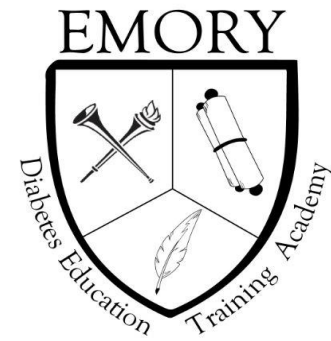




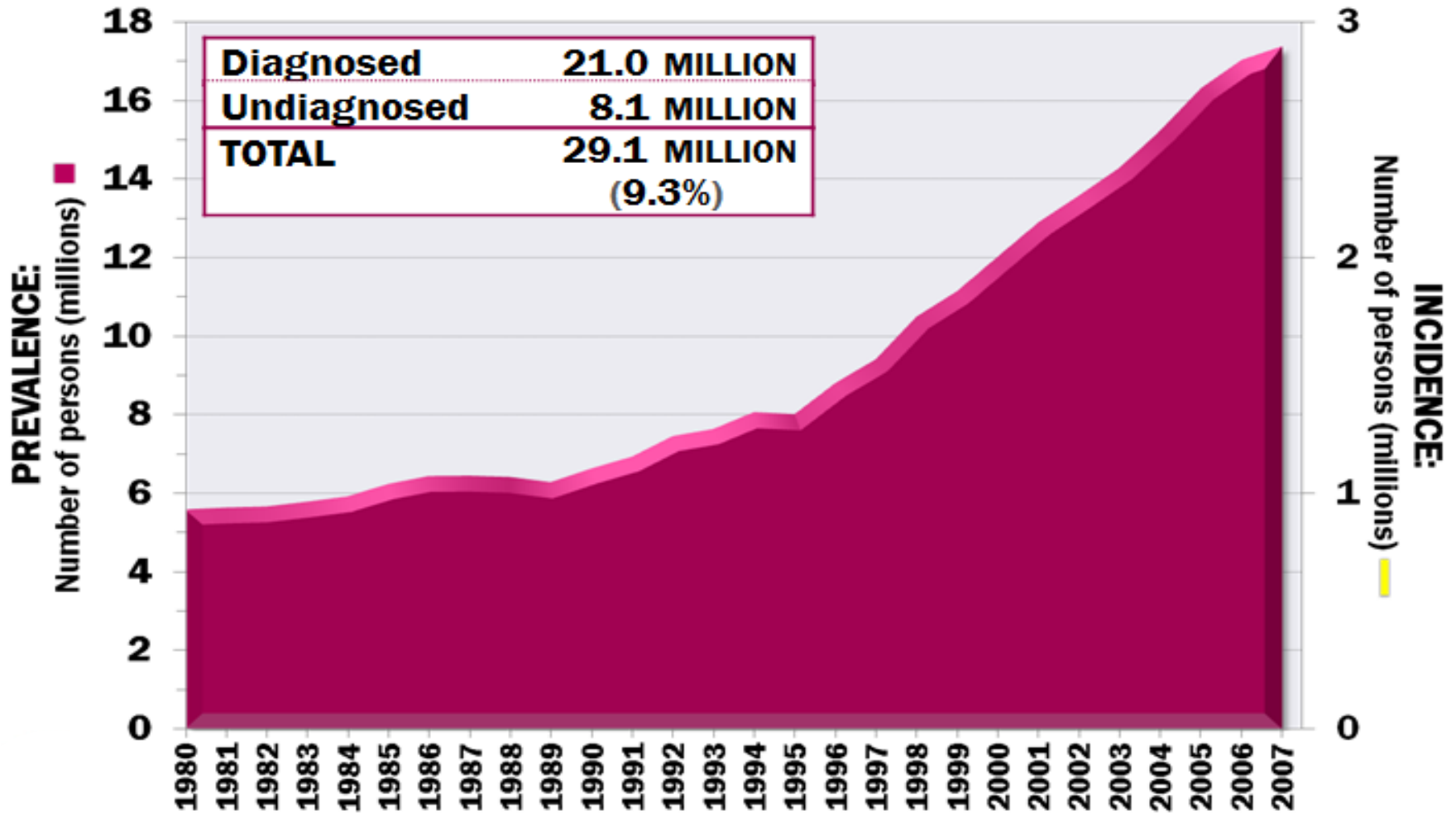
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How Diabetes Education and the 7 AADE Self-Care Behaviors are Delivered in Community Programs?

Britt Rotberg MS, RDN, LD, CDE
Emory University School of Medicine
August 26, 2014

Diabetes in the USA



Our Role as Diabetes Educators

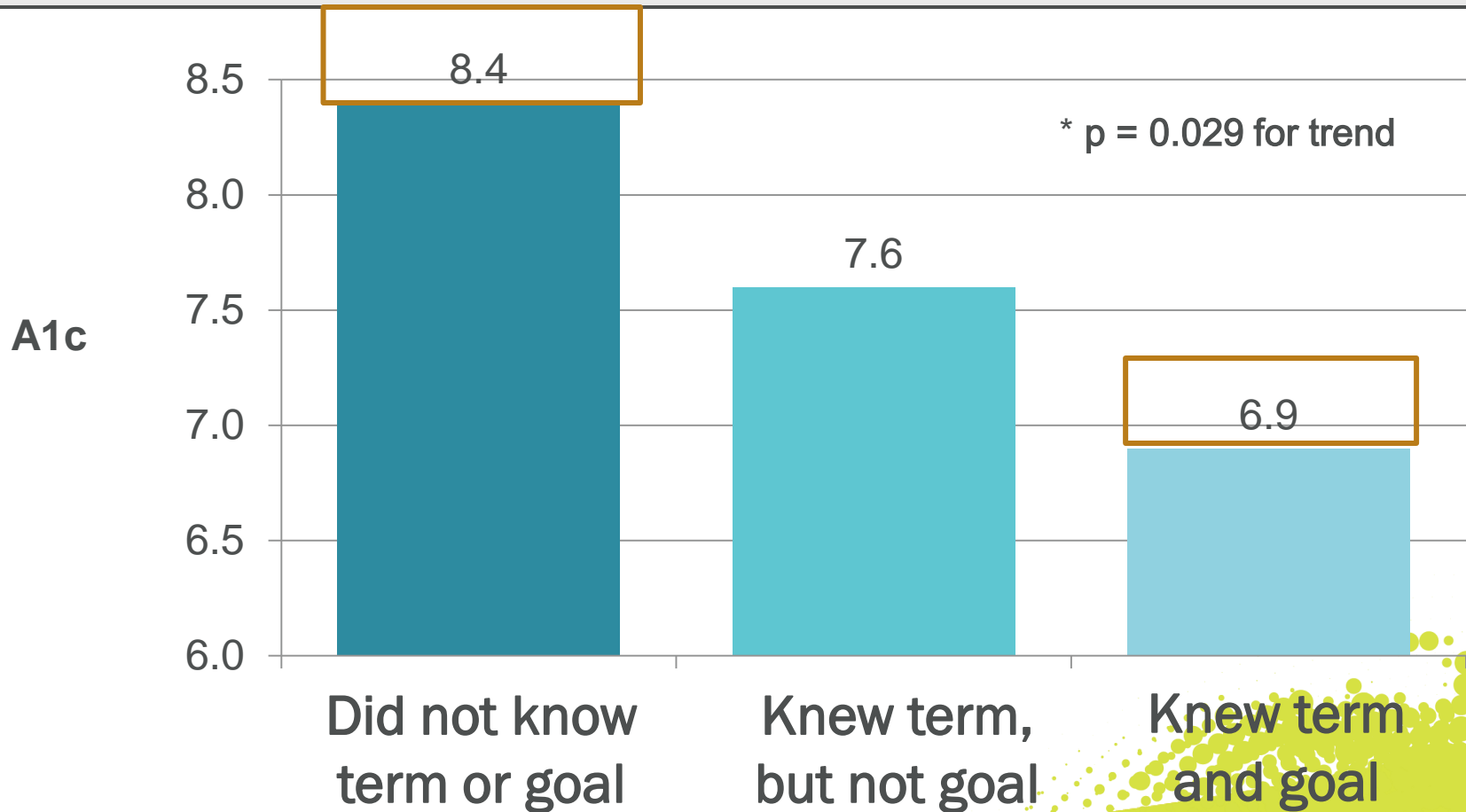
- Diabetes Self-Management Education (DSME):
 - Ongoing process facilitating knowledge, skills and the abilities necessary for diabetes self-care
 - Incorporate individual's needs, goals and life experiences
 - evidence-based standards
 - Improve clinical outcomes, health status and quality of life
- DSME does not stop when the patient leaves the educator's office = DSMS
 - Behavior change, maintenance of healthy diabetes-related behaviors, and continuously address psychosocial concerns
- Cover the *AADE7 Framework*

Knowledge does not change behavior,
but...it has an impact



A1C by Patient Knowledge

Better A1c knowledge was associated with lower A1c levels.



Accredited Diabetes Education Programs



684 programs, 1652 sites



1714 programs, 3506 sites

DSME Reimbursement

An education and training program that helps patients manage their diabetes

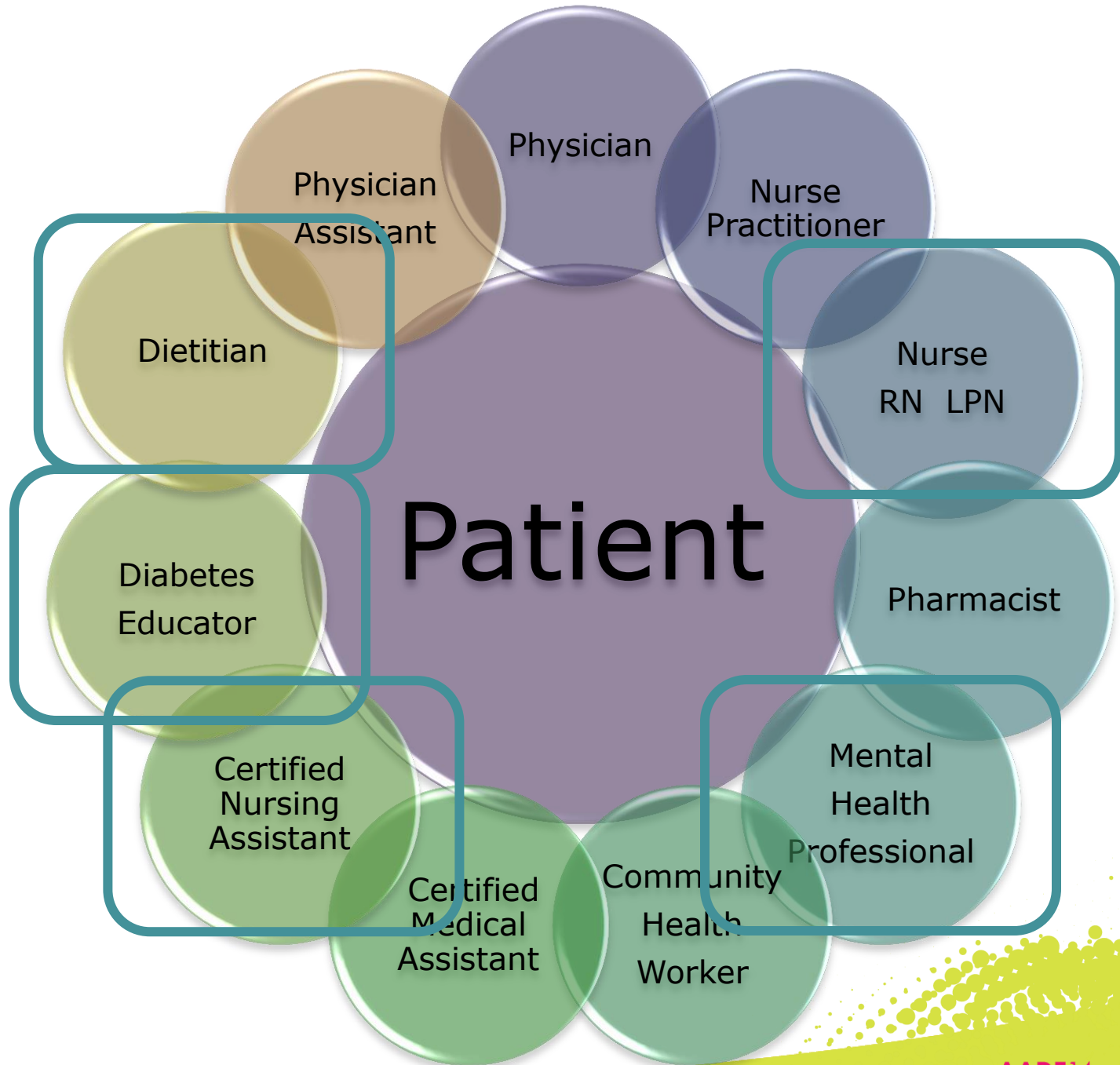
CPT Codes
Healthcare Common
Procedure Coding
(HCPC) System II G
Codes
(G0108 and G0109)

