WORKING
PAPER

The Quality of Health Care Delivered to Adults in the United States

Appendix

Elizabeth A. McGlynn, Steven M. Asch,
John L. Adams, Joan Keesey, Jennifer Hicks,
Alison H. DeCristofaro, Eve A. Kerr

WR-174-1

March 2006

This Working Paper is the technical appendix to an article published in a scientific journal. It has been subject to the journal's usual peer review process.

HEALTH

This technical appendix to "The Quality of Health Care Delivered to Adults in the United States", published in the New England Journal of Medicine, Vol. 348, No. 26, June 26, 2003, is part of the RAND Health Working Paper series. It contains specialized material that underlies the results in the paper and was part of the journal submission. Working Papers have not been edited by RAND or undergone RAND's formal review process.

Appendix A

Detailed Results for QA Tools Indicators Used in Analysis

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Alcohol Dependence										
1	All patients hospitalized with trauma and hepatitis should be screened for problem drinking at least once during their hospital stay.	P	A	S	H	U	3	21	21	15.47
2	The record should indicate assessment for dependence, tolerance of psychoactive effects, loss of control, and consequences of use if the medical record indicates the patient is a daily or binge drinker.	P	C	D	H	U	2	261	320	8.76
3	Regular or binge drinkers should be advised to decrease their drinking.	P	C	T	C	U	1	261	320	14.28
4	Patients diagnosed with alcohol dependence should be referred for further treatment to at least one of the following: inpatient rehabilitation program, outpatient rehabilitation program, mutual help group (e.g., AA), substance abuse counseling, and/or aversion therapy.	P	C	T	E	U	1	261	320	4.64
5	Providers should reassess the alcohol intake of patients who report regular or binge drinking at the next routine health visit.	P	C	T	H	U	3	66	55	30.46
Asthma										
1	Patients with the diagnosis of moderate-to-severe asthma should have had some historical evaluation of asthma precipitants within six months of diagnosis.	P	C	D	H	U	3	37	29	56.38
2	Patients with the diagnosis of moderate-to-severe asthma should have baseline spirometry or peak flow performed within six months of diagnosis.	P	C	D	L	U	3	37	29	12.44

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
3	Patients with the diagnosis of moderate-to-severe asthma should have been prescribed a beta2-agonist inhaler for symptomatic relief of exacerbations.	P	C	T	M	U	3	198	169	87.75
4	Patients who report using a beta2-agonist inhaler more than 3 times per day on a daily basis (not only during an exacerbation) should be prescribed a longer acting bronchodilator (theophylline) and/or an anti-inflammatory agent (inhaled corticosteroids, cromolyn).	P	C	T	M	U	3	67	54	43.24
5	Patients with moderate-to-severe asthma should not receive beta-blocker medications (e.g., atenolol, propranolol).	P	C	T	M	O	3	198	169	94.27
6	Patients requiring chronic treatment with systemic corticosteroids during any 12month period should have been prescribed inhaled corticosteroids during that same time period.	P	C	T	M	U	3	33	32	60.31
7	Patients on chronic theophylline (dose > 600 mg/day for at least 6 months) should have at least one serum theophylline level determination per year.	P	C	F	L	U	3	7	5	0
8	Patients with the diagnosis of moderate-to-severe asthma should have a documented flu vaccination in September to January of the previous year.	P	C	T	I	U	3	182	154	60.88
9	All patients seen for an acute asthma exacerbation should have a history taken for all current medications.	D	C	T	H	U	3	125	266	78.37
10	All patients seen for an acute asthma exacerbation should have a history taken for prior hospitalizations and emergency department visits for asthma.	D	C	T	H	U	3	125	266	13.97
11	All patients seen for an acute asthma exacerbation should have a history taken of prior episodes of respiratory failure requiring intubation.	D	C	T	H	U	3	125	266	6.44

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
12	Patients presenting to the physician's office with an asthma exacerbation or historical worsening of asthma symptoms should have their lung function assessed using PEF or FEV1.	D	C	T	L	U	3	154	288	34.04
13	At the time of an exacerbation, patients on theophylline should have their theophylline level measured.	D	C	T	L	U	3	17	52	37.64
14	A physical exam of the chest should be performed on patients presenting with an asthma exacerbation in the physician's office or emergency room.	D	C	T	P	U	3	117	221	90.41
15	Patients presenting to the physician's office or ER with an FEV1 or PEF < 70% of baseline should be treated with beta2-agonists before discharge.	D	C	T	M	U	3	6	19	100
16	Patients who receive treatment with beta2-agonists in the physician's office or ER for FEV1 < 70% of baseline should have an FEV1 or PEF repeated prior to discharge.	D	C	T	L	U	3	6	19	93.03
17	Patients with an FEV1 or PEF < 70% of baseline after treatment for an asthma exacerbation in the physician's office should be placed on an oral corticosteroid taper.	D	C	T	M	U	3	2	11	100
18	Patients admitted to the hospital for an asthma exacerbation should have their oxygen saturation measured.	D	C	T	L	U	3	22	46	82.98
19	Hospitalized patients should receive systemic steroids (either PO or IV).	D	C	T	M	U	3	22	46	56.01
20	Hospitalized patients should receive treatment with beta2-agonists.	D	C	T	M	U	3	22	46	77.71
21	Hospitalized patients with oxygen saturation < 90% should receive supplemental oxygen, unless pCO_2 > 40 is previously documented.	D	C	T	E	U	3	1	1	100

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
22	Hospitalized patients with pCO_2 > 40 should receive at least one additional blood gas measurement to evaluate response to treatment, unless pCO_2 > 40 is previously documented.	D	C	T	L	U	3	1	1	0
23	Hospitalized patients should not receive sedative drugs (e.g., anxiolytics), except if on a ventilator, physiologically dependent on sedatives, or in alcohol withdrawal.	D	C	T	M	O	3	22	45	87.62
24	Patients newly prescribed inhaled bronchodilaters should be concurrently given either a spacer device or instructions in proper use of an MDI.	P	C	T	C	U	3	50	62	11.16
25	Patients hospitalized for an asthma exacerbation should receive outpatient follow-up contact within 14 days.	E	C	F	E	U	3	22	38	31.3
Atrial Fibrillation										
1	Patients presenting with new-onset atrial fibrillation or atrial fibrillation of unknown duration should be asked about alcohol use and stimulant drug use at the time of presentation.	D	C	D	H	U	3	86	230	18.15
2	Patients presenting with new-onset atrial fibrillation or atrial fibrillation of unknown duration should have a thyroid function checked within the first two weeks of presentation.	P	C	D	L	U	3	87	80	18.62
3	Patients with atrial fibrillation of greater than 48 hours duration or of unknown duration who do not have contraindications to warfarin should receive warfarin if they are under 65 with one or more other risk factors for stroke.	P	C	T	M	U	1	15	17	56.94
4	Patients with atrial fibrillation of greater than 48 hours duration or of unknown duration who do not have contraindications to warfarin should receive warfarin if they are 65 years of age or older.	P	C	T	M	U	1	62	53	43.07

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
5	Patients with chronic atrial fibrillation who have contraindications to warfarin or have declined warfarin therapy should receive aspirin if they are under 65 with one or more other risk factors for stroke.	P	C	T	M	U	1	5	4	77.74
6	Patients with atrial fibrillation who do not have contraindications to warfarin should be started on warfarin within 2 weeks of presenting with new onset ischemic or embolic stroke.	P	C	T	M	U	1	1	1	100
7	Patients with atrial fibrillation who do not have contraindications to warfarin should be started on warfarin within 1 week of presenting with new onset transient ischemic attack.	P	C	T	M	U	1	1	1	0
8	Patients with atrial fibrillation of greater than 48 hours duration or of unknown duration who are undergoing elective electrical or chemical cardioversion should receive anticoagulation for at least 3 weeks prior to cardioversion unless they have had a transesophageal echocardiogram within 24 hours of cardioversion that indicates no clot.	P	C	T	M	U	3	11	9	12.2
9	All patients with atrial fibrillation of greater than 48 hours or unknown duration should receive anticoagulation for at least 4 weeks after cardioversion unless there are contraindications to anticoagulation.	P	C	T	M	U	3	12	9	25.5
10	Patients with atrial fibrillation started on warfarin should have an INR checked within 1 week of the first dose.	P	C	F	L	U	3	15	12	56.18

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
BPH										
1	Patients diagnosed with BPH who report recent symptoms of prostatism, and who are on anticholinergic or sympathomimetic medications, should have discontinuation or dose reduction of these medications offered or discussed within one month of the note of symptoms.	P	C	D	M	O	3	8	8	12.8
2	Patients diagnosed with BPH who report symptoms of moderate prostatism should have treatment options discussed or offered within one month of the note of symptoms.	P	C	T	C	U	3	129	118	57.47
3	Patients diagnosed with BPH should be offered surgical therapy within two months of any continued complaints of moderate symptoms of prostatism after at least 2 months of alpha 1 adrenergic therapy, unless the patient is not a surgical candidate.	P	C	T	S	U	2	6	5	0
4	Patients diagnosed with BPH who have surgical therapy should have their symptoms reassessed 6 months after initiation of therapy.	P	C	F	H	U	3	9	8	48.53
5	Patients diagnosed with BPH who have alpha-1 adrenergic therapy should have their symptoms reassessed 6 months after initiation of therapy.	P	C	F	H	U	3	5	7	69.47
Breast Cancer										
1	If a palpable breast mass has been detected, at least one of the following procedures should be completed within 3 months: fine needle aspiration, mammography, ultrasound, biopsy, and/or a follow-up visit.	P	C	D	L	U	3	77	53	89.09

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
2	If a breast mass has been detected on two separate occasions, then either a biopsy, FNA, or ultrasound should be performed within 3 months of the second visit.	P	C	D	L	U	3	13	8	81.59
3	A biopsy or FNA should be performed within 6 weeks either when the mammography suggests malignancy or the persistent palpable mass is not cystic on ultrasound.	D	C	D	S	U	3	33	44	50.23
4	A biopsy should be performed within 6 weeks if FNA cannot rule out malignancy.	P	C	D	S	U	3	2	1	100
5	Women with stage I or stage II breast cancer should be offered a choice of modified radical mastectomy or breast-conserving surgery, unless contraindications to breast-conserving surgery are present.	P	C	T	S	U	1	13	8	50.24
6	Women treated with breast-conserving surgery should begin radiation therapy within 6 weeks of completing either of the following: the last surgical procedure on the breast (including reconstructive surgery that occurs within 6 weeks of primary resection) or chemotherapy, if patient receives adjuvant chemotherapy, unless wound complications prevent the initiation of treatment.	P	C	T	L	U	3	10	6	45.25
7	Women with invasive breast cancer that is node-positive, or node-negative and primary tumor >= 1 cm, should be treated with adjuvant systemic therapy to include combination chemotherapy and/or tamoxifen (20 mg/d).	P	C	T	M	U	1	13	7	85.05
8	Women with a history of breast cancer should have a yearly mammography.	P	C	F	L	U	1	99	73	84.64

