MEMORANDUM

DATE: April 12, 2011

TO: Long Term Care Facilities

FROM: MDCH/Clinical Advisory Panel
Deborah Ayers, Quality Improvement Nurse Consultant/Trainer

RE: **Process Guideline Osteoporosis**

Best clinical practice is only worthwhile to the extent that we use it to guide care for our residents.

Collaboratively, we are striving to improve the recognition and management of Osteoporosis for nursing home residents in Michigan. The purpose of the Guide is to clarify how to apply the Documentation **Checklist: Process Guideline for Osteoporosis.** Electronic copies are available for reprint at www.michigan.gov/qinc . Click on Best Practices once you've reached the website.

An overview of this optional "best practice" tool will be presented to you at the Spring 2011 Joint Provider/Surveyor Training on April 12, 2011. **If you would like this information explained in more detail at your facility (s), please do not hesitate to take advantage of this option by scheduling a facility visit with the State Quality Improvement Nurse Consultant.**

The effective date for usage of the tool will be **May 12, 2011**. Both facilities and surveyors will have the opportunity to use the Documentation Checklist when a resident's risk for osteoporosis or osteoporosis is a concern.

A workgroup including doctors and nurses, with experience in geriatrics and nursing home care discussed the topic in depth. They used generally accepted, current references regarding geriatric osteoporosis to help prepare the Process Guideline. The Documentation Checklist contains a series of steps related to recognizing and managing osteoporosis.

Best clinical practice information helps facilities provide the best possible care at all times. Along with information in the Federal OBRA regulations, surveyors will use these Process Guidelines to review how a facility is managing osteoporosis. We encourage you to examine your process in recognizing and managing Osteoporosis and consider the application of the following information.

The management of all conditions and problems in a nursing home should follow the steps included in the basic care process. We have utilized the terminology **staff and practitioner** throughout the guideline to designate responsibility for care. For the purpose of clarification the term **practitioner refers to a physician or his/her designee** (e.g. physician assistant, clinical nurse practitioner, etc.) **that has the authority to write medical "orders."**

The Basic Care Process

Assessment/recognition: The purpose of this step is to provide a rational basis for identifying whether there is a need, risk, or problem and what to do about it. The facility's staff and practitioners collect relevant information about the resident (history, signs and symptoms, known medical conditions, personal habits and patterns, etc.) and then a.) evaluate and organize that information to identify whether the individual has a specific need, condition, or problem; and b.) describe and define the nature (onset, duration, frequency, etc.) of the risk, condition, or problem.

Diagnosis/cause identification: The facility's staff and practitioners attempt to identify causes of a condition or problem, or explain why causes cannot or should not be identified.

Treatment/management: The facility's staff and practitioners use the above information to decide how to manage a resident's condition, symptom, or situation. Where causes may be identifiable and correctable, they seek and address them or explain why they could not or should not have done so.

Monitoring: The facility's staff and practitioners evaluate the individual's progress over time in relation to a risk, need, problem, condition, or symptom, consider the effectiveness of interventions, and make a systematic determination about what to do next.

OSTEOPOROSIS

CARE PROCESS STEP	EXPECTATIONS	RATIONALE
ASSESSMENT / PROBLEM RECOGNITION		
- Did the staff and physician seek and document any history of osteoporosis?	- On admission and thereafter as indicated, the staff and practitioner seek and document factors that are associated with, or present a risk for, osteoporosis.	- History may include a loss of height, a history of fractures (often with minimal or no trauma), chronic back pain due to vertebral compression fractures, a positive X-Ray finding of thinning of bone [osteopenia], or a positive bone density study (DEXA scan). - Although more women than men have osteoporosis, both sexes are at risk.
- Did staff identify individuals with osteoporosis or risk factors for osteoporosis and its complications?	- The staff and practitioner identify individuals with loss of bone mass and complications related to decreased bone mass. - The staff and practitioner identify and document risk factors for developing osteoporosis or for worsening of existing bone loss.	- Risk factors may be modifiable (inadequate calcium and vitamin D intake, excess alcohol intake, smoking, medications that impair bone metabolism) or nonmodifiable (age, female gender, Caucasian or Asian race, small body frame). - Various medications (e.g., anticonvulsants, proton pump inhibitors (PPIs), heparin, thyroid hormone replacement, glucocorticoids, Vitamin A) can increase the risk of osteoporosis. - In select individuals of any age, there may be benefits to addressing modifiable risk factors. - Risk factors for complications include fall history, gait and balance disturbances , medication adverse consequences, Vitamin D deficiency. - For women, osteoporosis is defined as BMD that is 2.5 SD or more below the mean for women at age 30, and osteopenia is defined as a BMD that is 1-2.5 SD below the average, for young, healthy white women. To date, the criteria for osteoporosis in men are similar. - In men, significant risk factors include age (>70 years), low body weight (body mass index <20 to 25 kg/m2 or lower), weight loss (>10% compared with the usual young or adult weight or weight loss in recent years), physical inactivity (participates in no physical activity on a regular basis [walking, climbing stairs, carrying weights, housework, or gardening]), use of oral corticosteroids, and previous fragility fracture. [Reference: Qaseem A, Snow V, Shekelle P, Hopkins R, Forciea MA, Owens DK; Clinical Efficacy Assessment Subcommittee of the American College of Physicians. Screening for osteoporosis in men: a clinical practice guideline from the American College of Physicians. Ann Intern Med. 2008 May 6;148(9):680-4.]

