Geriatric Diabetes Program
at the
Joslin Diabetes Center

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Disclosure

• Disclosed no conflict of interest.
Total number of persons ≥65 years
1900-2050 in millions

Source: US Census Bureau
Diagnosed and Undiagnosed Diabetes

Young adults vs Older adults with Diabetes

- Heterogeneous population
  - Clinically
  - Functionally
  - Socioeconomically
- Multiple co-morbidities
- Goals of treatment

Medication management

Education strategies
Complex Interactions in Older Adults with Diabetes

- Psychosocial and Financial Environment
  - Compliance
  - Hypoglycemia
  - Quality of life

- Comorbidities
  - CAD
  - CVD
  - PVD
  - Neuropathy
  - Retinopathy
  - Nephropathy

- Complications
  - Cognitive Dysfunction
  - Depression
  - Polypharmacy
  - Falls
  - Urinary Incontinence
  - Physical Disability

- Diabetes Mellitus

- ↑Morbidity
- ↑Mortality
Management of Diabetes in Older Adults

• Screening for barriers
  – Clinical / functional / psychosocial

• Management of hyperglycemia
  – Medications
  – Diet
  – Exercise/Physical activity

• Management of risk factors
  – BP control <130/80 mm Hg
  – LDL cholesterol <100 mg/dl
  – Cessation of cigarette smoking
  – Low dose aspirin therapy
  – Yearly screening for microalbuminuria (ACE inhibitors), retinopathy, foot examination
Geriatric Diabetes Clinic

Goals:

• Identify barriers
• Help patients to overcome barriers
  – Depression, deconditioning, social isolation
• Modify management plans
  – Cognitive dysfunction, physical disabilities

Improve overall health goals and quality of life along with glycemic goals.
Geriatric Diabetes Clinic

- Health Literacy
  - 2 question screening
- Cognitive assessment
  - Modified clock-drawing test esp. for executive dysfunction
- Depression
  - 2 question tool
- Functional assessment - questionnaire
- Social support assessment - questionnaire
- Medication adherence and Polypharmacy assessment
- Nutrition assessment – 6 questions tool
- Exercise prescription – pt tolerance and preference
Joslin Geriatric Diabetes Clinical Care Model

Screening for Co-morbidities → Clinical Assessment → Focused Education At clinic visit → Comprehensive Diabetes Management

Clinical Assessment → Medications Assessment & Adherence

Screening for Co-morbidities → Continuous Glucose Monitoring

Clinical Assessment ↔ Remote Tele-Monitoring

Clinical Assessment ↔ Care coordination by Geriatric Life Specialist
Practice-related Outcomes
Patient-based

Assess barriers
- Cognitive dysfunction: 34%
- Depressive symptoms: 33%
- Functional difficulties: 62%
- Inadequate social support: 40%

Educate at each visit
- To patient and/or caregivers: 90%

Caregiver support
- Education to caregivers: 40%

Phone availability between visits
- Phone call follow-up: 60%
Establish individualized glycemic goals

- Improve hyperglycemia: 32%
- Decrease hypoglycemia: 19%
- Reduce glucose excursions: 11%
- Medication management and compliance: 13%
- Continue maintaining current glycemic control: 25%
MMSE: 28/30
GDS: 1/15
Put in a box

Draw a clock

10-12
Mrs. JB: A1C: 10%
Practice-related outcomes
Practice-based

Offer availability of educator, nutritionist, pharmacist
- At each clinic visit

Dissemination of tools and knowledge
- CME presentations (endocrinology/geriatrics)
- Education for PCP through Joslin Strategic Initiatives (outpatient and nursing home)
- Clinical observerships (local/national/international)
- Research/publications
Research / Publications

1. Cognitive dysfunction is associated with poor diabetes control in older adults.

2. Use of serum c-peptide level to simplify diabetes treatment regimens in older adults.

3. Frequent hypoglycemia among elderly with poor glycemic control.
Barriers to Best Practice

• Time restraints
  – Short tools – surveys and questionnaire that can be filled by patient/caregivers
  – Phone contact between the visits
• Lack of reimbursement
• Lack of evidence-based recommendations
Diabetes Management Goals in older adults

Glycemic Goal

Hypoglycemia
Social support and
Living situation
Financial issues
Life expectancy
Physical abilities

Overall Health Goal
Summary

“Winning the battle as well as the war”
‘Improving glycemic control while maintaining quality of life”

Ideal geriatric diabetes clinic philosophy

• Older patients with diabetes are a heterogeneous group – distinctly different from younger adults

• Older adults have multiple coexisting conditions and it is important to set and adjust goals of treatment as needed

• Phone contact between clinic visits is essential to help adjust glucose fluctuations that occurs in health and disease.