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
9	Women with metastatic breast cancer should be offered hormonal therapy, chemotherapy, and/or enrollment in a clinical trial with documentation of informed consent within 6 weeks of the identification of metastases.	P	C	T	M	U	3	4	2	82.59
CAD										
1	Patients newly diagnosed with CAD should receive aspirin within one week of the diagnosis of CAD unless they have a contraindication to aspirin.	P	C	T	M	U	1	84	67	51.46
2	Patients with a prior diagnosis of CAD who are not on aspirin and do not have contraindications to aspirin should receive aspirin within one week of any visit to a provider in which CAD was addressed.	P	C	T	M	U	1	244	187	49.99
3	Patients newly diagnosed with CAD who smoke should have documentation of counseling on smoking cessation at the time of the diagnosis of CAD.	D	C	T	C	U	1	28	29	29.13
4	Patients with the diagnosis of unstable angina should receive aspirin within 2 hours of admission or presentation to the emergency room.	D	C	T	M	U	1	122	139	56.38
5	Patients admitted with the diagnosis of unstable angina who have angina > 5 minutes at rest associated with ischemic ST segment changes who do not have contraindications to heparin should receive heparin within 2 hours of the initial ECG that demonstrates ischemic changes, and continuous heparin infusion or subcutaneous LMW heparin for at least 24 hours (or until 26 hours after the ECG with ischemic changes).	P	C	T	M	U	1	4	3	41.61

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
6	Patients admitted with the diagnosis of unstable angina who have angina > 5 minutes at rest associated with ischemic ST segment changes should receive beta-blockers within 4 hours (unless they have contraindications to beta-blockers).	P	C	T	M	U	1	4	3	41.61
7	Patients presenting with acute myocardial infarction should receive at least 160 mg of aspirin within 2 hours of presentation or admission unless they have contraindications to aspirin.	D	C	T	M	U	1	17	22	60.55
8	Patients <75 years old presenting with an acute myocardial infarction who are within 12 hours of the onset of MI symptoms and who do not have contraindications to thrombolysis or revascularization should receive a thrombolytic agent within 1 hour of the time their ECG initially shows ST elevation > 0.1 mV in 2 or more contiguous leads, or a LBBB not known to be old.	P	C	T	M	U	1	4	4	43.78
9	Patients admitted within 12 hours of the onset of acute myocardial infarction who do not have contraindications to heparin should receive heparin (subcutaneously or IV) for at least 24 hours unless they have received streptokinase, APSAC, or urokinase.	P	C	T	M	U	3	2	2	100
10	Patients admitted with acute myocardial infarction should receive a beta-blocker within 12 hours of admission (unless they have contraindications to beta-blockers).	D	C	T	M	U	1	19	25	44.97
11	Patients admitted with acute myocardial infarction should not receive short-acting nifedipine during the hospitalization.	D	C	T	M	O	1	27	35	99.14
12	Patients admitted with acute myocardial infarction should not receive any calcium channel blocker if they have a reduced LVEF (<= 40%) or heart failure during the hospitalization.	P	C	T	M	O	1	8	6	94.99

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
13	Patients discharged after an acute myocardial infarction who do not have contraindications to aspirin should be discharged on aspirin.	D	C	T	M	U	1	26	34	63.24
14	Patients discharged after an acute myocardial infarction should be discharged on a beta-blocker (unless they have contraindications to beta-blockers).	D	C	T	M	U	1	26	32	63.91
15	Patients discharged after an acute myocardial infarction who have an LVEF<=40% documented at any time during the hospitalization should receive ACE inhibitors at discharge (unless they have contraindications to ACE inhibitors).	P	C	T	M	U	1	9	6	49.47
16	Patients with CAD who do not have contraindications to revascularization should be offered PTCA or CABS within 1 month of coronary angiography if they have 3 vessel CAD and an LVEF <= 40%.	P	C	T	S	U	1	6	3	52.98
17	Patients with CAD who do not have contraindications to revascularization should be offered CABS within 1 month of coronary angiography if they have left main stenosis > 50%.	P	C	T	S	U	1	4	5	89.77
18	Patients 40-75 years old who have a high-risk stress test should be offered coronary angiography within 6 weeks of the stress test (unless they have contraindications to revascularization).	P	C	D	L	U	3	8	6	62.59
19	Patients with newly diagnosed CAD should have a 12-lead ECG at the time of diagnosis.	P	C	D	L	U	3	106	81	51.56
20	Patients newly diagnosed with angina should have a hemoglobin and/or hematocrit measured at the time of diagnosis.	P	C	D	L	U	3	58	41	61.59
21	Patients newly diagnosed with unstable angina should have a hemoglobin and/or hematocrit measured at the time of diagnosis.	D	C	D	L	U	3	121	130	66.11

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
22	Patients being evaluated for unstable angina or rule-out unstable angina should have their blood pressure taken.	D	C	D	P	U	3	86	118	82.49
23	Patients being evaluated for unstable angina or rule-out unstable angina should have their heart rate measured.	D	C	D	P	U	3	86	118	83.71
24	Patients being evaluated for unstable angina or rule-out unstable angina should have a heart exam.	D	C	D	P	U	3	86	118	86.17
25	Patients being evaluated for unstable angina or rule-out unstable angina should have a lung exam.	D	C	D	P	U	3	86	118	83.12
26	Patients being evaluated for unstable angina or rule-out unstable angina should have a 12-lead ECG.	D	C	D	L	U	3	86	118	66.44
27	Patients admitted with unstable angina should be placed on cardiac monitoring (i.e., telemetry).	D	C	D	L	U	3	113	115	66.17
28	Patients admitted with unstable angina should have a repeat ECG 12-36 hours after admission.	D	C	D	L	U	3	104	105	47.64
29	Patients admitted with unstable angina who have any one of the conditions below should have a measurement of LVEF by echocardiogram, radionuclide scan, or ventriculogram during their hospitalization or within 10 days of discharge unless a prior LVEF is documented in the past year: a history of prior MI, left bundle branch block on their resting ECG, cardiomegaly by examination, cardiomegaly on chest X-ray, or a diagnosis of heart failure.	D	C	D	L	U	3	32	30	54.52
30	Patients hospitalized for the diagnosis of an MI or rule out MI should have their blood pressure measured.	D	C	D	P	U	3	86	90	76.53
31	Patients hospitalized for the diagnosis of an MI or rule-out MI should have their heart rate documented.	D	C	D	P	U	3	86	90	76.88

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
32	Patients hospitalized for the diagnosis of an MI or rule-out MI should have a heart exam.	D	C	D	P	U	3	86	90	81.29
33	Patients hospitalized for the diagnosis of an MI or rule-out MI should have a lung exam.	D	C	D	P	U	3	86	90	79.3
34	Patients hospitalized with an MI should have an assessment of LVEF prior to discharge if they have any risk factors for low LVEF (unless it is noted during hospitalization that prior to admission LVEF was <=40%).	P	C	D	L	U	3	4	1	83.79
35	Patients hospitalized with an MI who have a history of prior MI, but no risk factors for low LVEF, should have an assessment of LVEF during the hospitalization or within 2 weeks of discharge (unless it is noted during hospitalization that prior to admission LVEF was <=40%).	P	C	D	L	U	3	6	5	100
36	Patients < 75 years old with an MI should be offered symptom-limited stress testing or coronary angiography within 8 weeks of the MI (unless they have contraindications to revascularization).	P	C	D	L	U	3	17	14	96.81
37	Patients < 75 years old admitted after cardiac arrest and who have a positive stress test during hospitalization should be offered coronary angiography before discharge (unless revascularization is contraindicated).	P	C	D	L	U	3	5	4	100
Cancer Pain and Palliation										
1	Patients with metastatic cancer to bone should have the presence or absence of pain noted at least every 6 months.	P	C	F	H	U	3	5	3	52.16
2	Cancer patients whose pain is uncontrolled should be offered a change in pain management within 24 hours of the pain complaint.	P	C	T	M	U	3	7	6	73.63

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
3	Patients receiving emetogenic chemotherapy should be offered concurrent potent antiemetic therapy (e.g., 5HT blockade).	P	C	T	M	U	3	20	12	38.11
Cesarean Delivery										
1	For women who have delivered by cesarean section, the type of uterine incision used (transverse lower segment or vertical) should be noted in the medical record.	D	A	D	H	U	3	59	83	86.31
2	For women with a cesarean delivery in a prior pregnancy, the number and type of previous uterine scar(s) should be noted in the current delivery medical record. (If this information is not available, an attempt to locate it should be documented in the chart.)	D	A	D	H	U	2	34	42	51.16
3	Women with one prior transverse lower segment cesarean should undergo a trial of labor unless another indication for cesarean delivery is present (including refusal of a trial of labor).	P	A	T	E	O	2	11	12	60.83
4	Women with a prior classical vertical cesarean should have a scheduled repeat cesarean delivery.	P	A	T	S	U	2	4	3	81.32
5	When the diagnosis of failure to progress in labor is made, a woman should be in the active phase of labor.	P	A	D	P	O	3	15	18	74.32
6	Before a cesarean delivery is used to treat failure to progress in labor, at least two of the following therapeutic interventions should have been tried after the time of the diagnosis of FTP: amniotomy, oxytocin, and/or ambulation.	P	A	T	E	O	3	15	18	98.61
7	Women who give birth by cesarean should receive at least one dose of antibiotic prophylaxis.	P	A	T	M	U	1	55	58	32.79

