SECTION N: MEDICATIONS

**Intent:** The intent of the items in this section is to record the number of days, during the last 7 days (or since admission/entry or reentry if less than 7 days) that any type of injection, insulin, and/or select medications were received by the resident.

In addition, an Antipsychotic Medication Review has been included. Including this information will assist facilities to evaluate the use and management of these medications. Each aspect of antipsychotic medication use and management has important associations with the quality of life and quality of care of residents receiving these medications.

N0300: Injections

<table>
<thead>
<tr>
<th>N0300. Injections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record the number of days that injections of any type were received during the last 7 days or since admission/entry or reentry if less than 7 days. If 0 → Skip to N0410, Medications Received</td>
</tr>
</tbody>
</table>

**Item Rationale**

**Health-related Quality of Life**

- Frequency of administration of medication via injection can be an indication of stability of a resident’s health status and/or complexity of care needs.

**Planning for Care**

- Monitor for adverse effects of injected medications.
- Although antigens and vaccines are not considered to be medications per se, it is important to track when they are given to monitor for localized or systemic reactions.

**Steps for Assessment**

1. Review the resident’s medication administration records for the 7-day look-back period (or since admission/entry or reentry if less than 7 days).
2. Review documentation from other health care locations where the resident may have received injections while a resident of the nursing home (e.g., flu vaccine in a physician’s office, in the emergency room – as long as the resident was not admitted).
3. Determine if any medications were received by the resident via injection. If received, determine the number of days during the look-back period they were received.
N0300: Injections (cont.)

Coding Instructions

Record the number of days during the 7-day look-back period (or since admission/entry or reentry if less than 7 days) that the resident received any type of medication, antigen, vaccine, etc., by injection.

Insulin injections are counted in this item as well as in Item N0350.

• Count the number of days that the resident received any type of injection while a resident of the nursing home.

• Record the number of days that any type of injection (e.g., subcutaneous, intramuscular, or intradermal) was received in Item N0300.

Coding Tips and Special Populations

• For subcutaneous pumps, code only the number of days that the resident actually required a subcutaneous injection to restart the pump.

• If an antigen or vaccination is provided on one day, and another vaccine is provided on the next day, the number of days the resident received injections would be coded as 2 days.

• If two injections were administered on the same day, the number of days the resident received injections would be coded as 1 day.

Examples

1. During the 7-day look-back period, Mr. T. received an influenza shot on Monday, a PPD test (for tuberculosis) on Tuesday, and a Vitamin B₁₂ injection on Wednesday.

   **Coding:** N0300 would be coded 3.
   **Rationale:** The resident received injections on 3 separate days during the 7-day look-back period.

2. During the 7-day look-back period, Miss C. received both an influenza shot and her vitamin B₁₂ injection on Thursday.

   **Coding:** N0300 would be coded 1.
   **Rationale:** The resident received injections on one day during the 7-day look-back period.
N0350: Insulin

Item Rationale

**Health-related Quality of Life**

- Insulin is a medication used to treat diabetes mellitus (DM).
- Individualized meal plans should be created with the resident’s input to ensure appropriate meal intake. Residents are more likely to be compliant with their DM diet if they have input related to food choices.

**Planning for Care**

- Orders for insulin may have to change depending on the resident’s condition (e.g., fever or other illness) and/or laboratory results.
- Ensure that dosage and time of injections take into account meals, activity, etc., based on individualized resident assessment.
- Monitor for adverse effects of insulin injections (e.g., hypoglycemia).
- Monitor HbA1c and blood glucose levels to ensure appropriate amounts of insulin are being administered.

**Steps for Assessment**

1. Review the resident’s medication administration records for the 7-day look-back period (or since admission/entry or reentry if less than 7 days).
2. Determine if the resident received insulin injections during the look-back period.
3. Determine if the physician (or nurse practitioner, physician assistant, or clinical nurse specialist if allowable under state licensure laws) changed the resident’s insulin orders during the look-back period.
4. Count the number of days insulin injections were received and/or insulin orders changed.

**Coding Instructions for N0350A**

- Enter in Item N0350A, the number of days during the 7-day look-back period (or since admission/entry or reentry if less than 7 days) that insulin injections were received.

**Coding Instructions for N0350B**

- Enter in Item N0350B, the number of days during the 7-day look-back period (or since admission/entry or reentry if less than 7 days) that the physician (nurse practitioner, physician assistant, or clinical nurse specialist if allowable under state licensure laws) changed the resident’s insulin orders.
N0350: Insulin (cont.)

