Assessing Care of Vulnerable Elders-3 Quality Indicators

Assessing Care of Vulnerable Elders (ACOVE) quality indicators (QIs) are implemented using medical records (unless specified) as follows. If it is documented that a patient refuses the specified care process or that there is a justification for not implementing the care process, the QI is considered to have been satisfied. If a care process is not indicated because of contraindications or other medical reasons, then the QI is excluded. If documentation indicates a global patient preference (e.g., not to be hospitalized or receive surgery) that contradicts a care process, the QI is excluded. For some quality indicators, patients with advanced dementia or poor prognosis (e.g., <6-month anticipated survival) are excluded.

BENIGN PROSTATIC HYPERPLASIA

Benign prostatic hyperplasia (BPH) history
1. IF a male vulnerable elder (VE) complains of new or worsening urinary frequency, urgency, urinary incontinence (UI), nocturia, decreased force of stream, feeling of incomplete bladder emptying, or postvoid dribbling (lower urinary tract symptoms (LUTS)), THEN a history should document the following:
   - Medications associated with symptoms
   - Neurological conditions that can affect the urological system
   - Prior urological, neurosurgical, orthopedic, or general surgery procedures
   - Whether symptoms are bothersome
   - Prior treatment

   *For incontinence, see UI #4

BPH Examination
2. IF a male VE complains of new LUTS*, THEN a rectal examination (including prostate size, degree of tenderness, and nodularity) and abdominal examination should be performed.

   *For incontinence, see UI #5

Urine evaluation
3. IF a male VE complains of new or worsening LUTS, THEN a urinalysis (microscopic examination or dipstick) should be performed, as well as a urine culture if the urinalysis demonstrates pyuria or hematuria.

   Postvoid residual
4. IF a male VE presenting with new or worsening UI or complaints of incomplete emptying or LUTS and has neurological disease (e.g., spinal cord injury, multiple sclerosis) or has had a procedure that can affect innervation of the bladder or urethral sphincter mechanism (e.g., spinal surgery), THEN he should have a postvoid residual measurement.

Urological trauma
5. IF a male VE presenting with new or worsening LUTS has a history of lower tract urological surgery or urethral trauma (including traumatic catheterizations), THEN he should be referred to a urologist within 2 months.

Hematuria
6. IF a male VE has new microhematuria (>3 red blood cells/high-powered field) and a negative urine culture (or has 1 positive and 1 negative urinalysis), THEN a repeat urinalysis should be performed within 1 month.
7. IF a male VE has unexplained gross hematuria or microhematuria (>3 red blood cells/high-powered field on 2 of 3 urinalyses) and a negative urine culture, THEN he should have the following within 3 months:
   - Serum creatinine
   - Upper urological tract imaging
   - Referral to a urologist or nephrologist

Prostate specific antigen (PSA) testing
8. IF a male VE receives a screening PSA test, THEN the chart should document a discussion of the pros and cons of the test.

Referral indications
9. IF a male VE with presumed BPH has bladder stones, urinary retention (>1 episode), urinary tract infection, or renal failure with hydronephrosis, THEN the patient should be referred to a urologist.

BPH treatment
10. IF a male VE with BPH has an American Urological Association Symptom Index (AUA SI) score of 7 or less, the symptoms are not bothersome, and the patient is not known to have bilateral hydronephrosis, bladder stones, hematuria

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attributable to the prostate, or urinary tract infection, THEN he should not be prescribed medications or surgery for BPH.

11. IF a male VE with BPH has moderate to severe symptoms (or an AUA SI score > 7) that are bothersome, THEN the medical record should document that treatment options were discussed (e.g., medical, surgical, watchful waiting).

Preoperative urine evaluation

12. IF a male VE has surgery for BPH, THEN a urinalysis or a urine culture should have been done within 6 weeks before surgery and treated, if necessary.

Related QIs for BPH

Incontinence history (UI #4)
Incontinence examination (UI #5)
Postvoid residual (UI #7, #8)
Classification of UI (UI #9)

BREAST CANCER

Mammogram

1. IF a female VE is younger than age 70, THEN she should be offered mammographic screening for breast cancer every 2 years.

History

2. IF a female VE is diagnosed with breast cancer, THEN physical and psychosocial performance status should be evaluated.

3. IF a female VE is diagnosed with breast cancer, THEN comorbid illnesses should be evaluated.

Discussion of options

4. IF a female VE has a new diagnosis of breast cancer, THEN there should be documentation of a discussion regarding:

- Surgical options and goals of therapy
- Posttreatment quality of life
- Functional outcomes
- Risk and benefits of adjuvant therapy

Surgical documentation

5. IF a female VE is diagnosed with locally invasive breast cancer, THEN tumor size, grade, and margins should be recorded after surgery.

Estrogen receptor status

6. IF a female VE is diagnosed with locally invasive breast cancer, THEN the estrogen and progesterone receptor status of the tumor should be documented.

HER-2/neu receptor status

7. IF a female VE is diagnosed with locally invasive breast cancer and chemotherapy is planned, THEN at the time of diagnosis, HER-2/neu receptor status should be evaluated.

8. IF a female VE is diagnosed with locally invasive breast cancer, chemotherapy is planned, and she has a score of 2+ for HER-2/neu overexpression according to immunohistochemistry testing, THEN HER-2/neu receptor status should be confirmed using fluorescence in situ hybridization.

Bone evaluation

9. IF a female VE with locally invasive breast cancer has symptoms of bone pain, elevated serum alkaline phosphatase, tumor size greater than 5 cm, or positive lymph nodes, THEN radiographic bone imaging should be performed during the staging examination.

Surgical care

10. IF a female VE is diagnosed with early-stage locally invasive breast cancer (Stage I–III) and chemotherapy is planned, THEN the patient should undergo axillary staging with a sentinel lymph node biopsy or a complete axillary lymph node dissection at the time of surgery.

11. IF a female VE is diagnosed with only lobular carcinoma in situ, THEN further surgical resection should not be performed.

12. IF a female VE is diagnosed with ductal carcinoma in situ or early-stage invasive breast cancer, THEN breast-conserving surgery should be offered.

13. IF a female VE with locally invasive breast cancer is treated with a mastectomy, THEN she should be offered breast reconstruction.

Radiation therapy

14. IF a female VE is diagnosed with early-stage invasive breast cancer and undergoes a lumpectomy, THEN breast radiation therapy should be discussed.

15. IF a female VE is diagnosed with invasive breast cancer with a tumor larger than 5 cm or four or more positive lymph nodes and undergoes mastectomy, THEN postoperative radiation therapy should be discussed within 2 months after surgery or after chemotherapy.

Hormonal therapy

16. IF a female VE is diagnosed with estrogen receptor-positive locally invasive breast cancer larger than 1 cm, THEN adjuvant hormonal therapy should be offered.

Adjuvant chemotherapy

17. IF a female VE with a life expectancy of longer than 5 years is diagnosed with locally invasive breast cancer with four or more positive lymph nodes, THEN adjuvant chemotherapy should be offered.

18. IF a female VE with normal cardiac function and a life expectancy longer than 5 years is diagnosed with locally invasive breast cancer with positive lymph nodes and HER-2/neu receptor overexpression, THEN adjuvant chemotherapy with trastuzumab should be offered.

Limiting surveillance

19. IF a female VE is diagnosed with nonmetastatic breast cancer and receives primary treatment, THEN she should not receive follow-up surveillance with imaging (e.g., com-
puted tomography (CT) scan) or laboratory studies (e.g., CA 15–3, CA 27.29, CEA).

Metastatic disease
20. IF a female VE is diagnosed with advanced breast cancer with symptomatic or osteolytic bone metastasis, THEN bisphosphonate treatment should be offered.
21. IF a female VE is diagnosed with advanced estrogen receptor–positive breast cancer with bone metastasis and without extensive visceral involvement, THEN endocrine therapy should be offered.
22. IF a female VE has symptomatic multifocal metastatic hormone-refractory breast cancer or symptomatic hormone receptor–negative breast cancer with extensive visceral metastasis, THEN treatment with systemic chemotherapy should be offered.
23. IF a female VE with normal cardiac function with HER-2/neu-positive metastatic breast cancer is treated with systemic chemotherapy, THEN trastuzumab should be offered.

Related QIs for Breast Cancer
Comprehensive assessment for anticipated death (End of life #1)
Goals of care surrogate discussion (End of life #2)
Management of emergent pain (End of life #17)
Ask about pain at cancer visits (Pain #3)
Treat severe pain (Pain #4, #5)

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)
Evaluate respiratory symptoms
1. IF a VE presents with noncardiac exertional dyspnea, chronic cough (≥6 months), wheeze or two or more episodes per year of bronchitis, THEN he or she should have spirometry.

Smoking cessation
2. IF a VE with COPD lives with others who smoke, THEN the patient, smoker, or both should be counseled to eliminate smoking in the home.
3. IF a VE with COPD is new to a primary care practice, THEN smoking status should be documented, and if the patient ever smoked, smoking status should be assessed annually.
4. IF a VE with COPD is a current smoker, THEN counseling to quit smoking should be documented annually.

Screening for hypoxemia
5. IF a VE with COPD does not use supplemental oxygen and has a postbronchodilator forced expiratory volume in 1 second less than 50% predicted (or unknown), THEN oxygenation (pulse oximetry or arterial blood gas) should be assessed annually.

Rapid-acting bronchodilator
6. IF a VE has COPD (GOLD Stage >I), THEN he or she should be prescribed a rapid-acting bronchodilator.

Inhaler device training
7. IF a VE with COPD is given a new inhaler device, spacer, or nebulizer, THEN training to use the device should be documented.

Long-acting bronchodilator
8. IF a VE with moderate to very severe COPD (GOLD Stage II–IV) has symptoms not controlled by as-needed bronchodilator use or had two or more exacerbations in the previous year, THEN a long-acting bronchodilator should be prescribed.

Inhaled corticosteroids
9. IF a VE with severe to very severe COPD (GOLD Stage III–IV) has two or more exacerbations requiring antibiotics or oral corticosteroids in the previous year, THEN (in addition to a long-acting bronchodilator) inhaled steroids (if not taking oral steroids) should be prescribed.

Long-term oxygen therapy
10. IF a VE with COPD has an arterial partial pressure of oxygen less than 55 mmHg or an oxygen saturation less than 88% (not during an exacerbation), THEN long-term oxygen therapy should be offered.
11. IF a VE with COPD is prescribed long-term oxygen therapy, THEN encouragement to use it for 18 hours per day or longer (including portable oxygen) should be documented.

Related QIs for COPD
Goals of care surrogate discussion (End of life #2)
Preference documentation for mechanical ventilation (End of life #8)
Dyspnea assessment (End of life #12)
Opiate treatment of dyspnea (End of life #13)
Management of emergent dyspnea (End of life #14, #15)
Withdrawal of mechanical ventilation (End of life #16)
Preoperative pulmonary assessment (Hosp #18)
Response to therapy (Medications (Meds) #5)
Tobacco screening and counseling (Screening and prevention (S&P) #7–9)

COLORECTAL CANCER
Screening
1. IF a VE is younger than 70, THEN there should be documentation that the option of colorectal cancer screening was discussed.

History
2. IF a VE is diagnosed with colorectal cancer, THEN physical and psychosocial performance status should be evaluated.
3. IF a VE is diagnosed with colorectal cancer, THEN co-morbid illnesses should be evaluated.
Staging evaluation
4. IF a VE has a new diagnosis of colorectal cancer and is a candidate for therapy, THEN he or she should have a pretreatment carcinoembryonic antigen (CEA) level.
5. IF a VE with a new diagnosis of colon or rectal cancer is a candidate for elective resection of the primary tumor and has an elevated (or unknown) CEA, THEN pretreatment imaging with a CT scan (or similar imaging) of the abdomen and pelvis should be done.
6. IF a VE has a new diagnosis of rectal cancer with a normal CEA and is a candidate for elective resection of the primary tumor, THEN pelvic imaging should be performed using ultrasound (endoscopic ultrasound or transrectal ultrasound), magnetic resonance imaging, or CT.

