

Supplementary Online Content

Friedberg MW, Schneider EC, Rosenthal MB, Volpp KG, Werner RM.
Association between participation in a multipayer medical home
intervention and changes in quality, utilization, and costs of care. *JAMA*.
doi:10.1001/jama.2014.353.

eAppendix. Measure specifications

This supplementary material has been provided by the authors to give
readers additional information about their work.

eAppendix. Measure specifications

Quality measures	
Measure name	Definition*
Breast Cancer Screening	Percentage of women aged 40-69 years who had at least one mammogram in the measurement year or year prior to the measurement year.
Cervical Cancer Screening	Percentage of women aged 21-64 years who had at least one Pap test in the measurement year or 2 years prior to the measurement year.
Colorectal Cancer Screening	Percentage of adults 50 to 80 years of age who had 1 or more of the following during the measurement year: fecal occult blood test, flexible sigmoidoscopy, double contrast barium enema or air contrast barium enema, or colonoscopy.
Chlamydia Screening	Percentage of sexually active women ages 16 to 24 who had at least one test for Chlamydia during the measurement year.
Comprehensive Diabetes Care: HbA1c Testing	Percentage of patients aged 18-75 years with diabetes (type 1 and type 2) who had a hemoglobin A1c test during the measurement year.
Comprehensive Diabetes Care: HbA1c Abnormal	Percentage of patients aged 18-75 years with diabetes (type 1 and type 2) who had a hemoglobin A1c of greater than 8% during the measurement year.
Comprehensive Diabetes Care: Eye Exams	Percentage of patients aged 18-75 years with diabetes (type 1 and type 2) who had a retinal or dilated eye exam by an eye care professional in the measurement year or a negative retinal exam (no evidence of retinopathy) by an eye care professional in the measurement year.
Comprehensive Diabetes Care: Cholesterol Screening	Percentage of patients aged 18-75 years with diabetes (type 1 and type 2) who had a low-density lipoprotein cholesterol test during the measurement year.
Comprehensive Diabetes Care: LDL-C Abnormal	Percentage of patients aged 18-75 years with diabetes (type 1 and type 2) who had a LDL-C of greater than 100mg/dL during the measurement year.
Comprehensive Diabetes Care: Monitoring Diabetic Nephropathy	Percentage of patients aged 18-75 years with diabetes (type 1 and type 2) who received nephropathy screening, had a nephrologist visit, or had evidence of nephropathy as documented through administrative data during the measurement year.
Use of Appropriate Medications for People With Asthma	Percentage of patients aged 5–56 years of age during the measurement year who were identified as having persistent asthma and who were appropriately prescribed medication during the measurement year.

Definitions taken from National Committee for Quality Assurance (NCQA). HEDIS 2009. Health plan employer data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2009. Detailed lists of comorbid conditions, competing diagnoses, and other exclusion criteria are contained in the original measure documentation available from the NCQA.

*One of the health plans contributed only 18 months of pre-intervention claims data. Therefore all quality measures for this plan were calculated using an 18-month look back period (rather than 2 years) when applicable.

eAppendix. Measure specifications, continued

Utilization measures	
Measure name	Definition
Hospitalization rate, all-cause	Count of unique hospitalizations for any reason per month.
Hospitalization rate, ambulatory care-sensitive	Count of unique hospitalizations per month that meet one or more criteria for being ambulatory care-sensitive according to the Agency for Healthcare Research and Quality “Prevention Quality Indicators Technical Specifications,” Version 4.0. Specifications available from Agency for Healthcare Research and Quality, http://www.qualityindicators.ahrq.gov/Modules/PQI_TechSpec.aspx
Emergency department visit rate, all-cause	Count of unique emergency department visits for any reason per month.
Emergency department visit rate, ambulatory care-sensitive	Count of unique emergency department visits per month that have any evidence of being avoidable or primary care treatable according to the “NYU ED Algorithm,” specifications available from http://wagner.nyu.edu/faculty/billings/nyued-download . For each ED visit, the NYU algorithm assigns a probability that the visit is in one of 4 categories: <ul style="list-style-type: none"> 1- Non-Emergent; 2- Emergent, Primary Care Treatable; 3- Emergent, ED Care Needed, Preventable/Avoidable; 4- Emergent, ED Care Needed, Not Preventable/Avoidable. For this measure, we count an ED visit as “ambulatory care-sensitive” if it has a nonzero probability of belonging in any of the first 3 categories.
Ambulatory care visit rate	Count of unique ambulatory visits (excluding emergency department visits) for any reason per month.
Total costs of care	Total costs of care for all professional, facility, and prescription drug claims. Costs are assigned to each claim using Optum Normalized Pricing software; further information available from http://www.optuminsight.com .