
Avoidable Hospitalizations among Dual and Non-Dual Kansas Medicaid Enrollees with Diabetes, Severe Mental Illness, or Both

Theresa Shireman, PhD

Melissa Jaffee, MBA

**In consultation with the KanCare Target Population
Subgroup**

KanCare Health Homes Forum, April 16, 2013; Topeka KS



Introduction

- **Initial target populations for health homes (Division of Health Care Finance)**
 - **Diabetes**
 - **Severe Mental Illness (SMI)**
- **Generate baseline assessment**
 - **Ambulatory Care Sensitive (ACS) Condition costs = Avoidable hospitalizations**

Methods

- **Examined Medicaid Fee-for-service (FFS) and Managed Care (MC) encounter claims to identify beneficiaries with diabetes and/or SMI**
 - **Reports generated through KS Medicaid Data Analytic Interface**
 - **State fiscal year 2011 data**

Methods

- **Diabetes Only**: those with primary diagnosis code for diabetes (250.xx essentially), excluding those with a SMI code
- **SMI only**: those with a primary diagnosis code for antisocial behavior, bipolar, obsessive compulsive, schizophrenia, and psychoses (DAI codes)
- **Diabetes and SMI**: those with a primary diagnosis codes for both diabetes and SMI

Definition of Terms

- **Ambulatory Care Sensitive (ACS) Condition costs = Avoidable hospitalizations**
 - **Measures potentially avoidable hospital admissions for 16 ambulatory care sensitive conditions**
 - **Includes payments for avoidable hospitalizations for any reason, *not only those which are diabetes related***

