

## 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 (subcutaneous, intramuscular or intradermal), insulin, and/or select medications were received by the resident.

### N0300: Injections

N0300. Injections	
Enter Days <input type="text"/>	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

### 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

- 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).
- 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).
- 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.

### 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 subcutaneous, intramuscular, or intradermal 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 (subcutaneous, intramuscular, or intradermal) while a resident of the nursing home.**
- Record the number of days that any type of injection (subcutaneous, intramuscular, or intradermal) was received in Item N0300.

## N0300: Injections (cont.)

### 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 B<sub>12</sub> 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 B<sub>12</sub> 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

N0350. Insulin	
Enter Days <input type="text"/>	A. Insulin injections - Record the number of days that insulin injections were received during the last 7 days or since admission/entry or reentry if less than 7 days
Enter Days <input type="text"/>	B. Orders for insulin - Record the number of days the physician (or authorized assistant or practitioner) changed the resident's insulin orders during the last 7 days or since admission/entry or reentry if less than 7 days

### 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.

## N0350: Insulin (cont.)

### 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.

### 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

N0410. Medications Received	
Indicate the number of DAYS the resident received the following medications during the last 7 days or since admission/entry or reentry if less than 7 days. Enter "0" if medication was not received by the resident during the last 7 days	
Enter Days <input type="text"/>	A. Antipsychotic
Enter Days <input type="text"/>	B. Antianxiety
Enter Days <input type="text"/>	C. Antidepressant
Enter Days <input type="text"/>	D. Hypnotic
Enter Days <input type="text"/>	E. Anticoagulant (warfarin, heparin, or low-molecular weight heparin)
Enter Days <input type="text"/>	F. Antibiotic
Enter Days <input type="text"/>	G. Diuretic

### 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.

## N0410: Medications Received (cont.)

### 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, 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).
- 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).

### 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.)

- 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).

## 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.
- 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).
- 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.
- 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.

### DEFINITION

**SLEEP HYGIENE**  
Practices, habits and environmental factors that promote and/or improve sleep patterns.

## N0410: Medications Received (cont.)

- 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.
- 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 <http://www.cms.gov/Manuals/IOM/list.asp>).
- 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.).

### DEFINITIONS

#### GRADUAL DOSE REDUCTION (GDR)

Step-wise tapering of a dose to determine whether or not symptoms, conditions, or risks can be managed by a lower dose or whether or not the dose or medication can be discontinued.

#### MEDICATION INTERACTION

The impact of medication or other substance (such as nutritional supplements including herbal products, food, or substances used in diagnostic studies) upon another medication. The interactions may alter absorption, distribution, metabolism, or elimination. These interactions may decrease the effectiveness of the medication or increase the potential for adverse consequences.



## N0410: Medications Received (cont.)

- 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, duration of use, and stability of monitoring 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 <http://www.cms.gov/Manuals/IOM/list.asp>]), 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.
- 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. 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/>.

### 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.)

Additional information on psychoactive medications can be found in the **Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)** (or subsequent editions) (<http://www.psychiatry.org/practice/dsm>), and the **State Operations Manual, Appendix PP, Guidance to Surveyors for Long Term Care Facilities** [the **State Operations Manual** can be found at (<http://www.cms.gov/Manuals/IOM/list.asp>)].

Additional information on medications can be found in:

The Orange Book, <http://www.accessdata.fda.gov/scripts/cder/ob/>

The National Drug Code Directory,  
<http://www.fda.gov/drugs/informationondrugs/ucm142438.htm>