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	Prophylactic antibiotic regimens should include one of the following: broad spectrum penicillins, broad spectrum cephalosporins, or metronidazole.	D	A	T	M	U	1	17	24	65.08
9	Aminoglycosides should not be used, alone or in combination, for antibiotic prophylaxis.	D	A	T	M	O	3	17	24	95.07
CHF										
1	Patients newly diagnosed with heart failure who are beginning medical treatment should receive an evaluation of their ejection fraction within 1 month of the start of treatment.	P	C	D	L	U	3	29	21	35.25
2	Patients newly diagnosed with heart failure should have a history at the time of the diagnosis documenting the presence or absence of a prior myocardial infarction or cardiac disease.	P	C	D	H	U	3	45	39	53.41
3	Patients newly diagnosed with heart failure should have a history at the time of the diagnosis documenting the presence or absence of current symptoms of chest discomfort or angina.	P	C	D	H	U	3	45	39	47.22
4	Patients newly diagnosed with heart failure should have the presence or absence of a history of hypertension documented.	P	C	D	H	U	3	45	39	61.17
5	Patients newly diagnosed with heart failure should have a history of diabetes documented.	P	C	D	H	U	3	45	39	40.73
6	Patients newly diagnosed with heart failure should have the patient's current medications documented.	P	C	D	H	U	3	45	39	78.57
7	Patients newly diagnosed with heart failure should have the patient's alcohol use documented.	P	C	D	H	U	3	45	39	65.32
8	Patients newly diagnosed with heart failure should have their smoking status documented.	P	C	D	H	U	3	45	39	51.67

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
9	Patients with a new diagnosis of heart failure should have their weight documented at the time of presentation.	P	C	D	P	U	3	24	21	62.97
10	Patients with a new diagnosis of heart failure should have their blood pressure documented at the time of presentation.	P	C	D	P	U	3	24	21	100
11	Patients with a new diagnosis of heart failure should have their lung exam documented at the time of presentation.	P	C	D	P	U	3	24	21	73.36
12	Patients with a new diagnosis of heart failure should have their cardiac exam documented at the time of presentation.	P	C	D	P	U	3	24	21	73.36
13	Patients with a new diagnosis of heart failure should have their abdominal exam documented at the time of presentation.	P	C	D	P	U	3	24	21	33.88
14	Patients with a new diagnosis of heart failure should have their lower extremity exam documented at the time of presentation.	P	C	D	P	U	3	24	21	59.82
15	Patients with a new diagnosis of heart failure should have an examination of neck veins documented at the time of presentation.	P	C	D	P	U	3	24	21	16.68
16	Patients with a new diagnosis of heart failure should have their heart rate documented at the time of presentation.	P	C	D	P	U	3	24	21	66.35
17	Patients with a new diagnosis of heart failure should be offered a chest X-ray within 1 month of the diagnosis (unless performed within the prior 3 months).	P	C	D	L	U	3	16	11	18.41
18	Patients with a new diagnosis of heart failure should be offered an EKG within 1 month of the diagnosis (unless performed within the prior 3 months).	P	C	D	L	U	3	16	11	24.01

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
19	Patients with a new diagnosis of heart failure should be offered a complete blood count within 1 month of the diagnosis (unless performed within the prior 3 months).	P	C	D	L	U	3	16	11	34.15
20	Patients with a new diagnosis of heart failure should be offered a serum sodium, potassium, and bicarbonate within 1 month of the diagnosis (unless performed within the prior 3 months).	P	C	D	L	U	3	16	11	47.77
21	Patients with a new diagnosis of heart failure should be offered a serum creatinine test within 1 month of the diagnosis (unless performed within the prior 3 months).	P	C	D	L	U	3	16	11	62.03
22	Patients who are hospitalized for symptoms of heart failure should have their weight documented on the day of hospitalization.	D	C	D	P	U	3	48	75	32.04
23	Patients who are hospitalized for symptoms of heart failure should have their blood pressure documented on the day of hospitalization.	D	C	D	P	U	3	48	75	70.63
24	Patients who are hospitalized for symptoms of heart failure should have their lung exam documented on the day of hospitalization.	D	C	D	P	U	3	48	75	78.18
25	Patients who are hospitalized for symptoms of heart failure should have their cardiac exam documented on the day of hospitalization.	D	C	D	P	U	3	48	75	72.33
26	Patients who are hospitalized for symptoms of heart failure should have their abdominal exam documented on the day of hospitalization.	D	C	D	P	U	3	48	75	77.2
27	Patients who are hospitalized for symptoms of heart failure should have their lower extremity examination documented on the day of hospitalization.	D	C	D	P	U	3	48	75	75.69

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
28	Patients who are hospitalized for symptoms of heart failure should have an examination of their neck veins documented on the day of hospitalization.	D	C	D	P	U	3	48	75	69.09
29	Patients who are hospitalized for symptoms of heart failure should have their heart rate documented on the day of hospitalization.	D	C	D	P	U	3	48	75	67.02
30	Patients who are hospitalized for heart failure should have serum electrolytes assessed within one day of hospitalization.	D	C	D	L	U	3	48	75	72.38
31	Patients who are hospitalized for heart failure should have a serum creatinine test performed within one day of hospitalization.	D	C	D	L	U	3	48	75	69.65
32	Patients with a diagnosis of heart failure who have an ejection fraction of less than 40% and no contraindications to ACE inhibitors should be receiving an ACE inhibitor.	P	C	T	M	U	1	24	22	100
33	Patients with a diagnosis of heart failure who are on an ACE inhibitor should have their serum potassium checked every year.	P	C	F	L	U	3	49	46	78.24
34	Patients with a diagnosis of heart failure who are on an ACE inhibitor should have their serum creatinine checked every year.	P	C	F	L	U	3	49	46	76.37
35	Patients with a new diagnosis of heart failure who are started on medical treatment for heart failure should have dietary counseling within 1 month of the start of medical treatment.	P	C	T	E	U	2	27	19	16.12
36	Patients who have been hospitalized for heart failure should have follow-up contact within 4 weeks of discharge.	E	C	F	E	U	3	37	31	66.2

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Colorectal Cancer										
1	Patients documented in the chart as having one or more first-degree relatives with CRC should be offered at least one of the following colon cancer screening tests beginning at age 40: FOBT (if not done in the past 2 years), sigmoidoscopy (if not done in the past 5 years), colonoscopy (if not done in the past 10 years), double contrast barium enema (if not done in the past 5 years).	P	P	S	L	U	1	79	56	82.35
2	Providers should offer to remove all polyps having a size greater than 1 cm and/or adenomatous histology within 3 months of detection.	D	P	T	S	U	3	65	68	84.68
3	Procedure note documentation for endoscopic management of polyps should include the location of any polyps removed endoscopically and the polyp type (sessile versus pedunculated).	D	P	D	S	U	3	73	77	29.73
4	All patients with positive screening sigmoidoscopy tests should be offered a diagnostic colonoscopy within 3 months.	P	P	D	L	U	2	7	5	56.04
5	If a screening FOBT is positive, a diagnostic evaluation of the colon should be offered within 3 months.	D	P	D	L	U	1	89	98	27.97
6	Patients who have undergone surgical resection for colon or rectal cancer should have documentation in the chart that colonoscopy or barium enema with sigmoidoscopy was offered within the preceding 12 months.	P	C	D	L	U	2	11	7	65.7
7	Patients who are diagnosed with colon cancer and do not have metastatic disease should be offered a wide resection with anastamosis within 6 weeks of diagnosis.	P	C	T	S	U	2	10	7	100

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	Patients who undergo a wide surgical resection should have negative margins noted on the most recent final pathology report or have documentation that they were offered a repeat resection if they have Stage I colon cancer.	P	C	T	S	U	2	6	5	89.79
9	Patients with Stage III colon cancer who have undergone a surgical resection should be offered adjuvant chemotherapy to start within 6 weeks of surgery with a published 5-FU-containing regimen (or be enrolled in a clinical trial with documentation of informed consent).	P	C	T	M	U	1	1	2	100
10	Patients who are diagnosed preoperatively with Stage I rectal cancer should be offered one of the following surgical resections within 6 weeks of diagnosis: low anterior resection, abdominal perineal resection, or full-thickness local excision, or be enrolled in a clinical trial with documentation of informed consent.	P	C	T	S	U	2	1	0	0
11	Patients who undergo a wide surgical resection should have negative margins noted on the most recent final pathology report or have documentation that they were offered a repeat resection if they have either Stage I rectal cancer or Stage II or III rectal cancer that is not invading into other organs (not a T4 lesion).	P	C	T	S	U	2	1	0	0
12	Patients with Stages I, II, and III colorectal cancer should receive a colonoscopy or double contrast barium enema within a year of curative surgery if it did not occur within 12 months preoperatively.	P	C	F	L	U	2	4	3	100

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Community Acquired Pneumonia										
1	Patients over 65 years of age or with coexisting illness and a diagnosis of pneumonia should receive a WBC on the day of presentation.	D	A	D	L	U	3	86	82	24.17
2	Patients over 65 years of age or with coexisting illness and a diagnosis of pneumonia should receive a BUN on the day of presentation.	D	A	D	L	U	3	86	82	20.03
3	Non-hospitalized persons <= 65 years of age diagnosed with pneumonia without a known bacteriologic etiology and without coexisting illness should be offered an oral empiric macrolide, unless allergic.	D	A	T	M	U	3	54	47	66.84
4	Non-hospitalized persons > 65 years of age diagnosed with pneumonia without a known bacteriologic etiology and with coexisting illnesses should be offered one of the following oral empiric antibiotic regimens: a second-generation cephalosporin, trimethoprim-sulfamethoxazole, or a beta-lactam/beta-lactamase inhibitor combination.	D	A	T	M	U	3	18	13	28.97
5	Persons treated for pneumonia should have follow-up contact with a provider within 6 weeks after discharge or diagnosis.	D	A	F	E	U	3	66	68	62.35

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
COPD										
1	COPD patients on bronchodilator therapy who have not had spirometry in the previous 12 months should have spirometry performed within 3 months after initiation of therapy.	P	C	D	P	U	3	19	24	28.55
2	Newly diagnosed COPD patients who smoke should be counseled or referred for smoking cessation within 3 months of the new diagnosis of COPD.	P	C	T	C	U	3	28	29	62.53
3	All patients receiving regular bronchodilator treatment for COPD symptoms should be receiving ipratropium, unless intolerance is documented.	P	C	T	M	U	3	119	100	56.99
4	Patients newly prescribed inhaled bronchodilators should be concurrently given either a spacer device or instructions in proper use of an MDI.	P	C	T	C	U	3	48	47	31.67
5	COPD patients should have a theophylline level checked within 1 week of either initiation or increase of theophylline dose.	P	C	F	L	O	3	6	8	19.23
6	In patients receiving theophylline, if a serum theophylline level exceeds 20 µg/ml, the dose should be modified within 1 day of the measurement.	P	C	T	M	O	3	5	2	30.88
7	In patients receiving theophylline, if a serum theophylline level exceeds 20 µg/ml, re-testing of level should be performed within one week, unless theophylline was stopped.	P	C	T	L	O	3	3	2	0
8	COPD patients should receive home oxygen if their baseline room air oxygen saturation is < 88% at rest (not during an exacerbation).	P	C	T	E	U	1	9	11	32.18