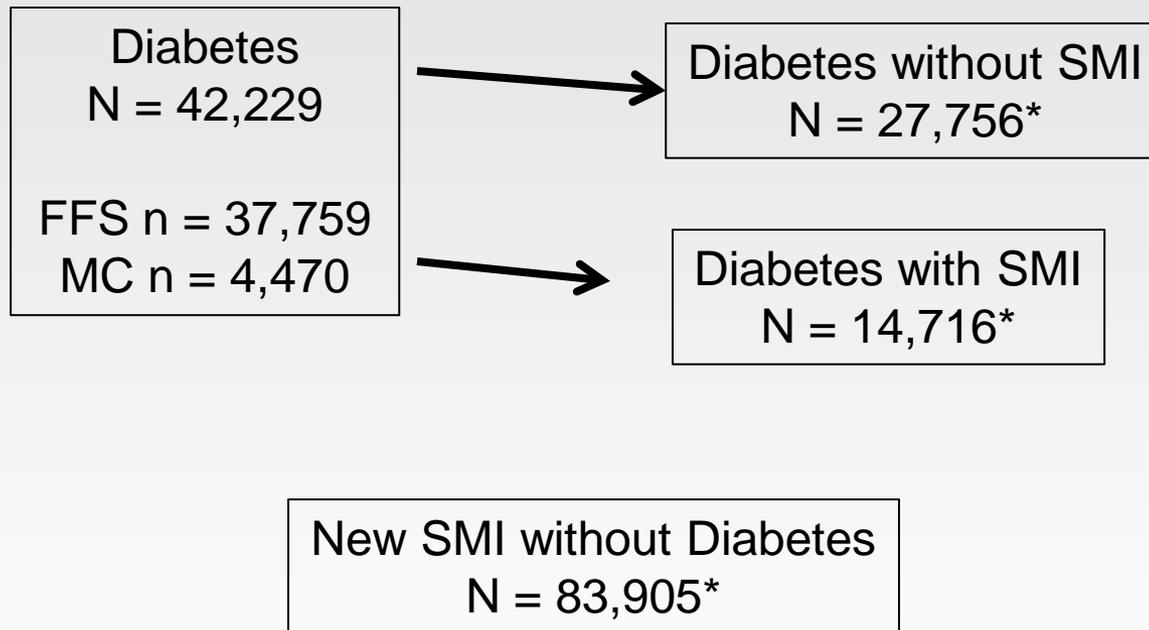
Avoidable admissions

- [All Prevention Quality Indicators Technical Specifications, Version 4.4 \(Zip File\)](#)
 - [PQI 01 Diabetes Short-term Complications Admissions Rate](#)
 - [PQI 02 Perforated Appendix Admission Rate](#)
 - [PQI 03 Diabetes Long-term Complications Admission Rate](#)
 - [PQI 05 COPD or Asthma in Older Adults Admission Rate](#)
 - [PQI 07 Hypertension Admission Rate](#)
 - [PQI 08 Heart Failure Admission Rate](#)
 - [PQI 09 Low Birth Weight Rate](#)
 - [PQI 10 Dehydration Admission Rate](#)
 - [PQI 11 Bacterial Pneumonia Admission Rate](#)
 - [PQI 12 Urinary Tract Infection Admission Rate](#)
 - [PQI 13 Angina without Procedure Admission Rate](#)
 - [PQI 14 Uncontrolled Diabetes Admission Rate](#)
 - [PQI 15 Asthma in Younger Adults Admission Rate](#)
 - [PQI 16 Rate of Lower-Extremity Amputation Diabetes](#)
- AHRQ, March 2012

Definition of Terms

- **Avoidable admission days**
 - **Aggregate number of days associated with avoidable hospitalizations**
 - **Should see Medicare “days”**
- **Avoidable admission costs**
 - **Dollar amount paid by Kansas Medicaid for hospital admissions**
 - **Won't see Medicare costs**
- **Calculated from FFS claims only**

Subset samples



**There may be some duplication of cases*

Diabetes Only (FY 2011)

- **Prevalence counts**
 - **N=27,756**
 - **FFS, N = 24,205**
 - **Children: n = 997**
 - **Adults: n = 23,208**
 - **MC, N = 3,551**
 - **Children: n = 1,302**
 - **Adults: n = 2,249**

Includes full duals & non-duals only: excludes members with Part A or Part B only; Members may be in FFS and MC during year

Diabetes only: FFS Avoidable admissions (N=24,205 adults & children)

- **Duals (n=15,207)**
 - **Avoidable admission costs: \$945,622**
 - **Per enrollee: \$ 62**
 - *Remember: Medicare picks up ~80% tab*
 - **Avoidable admission days: 7,898**
- **Non-duals (n=8,988)**
 - **Avoidable admission costs: \$6,541,347**
 - **Per enrollee: \$ 727**
 - **Avoidable admission days: 3,883**

Diabetes Only: Avoidable Costs for FFS Adults only (N=23,208)

- **Duals (n=15,205)**
 - **Avoidable admission costs: \$945,622**
 - **Per enrollee: \$62**
 - *Remember: Medicare picks up ~80% tab*
 - **Avoidable admission days: 7,898**
- **Non-duals (n=8,003)**
 - **Avoidable admission costs: \$6,073,259**
 - **Per enrollee: \$759**
 - **Avoidable admission days: 3,696**

Diabetes + SMI (FY 2011)

- **Prevalence counts**
 - **N=14,716**
 - **FFS, N = 13,813**
 - **Children: n = 549**
 - **Adults: n = 13,254**
 - **MC, N = 903**
 - **Children: n = 218**
 - **Adults: n = 685**

Includes full duals & non-duals only: excludes members with Part A or Part B only; Members may be in FFS and MC during year

Diabetes + SMI: FFS Avoidable admissions (N=13,813)

- **Duals (n=9,708)**
 - **Avoidable admission costs: \$887,336**
 - **Per enrollee: \$ 91**
 - *Remember: Medicare picks up ~80% tab*
 - **Avoidable admission days: 6,389**
 - **Non-duals (n=4,105)**
 - **Avoidable admission costs: \$3,888,451**
 - **Per enrollee: \$ 947**
 - **Avoidable admission days: 2,250**

