Financial Disclosure

- Funded by MCW Advancing a Healthier Wisconsin, 2013 – 17
- No commercial conflict of interest

Why Do This Project?

Am Diabetes Association

- Prevalence of diabetes in WI increased 44% in past 15 years
  - 12% 45-64 yo and 19% > 65
  - 9% of White, 16% of Hispanic, 22% of Black, 43% of Native American
- Complications
  - 80% have hypertension
  - 67% have coronary artery disease
 - #1 cause of blindness

Why Do This Project?

Am Diabetes Association

- Patients with diabetes account for 20% of healthcare expenditures
  - 4x more than person w/o diabetes
- 40% of people with type 2 diabetes (T2D) in WI do not monitor their blood glucose and never attended a self-care class
  - Intensive education critical in 1st year after diagnosis and then ongoing
  - $1 in education → $8 reduction in healthcare costs
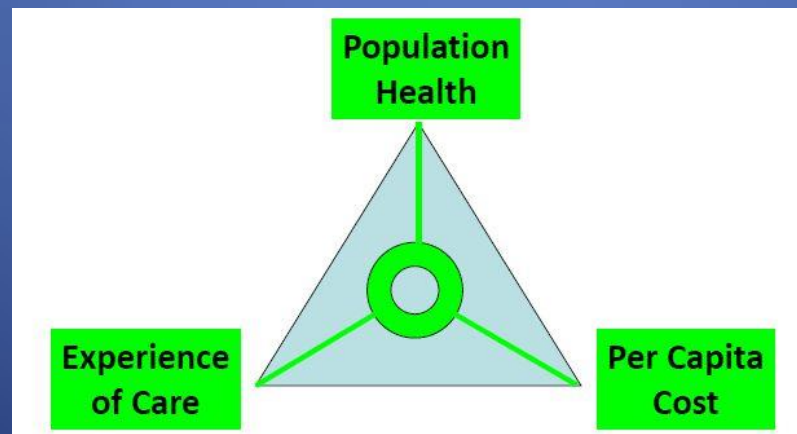
Health Outcome Measures for People with T2D
WI Collaborative for Healthcare Quality, 2012
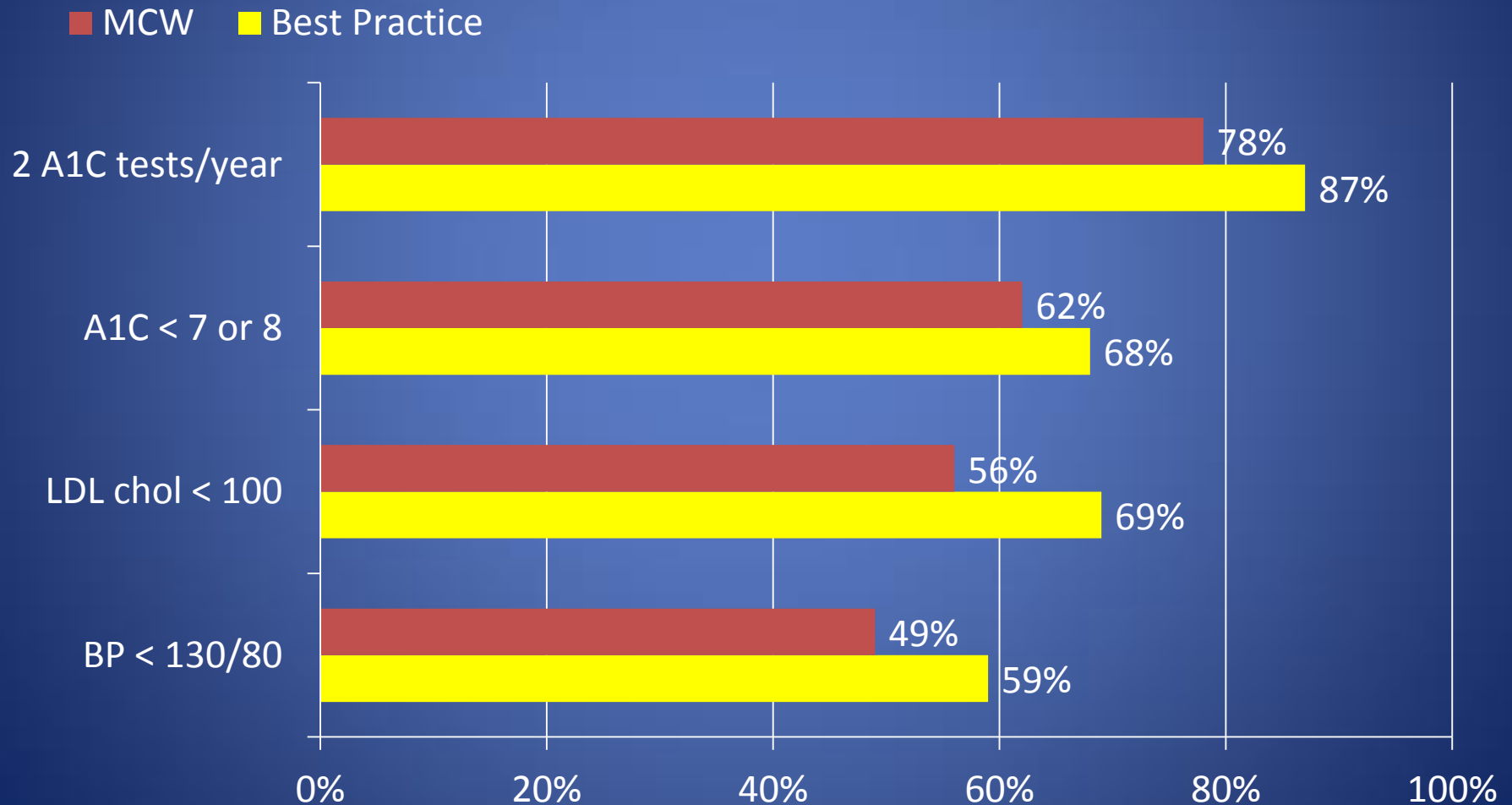
Long-Term Objectives: Triple Aim
D Berwick, *Health Affairs* 2008