Classes

Nutritional management is one content area and may be delivered by non-RD members of healthcare team

National Standards for Diabetes Self-management Education and Support

- Standard 1: Organizational Structure, Mission Statement, Goals
- Standard 2: Target Population
- Standard 3: Advisory Board
- Standard 4: Coordinator
- Standard 5: Multifaceted Education Team
- Standard 6: Curriculum
- Standard 7: Assessment, Development of Education Plan, Re-assessment
- Standard 8: Ongoing Support
- Standard 9: Documentation
- Standard 10: Continuous Quality Improvement Plan (Data Collection and Analysis)



Multidisciplinary Team Approach: Is it more Effective?

- Coordinated, team-based care vs standard care in FQHCs
- MD or NP, care manager (RN or LPN), medical assistant, information specialist and a social worker
 - Telephone calls, system prompts key guideline requirements to practitioners (A1C testing), planned visits addressing multiple diseases
- Patients receiving team-based care showed reductions and significantly better outcomes in:
 - glycemic control, hypertension, and BMI

Is a Multidisciplinary Team Approach More Costly?

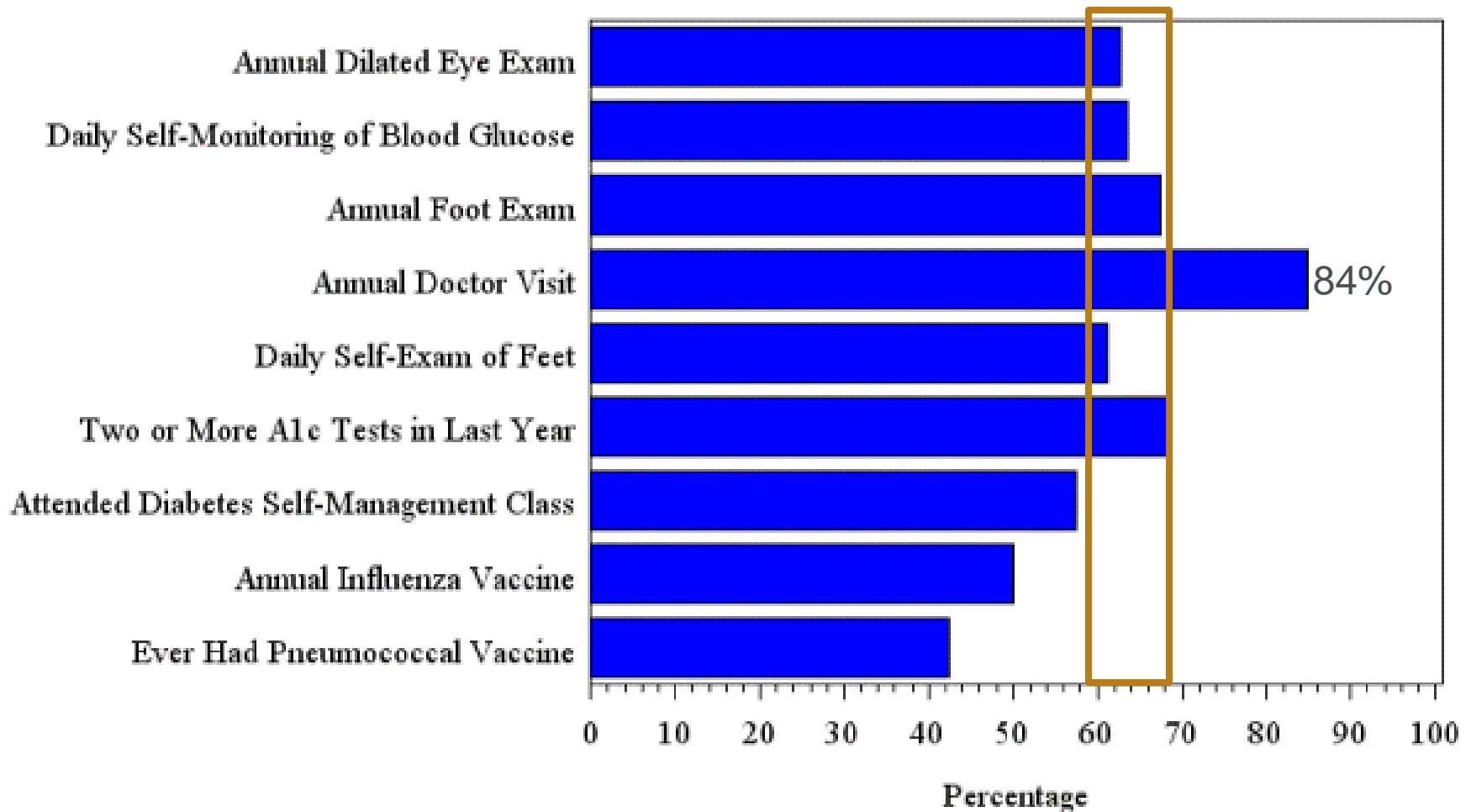
- Differences in Medicaid/Medicare claims of team-based care vs standard care in FQHCs.
- Both team based and control patients had an increase in claims, but no significant difference in total payments
 - Team based approach is no more costly than standard care
- Diabetes outcomes in team management program
 - Diabetes visits, groups DSME and telephone contact
 - Increase in A1C, urinary protein, and serum lipids screenings
 - Shorter hospital stays
 - ✧ Lower overall cost for patient and facility



Preventative Services



Age-Adjusted % of Adults (18+ years) with Diagnosed Diabetes Receiving Preventive Care United States



Preventative Services: Ophthalmology



- Between 2005 and 2050, the number of Americans 40 years or older with diabetic retinopathy (DR) is predicted to triple
 - 5.5 million to 16 million people
 - Vision threatening (DR) will increase from 1.2 million to 3.4 million
- The National Committee for Quality Assurance, Health Plan Employer Data and Information Set concluded that:
 - 56.5% of those covered by commercial health plans had a retinal exam in the previous year
 - 63.5% covered by Medicare had a retinal exam in the previous year
 - 52.7% covered by Medicaid had a retinal exam in the previous year
- Healthy People 2020 goal for annual dilated eye exams for adults with diabetes is 58.7%

Preventative Services: Nephrology and Podiatry

- **Nephrology**: Dialysis Morbidity and Mortality Study
 - 30% of all patients with Stage 5 CKD did not see a nephrologist until 3 months before initiating RRT
 - 50% never consulted with a dietitian before starting such therapy

Healthy People 2020 goal: 37%
- **Podiatry**: study of time for foot ulcer treatment/healing
 - 57% of patients had a delay time of >2 weeks before seeing a podiatrist
 - Patient delay: 3 days
 - Professional delay: 7 days
 - Ulcer healing time was 49 days vs the average 21 days
 - Reducing the number of health care professionals in the referral trajectory – decrease treatment delay and healing time?

Healthy People 2020 goal: 75%

Mental Health and Glycemic Control



- Improve diabetes self-care integrating mindfulness and acceptance skills
 - Effective in treating depression and in improving glycemic control
- Controlled psychosocial intervention incorporating Cognitive Behavioral Therapy (CBT)
 - CBT was more effective in improving glycemic control than education alone



Barriers of Referral to Preventative Services

- Minimal patient awareness of the importance of preventative care
 - Interventions to increase patient awareness have proven effective at increasing screening rates (i.e. eye exams)
- Limited health knowledge by primary care doctors
 - Identifying high risk patients
 - Barrier to adherence to standard guidelines
- Lack of information to patients' about their health during the physical exam
 - Teachable moments?
- Cultural differences

Cultural factors in Diabetes



Assessment of health beliefs

- What do you think has caused your diabetes?
- Why do you think it started when it did?
- What do you think diabetes does to you? How does it work?
- What problems has diabetes caused to you?
- What concerns you most about your diabetes?
- How serious is your diabetes, do think you will get better soon?

Health Literacy and Literacy. Is it the same?



- Literacy: Ability to read and write
 - Approximately 1/5 of the US adult population reads below the fifth-grade level
- Health literacy refers to a patient's ability to obtain, process and understand health information and services needed **to make appropriate decisions**
- Patients with low literacy and health literacy often struggle with diabetes self-management

Who is at risk for low health literacy?

- **Low health literacy is more prevalent among:**

- Older adults
- Minority populations
- Those who have low socioeconomic status
- Medically underserved people

- **Patients with low health literacy may have difficulty:**

- Locating providers and services
- Filling out complex health forms (i.e. questionnaires)
- Sharing their medical history with providers
- Seeking preventive health care
- Knowing the connection between risky behaviors and health
- Understanding directions on medication bottles



How can we help?



- Use simple language, short sentences and define technical terms
- Supplement instruction with appropriate materials (videos, models, pictures, etc.)
- Ask patients to explain your instructions (**teach back method**) or demonstrate the procedure
- Ask questions that begin with “how” and “what,” rather than closed-ended yes/no questions
- For Limited English Proficiency (LEP) patients, provide information in their primary language
- Offer assistance with completing forms
- Organize information so that the most important points stand out and repeat this information

How can we help?

Valor ideal del azúcar

En ayunas y antes de las comidas:
90-130 mg/dl

2 horas después de comer:
menos de 180mg/dl



Horario de Chequeo del azúcar

En el día	En el día	En la noche	En la noche
Hora:	Hora:	Hora:	Hora:

- Me voy a chequear ___ veces al día.
- Me voy a chequear ___ veces a la semana.

Usando Medicamentos: Recuerda que debe usar sus medicamentos como le indicó su médico.

Nombre(s) de mis Medicamentos	Dosis	Nota

Reduciendo Riesgos: El alto nivel del azúcar causa daños en todo el cuerpo. Por eso debe hacerse estos exámenes:

Examen	¿Cada cuánto?	Fecha de mi próximo examen
Examen de ojos	1 vez al año	
Visita al Dentista	1 vez al año	
Examen de las pies	Una vez Todos los días y Surtidos de cada día	
Examen de otros alBmentos (para sentirse está bien)	1 vez al año	

La diabetes causa altos niveles de azúcar en la sangre

Vigilando mis valores	Valor ideal	Mi Valor
A1c	Menos de 7%	
Peso	Peso ideal	
Índice de Masa Corporal (IMC)	19-24 (normal)	
	25-30 (sobrepeso)	
	31+ (obesidad)	
Presión arterial	Menos de 130/80	
Cholesterol	Mujeres: menos de 35 pulgadas Hombres: menos de 38 pulgadas	
Cholesterol y Triglicéridos	Cholesterol Total: menos de 200	
	LDL: Menos de 100 HDL: Más de 40 para hombres más de 50 para mujeres.	
	Triglicéridos: menos de 150	

Actividad Física: 5 días a la semana por 30 minutos o más.