Diabetes + SMI: Adult Only FFS

Avoidable admissions (N=13,264)

- **Duals (n=9,704)**
 - **Avoidable admission costs: \$887,336**
 - **Per enrollee: \$ 91**
 - *Remember: Medicare picks up ~80% tab*
 - **Avoidable admission days:6,389**
- **Non-duals (n=3,560)**
 - **Avoidable admission costs: \$3,825,702**
 - **Per enrollee: \$1,075**
 - **Avoidable admission days: 2205**

SMI only (FY 2011)

- **Prevalence counts**
 - **N= 83,905**
 - **FFS, N = 56,734**
 - **Children: n = 24,368**
 - **Adults: n = 32,366**
 - **MC, N = 27,171**
 - **Children: n = 20,911**
 - **Adults: n = 6,260**

Includes full duals & non-duals only: excludes members with Part A or Part B only; Members may be in FFS and MC during year

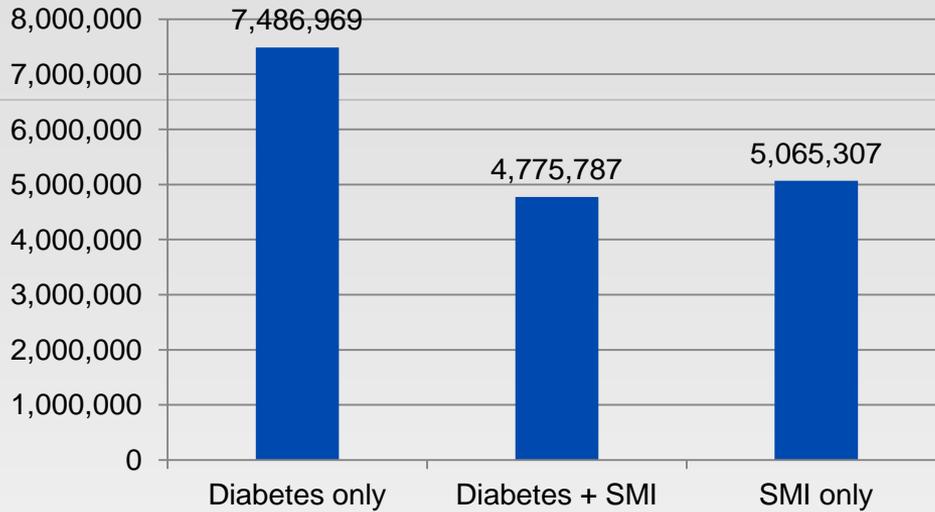
SMI only: FFS Avoidable admissions (N=56,734 adults & children)

- **Duals (n=16,709)**
 - **Avoidable admission costs: \$370,913**
 - **Per enrollee: \$ 22**
 - *Remember: Medicare picks up ~80% tab*
 - **Avoidable admission days: 3,950**
- **Non-duals (n=40,025)**
 - **Avoidable admission costs: \$4,694,393**
 - **Per enrollee: \$ 117**
 - **Avoidable admission days: 2,016**

SMI only: FFS Adults Only Avoidable admissions (N=32,368)