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
9	The outpatient COPD medications should be documented in the medical record at the time of a COPD exacerbation.	D	C	D	H	U	3	111	205	67.08
10	Information on prior hospitalizations, urgent care, or ED visits for COPD (e.g., time of most recent visit or number per year) should be documented in the medical record at the time of a COPD exacerbation.	D	C	D	H	U	3	111	205	28.89
11	The presence or absence of new cough should be documented in the medical record at the time of a COPD exacerbation.	D	C	D	H	U	3	111	205	58.96
12	Vital signs, including respiratory rate, pulse, temperature, and blood pressure should be documented in the medical record at the time of a COPD exacerbation.	D	C	D	P	U	3	111	205	61.58
13	A chest exam should be documented in the medical record at the time of a COPD exacerbation.	D	C	D	P	U	3	111	205	94.04
14	Patients admitted to the hospital for an exacerbation of COPD who have a history of coronary disease should have an EKG performed within 24 hours of admission.	D	C	D	L	U	3	15	19	73.8
15	A theophylline level should be obtained for patients on theophylline who are hospitalized with an exacerbation of COPD.	D	C	D	L	U	3	14	29	8.54
16	A theophylline level should be obtained for patients on theophylline who present in the outpatient setting with an exacerbation of COPD.	D	C	D	L	U	3	8	18	66.99
17	Patients presenting with COPD exacerbation should have oxygen administered if the oxygen saturation is < 88% or pO2 is < 55 mm Hg.	D	C	T	E	U	3	12	12	33.46

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
18	Patients presenting with COPD exacerbation should be admitted to the hospital if acute ischemia is documented in the medical record on the date of presentation.	D	C	T	E	U	3	1	0	0
19	Patients hospitalized with a COPD exacerbation should be admitted to a critical-care bed when severe dyspnea (breathing rate > 35 with accessory muscle use) occurs despite initial therapeutic measures.	D	C	T	E	U	3	4	8	32.19
20	COPD patients hospitalized for an exacerbation should be discharged on home oxygen if the last documented oxygen saturation prior to discharge is <88%.	D	C	T	E	U	3	2	2	70.21
CVD										
1	Patients who receive anticoagulant or antiplatelet therapy for treatment of acute stroke within 7 days of presentation should receive a head CT or MRI prior to the initiation of anticoagulant or antiplatelet treatment.	P	C	D	L	U	3	19	16	63.18
2	Patients newly diagnosed with a stroke without a known cardiac source should be started on antiplatelet therapy within 1 week of the diagnosis unless a contraindication is documented.	P	C	T	M	U	1	24	22	38.91
3	Patients newly diagnosed with a TIA without a known cardiac source should be started on antiplatelet therapy within 1 week of the diagnosis unless a contraindication is documented.	P	C	T	M	U	1	26	24	65.09
4	Patients with a documented history of stroke or TIA without a known cardiac source should be on daily antiplatelet treatment, unless a contraindication is documented.	P	C	T	M	U	1	63	50	58.05

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
5	Patients presenting for care with carotid artery symptoms who are diagnosed with TIA or stroke should have a carotid artery imaging study within 6 months before or 1 month after the event, unless the patient is not a candidate for carotid surgery.	P	C	D	L	U	1	26	21	61.82
6	Patients admitted with a newly diagnosed stroke should have an assessment of functional status and swallowing prior to discharge.	P	C	F	H	U	3	24	22	48.49
7	Patients presenting with a new diagnosis of stroke should have a neurological examination at the time of presentation.	P	C	D	P	U	3	28	24	82.04
8	Patients presenting with a new diagnosis of TIA should have a neurological examination at the time of presentation.	P	C	D	P	U	3	28	26	64.54
9	Patients who smoke and present with stroke but are not hospitalized should be counseled to stop smoking at the time they present with the stroke.	P	C	F	C	U	3	3	2	11.81
10	Patients who smoke and present with TIA but are not hospitalized should be counseled to stop smoking at the time they present with the TIA.	P	C	F	C	U	3	5	4	16.86
Depression										
1	Clinicians should ask about the presence or absence of depression or depressive symptoms in any person with any of the following risk factors for depression: history of depression, death in family in past six months, or alcohol or other drug abuse.	D	C	S	H	U	3	700	761	67.85
2	If the diagnosis of depression is made, the presence or absence of alcohol or other drug abuse should be documented.	D	C	D	H	U	3	261	252	28.17

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
3	If the diagnosis of depression is made, medication use should be documented.	D	C	D	H	U	3	261	252	59.03
4	If the diagnosis of depression is made, general medical co-morbidities should be elicited and documented in the chart.	D	C	D	H	U	3	261	252	55.59
5	Once diagnosis of major depression has been made, treatment with antidepressant medication and/or psychotherapy should begin within 2 weeks.	P	C	T	M	U	1	261	242	81.41
6	Presence or absence of suicidal ideation should be documented during the first or second diagnostic visit.	D	C	D	H	U	3	294	281	25.8
7	Persons who have suicidality should be asked if they have specific plans to carry out suicide.	D	C	D	H	U	3	50	47	76.11
8	Persons who have suicidality and have any of the following risk factors should be hospitalized: psychosis, current alcohol or drug abuse or dependency, and specific plans to carry out suicide (e.g., obtaining a weapon, putting affairs in order, making a suicide note).	P	C	T	E	U	3	14	11	28.9
9	Antidepressants should be prescribed at appropriate dosages.	P	C	T	M	U	1	219	203	81.57
10	Anti-anxiety agents should not be prescribed as a sole agent for the treatment of depression.	P	C	T	M	O	1	227	204	96.84
11	Medication treatment visits or telephone contacts should occur at least once in the 2 weeks following initial diagnosis.	P	C	F	E	U	3	218	201	25.77
12	Persons hospitalized for depression should have follow-up with a mental health specialist or their primary care doctor within two weeks of discharge.	E	C	F	E	U	3	45	43	49.64

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
13	Patients with major depression who have medical record documentation of improvement of symptoms within 6 weeks of starting antidepressant treatment should be continued on an antidepressant for at least 4 additional months.	P	C	F	M	U	1	219	203	41.2
14	At each visit during which depression is discussed, degree of response/remission and side effects of medication should be assessed and documented during the first year of treatment.	P	C	F	H	U	3	61	59	54.16
Diabetes										
1	Patients < 75 years old with more than one fasting blood sugar >126 or postprandial blood sugar >200 should have a diagnosis of diabetes noted in progress notes or problem list.	P	C	D	L	U	3	182	167	94.89
2	Patients with diabetes should have glycosylated hemoglobin every 6 months.	P	C	F	L	U	1	416	357	23.87
3	Patients with diabetes should have an annual eye and visual exam.	P	C	F	P	U	1	416	357	14.21
4	Patients with diabetes should have total serum cholesterol and HDL cholesterol tests documented.	P	C	F	L	U	3	416	357	57.86
5	Patients with diabetes should have measurement of urine protein (annual) documented.	P	C	F	L	U	3	416	357	23.62
6	Patients with diabetes should have an examination of their feet at least twice a year.	P	C	F	P	U	3	416	357	44.92
7	Patients with diabetes should have a measurement of blood pressure at every visit.	P	C	F	P	U	3	416	357	64.22

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	Patients taking insulin should monitor their glucose at home unless documented to be unable or unwilling.	P	C	F	L	U	3	170	150	91.05
9	Newly diagnosed diabetics should receive dietary and exercise counseling.	P	C	T	C	U	2	96	78	56.33
10	Type 2 diabetics who have failed dietary therapy should receive oral hypoglycemic therapy.	P	C	T	M	U	3	16	14	37.83
11	Type 2 diabetics who have failed oral hypoglycemics should be offered insulin.	P	C	T	M	U	3	12	8	38.98
12	Diabetics with proteinuria should be offered an ACE inhibitor within 3 months of the notation of proteinuria unless contraindicated.	P	C	T	M	U	1	47	38	55.15
13	Patients with diabetes should have a follow-up visit at least every 6 months.	P	C	F	E	U	3	416	357	44.57
Dyspepsia/ PUD										
1	Patients presenting with a new episode of dyspepsia should have the presence or absence of NSAID use noted in the medical record on the date of presentation.	P	C	D	H	U	2	255	232	33.32
2	Patients with new dyspepsia who have significant unintentional weight loss (exceeding 15 pounds in the past 3 months), guaiac-positive stool if not on NSAIDs, and dysphagia on the date of presentation should have endoscopy performed within 1 month, unless endoscopy has been performed in the previous 6 months.	P	C	D	L	U	2	24	22	23.31

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
3	For patients with documented PUD who have been noted to use NSAIDs or aspirin within 2 months before diagnosis, the medical record should indicate a reason why NSAIDs or aspirin will be continued or advice to the patient to discontinue NSAIDs or aspirin at the time of diagnosis.	P	C	T	M	O	2	17	14	36.93
4	Patients with a gastric ulcer confirmed by endoscopy should have at least a minimum of 3 biopsies during endoscopy and/or a follow-up endoscopy within 3 months.	P	C	T	L	U	3	7	6	41.84
5	Patients with endoscopically documented PUD should be offered endoscopic treatment or surgery within the next 24 hours if either continued oozing, bleeding, or spurting of blood or a visible vessel (or pigmented protuberance) is documented in the endoscopy note.	P	C	T	S	U	1	2	2	45.21
6	Patients with a documented PUD complication who have had a positive H. pylori test (by biopsy, breath test, or positive serology not previously treated) within 3 months after the complication should be started on an H. pylori eradication regimen within 1 month of the positive test.	P	C	T	M	U	1	1	1	0
7	Patients with endoscopically confirmed PUD whose symptoms of dyspepsia or documented ulcers recur within 6 months after eradication therapy for H. pylori should receive confirmatory testing for successful H. pylori cure by endoscopic biopsy or urease breath test within 1 month of symptom recurrence.	P	C	F	L	U	2	2	1	0

