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Ohio Cardiovascular and Diabetes Health Collaborative

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Ohio Cardiovascular and Diabetes Health Collaborative

School of Medicine, Case Western Reserve University

In partnership with:

The Ohio State University Wexner Medical Center

College of Medicine and Life Sciences, The University of Toledo

Ohio University Heritage College of Osteopathic Medicine

Northeast Ohio Medical University

University of Cincinnati Family and Community Medicine

Boonshoft School of Medicine, Wright State University

Ohio Colleges of Medicine Government Resource Center

medtapp

Ohio Department of Medicaid

Management of Type 2 Diabetes in the Adolescent and Young Adult: Preventing Diabetes-Related Comorbidities and Bridging the Transition to Adulthood

December 1, 2021

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Welcome

Michael W. Konstan, MD

PI, Cardi-OH

Shari Bolen, MD, MPH

Co-PI, Cardi-OH

Case Western Reserve University School of Medicine

About Cardi-OH

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Ohio Cardiovascular and Diabetes Health Collaborative

Founded in 2017, the mission of Cardi-OH is to improve cardiovascular and diabetes health outcomes and eliminate disparities in Ohio's Medicaid population.

WHO WE ARE: An initiative of health care professionals across Ohio's seven medical schools.

WHAT WE DO: Identify, produce and disseminate evidence-based cardiovascular and diabetes best practices to primary care teams.

HOW WE DO IT: Utilize monthly newsletters and an online repository of resources at Cardi-OH.org, podcasts available on Cardi-OH Radio, and the Project ECHO® virtual training model.

Learn more at Cardi-OH.org

Special Thanks

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CASE WESTERN RESERVE UNIVERSITY

University of CINCINNATI
FAMILY AND COMMUNITY MEDICINE

Northeast Ohio
MEDICAL UNIVERSITY

OHIO UNIVERSITY
Heritage College of Osteopathic Medicine

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

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THE UNIVERSITY OF TOLEDO

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Registration Reminder

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- Registration is required for CME credit:

URL in Chat window **OR** Use QR Code

Zoom Webinar Logistics

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- **If joining as a group, please use the Chat feature to record names and emails of all attendees**

- **Submit Questions for Discussion**
  - Use the Q&A feature to submit questions at any point
  - Questions will be answered during the 'Question and Answer' portion of the program
  - Please specify which speaker should answer

- **Post Webinar Evaluation Survey**
  - The survey link will be shared at the end of today's webinar and also sent by email
  - Please complete by COB Wednesday, December 8

Continuing Medical Education (CME)

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- 1.00 AMA PRA Category 1 Credit is available for this webinar
- You must complete the CME Evaluation and claim credits by Wednesday, December 15
- If you do not receive an email to complete your CME evaluation or need other assistance, contact Cathy Sullivan, csullivan1@metrohealth.org

Disclosure Statement:

- None of the planners or speakers of the CME activity have any financial relationships with commercial interests to disclose.

The MetroHealth System is accredited by the Ohio State Medical Association to provide continuing medical education for physicians. The MetroHealth System designates this educational activity for a maximum of 1.00 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity. Other Healthcare Professionals: check with your professional association as these credits might be applicable for licensure renewal.

Agenda

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Topics	Presenter(s)	Timing
Welcome and Overview	Michael W. Konstan, MD Shari Bolen, MD, MPH	5 mins.
Ohio Department of Medicaid: Introductory Remarks	Donald P. Wharton, MD	5 mins.
Management of Type 2 Diabetes in the Adolescent and Young Adult: Preventing Diabetes-Related Comorbidities and Bridging the Transition to Adulthood	Rose Gubitosi-Klug, MD, PhD Erika Lundgrin, MD, MS	35 mins.
Facilitated Question and Answer	Amy Zack, MD All	13 mins.
Next Steps and Wrap-Up	Shari Bolen, MD, MPH	2 mins.

Speakers

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Donald P. Wharton, MD

Ohio Department of Medicaid

Rose Gubitosi-Klug, MD, PhD

Erika Lundgrin, MD, MS

Amy Zack, MD

Case Western Reserve University School of Medicine

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Ohio Department of Medicaid: Introductory Remarks

Donald P. Wharton, MD

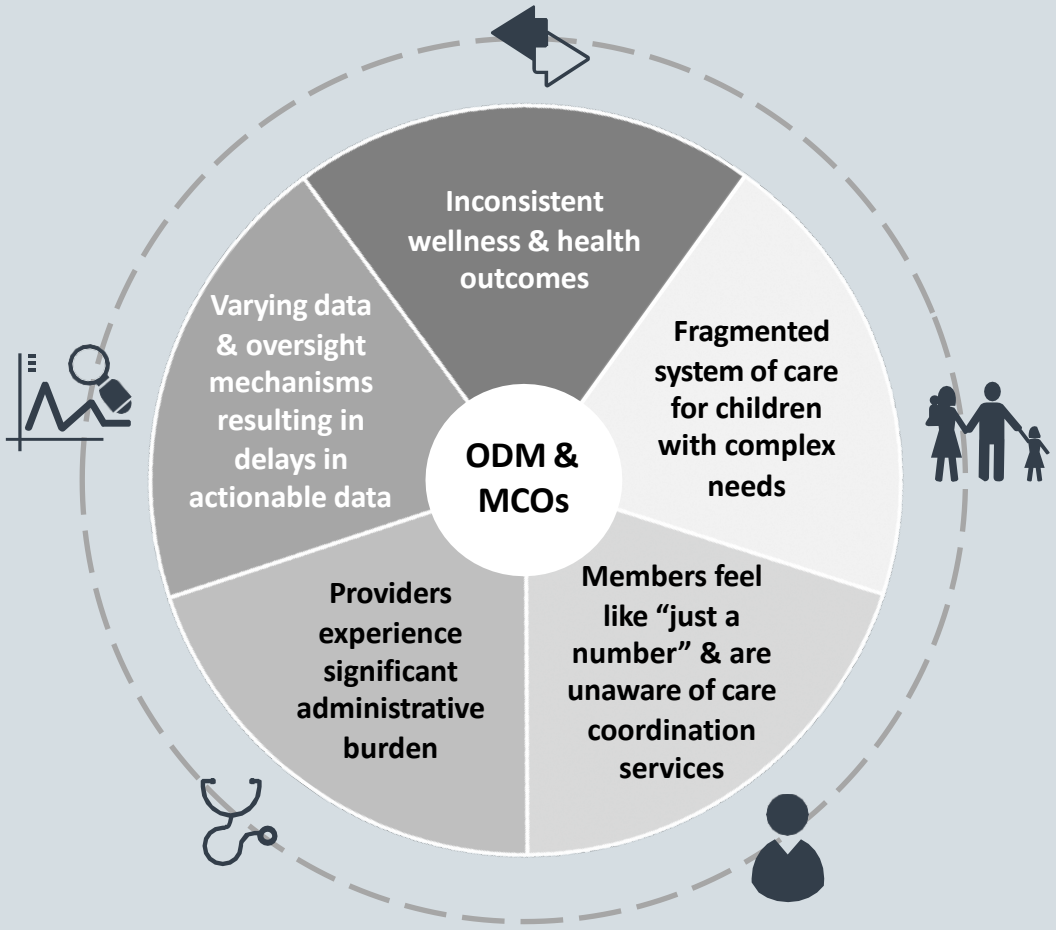
Assistant Medical Director

Office of Health Innovation and Quality

Ohio's Medicaid Managed Care Program

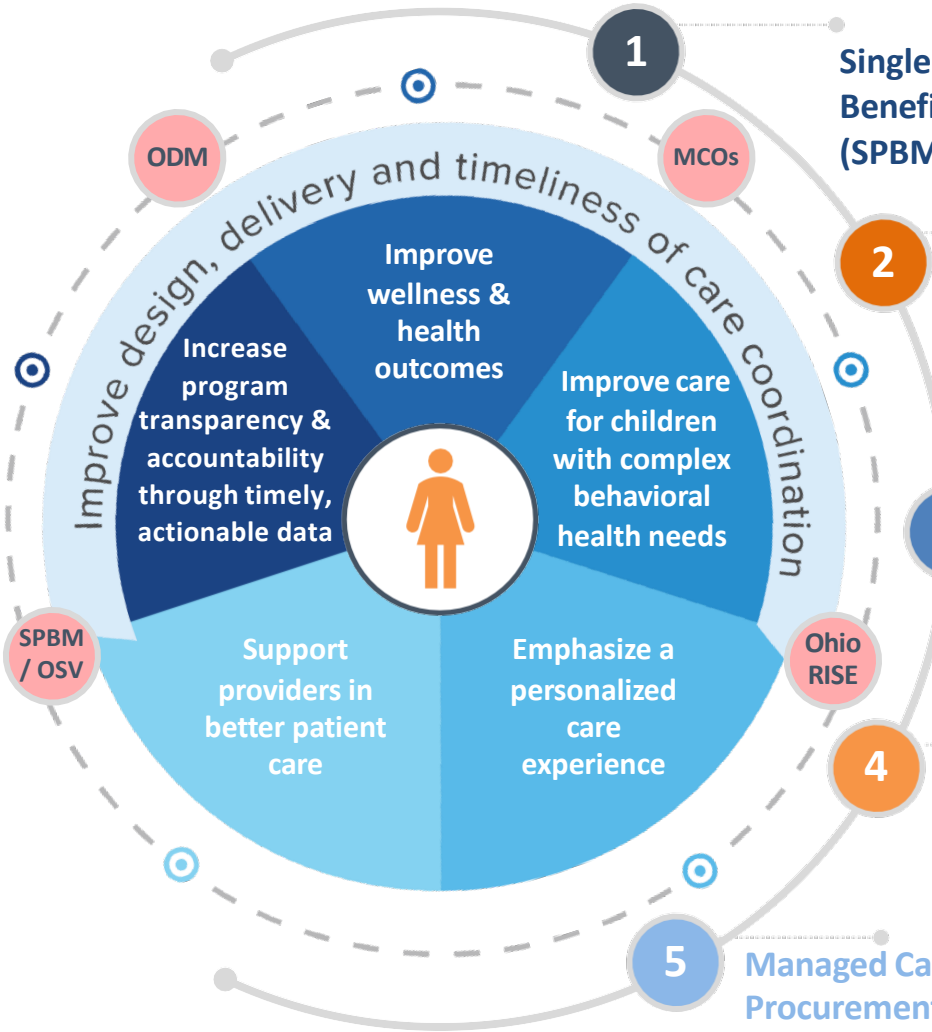
Today's Ohio Medicaid Managed Care Program

Members are impacted by business decisions that don't always take their needs or circumstances into consideration. Providers are not always treated as partners in patient care. We want to do better for the people we serve.



"Next Generation" of Managed Care in Ohio

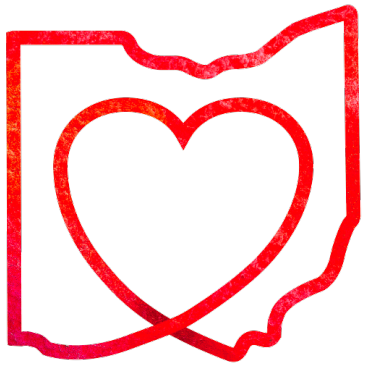
The focus is on the individual with strong coordination and partnership among MCOs, vendors & ODM to support specialization in addressing critical needs.