CARE PROCESS STEP	EXPECTATIONS	RATIONALE
		- FRAX (developed by the World Health Organization, WHO) is a computer-based screening tool that predicts the risk of developing osteoporosis, which can help identify individuals who should have additional testing and treatment, also depending on prognosis.
- Did the staff and practitioner identify complications of osteoporosis?	- The staff and practitioner collaborate to identify complications of osteoporosis.	- Complications of osteoporosis may include impaired mobility, pain at fracture sites (including chronic back pain), deformities, deconditioning, neurological complications, psychological issues - The care plan document provides a good opportunity to show the link between osteoporosis and its various complications (e.g., impairments, symptoms).
DIAGNOSIS / CAUSE IDENTIFICATION		
- Did the practitioner and staff seek causes of osteoporosis or indicate why causes could not or should not be sought?	- The practitioner and staff identify individuals who may benefit from an additional workup - The practitioner and staff identify an additional diagnostic workup to help define the presence, severity, and/or causes of decreased bone mass. - The practitioner and staff collaborate to document a rationale for not screening or attempting to confirm a suspected diagnosis of bone mass loss.	- In addition to medications (see Table x), more common causes may include hyperthyroidism, hyperparathyroidism, chronic renal failure, malabsorption syndromes, multiple myeloma (see Table xx-secondary causes), and Vitamin D deficiency. - Additional screening or diagnostic testing may not be needed if clinical evidence (e.g., a positive X-Ray showing bone thinning, a high score on a risk assessment tool, or a history of vertebral compression fractures) has already suggested or confirmed the condition - In the absence of existing confirmation of the diagnosis, the presence of more advanced bone loss or significant complications may warrant screening or diagnostic testing, if there are no contraindications (e.g., a terminal or advanced or end-stage medical illness) - Depending on the situation, additional tests may include a pDEXA scan for bone density screening, serum calcium and Vitamin D levels, TSH (hyperthyroidism), renal function tests (chronic renal failure), and serum protein electrophoresis (myeloma)
TREATMENT / PROBLEM MANAGEMENT		

CARE PROCESS STEP	EXPECTATIONS	RATIONALE
- Did the facility identify and initiate appropriate general and specific interventions?	- The staff and practitioner institute relevant general and cause-specific interventions, or provide a clinically pertinent reason for not doing so.	- The degree of improvement or prevention will vary, but some individuals may benefit from risk reduction and cause management. - General interventions (i.e., those applicable to all at-risk individuals) include calcium (total 1200-1500 mg/day from all sources) and vitamin D (total 800-1000 IU/day from all sources) supplementation, which may reduce additional bone loss but will not significantly improve existing bone loss. - Exercise—especially weight bearing activity—may have benefits in reducing bone loss. - Fall prevention strategies, including gait and balance training may help reduce falls and subsequent fall-related complications of decreased bone mass.
1 - Did the staff and practitioner consider possible individuals for whom additional treatment may be indicated?	- The practitioner and staff identify individuals who can benefit from additional treatments.	- Several options exist for medications to try to reverse bone loss, including bisphosphonates, calcitonin, parathyroid hormone, hormone replacement therapy or estrogen receptor modulators, and osteoclast inhibitors. - All medications for osteoporosis treatment should be prescribed and given consistent with manufacturers' specifications and pertinent warnings related to use, including adverse consequences and drug interactions. - Some individuals may not be able to tolerate the side effects or comply with the manufacturer 's specifications for taking medications for osteoporosis. - Vertebroplasty and kyphoplasty may help to stabilize vertebral compression fractures.
- Did the staff and practitioner address complications and related risk factors?	- The staff institute fall prevention strategies. - The staff and practitioner identify and address symptoms such as pain related to osteoporosis or its complications. - The staff and practitioner evaluate the medication regimen and address medications that are identified or suspected as affecting bone density, and that may predispose to complications from osteoporosis; e.g.,	- Measures to try to prevent falls and related injury may prevent injury-related complications due to osteoporosis. - There are no interventions that can prevent all falls. Therefore, it is sometimes necessary to f ocus on trying to minimize the severity of complications, to the extent possible.