1. Improve health care experience of patients with type 2 diabetes (T2D)

2. Improve health of clinic and employee populations with T2D

3. Reduce health care costs per person

Specific Aims

1. Establish infrastructure for PHI research to evaluate patient care experiences, healthcare costs, coordination of services, and education to improve diabetes control

2. Coordinate clinical and then employee health services to achieve the triple aim

3. Expand PHI knowledge and practice for diverse audiences to strengthen workforce competency in population health

Target Populations with T2D

- 8,269 Froedtert/MCW patients
  - Primary care
  - Endocrinology
  - Bariatric surgery
- In addition: Employees
  - MCW
  - United Neighborhood Centers of Milwaukee
 - Other employers
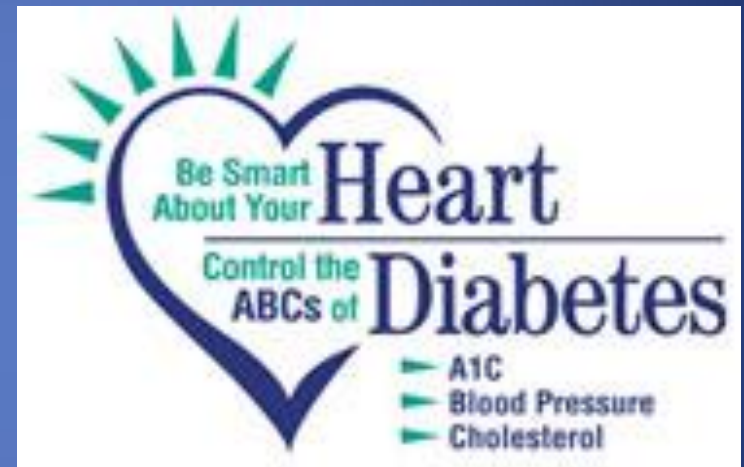
Hypotheses

1. Analyses of patient/employee databases will identify key risk groups for targeted interventions

2. Primary data from people with T2D and clinicians will identify approaches to improve self-care and care delivery

3. Clinical and employer plan interventions will improve A1C, LDL and BP and reduce hospitalizations and costs for people with T2D

    – NQF targets of 8, 100, and 140/90, respectively

Hypotheses

4. Better coordinated clinical care and health plan systems will result in more satisfied patients, employees, clinicians and employers, and more efficient processes