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	Patients with a history of PUD complications in the past year should have results of H. pylori testing documented in the medical record in the same time period.	P	C	F	L	U	1	13	9	30.26
Headache										
1	Patients with new onset headache should be asked about the location of the pain.	D	A	D	H	U	3	484	660	48.29
2	Patients with new onset headache should be asked about associated symptoms.	D	A	D	H	U	3	484	660	57.09
3	Patients with new onset headache should be asked about their temporal profile.	D	A	D	H	U	3	484	660	46.12
4	Patients with new onset headache should be asked about the degree of severity of the headache.	D	A	D	H	U	3	484	660	44.23
5	Patients with new onset headache should be asked about family history of headache.	D	A	D	H	U	3	484	660	8.21
6	Patients with new onset headache should be asked about any possible aggravating or alleviating factors.	D	A	D	H	U	3	484	660	38.64
7	Patients with new onset headache should have an examination evaluating the cranial nerves.	D	A	D	P	U	3	484	660	37.73
8	Patients with new onset headache should have an examination evaluating the fundi.	D	A	D	P	U	3	484	660	22.17
9	Patients with new onset headache should have an examination evaluating deep tendon reflexes.	D	A	D	P	U	3	484	660	21.04
10	Patients with new onset headache should have an examination evaluating their blood pressure.	D	A	D	P	U	3	484	660	53.85
11	CT or MRI scanning is indicated in patients with new onset headache and an abnormal neurological examination.	D	A	D	L	U	3	46	48	32.74

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
12	CT or MRI scanning is indicated in patients with new onset headache and a severe headache.	D	A	D	L	U	3	100	121	18.14
13	Skull X-rays should not be part of an evaluation for headache.	P	A	D	L	O	2	712	668	98.7
14	Patients with acute mild migraine or tension headache should have tried aspirin, Tylenol, or other nonsteroidal anti-inflammatory agents before being offered any other medication.	P	A	T	M	O	1	207	198	56.76
15	For patients with acute moderate or severe migraine headache, one of the following should have been tried before any other agent is offered: ketorolac, sumatriptan, dihydroergotamine, ergotamine, chlorpromazine, or metoclopramide.	P	A	T	M	O	1	55	58	36.91
16	Recurrent moderate or severe tension headaches should be treated with a trial of tricyclic antidepressant agents, if there are no medical contraindications to use.	P	A	T	M	U	1	16	12	9.55
17	If a patient has more than 2 moderate to severe migraine headaches each month, then prophylactic treatment with one of the following agents should be offered: beta blockers, calcium channel blockers, tricyclic antidepressants, naproxen, aspirin, fluoxitene, valproate, orcyproheptadine.	P	A	T	M	U	1	24	25	53.47
18	Sumatriptan and ergotamine should not be concurrently administered.	P	A	T	M	O	3	90	76	95.32
19	Opioid agonists and barbiturates should not be first-line therapy for migraine or tension headaches.	P	A	T	M	O	3	277	265	78.52
20	Sumatriptan and ergotamine should not be given in patients with a history of uncontrolled hypertension.	P	A	T	M	O	2	15	16	93.76

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
21	Sumatriptan and ergotamine should not be given in patients with a history of ischemic heart disease or angina.	P	A	T	M	O	2	42	37	100
Hip Fracture										
1	Patients who have had surgical repair of a hip fracture should have received a complete blood count preoperatively.	D	A	D	L	U	3	5	6	61.72
2	Patients who have had surgical repair of a hip fracture should have received a coagulation test preoperatively.	D	A	D	L	U	3	5	6	42.72
3	Patients who have had surgical repair of a hip fracture should have received a chemistry panel preoperatively.	D	A	D	L	U	3	5	6	61.72
4	Patients who have had surgical repair of a hip fracture should have had a preoperative urinalysis.	D	A	D	L	U	3	5	6	8.32
5	Patients who have had surgical repair of a hip fracture should have had a preoperative ECG.	D	A	D	L	U	3	5	6	42.72
6	Patients who have had surgical repair of a hip fracture should have received antibiotics prophylactically on the same day that surgery was performed.	D	A	T	M	U	1	5	6	21.36
7	Persons with hip fractures should be given prophylactic antithrombotics on admission to the hospital.	P	A	T	M	U	1	7	5	45.16
8	Patients who have had a hip fracture should have documented within 2 months (before or after) the presence or absence of at least one modifiable risk factor for subsequent hip fracture.	D	A	F	H	U	3	6	7	56.24
9	Patients over 65 who report falling should be assessed for at least two modifiable risk factors within 3 months of the report.	D	A	F	H	U	3	106	119	14.77

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Hyperlipidemia										
1	Persons under age 75 with preexisting heart disease who are not on pharmacological therapy for hyperlipidemia should have their total cholesterol, HDL, and LDL level documented at least every 5 years.	P	C	D	L	U	3	230	192	56.23
2	Persons under age 75 with newly diagnosed coronary disease should have had total cholesterol, HDL, and LDL documented within 2 years before or within 4 months after the diagnosis is first noted in the medical record.	P	C	D	L	U	3	65	48	53.78
3	Patients without preexisting coronary disease who are started on pharmacological treatment for hyperlipidemia should have had at least 2 measurements of their cholesterol (total or LDL) documented in the year before the start of pharmacological treatment.	P	C	D	L	U	3	69	61	28.46
4	Patients under age 75 with preexisting coronary disease who have an untreated LDL cholesterol level >130 mg/dl should begin diet or drug therapy within 3 months of the high LDL measurement.	P	C	T	M	U	1	49	38	60.01
5	Patients under age 75 with preexisting coronary disease who have an LDL level >130 mg/dl after 6 months of dietary cholesterol-lowering treatment should receive pharmacological therapy for hyperlipidemia within 2 months of measurement.	P	C	T	M	U	3	5	4	33.14
6	Patients in whom pharmacological therapy for hyperlipidemia has been initiated should have their total cholesterol, HDL, and LDL rechecked within 4 months.	P	C	F	L	U	3	143	122	40.12

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
7	Patients receiving pharmacological therapy for hyperlipidemia who have had a dosage or medication change should have total cholesterol, HDL, and LDL rechecked within 4 months of the change.	D	C	F	L	U	3	123	179	49.65
Hypertension										
1	All patients with average blood pressures of Stage I or greater as determined on at least 3 separate visits should have a diagnosis of hypertension documented in the record.	P	C	D	P	U	3	823	687	72.99
2	Patients with a new diagnosis of Stage 1, 2, or 3 hypertension should have at least 3 or more measurements on separate visits with a mean SBP>140 or a mean DBP>90.	P	C	D	P	U	3	185	168	21.39
3	Initial history and physical of patients with hypertension should document assessment of at least 2 of the following items by the third visit: medication and substance abuse, personal history of tobacco abuse, alcohol abuse, or taking of medications that may cause hypertension.	P	C	D	H	U	3	187	170	33.06
4	Initial history and physical of patients with hypertension should document a physical examination: of the fundi by the third visit.	P	C	D	P	U	3	203	183	13.56
5	Initial history and physical of patients with hypertension should document heart sounds by the third visit.	P	C	D	P	U	3	203	183	71.2
6	Initial history and physical of patients with hypertension should document assessment of the abdomen for bruits by the third visit.	P	C	D	P	U	3	203	183	47.92
7	Initial history and physical of patients with hypertension should document assessment of peripheral arterial pulses by the third visit.	P	C	D	P	U	3	203	183	30.57

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	Initial history and physical of patients with hypertension should document a neurologic exam by the third visit.	P	C	D	P	U	3	203	183	34.37
9	Initial laboratory tests should include urinalysis.	P	C	D	L	U	3	245	225	30.91
10	Initial laboratory tests should include serum, plasma, or blood glucose.	P	C	D	L	U	3	245	225	66.08
11	Initial laboratory tests should include serum potassium.	P	C	D	L	U	3	245	225	60.09
12	Initial laboratory tests should include serum cholesterol.	P	C	D	L	U	3	245	225	60.06
13	Initial laboratory tests should include triglycerides.	P	C	D	L	U	3	245	225	55.78
14	Initial laboratory tests should include creatinine.	P	C	D	L	U	3	245	225	61.54
15	First-line treatment for patients in risk group HN-A or HN-B is lifestyle modification. The medical record should indicate counseling for at least 1 of the following interventions prior to initiating pharmacotherapy: weight reduction if obese, increased physical activity if sedentary, or a low sodium diet.	P	C	T	C	U	1	27	23	30.57
16	First-line treatment for patients with Stage 1A hypertension is lifestyle modification. The medical record should indicate counseling for at least 1 of the following interventions prior to initiating pharmacotherapy: weight reduction if obese, increased physical activity if sedentary, or a low sodium diet.	P	C	T	C	U	1	25	23	25.03

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
17	Treatment for Stage 1B and 1C, and Stages 2 and 3 hypertension should include lifestyle modification. The medical record should indicate counseling for at least 1 of the following interventions: weight reduction if obese, increased physical activity if sedentary, or a low-sodium diet.	P	C	T	C	U	1	149	136	39.86
18	Stage 1B hypertensives whose blood pressure remains Stage 1 after 6 months of lifestyle modification should be offered pharmacotherapy.	P	C	T	M	U	1	113	94	20.33
19	Stage 1A hypertensives whose blood pressure remains Stage 1 after 12 months of lifestyle modification should be offered pharmacotherapy.	P	C	T	M	U	1	22	17	13.87
20	Patients in any risk group with Stage 2 or 3 hypertension should be offered pharmacotherapy.	P	C	T	M	U	1	359	318	64.36
21	Patients in risk group HN-C should be offered pharmacotherapy.	P	C	T	M	U	1	277	218	67.12
22	Patients in risk group C with Stage 1 hypertension should be offered pharmacotherapy.	P	C	T	M	U	1	332	270	75.19
23	Hypertensive patients should visit the provider at least once each `year.	P	C	F	E	U	3	1,701	1413	92.98
24	Newly diagnosed Stage 1 patients should be evaluated by the provider within 4 months of their initial visit.	P	C	F	E	U	3	111	99	76.14
25	Newly diagnosed Stage 2 patients should be evaluated by the provider within 2 months of their initial visit.	P	C	F	E	U	3	56	55	65.99

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
26	Newly diagnosed Stage 3 patients should be evaluated by the provider within 2 weeks of their initial visit.	P	C	F	E	U	3	18	14	32.83
27	Hypertensive patients with consistent average SBP>140 or DBP>90 over 6 months should have one of the following interventions recorded in the medical record: a change in dose or regimen of antihypertensives, or repeated education regarding lifestyle modifications.	P	C	F	M	U	3	853	674	76.47
Hysterectomy										
1	If a woman undergoes a hysterectomy with the indication of fibroid uterus, at least one of the following should be recorded in the medical record: the uterus is significantly enlarged and the patient is concerned about the fibroids, excessive menstrual bleeding, pelvic discomfort, or bladder pressure with urinary frequency.	P	A	D	H	O	3	20	12	91.29
2	If a pre- or peri-menopausal woman undergoes a hysterectomy with the indication of abnormal uterine bleeding, then the medical record should indicate that at least one month of medical therapy was offered in the six months prior to the hysterectomy without relief of symptoms.	P	A	T	M	O	3	11	10	43.88
3	Women who have a hysterectomy for post-menopausal bleeding should have been offered a biopsy of the endometrium within six months prior to the procedure.	P	A	D	S	O	3	12	6	46.5
4	Women with post-menopausal bleeding should be offered an office endometrial biopsy within three months of presentation.	P	A	D	S	O	3	37	23	55.74