Tipo de Actividad	¿Cuanto tiempo?	¿Cuántos días a la semana?	¿Que equipo necesitas?

Comiendo Saludablemente: Controlar a 3-5 porciones de fruta, leche, yogur o pan en cada comida.

Hora	Plan de Comida



What to ask?

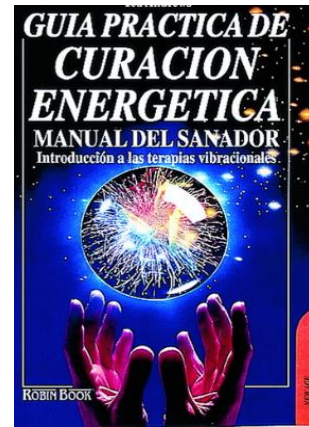


- Are you taking any medication?
- Use of herbal medicines including: spearmint, chamomile, aloe vera (nopal), garlic, lavender, ginger, ginseng, rue, anise, orange leaves, sweet basil, oregano, lime, peppermint, cinnamon pills, red yeast rice, St. John's wort, garlic, benfotiamine, fengugreek, Ginseng, bitter melon

Are you taking anything to relieve your symptoms?

Healers

- Curanderos/as (Mexico)- Medicine Men
- Santiguadura (PR) – Medicine Men
- Espiritistas – Spiritual Healers
- Sobadora – Massage Therapists
- Partera – Midwife
- Senoras – Women with herbal remedies



How are We Doing?

Proportion of people with diabetes	Controlled Blood Pressure (\leq 140/80 mmHg)	57.1%
	LDL at goal level (\leq 100 mg/dL)	58.8%
	A1C at goal level (\leq 7%)	43.2%
	All three met	18.8%

EMORY



Emory Diabetes Education Training Academy



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- Live and web-based Continuing Medical Education (CME)
 - MDs, NPs, PAs
- Professional Diabetes Educator Certificate Course for mid-level professionals
 - CDEs, PharmDs, RDs, RNs
- Diabetes Education for Clinical Support Staff
 - MAs, CNAs, LPNs, CHWs, Public Health

Study Design and Methods

- **Purpose:**
 - To evaluate the gaps in the delivery of diabetes-self management education to patients with diabetes
- **Design:**
 - Healthcare professionals (HCP) were invited to attend Continuing Education interactive webinars by Endocrinologists
 - “Discussing Cases with Diabetes Experts”
 - Participants had the opportunity to interact, discuss challenging cases within their facility and ask questions to the presenters



Study Design and Methods

- 1 hour Continuing Education credit
 - No cost
- Webinars were available for 3 months for those participants unable to attend
 - Is Incretin Therapy the Way to go?
 - Diabetes Updates 2014
- Information was collected on healthcare professionals, diabetes education and prevention strategies at their working institutions



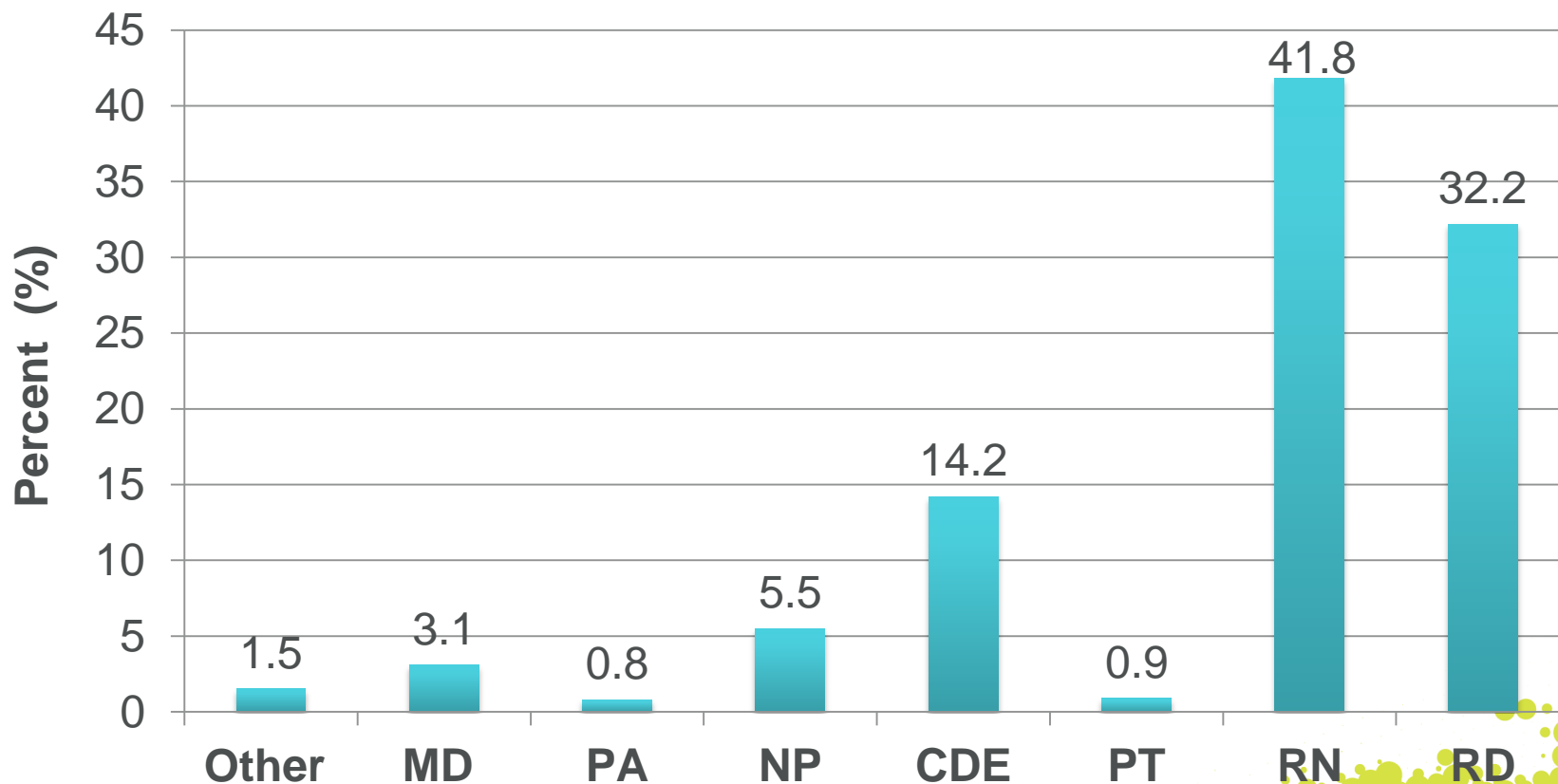
Statistical Methods

- Descriptive analyses were conducted for variables related to health settings, resource utilization, diabetes education, and preventative services
- Chi square test was used to analyze the relationship between type organizations, individuals and health care variables