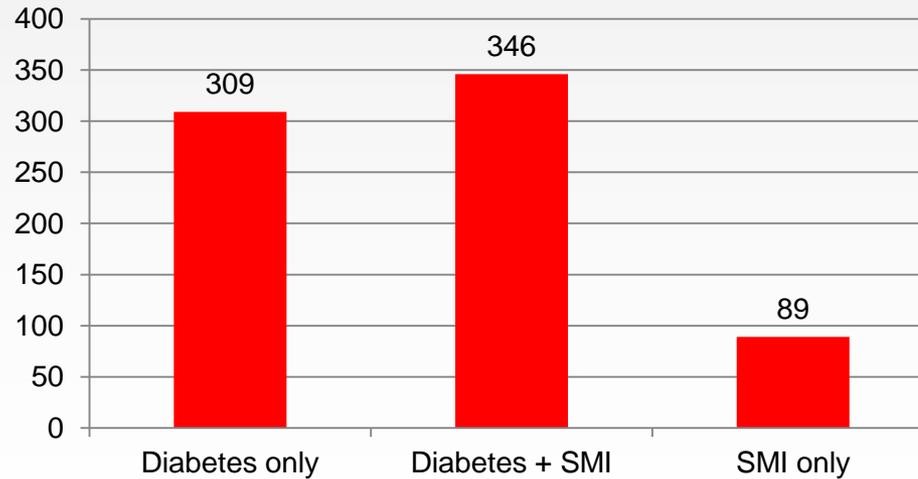
- **Duals (n=16,707)**
 - **Avoidable admission costs: \$370,498**
 - **Per enrollee: \$22**
 - *Remember: Medicare picks up ~80% tab*
 - **Avoidable admission days: 3,946**
- **Non-duals (n=15,661)**
 - **Avoidable admission costs: \$1,861,867**
 - **Per enrollee: \$119**
 - **Avoidable admission days: 1,057**

Avoidable admission costs

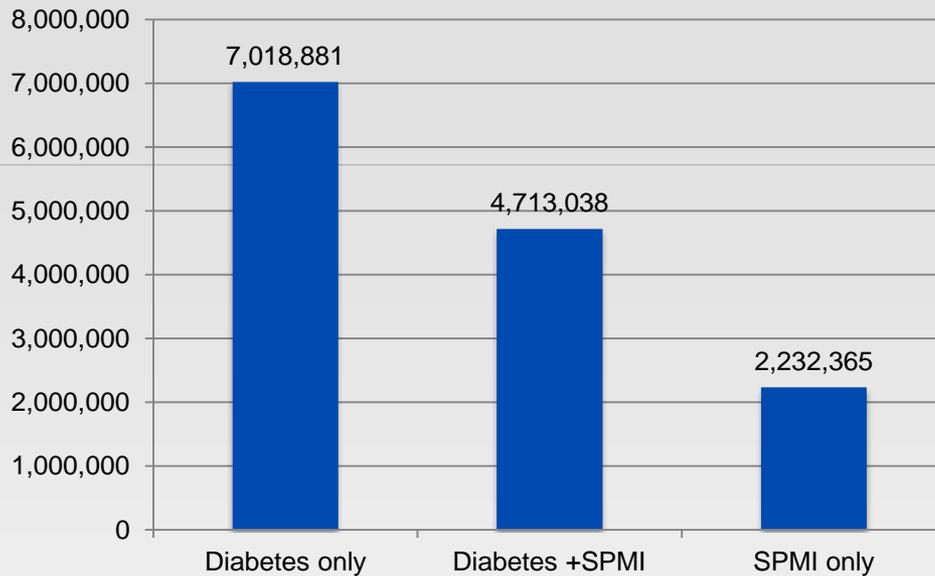


Includes children & adults:
Total avoidable costs across groups
\$17,328,063

Avoid admit cost per member



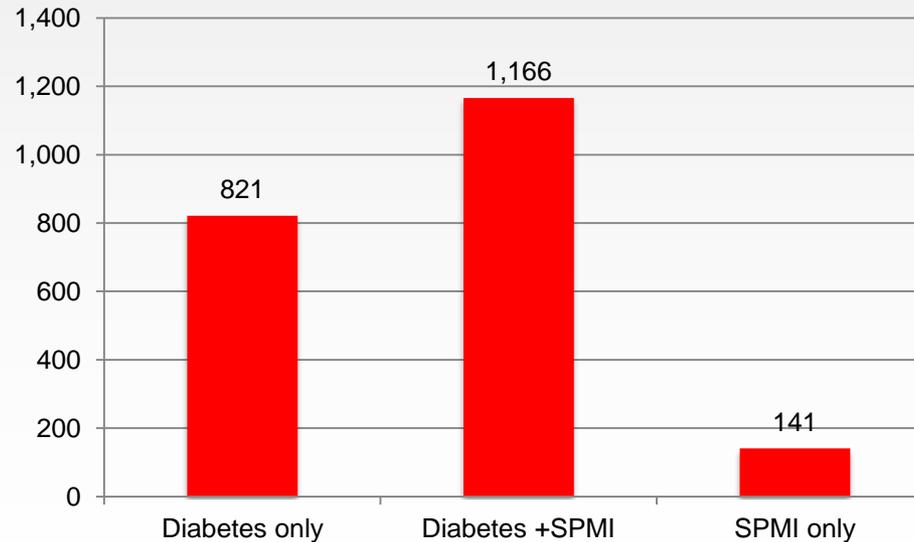
Adult FFS Dual and Non-Duals: Avoidable Admissions



