

Table 3. Core Recommended Adult Technical Quality Measures for PCMHs

Measure	Description	Data Source(s)	Composite Domain	Measure Source
Avoidance of anti-biotic treatment in adults with acute bronchitis (AAB)	Percentage of adults ages 18–64 with a diagnosis of acute bronchitis who were not dispensed an antibiotic prescription	Claims	Effectiveness of Care: Respiratory Conditions	NCQA: HEDIS 2012 Measure Set
Adult weight screening and follow-up	Percentage of patients age 18 years and older with a calculated body mass index (BMI) in the past six months or during the current visit documented in the medical record AND if the most recent BMI is outside the parameters, a follow up plan is documented. Normal parameters: Age 65 and older BMI ≥ 23 and < 30 Ages 18–64 BMI ≥ 18.5 and < 25	Claims EHR	Effectiveness of Care: Prevention and Screening	CMS/ NQF 0421
Medication Management for People with Asthma (MMA)	The percentage of members ages 18–64 during the measurement year who were identified as having persistent asthma and who were dispensed appropriate medications and remained on their medications during the treatment period. Two rates are reported: 1. The percentage of members who remained on an asthma controller medication for at least 50% of the treatment period 2. The percentage of members who remained on an asthma controller medication for at least 75% of the treatment period	Claims EHR	Effectiveness of Care: Respiratory Conditions	NCQA: HEDIS 2012 Measure Set
Breast cancer screening (BCS)	Percentage of women ages 40–69 who had a mammogram to screen for breast cancer	Claims EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Cervical cancer screening (CCS)	Percentage of women ages 21–64 who received one or more Pap tests to screen for cervical cancer	Claims Medical record EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Chlamydia screening in women (CHL)	Percentage of women ages 16–24 who were identified as sexually active and who had at least one test for chlamydia during the measurement year	Claims EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Colorectal cancer Screening (COL)	Percentage of members ages 50–75 who had appropriate screening for colorectal cancer	Claims Medical record EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Cholesterol management for patients with cardiovascular conditions (CMC)	Percentage of members ages 18–75 who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG), or percutaneous coronary interventions (PCI) from January 1 to November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year and the year prior to the measurement year, who had each of the following during the measurement year: LDL-C screening LDL-C control (< 100 mg/dL)	Claims Medical record	Effectiveness of Care: Cardiovascular Conditions	NCQA: HEDIS 2012 Measure Set
Antidepressant medication management (AMM)	Percentage of members age 18 and older who were diagnosed with a new episode of major depression and treated with antidepressant medication, and who remained on an antidepressant medication treatment. Two rates are reported: 1. Effective acute phase treatment: the percentage of newly diagnosed and treated members who remained on an antidepressant medication for at least 84 days (12 weeks) 2. Effective continuation phase treatment: the percentage of newly diagnosed and treated members who remained on an antidepressant medication for at least 180 days (6 months)	Claims EHR	Effectiveness of Care: Behavioral Health	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care: Hemoglobin A1c (HbA1c) testing	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had HbA1c testing	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care: HbA1c poor control ($> 9.0\%$)	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had poor HbA1c control ($> 9.0\%$)	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set