Results

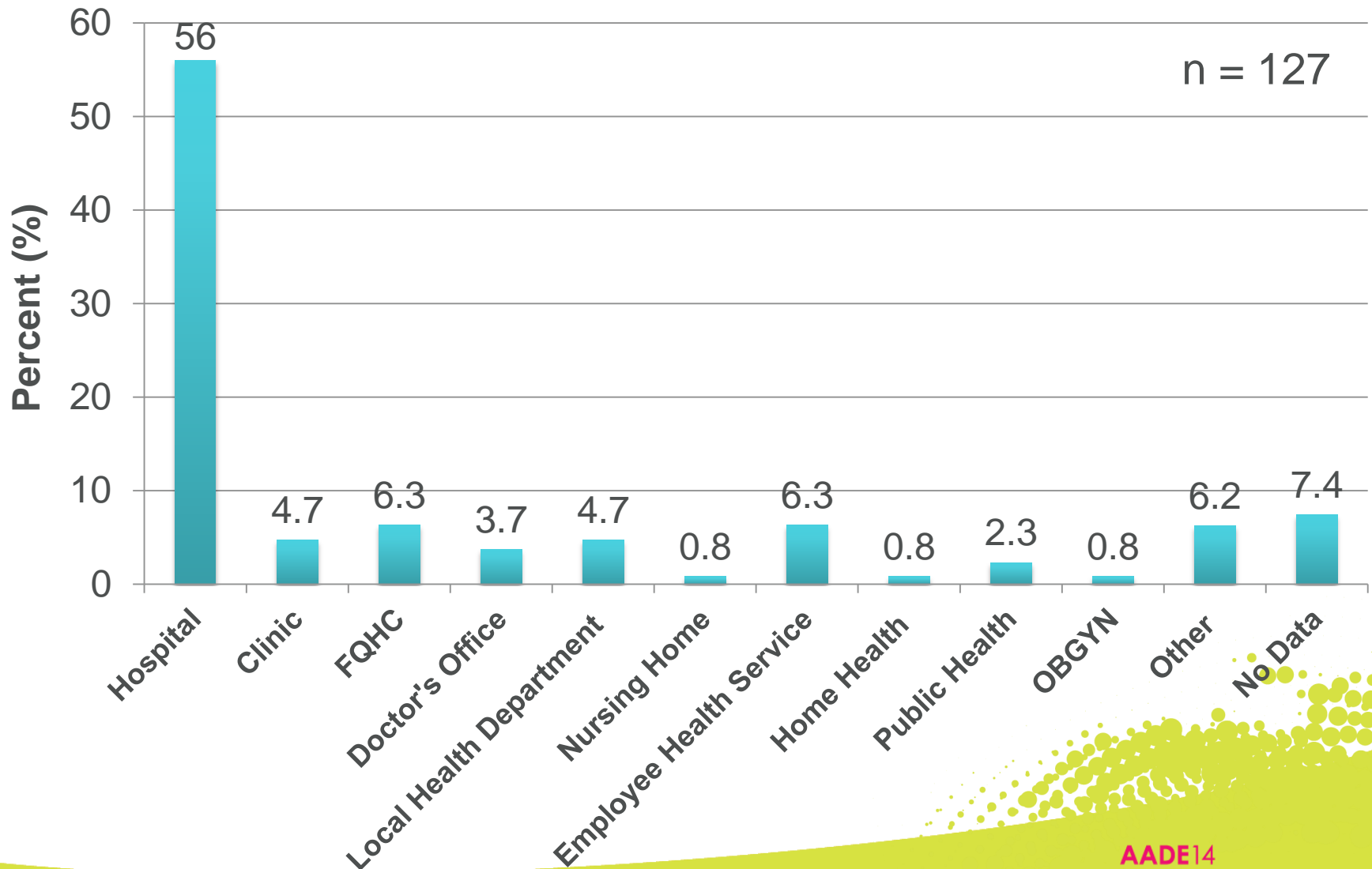
Attendees by License

n = 127



Results

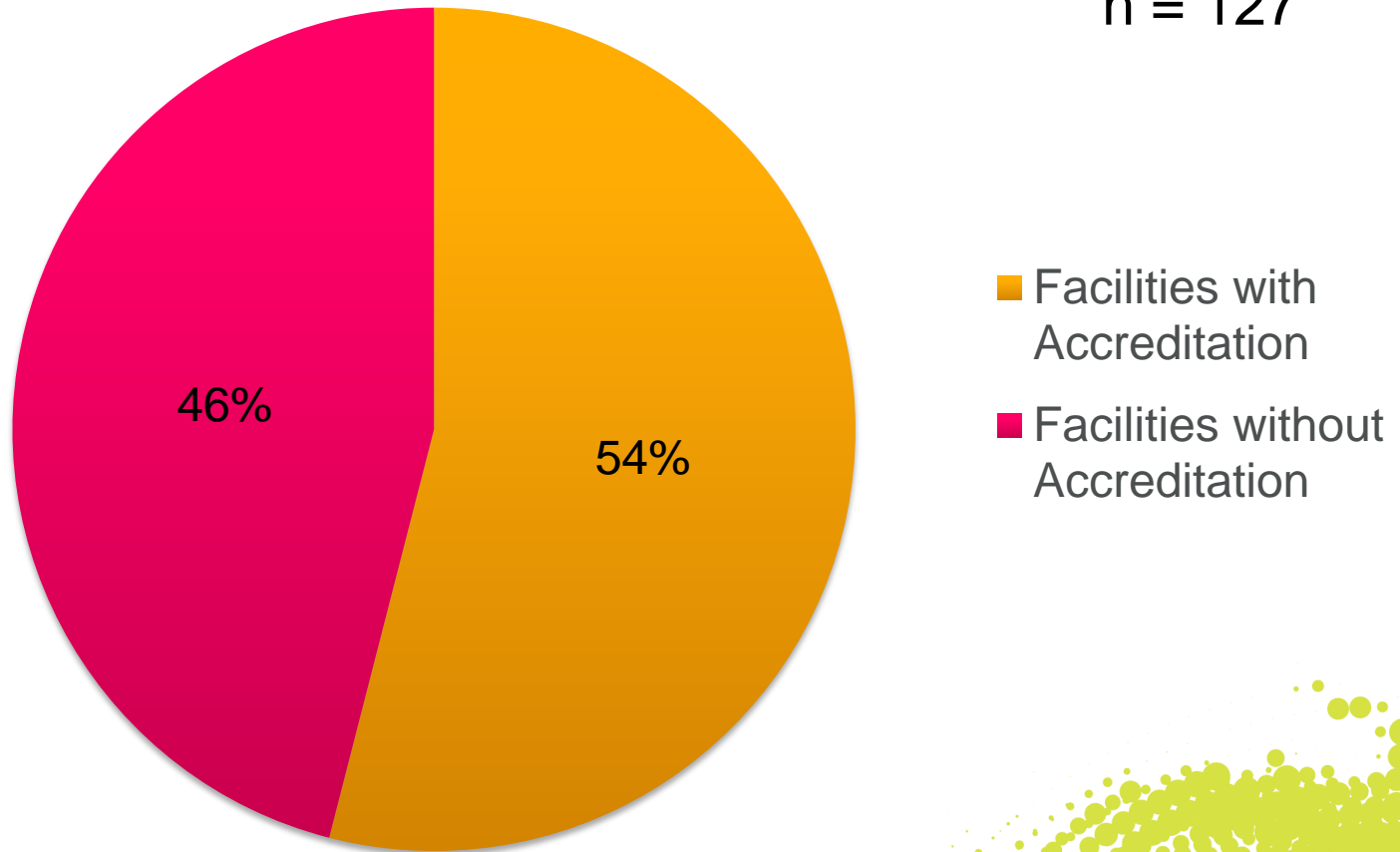
Attendees by Organizational Affiliation



Results

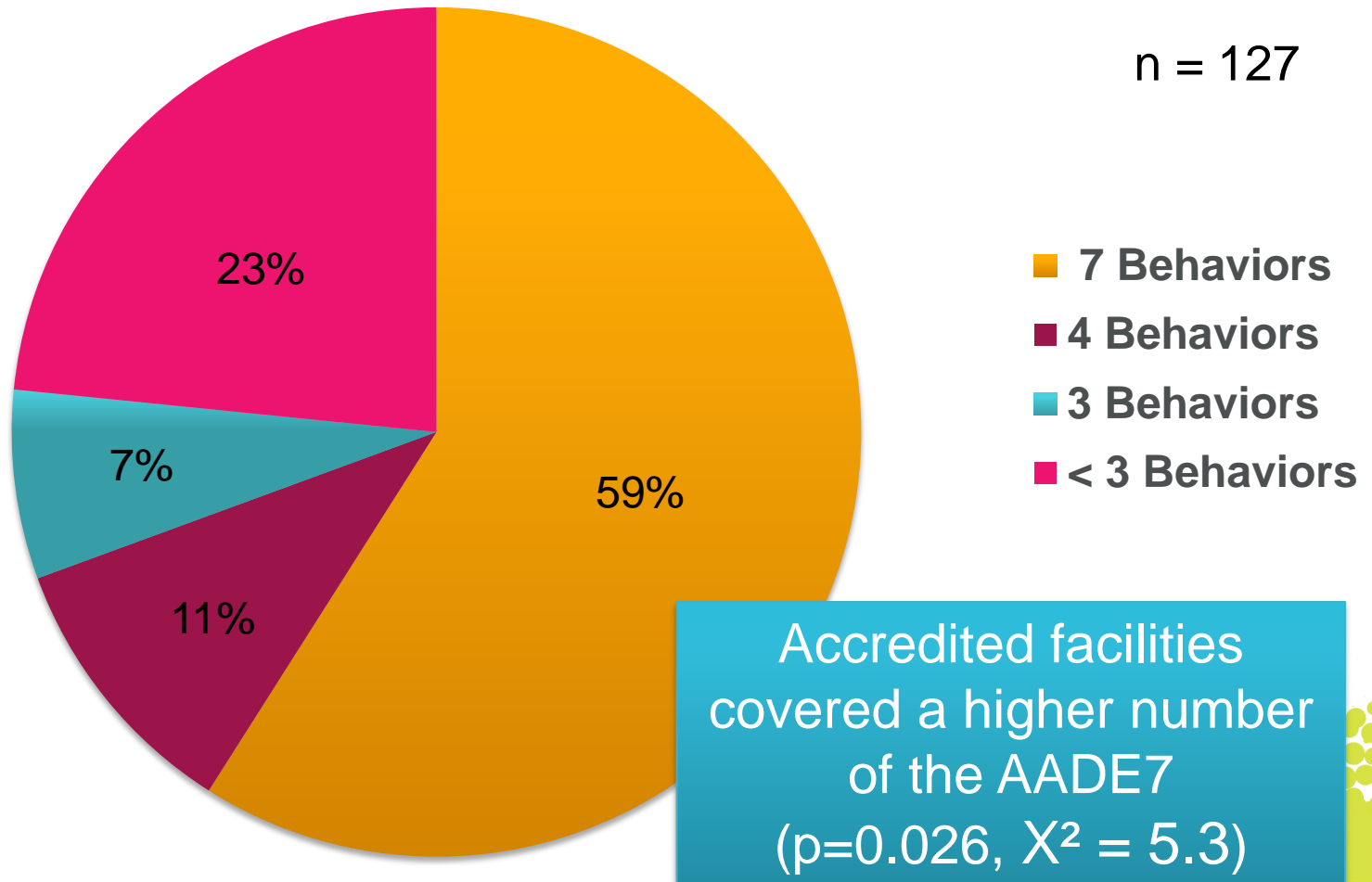
AADE or ADA Accredited Programs

n = 127



Results

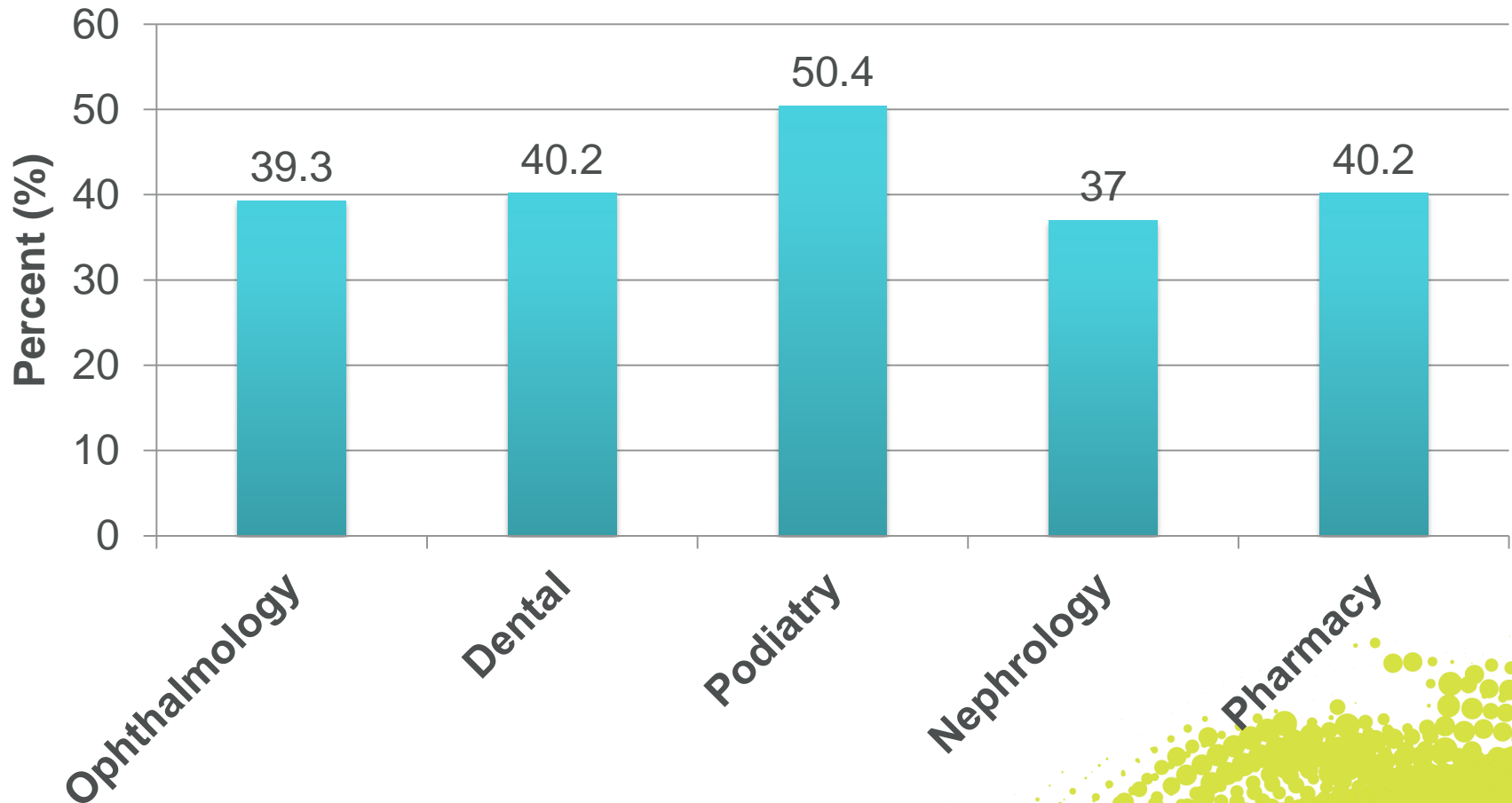
AADE7 Behaviors Covered in Facilities



Results

Provided/Referred to Preventative Services

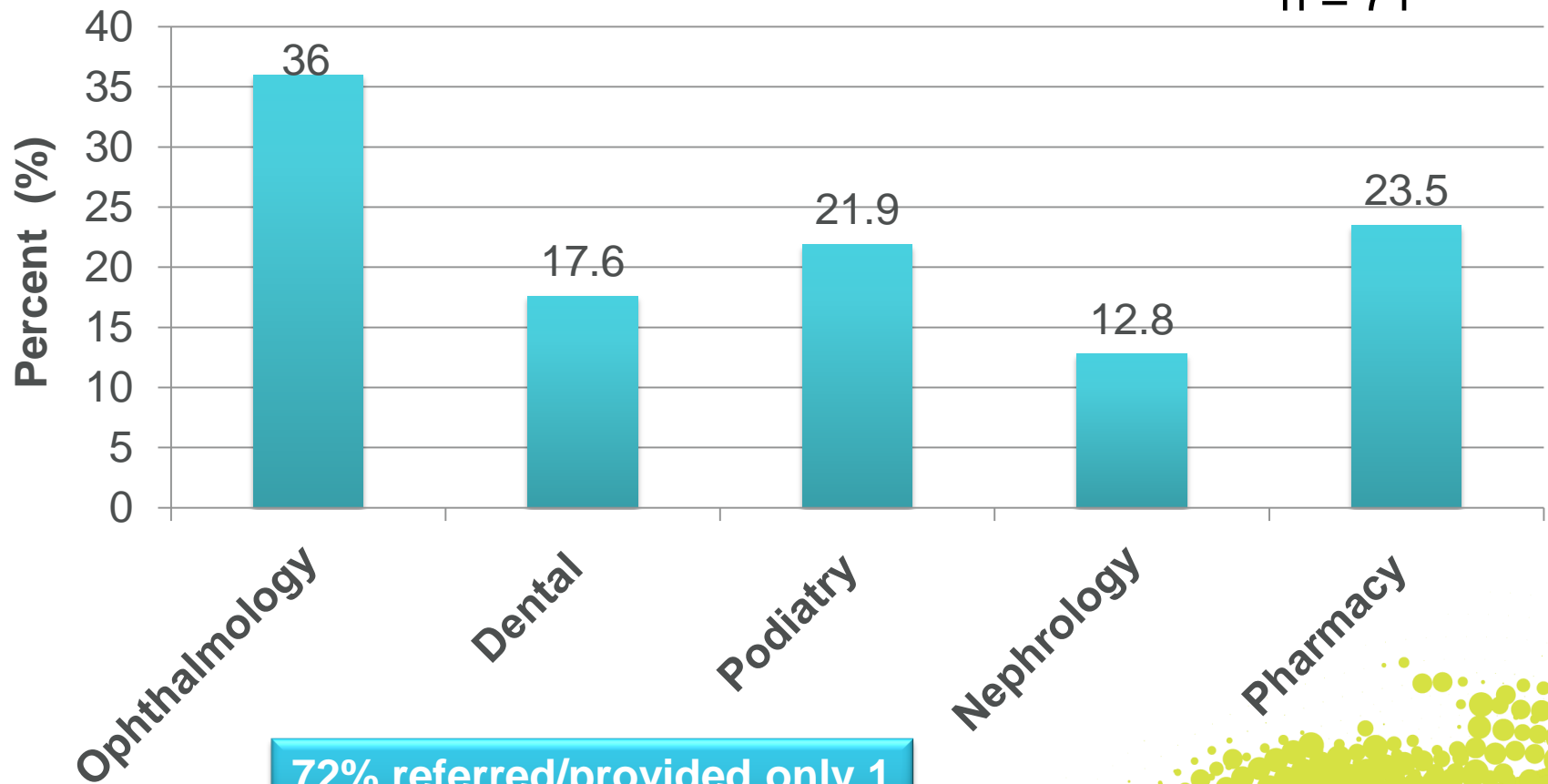