1. Single Pharmacy Benefit Manager (SPBM) Procurement
2. OhioRISE Procurement — *Resilience through Integrated Systems and Excellence*
3. Fiscal Intermediary
4. Centralized Credentialing
5. Managed Care Procurement

Next Generation of Managed Care

- Increase program transparency and accountability
- Ensure compliance with federal and state requirements
- Strong coordination and partnership
- **Implementation of the next generation of managed care is July 1, 2022.**



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Management of Type 2 Diabetes in the Adolescent and Young Adult: Preventing Diabetes-Related Comorbidities and Bridging the Transition to Adulthood

Rose Gubitosi-Klug, MD, PhD
Professor and Chief, Pediatric Endocrinology
Case Western Reserve University
UH Rainbow Babies & Children's Hospital

Erika Lundgrin, MD, MS
Assistant Professor, Adult and Pediatric Endocrinology
Case Western Reserve University
University Hospitals and UH Rainbow Babies & Children's Hospital

Objectives

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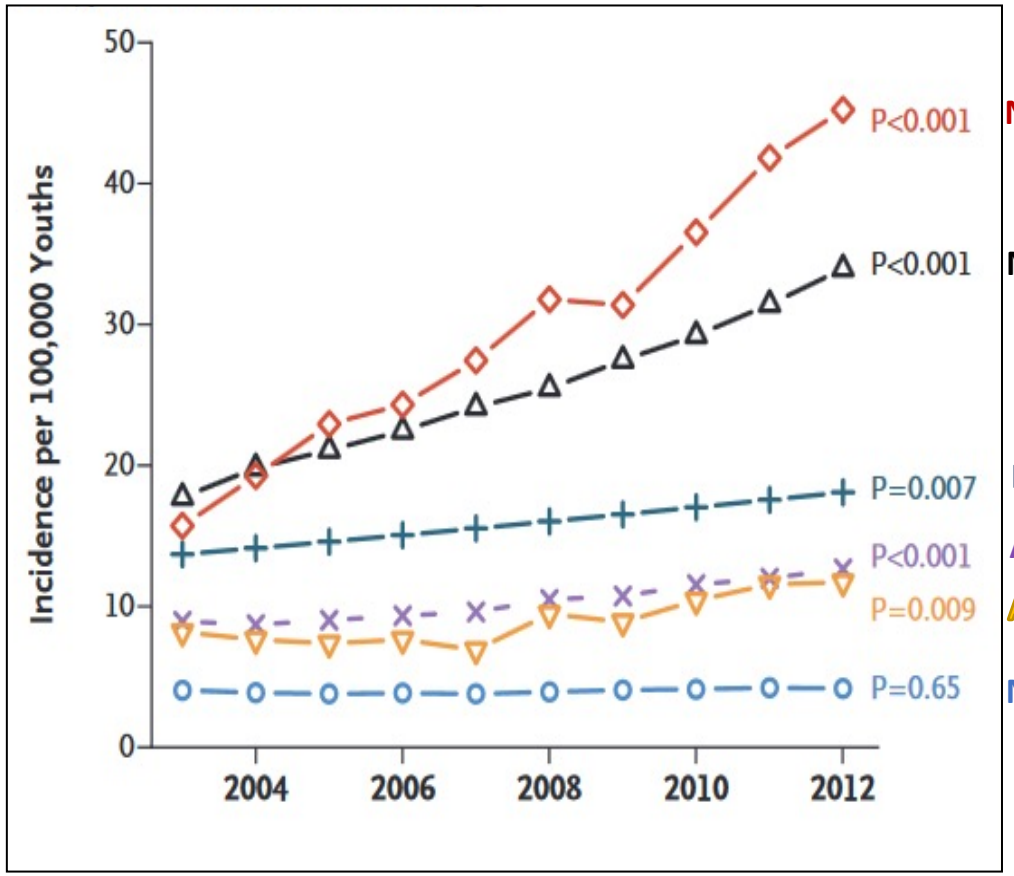
- Review evidence-based guidelines to improve patient care for adolescents and young adults with type 2 diabetes (T2D)
- Describe family-based assessments and approaches to enhance diabetes management in adolescents and young adults
- Identify transition of care models and technology to prevent treatment lapses and urgent medical care

Emergence of Type 2 Diabetes in Adolescents



- Rise in new cases of type 2 diabetes in youth parallels national trends in BMI> 95th% prevalence
- Few medications with pediatric approval
- Ethnic minorities more heavily affected
- Insidious onset, decreased awareness by families/providers

Mayer-Davis et al for the SEARCH for Diabetes in Youth Study, *N Engl J Med*. 2017

Evidence for Treatment Guidelines

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- TODAY Study, *Treatment Options for type 2 Diabetes in Adolescents and Youth*

- RISE Study, *Restoring Insulin Secretion*

TODAY Study: Intervention

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Hypotheses:

- Early initiation of combination therapy in youth-onset type 2 diabetes will be more effective in promoting sustained target HbA1C than standard therapy (monotherapy with metformin).

- Aggressive treatment of adolescents with onset of diabetes during the period of pubertal insulin resistance will lead to improvements in post-pubertal outcomes.

TODAY Study: Intervention

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3 treatment arms:

- Metformin-alone arm
- Metformin + rosiglitazone arm
  - rosiglitazone increased from 2 mg to 4 mg bid
- Metformin + intensive lifestyle arm
  - dietary component
  - physical activity component
  - behavioral component
  - educational materials specifically tailored to age, race/ethnicity, and language

TODAY Study: Intervention

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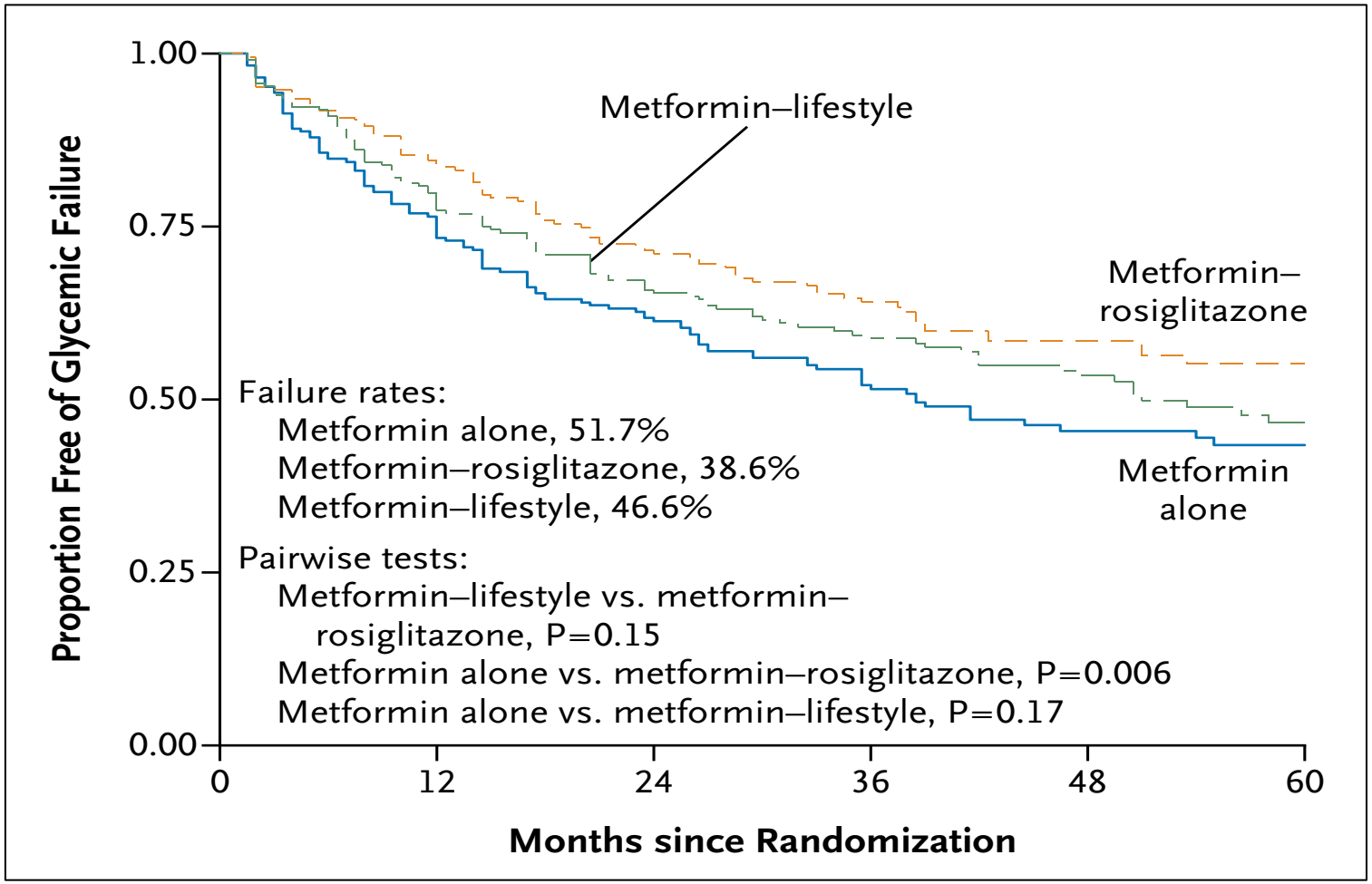
- 699 adolescents (10-17 years old)
- BMI> 85th%
- High rates of above target HbA1C (defined as failure to maintain HbA1C <8% for 6 months or requiring insulin)



Zeitler et al for the TODAY Study Group, *N Engl J Med*, 2012

TODAY Study: Intervention

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- Lifestyle interventions achieved early and sustained weight loss, yet did not impact HbA1C trajectory

- 71% of all visits completed during the 72 months of follow-up

Change in % BMI> 85th pct from Baseline

Zeitler et al for the TODAY Study Group, *N Engl J Med*, 2012

TODAY Study: Intervention

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Failure rates differ by sex and race-ethnicity:

- Sex
  - Female 200 out of 452 = 44.3%
    Male 119 out of 247 = 48.2%
- Race-ethnicity
  - NH Black 120 out of 227 = **52.9%**
    Hispanic 125 out of 279 = **44.8%**
    NH White 52 out of 141 = 36.9%
    American Indian 16 out of 41 = 39.0%

Zeitler et al for the TODAY Study Group, *N Engl J Med*, 2012

TODAY Study: Intervention

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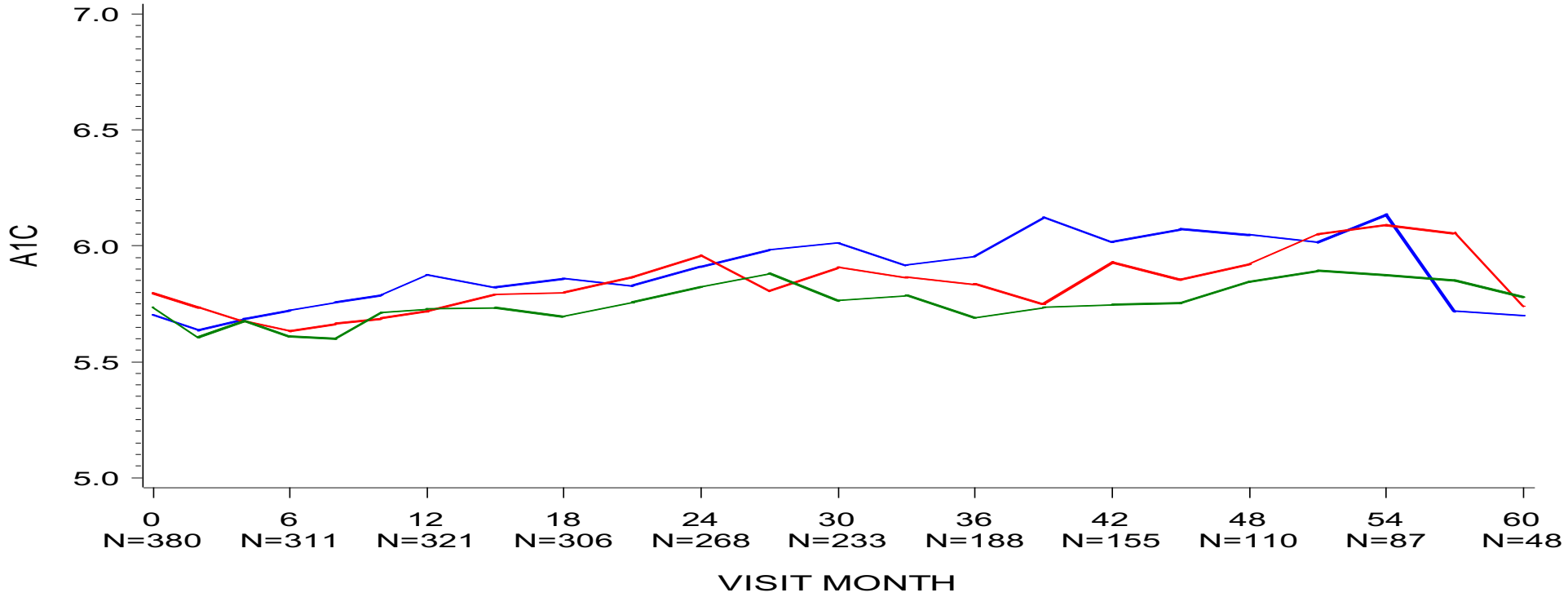
Durable control was achieved in some participants!