5. Lectures, applied CQI, and new graduate courses will expand knowledge and practices in PHI
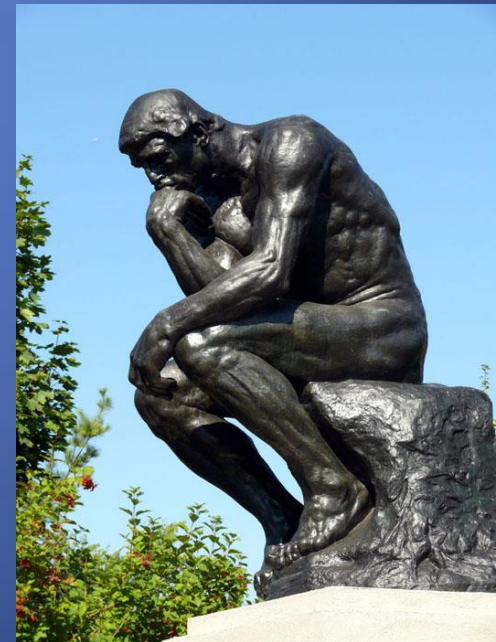
Key Researchers

- Biostatistics: Sergey Tarima, Ray Hoffmann

- Epidemiology: Laura Cassidy

- Economics: Scott Adams

- Sociology: Staci Young

- Community: David Nelson

- QI: Paul Pejsa

- Bioethics: Tom May

Research Designs in FY14

- 23 targeted focus groups of 184 patients and employees with $50 incentives each

- 13 focus groups of 104 clinicians

- Identify advisors and champions

- Analyses of medical records of 10,000 patients from the past few years

- Then surveys of all patients and employees with T2D with $100 lotteries at 23 sites

Strategy for Patient/Employee Focus Groups

- Key data
  - Age, gender, education, insurance, ethnicity, family history, BMI
  - Physical activities, medicines
- Topics
  - What clinic does well, should stop, should start in diabetes care
  - Motivation, support, resources, barriers
  - Preferred communication with clinicians

Topics for Focus Groups of Clinicians

Cosgrove, *Health Affairs* 2013, CEO Checklist for High Value Health Care

- Leader support
- Info systems, embedded protocols and prompts
- Space use
- Decision-making with patients
- Resource-intensive patients
- Safeguards
- Transparent performance, outcomes, costs

Key Measures in Secondary Data Analyses to Characterize Risk Groups

- A1C adjusted for age, comorbidities and life expectancy

- Bundle of A1C, LDL, and BP

- If A1C not down, referrals and follow-up

- Inpatient days and readmissions

- Vascular complications

- Relative value units

- ROI for bariatric surgery

Intervention Models

- Population health management (Care Continuum Alliance)
  - Assess and predict health risk
  - Tailor interventions and engage patients/employees
  - Evaluate impact
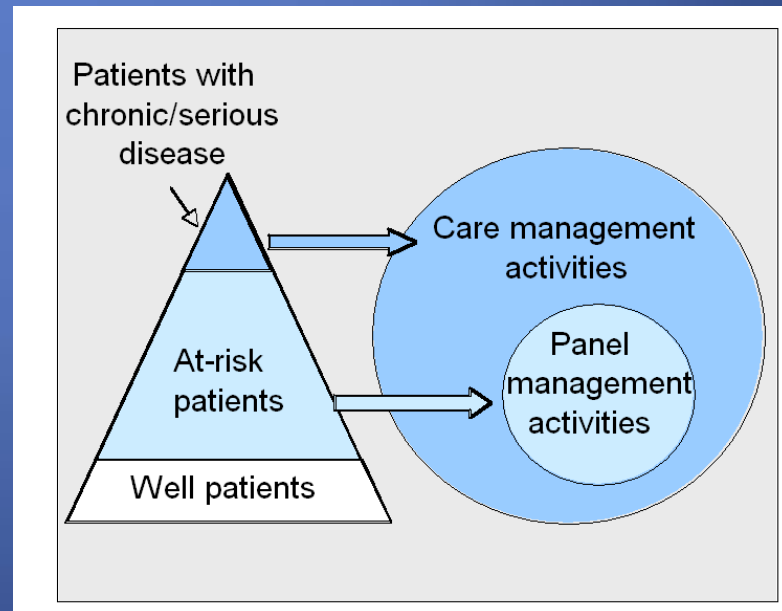
Process Improvement Approaches