n = 127



Results

Provided/Referred to Preventative Services by Hospitals

n = 71



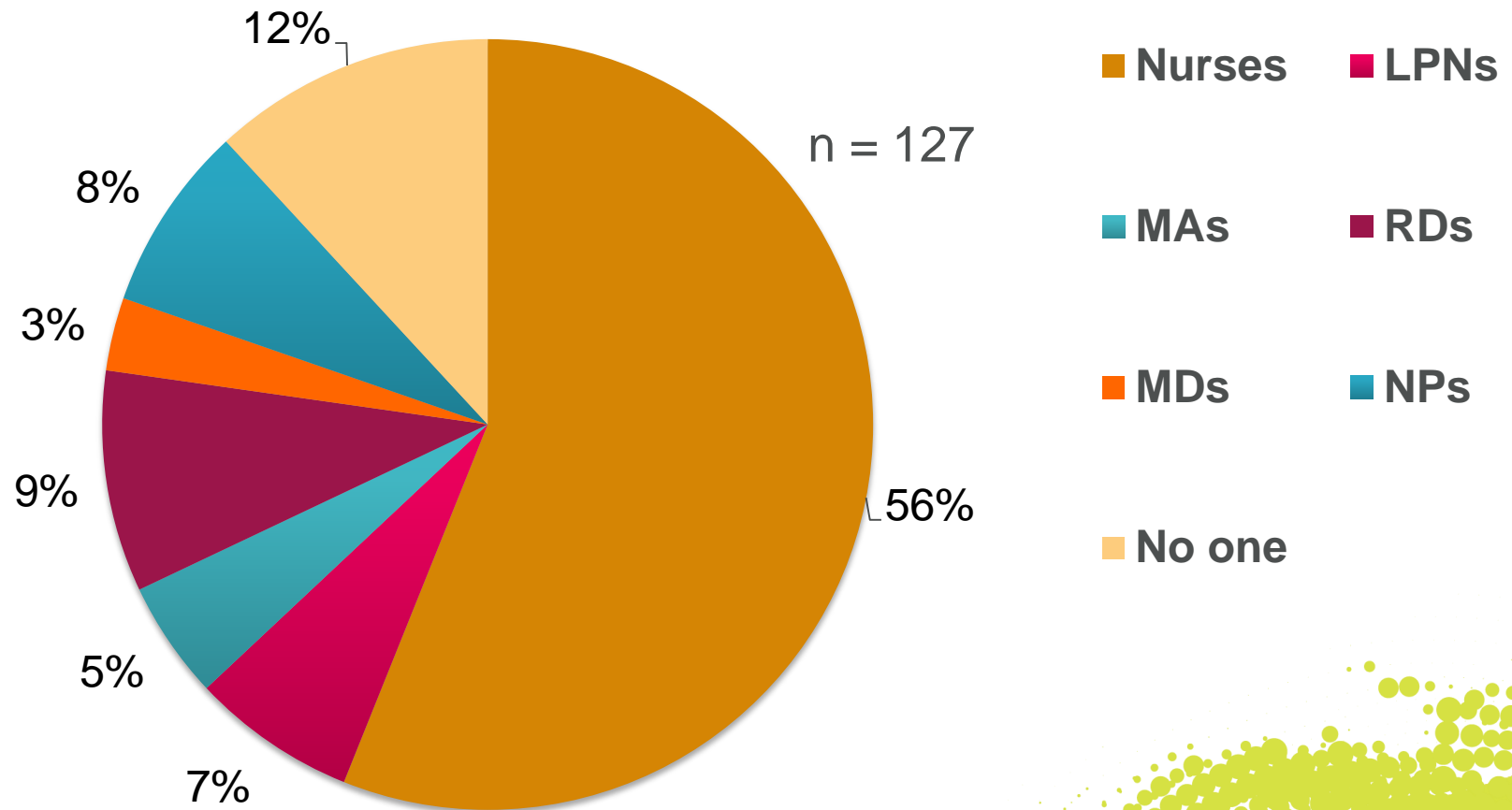
72% referred/provided only 1
preventive service

Results

- A total of 37% of healthcare professionals did not know if mental/psychological assistance was provided or referred
 - 65% were diabetes educators ($p < 0.01$)

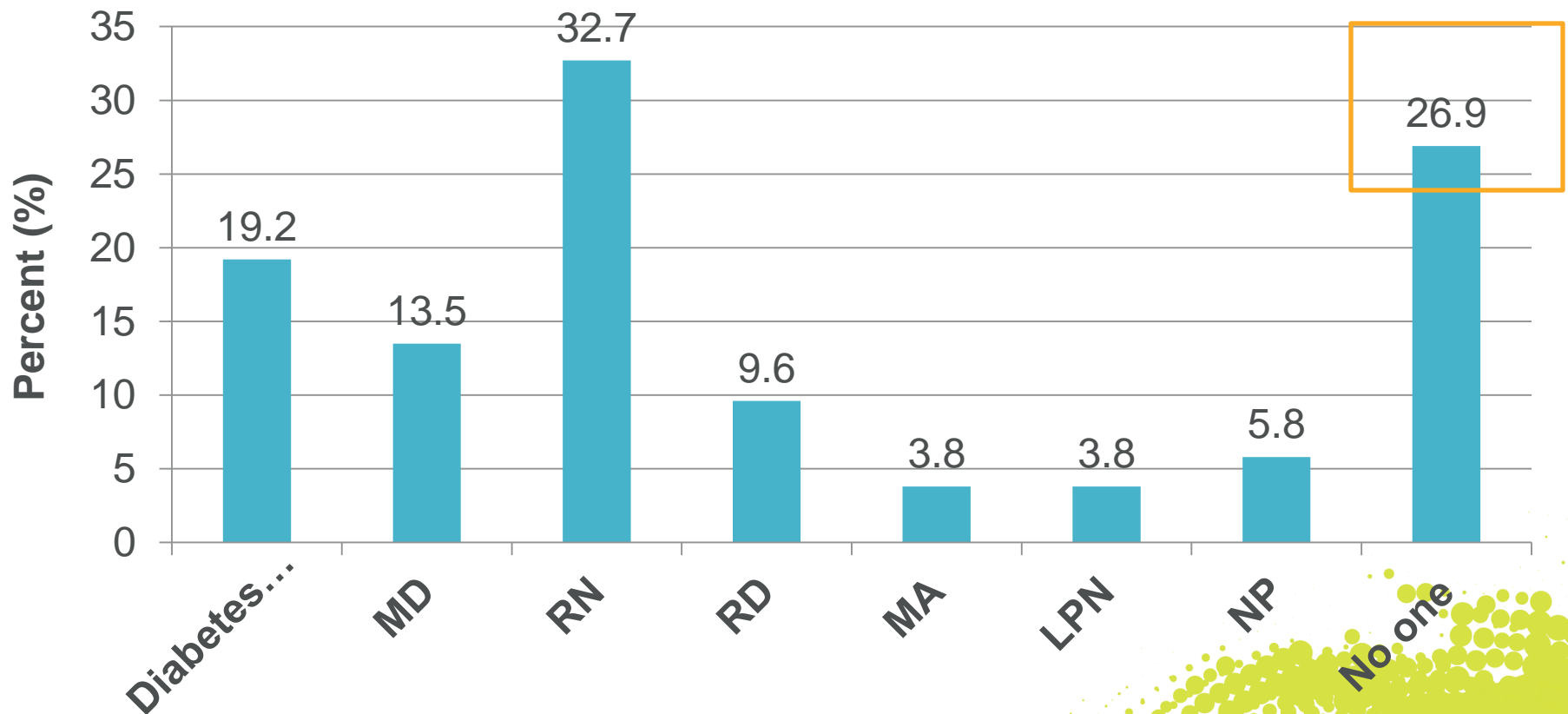
Results

Who Teaches Insulin Administration?