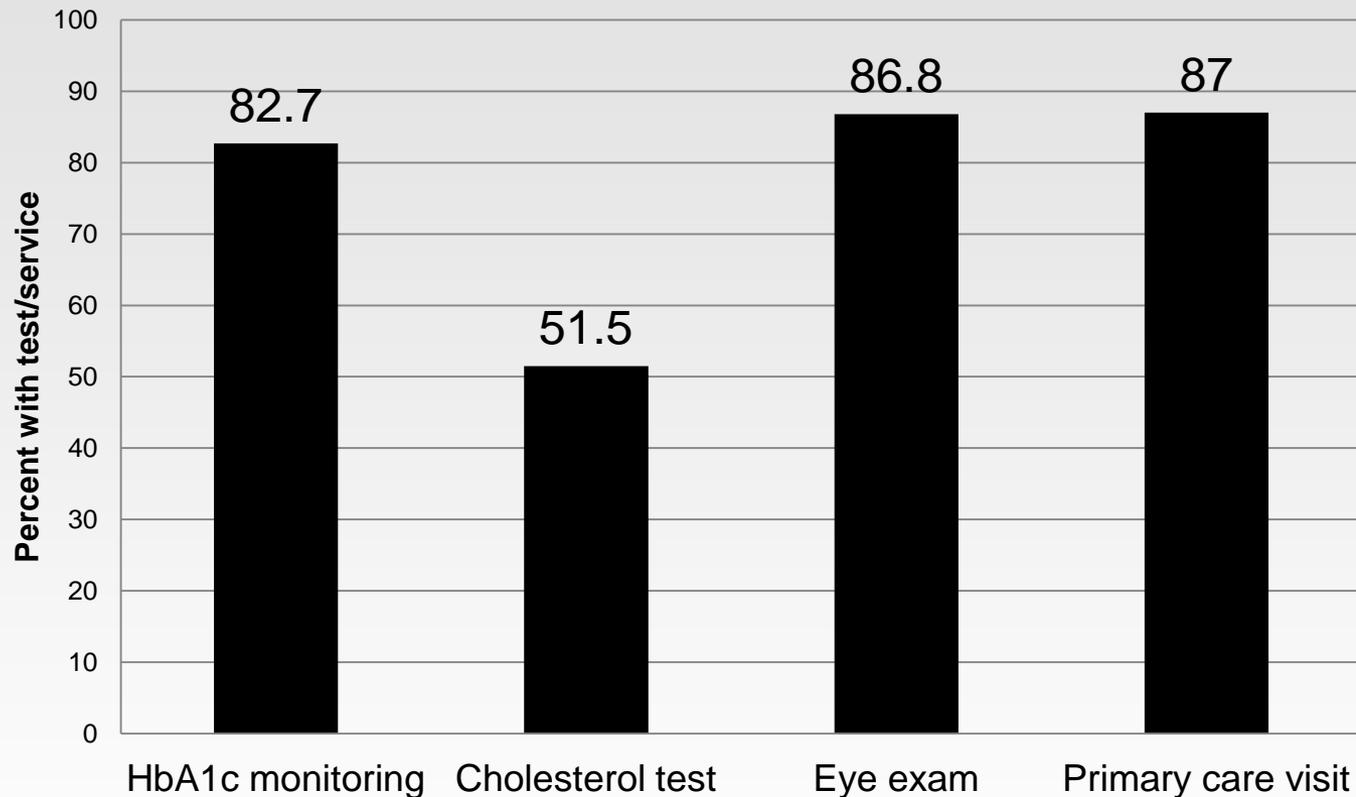
Total adult avoidable admit costs
\$18,895,329