Early HbA1C < 6.3% at diabetes duration less than 2 years associated with achieving durable glycemia

Zeitler et al for the TODAY Study Group, *N Engl J Med*, 2012

Long-Term Follow-Up of TODAY Trial Participants

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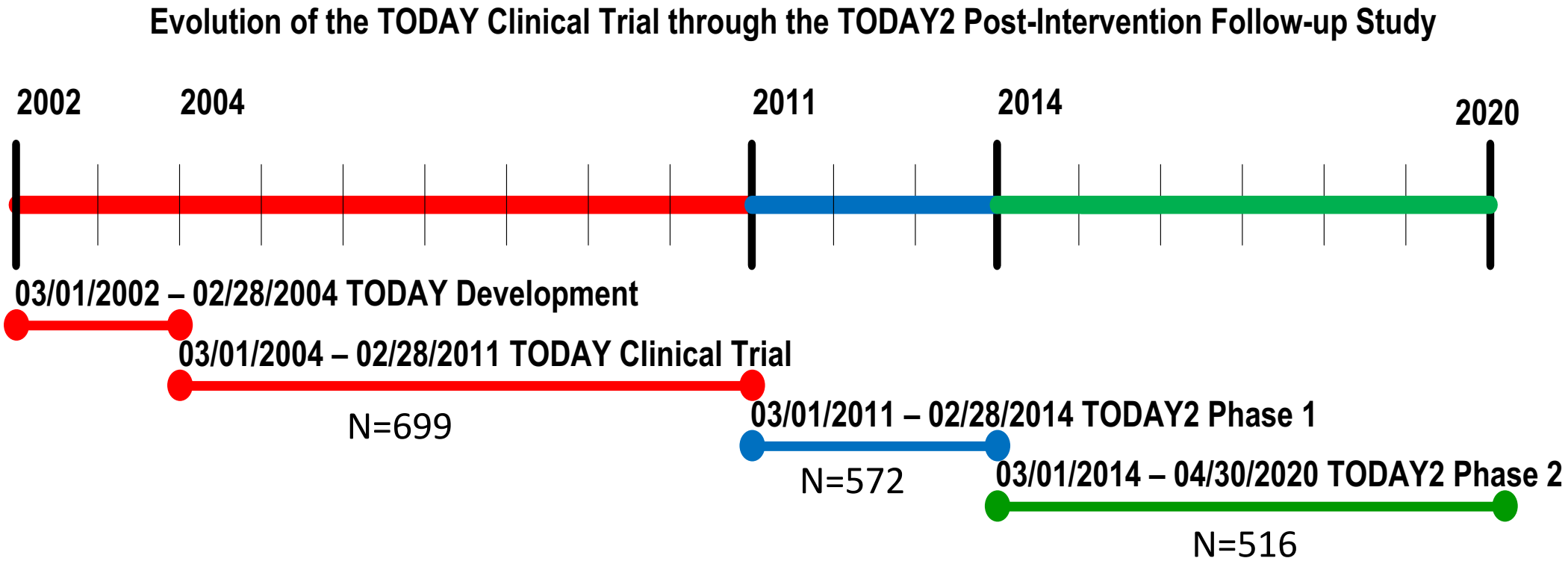
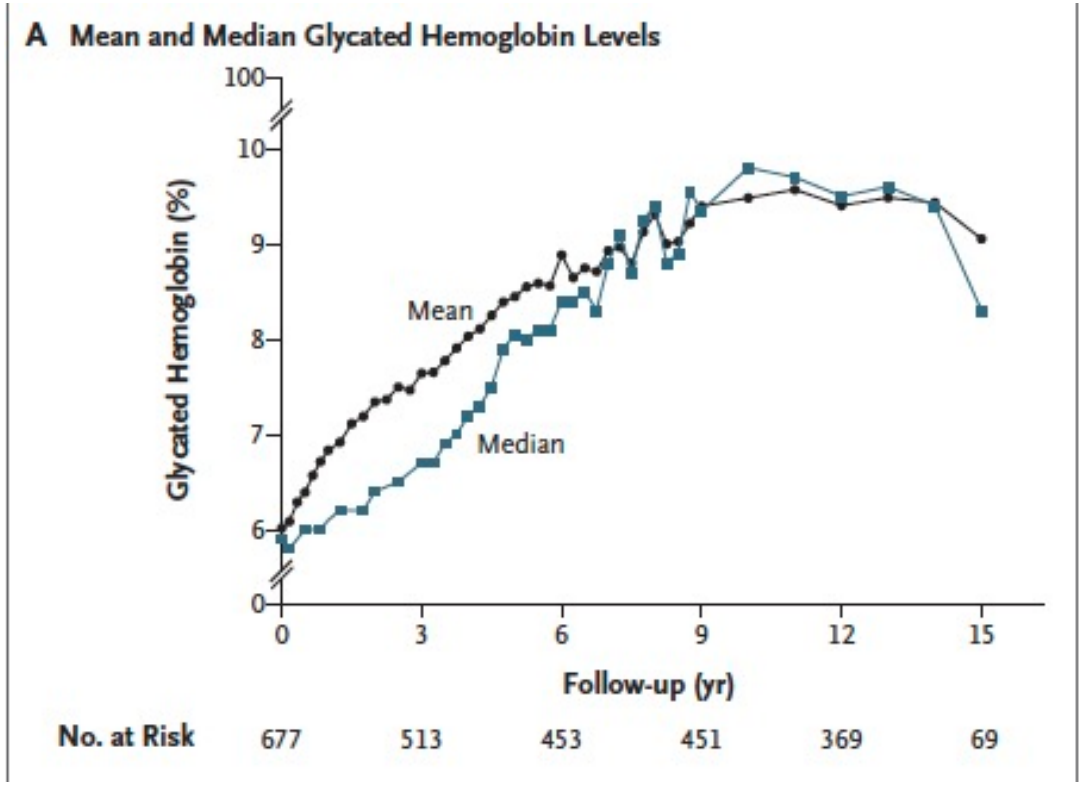
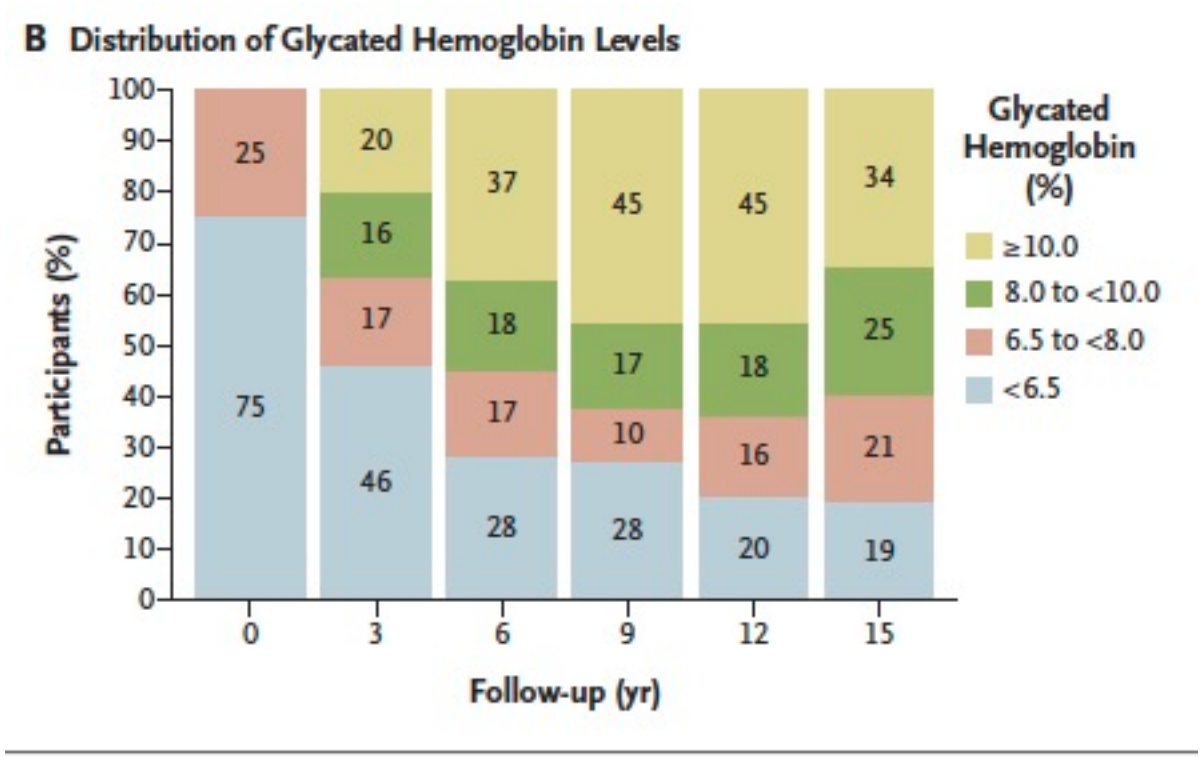