Coding Tips and Special Populations

- For sliding scale orders:
  - A sliding scale dosage schedule that is written to cover different dosages depending on lab values **does not** count as an order change simply because a different dose is administered based on the sliding scale guidelines.
  - If the sliding scale order is new, discontinued, or is the first sliding scale order for the resident, these days **can** be counted and coded.
- For subcutaneous insulin pumps, code only the number of days that the resident actually required a subcutaneous injection to restart the pump.

N0410: Medications Received

<table>
<thead>
<tr>
<th>N0410. Medications Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicate the number of DAYS the resident received the following medications by pharmacological classification, not how it is used, during the last 7 days or since admission/entry or reentry if less than 7 days. Enter &quot;0&quot; if medication was not received by the resident during the last 7 days.</td>
</tr>
<tr>
<td>A. Antipsychotic</td>
</tr>
<tr>
<td>B. Antianxiety</td>
</tr>
<tr>
<td>C. Antidepressant</td>
</tr>
<tr>
<td>D. Hypnotic</td>
</tr>
<tr>
<td>E. Anticoagulant (e.g., warfarin, heparin, or low-molecular weight heparin)</td>
</tr>
<tr>
<td>F. Antibiotic</td>
</tr>
<tr>
<td>G. Diuretic</td>
</tr>
<tr>
<td>H. Opioid</td>
</tr>
</tbody>
</table>
N0410: Medications Received (cont.)

Item Rationale

**Health-related Quality of Life**

- Medications are an integral part of the care provided to residents of nursing homes. They are administered to try to achieve various outcomes, such as curing an illness, diagnosing a disease or condition, arresting or slowing a disease’s progress, reducing or eliminating symptoms, or preventing a disease or symptom.

- Residents taking medications in these medication categories and pharmacologic classes are at risk of side effects that can adversely affect health, safety, and quality of life.

- While assuring that only those medications required to treat the resident’s assessed condition are being used, it is important to assess the need to reduce these medications wherever possible and ensure that the medication is the most effective for the resident’s assessed condition.

- As part of all medication management, it is important for the interdisciplinary team to consider non-pharmacological approaches. Educating the nursing home staff and providers about non-pharmacological approaches in addition to and/or in conjunction with the use of medication may minimize the need for medications or reduce the dose and duration of those medications.

### DEFINITIONS

#### ADVERSE CONSEQUENCE

An unpleasant symptom or event that is caused by or associated with a medication, impairment or decline in an individual’s physical condition, mental, functional or psychosocial status. It may include various types of adverse drug reactions (ADR) and interactions (e.g., medication-medication, medication-food, and medication-disease).

#### NON-PHARMACOLOGICAL INTERVENTION

Approaches that do not involve the use of medication to address a medical condition.
**Planning for Care**

- The indications for initiating, withdrawing, or withholding medication(s), as well as the use of non-pharmacological interventions, are determined by assessing the resident’s underlying condition, current signs and symptoms, and preferences and goals for treatment. This includes, where possible, the identification of the underlying cause(s), since a diagnosis alone may not warrant treatment with medication.

- Target symptoms and goals for use of these medications should be established for each resident. Progress toward meeting the goals should be evaluated routinely.

- Possible adverse effects of these medications should be well understood by nursing staff. Educate nursing home staff to be observant for these adverse effects.

- Implement systematic monitoring of each resident taking any of these medications to identify adverse consequences early.

**Steps for Assessment**

1. Review the resident’s medical record for documentation that any of these medications were received by the resident during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

2. Review documentation from other health care settings where the resident may have received any of these medications while a resident of the nursing home (e.g., valium given in the emergency room).

**Coding Instructions**

- **N0410A–H**: Code medications according to the pharmacological classification, not how they are being used.

- **N0410A, Antipsychotic**: Record the number of days an antipsychotic medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

- **N0410B, Antianxiety**: Record the number of days an anxiolytic medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

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**DEFINITIONS**

**DOSE**

The total amount/strength/concentration of a medication given at one time or over a period of time. The individual dose is the amount/strength/concentration received at each administration. The amount received over a 24-hour period may be referred to as the “daily dose.”

**MONITORING**

The ongoing collection and analysis of information (such as observations and diagnostic test results) and comparison to baseline and current data in order to ascertain the individual's response to treatment and care, including progress or lack of progress toward a goal. Monitoring can detect any improvements, complications, or adverse consequences of the condition or the treatments and support decisions about adding, modifying, continuing, or discontinuing any interventions.
N0410: Medications Received (cont.)

