - Type 1 diabetes at any age without any other requirements besides bi-annual clinician visits
 - Type 2 diabetes, on insulin, with documented hypoglycemia
 - Chronic Kidney Disease (CKD)
- ADCES is also advocating for elimination of requiring insulin use multiple times per day to qualify for CGM



Quick CGM Therapy Review

- Freestyle libre 2
 - Indicated for people aged ≥4 years
 - Change sensor every 14 days
 - Utilize reader to view blood sugars reader can connect to phone app
 - Taking vitamin C >500 mg/day may cause people to miss hypoglycemic episodes
- Dexcom G6 and G6 Pro
 - Indicated for people aged ≥2 years
 - Change sensor every 10 days
 - Utilize smartphone (or reader with Dexcom G6 version)
 - Compatibility with t:slim X2™ and Omnipod DASH®
 - Taking acetaminophen up to 1,000 mg every 6 hours will NOT affect readings



https://provider.myfreestyle.com/fre estyle-libre-2-product.html



https://provider.dexcom.com/products/de xcom-g6-personal-cgm-system



Statin Use in Diabetes

Kaylin Maddy, PharmD



Statin Use in Diabetes

ADA Guidelines

- Age 40-75 without ASCVD, use MODERATE intensity statin therapy in addition to lifestyle therapy
- Consider HIGH intensity statin if high risk, multiple cardiovascular disease risk factors, or age 50-70

ACC/AHA Guidelines for Primary Prevention

- Age 40-75: MODERATE intensity statin
 - Use risk assessment to consider HIGH intensity statin



Statin Use in Diabetes - SUMMARY

ALL individuals with diabetes + age 40-75 should be on a statin!

There are many different statins. Some are much less likely to cause side effects than others.



Helpful Tools

Kaylin Maddy, PharmD

Helpful Tool - Shared Decision Making



MAYO CLINIC Diabetes Medication Choice Decision Aid										
		WOULD YOU SS NEXT?	A1C ↓	DAILY BLOOD CHANGE BENEFITS				BACK SHOW ALL COSTS		
•		Metformin	1 - 2 %	©	•	•	7	(Generic available) \$0.10 per day \$9 / 3 months		
•		Insulin	00	® [□]	8	•	•	(No generic available) prices varies by dose Per 100 units Lantus Vial: \$26 / Pen: \$26 NPH Vial: \$2.50 / Pen: \$28 Short acting analog insulin Vial: \$25 / Pen: \$30		
•		Pioglitazone	1 %	®	•	0	•	(Generic available) \$0.50 per day \$42 / 3 months		
•		Liraglutide Exenatide	0.5 - 1%	® □	•	•	•	(No generic available) \$20.00 per day \$1,800 / 3 months		
•		Sulfonylureas	1 - 2 %	€	8	•	•	(Generic available) \$0.10 per day \$12 / 3 months		
•		Gliptins	0.5 - 1%	®	•	•	•	(No generic available) \$12.00 per day \$1,100 / 3 months		
•		SGLT2 Inhibitors	0.5 - 1%	©	•	•	•	(No generic available) \$12.00 per day \$1,100 / 3 months		



Helpful Tool - Shared Decision Making







Helpful Tool – ADA Drug Considerations



Table 9.1—Drug-specific and	atient factors to consider when selecting antihyperglycemic treatment in adults with type 2 diabetes

	Efficacy	Hypoglycemia	Weight	CV effects		Cost	Oral/SQ	Renal effects		Additional considerations
			change	ASCVD	HF	COA SIGNA		Progression of DKD	Dosing/use considerations*	
Metformin	High	No	Neutral (potential for modest loss)	Potential benefit	Neutral	Low	Oral	Neutral	Contraindicated with eGFR <30 mL/min/1.73 m ²	 Gastrointestinal side effects common (diarrhea, nausea) Potential for B12 deficiency
SGLT-2 inhibitors	Intermediate	No	Loss	Benefit: empagliflozin†, canagliflozin	Benefit: empagliflozin†, canagliflozin, dapagliflozin‡	High	Oral	Benefit: canagliflozin§, empagliflozin, dapagliflozin	Renal dose adjustment required (canagliflozin, dapagliflozin, empagliflozin, ertugliflozin)	Should be discontinued before any scheduled surgery to avoid potentia risk for DIA parts, rare in TZD) Isk for DIA parts, rare in TZD) Risk of bone fractures (canagliflozin) Genitourinary infections Risk of volume depletion, hypotension LDL cholesterol Risk of Fournier's gangrene
GLP-1 RAs	High	No	Loss	Neutral; exenatide once weekly, lixisenatide Benefit: dulaglutidet, liraglutidet, semaglutidet	Neutral	High	SQ; oral (semaglutide)	Benefit on renal end points in CVOTs, driven by albuminuria outcomes: Il raglutide, semaglutide, dulaglutide	Exenatide, lixisenatide: avoid for eGFR 30 mL/min/1/3 m² No dose adjustment for dulaglutide, liraglutide, semaglutide Caution when initiating or increasing dose due to potential risk of nausea, vomiting, diarrhea, or dehydration, Monitor renal function in patients reporting severe adverse GI reactions when initiating or increasing dose of therapy.	FDA Black Box: Risk of thyroid C-cell tumors in rodents; human relevance not determined (firaglutide, albiglutide, albiglutide, described release, semaglutide) Gl side effects common (nausea, vomiting, diarrhea) Injection site reactions Pancreatitis has been reported in clintrials but causality has not been established. Discontinue if pancreatit suspected.
DPP-4 inhibitors	Intermediate	No	Neutral	Neutral	Potential risk: saxagliptin	High	Oral	Neutral	Renal dose adjustment required (sitagliptin, saxagliptin, alogliptin); can be used in renal impairment No dose adjustment required for linagliptin	Pancreatitis has been reported in ditrials but causality has not been established. Discontinue if pancreati suspected. Joint pain
Thiazolidinediones	High	No	Gain	Potential benefit: pioglitazone	Increased risk	Low	Oral	Neutral	No dose adjustment required Generally not recommended in renal impairment due to potential for fluid retention	FDA Black Box: Congestive heart failure (pioglitzaone, rosiglitzaone fluid retention (edema; heart failure) Benefit in NASH Risk of bone fractures Bladder cancer (pioglitzaone) LDL cholesterol (rosiglitzaone)
Sulfonylureas (2nd generation)	High	Yes	Gain	Neutral	Neutral	Low	Oral	Neutral	Glyburide: not recommended Glipizide and glimepiride: initiate conservatively to avoid hypoglycemia Glyburide: not recommended.	FDA Special Warning on increased risk of cardiovascular mortality based on studies of an older sulfonylurea (tolbutamide)
nsulin Human insulin	Highest	Yes	Gain	Neutral	Neutra	Low (SQ)	SQ; inha l ed	Neutral	Lower insulin doses required with a decrease in eGFR; titrate	 Injection site reactions Higher risk of hypoglycemia with human insulin (NPH or premixed
							SQ	1	per clinical response	formulations) vs. analogs