Colon examination
7. IF a VE has a new diagnosis of colorectal cancer and is a candidate for potential cure, THEN he or she should have a total colonic examination before surgery.
8. IF a VE underwent colorectal cancer resection for cure and total colonic examination was not performed preoperatively (e.g., because of an obstructing lesion), THEN total colonic examination should be performed within 6 months after surgery.

Discussion of options
9. IF a VE has a new diagnosis of colorectal cancer, THEN there should be documentation of a discussion regarding:
   - Surgical options and goals of surgery
   - Posttreatment quality of life
   - Functional outcomes
   - Risks and benefits of adjuvant therapy (if colon cancer) or neoadjuvant therapy (if rectal cancer)

Discussion of surgical findings
10. IF a VE undergoes surgery for colorectal cancer, THEN a qualified physician (e.g., surgeon, oncologist, radiation oncologist) should discuss with the patient or caregiver final pathology (e.g., stage, status of lymph nodes, margins) and indications for further treatment (e.g., chemotherapy, radiation therapy).

Nonsurgical treatment plan
11. IF a VE has a new diagnosis of colorectal cancer and is not a candidate for surgical therapy, THEN this should be noted, as well as an alternative treatment plan.
12. IF a VE is diagnosed with incurable, metastatic colorectal cancer, THEN prognosis and end-of-life discussions should be documented.

Preoperative examination
13. IF a VE with a new diagnosis of rectal cancer is to be treated surgically, THEN the surgeon should preoperatively (or pre-neoadjuvant therapy) assess the mass (e.g., digital rectal examination or flexible sigmoidoscopy).

Preoperative ostomy siting
14. IF a VE with a new diagnosis of colorectal cancer is to have elective abdominal perineal resection or other procedure with planned creation of an ostomy, THEN the ostomy should be sited preoperatively and documented in the medical record (e.g., enterostomal therapy note or operative note).

Adjuvant therapy
15. IF a VE has Stage III colon cancer, THEN adjuvant chemotherapy should be given within 4 months of surgery.
16. IF a VE is thought to have Stage II or III mid-low rectal cancer and is a candidate for surgery, THEN preoperative neoadjuvant chemotherapy and radiation therapy should be given.
17. IF a VE had surgical resection for Stage II or III rectal cancer and did not receive neoadjuvant radiation or chemotherapy, THEN postoperative adjuvant chemotherapy, radiation therapy, or both should be provided within 4 months of surgery.

Postoperative surveillance
18. IF a VE with greater than Stage I colorectal cancer underwent resection for cure, THEN a history and physical examination should be performed every 6 months for the first 2 years after surgery and annually during years 3 to 5.
19. IF a VE with greater than Stage I colorectal cancer underwent resection for cure, THEN a CEA level should be performed every 6 months for the first 2 years after surgery and annually during Years 3 to 5.
20. IF a VE underwent colorectal cancer resection for cure, THEN a colonoscopy should be performed within 3 years after surgery.

Evaluate rising CEA
21. IF a VE had prior colorectal cancer resection for cure and has a CEA greater than 7.5 (confirmed by retesting if <10), THEN further examination should be initiated (e.g., colonoscopy, radiological imaging).

Related QIs for Colorectal Cancer

- Comprehensive assessment for anticipated death (End of life #1)
- Goals of care surrogate discussion (End of life #2)
- Management of emergent pain (End of life #17)
- Ask about pain at cancer visits (Pain #3)
- Treat severe pain (Pain #4, #5)

CONTINUITY AND COORDINATION OF CARE

Identify source of care
1. ALL VEs should be able to identify a physician or a clinic to call for medical care or know the telephone number or other mechanism to reach this source of care.

Medication continuity
2. IF an outpatient VE is prescribed a new chronic disease medication and he or she has a follow-up visit with the prescribing physician, THEN one of the following should be noted at the follow-up visit:
   - Medication is being taken
   - Patient was asked about the medication (e.g., side effects, adherence, availability)
• Medication was not started, because it was not needed or changed.

3. IF a VE is under the outpatient care of two or more physicians and one physician prescribed a new chronic disease medication or a change in prescribed medication, THEN the nonprescribing physician should acknowledge the medication change at the next visit.

Consultation continuity
4. IF an outpatient VE was referred to a consultant and revisited the referring physician, THEN the referring physician's medical record should acknowledge the consultant's recommendations, include the consultant's report, or indicate why the consultation did not occur.

Test continuity
5. IF an outpatient VE was given an order for a diagnostic test, THEN one of the following should be documented at the follow-up visit:
• Result of the test initialed or acknowledged
• Note that the test was not needed or reason why it will not be performed
• Note that the test is pending

Prevention reminders
6. IF a VE misses a required preventive care event that is recurrent with a specific periodicity, THEN there should be medical record documentation of a reminder that the preventive care is needed within one full interval since the missed event.

Communication with continuity physician
7. IF a VE is treated at an emergency department or admitted to a hospital, THEN there should be documentation (during the emergency department visit or within the first 2 days after admission) of communication with a continuity physician, of an attempt to reach a continuity physician, or that there is no continuity physician.

Posthospitalization follow-up
8. IF a VE is discharged from a hospital to home and survives 6 weeks or longer after discharge, THEN a physician visit or telephone contact should be documented within 6 weeks of discharge and the medical record should document acknowledgment of the recent hospitalization.

Posthospitalization medications
9. IF a VE is discharged from a hospital to home and received a new chronic disease medication or a change in medication before discharge, THEN the outpatient medical record should document the medication change within 6 weeks of discharge.
10. IF a VE is discharged from a hospital to home with a new medication that requires a serum medication level to be checked, THEN the medical record should document the medication level, that the medication was stopped, or that the level was not needed.

Posthospitalization tests
11. IF a VE is discharged from a hospital to home or a nursing home and the transfer form or discharge summary indicates that a test result is pending, THEN the outpatient or nursing home medical record should include the test result within 6 weeks of hospital discharge or indicate that the result was followed up elsewhere or why the result cannot be obtained.

Posthospitalization appointments
12. IF a VE is discharged from a hospital to home or a nursing home and the hospital medical record specifies a follow-up appointment for a physician visit or a treatment (e.g., physical therapy or radiation oncology), THEN the medical record should document that the visit or treatment took place, was postponed, or was not needed.

Discharge summary
13. IF a VE is discharged from a hospital to home or nursing home, THEN there should be a discharge summary in the outpatient or nursing home medical record.
14. IF a VE is discharged from a nursing home to home, THEN there should be a discharge summary in the outpatient medical record.

Outside medical records
15. IF a VE is new to a primary care practice, THEN the medical record should contain medical records from a prior care source, a request for such medical records, or an indication that such records are unavailable.

Interpreter
16. IF a VE is deaf or does not speak English, THEN an interpreter or translated materials should be used to facilitate communication.

Related QIs for Continuity and Coordination of Care
Follow up suicidal thoughts (Depression #16)
Follow-up of depression treatment (Depression #15, 17, 18)
Goals of care surrogate discussion (End of life #2)
Advance care planning documentation (End of life #3)
Advance directive continuity between venues (End of life #4)
Inpatient care preference documentation (End of life #6, #7)
Preference documentation for mechanical ventilation (End of life #8)
Patient participation in life-sustaining treatment preferences (End of life #9)
Follow treatment preferences (End of life #10)
Management of emergent symptoms (End of life #14, #17, #19)
Discharge planning in the hospital (Hospital #15)
Cognition and function at discharge (Hospital #30)
Repeat elevated blood pressure (BP) measurement (HTN #1)
Addressing uncontrolled HTN (HTN #10)
Response to therapy (Meds #5)
Monitoring warfarin therapy (Meds #7)
Laboratory follow-up of angiotensin-converting enzyme (ACE) inhibitor (Meds #8)
Laboratory follow-up of loop diuretic (Meds #9)
Follow-up response to pain treatment (Pain #8)
Reassessment of pressure ulcer (PU #12, #13)
Documentation about Pneumovax (S&P #3)
Assess response to treatment (UI #11)
Chronic urethral catheter (UI #15)
Continuity of eye care (Vision #4, #7, #8, #10)
Antipsychotic drug response (Meds #19)

DEMENTIA

Cognitive and functional screening
1. IF a VE is new to a primary care practice or inpatient service, THEN there should be a documented assessment of cognitive ability and functional status.
2. ALL VEs should be evaluated annually for changes in memory and function.

Cognitive evaluation
3. IF a VE screens positive for dementia, THEN a physician should document an objective cognitive evaluation that tests two or more cognitive domains.

Medication review
4. IF a VE screens positive for dementia, THEN the physician should review the patient's medications (including over the counter) for any that may be associated with mental status changes.
5. IF a VE screens positive for dementia and is taking medications that are commonly associated with mental status changes in older people, THEN the physician should discontinue or justify continuing these medications.

Neurological examination
6. IF a VE is newly diagnosed with dementia, THEN a physician should perform a neurological examination that includes evaluation of gait, motor function, and reflexes.

Laboratory testing
7. IF a VE is newly diagnosed with dementia, THEN a complete blood count, thyroid testing, electrolytes, liver function tests, glucose, blood urinary nitrogen, serum B12, and a syphilis test should be performed.
8. IF a VE is newly diagnosed with dementia and has risk factors for human immunodeficiency virus (HIV), THEN HIV testing should be offered.

Depression screening
9. IF a VE has newly diagnosed dementia, THEN he or she should be screened for depression during the initial evaluation period.

Medication discussion
10. IF a VE has been diagnosed with mild to moderate Alzheimer's disease, mild to moderate vascular dementia, or Lewy body dementia, THEN there should be a documented discussion with the patient or caregiver about cholinesterase inhibitor treatment.

Stroke prophylaxis
11. IF a VE has mild to moderate vascular or mixed dementia, THEN he or she should receive stroke prophylaxis.

Caregiver support and patient safety
12. IF a VE with dementia has a caregiver, THEN the patient or caregiver should be given information on the following:
   - Dementia diagnosis, prognosis, and associated behavioral symptoms
   - Home occupational safety
   - Community resources

Behavioral and psychological symptoms
13. IF a VE has dementia, THEN he or she should be screened annually for behavioral symptoms of dementia.
14. IF a VE with dementia has behavioral symptoms, THEN specific target symptoms should be documented and behavioral interventions instituted first or concurrently with pharmacotherapy, or if treating first with a pharmacological intervention, then severe symptoms or safety concerns should be present and documented.
15. IF a VE with dementia and behavioral symptoms is newly treated with an antipsychotic, THEN there should be a documented risk-benefit discussion.

Driving
16. IF a VE has newly diagnosed dementia, THEN one of the following should occur (consistent with state law):
   - Patient advised not to drive a motor vehicle
   - Referral to the Department of Motor Vehicles to test driving ability
   - Referred to a driver's safety course that includes assessment of driving ability

Restraints
17. IF a VE with dementia is physically restrained in the hospital, THEN the target behavioral disturbance and safety concern justifying the use of restraints must be documented in the medical record and communicated to the patient, caregiver, or guardian.