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Low Back Pain										
1	Patients presenting with acute low back pain should receive a focused medical history and physical examination. The history should include questions about red flags in at least one of the following areas: spine fracture (trauma, prolonged use of steroids), cancer (history of cancer, unexplained weight loss, immunosuppression), infection (fever, IV drug use). Red flags for cauda equina syndrome (CES) or rapidly progressing neurologic deficit are: acute onset of urinary retention or overflow incontinence, loss of anal sphincter tone or fecal incontinence, saddle anesthesia, and global progressive motor weakness in the lower limbs.	D	A	D	H	U	3	489	568	33
2	Patients presenting with acute low back pain should have neurologic screening.	D	A	D	P	U	3	489	568	49.8
3	Patients presenting with acute low back pain should have a test of straight leg raising.	D	A	D	P	U	3	489	568	39.15
4	Patients should not be taking any of the following medications for treatment of acute low back pain: phenylbutazone, dexamethasone, other oral steroids, colchicine, or anti-depressants.	D	A	T	M	O	3	482	554	95.96
5	Patients should not be prescribed any of the following physical treatments for acute low back pain: transcutaneous electrical nerve stimulation (TENS), lumbar corsets and support belts, or spinal traction.	D	A	T	E	O	1	489	568	93.89
6	Prolonged bed rest (>4 days) should not be recommended for patients with acute low back pain.	D	A	T	E	O	1	489	568	99.71

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Menopause Management										
1	Women with a new diagnosis of menopause should receive counseling about the risks and benefits of HRT within one year of diagnosis.	P	C	T	E	U	3	19	19	97.87
2	Post-menopausal women being initiated on HRT should receive counseling about the risks and benefits of HRT within 1 year prior to initiation.	P	C	T	E	U	3	32	25	85.48
Orthopedic Conditions										
1	Patients diagnosed with impingement syndrome should be offered at least 1 of the following within 2 weeks: NSAIDs (including aspirin), steroid injection, avoidance of inciting activities, physical therapy, and instructions for a home exercise program.	D	A	T	M	U	1	123	120	80.58
2	Patients presenting with new onset knee pain after injury to their knee should undergo at least 2 of the following maneuvers during physical examination within one month of initial presentation: Lachman's test, anterior drawer test, posterior drawer test, posterior sag test, joint line palpation, McMurray's test, valgus stress, varus stress.	D	A	D	P	U	3	115	133	48.28
3	Patients presenting with new onset knee effusion should have a history taken at time of initial presentation that includes duration of swelling.	D	A	D	H	U	3	81	87	53.3
4	Patients presenting with new onset knee effusion should have a history taken at time of initial presentation that includes a history of trauma and injury.	D	A	D	H	U	3	81	87	76.61

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
5	Patients presenting with new onset knee effusion should have a history taken at time of initial presentation that includes the presence or absence of fever.	D	A	D	H	U	3	81	87	23.3
6	Patients who undergo an arthrocentesis for new onset knee effusion should have the fluid analyzed for cell count.	D	A	D	L	U	3	11	16	61.35
7	Patients who undergo an arthrocentesis for new onset knee effusion should have the fluid analyzed with a Gram stain.	D	A	D	L	U	3	11	16	36.26
8	Patients who undergo an arthrocentesis for new onset knee effusion should have the fluid analyzed for crystals.	D	A	D	L	U	3	11	16	61.35
9	Patients diagnosed with an ACL rupture should have surgical options discussed within 2 weeks of the rupture unless documented not to be a surgical candidate.	D	A	T	C	U	3	17	20	68.28
10	Patients who report having at least 6 months of knee pain that limits function, despite regular use of NSAIDs and/or intrarticular steroid joint injection, should have physical therapy (if not already tried) and surgery/arthroscopy offered or discussed within 1 month of the report of continued pain.	D	A	T	E	U	3	10	9	54
Osteoarthritis										
1	Providers caring for patients with symptoms of OA should document all at least one of the following at least once in 2 years: the location of symptoms, and/or the presence or absence of limitations in daily activities.	P	C	D	H	U	3	462	353	83.99
2	Patients with a new diagnosis of OA who wish to take medication for joint symptoms should be offered a trial of acetaminophen.	P	C	T	M	U	1	156	126	19.36

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
3	Providers caring for patients with symptoms of hip or knee OA should recommend exercise programs at least once in 2 years.	P	C	T	C	U	1	225	169	29.74
Prenatal Care										
1	The first prenatal visit should occur in the first trimester.	P	A	T	E	U	2	134	157	77.15
2	The physician should make an accurate determination of gestational age using any one of the following: an ultrasound in the 1st or 2nd trimester, or reliable LMP and size within 2 weeks indicated by dates in the 1st trimester. Alternately, no 1st-trimester exam, but reliable LMP and 2 of the following: size within 2 weeks of dates in 2nd trimester, quickening by 20 weeks, or fetal heart tones by fetoscope before 20 weeks.	P	A	D	L	U	3	134	157	87.15
3	Pregnant women should be screened for anemia at the first prenatal visit.	P	A	S	L	U	3	120	145	74.48
4	Pregnant women should be rescreened for anemia after 24 weeks.	P	A	S	L	U	3	120	145	86.69
5	A smoking history should be obtained at the first prenatal visit.	P	A	S	H	U	1	120	145	72.77
6	An alcohol history should be obtained at the first prenatal visit.	P	A	S	H	U	2	120	145	78.77
7	A drug history should be obtained during the first prenatal visit.	P	A	S	H	U	3	120	145	68.5
8	A history should be taken at the first prenatal visit to elicit risk factors for STDs and Hepatitis B.	P	A	S	H	U	3	120	145	40.8
9	Women should receive a urine screen at the first prenatal visit.	P	A	S	L	U	1	120	145	95.31

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
10	Women should receive a serologic test for rubella immunity before delivery.	P	A	S	L	U	2	134	157	88.77
11	Women should be screened for HBsAg before delivery.	P	A	S	L	U	2	120	145	91.11
12	A non-treponemal screening test (e.g., VDRL) should be performed on women at the first prenatal visit.	P	A	S	L	U	2	120	145	71.93
13	A cervical gonorrhea culture should be performed on women at the first prenatal visit.	P	A	S	L	U	3	120	145	46.45
14	Women at high risk (adolescents, unmarried, those with multiple sex partners, low SES, other STD diagnosed) should receive a cervical chlamydia culture or antigen detection at the first prenatal visit.	P	A	S	L	U	3	40	54	54.52
15	Pregnant women should be offered HIV testing at the first prenatal visit.	P	A	S	L	U	1	120	145	53.32
16	Women should be offered AFP testing; this should be performed between 15 and 20 weeks.	P	A	S	L	U	2	120	145	76.68
17	Women who are African-American or have a family history of sickle cell disease should be offered screening at the first prenatal visit, if status is unknown.	P	A	S	L	U	2	2	3	0
18	For women with the sickle cell trait, the baby's father should be offered screening.	P	A	S	L	U	2	3	3	34.82
19	Women should receive an Rh factor and antibody screen at the first prenatal visit.	P	A	S	L	U	2	120	145	74.11
20	Measurements of the symphysis-fundal height should be made at each visit from 20 to 32 weeks.	P	A	S	P	U	3	115	142	82.82
21	Blood pressure measurements should be taken at each visit.	P	A	S	P	U	2	120	145	92.29

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
22	A one-hour, 50 g glucose challenge test should be performed on women with risk factors at 24 to 28 weeks.	P	A	S	L	U	1	87	106	43.87
23	Women with an abnormal serum AFP should receive an ultrasound to evaluate gestational age and possible multiple gestation.	P	A	D	L	U	2	6	6	100
24	Women with the sickle cell trait should be offered either amniocentesis or chorionic villus sampling, unless the baby's father is known to be negative for the sickle trait.	P	A	D	L	U	2	3	3	34.82
25	Women whose symphysis-fundal height is 4 cm less than indicated by their gestational age between 20 and 32 weeks should have an ultrasound.	P	A	D	L	U	3	4	4	68.56
26	In women without a prior diagnosis of chronic hypertension who have elevated BPs (systolic > 140 mm Hg at 20 weeks or later, or diastolic > 90 mm Hg at 20 weeks or later, or systolic rise >30 mm Hg, or diastolic rise > 15 mm Hg), proteinuria and peripheral edema should be assessed.	P	A	D	L	U	2	11	12	68.43
27	In women without a prior diagnosis of chronic hypertension who have elevated BP and either proteinuria (1+ or more) or edema (> trace), PIH diagnosis should be made.	P	A	D	L	U	2	2	5	100
28	Pregnant women with abnormal glucose challenge tests (≥140 mg/dL or 7.8 mmol/L) should have a 3-hour plasma glucose tolerance test performed.	P	A	D	L	U	1	16	15	48.13
29	Pregnant women identified as smokers should receive counseling from their physician to stop smoking.	P	A	T	C	U	1	10	13	70.75

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
30	Pregnant women who indicate they use any amount of alcohol should be counseled to eliminate alcohol consumption during pregnancy and should be referred for treatment if appropriate.	P	A	T	C	U	2	7	7	0
31	Pregnant women who indicate they use drugs should be counseled by their physician to cease use during pregnancy and should be referred for treatment if appropriate.	P	A	T	C	U	2	1	3	0
32	Pregnant women with positive cultures (>100,000 bacteria/cc) should receive an appropriate antibiotic.	P	A	T	M	U	1	9	13	42.27
33	Pregnant women with abnormal serum AFP for gestational age and normal ultrasound should be offered amniocentesis counseling.	P	A	T	L	U	2	2	4	100
34	Labor should be induced when monitoring shows non-reassuring fetal status or oligohydramnios.	P	A	T	M	U	3	1	0	100
35	If PIH is diagnosed and the patient is not hospitalized, bed rest should be recommended and a return visit should occur within 1 week.	P	A	T	E	U	2	8	9	4.55
36	If PIH is diagnosed and pregnancy is at term (≥ 37 weeks), either labor should be induced or delivery by cesarean section should take place.	P	A	T	S	U	2	13	11	57.47
37	Pregnant women with abnormal 3-hour glucose tolerance tests should receive dietary counseling and have glucose monitoring.	P	A	T	L	U	1	3	2	0
38	An oral agent should not be used in diabetic pregnant women.	P	A	T	M	O	1	5	3	100
39	Women treated for positive cultures should receive a post-treatment follow-up culture within one month of completing treatment.	P	A	F	L	U	1	6	9	41.35