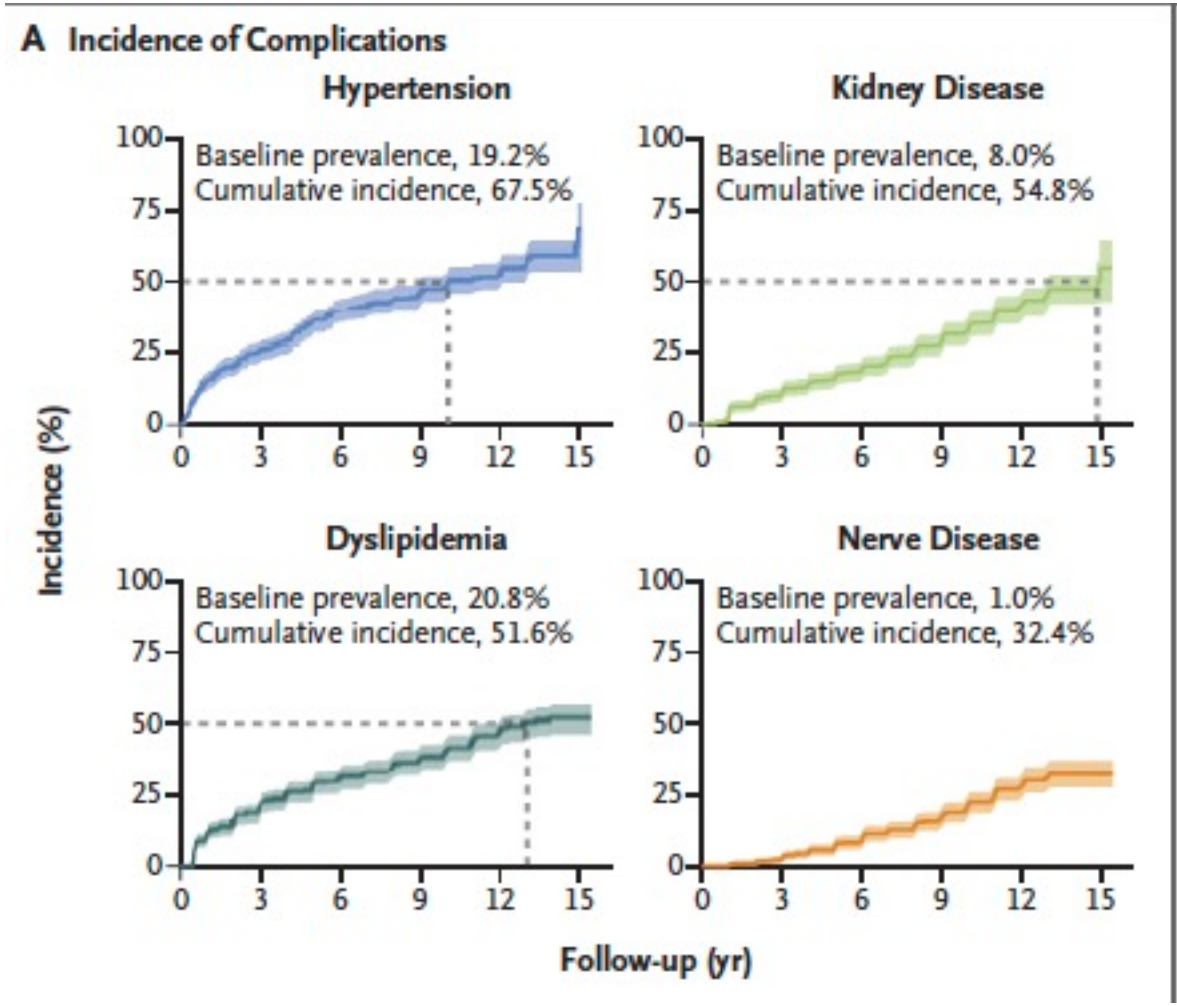
TODAY2: Outcomes

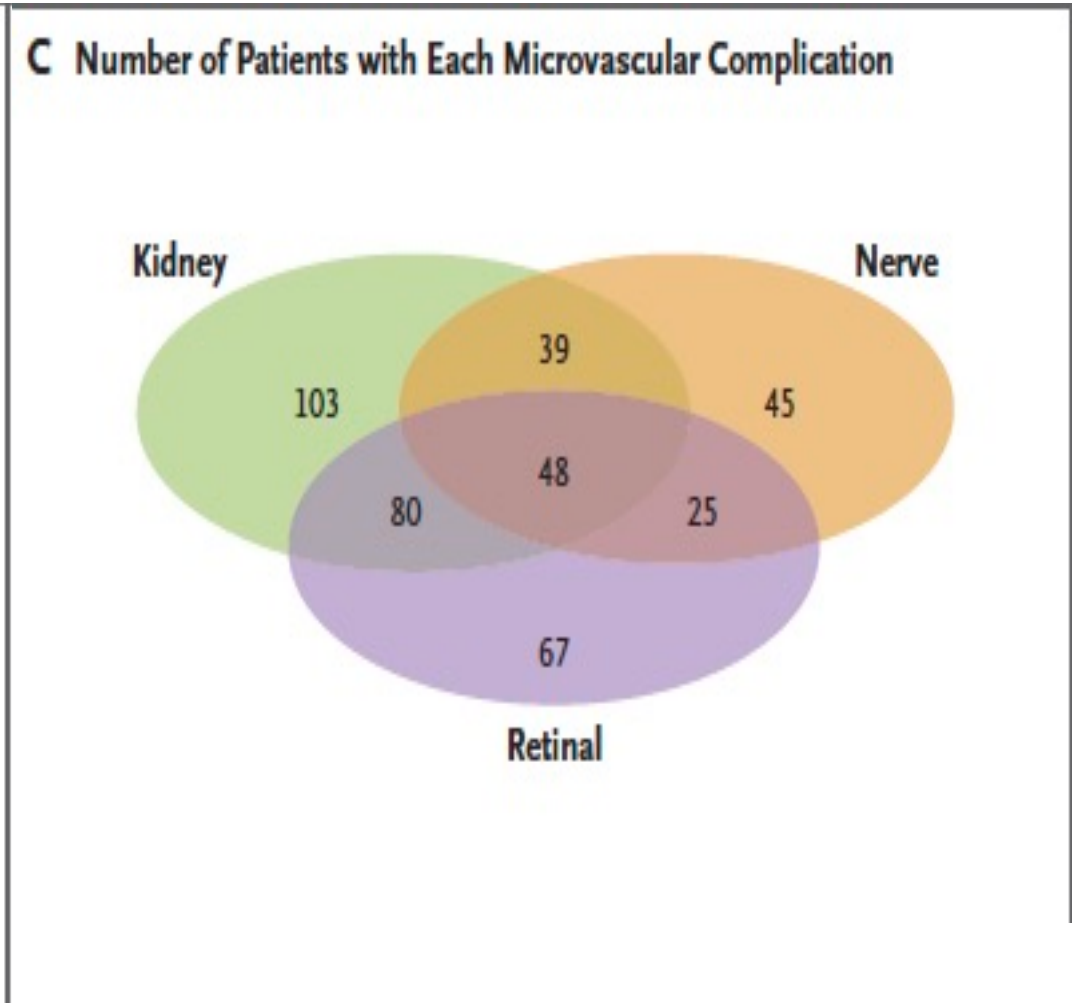




TODAY Study Group, *N Engl J Med*. 2021;385;416-426

TODAY2: Outcomes





RISE: Can We Alter the Course of Prediabetes?

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- Hypothesis:
  - Early metformin, with or without insulin, would preserve beta cell function in youth with prediabetes or within two years of onset of type 2 diabetes
- Approach:
  - Two treatments: metformin (12 months) vs. glargine (3 months) followed by metformin (9 months)
  - Longitudinal assessments: Hyperglycemic clamp studies and oral glucose tolerance tests to describe glucose metabolism, insulin sensitivity, and insulin secretion at baseline, 12 months, and 15 months
  - Pediatric vs. Adult comparisons

RISE: Early Beta Cell Dysfunction in Youth Compared to Adults

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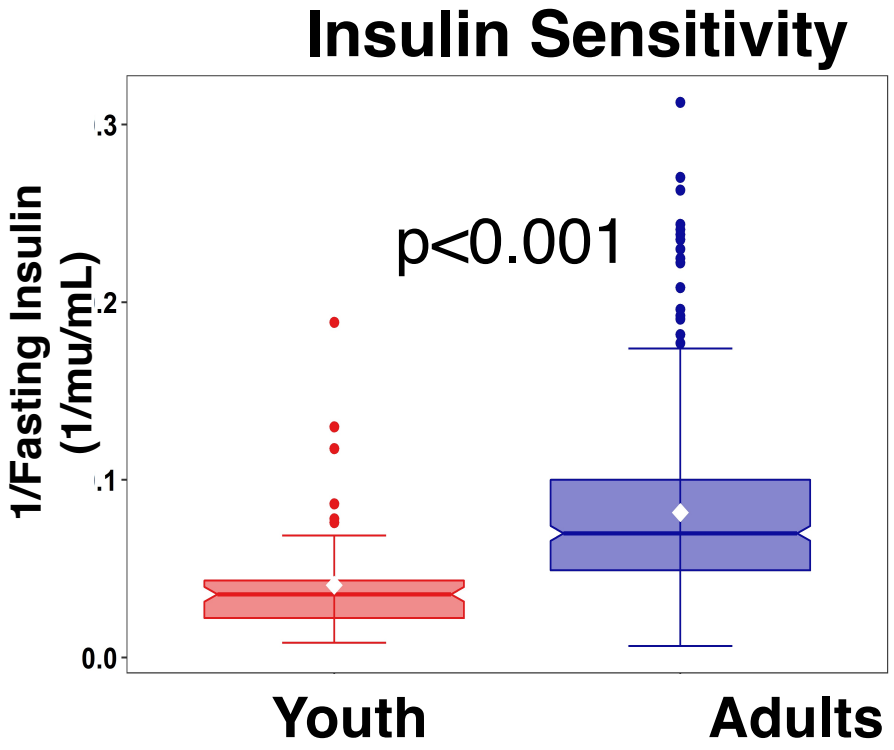
- 85 youth, 353 adults
- Youth had lower insulin sensitivity over the course of the study
- Unlike adults, early medication use did not alter the course of prediabetes
- More aggressive beta cell dysfunction leading to beta cell failure occurs in youth with early onset diabetes



RISE Consortium, *Diabetes Care*. 2021 Mar; 44(3);817-825

Guidelines: Treatment

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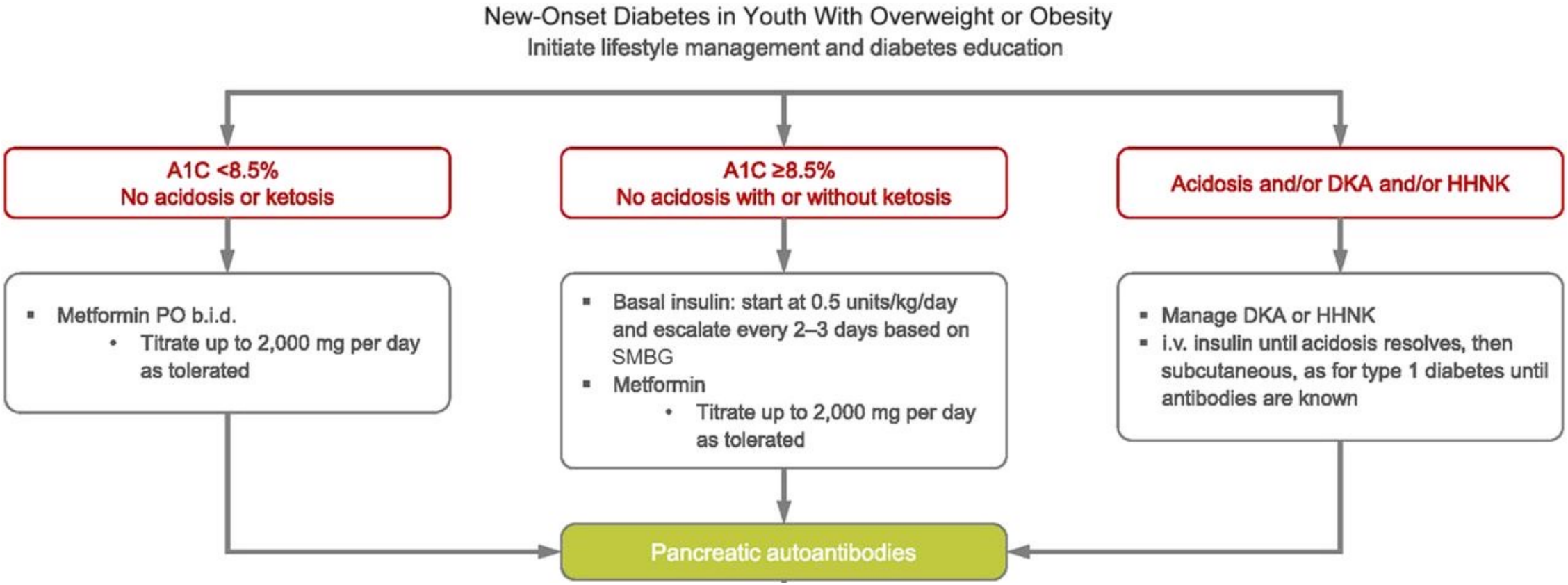
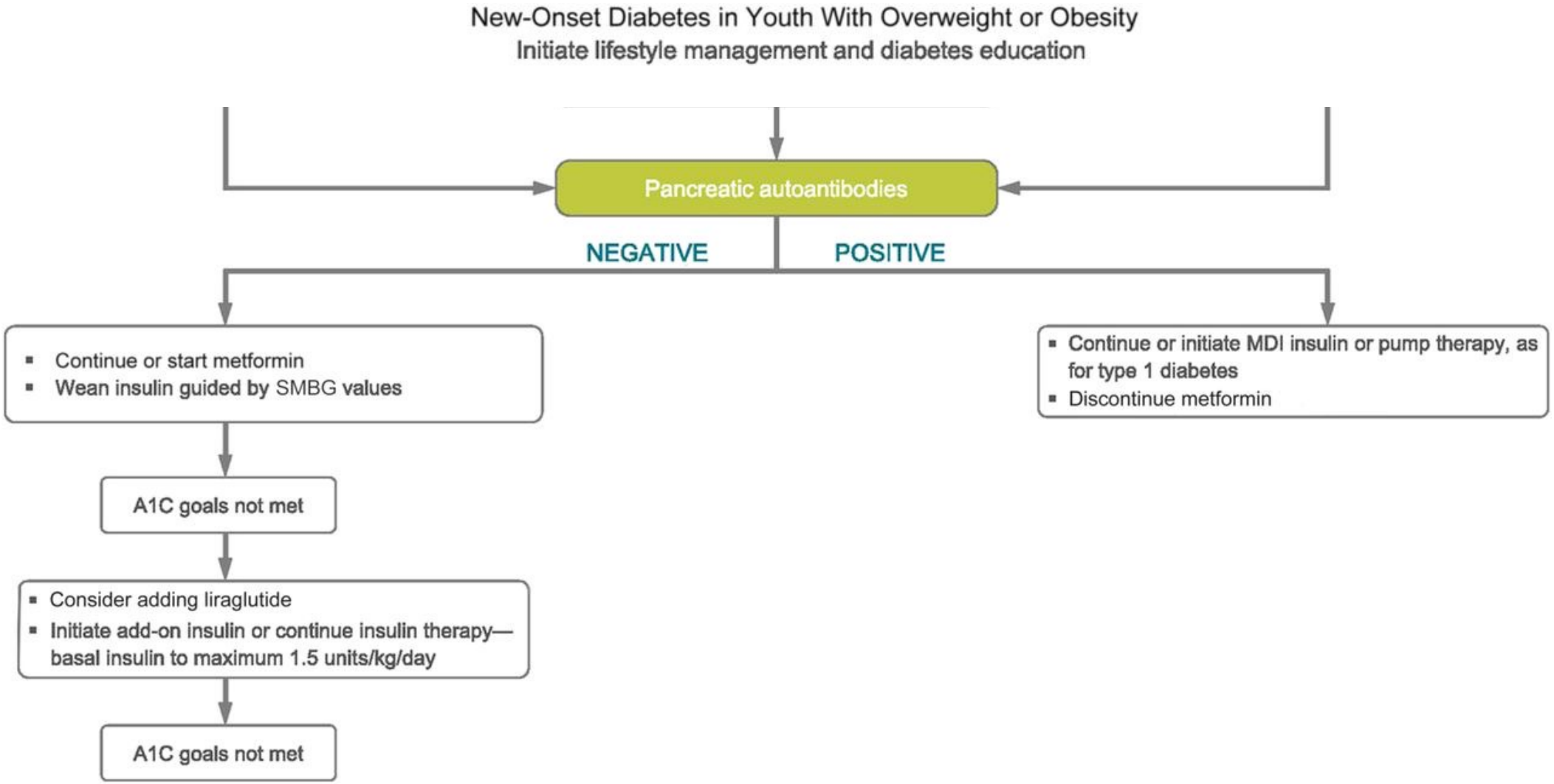