- **N0410C, Antidepressant:** Record the number of days an antidepressant medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

- **N0410D, Hypnotic:** Record the number of days a hypnotic medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

- **N0410E, Anticoagulant (e.g., warfarin, heparin, or low-molecular weight heparin):** Record the number of days an anticoagulant medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days). Do not code antiplatelet medications such as aspirin/extended release, dipyridamole, or clopidogrel here.

- **N0410F, Antibiotic:** Record the number of days an antibiotic medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

- **N0410G, Diuretic:** Record the number of days a diuretic medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

- **N0410H, Opioid:** Record the number of days an opioid medication was received by the resident at any time during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).

**Coding Tips and Special Populations**

- Code medications in Item N0410 according to the medication’s therapeutic category and/or pharmacological classification, not how it is used. For example, although oxazepam may be prescribed for use as a hypnotic, it is categorized as an antianxiety medication. Therefore, in this section, it would be coded as an antianxiety medication and not as a hypnotic.

- Medications that have more than one therapeutic category and/or pharmacological classification should be coded in all categories/classifications assigned to the medication, regardless of how it is being used. For example, prochlorperazine is dually classified as an antipsychotic and an antiemetic. Therefore, in this section, it would be coded as an antipsychotic, regardless of how it is used.

- Include any of these medications given to the resident by any route (e.g., PO, IM, or IV) in any setting (e.g., at the nursing home, in a hospital emergency room) while a resident of the nursing home.

- Code a medication even if it was given only once during the look-back period.

- Count long-acting medications, such as fluphenazine decanoate or haloperidol decanoate, that are given every few weeks or monthly only if they are given during the 7-day look-back period (or since admission/entry or reentry if less than 7 days).
N0410: Medications Received (cont.)

- Combination medications should be coded in all categories/pharmacologic classes that constitute the combination. For example, if the resident receives a single tablet that combines an antipsychotic and an antidepressant, then both antipsychotic and antidepressant categories should be coded.

- Over-the-counter sleeping medications are not coded as hypnotics, as they are not categorized as hypnotic medications.

- In circumstances where reference materials vary in identifying a medication’s therapeutic category and/or pharmacological classification, consult the resources/links cited in this section or consult the medication package insert, which is available through the facility’s pharmacy or the manufacturer’s website.

- When residents are having difficulty sleeping, nursing home staff should explore non-pharmacological interventions (e.g., sleep hygiene approaches that individualize the sleep and wake times to accommodate the person’s wishes and prior customary routine) to try to improve sleep prior to initiating pharmacologic interventions. If residents are currently on sleep-enhancing medications, nursing home staff can try non-pharmacologic interventions to help reduce the need for these medications or eliminate them.

- Many psychoactive medications increase confusion, sedation, and falls. For those residents who are already at risk for these conditions, nursing home staff should develop plans of care that address these risks.

- Adverse drug reaction (ADR) is a form of adverse consequence. It may be either a secondary effect of a medication that is usually undesirable and different from the therapeutic effect of the medication or any response to a medication that is noxious and unintended and occurs in doses for prophylaxis, diagnosis, or treatment. The term “side effect” is often used interchangeably with ADR; however, side effects are but one of five ADR categories, the others being hypersensitivity, idiosyncratic response, toxic reactions, and adverse medication interactions. A side effect is an expected, well-known reaction that occurs with a predictable frequency and may or may not constitute an adverse consequence.
N0410: Medications Received (cont.)

- Doses of psychoactive medications differ in acute and long-term treatment. Doses should always be the lowest possible to achieve the desired therapeutic effects and be deemed necessary to maintain or improve the resident’s function, well-being, safety, and quality of life. Duration of treatment should also be in accordance with pertinent literature, including clinical practice guidelines.

- Since medication issues continue to evolve and new medications are being approved regularly, it is important to refer to a current authoritative source for detailed medication information, such as indications and precautions, dosage, monitoring, or adverse consequences.

- During the first year in which a resident on a psychoactive medication is admitted, or after the nursing home has initiated such medication, nursing home staff should attempt to taper the medication or perform gradual dose reduction (GDR) as long as it is not medically contraindicated. Information on GDR and tapering of medications can be found in the State Operations Manual, Appendix PP, Guidance to Surveyors for Long Term Care Facilities (the State Operations Manual can be found at https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/index.html).

- Prior to discontinuing a psychoactive medication, residents may need a GDR or tapering to avoid withdrawal syndrome (e.g., for medications such as selective serotonin reuptake inhibitors [SSRIs], tricyclic antidepressants [TCAs], etc.).

- Residents who are on antidepressants should be closely monitored for worsening of depression and/or suicidal ideation/behavior, especially during initiation or change of dosage in therapy. Stopping antidepressants abruptly puts one at higher risk of suicidal ideation and behavior.