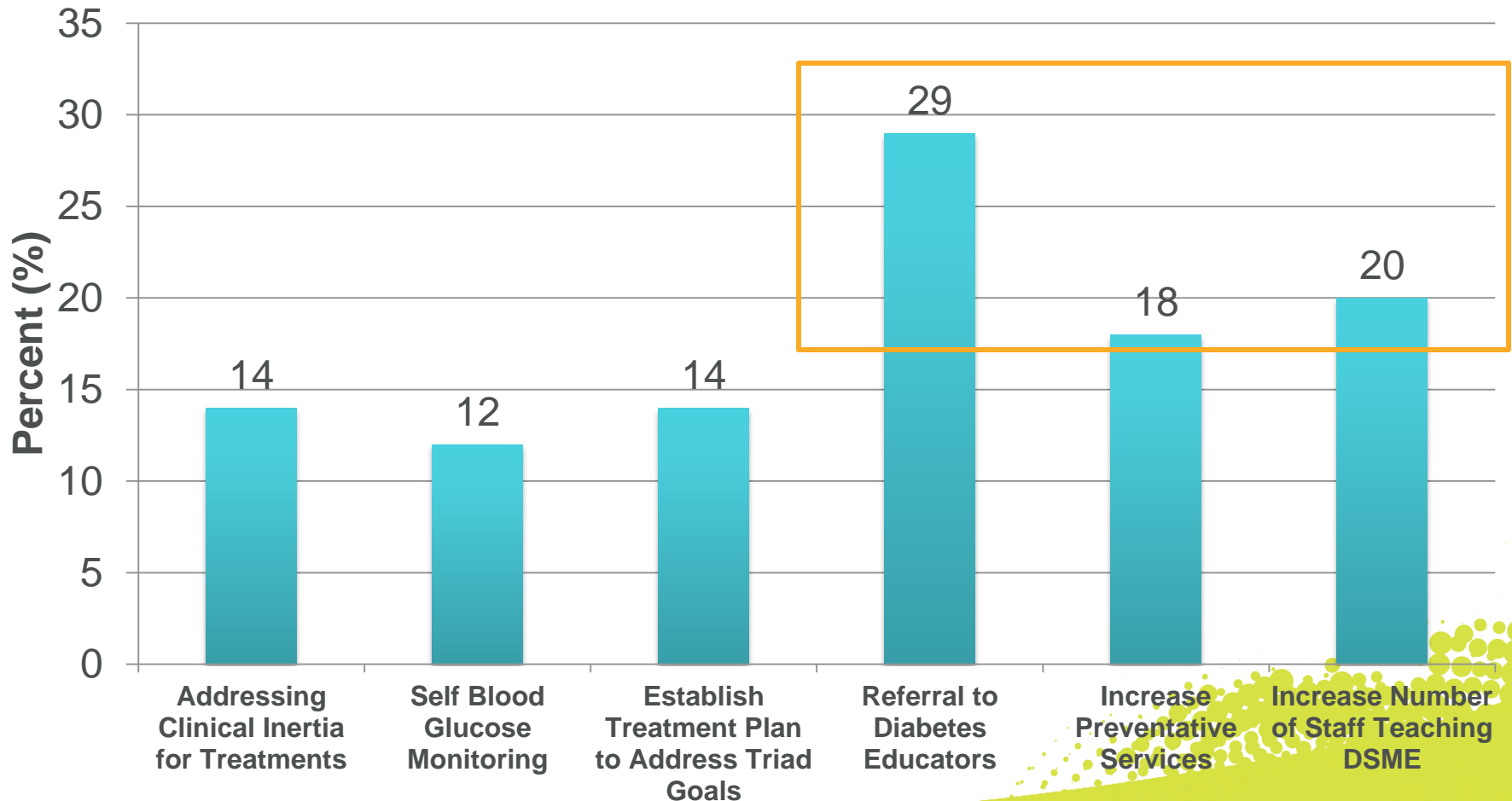
Results

Who Focuses on the Teachable Moments Theory?



Results

Participants' Goals for Improving their Practice n = 127



Putting the Pieces together

- Facilities are eager to provide the most up-to date DSME/S
- 7 out of 10 healthcare professionals who attended the webinars were RNs and RDs and some CDEs
 - MDs, NPs, PAs and CHWs, LPNs, CNA, and MAs
- Only half of the facilities had an accredited program and these were more likely to include the complete AADE7
 - 59% taught the all of the 7 self-care behaviors
- AADE7 behaviors taught were:
 - Healthy Eating
 - Being Active
 - Taking Medications
 - Blood Glucose Monitoring
 - Leaving out: Reducing Risks, Problem Solving and Healthy Coping



Putting the Pieces Together

- About 1 out of 3 hospitals provided and/or referred patients to preventative services
- About 2 out of 3 of hospitals only provided and/or referred patients to 1 preventative service
- Diabetes educators are not identifying those patients at high risk for mental health conditions
- Nurses were the main healthcare professionals to teach insulin administration
 - 12% of facilities did not have anyone to teach insulin administration

Where do we go from here?



1. Focus on increasing capacity training for all levels of healthcare professionals
2. Incorporate prevention strategies to reduce diabetes complications
 - Identifying patient in need of mental health assistance
3. Utilize clinical support staff for diabetes education and allocate resources to provide the most up-to-date care for patients with diabetes

What do you think?

BD is a 46 y/o Asian American man with T2D for 11 years and an A1C of 11.4% who refuses to start insulin. He has a family hx of diabetes on his father's side.

What is your best initial answer?

- a) Reassure the patient that will nothing bad will happen to him
- b) Ask the patient if his father had complications
- c) Educate the patient on the increased risk of complications due to high blood glucose
- d) Ask the patient why he does not want to start insulin

What do you think?

How would you assess BD's health literacy?

- a) Ask the patient how well they can read
- b) Ask the patient to read a pamphlet and then explain it to you
- c) Obtain information about the educational level
- d) Gauge reading level based on what newspaper or magazines he reads



Georgia Department of Public Health

How Diabetes Education & the 7 AADE Self-Care Behaviors are Delivered in Community Programs?



Presentation to: Healthcare/Public Health
Presented by: Dwana "Dee" Calhoun, MS, CHES
Date: Health Systems Project Director
August 25, 2014

We Protect Lives.



Georgia Diabetes Prevention and Control Program



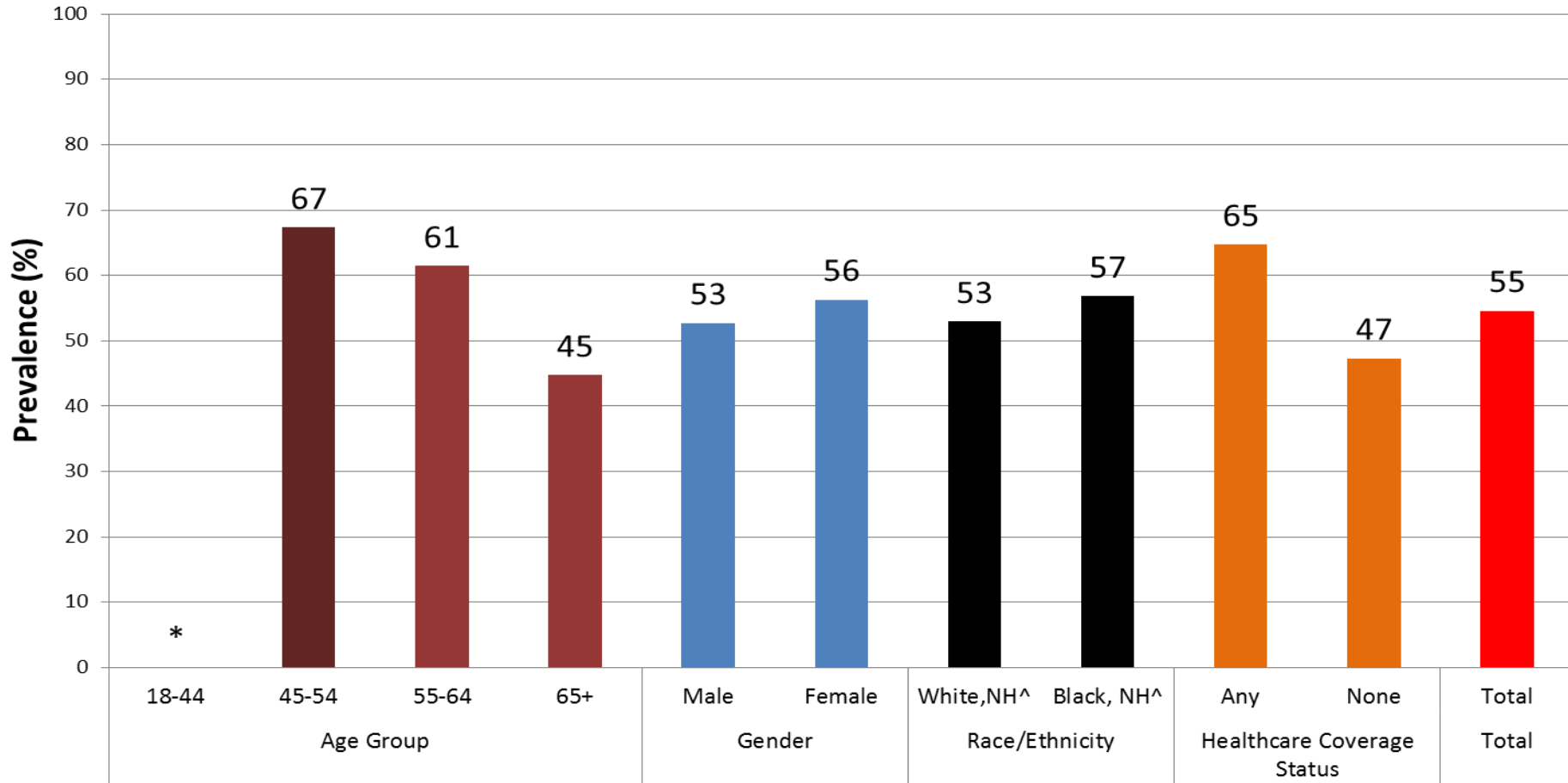
Mission

Protecting and preserving the eyes, hearts, kidneys and feet of Georgians living well with diabetes, prediabetes, and gestational diabetes.

Vision

Georgians living well, free of diabetes and its complications, with increased access to quality-oriented diabetes care and healthier options where they live, work, play and learn.

Figure 1. Prevalence of Formal Diabetes Education among Adult with Diabetes by Demographic and Healthcare Coverage Status, Georgia, 2012



* Sample Size too small to produce reliable estimates

^Non-Hispanic

Data Source: Behavioral Risk Factor Surveillance System (2012)

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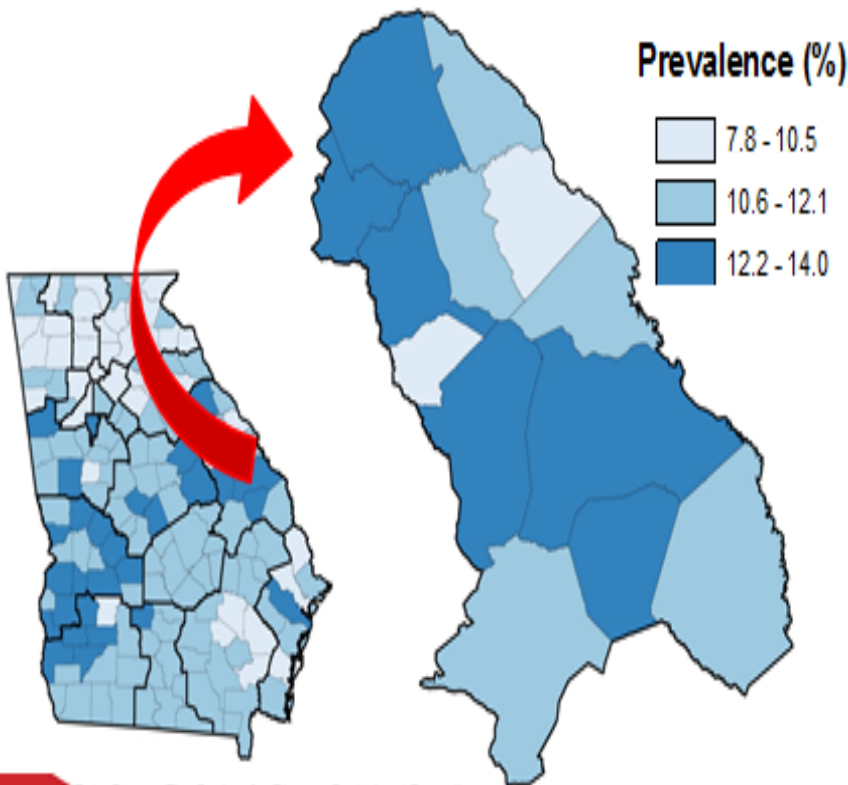


*Essential Services of
Public Health (3)
Inform, Educate, and
Empower People About
Health Issues
&
Essential Services of
Public Health (7)
Link People to Needed
Personal Health Services
and Assure the Provision
of Healthcare (When
Otherwise Unavailable)*

We Protect Lives.