MTM & How Pharmacists Can Help

Grant Shaft, PharmD

Background

- More than 3.5 billion prescriptions are written every year in the US and medications are involved in 80% of medical treatment plans¹
- Over 50% of prescriptions are taken incorrectly or not at all²
- Drug-related morbidity and mortality costs exceed \$200 billion every year¹
- Medicare beneficiaries with multiple chronic illnesses:
 - See an average of 13 different physicians
 - Have 50 different prescriptions filled per year
 - Account for 76 percent of hospital admissions
 - Are 100 times more likely to have a preventable hospitalization¹
- Multiple Star and HEDIS measures are influenced by medication use

What is MTM?

- APhA: "Distinct service or group of services that optimize therapeutic outcomes for individual patients."
 - Goal is to identify, prevent, and resolve medication-related problems to improve patient outcomes
- Patient-Centered Medical Home:
 - Comprehensive Medication Management (CMM): The standard of care that ensures that medications are individually assessed to determine that each medication is appropriate, effective, safe, and able to be taken by the patient as intended
- CMS: Ensures optimum therapeutic outcomes for targeted beneficiaries through improved medication use and reduces the risk of adverse effects
- Generally provided by pharmacists, but may be provided by other health care professionals
- Comprehensive visits (CMM, CMR) are different than "Medication Reconciliation"

Examples of Medication Related Problems

Indication

Untreated diseases or conditions

Medication is no longer indicated

Therapeutic duplication

Effectiveness

Dosing

Adherence

Lab value assessment

Safety

Dosing

Contraindications/Adverse Effects

Drug Interactions

Convenience

Medication access

Cost of medication

Drug dosed multiple times per day

MTM in Different Settings



Community Pharmacy	Clinic	Health Plan		
Patients may receive call or recommendation from pharmacist; often less receptive	Patients may be referred or may be more receptive	Patients are targeted by health plan; health plan may refer patients to health systems or complete internally		
No lab values (depending on electronic medical record)	Lab values	May or may not have lab values depending on what is submitted		
Patient reported PMH (past medical history)	Chart with PMH (past medical history)	PMH utilizing diagnosis claims; accuracy can be difficult to determine		
Recommendations usually made to prescribers over the phone or via fax (rare to hear outcome)	Potentially a closer relationship with prescriber or in-person recommendations (more likely to hear outcome)	Recommendations usually made to prescribers over the phone or via fax (rare to hear outcome)		
Usually paid at flat rate	Potential to be paid based on problems identified	No reimbursement; completed to reduce cost and improve STAR metrics		
Possibly more past interactions with patient or better rapport	May be less past interactions with a given patient or less rapport	Variable; depends on previous abrasion by health plan often		
Better access to cost of medications	Less access to cost of medications	Best access to cost of medications with up-to-date formularies		



Summary

- Pharmacists look at medications from a unique lens in the health care system
- MTM is not intended to compete with providers, but instead supplement the regular care that a patient is receiving
- Studies have proven that MTM helps save the health care system money and improve adherence
- Recommendations are only intended to improve patient care



Quotes from Members

- "Thank you so much! I'm so grateful! I don't always understand my medications, so this is very helpful."
- "I have a lot of faith in my health care team, so I was hesitant to do a review, but I found this service beneficial and there are no downsides at all."
- "This visit was exactly what I needed. I've been researching and not finding the answers I needed. You were able to explain why it was important to take my medications in a way that was easy to understand. Thank you for listening and taking the time to explain."
- "You were very helpful. This helped reassured me that I'm on the right track with most things and in the areas that need improvement, I feel like I have a clear direction forward with what to work on or talk to my doctor about."

Questions and Open Discussion

Thank You!

Evaluation -

https://survey.alchemer.com/s3/6474995/Meeting-the-Challenges-of-Diabetes-Updates-with-the-Pharmacists

Certificate of Participation –upon completion of Evaluation

Recording - https://stratishealth.org/health-plan-performance-improvement-projects-pips/pip-improving-comprehensive-diabetes-care/