- LEAN value stream mapping (Toyota)
- PDSA cycles (Shewhart)
- Rapid improvement "kaizen" events
- Standardized, evidence-based protocols and algorithms for each risk group
- Informatics tools
- Six sigma: reduce variation
- Change management (GE)

Intervention Models

- Chronic illness care model (E Wagner)
- Patient-centered medical home (NCQA)
- Community health workers
- Workplace wellness programs
- Value-based insurance benefit design
- Linkages to public health system
- Accountable care organization

Timeline of Milestones

MILESTONES....MILES DAVIS

- Studies of diabetes control, 2013
- Healthcare system coordination, then prospective studies
    1. Primary care and endocrine, 2014
    2. Endocrine and bariatric surgery, 2014-15
    3. MCW and Froedtert employees who are patients too, 2015-16
    4. Other employees who are patients, 2016-17
- Reform incentives and payments, 2016-17
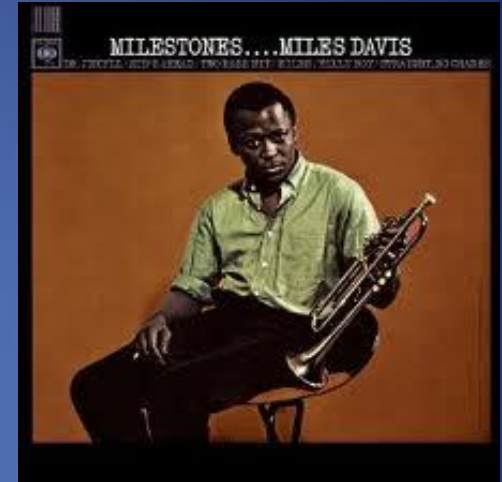
# Possible New MCW MPH and Bioethics Courses by 2015-16

- Prevention and behavior modification

- Performance measurement and QI

- Population health practice and research

- Financial management and economic analyses

- Ethics and justice in healthcare reform

Innovation Impact

National Science Foundation

- Broad impact
  - Diverse groups
  - Education
  - Strategic dissemination
- Intellectual merit
  - New collaborations
  - New knowledge
- Transformative research
  - New paradigm
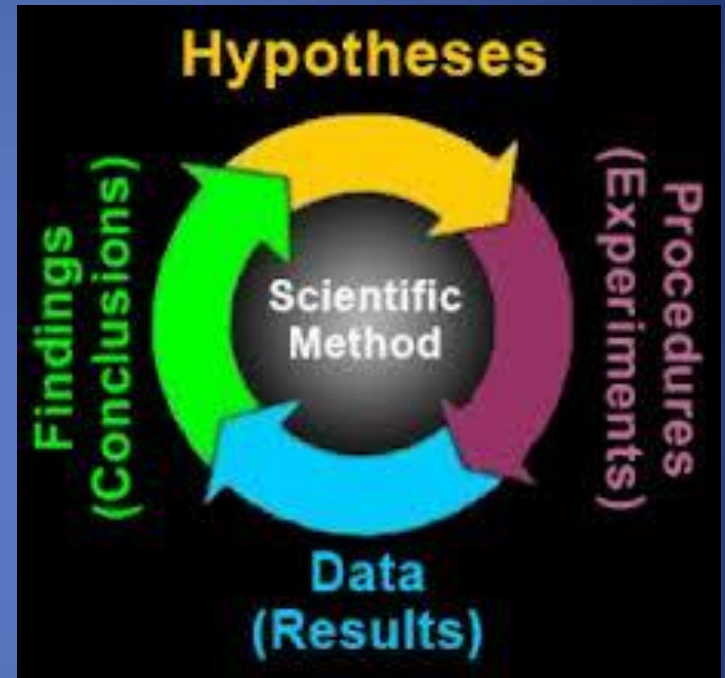
Summary

- Diabetes is becoming epidemic

- Triple aim to improve care and health and reduce costs

- Partner with patients, employees, clinicians, and employers

- Primary and secondary data will inform PHI intervention selection

Questions, comments or suggestions?
jmeurer@mcw.edu