Related QIs for Dementia
Evaluate memory loss for depression (Depression #3)
Comprehensive assessment for anticipated death (End of life #1)
Goals of care surrogate discussion (End of life #2)
Inpatient care preference documentation (End of life #6)
Gastrostomy tube placement (End of life #11)
Cognitive evaluation for a fall (Falls #7)
Delirium evaluation (Hosp #6)
Capacity to consent for surgery (Hosp #16)
Pre- and postoperative delirium assessment (Hosp #22, #29)
Evaluate postoperative cognition at hospital discharge (Hosp #30)
Response to therapy (Meds #5)
Avoid anticholinergic medication (Meds #12, #16)
Reassess response to antipsychotic medication (Meds #19)
Comprehensive geriatric assessment (CGA) (S&P #16, #17)
History for sleep problem (Sleep #2)
Cognitive evaluation for weight loss (Undernutrition #6)
Chronic urethral catheter (UI #15)
DEPRESSION

Screening for depression
1. ALL VE s should have documentation of a screen for depression during the initial primary care evaluation and annually.
2. IF a VE is admitted to a nursing home, THEN the patient should have documentation of a screen for depression within 2 weeks of admission and annually.

Recognizing depression
3. IF a VE presents with one of the following symptoms (and the symptom has not previously been documented as a chronic condition):
   - Sad mood, feeling down
   - Insomnia or difficulties with sleep
   - Apathy or loss of interest in pleasurable activities
   - Complaints of memory loss
   - Unexplained weight loss of 5% or more in the previous month or 10% or more in the previous year
   - Unexplained fatigue or low energy
   THEN the patient should be asked about depression, treated for depression, or referred to a mental health professional within 2 weeks of presentation.

Documenting depression symptoms
4. IF a VE receives a diagnosis of a new depression episode, THEN the medical record should document at least three of the nine Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) target symptoms for major depression within 2 weeks of diagnosis.

Suicidality
5. IF a VE receives a diagnosis of a new depression episode, THEN the medical record should document on the day of diagnosis the presence or absence of suicidal ideation and psychosis.
6. IF a VE has thoughts of suicide, THEN the medical record should document, on the same date, that the patient has no immediate plan for suicide or was referred for evaluation for psychiatric hospitalization.
7. IF a VE has thoughts of suicide, THEN the medical record should document, on the same date, that the patient was asked about access to firearms.

Evaluate for comorbid condition
8. IF a VE receives a diagnosis of a new depression episode, THEN the medical record should document evaluation of the following within 1 month or in the prior 3 months:
   - Hypothyroidism for women
   - Substance dependence or abuse

Initiating depression treatment
9. IF a VE is diagnosed with depression, THEN antidepressant treatment, psychotherapy, or electroconvulsive therapy (ECT) should be offered within 2 weeks after diagnosis unless there is documentation within that period that the patient has improved or the patient has substance abuse or dependence, in which case treatment may wait until 8 weeks after the patient is in a drug- or alcohol-free state.

Antidepressant choice
10. IF a VE is started on antidepressant medication, THEN the following medications should not be used as first- or second-line therapy: tertiary amine tricyclics (amitriptyline, imipramine, doxepin, clomipramine, trimipramine), monoamine oxidase inhibitors (MAOIs; unless atypical depression is present), benzodiazepines, or stimulants (except methylphenidate).

Psychotic depression
11. IF a VE has depression with psychotic features, THEN he or she should be referred to a psychiatrist or should receive treatment with a combination of an antidepressant and an antipsychotic or with ECT.

Electrocardiogram (ECG) for tricyclic use
12. IF a VE with a history of cardiac disease is started on a tricyclic medication, THEN a baseline ECG should be performed before initiation if one was not performed in the prior 3 months.

Interactions with MAOIs
13. IF a VE is taking a selective serotonin reuptake inhibitor (SSRI), THEN an MAOI should not be used for at least 2 weeks after termination of the SSRI (and for at least 5 weeks after termination of fluoxetine)
14. IF a VE is taking an MAOI, THEN he or she should not receive medications that have the potential for serious interactions with MAOIs or for at least 2 weeks after termination of the MAOI.

Depression follow-up
15. IF a VE is newly treated for depression, THEN the following should be documented at the first follow-up visit with the same physician or with a mental health provider within 4 weeks of treatment initiation:
   - Degree of response to at least two of the nine DSM-IV target symptoms for major depression
   - Medication side effects, if he or she is taking antidepressant medications
16. IF a VE is newly treated for depression and has suicidal ideation at an outpatient visit, THEN at the next follow-up visit, which must occur within 1 week, documentation should reflect asking about suicide risk.
17. IF a VE has no meaningful symptom response after 6 weeks of depression treatment, THEN one of the following treatment options should be initiated by the eighth week of treatment:
   - If initial treatment was medication, dose should be optimized or changed, or the patient should be referred to a psychiatrist.
   - If initial treatment was psychotherapy alone, medication should be initiated, or referral to a psychiatrist should be offered.
18. IF a VE with depression responds only partially after 12 weeks of treatment, THEN one of the following treat-
ment options should be instituted by the 16th week of treatment.

- If initial treatment includes medication, switch to a different medication class or add a second medication to the first.
- If the initial treatment was medication, add psychotherapy.
- If initial treatment was psychotherapy without medication, try medication.
- Consider ECT.
- Refer to a psychiatrist.

Continuing depression therapy
19. IF a VE with depression has responded to antidepressant medication, THEN he or she should be continued on the drug at the same dose for at least 6 months and make at least one clinician contact (office visit or phone) during that period.

Maintenance depression therapy
20. IF a VE has experienced three or more episodes of depression, THEN he or she should receive maintenance antidepressant medication with the same type and dose of medication for at least 24 months with at least four office or telephone visits for depression during that period.

Related QIs for Depression
Depression screening in new dementia (Dementia #9)
Caregiver stress assessment (End of life #20)
Bereavement assessment (End of life #21)
Depression screening for new myocardial infarction (MI) (IHD #8)
CGA(S&C P #16, #17)
History for sleep problem (Sleep #2)
Depression screening for new stroke (Stroke #18)
Depression evaluation for weight loss (Undernutrition #6)

DIABETES MELLITUS
Glycated hemoglobin
1. IF a VE has diabetes mellitus, THEN glycated hemoglobin should be measured annually.

Improving glycemic control
2. IF a VE has an elevated hemoglobin A1c (HbA1c), THEN a therapeutic intervention should occur:
   - HbA1c 9–10.9%: within 3 months
   - HbA1c ≥11%: within 1 month

Proteinuria
3. IF a VE with diabetes mellitus does not have established renal disease and is not receiving an ACE inhibitor or angiotensin receptor blocker (ARB), THEN a test for proteinuria should be done annually.
4. IF a VE with diabetes mellitus has proteinuria, THEN an ACE inhibitor or ARB should be prescribed.

Foot examination
5. IF a VE has diabetes mellitus, THEN a foot examination should be performed annually.

Periodic retinal examination
6. IF a VE with diabetes mellitus has a retinal examination, THEN the presence and degree of diabetic retinopathy should be documented.
   See Vision p. S453
7. IF a VE with diabetes mellitus is not blind and did not have retinopathy on a previous examination, THEN he or she should have a retinal eye examination performed by a specialist every 2 years.

BP measurement
8. IF a VE has diabetes mellitus, THEN BP should be measured at each primary care and endocrinology visit.

BP Control
9. IF a VE with diabetes mellitus has a persistent (on 2 consecutive visits) elevation of systolic BP (>130 mmHg), THEN an intervention (e.g., pharmacological, lifestyle, compliance) should occur, or there should be documentation of a reversible cause or other justification for the elevation.

Aspirin therapy
10. IF a VE with diabetes mellitus is not on anticoagulant/antiplatelet therapy, THEN daily aspirin should be prescribed.

Improving cholesterol
11. IF a VE with diabetes mellitus has fasting low-density lipoprotein cholesterol (LDL-C) greater than 130 mg/dL, THEN a pharmacological or lifestyle intervention should be offered within 3 months.

Related QIs for Diabetes Mellitus
Preoperative assessment of diabetes mellitus (Hosp #20, #21)
Postoperative diabetic control (Hosp #28)
Response to therapy (Meds #5)
Laboratory follow-up of ACE inhibitor (Meds #8)
Risks and prophylaxis for aspirin (Meds #22, #23)

END-OF-LIFE CARE
Comprehensive assessment
1. IF a VE dies an expected death with metastatic cancer, oxygen-dependent pulmonary disease, New York Heart Association (NYHA) Class III–IV congestive heart failure (CHF), end-stage liver disease, end-stage (Stage IV) renal disease, or dementia, THEN the chart should document the following within the 6 months before death:
   - Pain and other symptoms
   - Spiritual and existential concerns
   - Caregiver burdens and need for practical assistance
   - Advance care planning

Goals of care surrogate discussion
2. IF a VE dies an expected death with metastatic cancer, oxygen-dependent pulmonary disease, NYHA Class III–IV CHF, end-stage liver disease, end-stage (Stage IV) renal dis-
ease, or dementia, THEN the chart should document one of the following within the 6 months before death.

- Discussion of the medical condition and goals for treatment with a designated surrogate
- Patient’s preference for not involving a designated surrogate in discussions
- Note that a surrogate decision maker is unavailable

**Advance care planning documented**
3. ALL VEs should have in the outpatient chart the patient’s surrogate decision maker and documentation of a discussion to identify or search for a surrogate decision maker.

**Advance directive continuity**
4. IF a VE has an advance directive in the outpatient, inpatient, or nursing home medical record, or the patient reports the existence of an advance directive in an interview, and the patient receives care in a second venue, THEN the advance directive should be present in the medical record at the second venue, or documentation should acknowledge its existence and its contents.
5. IF a VE is admitted to the hospital or nursing home, THEN within 48 hours of admission, the medical record should contain the patient’s surrogate decision maker or documentation of a discussion to identify or search for a surrogate decision maker.

**Care preference documentation**
6. IF a VE with severe dementia is admitted to the hospital and survives 48 hours, THEN within 48 hours of admission, the medical record should document that the patient’s preferences for care have been considered or an attempt was made to identify them.
7. IF a VE is admitted to the intensive care unit and survives 48 hours, THEN within 48 hours of intensive care unit admission, the medical record should document that the patient’s preferences for care have been considered or an attempt was made to identify them.

**Mechanical ventilation preference**
8. IF a hospitalized VE requires mechanical ventilation for more than 48 hours, THEN within 48 hours of the initiation of mechanical ventilation, the medical record should document the goals of care and the patient’s preference for mechanical ventilation or why this information is unavailable.

**Life-sustaining treatment decisions**
9. IF a VE with decision-making capacity has orders in the hospital or nursing home to withhold or withdraw life-sustaining treatment (e.g., do-not-resuscitate (DNR) order), THEN the medical record should document patient participation in the decision or why the patient did not participate.

**Follow treatment preferences**
10. IF a VE has documented treatment preferences to withhold or withdraw life-sustaining treatment (e.g., DNR order, no tube feeding, no hospital transfer), THEN these treatment preferences should be followed.

**Gastrostomy tube placement**
11. IF a VE with dementia has a gastrostomy or jejunum tube placed, THEN before placement, the medical record should document one of the following:

- Patient preferences concerning tube feeding
- If patient is decisionally incapacitated and a surrogate decision maker is available, discussion of patient preferences or best interests
- If patient is decisionally incapacitated and a surrogate decision maker is not available, a formal decision mechanism should be used.

**Dyspnea assessment**
12. IF a VE is diagnosed with lung cancer or cancer metastatic to lung, NYHA Class III–IV CHF, or oxygen-dependent pulmonary disease, THEN a self-reported assessment of dyspnea should be documented in the outpatient chart.

**Treatment of dyspnea**
13. IF a VE with metastatic cancer or oxygen-dependent pulmonary disease has dyspnea refractory to nonopiate medications, THEN opiate medications should be offered.