Opportunity: Increase DSME Program Access

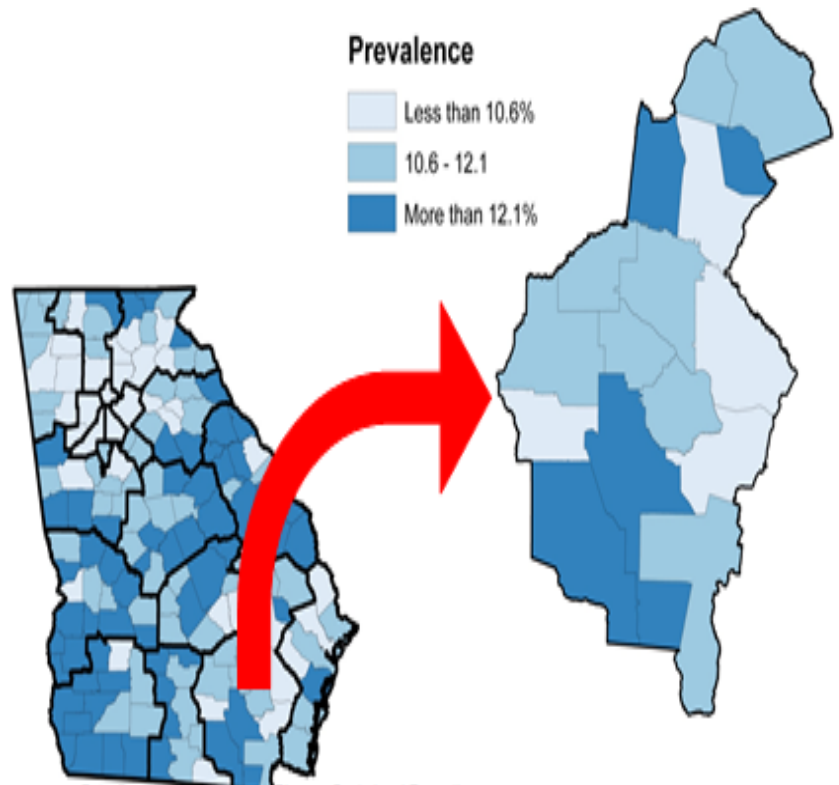
Prevalence of Diabetes among Augusta Adults by County, 2008-2010



Data Source: The Centers for Disease Control and Prevention:
http://www.cdc.gov/DDO1_STRS2/County/PrevalenceData.aspx?mode=DBT

We Protect Lives.

Prevalence of Diabetes among Waycross Adults by County, 2008-2010



Data Source: The Centers for Disease Control and Prevention:
http://www.cdc.gov/DDO1_STRS2/County/PrevalenceData.aspx?mode=DBT

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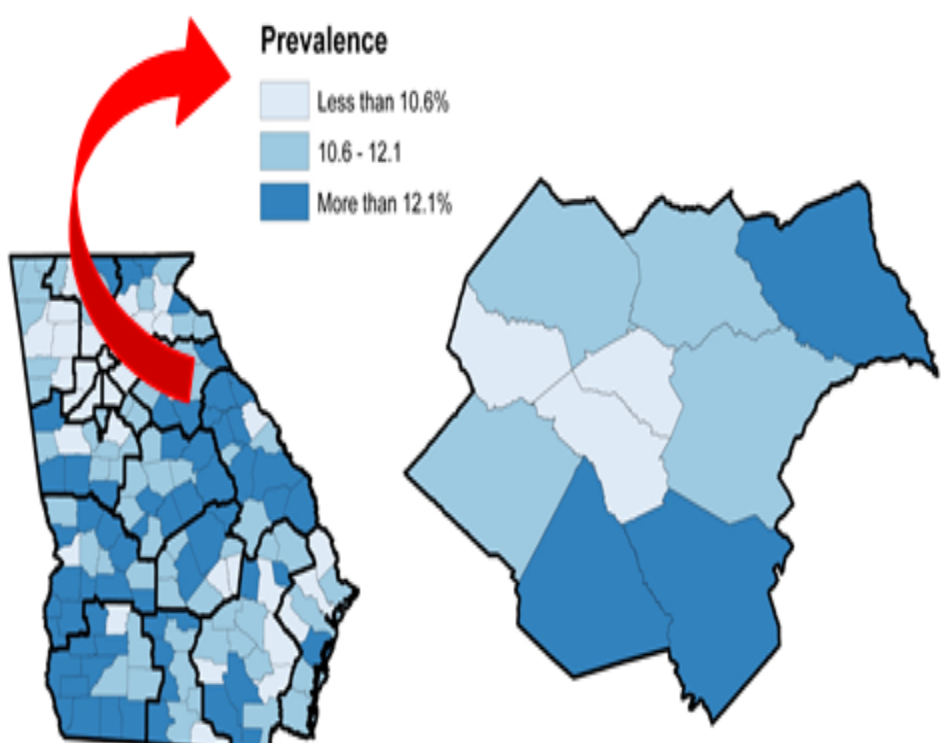
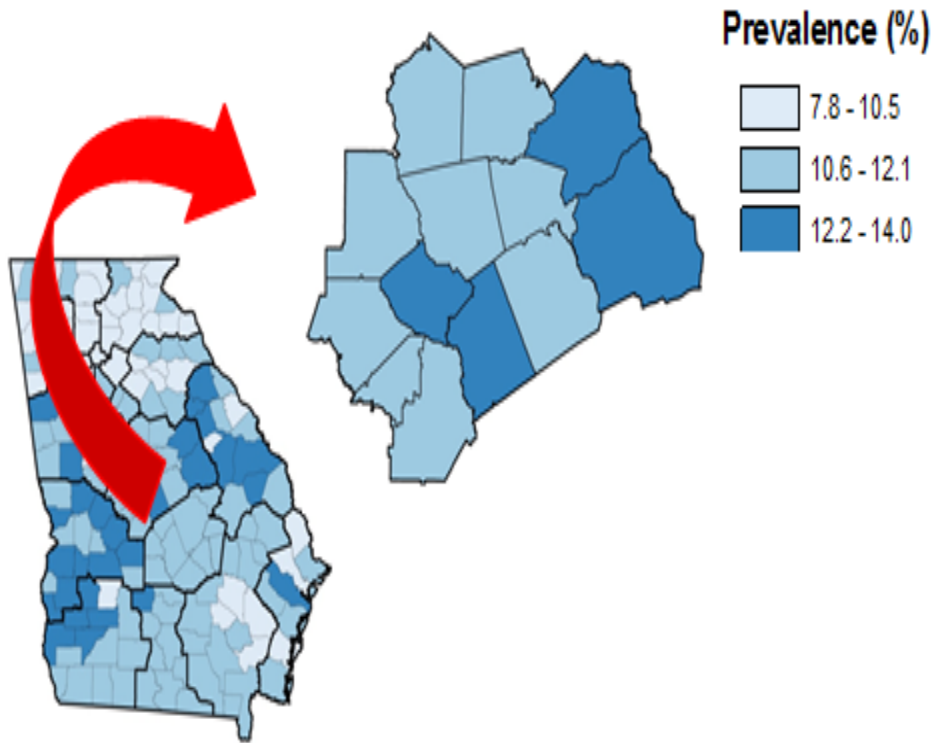
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Opportunity:

Increase DSME Program Access

Prevalence of Diabetes among Macon Adults by County, 2008-2010

Prevalence of Diabetes among Athens Adults by County, 2008-2010



Data Source: The Centers for Disease Control and Prevention:
http://www.ncscd.cdc.gov/DDT_STRS2/County/PrevalenceData.aspx?mode=DBT

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Data Source: The Centers for Disease Control and Prevention:
http://www.ncscd.cdc.gov/DDT_STRS2/County/PrevalenceData.aspx?mode=DBT

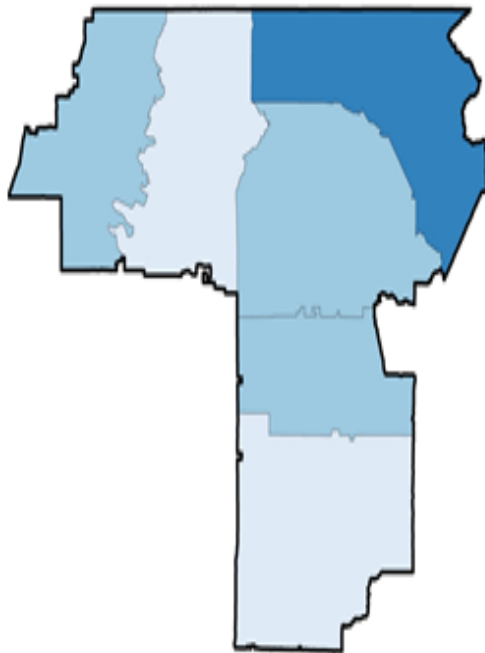
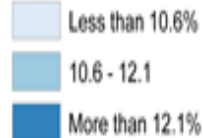
We Protect Lives.

We Protect Lives.

Opportunity: Increase DSME Program Access

Prevalence of Diabetes among Dalton Adults by County, 2008-2010

Prevalence

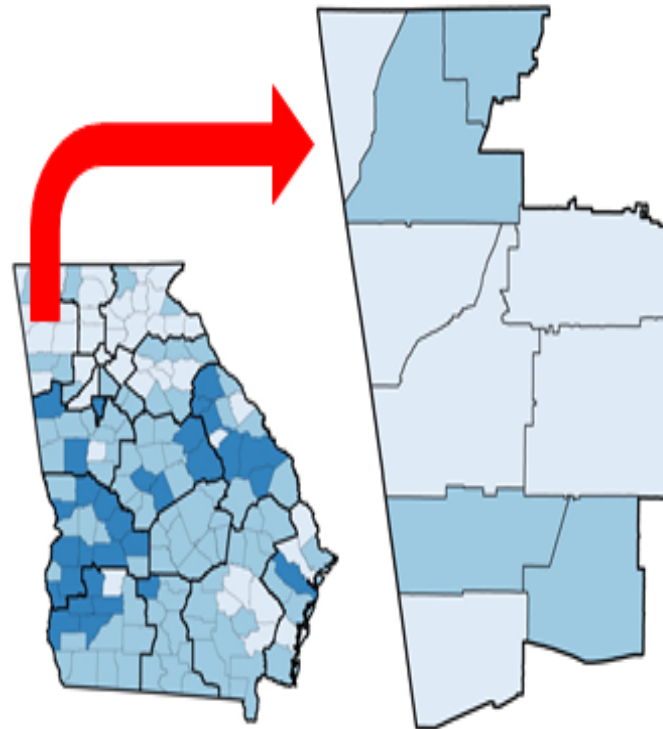
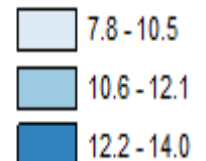