CARE PROCESS STEP	EXPECTATIONS	RATIONALE
	that increase fall risk and thereby may increase risk of fracture.	
MONITORING		
- Did the practitioner and staff follow up on individuals with osteoporosis?	- The practitioner and staff monitor the progress of the condition and the individual 's response to any interventions, based on criteria that are relevant to the individual resident.	- It may be difficult to identify the specific long-term benefits of osteoporosis treatment in individuals. - Examples of monitoring may include—as clinically appropriate—functional capacity, degree of pain, and the progression, stabilization, or reduction of bone mass loss
- Did the staff and physician consider the justification for continuing current approaches?	- The staff and practitioner review information that can help identify the rationale for continuing treatment.	- Circumstances that may affect decisions about continuing or modifying treatments include: prognosis, responsiveness to treatment, possibility for changing to a less obtrusive or lower-risk intervention, and resident satisfaction with the benefits of— or concern about complications related to—treatment. - Less than optimal compliance with osteoporosis medications is common, mostly due to adverse consequences.
- Did the staff and practitioner monitor for, and address, complications of osteoporosis and of treatments for osteoporosis?	- The staff and practitioner monitor for, and manage, complications of osteoporosis and of various treatments for osteoporosis.	- Side effects of osteoporosis medications may include symptoms of Vitamin D or calcium excess, gastrointestinal irritation including erosive esophagitis or gastritis (bisphosphonates), bone pain, and others that are specific for the medication that is given.

Documentation Checklist: Process Guideline for Osteoporosis

May 12, 2011

Resident: _____ **Date:** _____

If a concern related to Osteoporosis is triggered during the survey process, the facility may demonstrate that it has followed the steps in the checklist, as evidence to support an appropriate care process related to Osteoporosis. Evidence of an appropriate care process will be considered in determining whether an adverse event (negative outcome), or the potential for an adverse event, related to Osteoporosis can be attributed to a deficient facility practice. If attributable to a preventable (avoidable) facility practice, this checklist may also be used in analyzing the severity of the deficiency, if a citation results. F- tags, which could be associated with recognition, prevention, and management of Osteoporosis concerns, are provided within the checklist. Other tags may also be appropriate.

DOCUMENTATION CHECKLIST:
Process Guideline for Osteoporosis
April 12, 2011

PROCESS INDICATORS	Yes	No	N/A
ASSESSMENT/PROBLEM RECOGNITION May relate to F Tags: 272 (comprehensive assessment)			
1. Did the staff and physician seek and document any history of osteoporosis?			
2. Did staff identify individuals with osteoporosis or risk factors for osteoporosis and its complications?			
3. Did the staff and practitioner seek and identify complications of osteoporosis?			
DIAGNOSIS/CAUSE IDENTIFICATION May relate to F Tags: 309 (Quality of care), F386 (Physician review of total plan of care)			
4. Did the practitioner and staff seek causes of osteoporosis or indicate why causes could not or should not be sought?			
TREATMENT/PROBLEM MANAGEMENT May relate to F Tags: 279/280 (Comprehensive Care Plans), F 309 (Quality of Care), F386 (Physician review of total plan of care)			
5. Did the facility identify and initiate appropriate general and specific interventions?			
6. Did the staff and practitioner consider possible individuals for whom additional treatment may be indicated?			
7. Did the staff and practitioner address complications and related risk factors?			
MONITORING May relate to F Tags: 272 (Assessment), 309 (Quality of Care)			

8. - Did the practitioner and staff follow up on individuals with osteoporosis?			
9. Did the staff and physician evaluate and document the progress of a resident's osteoporosis and the justification for continuing existing approaches?			
10. Did the staff and practitioner monitor for, and address, complications of osteoporosis and of higher risk treatments for osteoporosis?			

Signature of person completing the form

Date

Addendums

Table 1:

Risk Factors for Osteoporosis

Non-modifiable

- Age
- Caucasian or Asian race
- Female gender
- Personal history of dementia, poor health , or frailty
- Personal or family history of fracture as a an adult
- Small body frame, weight< 127lb

Potentially modifiable

- Alcohol abuse
- Diseases associated with secondary osteoporosis
- Functional impairment
- Inadequate exercise
- Inadequate intake of calcium and vitamin D
- Medications that adversely affect bone metabolism
- Smoking

AMDA Osteoporosis Clinical Practice Guideline 2003

Table 2:

Medications Associated with Adverse Effects on Bone Metabolism

- Anticonvulsants (phenytoin, Phenobarbital, carbamazepine)
- Chemotherapy (methotrexate, cyclosporine A)
- Excess thyroid hormone replacement (TSH below the normal range)
- Excess Vitamin A
- Glucocoritcoids
- GNRH agonist and antagonists
- Heparin

AMDA Osteoporosis Clinical Practice Guideline 2003