**Management of emergent dyspnea**
14. IF a VE is in hospice or has a preference for no hospitalization and is living with oxygen-dependent pulmonary disease, lung cancer, or NYHA Class III–IV CHF, THEN the medical record should document a plan for management of worsening or emergent dyspnea.
15. IF a VE who had dyspnea in the last 7 days of life died an expected death, THEN the chart should document dyspnea care and follow-up.

**Mechanical ventilator withdrawal**
16. IF a noncomatose VE is not expected to survive, and a mechanical ventilator is withdrawn or withheld, THEN the chart should document whether the patient has dyspnea, and the patient should receive (or have orders available for) an infusion of an opiate, benzodiazepine, or barbiturate infusion.

**Management of emergent pain**
17. IF a VE with end-stage metastatic cancer is treated with opiates for pain, THEN the medical record should document a plan for management of worsening or emergent pain.
18. IF a VE who was conscious during the last 7 days of life died an expected death, THEN the medical record should contain documentation about presence or absence of pain during the last 7 days of life.

**Management of emergent obstruction**
19. IF a VE with end-stage metastatic cancer has obstructive GI symptoms, THEN the medical record should document...
a plan for management of worsening or emergent nausea and vomiting.

**Caregiver stress**

20. **IF** a VE is a caregiver for a spouse, significant other, or dependent who is terminally ill or has very limited function, **THEN** the VE should be assessed for caregiver financial, physical, and emotional stress.

**Bereavement**

21. **IF** a VE's spouse or significant other dies, **THEN** the VE should be assessed for depression or thoughts of suicidality within 6 months.

**Related QIs for End-of-Life Care**

Nonsurgical colon cancer treatment plan (Colon cancer #11, #12)
Caregiver support (Dementia #12)
Heart failure (HF) education (HF #11)
Preoperative discussion (Hosp #17)
Chronic urethral catheter (UI #15)

**FALLS AND MOBILITY PROBLEMS**

**Screening for falls**

1. **ALL** VEs should have documentation that they were asked annually about the occurrence of recent falls.

**Fall history**

2. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year, **THEN** there should be documentation of a basic fall history (circumstances, medications, chronic conditions, mobility, alcohol intake) within 3 months of the report (or within 4 weeks of the report if the most recent fall occurred in the previous 4 weeks).

**Fall examination**

3. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year, **THEN** there should be documentation of orthostatic vital signs (BP and pulse) within 3 months of the report (or within 4 weeks of the report if the most recent fall occurred in the previous 4 weeks).

4. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year, **THEN** there should be documentation of receipt of an eye examination in the previous year or evidence of visual acuity testing within 3 months of the report.

5. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year, **THEN** there should be documentation of a basic gait, balance, and strength evaluation within 3 months of the report (or within 4 weeks of the report if the most recent fall occurred in the previous 4 weeks).

**Gait and balance evaluation**

6. **IF** a VE has new or worsening difficulty with ambulation, balance, or mobility, **THEN** there should be documentation of a basic gait, balance, and strength evaluation within 3 months of the report.

**Cognitive evaluation for fall**

7. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year, **THEN** there should be documentation of an assessment of cognitive status in the previous 6 months or within 3 months of the report (or within 4 weeks of the report if the most recent fall occurred in the previous 4 weeks).

**Home hazard evaluation**

8. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year, **THEN** there should be documentation of an assessment and modification of home hazards recommended in the previous year or within 3 months of the report.

**Benzodiazepine discontinuation**

9. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year and is taking a benzodiazepine, **THEN** there should be documentation of a discussion of related risks and assistance offered to reduce or discontinue benzodiazepine use.

**Assistive device for balance disorder**

10. **IF** a VE demonstrates decreased balance or proprioception or excessive postural sway and does not have an assistive device, **THEN** an evaluation or prescription for an assistive device should be offered within 3 months.

**Assistive device review**

11. **IF** a VE reports a history of two or more falls (or 1 fall with injury) in the previous year and has an assistive device, **THEN** there should be documentation of an assistive device review in the previous 6 months or within 3 months of the report (or within 4 weeks of the report if the most recent fall occurred in the previous 4 weeks).

**Exercise program**

12. **IF** a VE is found to have a problem with gait, balance, strength, or endurance, **THEN** there should be documentation of a structured or supervised exercise program offered in the previous 6 months or within 3 months of the report.

**Related QIs for Falls and Mobility Problems**

Cognitive and functional screening (Dementia #1, #2)
Antidepressant choice (Depression #10)
Inpatient fall evaluation (Hosp #8)
Evaluate orthostatics after antihypertensive change (HTN #12)
Taper or discontinue benzodiazepines (Meds #11)
Avoid anticholinergic medication (Meds #12, #16)
Avoid barbiturates (Meds #13)
Evaluation of function and pain for lower extremity OA (OA #1, #2)
Exercise for lower extremity OA (OA #3)
Assistive device evaluation for OA patients with difficulty ambulating (OA #4)
CGA (S&CP #16, #17)
Avoid antihistamines for sleep (Sleep #7, #8)
Taper chronic benzodiazepines (Sleep #9)
Vitamin D supplement (Undernutrition #2)
Vision evaluation every 2 years (Vision #1)
Corrective lenses for correctable refractive error (Vision #9)
Corrective lenses in the hospital (Vision #10)

HEARING LOSS

Screening for hearing loss
1. ALL VEs should have an annual evaluation of hearing status.
2. ALL VEs should have an evaluation of hearing status as part of the initial evaluation.

Formal audiological evaluation
3. IF a VE has a self-reported hearing problem or fails a hearing screening, THEN he or she should be referred for formal evaluation by an otolaryngologist or audiologist within 3 months.

Hearing rehabilitation
4. IF a VE is a hearing aid candidate (according to audiometry), THEN he or she should be offered rehabilitation with a hearing aid.

Conductive hearing loss
5. IF a VE has conductive hearing loss (according to audiometry), THEN the patient should be offered a referral to an otolaryngologist.

Cochlear implantation
6. IF a VE has profound bilateral sensorineural hearing loss that has not responded to hearing aid rehabilitation, THEN he or she should be offered referral for cochlear implantation.

Assistive listening device
7. IF audiology and formal evaluation reveal that a VE’s hearing loss would not benefit from a hearing aid (or he or she cannot afford it) or treatment from an otolaryngologist or that he or she has a persistent hearing handicap, THEN he or she should be offered hearing rehabilitation or an assistive listening device (telephone amplifiers, TTY/TDD devices, television headphones, infrared systems, lighted telephones, door knock alert systems, vibrating clocks, or smoke detectors with strobe lights).

Related QIs for Hearing Loss
Interpreter for hearing impaired patient (Continuity #16)
CGA (S&P #16, #17)

HEART FAILURE

ACE inhibitor
1. IF a VE has a left ventricular ejection fraction (LVEF) less than 40%, THEN he or she should receive an ACE inhibitor (or an ARB if ACE inhibitor intolerant).

HF history
2. IF a VE is newly diagnosed with HF, THEN he or she should have a history taken at diagnosis or hospitalization that documents the following:
   - Symptoms of volume overload
   - Current symptoms of chest pain or angina pectoris
   - Prior MI, coronary artery disease, or revascularization
   - Hypertension
   - Diabetes mellitus
   - Hypercholesterolemia
   - Valvular heart disease
   - Thyroid disease
   - Alcohol use
   - Smoking
   - Current medications
   - NYHA functional class or other description of functional status

HF examination
3. IF a VE is newly diagnosed with HF, THEN he or she should have a physical examination at diagnosis or hospitalization that documents the following:
   - Weight
   - BP and heart rate
   - Lung examination
   - Cardiac examination
   - Abdominal examination
   - Lower extremity examination

HF diagnostic testing
4. IF a VE is newly diagnosed with HF, THEN he or she should undergo the following studies within 1 month of diagnosis if not done in the prior 3 months:
   - Chest X-ray
   - ECG
   - Complete blood count
   - Serum electrolytes
   - Blood urea nitrogen
   - Creatinine
   - Glucose
   - Albumin
   - Liver function tests
   - Thyroid stimulating hormone
   - Urinalysis

Left ventricular function evaluation
5. IF a VE is newly diagnosed with HF or has known HF with an unexplained clinical deterioration, THEN he or she should have an evaluation of left ventricular function.

Inpatient laboratory testing
6. IF a VE is hospitalized with HF, THEN he or she should have serum electrolytes, creatinine, and blood urea nitrogen determined within 1 day.

Selective beta-blocker
7. IF a VE has HF and an LVEF less than 40%, THEN he or she should be treated with a beta-blocker known to prolong survival (carvedilol, metoprolol, or bisoprolol).
Calcium channel blocker use
8. IF a VE has HF, LVEF less than 40% and no atrial fibrillation, THEN he or she should not be treated with a first- or second-generation calcium channel blocker.

Antiarrhythmic use
9. IF a VE has HF and an LVEF less than 40%, THEN he or she should not be treated with a type I antiarrhythmic agent unless an implantable cardioverter defibrillator is in place.

Digoxin toxicity
10. IF a VE with HF is taking digoxin and has signs of toxicity, THEN a digoxin level should be checked or digoxin discontinued within 1 week.

HF education
11. IF a VE is newly diagnosed or hospitalized with HF, THEN patient counseling in the following areas should be provided and documented.

- Medication use, dosage, intervals, side effects
- Low-salt diet
- Exercise and physical activity
- Smoking cessation
- Weight monitoring
- Symptom management
- Avoiding or minimizing use of nonsteroidal antiinflammatory drugs (NSAIDs)
- Prognosis/end-of-life issues

HF outpatient visit: Volume status
12. IF a VE has HF, THEN the following physical examination elements should be documented at each primary care or cardiology outpatient visit.

- Weight
- BP
- Heart rate
- Assessment of volume overload

Related QIs for HF
Hospital follow-up (Continuity #8)
Goals of care surrogate discussion (End of life #2)
Dyspnea assessment (End of life #12)
Opiate treatment of dyspnea (End of life #13)
Management of emergent dyspnea (End of life #14, #15)
Preoperative cardiovascular risk assessment (Hosp #19)
Response to therapy (Meds #5)
Warfarin education and monitoring (Meds #6, #7)
Laboratory follow-up of ACE inhibitor (Meds #8)
Laboratory follow-up of loop diuretic (Meds #9)
Anticoagulation for atrial fibrillation (Stroke #3–5)

Endocarditis prophylaxis
2. IF a VE has moderate to high risk for endocarditis, and a high-risk procedure is planned, THEN endocarditis prophylaxis should be given.

Central venous catheter infection precautions
3. IF a hospitalized VE has a new temporary central venous catheter placed, THEN the medical record should document that maximal barrier precautions were used.
4. IF a hospitalized VE has a temporary central venous catheter placed, THEN there should be daily documentation of examination of line site for signs of infection and continued need for the central line.

Indwelling bladder catheter
5. IF a hospitalized VE has an indwelling bladder catheter placed, THEN the indication or continued need for the catheter should be documented at least every 3 days until its removal.

Delirium evaluation
6. IF a hospitalized VE has a suspected or definite diagnosis of delirium, acute confusional state, or reduced level of consciousness, THEN there should be a documented attempt to attribute the altered mental state to a potential etiology.

Mobilization
7. IF a VE who is ambulatory as an outpatient is hospitalized for longer than 48 hours and is not receiving intensive or palliative care, THEN there should be a plan to increase mobility within 48 hours of admission.

Inpatient fall evaluation
8. IF a VE falls during hospitalization, THEN the following should be documented within 24 hours:

- Presence or absence of prodromal symptoms
- Review of medications or drugs potentially contributing to the fall

Aspiration precautions
9. IF a hospitalized VE is tube fed, THEN there should be documentation of a plan to reduce risk of aspiration.
10. IF a VE is mechanically ventilated, THEN the medical record should document a plan to reduce the risk of ventilator-associated pneumonia.