Diabetes only: 37%
Diabetes & SMI: 25%
SMI only: 12%

Adult FFS Duals and Non Duals: Avoidable Admit Cost per Member



Quality of diabetes care for KS Medicaid enrollees with physical disabilities, FY2008



Reichard et al. *Disability and Health Journal*, 2012

Quality of Diabetes Care for Adults with Intellectual or Developmental Disability

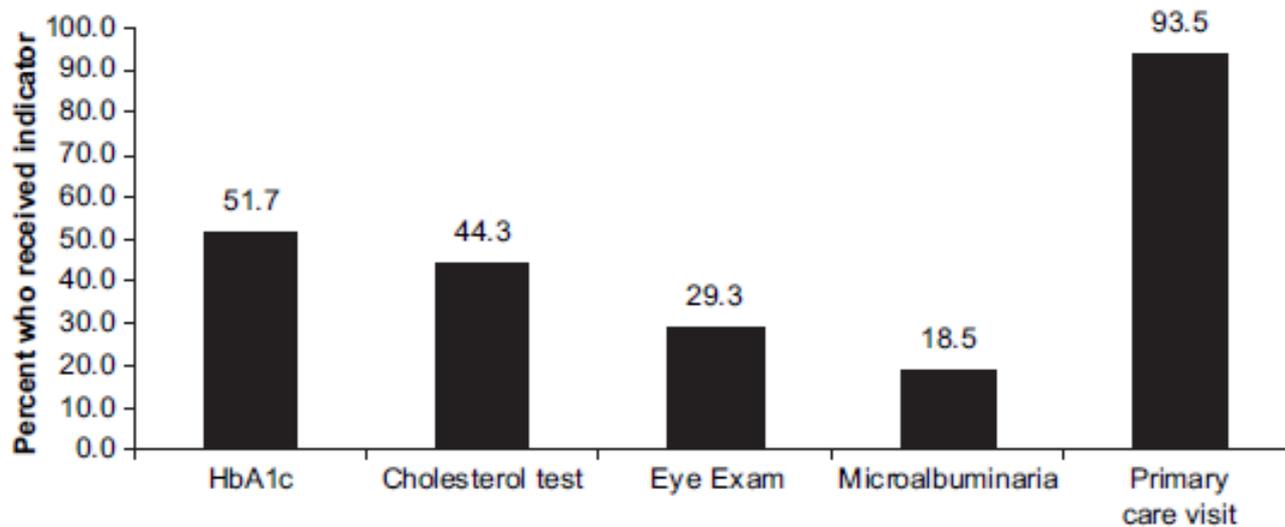


Figure 1. One-year rates of monitoring for key diabetes quality care indicators among adults with developmental disabilities and diabetes in Kansas Medicaid.

Shireman et al. *Disability and Health Journal*, 2010

SMI Definition

Included today

- **Antisocial behavior**
- **Bipolar & major depression**
- **Obsessive compulsive disorder**
- **Schizophrenia**
- **Psychoses (other, NEC)**

Other options

- **Anxiety disorder**
- **Autism**
- **Depression**
- **Eating disorders**
- **Neuroses NEC**
- **Substance abuse**