American Diabetes Association, *Diabetes Care*. 2020;43:S163-S182

Guidelines: Treatment



American Diabetes Association, *Diabetes Care*. 2020;43:S163-S182

Guidelines: Co-Morbidities and Complications Screening and Care

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- **Nephropathy**
  - BLOOD PRESSURE measure at every visit
  - If blood pressure is > 95th percentile for age, sex, and height, increased emphasis should be placed on lifestyle management to promote weight loss. If blood pressure remains above the 95th percentile after 6 months, anti-hypertensive therapy should be initiated
  - Therapeutic options include angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB)
  - Urine albumin/creatinine ratio (UACR) should be obtained at the time of diagnosis and annually thereafter. An elevated urine albumin/creatinine ratio (> 30 mg/g creatinine) should be confirmed on 2 of 3 samples

Guidelines: Co-Morbidities and Complications Screening and Care

- **Retinopathy**
  - Screening for retinopathy should be performed by dilated fundoscopy or retinal photography at or soon after diagnosis and annually thereafter.
  - Optimizing glycemia and CVD risk factors is recommended to decrease the risk or slow the progression of retinopathy.
  - Less frequent examination (every 2 years) may be considered if there is adequate glycemic control and normal eye exam.

Guidelines: Co-Morbidities and Complications Screening and Care

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- **Neuropathy**
  - Youth with type 2 diabetes should be evaluated for evidence of neuropathy at diagnosis and annually.
  - The examination should include inspection, assessment of foot pulses and testing of protective temperature or pinprick (10-g monofilament) sensation, testing of vibration sensation using 128-Hz tuning fork, and ankle reflexes.

Guidelines: Co-Morbidities and Complications Screening and Care

- **Non-Alcoholic Fatty Liver Disease (NAFLD)**
  - Evaluation for NAFLD (by measuring AST and ALT) should be done at diagnosis and annually thereafter.
  - Referral to gastroenterology should be considered for persistently elevated or worsening transaminases.
- **Obstructive Sleep Apnea (OSA)**
  - Screening for symptoms of sleep apnea should be done at each visit and referral to a pediatric sleep specialist for evaluation and a polysomnogram, if indicated, is recommended. OSA should be treated when documented.

Guidelines: Co-Morbidities and Complications Screening and Care

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- **Dyslipidemia**
  - Lipid testing should be performed when initial glycemic control has been achieved and annually thereafter.
  - Optimal cholesterol goals: LDL-C < 100 mg/dl; HDL-C > 35 mg/dL; triglycerides <150 mg/dL.
  - If LDL-C is > 130 mg/dL, blood glucose control should be maximized and dietary counseling provided using the American Heart Association Step 2 diet.
  - If LDL-C remains above goal after 6 months of dietary intervention, initiate therapy with statin, with goal of LDL < 100 mg/dL.
  - If triglycerides are >400 mg/dl fasting or >1000 mg/dl non-fasting: optimize glycemia and begin fibrate, with a goal of <400 mg/dl fasting (to reduce risk for pancreatitis).

Changing the Course of Youth-Onset T2D

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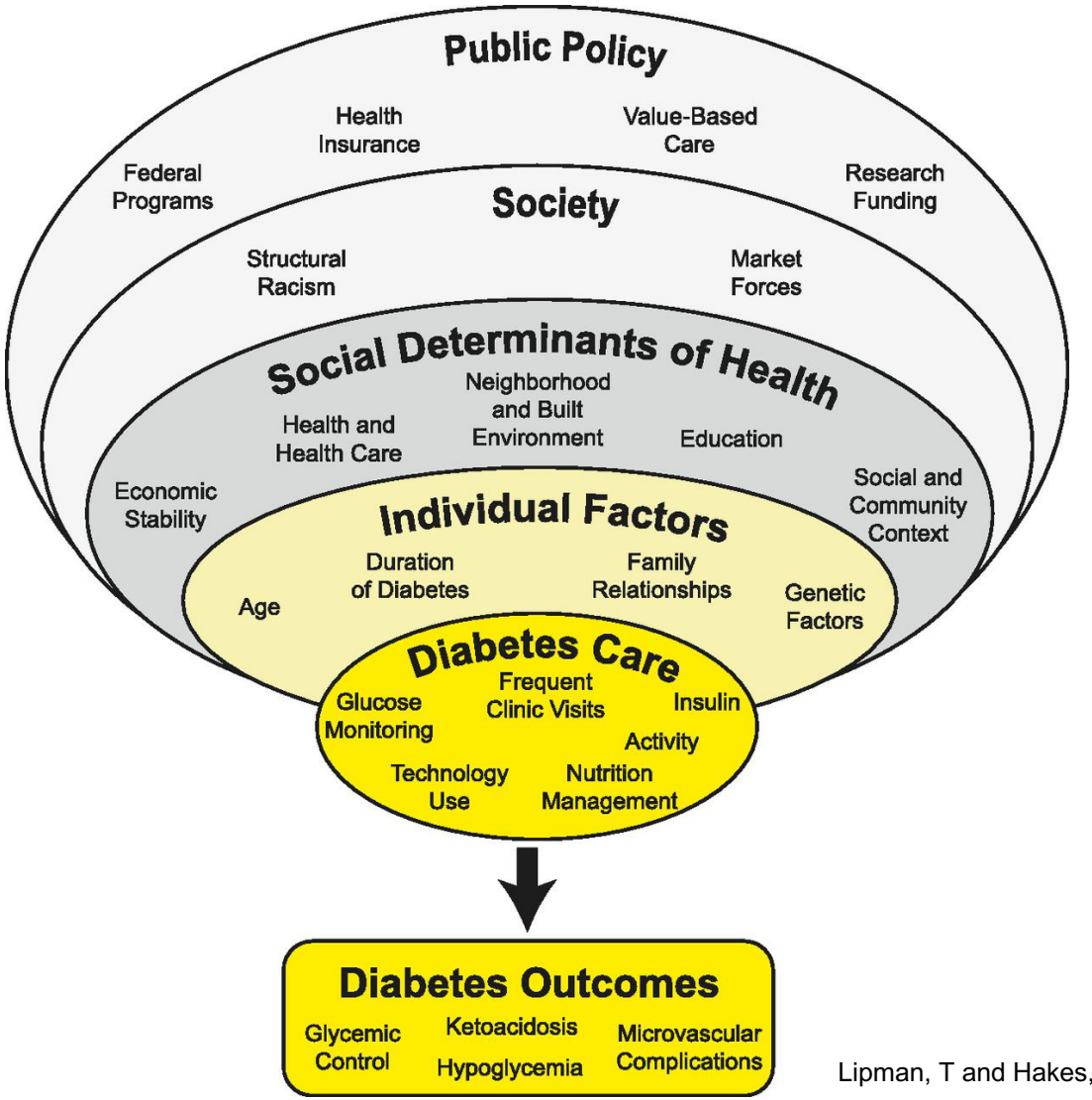

Lipman, T and Hakes, CP, *Diabetes Care*. 2021;44:14-16

Health Care Usage and Outcomes in Young Adults with Youth-Onset T2D

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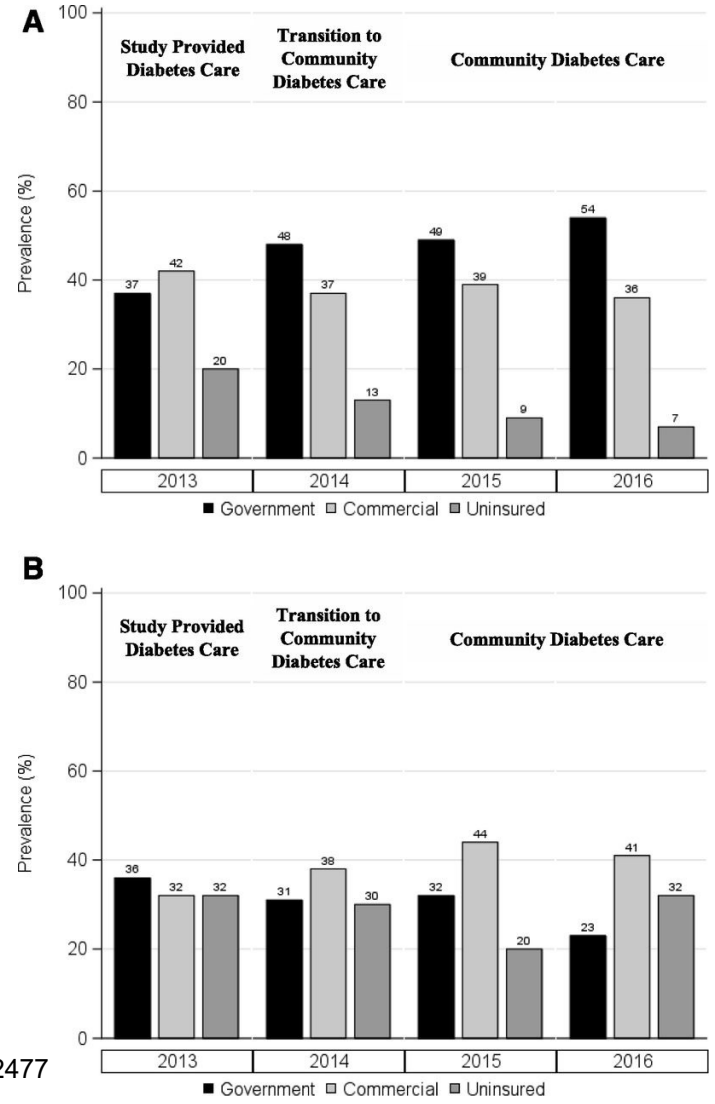
- By 2016, 93% of TODAY participants in Medicaid expansion states (A) had health care coverage compared to 68% of participants from states without Medicaid expansion (B)
- Outpatient visits higher with government coverage than with no coverage
- Trend for participants without healthcare coverage to have higher HbA1C than those with coverage