Treatment of pneumonia
11. IF a VE is admitted to the hospital for pneumonia, THEN antibiotics should be administered within 4 hours of arrival.
12. IF a VE is admitted to the hospital with community-acquired pneumonia with hypoxia (oxygen saturation <90%), THEN oxygen should be administered.
13. IF a VE hospitalized with community-acquired pneumonia is switched from parenteral to oral antimicrobial therapy, THEN the oral medication should have equivalent or near-equivalent bioavailability or there should be documentation of the following.
Signs of clinical improvement
- Ability to tolerate other oral medications, food, and fluids
- Hemodynamic stability (heart rate <100, systolic BP >90, respiratory rate <24, temperature \(\leq 37.8^\circ\text{C} \) (100°F), oxygen saturation >90% on room air)

14. IF a VE with community-acquired pneumonia is discharged home, THEN he or she should have been hemodynamically stable on the day before and the day of discharge.

Discharge assessment
15. IF a VE is discharged from the hospital, THEN the hospital record should contain an assessment of level of independence, need for home health services, and patient and caregiver readiness for discharge time and location.

PREOPERATIVE CARE

Capacity to consent
16. IF a VE is to have inpatient or outpatient elective surgery, THEN there should be documentation of the patient’s capacity to understand the risks and benefits of the proposed procedure before the operative consent form is presented for signature.

Preoperative discussion
17. IF a VE is to have elective major surgery, THEN the following should be discussed preoperatively.
- Patient priorities and preferences regarding treatment options
- Operative risks
- Anticipated postoperative functional outcome
- Advance directive and designated surrogate decision maker

Preoperative evaluation
18. IF a VE is to have elective major surgery, THEN a pulmonary review of systems (history of smoking, baseline exercise tolerance, history of COPD or asthma) and chest auscultation should be performed preoperatively.
19. IF a VE is to have elective major surgery, THEN an assessment of cardiovascular risk should be performed preoperatively.

Preoperative diabetes mellitus evaluation
20. IF a VE is to have elective major surgery, THEN the presence or absence of diabetes mellitus should be documented preoperatively.
21. IF a VE with diabetes mellitus is to have elective major surgery, THEN the diabetes regimen and adequacy of diabetes control should be documented preoperatively.

Preoperative delirium assessment
22. IF a VE is to have elective major surgery, THEN he or she should be screened for risk factors for the development of postoperative delirium within 8 weeks before surgery.

PERIOPERATIVE CARE

Prevention of surgical site infection
23. IF a VE has elective major surgery, THEN prophylactic antibiotics should be administered within 1 hour before incision (2 hours for vancomycin or fluoroquinolone) and discontinued within 24 hours after the end of surgery.

Perioperative beta-blockade
24. IF a VE with coronary artery disease has elective major surgery, THEN preoperative beta-blockade should be considered, and if initiated, it should be continued until discharge.

Anticoagulation for hip fracture
25. IF a VE has sustained a hip fracture, THEN an anticoagulant regimen should be started.

Anticoagulation for hip replacement
26. IF a VE is to have a total hip replacement, THEN an anticoagulation regimen should be started preoperatively or on the evening after surgery.

POSTOPERATIVE CARE

Mobilization
27. IF a VE who was ambulatory as an outpatient has major surgery and is not in intensive care, THEN ambulation should be performed by postoperative day 2.

Diabetes mellitus control
28. IF a VE with diabetes mellitus has major surgery, THEN blood sugar should be kept below 200 on day of surgery and the first 2 postoperative days (or the chart should reflect attempts to achieve this).

Screen for postoperative delirium
29. IF a VE has major surgery, THEN a daily screening examination for delirium should be performed for the first 3 days after surgery.

Cognition and function at discharge
30. IF a VE has major surgery, THEN assessment of cognition and functional status before discharge, in comparison with preoperative levels, should be performed.

Related QIs for Hospital Care and Surgery
Preoperative urine evaluation (BPH #12)
Surgical documentation (Breast cancer #5)
Colon cancer preoperative staging (Colon cancer #4, #5, #6)
Discussion of colon cancer surgical findings (Colon cancer #10)
Preoperative colon cancer examination (Colon cancer #13)
Preoperative colon cancer ostomy siting (Colon cancer #14)
Adjuvant colon cancer therapy (Colon cancer #15, #16, #17)
Postoperative colon cancer surveillance (Colon cancer #18, #19, #20)
Hypertension

Confirm elevated BP measurement

1. IF an asymptomatic VE without a diagnosis of HTN has an elevated systolic BP measurement, THEN a repeat BP measurement should occur as follows:

- 140–159 mmHg: within 6 months
- 160–179 mmHg: within 2 months
- ≥180 mmHg: within 1 month

Diagnose HTN

2. IF a VE without a diagnosis of HTN has a systolic BP of 140 mmHg or higher on two consecutive visits, THEN the diagnosis of HTN should be documented or home or 24-hour ambulatory BP monitoring should be ordered within 2 months or documented as done in the previous 2 years.

Evaluation of new HTN

3. IF a VE is newly diagnosed with HTN, THEN cardiovascular disease risk assessment should be performed within 3 months (if not done in the prior 3 months), including:

- History: MI, angina pectoris, cardiomyopathy, aortic aneurysm, peripheral arterial disease, stroke, transient ischemic disease, hypercholesterolemia, family history of early coronary artery disease, smoking
- Examination: murmurs or gallops, peripheral arterial examination, peripheral edema, weight, body mass index (BMI), waist circumference
- Review of systems: chest pain, shortness of breath, transient vision or neurological symptoms, nocturnal dyspnea, leg pain
- Laboratory: blood glucose and serum lipids
- ECG

Renal function check

4. IF a VE is newly diagnosed with HTN, THEN an assessment of renal function should be performed within 3 months (if not done in the prior 3 months).

Alcohol intake check

5. IF a VE is newly diagnosed with HTN, THEN the quantity and frequency of alcohol intake should be documented within 3 months (if not done in the prior 3 months).

NSAID reduction

6. IF a VE is newly diagnosed with HTN and is taking an NSAID or cyclooxygenase-2 inhibitor, THEN there should be documentation within 6 months of dose reduction, an attempt to use an alternative medication, or justification for continued use.

Discussion of goal BP

7. IF a VE is newly diagnosed with HTN, THEN a discussion of goal BP or risks of prolonged HTN should be documented within 3 months.

Nonpharmacological intervention

8. IF a VE is newly diagnosed with HTN, THEN a nonpharmacological intervention (e.g., diet, exercise, weight loss, reduced alcohol) should be recommended within 3 months (if not done in the prior 3 months).

Intervening for persistent HTN

9. IF a VE with HTN has persistent (on 2 consecutive visits) systolic BP above goal*, THEN an intervention (e.g., pharmacological, lifestyle, compliance) should occur, or there should be documentation of a reversible cause or other justification for the elevation.

*Goal systolic BP (mmHg):
– Diabetes mellitus or chronic renal disease — 130 mmHg
– Home ambulatory monitoring — 135 mmHg
– All other patients — 140 mmHg or other specified goal

**Refractory HTN**
10. **IF** a VE with HTN has persistent (on two consecutive visits) systolic BP above goal* continuously for more than 6 months, **THEN** there should be documentation of the suspected reason why the target was not reached and efforts to address the limitation.

*Goal systolic BP (mmHg):
– Diabetes mellitus/chronic renal disease — 130 mmHg
– Home ambulatory monitoring — 135 mmHg
– All other patients — 140 mmHg or other specified goal

**Hypertensive Urgency**
11. **IF** a VE without target organ damage has a diastolic BP of 120 mmHg or greater, **THEN** immediate therapy or referral to the emergency department or hospital should occur.

**Orthostatic hypotension check**
12. **IF** a VE’s HTN medication regimen is changed (new medication or dose change) and within 1 week he or she reports dizziness, syncope or near syncope, near-fall, or fall, **THEN** he or she should be evaluated for orthostatic hypotension at the time of the report (or within 1 week if outside the office) or the medication regimen should be changed.

**Beta-blocker for HTN and IHD**
13. **IF** a VE with HTN has IHD, **THEN** treatment with a beta-blocker should be recommended or documentation of why it should not be provided.

**ACE inhibitor for comorbid vascular disease**
14. **IF** a VE with HTN has a history of HF, left ventricular hypertrophy, IHD, chronic kidney disease, or cardiovascular accident, **THEN** he or she should be treated with an ACE inhibitor or ARB or documentation provided why it not should be provided.

**Related QIs for Hypertension**
BP check at outpatient visits for diabetic (Diabetes #8)
Diabetic BP control (Diabetes #9)
Orthostatic BP check for fall (Falls #3)
HF examination (HF #3)
HF outpatient visit (HF #12)
Response to therapy (Meds #5)
Laboratory follow-up of ACE inhibitor (Meds #8)
Laboratory follow-up of loop diuretic (Meds #9)

**ISCHEMIC HEART DISEASE**

**Cardiovascular risk factors**
1. **IF** a VE has a BMI of 25 or greater, **THEN** risk factors for cardiovascular disease should be assessed.

**Early aspirin therapy**
2. **IF** a VE has an acute coronary syndrome, **THEN** he or she should be given aspirin within 1 hour of presentation.

**Aspirin and clopidogrel**
3. **IF** a VE has non-ST-elevation acute coronary syndrome (unstable angina pectoris or non-ST-elevation acute MI (AMI)), and coronary artery bypass graft surgery is not planned, **THEN** he or she should be treated with aspirin and clopidogrel for at least 3 months.

**Early beta-blocker therapy**
4. **IF** a VE has an acute coronary syndrome, **THEN** he or she should be given a beta-blocker within 12 hours.

**Early ACE inhibitor therapy for MI and HF**
5. **IF** a VE has an MI (ST-segment elevation myocardial infarction (STEMI) or non-ST-elevation myocardial infarction (NSTEMI)) complicated by HF or LVEF less than 40%, **THEN** he or she should be given an ACE inhibitor or ARB within 36 hours of presentation and advised to continue this treatment for 4 weeks or longer.

**Assess left ventricular function**
6. **IF** a VE is hospitalized with an acute MI (STEMI or NSTEMI), **THEN** an assessment of left ventricular function (LVEF) should be performed in the hospital or within 7 days of discharge.

**Noninvasive stress testing**
7. **IF** a VE is hospitalized with acute coronary syndrome, did not undergo angiography, and does not have contraindications to revascularization, **THEN** he or she should be offered noninvasive stress testing before or within 2 weeks of discharge.

**Depression screening**
8. **IF** a VE has a diagnosis of acute MI, **THEN** he or she should be screened for depression within 3 months.

**Reperfusion therapy**
9. **IF** a VE has an acute STEMI, **THEN** he or she should be offered reperfusion therapy.

**Revascularization**
10. **IF** a VE has significant left main or three-vessel coronary artery disease and LVEF less than 50%, **THEN** he or she should be offered revascularization.

**Cholesterol evaluation**
11. **ALL** VE with IHD should have a fasting cholesterol evaluation (LDL-C, high-density lipoprotein cholesterol, and triglycerides) at least every 2 years.

**Medication for elevated cholesterol**
12. **IF** a VE with IHD has an LDL-C greater than 100 mg/dL, **THEN** he or she should be offered cholesterol-lowering medication.
Antiplatelet therapy
13. IF a VE with IHD is not taking warfarin, THEN he or she should be offered daily aspirin or other antiplatelet therapy.

Beta-blocker therapy
14. IF a VE has had an MI (STEMI or NSTEMI), THEN he or she should be offered a beta-blocker and advised to continue treatment for 2 years or longer after infarction.

ACE inhibitor therapy
15. IF a VE has IHD, THEN he or she should be offered ACE inhibitor or ARB therapy and advised to continue the treatment indefinitely.