Data Source: The Centers for Disease Control and Prevention:
http://www.cdc.gov/DOT_STRS/CountyPrevalenceData.aspx?mode=DET

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Prevalence of Diabetes among Rome PHD Adults by County, 2008-2010

Prevalence (%)

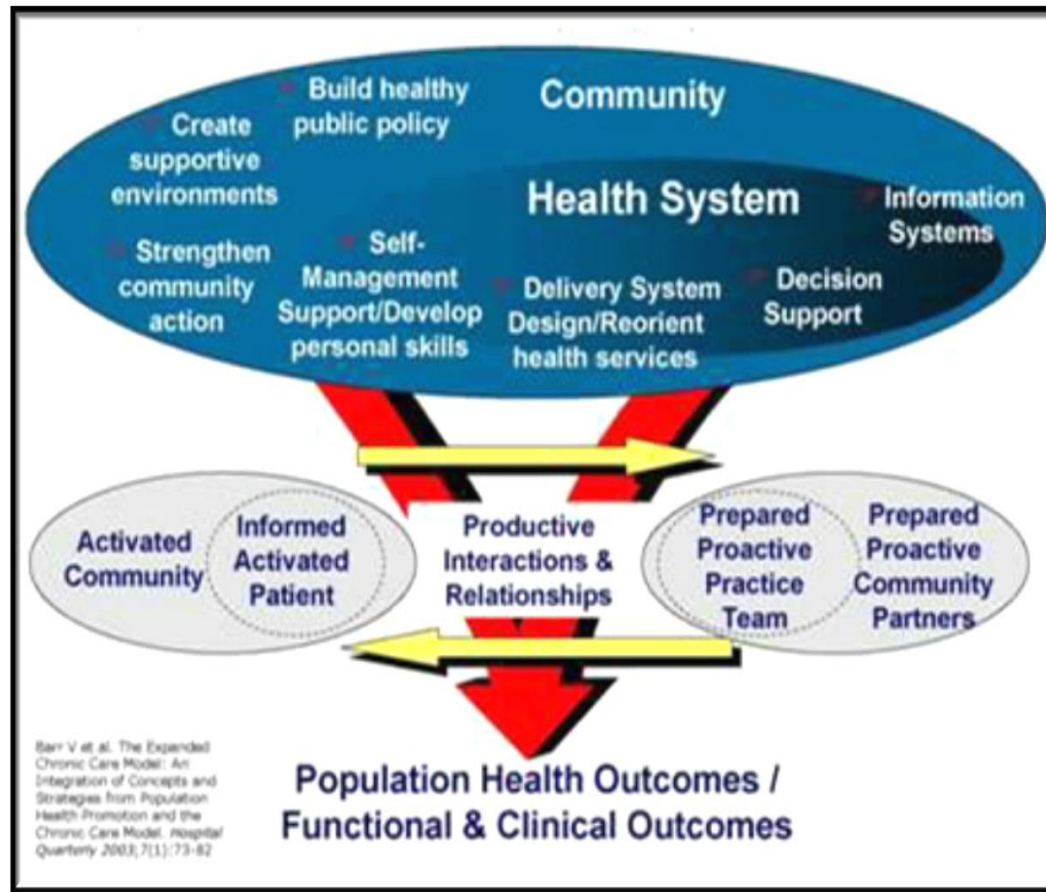


Data Source: The Centers for Disease Control and Prevention:
http://www.cdc.gov/DOT_STRS/CountyPrevalenceData.aspx?mode=DET

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Expanded Chronic Care Model



Elimination of health disparities related to diabetes prevalence, disability, morbidity and mortality.



Diabetes-14

Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education.

Relevant Healthy People 2020 Objectives: Diabetes (D)

D (Diabetes)-5.1

Reduce the proportion of persons with diabetes (*with an A1c value greater than 9 percent*).

D (Diabetes)-11

Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement *at least twice a year*.

D (Diabetes)-13

Increase the proportion of adults with diabetes who perform *self-blood glucose-monitoring* at least once daily.

Relevant Healthy People 2020 Objectives: Diabetes (D)

D (Diabetes)-6

Improve lipid control among persons with diagnosed diabetes.

D (Diabetes)-7

Increase the proportion of persons with diagnosed diabetes whose blood pressure is under control.

D (Diabetes)-9

Increase the proportion of adults with diabetes who have at least an annual foot examination.

D (Diabetes)-10

Increase the proportion of adults with diabetes who have an annual dilated eye examination.

D (Diabetes)-12

Increase the proportion of persons with diagnosed diabetes who obtain an annual urinary microalbumin measurement.

Teachable Moments: Identifying Additional Opportunities for Patient Engagement

Diabetes Diagnosis

Every Physician Office Visit

Maintain Recommended Testing

Assess Medication Compliance

Manage Co-morbid Conditions

Assess for Tx & Referral Challenges

Every Physician Office Visit

Family History-Medical

Reduce Lifestyle Risk Factors

Patient History-Medical

Review Plan of Care (POC) Goals

Teachable Moments: Identifying Additional Opportunities for Patient Engagement

Who?

Frequent Emergency Room Visits/Hospital Admissions

Episodes of visual, kidney foot problems, or high blood pressure

Experience difficulty adjusting to recommended nutritional intake

When?

Glucose levels continue to fluctuate

Difficulty adjusting to medication schedule or adherence with multiple medications

Challenges with meeting plan of care or treatment goals

Where?

Recently discharged from hospital due to diabetes complications

New to insulin therapy regimen and experiencing challenges

Difficulty recording or remembering when to check glucose levels in log book



Upcoming Opportunities
for Georgia's
Healthcare & Public
Health Professionals

We Protect Lives.



Georgia Diabetes Self-
Management Education
(DSME) Learning &
Sustainability
Network

We Protect Lives.



Scholarships:

Certified Diabetes Educators (CDE)- Exam Fee for clinicians (*including pharmacists*)

Medication Therapy Management (MTM) Certificate Training Program for Registered Pharmacists

Additional Resources

Diabetes is a serious and costly disease that affects both genders and crosses cultural, sociodemographic, and geographical boundaries.

In 2012, approximately 9.9%, or 734,800, Georgia adults were diagnosed with diabetes.¹¹



2013 Diabetes Self-Management Report



Diabetes-Related Complications among Older Adults

Nationally, older adults with diabetes have the highest rates of major lower-extremity amputation, visual impairment, end-stage renal (kidney) disease and heart conditions such as myocardial infarction (MI) of any age-group.¹⁷ Normal aging and diabetes, and conditions such as functional and cognitive impairments that impair function are associated with a higher risk of falls and fractures. A potential cause of functional impairment in diabetes may include interaction between coexisting medical conditions, peripheral neuropathy, vision and hearing difficulty, and gait (walking) and balance problems.¹⁷

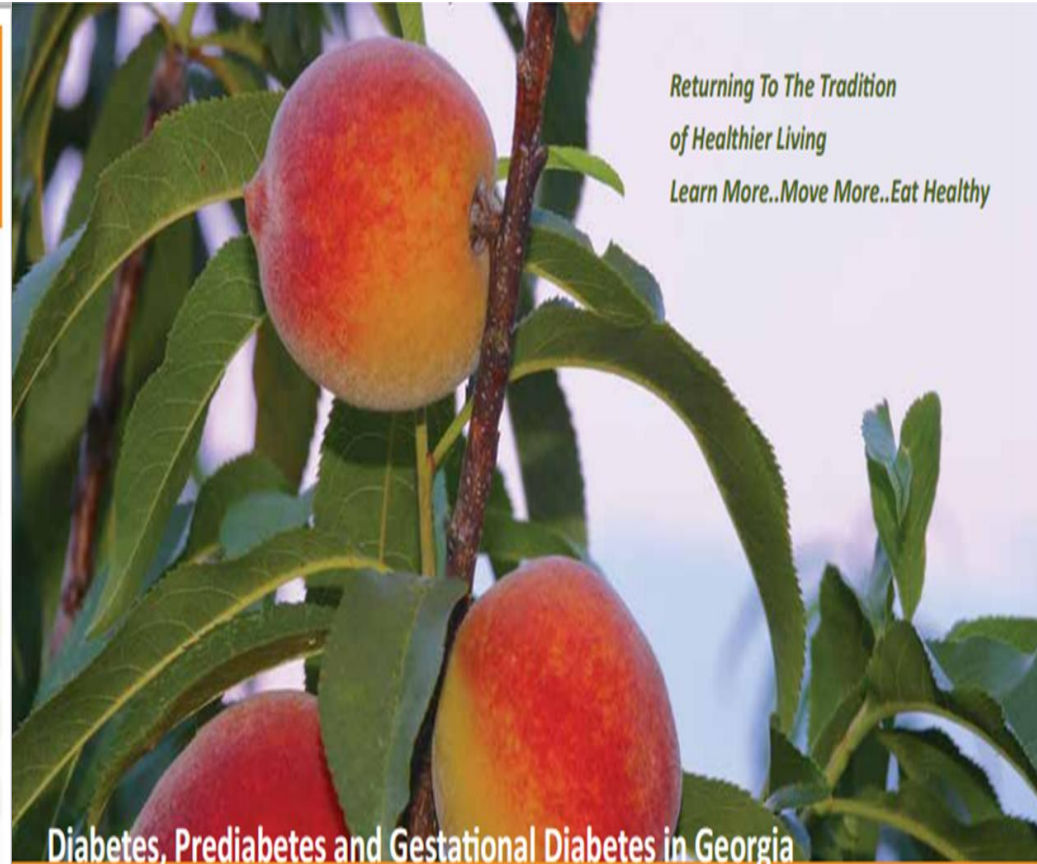
Moreover, peripheral neuropathy, present in 50–70% of older patients with diabetes, increases the risk of postural instability, balance problems, and muscle atrophy, limiting physical activity and increasing the risk of falls.¹⁷ Older adults are at high risk for the development of type 2 diabetes due to the combined effects of increasing insulin resistance and other impaired functions associated with aging.¹⁷

Additional Resources



2014 Georgia Diabetes Community Resource Guide

*Featuring Diabetes and Chronic Disease
Self-Management Education Programs, Care and
Support Resources For Georgians with Diabetes,
Prediabetes and Gestational Diabetes Mellitus (GDM)*



*Returning To The Tradition
of Healthier Living
Learn More..Move More..Eat Healthy*

Diabetes, Prediabetes and Gestational Diabetes in Georgia

This Georgia Diabetes Community Resource guide provides a general listing of services and resources for Georgians diagnosed with diabetes, prediabetes (also known as borderline diabetes) or gestational diabetes mellitus (GDM), their loved ones as well as healthcare and public health professionals providing care and support to them.

Prepared by: Georgia Diabetes Prevention and Control Program

We Protect Lives.

DSME Program: Additional Resources

For Professionals: AADE Accredited Diabetes Self-Management Education (DSME) Programs

<http://www.diabeteseducator.org/ProfessionalResources/accred/>

For Professionals: American Diabetes Association (ADA) Diabetes Education Recognition Programs

<http://professional.diabetes.org/Default.aspx>

Contact Information

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Health Promotion and Disease Prevention Section

Office of Prevention, Screening and Treatment

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E-mail address: dwcalhoun@dhr.state.ga.us

Georgia Diabetes Prevention and Control Program

2014 Georgia Diabetes Community Resource Guide

2013 Georgia Diabetes Self-Management Report and other reports

Diabetes Prevention and Management Resources

<http://dph.georgia.gov/>

THANK YOU!

Thank you for attending the webinar. Please access the survey to obtain credit . The link will be posted in the chat box to the left.

<https://www.surveymonkey.com/s/N5SDPX2>

Your comments are vital to the success of the program.

Britt Rotberg, MS, RDN, LD, CDE

404-616-7417

diabetescourse@emory.edu