Conclusions

- **SMI and diabetes prevalence**
 - **SMI is largest group, though smaller if consider duplication across FFS and MC**
- **Burden of avoidable admissions higher in persons with diabetes regardless of SMI**
 - **SMI on top of diabetes increases avoidable costs per person**
- **Psychosis admissions are excluded from avoidable admissions**
 - **We're missing "opportunities" for SMI**
- **There are a LOT of children with SMI**
 - **Even if account for duplication**

Avoidable Admission Costs: Medicaid FY 2011

- **All Medicaid enrollees**
 - **\$44,007,028 & 60,272 days**
 - **Avoidable costs from FFS claims only**
 - **Includes MC, FFS with dual, non-dual & Part A or Part B only status**
 - **No restrictions on diagnoses or age**

Avoidable admissions: children

- Children with FFS enrollment *at least part of the year*
 - Avoidable admit costs: \$24,686,448
 - 56.1% of total avoidable costs for Medicaid
 - Avoidable admit days: 16,808
 - 27.9% of total avoidable days

Avoidable admits costs for children in subgroups discussed

- **Diabetes only:** \$468,888
 - **Diabetes + SMI:** \$62,749
 - **SMI only:** \$2,832,526
 - **Total =** \$3,364,163
-
- **So, what is in the other \$21,322,285?**

Avoidable admissions

- AHRQ Prevention Quality Indicators Technical Specifications - Version 4.4, March 2012
- [All Prevention Quality Indicators Technical Specifications, Version 4.4 \(Zip File\)](#)
 - [PQI 01 Diabetes Short-term Complications Admissions Rate](#)
 - [PQI 02 Perforated Appendix Admission Rate](#)
 - [PQI 03 Diabetes Long-term Complications Admission Rate](#)
 - [PQI 05 COPD or Asthma in Older Adults Admission Rate](#)
 - [PQI 07 Hypertension Admission Rate](#)
 - [PQI 08 Heart Failure Admission Rate](#)
 - [PQI 09 Low Birth Weight Rate](#)
 - [PQI 10 Dehydration Admission Rate](#)
 - [PQI 11 Bacterial Pneumonia Admission Rate](#)
 - [PQI 12 Urinary Tract Infection Admission Rate](#)
 - [PQI 13 Angina without Procedure Admission Rate](#)
 - [PQI 14 Uncontrolled Diabetes Admission Rate](#)
 - [PQI 15 Asthma in Younger Adults Admission Rate](#)
 - [PQI 16 Rate of Lower-Extremity Amputation Diabetes](#)

Avoidable admissions

- AHRQ Prevention Quality Indicators Technical Specifications - Version 4.4, March 2012
- All Prevention Quality Indicators Technical Specifications, Version 4.4 (Zip File)
 - PQI 01 Diabetes Short-term Complications Admissions Rate
 - PQI 02 Perforated Appendix Admission Rate
 - PQI 03 Diabetes Long-term Complications Admission Rate
 - PQI 05 COPD or Asthma in Older Adults Admission Rate
 - PQI 07 Hypertension Admission Rate
 - PQI 08 Heart Failure Admission Rate
 - PQI 09 Low Birth Weight Rate
 - PQI 10 Dehydration Admission Rate
 - PQI 11 Bacterial Pneumonia Admission Rate
 - PQI 12 Urinary Tract Infection Admission Rate
 - PQI 13 Angina without Procedure Admission Rate
 - PQI 14 Uncontrolled Diabetes Admission Rate
 - PQI 15 Asthma in Younger Adults Admission Rate
 - PQI 16 Rate of Lower-Extremity Amputation Diabetes

Target Population Subgroup: Next Steps

- **Working definition for SMI in process**
 - **Which mental illnesses to include**
 - **Co-occurring substance abuse**
 - **How to identify target enrollees**
 - **Claims data vs functional assessments**
- **Subsequent target populations potentially...**
 - **Diabetes**
 - **Chronic respiratory diseases**

-
- **Questions? Comments?**
 - **Contact information:**
 - **Theresa Shireman, PhD**
 - **tshireman@kumc.edu**
 - **913-588-2382**