TODAY Study Group, *Diabetes Care*. 2020 Oct;43(10):2469-2477

Family-Based Assessments for T2D

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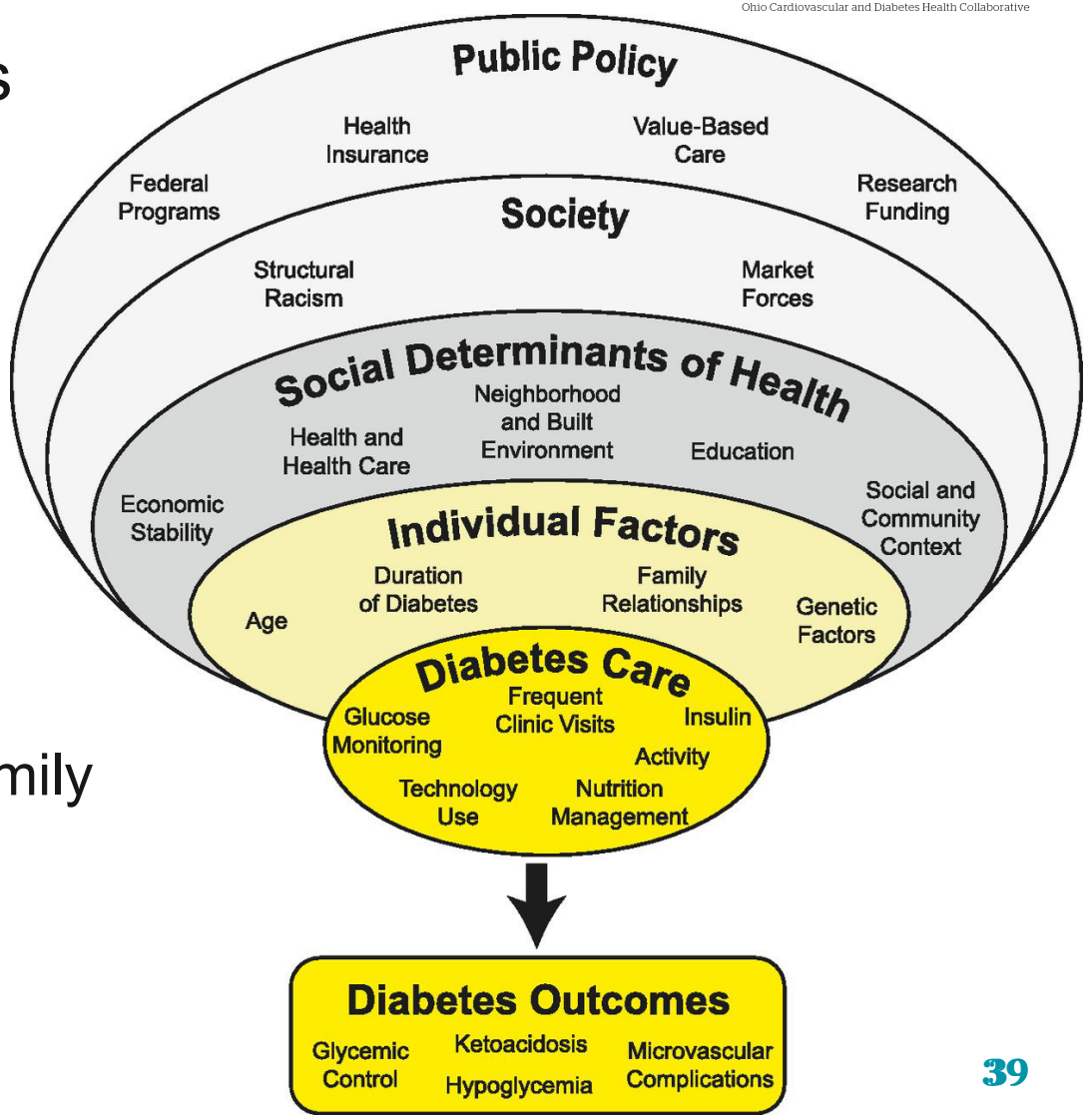
- Engage the whole family in diabetes education
  - Adopt lifestyle changes together
    - Dietary
    - Exercise
  - Re-education of families with many generations living with diabetes
    - New oral medications
    - New insulins
    - Methods to avoid hypoglycemia
  - Encourage the family to teach other family members and friends
    - Support network for success
    - Utilize community resources



Shared Diabetes Medical Appointments

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- Shared visit to address medical, educational and social support needs of adolescent and family
- Adolescent and parent attend
- Group educational session
  - Demonstrations on meal planning, serving size selection, carbohydrate counting, medication management, glucose monitoring, mental health, insurance and diabetes supplies
  - Breakout sessions for adolescents separate from parents
- Individual time to meet with provider for diabetes management and medication adjustment

Summary – Part 1

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- Complex psychosocial environment and aggressive pathophysiology challenge adolescents with type 2 diabetes
- Young adulthood is a critical time when complications can arise that require medical intervention
- Uninterrupted care during the transition to young adulthood is paramount

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Transition & Technology in Youth with Type 2 Diabetes

Pediatric-to-Adult Transition in Type 2 Diabetes

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- Teens & young adults are at high risk for low engagement in self-management, not reaching glycemic targets and loss to follow-up:
  - Time of upheaval
  - Competing priorities (diabetes may not be high on their list)
  - Mental health issues can exacerbate
  - Feeling unprepared

- American Diabetes Association, Endocrine Society & International Society for Pediatric and Adolescent Diabetes: continued care and education during the transition of care are *critical* to:
  - Reduce risk of complications
  - Lower diabetes distress levels
  - Improve symptoms of psychological comorbidities

Pediatric-to-Adult Transition: 6 Core Elements

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- Transition Policy
  - Describe practice's approach to transition
  - Privacy/consent information
- Transition Tracking and Monitoring
  - Identify youth & enter into registry
  - Use EHR if possible
- Transition Readiness
  - Regular assessments (begin at age 14) to identify needs/goals in self-care
  - Jointly develop goals & document in plan of care
- Transition Planning
  - Regularly update plan of care
  - Prepare for adult approach to care
  - Plan for optimal timing of transfer
  - Assist youth in identifying adult provider
- Transfer of Care
  - Confirm date of first provider appt
  - Complete "transfer package"
- Transfer Completion
  - Contact pt 3-6 mo after last peds visit to confirm transfer of responsibilities
  - Build ongoing collaborative partnerships with adult providers

www.GotTransition.org

Pediatric-to-Adult Transition: Society Guidelines

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ADA 2021 Standards of Care Recommendations:

- **13.110** Pediatric diabetes providers should begin to prepare youth for transition to adult health care in early adolescence and, at the latest, at least 1 year before the transition. **E**
- **13.111** Both pediatric and adult diabetes care providers should provide support and resources for transitioning young adults. **E**
- **13.112** Youth with type 2 diabetes should be transferred to an adult-oriented diabetes specialist when deemed appropriate by the patient and provider. **E**

American Diabetes Association, *Diabetes Care*. 2021 Jan;44(Supplement 1):S180-S199

Pediatric-to-Adult Transition: Society Guidelines

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ADA 2011 Position Statement:

- Preparation: focus on diabetes self-management skills and education on health insurance. **E**
- Pediatric provider: provide a written summary of problem list (including mental health), medications, assessment of diabetes self-care skills, & summary of past glycemic outcomes and diabetes-related comorbidities. **E**
- Consider assisting with scheduling the first appointment with adult care provider within 3-4 months of final pediatric visit (e.g. using a care ambassador). **C**
- Both peds/adult providers: discuss issues of birth control, pregnancy planning, STI prevention, drug/alcohol/tobacco use, and interplay with diabetes. **E**
- Ensure emerging adult "is receiving accessible, patient-centered, coordinated, comprehensive, continuous, compassionate, and culturally effective care." **E**

Peters et al, *Diabetes Care*. 2011 Nov;34(11):2477-2485

Pediatric-to-Adult Transition: Models of Care

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- Transitioning care to:
  - Adult clinic or different hospital
  - Combination of pediatric and adult care providers
  - Young adult clinic within the same pediatric hospital

- Numerous transition interventions studied:
  - Transition coordinator / patient navigator
  - Multidisciplinary appointment
  - Intervention/workshop
  - Web/app based programs
  - Personalized appointment reminders
  - Financial incentives
  - Transition documents

Pediatric-to-Adult Transition: Models of Care

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- Which model works best? Difficult to study!
  - Randomized controlled trials (RCTs) sparse & small
  - Larger studies generally single arm, observational
  - Most studies include multiple interventions → which part of intervention is helping?
  - Studies look at different outcomes, so difficult to directly compare
    - Glycemic outcomes (e.g. A1C)
    - Frequency of glucose monitoring
    - Continuity of care
    - Diabetes complications (e.g. diabetic ketoacidosis admissions)
    - Psychological wellbeing
    - Transition readiness
    - Satisfaction with care

Pediatric-to-Adult Transition
A Few Interesting Studies

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Study Design	Population	Intervention	Outcomes	Ref
6-month, single arm cohort	18-25 year olds with T1D (n=72)	Multidisciplinary adult diabetes transition clinic with a transfer summary document, orientation to adult care, behavioral support, & goal-setting exercises	• HbA1C lowering (9.7→9%) • Increased blood glucose monitoring (2.5→ 3.5 checks/day)	Agarwal S, et. al. Diabetes Educ. 2017
30-month, single arm cohort	14-23 year olds with T1D (n=439)	Text reminders before appointments, rebooking missed appointments, diabetes educator clinic coordinator, phone support for sick days	• No change in HbA1C (8.5%→8.7%) • Fewer DKA admissions (72% in 2001 → 4% in 2014) • 8.6% lost to follow-up	Farrell et al. Diabetes Res Clin Pract. 2018
12-month, non-randomized trial	Young adults with T1D (n=81)	Structured transition program with tailored diabetes education & transition support by case managers	• 78% successfully transitioned in intervention arm • HbA1c decreased 0.4% with intervention, increased 0.42% in control group (p=0.01) • Lower incidence of severe hypoglycemia (0 vs 16%, p=0.02) • Global well-being improved (p=0.02)	Sequeira et al. Diabetes Care. 2015
Multicenter randomized trial	17-20 year olds with T1D (n=205)	18-month transition program (6 months in pediatric care, 12 in adult care) with transition coordinator, appointment reminders & rescheduling, transition education materials, & instructions/map to adult clinic	• No difference in HbA1C • Higher clinic attendance (4.1 vs 3.6 visits) • Less diabetes-related distress • Greater satisfaction with care • In the year post-intervention, 20% loss to follow-up (both arms) & benefits not sustained	Spaic et al. Diabetes Care 2019

Ongoing transition support is crucial!