Measure	Description	Data Source(s)	Composite Domain	Measure Source
Comprehensive diabetes care: blood pressure control (<140/80 mm Hg)	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had blood pressure control of <140/80 mm Hg	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care: Eye exam (retinal) performed	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had an eye exam (retinal) performed	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care: LDL-C screening	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had an LDL-C screening	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care: LDL-C <100 mg/dL	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had good LDL-C control (<100 mg/L)	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care: Medical attention for nephropathy	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had medical attention for nephropathy	Claims Medical record EHR	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Comprehensive diabetes care	Percentage of members ages 18–75 with diabetes (type 1 and type 2) who had each of the following: hemoglobin A1c testing, HbA1c poor control (>9.0%), HbA1c control (<8.0%), HbA1c control (<7.0%) for a selected population, eye exam (retinal) performed, LDL-C screening, LDL-C control (<100 mg/dL), medical attention for nephropathy, blood pressure control (<140/80 mm Hg), blood pressure control (<140/90 mm Hg)	Claims Medical record	Effectiveness of Care: Diabetes	NCQA: HEDIS 2012 Measure Set
Controlling high blood pressure (CBP)	Percentage of members ages 18–85 who had a diagnosis of hypertension and whose blood pressure was adequately controlled (<140/90) during the measurement year	Claims Medical record	Effectiveness of Care: Cardiovascular Conditions	NCQA: HEDIS 2012 Measure Set
Use of imaging studies for low back pain (LBP)	Percentage of members with a primary diagnosis of low back pain who did not have an imaging study (plain X-ray, MRI, CT scan) within 28 days of diagnosis	Claims EHR	Effectiveness of Care: Musculoskeletal Conditions	NCQA: HEDIS 2012 Measure Set
Annual monitoring for patients on persistent medications (MPM)	Percentage of members age 18 and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. For each product line, report each of the four rates separately and as a total rate. <ul style="list-style-type: none"> • annual monitoring for members of angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB) • annual monitoring for member on digoxin • annual monitoring for members on diuretics • annual monitoring for members on anticonvulsants • total rate (the sum of the four numerators divided by the sum of the four denominators) 	Claims	Effectiveness of Care: Medication Management	NCQA: HEDIS 2012 Measure Set
Pneumonia vaccination status for older adults (PNU)	Percentage of Medicare members age 65 and older as of January 1 of the measurement year who have ever received a pneumococcal vaccination	Survey EHR	Effectiveness of Care: Measures Collected Through the CAHPS Health Plan Survey	NCQA: HEDIS 2012 Measure Set via the Medicare CAHPS Survey
Preventive Care and Screening Measure Pair: a) Tobacco Use Assessment, and b) Tobacco Cessation Intervention	a) Percentage of patients age 18 years and older who have been seen for at least 2 office visits who were queried about tobacco use one or more times within 24 months b) Percentage of patients age 18 years and older identified as tobacco users within the past 24 months and have been seen for at least 2 office visits, who received cessation intervention	Claims EHR	Effectiveness of Care: Prevention and Screening	CMS AMA–PCPI

Source: Commonwealth Fund Patient-Centered Medical Home Evaluators' Collaborative.

Table 4. Core Recommended Technical Quality Measures for PCMH Meta-Analysis

Adult Quality Measures	
Claims-based measures	Claims- and chart-based measures
Diabetes process measures	All diabetes outcome measures
Pneumonia vaccination	Tobacco assessment and intervention (aligned with Meaningful Use incentives and ACO models)
Cervical cancer screening	BMI documentation and follow-up (aligned with Meaningful Use incentives and ACO models)
Breast cancer screening	Hypertension control
Colorectal cancer screening	Hyperlipidemia control
Antidepressant medication management	Acute low back pain imaging
Overuse: antibiotics for acute bronchitis	
Safety: persistent medication monitoring	
Asthma medication management (ages 18–64)	
Child Quality Measures	
Claims-based measures	Claims- and chart-based measures
Well-child visits (all pre-specified ages)	2-year and 13-year immunizations
Appropriate testing for children with pharyngitis	Body mass index assessment and follow-up percentile
Follow-up care for children prescribed attention deficit hyperactivity disorder medication	
Asthma medication management (ages 5–18)	

Source: Commonwealth Fund Patient-Centered Medical Home Evaluators' Collaborative.

NOTES

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Appendix A2. Supplemental Adult Technical Quality Measures for PCMH Evaluations