Smoking cessation
16. IF a VE with IHD smokes, THEN there should be documentation of smoking cessation counseling annually.

Cardiac rehabilitation
17. IF a VE has had an MI (STEMI or NSTEMI) or coronary artery bypass graft surgery in the past year, THEN he or she should be offered cardiac rehabilitation (formal program or its components).

Estrogen and progesterone counseling
18. IF a female VE with IHD is currently taking combination estrogen and progesterone therapy, THEN she should be counseled about possible increased cardiovascular risk, or this therapy should be discontinued.

Related QIs for IHD
ECG for tricyclic use (Depression #12)
Daily aspirin for patient with diabetes mellitus (Diabetes #10)
Treat hypercholesterolemia in patient with diabetes mellitus (Diabetes #11)
Document coronary artery disease history for patient with new HF (HF #2)
Preoperative cardiovascular risk assessment (Hosp #19)
Perioperative beta-blockade (Hosp #24)
IHD risk factor assessment for new HTN (HTN #3)
Response to therapy (Meds #5)
Warfarin education and monitoring (Meds #6, #7)
Laboratory follow-up of ACE inhibitor (Meds #8)
Laboratory follow-up of loop diuretic (Meds #9)
Avoid ticlopidine (Meds #17)
Risks and prophylaxis for aspirin (Meds #22, #24)
Tobacco screening and counseling (S&P #7–9)
Anticoagulation for atrial fibrillation (Stroke #3–5)
LDL-C for stroke (Stroke #7)

MEDICATION USE
Medication list
1. ALL VEs should have an up-to-date medication list readily available in the medical record that is accessible to all healthcare providers and includes and including over-the-counter medications.

Drug regimen review
2. ALL VEs should have an annual drug regimen review.

Drug indication
3. IF a VE is prescribed a drug, THEN the prescribed drug should have a clearly defined indication.

Patient education
4. IF a VE is prescribed a drug, THEN the he or she (or a caregiver) should receive appropriate education about its use.

Response to therapy
5. IF a VE is prescribed an ongoing medication for a chronic medical condition, THEN there should be a documentation of response to therapy.

Warfarin education
6. IF a VE receives a new prescription for warfarin, THEN he or she should receive education about diet and drug interactions and the risk of bleeding complications, or should be referred to an anticoagulation clinic.

Monitoring warfarin
7. IF a VE is prescribed warfarin, THEN an international normalized ratio (INR) should be determined within 4 days after initiation of therapy and at least every 6 weeks thereafter.

Laboratory monitoring for ACE inhibitor
8. IF a VE is prescribed an ACE inhibitor, THEN he or she should have serum creatinine and potassium monitored within 2 weeks after initiation of therapy and at least yearly thereafter.

Laboratory monitoring for loop diuretic
9. IF a VE is prescribed a loop diuretic, THEN he or she should have electrolytes checked within 2 weeks after initiation and at least yearly thereafter.

Avoid propoxyphene
10. IF a VE requires a new analgesic, THEN he or she should not be prescribed propoxyphene.

Avoid chronic or high-dose benzodiazepines
11. IF a VE is taking a benzodiazepine (> 1 month), THEN there should be annual documentation of discussion of risks and attempt to taper and discontinue the benzodiazepine.

Avoid strong anticholinergics
12. NO VEs should be prescribed any medication with strong anticholinergic effects if alternatives are available.

Avoid barbiturates
13. IF a VE does not require seizure control, THEN barbiturates should not be used.
Avoid meperidine
14. IF a VE requires analgesia, THEN meperidine should not be prescribed.

Limit ketorolac
15. IF a VE receives ketorolac, THEN it should not be prescribed for longer than 5 days.

Limit muscle relaxants
16. IF a VE receives prescription pharmacological treatment for back or neck pain, THEN cyclobenzaprine, methocarbamol, carisoprodol, chlorzoxazone, orphenadrine, tizanidine, or metaxalone should not be prescribed for longer than 1 week.

Avoid ticlopidine
17. IF a VE has had a recent stroke or MI or has peripheral arterial disease or acute coronary syndrome that will be treated medically or with a percutaneous angioplasty, and the patient requires antiplatelet therapy, THEN clopidogrel should be prescribed rather than ticlopidine.

Iron dosing for anemia
18. IF a VE has iron-deficiency anemia, THEN no more than 1 tablet daily of low-dose oral iron should be prescribed.

Antipsychotic medication response
19. IF a VE is started on an antipsychotic drug, THEN there should be documentation of an assessment of response within 1 month.

Acetaminophen
20. IF a VE is prescribed chronic high-dose acetaminophen (≥3 g/d) or a VE with liver disease is prescribed chronic acetaminophen, THEN he or she should be advised of the risk of liver toxicity.
   See OA p. S387

NSAIDs and ASA
21. IF a VE is prescribed an NSAID (nonselective or selective), THEN GI bleeding risks should be discussed and documented.
   See OA p. S387

22. IF a VE is prescribed daily aspirin (including low-dose, ≤325 mg/d), THEN GI bleeding risks should be discussed and documented.
   See OA p. S387

23. IF a VE with a risk factor for GI bleeding (aged ≥75, peptic ulcer disease, history of GI bleeding, warfarin use, chronic glucocorticoid use) is treated with a nonselective NSAID, THEN he or she should be treated concomitantly with misoprostol or a proton pump inhibitor.
   See OA p. S387

24. IF a VE with two or more risk factors for GI bleeding (aged ≥75, peptic ulcer disease, history of GI bleeding, warfarin use, chronic glucocorticoid use) is treated with daily aspirin, THEN he or she should be treated concomitantly with misoprostol or a proton pump inhibitor.

Related QI s for Medication Use
Medication continuity (Continuity #2, #3)
Medication continuity after hospital discharge (Continuity #9, #10)
Medication review for cognitive impairment (Dementia #4, #5)
Medication treatment discussion for dementia (Dementia #10)
Medication treatment of behavioral symptoms (Dementia #14, #15)
Antidepressant choice (Depression #10)
ECG before tricyclic antidepressant in patient with cardiac disease (Depression #12)
Interactions with MAOI (Depression #13, #14)
Follow-up depression therapy (Depression #15, #17, #18)
Continuing depression therapy (Depression #19)
Maintenance depression therapy (Depression #20)
ACE inhibitor for proteinuria in diabetes (Diabetes #4)
Opiate treatment of dyspnea (End of life #13)
Medication review in fall history (Falls #2)
Benzodiazepine discontinuation after a fall (Falls #9)
ACE inhibitor for HF (HF #1)
Selective beta-blocker for HF (HF #7)
Avoid first- and second-generation calcium channel blockers (HF #8)
Avoid antiarrhythmic medications (HF #9)
Digoxin level for signs of toxicity (HF #10)
HF education (HF #11)
Endocarditis prophylaxis (Hosp #2)
Antibiotics for pneumonia (Hosp #11, #13)
Perioperative antibiotics (Hosp #23)
Anticoagulation for hip surgery (Hosp #25, #26)
Reduce NSAID for new HTN (HTN #6)
Beta-blocker for HTN and IHD (HTN #13)
ACE inhibitor for HTN with comorbid vascular disease (HTN #14)
Antiplatelet therapy for MI and IHD (IHD #2, #3, #13)
Beta-blocker for acute coronary syndrome (IHD #4, #14)
ACE inhibitor for IHD (IHD #5, #15)
Cholesterol-lowering medication for IHD (IHD #12)
Counseling for estrogen or progesterone use in IHD (IHD #18)
First-line pharmacological therapy for OA (OA #6)
Osteoporosis prophylaxis if taking steroids (Osteoporosis #6, #7)
Evaluate medications for new osteoporosis (Osteoporosis #8)
Pharmacological treatment of osteoporosis (Osteoporosis #11–13)
Bowel regimen for opioid use (Pain #7)
Follow up therapeutic effect of pain treatment (Pain #8)
Avoid antihistamines for sleep (Sleep #7, #8)
Taper chronic benzodiazepines (Sleep #9)
Anticoagulation for atrial fibrillation (Stroke #3–5)
Ischemic stroke prophylaxis (Stroke #6)
Early aspirin therapy for stroke (Stroke #15)
Thrombolytic therapy for stroke (Stroke #16, #17)
Evaluate medications if patient presents with weight loss (Undernutrition #6)

OSTEOARTHRITIS
Assess pain and function
1. IF a VE has symptomatic OA of the knee or hip, THEN pain should be assessed when new to a primary care or musculoskeletal disease practice and annually.
2. IF a VE has symptomatic OA of the knee or hip, THEN functional status should be assessed when new to a primary care or musculoskeletal disease practice and annually.

Exercise therapy
3. IF an ambulatory VE has symptomatic OA of the knee or hip for longer than 3 months and is able to exercise, THEN a directed or supervised muscle strengthening or aerobic exercise program should be recommended and activity reviewed annually.

Ambulatory assistive device
4. IF a VE has symptomatic OA of the hip or knee and has difficulty walking that makes activities of daily living difficult for longer than 3 months, THEN the need for ambulatory assistive devices should be assessed.

Nonambulatory assistive device
5. IF a VE has symptomatic OA and has difficulty with nonambulatory activities of daily living, THEN the need for activity of daily living assistive devices should be assessed.

First-line pharmacological therapy
6. IF a VE is started on pharmacological therapy to treat OA, THEN acetaminophen should be tried first.

Total joint replacement
7. IF a VE has severe symptomatic OA of the knee or hip despite nonsurgical therapy, THEN a referral to an orthopedic surgeon should be made.

Related QIs for Osteoarthritis
Cognitive and functional screening (Dementia #1, #2)
Risks of acetaminophen (Meds #20)
Risks and prophylaxis of NSAIDs and aspirin (Meds #21–23)
Follow up therapeutic effect of pain treatment (Pain #8)
Weight counseling for BMI (S&P #13)
CGA (S&P #16, #17)

OSTEOPOROSIS
Preventive advice
1. ALL VEs at an initial primary care visit should be counseled about intake of calcium and vitamin D and weight-bearing exercises.

Screening dual x-ray absorptiometry (DXA) scan for women
2. ALL female VEs without a diagnosis of osteoporosis should have documentation that they were offered a DXA scan.

Screening DXA scan for men
3. IF a male VE without a diagnosis of osteoporosis has any of the following risk factors for osteoporosis
   • >3 months of systemic glucocorticoid treatment
   • Primary hyperparathyroidism
   • Osteoporosis in a first-degree relative
   THEN a DXA scan should be performed.

Osteoporosis consideration after fracture
4. IF a female VE has a new nonpathological fracture, THEN she should be treated for osteoporosis, or a DXA scan should be performed.
5. IF a VE has a new hip fracture or undergoes kyphoplasty or vertebroplasty, THEN a DXA scan should be performed or pharmacological therapy for osteoporosis should be prescribed within 6 months.

Osteoporosis prophylaxis for corticosteroids
6. IF a VE without osteoporosis is taking 7.5 mg/d or more of prednisone (or equivalent) for 1 month or longer, THEN he or she should be prescribed calcium and vitamin D supplements.
7. IF a VE without osteoporosis is taking 7.5 mg/day or more of prednisone (or equivalent) for 3 months or longer, THEN he or she should be prescribed bisphosphonate therapy.

Identifying secondary osteoporosis
8. IF a female VE is newly diagnosed with osteoporosis, THEN she should receive a workup including the following.
   • Medication use
   • Alcohol use
   • Complete blood count
   • Liver function tests
   • Renal function
   • Calcium
   • Phosphorus
   • Vitamin D 25-OH
   • Thyroid-stimulating hormone

Exercise for osteoporosis
9. IF an ambulatory VE has a new diagnosis of osteoporosis, THEN there should be documentation of advice to exercise within 3 months.