Telehealth in Care Transitions: Benefits & Challenges

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Benefits

- More flexibility for patients
  - Work / childcare challenges
- Increasing access to care
  - Living remote from clinics
  - Homebound patients
- Reduced travel
- Access to unique information
  - Prescription meds, supplements

Challenges

- Tech issues / glitches
- Poor connections
- Confusion over insurance coverage and billing/coding
- Limited examination
- Getting labs or other tests

Telehealth in Care Transitions: Appropriate Diabetes Populations

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- Most suitable: patients who have to have ability to
  - interact with a virtual platform
  - accept individualized management
  - provide informed consent

- Probably not suitable: those with
  - significant mental illness
  - cognitive impairment
  - acute diabetes complications

Teens, young adults: generally well versed in technology - including video conferencing - poised to be ideal candidates for telehealth

Zhang B, *International Journal of Endocrinology*. 2021

Telehealth in Care Transitions: the CoYoT1 Study

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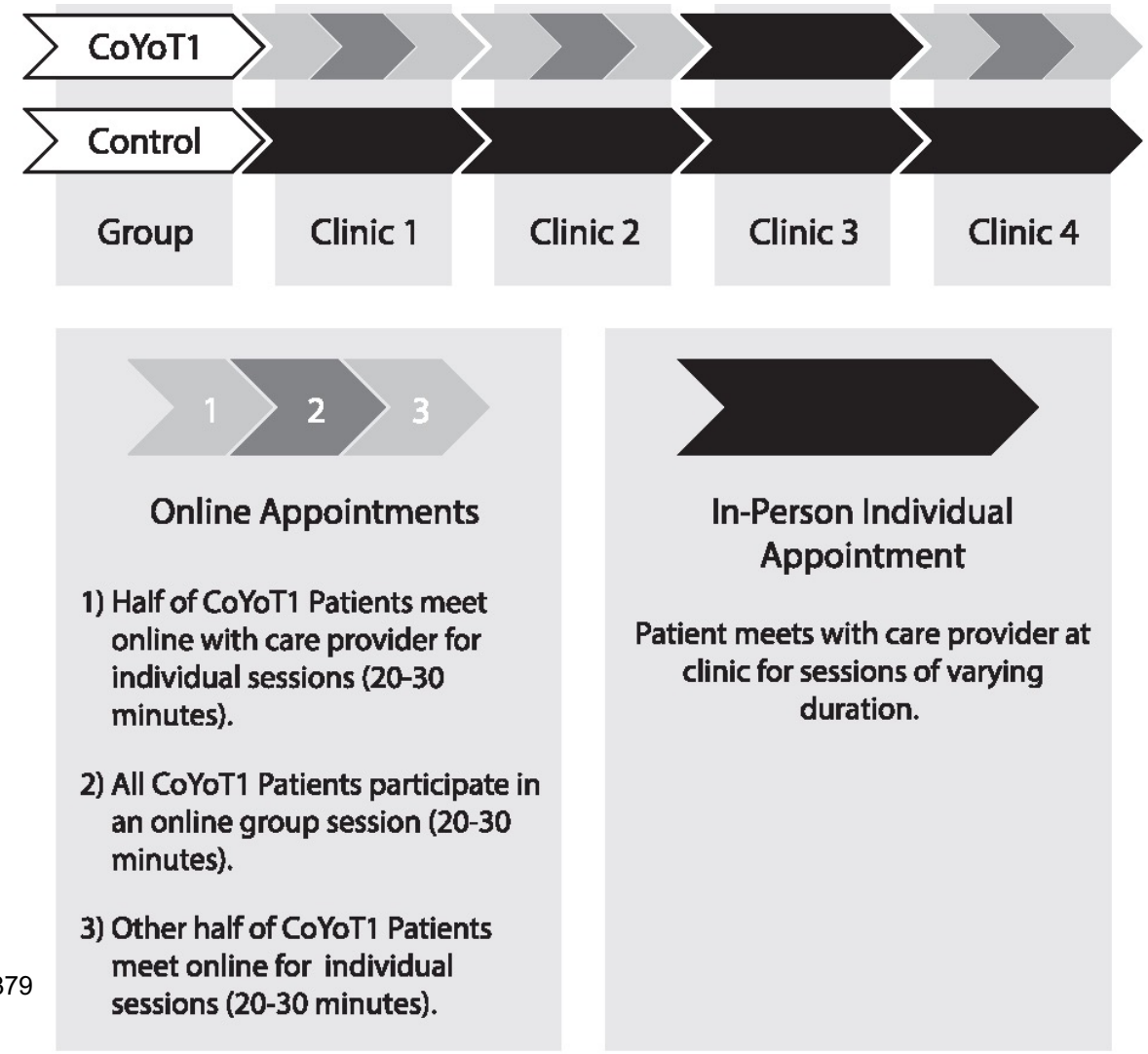
- 12-month, non-randomized trial of 18-25 year olds with type 1 diabetes (T1D) (n=81)
- 3 telemedicine sessions
  - individual appointments with a diabetes provider (MD/NP)
  - 30-min group shared sessions (4-6 participants), facilitated by a certified diabetes educator
- 1 in-person appointment for an annual physical exam



Reid et al, *Diabetes Technol Ther.* 2018 May;20(5):370-379
Bakhach et al, *Diabetes Educ.* 2019 Aug;45(4):420-430.

Telehealth in Care Transitions: the CoYoT1 Study

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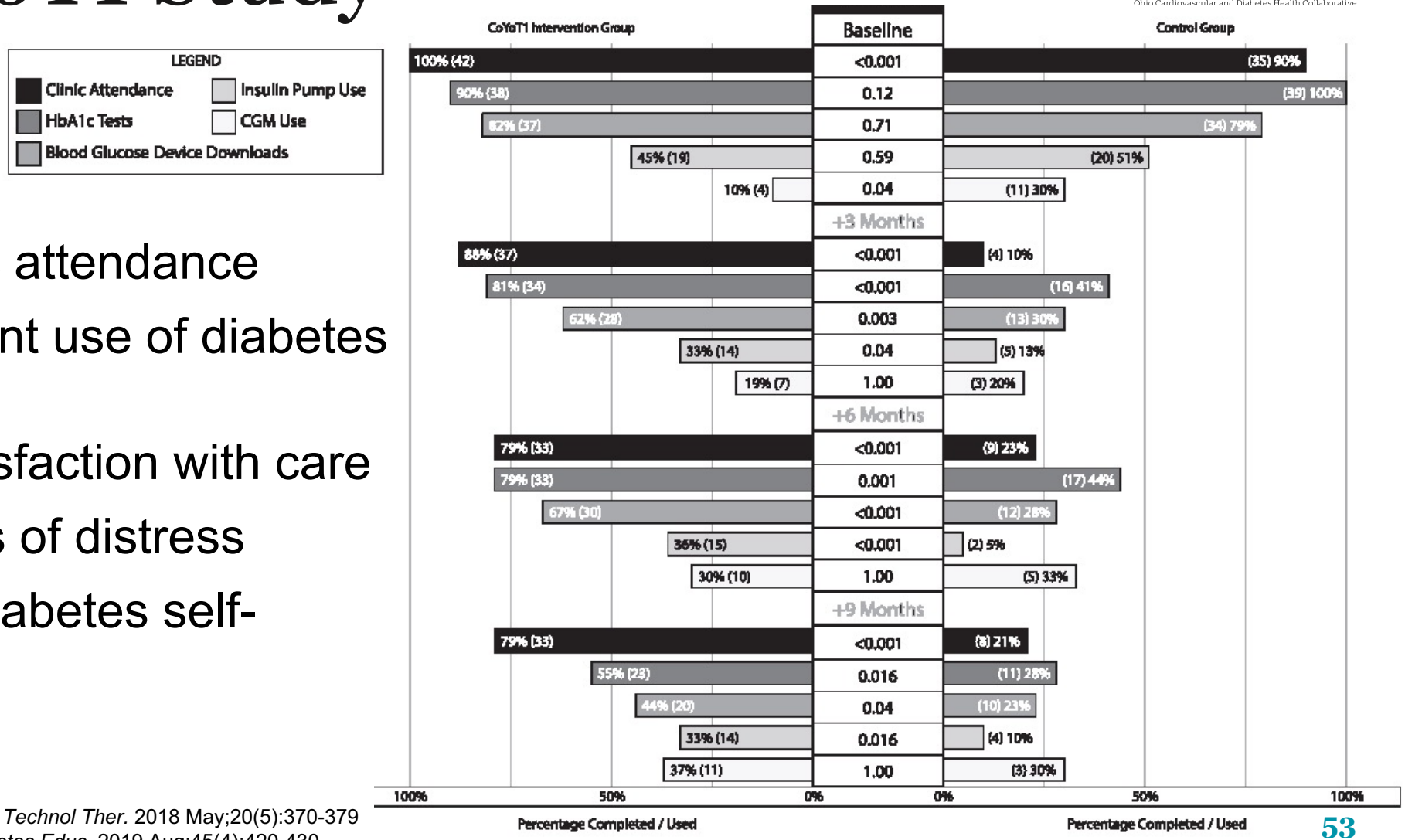
Outcomes

- Higher clinic attendance
- More frequent use of diabetes technology
- Greater satisfaction with care
- Lower levels of distress
- Increased diabetes self-efficacy



Reid et al, *Diabetes Technol Ther.* 2018 May;20(5):370-379
Bakhach et al, *Diabetes Educ*. 2019 Aug;45(4):420-430.

Diabetes Technology: Continuous Glucose Monitoring (CGM)

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	Dexcom G6	Freestyle Libre 2
Receiver	iPhone, Android, or receiver	iPhone or reader
Sensor wear time (max)	10 days	14 days
Calibrations required	No	No
Alarms for high/low glucose	Yes	Yes
FDA approved for dosing	Yes	Yes
FDA approved ages	>2 years	>4 years
MARD	9%	9.2%

CGM in Type 2 Diabetes: Evidence from the Literature

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- Biofeedback from CGM assists with behavioral change
  - Weight loss, increased physical activity, decreased caloric intake, and lowering of postprandial glucose
  - Small studies of short duration

- CGM associated with improvement in glycemic outcomes
  - Less time in hypoglycemia/hyperglycemia
  - Lowering of A1C

Jackson et al, *Diabetes Technology & Therapeutics.* 2021

CGM in Type 2 Diabetes: RCT - Patients on Basal Insulin

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JAMA Network™

QUESTION For adults with poorly controlled type 2 diabetes treated with basal insulin without prandial insulin in primary care practices, does continuous glucose monitoring (CGM) improve hemoglobin A_{1c} (HbA_{1c}) levels compared with blood glucose meter (BGM) monitoring?

CONCLUSION This randomized clinical trial found there was a significantly greater decrease in HbA_{1c} level over 8 months with CGM than with BGM monitoring.