Measure	Description	Data Source(s)	Important Considerations	Composite Domain	Measure Source
Fall risk management (FRM)	The two components of this measure assess different facets of fall risk management: Discussing fall risk: the percentage of Medicare members 75 and older or 65–74 with balance or walking problems or a fall in the past 12 months, who were seen by a practitioner in the past 12 months and who discussed falls and problems with balance or walking with their current practitioner Managing fall risk: the percentage of Medicare members 65 and older who had a fall or had problems with balance or walking in the past 12 months, who were seen by a practitioner in the past 12 months, and who received fall risk intervention from their current practitioner	Survey	May require heavy chart abstraction	Effectiveness of Care: Measures Collected Through Medicare Health Outcome Survey	NCQA: HEDIS 2012 Measure Set via the Medicare Health Outcomes Survey
Flu shots for adults ages 50–64 (FSA) and flu shots for older adults (FSO)	FSA: A rolling average represents the percentage of commercial members ages 50–64 who received an influenza vaccination between September 1 of the measurement year and the date when the CAHPS 4.OH Survey was completed FSO: The percentage of Medicare members 65 and older as of January 1 of the measurement year who received an influenza vaccination between September 1 of the measurement year and the date when the Medicare CAHPS survey was completed	Survey	May not be accurate due to wide variety of sources where patients could get an influenza vaccination	Effectiveness of Care: Measures Collected Through the CAHPS Health Plan Survey	NCQA: HEDIS 2012 Measure Set via CAHPS Health Plan Survey 4.OH, Adult Version (FSA) and Medicare CAHPS (FSO)
Medication reconciliation post-discharge (MRP)	The percentage of discharges from January 1–December 1 of the measurement year for members 66 and older for whom medications were reconciled on or within 30 days of discharge	Claims Medical record EHR	May be difficult to abstract from medical records	Effectiveness of Care: Medication Management	NCQA: HEDIS 2012 Measure Set
Osteoporosis testing in older women (OTO)	The percentage of Medicare women 65 years and over who report ever having received a bone density test to check for osteoporosis	Survey EHR	Some question the utility of this measure on a population basis	Effectiveness of Care: Measures Collected Through Medicare Health Outcome Survey	NCQA: HEDIS 2012 Measure Set via the Medicare Health Outcome Survey
Medical assistance with smoking and tobacco use cessation (MSC)	The three components of this measure assess different facets of providing medical assistance with smoking and tobacco use cessation: Advising smokers and tobacco users to quit: a rolling average represents the percentage of members 18 and older who are current smokers or tobacco users and who received cessation advice during the measurement year Discussing cessation medications: a rolling average represents the percentage of members 18 and older who are current smokers or tobacco users and who discussed or were recommended cessation medications during the measurement year Discussing cessation strategies: a rolling average represents the percentage of members 18 and older who are current smokers or tobacco users who discussed or were provided cessation methods or strategies during the measurement year	Survey EHR	May be more robust and linkable to outcomes than the smoking cessation advice measure; Documentation in the chart more likely to be inadequate	Effectiveness of Care: Measures Collected Through the CAHPS Health Plan Survey	NCQA: HEDIS 2012 Measure Set; Collected via CAHPS Health Plan Survey 4.OH, Adult Version and Medicare CAHPS (Medicare CAHPS collects results for only the <i>Advising Smokers and Tobacco Users to Quit</i> rate)
Management of urinary incontinence in older adults (MUI)	The two components of this measure assess the management of urinary incontinence in older adults: Discussing urinary incontinence: the percentage of Medicare members 65 and older who reported having a problem with urine leakage in the past six months and who discussed their urine leakage problem with their current practitioner Receiving urinary incontinence treatment: the percentage of Medicare members 65 and older who reported having a urine leakage problem in the past six months and who received treatment for their current urine leakage problem	Survey	Documentation may be inadequate; treatment may consist of medications that can promote falls	Effectiveness of Care: Measures Collected Through Medicare Health Outcome Survey	NCQA: HEDIS 2012 Measure Set via the Medicare Health Outcomes Survey
Use of high-risk medications in the elderly (DAE)	Percentage of Medicare members 65 and older who received at least one high-risk medication The percentage of Medicare members 65 and older who received at least two different high-risk medications (for both rates, a lower rate represents better performance)	Claims EHR	There may be valid reasons why a patient may need to be on these medications; not much data that reducing these medications clearly improves outcomes—these criteria are controversial	Effectiveness of Care: Medication Management	NCQA: HEDIS 2012 Measure Set

Appendix A3. Core Recommended Pediatric Technical Quality Measures for PCMH Evaluations