Calcium and vitamin D for osteoporosis
10. IF a VE has osteoporosis, THEN he or she should be prescribed calcium and vitamin D supplements.

Pharmacological treatment for female osteoporosis
11. IF a female VE has osteoporosis, THEN she should be treated with bisphosphonates, raloxifene, calcitonin, hormone replacement therapy, or teriparatide (if this is a new diagnosis, within 3 months).

Testosterone for male osteoporosis
12. IF a male VE has osteoporosis and is hypogonadal, and has no history of prostate cancer, THEN he should be prescribed testosterone therapy.
Pharmacological treatment for male osteoporosis
13. IF a male VE has osteoporosis, THEN he should be treated with bisphosphonates, calcitonin, parathyroid hormone, or, if hypogonadal, testosterone (if this is a new diagnosis, within 3 months).

Related QIs for Osteoporosis
Screen for falls (Falls #1)
Counseling for estrogen or progesterone use in IHD (IHD #18)
Response to therapy (Meds #5)
Alcohol screening (S&P #5, #6)
Tobacco screening and counseling (S&P #7–9)
Exercise counseling (S&P #10)
Counsel about hormone replacement therapy (S&P #11)
Counsel about hormone replacement therapy (Stroke #13)

PAIN MANAGEMENT
Screening for persistent pain
1. IF a VE presents for an initial evaluation, THEN a quantitative and qualitative assessment for persistent pain should be documented. (If cognitively impaired, a standardized pain scale, behavioral assessment, or proxy report of pain should be used.)
2. ALL VEs should be screened for persistent pain annually.

Ask about pain at cancer visits
3. IF a VE presents for a cancer-related physician visit, including visits for chemotherapy or radiation, THEN pain should be assessed.

Treat severe pain
4. IF an outpatient VE with cancer presents with severe pain (score > 5 on a 0–10 scale or similar quantifiable measurement), THEN an adjustment of pain treatment should occur.
5. IF a hospitalized VE has a new complaint of moderate to severe pain, THEN the medical record should indicate that an intervention and follow-up assessment of the pain occurred within 4 hours.

Education for persistent pain
6. IF a VE is new to a primary care practice and has persistent pain, THEN there should be documentation of patient education within 6 months that explains the likely cause of symptoms and how to use medication or other therapies.

Preventing constipation with opioids
7. IF a VE with persistent pain is treated with opioids, THEN one of the following should be prescribed or noted.
   - Stool softener or laxative
   - Increased fiber, stool-softening foods
   - Documentation of the potential for constipation or why bowel treatment is not needed

Reassessing pain control with opioids
8. IF a VE is started on new opioid therapy for persistent pain, THEN efficacy and side effects should be assessed within 1 month.

Related QIs for Pain Management
Comprehensive assessment of dying patient (End of life #1)
Management of emergent pain (End of life #17)
Pain assessment of dying patient (End of life #18)
Educate concerning side effects of new medication (Meds #4)
Response to therapy (Meds #5)
Avoid propoxyphene (Meds #10)
Avoid meperidine (Meds #14)
Limit ketorolac (Meds #15)
Limit muscle relaxants (Meds #16)
Risks of acetaminophen (Meds #20)
Risks and prophylaxis of NSAIDs and aspirin (Meds #21–24)
Assess pain for lower extremity OA (OA #1)
First-line pharmacological therapy for OA (OA #6)
Assessment of PU-related pain (PU #7)
Treat pain disrupting sleep (Sleep #10)

PRESSURE ULCERS
Risk assessment
1. IF a VE who is admitted to a hospital is unable to reposition himself or herself or has limited ability to do so, THEN risk assessment for PUs using a standardized scale should be performed upon admission, and if the patient is found to be at risk, the assessment should be repeated at least every 48 hours thereafter.
2. IF a VE is admitted to a skilled nursing facility, THEN risk assessment for PUs using a standardized scale should be performed upon admission, every week during the first 4 weeks, and every 3 months thereafter.
3. IF a VE is admitted to a home healthcare organization, THEN risk assessment for PUs using a standardized scale should be performed upon admission, and if the patient is found to be at risk, then weekly for 4 weeks and every other week thereafter.

Preventive intervention
4. IF a VE is identified as at risk for PU development or presents with a PU, THEN preventive interventions should be instituted that address pressure reduction (or management of tissue loads) and repositioning needs.
5. IF a VE who is at risk for PU development or has a PU also demonstrates malnutrition, THEN a nutritional assessment to identify nutritional deficiencies and nutrition support should be provided.

PU assessment
6. IF a VE presents with a PU, THEN the PU should be assessed for the following wound characteristics.
   - Location
   - Depth and stage
   - Size
• Wound bed (e.g., necrotic tissue, exudates, wound edges for undermining and tunneling, presence or absence of granulation and epithelialization)

7. IF a VE has a PU, THEN he or she should be assessed for PU pain daily in the hospital and at each outpatient visit, and the pain should be treated, if present.

PU management
8. IF a VE presents with a full-thickness PU covered with necrotic debris or eschar (unless dry eschar presents on the heel), THEN debridement interventions using sharp, mechanical, enzymatic, biosurgery, or autolytic procedures should be instituted within 24 hours.
9. IF a VE presents with a PU that is clean or free of necrotic tissue, THEN wound cleansing with normal saline or a noncytotoxic cleanser should be instituted at each dressing change.
10. IF a VE presents with a clean full-thickness or partial-thickness PU, THEN a moisture-retentive topical dressing such as thin-film dressings, hydrocolloids, hydrogels, foams, or alginates should be provided for treatment and not dry gauze in any form.
11. IF a VE with a full-thickness Stage III or IV PU presents with systemic signs and symptoms of infection, such as elevated temperature, elevated white blood count, and confusion and agitation, and it is likely the sepsis is due to the wound, THEN the PU should be debrided to eliminate necrotic debris within 24 hours, and a tissue biopsy, needle aspiration, or quantitative swab after debridement should be obtained for bacterial culture and appropriate systemic antibiotics initiated.
12. IF a VE presents with a clean full-thickness Stage III or IV PU at 2 to 4 weeks posttreatment with no improvement in PU status (e.g., decrease in surface area or depth or according to standardized wound healing tool score), THEN the appropriateness of the treatment plan and presence of complications should be reassessed.
13. IF a VE presents with a partial-thickness Stage II PU at 1 to 2 weeks posttreatment with no improvement in PU status, THEN the appropriateness of the treatment plan and presence of complications should be reassessed.

Related QIs for PUs
Mobilization of hospital patient (Hosp #7)
Mobilization of postoperative patient (Hosp #27)

SCREENING AND PREVENTION
Immunization
1. IF a VE has not received a tetanus-diphtheria booster after age 49, THEN he or she should receive a Tdd booster.
2. All VEs should be offered an annual influenza vaccination.
3. ALL VEs should have documentation of whether they have received a pneumococcal vaccination and, if so, at what age.
4. IF a VE has not received a pneumococcal vaccination or received it longer than 5 years before and before age 65, THEN he or she should be offered pneumococcal vaccination.

Alcohol misuse
5. ALL VEs should be screened for alcohol misuse within 3 months of entering a new primary care practice.
6. IF a VE misuses alcohol, THEN he or she should be counseled to decrease intake or be referred to an alcohol program within 3 months.

Tobacco
7. ALL VEs should be screened for tobacco use within 3 months of entering a new primary care practice.
8. IF a VE uses tobacco, THEN he or she should be counseled to quit within 3 months and annually.
9. IF a VE is ready to quit using tobacco, THEN there should be documentation of a quit date, discussion of therapies to aid cessation, and a follow-up visit within 1 month of the quit date.

Exercise
10. ALL VEs should have an assessment of activity level (with encouragement to be active) annually.

Hormone replacement therapy
11. IF a female VE is taking hormone therapy, THEN there should be documentation that the risks and benefits were discussed since January 2003.

Weight, height, and BMI
12. ALL non-wheelchair-bound VEs should have their height, weight, and BMI documented within 3 months of the initial primary care visit.
13. IF a VE is obese (BMI ≥30 kg/m²), THEN he or she should be advised annually to lose weight.

Avoid Papanicolaou test after hysterectomy
14. IF a female VE has had a total hysterectomy and has a Papanicolaou smear, THEN the reason for the Papanicolaou smear should be documented.

Elder abuse
15. IF a VE presents with contusions, burns, bite marks, genital or rectal trauma, PUs or BMI less than 17.5 with no clinical explanation, THEN he or she should be asked about possible mistreatment or referred to a social worker for assessment of mistreatment.

Comprehensive Geriatric Assessment
16. ALL VEs new to a primary care practice should receive the elements of a CGA within 3 months.
17. IF a VE receives the elements of a CGA that identifies a problem, THEN the problem should be addressed within 3 months.

Related QIs for Screening and Prevention
PSA testing (BPH #8)
Mammogram (Breast cancer #1)
Smoking cessation (COPD #2, #3, #4)
Colon cancer screening (Colon cancer #1)
Prevention reminders (Continuity #6)
Cognitive and functional evaluation (Dementia #1)
Screening for depression (Depression #1, #2)
Advance directives and preferences (End of life #3)
Screening for falls (Falls #1)
Screening for hearing loss (Hearing #1, #2)
Endocarditis prophylaxis (Hosp #2)
Cardiovascular risk factors (IHD #1)
Smoking cessation (IHD #16)
Calcium, vitamin D, and exercise advice at new-patient visit (Osteoporosis #1)
Screening for pain (Pain #1, #2)
Screening for sleep problem (Sleep #1)
Smoking cessation (Stroke #8, #9)
Alcohol misuse (Stroke #11, #12)
Weigh patient each outpatient visit (Undernutrition #1)
Screening for urinary incontinence (UI #1, 2)
Vision evaluation (Vision #1)

SLEEP DISORDERS
Screening
1. ALL VEs should be screened annually for sleep problems.

Sleep history
2. IF a VE reports a sleep problem, THEN a targeted sleep history should be documented within 6 months

Sleep hygiene education
3. IF a VE has a sleep problem, THEN a discussion of sleep hygiene should be documented within 6 months.

Sleep study
4. IF a VE has daytime sleepiness and observed apneas or loud snoring, THEN he or she should be referred for sleep evaluation within 6 months.

Discussion of treatment options
5. IF a VE has sleep-disordered breathing according to polysomnography, THEN a discussion of treatment options should be documented within 6 months.

Nocturnal limb movements
6. IF a VE has nocturnal limb movements during sleep and frequent awakenings or excessive daytime sleepiness, THEN treatment or referral to a sleep specialist should occur within 6 months.

Avoid antihistamines
7. IF a VE has sleep problems, THEN he or she should not be treated with sleep aids containing antihistamines.
8. IF a VE is new to a primary care practice and is chronically (>3 months) taking an over-the-counter sleep aid containing an antihistamine for sleep problems, THEN advice to discontinue the medication should be documented within 6 months.

Taper chronic benzodiazepines
9. IF a VE is new to a primary care practice and is chronically (>3 months) taking a benzodiazepine for sleep prob-
lems, THEN advice to taper off and discontinue the medication should be documented within 6 months.

Treat pain disturbing sleep
10. IF a VE has pain that disturbs his or her ability to fall asleep or maintain sleep, THEN pharmacological or non-pharmacological pain management should be recommended.