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
Preventive Care										
1	All patients should be screened for problem drinking. This assessment of pattern of alcohol use should include at least one of the following: use of a validated screening questionnaire (such as AUDIT, MAST or CAGE), quantity (e.g., drinks per day), binge drinking (e.g., more than 5 drinks in a day in the last month).	P	P	S	H	U	3	6,676	6652	45.72
2	Women aged 50 to 70 should have had a screening mammography performed at least every 2 years.	P	P	S	L	U	1	992	736	84.51
3	All average-risk adults age 50 to 80 should be offered at least one of the following colon cancer screening tests: FOBT (if not done in the past 2 years), sigmoidoscopy (if not done in the past 5 years), colonoscopy (if not done in the past 10 years), double contrast barium enema (if not done in the past 5 years).	P	P	S	L	U	2	2,388	1928	82.44
4	The smoking status of women prescribed combination oral contraceptives should be documented in the medical record.	P	P	T	H	U	2	308	329	37.55
5	Systolic and diastolic blood pressure should be measured on patients otherwise presenting for care at least once each year.	P	P	D	P	U	3	6,019	5811	47.91
6	For patients under age 50, notation of the date that a patient received a tetanus/diphtheria booster within the last ten years should be included in the medical record.	P	P	T	I	U	3	3,920	4431	70.22
7	There should be documentation in the medical record that patients over the age of 50 were offered a tetanus/diphtheria booster after their 50th birthday or in the past 10 years.	P	P	T	I	U	3	2,764	2254	61.97

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	All patients aged 65 and over should have been offered influenza vaccine annually or have documentation that they received it elsewhere.	P	P	T	I	U	1	1,016	805	84.45
9	All patients under age 65 with any of the following conditions should have been offered influenza vaccination annually: living in a nursing home, chronic obstructive pulmonary disease, chronic cardiovascular disorders, renal failure, immunosuppression, diabetes mellitus, hemoglobinopathies (e.g., sickle cell).	P	P	T	I	U	1	838	735	57.63
10	There should be documentation that all patients aged 65 and older presenting for care were offered pneumococcal vaccine at least once.	P	P	T	I	U	1	1,013	802	63.88
11	There should be documentation that all patients in the following groups and otherwise presenting for care were offered pneumococcal vaccine at least once: chronic cardiac or pulmonary disease, diabetes mellitus, anatomic asplenia, and persons over age 50 who are institutionalized.	P	P	T	I	U	1	605	552	33.17
12	All Mantoux tests read as positive or reactive should document both of the following: the presence of induration and the diameter of the induration in millimeters.	D	P	D	P	U	3	17	31	90.54
13	Mantoux tests should be read by a health professional or other trained personnel within 48 to 72 hours.	D	P	D	P	U	3	131	162	65.87
14	Patients age 65 and older noted to have a hearing problem or complaint without reversible cause or that persists despite treatment for reversible cause should have formal evaluation for amplification offered or discussed.	P	P	T	E	U	3	25	17	65.09
15	The medical record should include measurements of height at least once.	P	P	S	P	U	3	1,291	1,269	40.89

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
16	The medical record should include measurements of weight at least once.	P	P	S	P	U	3	1,291	1,269	66.4
17	Patients otherwise presenting for care should receive counseling regarding the use of seat belts on at least one occasion.	P	P	T	C	U	3	1,291	1,269	8.26
18	Patients should be asked if they have ever been sexually active.	P	P	S	H	U	3	1,291	1,269	64.71
19	Patients should be asked about current or past use of intravenous drugs at least once.	P	P	S	H	U	3	1,291	1,269	20.01
20	Patients who are sexually active and not in a monogamous relationship, have a history of STDs or have used intravenous drugs should be counseled regarding the prevention and transmission of HIV and other STDs.	P	P	T	C	U	3	242	268	23.49
21	Patients with the following past HIV risk factors should have HIV testing offered or discussed at the visit in which the past risk factor is noted (unless HIV status has been documented since the termination of the risk factor): past injection drug use, having had sex with more than 1 partner in a six-month period, having exchanged sex for money or drugs in the past, and if past sex partners were HIV-infected or injection drug users.	P	P	S	L	U	3	26	44	60.6
22	Patients with the following past HIV risk factors should have HIV testing offered or discussed at the visit in which the past risk factor is noted (unless HIV status has been documented since the termination of the risk factor): past injection drug use, having had sex with more than 1 partner in a six-month period, having exchanged sex for money or drugs in the past, and if past sex partners were HIV-infected or injection drug users.	P	P	S	L	U	3	23	35	17.56

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
23	Patients over age 65 should be asked about hearing difficulties at least every 2 years.	P	P	S	H	U	3	1,013	802	38.09
24	The medical record should contain the date and result of the last Pap smear.	P	P	S	L	U	2	3,705	3,413	54.4
25	Women who have not had a Pap smear within the past 3 years should have one performed (unless never sexually active with men or have had a hysterectomy for benign indications).	P	P	S	L	U	2	3,706	3,414	86.95
26	Women with a history of cervical dysplasia, or carcinoma-in-situ or HIV infection who have not had a Pap smear within the past year should have one performed.	P	P	S	L	U	3	94	88	83.84
27	Women with a severely abnormal Pap smear should have colposcopy performed within 3 months of the Pap smear date.	D	C	D	S	U	3	9	16	60.91
28	If a woman has a Pap smear that shows a low-grade lesion (ASCUS or LGSIL), then one of the following should occur within 6 months of the initial Pap smear: repeat Pap smear or colposcopy.	P	C	D	L	U	3	88	84	70.92
29	Smoking status should be documented at least once for all patients.	D	P	S	H	U	3	6,711	12,749	43.15
30	Patients documented to be smokers should have their smoking status indicated on more than 50% of all office visits.	P	P	S	H	U	3	1,104	1,113	61.43
31	There should be documentation that advice to quit smoking was given to all smokers at least once during the course of a year.	P	P	T	C	U	1	1,104	1,113	12.09
32	All smokers identified as attempting to quit should be offered at least one additional smoking cessation counseling visit within 3 months.	P	P	T	E	U	1	254	204	37.72

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
33	All smokers attempting to quit who smoke more than 10 cigarettes a day should be offered pharmacotherapy except in the presence of serious medical precautions.	P	P	T	M	U	1	128	106	19.67
34	All patients who receive a smoking cessation intervention should have their abstinence status documented within 4 weeks of the completion of treatment.	P	P	F	H	U	1	15	15	76
35	Pregnant women not immune to rubella should receive postpartum immunization within 6 weeks.	P	A	T	I	U	1	12	15	6.33
Prostate Cancer										
1	Men with a new diagnosis of prostate cancer who have not had a serum PSA in the prior three months, should have serum PSA checked within one month after diagnosis or prior to any treatment, whichever comes first.	P	C	F	L	U	2	16	13	100
2	Men with a new diagnosis of prostate cancer who have a PSA > 10mg/ml should be offered a radionuclide bone scan within 1 month or prior to initiation of any treatment, whichever is comes first.	P	C	F	L	U	2	3	3	33.8
3	Men over 60 with minimal prostate cancer (Stage 0/A1) should not be offered any of the following treatments: bilateral orchiectomy, LHRH analogue, and antiandrogen.	P	C	T	M	O	2	1	0	100
4	Men under age 65 with localized prostate cancer (Stage I or II/A2 or B) and a Gleason score <= 6 should have all of the following treatment options discussed within 3 months of diagnosis (unless contraindicated or enrolled in a clinical trial with documentation of informed consent): radiation therapy, prostatectomy, watchful waiting.	P	C	T	C	C	2	2	2	64.68

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
5	Men with metastatic prostate cancer (Stage IV/D) should be offered at least one of the following androgen blockade treatments within three months of staging: bilateral orchiectomy and/or LHRH analogue with or without antiandrogen.	P	C	T	M	U	1	1	0	100
6	Men under age 75 with localized prostate cancer (Stage I or II/A2 or B) and a Gleason score >= 7 should be offered both of the following treatment options within 3 months of diagnosis (unless contraindicated or enrolled in a clinical trial with documentation of informed consent): radiation therapy or radical prostatectomy.	P	C	T	S	U	3	4	2	0
Senile Cataract										
1	Patients who report difficulty with corrected visual function should receive a complete eye exam that includes a visual acuity measurement within 3 months of the report.	P	A	D	P	U	2	116	84	94.07
2	Patients who report difficulty with corrected visual function should receive a complete eye exam that includes an intraocular pressure measurement within 3 months of the report.	P	A	D	P	U	2	116	84	87.92
3	Patients who report difficulty with corrected visual function should receive a complete eye exam that includes a pupil exam within 3 months of the report.	P	A	D	P	U	2	116	84	77.98
4	Patients who report difficulty with corrected visual function should receive a complete eye exam that includes a slit lamp exam within 3 months of the report.	P	A	D	P	U	2	116	84	61.73

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
5	Patients who report difficulty with corrected visual function should receive a complete eye exam that includes a dilated fundus exam within 3 months of the report.	P	A	D	P	U	2	116	84	82.77
6	Patients should be offered refraction in the affected eye within 4 months before surgery unless a prior refraction made no improvement in otherwise stable vision in the past two years.	P	A	T	E	U	3	65	52	85.81
7	Patients with cataracts should be offered surgery if any of the following situations are present: phacolytic glaucoma, lens-related uveitis, disrupted anterior lens capsule in otherwise phakic eye.	P	A	T	S	U	3	12	9	15.74
8	In the absence of a medical indication for cataract surgery, the ophthalmologist should offer cataract surgery only when the following conditions are met: the patient's visual functioning is impaired, there is either a normal fundus exam or a statement that the surgeon believes the patient's visual function would improve after the surgery, or a lens opacity exists.	P	A	T	S	U	2	19	15	100
9	Within 48 hours of surgery, an optometrist or ophthalmologist should offer patients who have undergone cataract extraction a complete anterior segment eye examination, including all of the following: visual acuity measurement, intraocular pressure measurement, and a slit lamp exam.	P	A	F	P	U	2	75	58	69.11
10	Patients who have undergone cataract extraction should have their visual functioning assessed within 90 days of surgery.	P	A	F	P	U	3	63	48	68.78