- Anticoagulants must be monitored with dosage frequency determined by clinical circumstances and duration of use. Certain anticoagulants require monitoring via laboratory results (e.g., Prothrombin Time [PT]/International Normalization Ratio [INR]).

  — Multiple medication interactions exist with use of anticoagulants (information on common medication-medication interactions can be found in the State Operations Manual, Appendix PP, Guidance to Surveyors for Long Term Care Facilities (the State Operations Manual can be found at https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/index.html)), which may

  — significantly increase PT/INR results to levels associated with life-threatening bleeding, or

  — decrease PT/INR results to ineffective levels, or increase or decrease the serum concentration of the interacting medication.

- Anticoagulants such as Target Specific Oral Anticoagulants (TSOACs), which may or may not require laboratory monitoring, should be coded in N0410E, Anticoagulant.
N0410: Medications Received (cont.)

- Herbal and alternative medicine products are considered to be dietary supplements by the Food and Drug Administration (FDA). These products are not regulated by the FDA (e.g., they are not reviewed for safety and effectiveness like medications) and their composition is not standardized (e.g., the composition varies among manufacturers). Therefore, they should not be counted as medications (e.g., melatonin, chamomile, valerian root). Keep in mind that, for clinical purposes, it is important to document a resident’s intake of such herbal and alternative medicine products elsewhere in the medical record and to monitor their potential effects as they can interact with medications the resident is currently taking. For more information consult the FDA website http://www.fda.gov/food/dietarysupplements/usingdietarysupplements/.

- Opioid medications can be an effective intervention in a resident’s pain management plan, but also carry risks such as overuse and constipation. A thorough assessment and root-cause analysis of the resident’s pain should be conducted prior to initiation of an opioid medication and re-evaluation of the resident’s pain, side effects, and medication use and plan should be ongoing.

Example

1. The Medication Administration Record for Mrs. P. reflects the following:
   - Risperidone 0.5 mg PO BID PRN: Received once a day on Monday, Wednesday, and Thursday.
   - Lorazepam 1 mg PO QAM: Received every day.
   - Temazepam 15 mg PO QHS PRN: Received at bedtime on Tuesday and Wednesday only.

   **Coding:** Medications in N0410, would be coded as follows: **A. Antipsychotic = 3,** risperidone is an antipsychotic medication, **B. Antianxiety = 7,** lorazepam is an antianxiety medication, and **D. Hypnotic = 2,** temazepam is a hypnotic medication. Please note: if a resident is receiving medications in all three categories simultaneously there must be a clear clinical indication for the use of these medications. Administration of these types of medications, particularly in this combination, could be interpreted as chemically restraining the resident. Adequate documentation is essential in justifying their use.

N0410: Medications Received (cont.)

The following resources and tools provide information on medications including classifications, warnings, appropriate dosing, drug interactions, and medication safety information.


This list is not all-inclusive. CMS is not responsible for the content or accessibility of the pages found at these sites. URL addresses were current as of the date of this publication.

N0450: Antipsychotic Medication Review

<table>
<thead>
<tr>
<th>Enter Code</th>
<th>A. Did the resident receive antipsychotic medications since admission/entry or reentry or the prior OBRA assessment, whichever is more recent?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0. No - Antipsychotics were not received → Skip to C0100, Special Treatments, Procedures, and Programs</td>
</tr>
<tr>
<td></td>
<td>1. Yes - Antipsychotics were received on a routine basis only → Continue to N0450B, Has a GDR been attempted?</td>
</tr>
<tr>
<td></td>
<td>2. Yes - Antipsychotics were received on a PRN basis only → Continue to N0450B, Has a GDR been attempted?</td>
</tr>
<tr>
<td></td>
<td>3. Yes - Antipsychotics were received on a routine and PRN basis → Continue to N0450B, Has a GDR been attempted?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enter Code</th>
<th>B. Has a gradual dose reduction (GDR) been attempted?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0. No → Skip to N0450D, Physician documented GDR as clinically contraindicated</td>
</tr>
<tr>
<td></td>
<td>1. Yes → Continue to N0450C, Date of last attempted GDR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enter Code</th>
<th>C. Date of last attempted GDR:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Month - Day - Year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enter Code</th>
<th>D. Physician documented GDR as clinically contraindicated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0. No - GDR has not been documented by a physician as clinically contraindicated → Skip to C0100, Special Treatments, Procedures, and Programs</td>
</tr>
<tr>
<td></td>
<td>1. Yes - GDR has been documented by a physician as clinically contraindicated → Continue to N0450E, Date physician documented GDR as clinically contraindicated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enter Code</th>
<th>E. Date physician documented GDR as clinically contraindicated:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Month - Day - Year</td>
</tr>
</tbody>
</table>

Item Rationale

**Health-related Quality of Life**

- The use of unnecessary medications in long term care settings can have a profound effect on the resident’s quality of life.
- Antipsychotic medications are associated with increased risks for adverse outcomes that can affect health, safety, and quality of life.
N0450: Antipsychotic Medication Review (cont.)