Related QIs for Sleep Disorders
Evaluate insomnia for depression (Depression #3)
Taper or discontinue benzodiazepines (Meds #11)
Avoid anticholinergic medication (Meds #12)
Avoid barbiturates (Meds #13)

STROKE AND ATRIAL FIBRILLATION
Carotid artery imaging
1. IF a VE has a new transient ischemic attack (TIA) or ischemic stroke in the vascular territory of the carotid artery, THEN a carotid artery imaging study should be done, or it should be documented that the patient is not a carotid procedure candidate.
2. IF a VE has symptomatic carotid stenosis greater than 70%, THEN the medical record should document a discussion of risks and benefits of carotid procedures or that the patient is not a candidate for a carotid procedure or that a carotid endarterectomy cannot be done with a less than 6% 30-day morbidity and mortality rate.

Anticoagulate atrial fibrillation
3. IF a VE has chronic atrial fibrillation and is at medium to high risk for stroke, THEN anticoagulation should be offered.
4. IF a VE has chronic atrial fibrillation, medium to high risk for stroke, and has a contraindication to anticoagulation, THEN antiplatelet therapy should be prescribed.
5. IF a VE is prescribed anticoagulants for atrial fibrillation, THEN there should be documentation that the goal for the INR is 2.0 to 3.0 or reason for other goal.

Ischemic stroke prophylaxis
6. IF a VE has had a TIA or ischemic stroke, THEN outpatient antiplatelet or anticoagulant therapy should be prescribed within 3 months after the stroke or TIA or entering a new practice.

Hyperlipidemia and stroke
7. IF a VE has a new TIA or ischemic stroke, THEN there should be documentation of a fasting LDL-C level.

Smoking cessation
8. IF a VE has a new TIA or stroke, THEN smoking status should be documented.
9. IF a VE has a TIA or stroke and is a current smoker, THEN smoking cessation counseling should be documented annually.
Exercise prescription
10. IF an ambulatory VE has had a TIA or stroke and is not physically active, THEN counseling to increase physical activity should be documented annually.

Alcohol misuse
11. IF a VE has a new TIA or stroke, THEN assessment of alcohol intake should be documented, and if positive for alcohol intake, alcohol intake should be reassessed annually.
12. IF a VE has a new TIA or stroke and consumes five or more drinks of alcohol per day, THEN he or she should be counseled to decrease consumption to less than 2 drinks per day, and this should be documented annually.

Hormone replacement therapy
13. IF a female VE has had a TIA or stroke and is taking hormone replacement therapy, THEN hormone replacement therapy should be discontinued or a reason (other than stroke prevention) documented.

Education about stroke
14. IF a VE presents with a new TIA or stroke, THEN education of the patient (or caregiver) about stroke symptoms and risk factors should be documented within 6 months.

Early aspirin therapy
15. IF a VE is hospitalized with a new acute ischemic stroke, THEN aspirin should be given within 48 hours (if not already on anticoagulant therapy).

Thrombolytic therapy
16. IF a VE is hospitalized with an acute stroke and inclusion and exclusion criteria are met, THEN thrombolytic therapy should be offered.
17. IF a VE with a new stroke is started on intravenous tissue plasminogen activator for thrombolysis, THEN inclusion and exclusion criteria should be met.

Inclusion Criteria
- Clinical diagnosis of stroke with meaningful deficit
- Baseline CT scan with no intracranial hemorrhage (ICH)
- Stroke onset less than 180 minutes before treatment

Exclusion Criteria
- Minor or rapidly improving symptoms
- CT signs of ICH
- History of ICH, seizure at stroke onset, arterial puncture at noncompressible site or lumbar puncture within 1 week, major surgery or serious trauma within 2 weeks, GI or urinary tract hemorrhage within 3 weeks
- Systolic BP greater than 185 mmHg, diastolic BP greater than 110 mmHg, or aggressive treatment required to lower BP
- Laboratory values: glucose less than 50 mg/dL or greater than 400 mg/dL; platelet count less than 100,000/μL; heparin therapy within 48 hours with associated elevated partial thromboplastin time, current anticoagulant therapy with INR greater than 1.7
- Clinical presentation suggesting post-MI pericarditis

Depression evaluation
18. IF a VE presents with a new stroke, THEN presence or absence of depression should be documented within 3 months.

Speech therapy
19. IF a VE presents with a new stroke and has resulting language difficulties, THEN a referral for speech therapy should be made within 1 month.

Dysphagia documentation
20. IF a VE presents with a new stroke, THEN presence or absence of dysphagia should be documented in the hospital record.

Rehabilitation for functional deficits
21. IF a VE presents with a new stroke, THEN on discharge the patient should have a rehabilitation plan or documentation of no residual functional deficit from the new stroke.

Related QIs for Stroke and Atrial Fibrillation
Stroke prophylaxis for vascular dementia (Dementia #11)
Aspirin for patients with diabetes mellitus (Diabetes #10)
Antiplatelet therapy for patients with IHD (IHD #13)
Response to therapy (Meds #5)
Warfarin education and monitoring (Meds #6, #7)
Laboratory follow-up of ACE inhibitor (Meds #8)
Avoid ticlopidine (Meds #17)
Alimentation for patient who cannot eat (Undernutrition #7)
Approach to dysphagia (Undernutrition #8)
Nutrition for malnourished patient (Undernutrition #9)

UNDERNUTRITION
Weight measurement
1. ALL VEs should be weighed at each primary care visit and weights documented in the medical record.

Vitamin D
2. ALL VEs in stable health states should take 800 IU (or equivalent) of vitamin D supplementation daily.

Oral intake evaluation in hospital
3. IF a VE is hospitalized, THEN evaluation of oral intake should be documented during the hospitalization.

Document weight loss
4. IF a VE has involuntary weight loss of 10% or more of body weight in 1 year or less, THEN weight loss (or a related disorder) should be documented in the medical record as recognition of undernutrition as a potential problem.
Evaluate weight loss
5. IF a VE has involuntary weight loss of 10% or more in 1 year or less or hypoalbuminemia (<3.5 g/dL), THEN he or she should be evaluated for potentially reversible causes of poor nutritional intake including assessment of:
   • Dental status (e.g., dentition, gum health, dental referral)
   • Food security (e.g., financial status, social work referral)
   • Food-related functional status (e.g., ability to feed, prepare meals)
   • Appetite and intake (e.g., 72-hour calorie count, dietitian referral)
   • Swallowing ability (e.g., bedside swallowing study, swallowing study referral)
   • Dietary restrictions (e.g., low-salt or low-protein diet)

Evaluate comorbid conditions
6. IF a VE has involuntary weight loss of 10% or more in 1 year or less or hypoalbuminemia (<3.5 g/dL), THEN he or she should be evaluated for potentially relevant comorbid conditions, including assessment of:
   • Medications associated with decreased appetite
   • Depression
   • Cognitive impairment
   • Thyroid function
   • Screen for cancer
   • Diabetes mellitus
   • Malabsorption

Alternative alimentation
7. IF a hospitalized VE is unable to take food orally for longer than 48 hours, THEN alternative alimentation (e.g., enteral or parenteral) should be implemented or documented why not.

Swallowing training
8. IF a VE has a new stroke and fails a swallowing screen for dysphagia, THEN he or she should be offered swallowing training.

Supplementation
9. IF a hospitalized VE is malnourished or at risk, THEN he or she should receive oral protein and energy supplementation of 400 kcal per day or more for 35 days or longer.

Related QIs for Undernutrition
Evaluate weight loss for depression (Depression #3)
Gastrostomy tube placement (End of life #11)
Nutritional assessment for patient with PU (PU #5)
Evaluate weight, height, and BMI at new visit (S&P #12)
Dysphagia documentation after stroke (Stroke #20)

URINARY INCONTINENCE
Screening
1. ALL VEs should have documentation of the presence or absence of UI during the initial evaluation.
2. ALL VEs should have documentation of the presence or absence of UI every 2 years.

Annual assessment of UI
3. IF a VE has UI, THEN there should be documentation annually of whether the UI is bothersome to the patient or caregiver.

Incontinence history
4. IF a VE has new UI or established UI with bothersome symptoms, THEN a targeted history should be documented.

Incontinence examination
5. IF a VE has new UI, THEN a targeted physical examination should be documented.

Urine evaluation
6. IF a VE has new UI or established UI with bothersome symptoms, THEN a urinalysis (or dipstick urinalysis) and a urine culture, if the urinalysis demonstrates pyuria or hematuria, should be obtained.

Postvoid residual
7. IF a VE has a postvoid residual greater than 300 cc, THEN he or she should have a serum creatinine within 72 hours and (if no reversible causes found) be referred to a clinician with urological expertise within 2 months.
   See BPH p.S254
8. IF a VE with UI has a postvoid residual of between 200 and 300 cc, THEN renal function should be assessed within 3 months.

Classification of UI
9. IF a VE has new UI or established UI with bothersome symptoms, and the UI is treated with medication or surgery, THEN classification of the type of or suspected reason(s) for UI should be documented.

Discussion of treatment options
10. IF a VE has new UI or established UI with bothersome symptoms, THEN treatment options should be discussed within 3 months.

Assess response to treatment
11. IF a VE is treated for UI, THEN response to treatment should be documented within 3 months.

Behavioral and lifestyle treatments
12. IF a cognitively intact, ambulatory VE has stress, urge, or mixed UI, THEN behavioral and lifestyle treatment should be offered.

Preoperative urodynamic testing
13. IF a female VE undergoes surgery for stress UI, THEN urodynamic investigations should be performed before surgery.
Surgery for stress incontinence
14. IF a female VE has stress UI and undergoes a procedure or surgery for UI, THEN surgical correction with open retropubic suspension or a sling procedure (including tension-free vaginal tape) should be performed or periurethral bulking agent should be offered.

Chronic urethral catheter
15. IF a VE has clinically significant urinary retention, and a long-term (>1 month) urethral catheter is placed, THEN there should be documentation of justification for its use.

Related QIs for Urinary Incontinence
Postvoid residual (BPH #4)
Urological trauma (BPH #5)
Hematuria (BPH #6, #7)
Referral indications (BPH #9)
BPH treatment (BPH #10, #11)
Indwelling bladder catheter (Hosp #5)

VISION
Comprehensive eye examination
1. ALL VEs should have a comprehensive eye examination every 2 years.

New signs and symptoms
2. IF a VE has sudden-onset severe visual changes, THEN he or she should see an eye care professional within 24 hours.
3. IF a VE has new-onset eye pain, grossly visible corneal lesions, or severe purulent discharge, THEN he or she should undergo a basic eye examination within 72 hours.

Glaucoma follow-up
4. IF a VE has primary open-angle glaucoma, THEN he or she should have an eye examination annually that includes measurements of visual acuity and intraocular pressure, documentation of optic nerve examination, slit lamp evaluation, visual field testing, and documentation of target intraocular pressure.

Examination for macular degeneration
5. IF a VE with age-related macular degeneration has an eye examination, THEN the degree of maculopathy (number and size of macular drusen, presence of geographic atrophy or choroidal neovascular membranes) should be documented.

Cataract extraction
6. IF a VE is diagnosed with a cataract that limits his or her ability to perform needed or desired activities, THEN cataract extraction should be offered.
7. IF a VE has cataract surgery, THEN there should be a follow-up ocular examination within 48 hours.

Ocular therapy continuity
8. IF a VE who has been prescribed an ocular therapeutic regime (e.g., topical ophthalmological medications) is hospitalized or in a nursing home, THEN there should be documentation that the therapeutic regime was administered as prescribed.

Corrective lenses
9. IF a VE with functional visual deficits has subjective improvement on refraction, THEN he or she should receive a primary or an updated prescription for corrective lenses.
10. IF a VE who uses corrective lenses for any activities of daily living (for near or distance vision) is hospitalized or in a nursing home and the corrective lenses are at the hospital or nursing home, THEN the corrective lenses should be accessible.

Related QIs for Vision
Retinal examination for persons with diabetes mellitus (Diabetes #6, #7)
Vision evaluation for a fall (Falls #4)
CGA (S&P #16, #17)