Measure	Description	Data Source(s)	Composite Domain	Measure Source
Immunizations for adolescents (IMA)	The percentage of adolescents age 13 who had one dose of meningococcal vaccine and one tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap) or one tetanus, diphtheria toxoids vaccine (Td) by their 13th birthday. The measure calculates a rate for each vaccine and one combination rate.	Claims Medical record	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Medication Management for People with Asthma (MMA)	The percentage of members ages 5–18 during the measurement year who were identified as having persistent asthma and who were dispensed appropriate medications and remained on their medications during the treatment period. Two rates are reported, stratified by ages 5–11 and 12–18: 1. The percentage of members who remained on an asthma controller medication for at least 50% of the treatment period 2. The percentage of members who remained on an asthma controller medication for at least 75% of the treatment period	Claims EHR	Effectiveness of Care: Respiratory Conditions	NCQA: HEDIS 2012 Measure Set
Adolescent well-care visits (AWC)	The percentage of enrolled members ages 12–who had at least one comprehensive well-care visit with a primary care provider or an OB/GYN practitioner during the measurement year	Claims Medical record	Utilization and Relative Resource Use: Utilization	NCQA: HEDIS 2012 Measure Set
Appropriate testing for children with pharyngitis (CWP)	The percentage of children ages 2–18 who were diagnosed with pharyngitis, dispensed an antibiotic and received a group A streptococcus test for the episode	Claims EHR	Effectiveness of Care: Respiratory Conditions	NCQA: HEDIS 2012 Measure Set
Childhood immunization status (CIS)	The percentage of children at age 2 who had four diphtheria, tetanus, and acellular pertussis (DTaP); three polio (IPV); one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (HepB), one chicken pox (VZV); four pneumococcal conjugate (PCV); two hepatitis A (HepA); two or three rotavirus (RV); and two influenza vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates.	Claims Medical record EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Chlamydia screening in women (CHL)	The percentage of women ages 16–24 who were identified as sexually active and who had at least one test for chlamydia during the measurement year	Claims EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Follow-up after hospitalization for mental illness (FUH)	The percentage of discharges for members ages 6 and older who were hospitalized for treatment of selected mental health disorders and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner. Two rates are reported: 1. The percentage of members who received follow-up within 30 days of discharge 2. The percentage of members who received follow-up within seven days of discharge	Claims	Effectiveness of Care: Behavioral Health	NCQA: HEDIS 2012 Measure Set
Follow-up care for children prescribed attention deficit hyperactivity disorder medication (ADD)	The percentage of children newly prescribed attention-deficit hyperactivity disorder (ADHD) medication who had at least three follow-up care visits within a 10-month period, one of which was within 30 days of when the first ADHD medication was dispensed. Two rates are reported: 1. Initiation phase: the percentage of members 6–12 as of the index prescription start date (IPSD) with an ambulatory prescription dispensed for ADHD medication, who had one follow-up visit with practitioner with prescribing authority during the 30-day Initiation Phase 2. Continuation and maintenance phase: the percentage of members ages 6–12 as of the IPSD with an ambulatory prescription dispensed for ADHD medication, who remained on the medication for at least 210 days and who, in addition to the visit in the initiation phase, had at least two follow-up visits with a practitioner within 270 days (9 months) after the initiation phase ended	Claims EHR	Effectiveness of Care: Behavioral Health	NCQA: HEDIS 2012 Measure Set
Weight assessment and counseling for nutrition and physical activity for children/adolescents (WCC)	The percentage of members ages 3–17 who had an outpatient visit with a primary care provider or OB/GYN and who had evidence of the following during the measurement year: Body mass index (BMI) percentile documentation; counseling for nutrition; counseling for physical activity	Claims Medical record EHR	Effectiveness of Care: Prevention and Screening	NCQA: HEDIS 2012 Measure Set
Well-child visit in the first 15 months of life (W15)	The percentage of members who turned 15 months old during the measurement year and who had the following number of well-child visits with a PCP during their first 15 months of life: no well-child visits; one well-child visit; two well-child visits; three well-child visits; four well-child visits; five well-child visits; six or more well-child visits	Claims Medical record	Utilization and Relative Resource Use: Utilization	NCQA: HEDIS 2012 Measure Set
Well-child visit in the third, fourth, fifth, and sixth years of life (W34)	The percentage of members ages 3–6 who had one or more well-child visits with a primary care provider during the measurement year.	Claims Medical record	Utilization and Relative Resource Use: Utilization	NCQA: HEDIS 2012 Measure Set