- In addition to assuring that antipsychotic medications are being utilized to treat the resident’s condition, it is also important to assess the need to reduce these medications whenever possible.

**Planning for Care**

- Identify residents receiving antipsychotic medications to ensure that each resident is receiving the lowest possible dose to achieve the desired therapeutic effects.
- Monitor for appropriate clinical indications for continued use.
- Implement a system to ensure gradual dose reductions (GDR) are attempted at recommended intervals unless clinically contraindicated.

**Steps for Assessment**

1. Review the resident’s medication administration records to determine if the resident received an antipsychotic medication since admission/entry or reentry or the prior OBRA assessment, whichever is more recent.
2. If the resident received an antipsychotic medication, review the medical record to determine if a gradual dose reduction has been attempted.
3. If a gradual dose reduction was not attempted, review the medical record to determine if there is physician documentation that the GDR is clinically contraindicated.

**Coding Instructions for N0450A**

- **Code 0, no:** if antipsychotics were not received: Skip to O0100, Special Treatments, Procedures, and Programs.
- **Code 1, yes:** if antipsychotics were received on a routine basis only: Continue to N0450B, Has a GDR been attempted?
- **Code 2, yes:** if antipsychotics were received on a PRN basis only: Continue to N0450B, Has a GDR been attempted?
- **Code 3, yes:** if antipsychotics were received on a routine and PRN basis: Continue to N0450B, Has a GDR been attempted?

**Coding Instructions for N0450B**

- **Code 0, no:** if a GDR has not been attempted. Skip to N0450D, Physician documented GDR as clinically contraindicated.
- **Code 1, yes:** if a GDR has been attempted. Continue to N0450C, Date of last attempted GDR.

**Coding Instructions for N0450C**

- Enter the date of the last attempted Gradual Dose Reduction.
N0450: Antipsychotic Medication Review (cont.)

Coding Instructions for N0450D

- **Code 0, no:** if a GDR has not been documented by a physician as clinically contraindicated. Skip to O0100, Special Treatments, Procedures, and Programs.

- **Code 1, yes:** if a GDR has been documented by a physician as clinically contraindicated. Continue to N0450E, Date physician documented GDR as clinically contraindicated.

Coding Instructions for N0450E

- Enter date the physician documented GDR attempts as clinically contraindicated.

Coding Tips and Special Populations

- Any medication that has a pharmacological classification or therapeutic category as an antipsychotic medication must be recorded in this section, regardless of why the medication is being used.

- In this section, the term physician also includes physician assistant, nurse practitioner, or clinical nurse specialist.

- Do not include Gradual Dose Reductions that occurred prior to admission to the facility (e.g., GDRs attempted during the resident’s acute care stay prior to admission to the facility).

- Physician documentation indicating dose reduction attempts are clinically contraindicated must include the clinical rationale for why an attempted dose reduction is inadvisable. This decision should be based on the fact that tapering of the medication would not achieve the desired therapeutic effects and the current dose is necessary to maintain or improve the resident’s function, well-being, safety, and quality of life.

- Within the first year in which a resident is admitted on an antipsychotic medication or after the facility has initiated an antipsychotic medication, the facility must attempt a GDR in two separate quarters (with at least one month between the attempts), unless physician documentation is present in the medical record indicating a GDR is clinically contraindicated. After the first year, a GDR must be attempted at least annually, unless clinically contraindicated.

- Do not count an antipsychotic medication taper performed for the purpose of switching the resident from one antipsychotic medication to another as a GDR in this section.

- In cases where a resident is or was receiving multiple antipsychotic medications on a routine basis, and one medication was reduced or discontinued, record the date of the reduction attempt or discontinuation in N0450C, Date of last attempted GDR.

- If multiple dose reductions have been attempted since admission/entry or reentry or the prior OBRA assessment, record the date of the most recent reduction attempt in N0450C, Date of last attempted GDR.

- Federal requirements regarding GDRs are found at 42 CFR §483.45(d) Unnecessary drugs and 483.45(e) Psychotropic drugs.