POPULATION

88 Women
87 Men

Adults with type 2 diabetes treated with basal insulin without prandial insulin

Mean age: **57 years**

LOCATIONS

15
Primary care practices in the US

INTERVENTION

175 Patients randomized

116
Continuous glucose monitoring
CGM with BGM testing performed as needed

59
Blood glucose meter monitoring
BGM testing performed when fasting and postprandial 1 to 3 times daily

PRIMARY OUTCOME

HbA_{1c} level at 8 months adjusted for the baseline value

FINDINGS

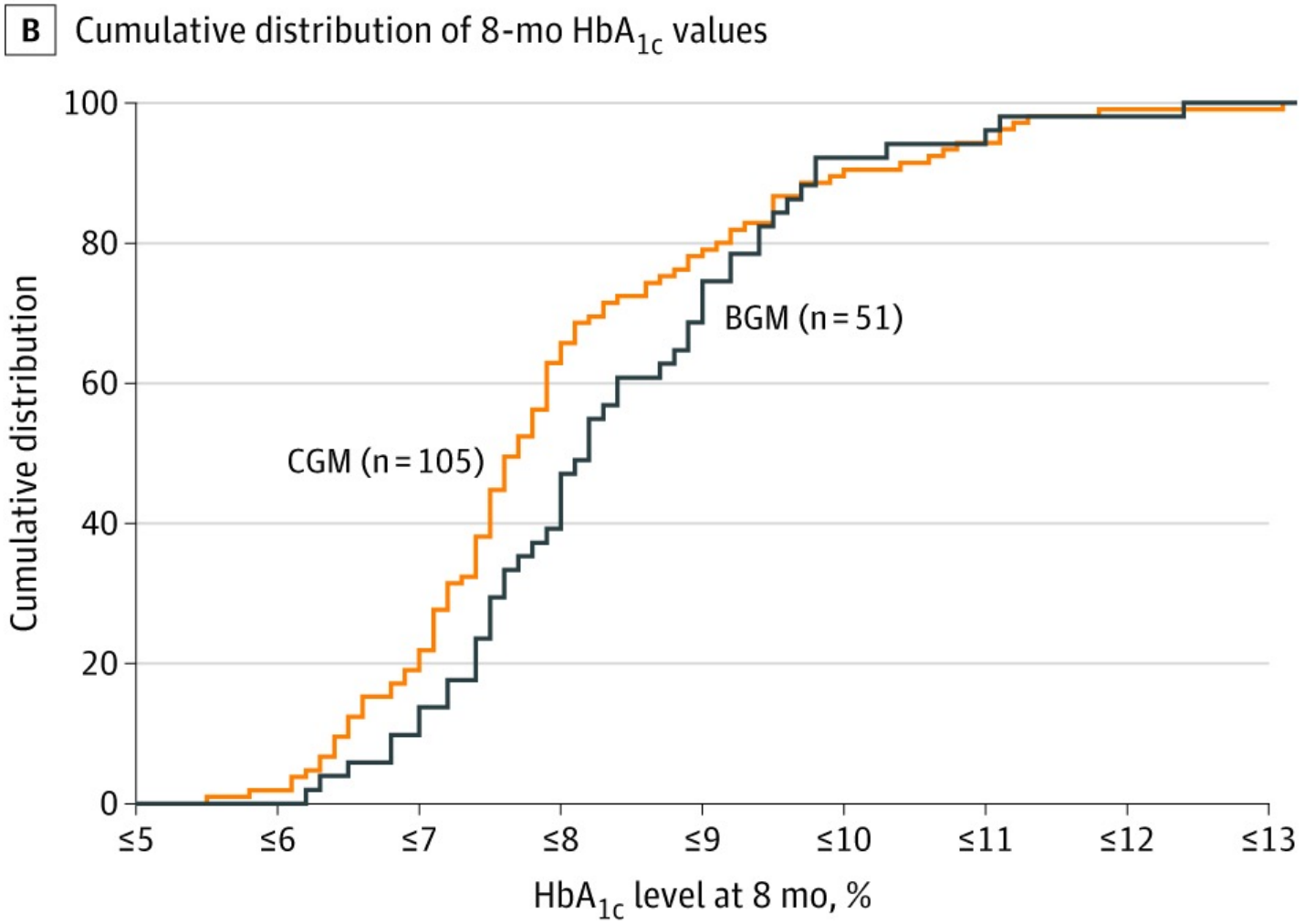
Mean HbA_{1c} level at 8 months

Continuous glucose monitoring		Blood glucose meter monitoring	
HbA_{1c}		HbA_{1c}	
Baseline	8 Months	Baseline	8 Months
9.1%	▶ 8.0%	9.0%	▶ 8.4%

Risk-adjusted difference was significant,
−0.4% (95% CI, −0.8% to −0.1%)

Martens T, Beck RW, Bailey R, et al; MOBILE Study Group. Effect of continuous glucose monitoring on glycemic control in patients with type 2 diabetes treated with basal insulin: a randomized clinical trial. *JAMA*. Published online June 2, 2021. doi:10.1001/jama.2021.7444

CGM in Type 2 Diabetes: RCT - Patients on Basal Insulin



CGM:

- Higher time-in-range (70-180 mg/dL) [40→59% vs 40→43%]
- Less hyperglycemia
- Less hypoglycemia

Martens et al, *JAMA*. 2021

CGM in Type 2 Diabetes: For Whom?

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- General consensus: beneficial for diabetes patients utilizing multiple daily injections of insulin
- More controversial: those managed on non-insulin therapies

<u>ADA 2021 Standards of Care Recommendations:</u>

- 7.9 When used properly, real-time CGM in conjunction with multiple daily injections and continuous subcutaneous insulin infusion **A** and other forms of insulin therapy **C** are a useful tool to lower and/or maintain A1C levels and/or reduce hypoglycemia in adults and youth with diabetes.
- 7.13 Use of professional CGM and/or intermittent real-time or intermittently scanned CGM can be helpful in identifying and correcting patterns of hyper- and hypoglycemia and improving A1C levels in people with diabetes on noninsulin as well as basal insulin regimens. **C**

American Diabetes Association, *Diabetes Care.* 2021 Jan;44(Supplement 1):S85-S99.

CGM in Type 2 Diabetes: For Whom?

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ADA 2021 Standards of Care Recommendations:

- 7.1 Use of technology should be individualized based on a patient's needs, desires, skill level, and availability of devices. **E**

Considerations in Patient Selection:

- More glycemic data in real-time: overwhelming or eye-opening?
- Technological support / comfort level of patient
- Risk for hypoglycemia
- Cost / insurance coverage

American Diabetes Association, *Diabetes Care.* 2021 Jan;44(Supplement 1):S85-S99.

Summary – Part 2

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- Successful pediatric-to-adult transitions benefit youth with diabetes (but ideal interventions are challenging to study & require further research)
- Telemedicine can be successfully implemented in diabetes care, including pediatric-to-adult transition of care
- Continuous glucose monitoring should be made accessible to all patients who manage diabetes with insulin and individualized for patients with type 2 diabetes

Cardi-OH and Other Resources

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Outpatient Diabetes Management for Primary Care Providers: Medications Intensification and Algorithm (Web Document PDF)
www.cardi-oh.org/best-practices/diabetes-management/outpatient-diabetes-management-for-primary-care-providers-medications-intensification-and-algorithm

Simplified Prescription of Diabetes Technology and Medications (Capsule)
www.cardi-oh.org/capsules/16-simplified-prescription-of-diabetes-technology-and-medications

Treatment of Type 2 Diabetes in Youth and Families (Podcast)
www.cardi-oh.org/podcasts/16-treatment-of-type-2-diabetes-in-youth-and-families

Youth-Onset Type 2 Diabetes: How to Identify, Screen, and Treat (Web Document PDF)
www.cardi-oh.org/best-practices/diabetes-management/youth-onset-type-2-diabetes

Clinical Summary for New Health Care Team (PDF)
www.endocrine.org/-/media/endocrine/files/practice/clinical_summary.pdf

Provider Assessment of Patient Skill Set (PDF)
www.endocrine.org/-/media/endocrine/files/practice/provider_assessment_skill_set.pdf

Self-Assessment of Worries, Concerns, and Burdens Related to Diabetes and Preparation for Transitioning (PDF)
www.endocrine.org/-/media/endocrine/files/practice/selfassessment.pdf

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Question and Answer

Amy Zack, MD

Case Western Reserve University School of Medicine

Speakers

REMINDER: Submit questions using the 'Q&A' feature and specify which speaker should answer

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Ohio Department of Medicaid

Rose Gubitosi-Klug, MD, PhD

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Next Steps and Wrap Up

Shari Bolen, MD, MPH

Case Western Reserve University School of Medicine

Registration Reminder

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- Registration is required for CME credit:

URL in Chat window **OR** Use QR Code

We Want to Hear from You!

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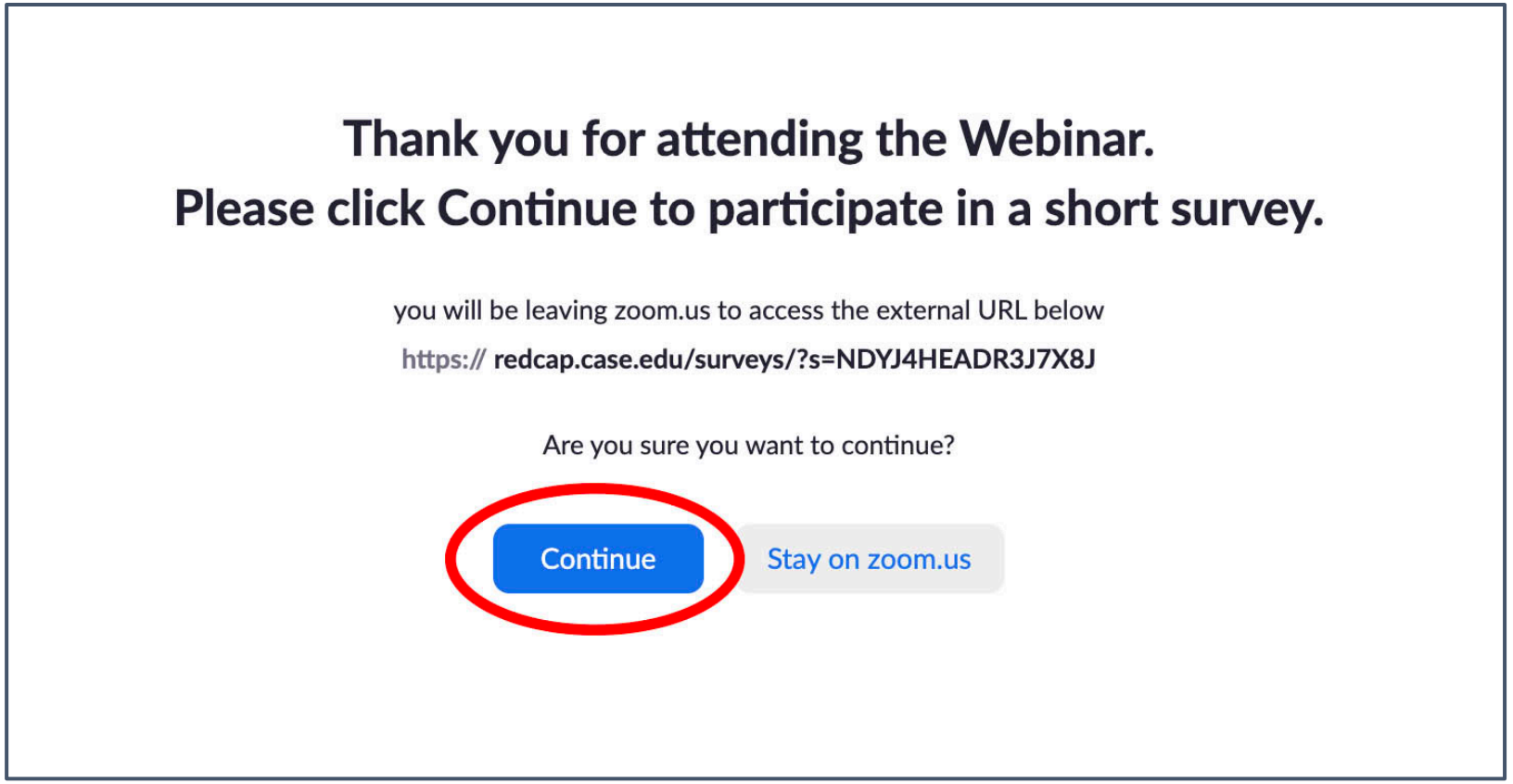
Please complete a brief evaluation of the webinar.



Hit the **Continue** button in your new browser tab to access the evaluation survey.
The survey link will also be emailed to you.

Spring 2022 TeleECHO Clinic
January 27 to April 14, 2022
Thursdays, 8 - 9 a.m.

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Project ECHO®
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Weight Management and Behavior Change:
Cases and Discussions

How Does it Work?

- Utilizes simple videoconferencing technology to conduct virtual clinics with community health care providers in Ohio
- Includes a brief didactic session followed by an interactive discussion of de-identified case studies
- Offers a whole-person approach to diabetes and cardiovascular risk management

Why Join?

- Improves cardiovascular and diabetes health outcomes
- Enhances professional development and retention
- Provides continued learning through the sharing of best practices
- Increases efficiency and joy of practice

Register now at Cardi-OH.org
CME credits provided at no cost.

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THANK YOU!

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Learn More!

To learn more about the collaborative and read up on the latest best practices, visit Cardi-OH.org and follow us on Twitter @cardi_OH and Facebook @cardiohio.

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