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
STDs/ Vaginitis										
1	All women presenting with a chief complaint of vaginal discharge should have a history taken of the number of male partners in the previous 6 months.	P	A	D	H	U	3	344	384	13.55
2	All women presenting with a chief complaint of vaginal discharge should have a history taken including the presence or absence of symptoms in partners.	P	A	D	H	U	3	344	384	4.9
3	All women presenting with a chief complaint of vaginal discharge should be asked about prior history of sexually transmitted diseases.	P	A	D	H	U	3	344	384	9.63
4	In women presenting with a chief complaint of vaginal discharge, the practitioner should perform a speculum exam at the time of the initial presentation to determine if the source of the discharge is vaginal or cervical.	P	A	D	P	U	3	344	384	82.48
5	If three of the following four criteria are met, a diagnosis of bacterial vaginosis, or gardnerella vaginitis should be made: pH greater than 4.5, positive whiff test, clue cells on wet mount, and/or thin homogeneous discharge.	P	A	D	L	U	3	7	13	92.39
6	Treatment for bacterial vaginosis should be with metronidazole (orally or vaginally) or clindamycin (orally or vaginally) at the time of diagnosis.	P	A	T	M	U	1	79	92	91.96
7	Treatment for T. Vaginalis should be with oral metronidazole, if the patient does not have an allergy to metronidazole or is not in first trimester of pregnancy at the time of diagnosis.	P	A	T	M	U	1	11	14	93.41

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
8	Treatment for nonrecurrent (< 3 episodes in the previous year) yeast vaginitis should be with topical ”azole” preparations (e.g., clotrimazole, butoconazole, etc.) or fluconazole at the time of diagnosis.	P	A	T	M	U	1	127	129	63.12
9	Routine testing for gonorrhea (culture) and chlamydia trachomatis (antigen detection), should be performed with the routine pelvic exam for women with multiple male sexual partners (more than 1 during the previous 6 months).	P	P	S	L	U	3	3	6	100
10	Women treated for gonorrhea should also be treated for chlamydia at the time of presentation.	P	A	T	M	U	2	2	2	100
11	If a sexually active male patient presents with penile discharge, he should be tested for gonorrhea at the time of presentation.	P	A	D	L	U	3	10	17	43.24
12	If a sexually active male patient presents with penile discharge, he should be tested for chlamydia at the time of presentation.	P	A	D	L	U	3	10	17	54.44
13	Women with the diagnosis of PID should receive a speculum exam at the time of diagnosis.	P	A	D	P	U	3	26	28	86.89
14	Women with the diagnosis of PID should receive a bimanual exam at the time of diagnosis.	P	A	D	P	U	3	26	28	91.65
15	If a patient is given the diagnosis of PID, at least 2 of the following signs should be present on physical exam: lower abdominal tenderness, adnexal tenderness, and/or cervical motion tenderness.	P	A	D	P	U	3	23	26	57.04

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
16	Women with PID and any of the following conditions should receive parenteral antibiotics at the time of diagnosis: presence or suspicion of pelvic abscess, pregnancy, HIV infection, uncontrolled nausea and vomiting, and lack of clinical improvement within 72 hours of beginning therapy.	P	A	T	M	U	3	4	3	44.19
17	Duration of total antibiotic therapy for PID should be no less than 10 days.	P	A	T	M	U	3	23	26	36.8
18	Patients receiving outpatient therapy for PID should receive follow-up contact within 72 hours of diagnosis.	P	A	F	E	U	3	20	23	100
19	All patients with genital herpes should be counseled on reducing the risk of transmission to a sexual partner.	P	A	T	C	U	3	13	15	41.21
20	If a patient presents with a new onset of genital ulcers, then culturing or DFA for HSV should be offered at the time of presentation.	P	A	D	L	U	3	26	31	37.91
21	If a patient presents with a new onset of genital ulcers, then a blood test for syphilis should be offered at the time of presentation.	P	A	D	L	U	3	10	16	27.46
22	Patients with primary and secondary syphilis who do not have a penicillin allergy should be treated with IM-administered benzathine penicillin G.	P	A	T	M	U	1	1	0	0
23	Women with an initial diagnosis of HPV should have a speculum examination and a pap smear (if not performed during the preceding year).	P	A	D	L	U	3	5	8	100
24	If a patient presents with an initial infection of any STD, HIV testing should be discussed and offered at the time of presentation.	P	A	S	L	U	3	53	68	11.21

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
25	If a patient presents with any STD, a non-treponemal test (VDRL or RPR) for syphilis should be performed at the time of presentation.	P	A	S	L	U	3	25	33	12.98
26	Sexual partners of patients with new diagnoses of gonorrhea, chlamydia, chancroid, and primary or secondary syphilis should be referred for treatment as soon as possible.	P	A	T	E	U	3	9	11	44.76
UTI										
1	In patients presenting with dysuria, presence or absence of fever and flank pain should be elicited.	D	A	D	P	U	3	427	527	36.36
2	A urine culture should be obtained for patients who have dysuria and have had several (three or more) infections in the past year.	D	A	D	L	U	3	13	13	48.31
3	A urine culture should be obtained for patients who have dysuria and/or diabetes or immunocompromised state.	D	A	D	L	U	3	62	68	43.15
4	A urine culture should be obtained for patients who have dysuria and fever, chills, and/or flank pain.	D	A	D	L	U	3	126	158	47.01
5	A urine culture should be obtained for patients who have dysuria and a suspected diagnosis of pyelonephritis.	D	A	D	L	U	3	34	49	48.17
6	A urine culture should be obtained for patients who have dysuria and any structural or functional anomalies of the urinary tract.	D	A	D	L	U	3	17	34	34.3
7	A urine culture should be obtained for patients who have dysuria and a relapse of symptoms, if no culture was previously obtained.	D	A	D	L	U	3	13	13	40.2
8	A urine culture should be obtained for patients who have dysuria and a recent invasive procedure.	D	A	D	L	U	3	11	11	36.89

Chapter/ Indicator #	Indicator Text	Unit	Type	Function	Modality	Problem	Evidence	# Eligible	# Elig. Events	Mean Score
9	Treatment with antimicrobials for uncomplicated lower-tract infections in women under age 65 should not exceed 7 days.	D	A	T	M	O	3	168	167	57.66
10	At least 10 days of antimicrobial therapy should be prescribed for a suspected upper-tract infection (pyelonephritis).	D	A	T	M	U	3	69	94	45.2
11	Regimens of at least 7 days should be used for patients with complicated lower-tract infections such as diabetes.	D	A	T	M	U	3	1	1	100
12	Regimens of at least 7 days should be used for patients with complicated lower-tract infections such as a functional or structural anomaly of the urinary tract.	D	A	T	M	U	3	6	5	69.17
13	For upper-tract infections, a repeat culture should be obtained within 2 weeks of finishing treatment.	D	A	F	L	U	3	68	77	7.61

LEGEND:
Unit: P=patient; D=dyad; E=episode
Type: P=preventive; A=acute; C=chronic
Function: S=screening; D=diagnosis; T=treatment; F=follow-up
Modality: H=history; P=physical exam; C=counseling/education; E=encounter or other intervention; M=medication; L=laboratory/radiology; I=immunization S= surgery.
Problem: u=underuse; o=overuse
Level of evidence: 1=randomized trial; 2=nonrandomized controlled studies (e.g., case control); 3=observational studies/expert opinion.
eligible: the number of persons in the study who were eligible for the indicator
eligibility events: the weighted denominator for the indicator
Mean score: the mean performance on the indicator

Appendix B: Nonresponse rates by sociodemographic and clinical characteristics

	Starting Sample	Number of Health History Nonrespondents	Health History Nonresponse Rate (%)	Number of Non-respondents to both Health History and Medical Record	Overall Nonresponse Rate (%)
Total – Overall	20,028	6,753	33.7	13,316	66.5
Gender					
Female	10,836	3,296	30.4	6,839	63.1
Male	9,192	3,457	37.6	6,477	70.5
Age					
18-30 years	4,473	1,864	41.7	3,346	74.8
31-40 years	4,406	1,395	31.7	2,929	66.5
41-50 years	4,357	1,433	32.9	2,842	65.2
51-64 years	3,902	1,185	30.4	2,455	62.9
>= 65 years	2,890	876	30.3	1,744	60.3
Ethnicity					
White	15,118	4,774	31.6	9,653	63.9
African American	2,043	703	34.4	1,502	73.5
Hispanic (Latino)	2,107	935	44.4	1,588	75.4

	Starting Sample	Number of Health History Nonrespondents	Health History Nonresponse Rate (%)	Number of Non-respondents to both Health History and Medical Record	Overall Nonresponse Rate (%)
Other	760	341	44.9	573	75.4
Education					
< High school	2,242	884	39.4	1,626	72.5
High school graduate	6,957	2,408	34.6	4,682	67.3
College	8,501	2,760	32.5	5,547	65.3
Graduate School	2,328	701	30.1	1,461	62.8
Household Income					
< $15,000 per year	3,959	1,375	34.7	2,743	69.3
$15,000-50,000 per year	7,940	2,521	31.8	5,172	65.1
>$50,000 per year	8,129	2,857	35.1	5,401	66.4
Utilization					
No hospitalizations over the past 2 years	17,847	6,069	34.0	11,989	67.2
1 hospitalization over the past 2 years	1,707	521	30.5	1,043	61.1
2 or more hospitalizations over the past 2 years	474	163	34.4	284	59.9
No outpatient visits over the past 2 years	4,077	1,558	38.2	3,280	80.5
1-2 outpatient visits over the past 2 years	6,299	2,280	36.2	4,204	66.7

	Starting Sample	Number of Health History Nonrespondents	Health History Nonresponse Rate (%)	Number of Non-respondents to both Health History and Medical Record	Overall Nonresponse Rate (%)
3-4 outpatient visits over the past 2 years	4,269	1,349	31.6	2,614	61.2
5 or more outpatient visits over the past 2 years	5,383	1,566	29.1	3,218	59.8
Self-Reported Health Status					
Excellent health	5,000	1,789	35.8	3,486	69.7
Very good health	7,373	2,365	32.1	4,789	65.0
Good health	4,995	1,697	34.0	3,323	66.5
Fair/poor health	2,660	902	33.9	1,718	64.6
Chronic condition	8,611	3,948	31.4	7,699	61.3