Quality Is No Accident

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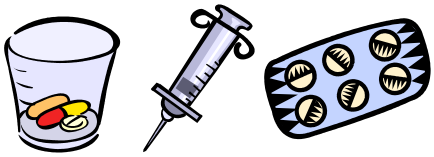

Medication Occurrences

• Risk Assessment • Prevention Strategies • Patterns

DID YOU KNOW?

The rate of errors in DDS community programs (called medication occurrences or MORs) is substantially lower than other acute care, long term care or transitional settings.

Most MORs involve 'wrong time' errors, many of which were omissions (missed doses).

People with greater assistance needs (e.g. personal hygiene, eating) are at higher risk of experiencing multiple MORs across a year.

People on medications with narrow therapeutic ranges or frequent dose changes (e.g. warfarin, sliding-scale insulin) are more likely to experience an MOR.

Older people are more likely to experience an MOR, but are less likely to experience multiple events.

Overview

The administration of medications to individuals in DDS homes who are not capable of self-administration is an important component of the work of MAP certified direct support professionals. Medication administration is an important safeguard for the individuals DDS supports. While medication occurrence rates are low, we want to take every possible step to assure the health and safety of those we support. Medication administration is a multi-step process and the consequences of a mistake in any step can be very serious. Understanding factors that are linked to errors can inform and target efforts to minimize this risk and prevent medication occurrences (MORs) or errors where possible.

What is a medication occurrence/error?

An event that results from a breach of one of the five "R's", namely right individual, right medication, right time, right dose and right route. There are five types of reportable occurrences - -"the five wrongs" are listed on the Medication Occurrence Reporting form: wrong individual, wrong medication (which includes administering a medication without an order), wrong time (which includes a forgotten dose), wrong dose and wrong route.

--DCP MAP Policy Manual Sept 2009

How can medication errors be avoided?

Medication errors can occur despite policies, procedures, protocols, and systems implemented as part of the structured Medication Administration Program (MAP). However, some of these errors are preventable. Understanding factors that contribute to medication errors is the first step toward preventing them. Approaching medication administration as a consistent, organized system can help staff to prevent errors and learn about system weaknesses if errors do occur.

Quality Is No Accident was developed by the Center for Developmental Disabilities Evaluation and Research (CDDER) of the E.K. Shriver Center/University of Massachusetts Medical School in collaboration with the Massachusetts DDS

Tips for Preventing Medication Administration Errors

- **Minimize distractions.** This is a common source of errors! Set up "reminder" systems at your program so that distractions and changes in schedules do not result in missed medications. For example, an alarm that rings at medication times can be an effective reminder for staff. Staff can also use a buddy system to remind each other when it's time to give medications.
- **Avoid rote practices.** Change the order in which you administer medications in order to avoid the error trap of routine practices affecting "mindfulness".
- **Pay special attention to look-alike and sound-alike medications to prevent confusion.** Take a look at all the medications administered to the people you serve. Do some of the medications look or sound alike? Could these similarities lead to errors? If so, use distinctive marks or color-coding to help distinguish look-alike or sound-alike medications.
- **Encourage staff to ask questions about discrepancies before administering the medication**. If something doesn't look right or match across records, investigate before giving the medication to the person.
- **Pay attention to the fatigue factor.** Fatigue can really affect a person's ability to concentrate therefore, whenever possible, staff working overtime should not administer medications.
- **Check for consistency.** Staff must compare the physician orders to the Medication Administration Record (MAR) and pharmacy label before administering the medication. Taking the time to complete this task can make all the difference in preventing an occurrence. Give staff enough time and a quiet place to complete these safety checks.
- **Don't run out!** Set up a system so that medications are reordered when the program is down to a 7 day supply. Ensure staff know who can order them, where to order them and who to notify if they are not delivered. Make sure there is coverage for people on vacation if they usually order refills or new medications.
- **Try to group medication administration times where possible.** If a group of people in a program need medications at about the same time or frequency, consider coordinating regular medication administration times. This way, medication administrations are not scattered throughout the day for different people.
- **Think of medication administration as a system, not individual doses.** Having a consistent, organized system of medication administration can help prevent errors. If an error does occur, use it to learn about where the system may have failed and how the system can be improved to prevent future errors. Consider a refresher in training for both staff and people who self-medicate.

Role of MAP Consultants

Providers employ or contract with MAP consultants who must be either a registered nurse, registered pharmacist or licensed practitioner.

Providers are required to contact their MAP consultant for every medication occurrence. They must also contact their MAP consultant with any question or concern they may have regarding a medication administration.

Supporting Self-administration of Medications

Self-administration of medication is an important option that helps support people while promoting their independence. However, recent data shows that people who participate in their own medication administration have at least 4 times the risk of experiencing a medication error compared to other consumers.

Tips to support people who administer their own medications to minimize errors:

- Conduct a thorough assessment to determine whether the person is capable of administering their own medications. Complete a written plan for all self-medicating individuals detailing needed supports, oversight required and the plan to follow if the individual becomes unable to safely self-medicate for some reason. The review of a person's ability to continue to self-administer medications should occur at regular intervals.
- Offer tools that allow the person to track their own doses, such as a daily calendar or check-off sheet
- To prevent missed doses, a watch with alarms or other assistive technology can provide helpful reminders
- Encourage people to use med boxes to separate doses. This may be particularly helpful for people on multiple medications, or who take medication multiple times per day.
- If mistakes are observed, assist the person to identify patterns if they exist. For example, is it challenging to take an afternoon dose at the right time due to varied daily activities? Do two pills look similar? Support the person to understand the reason for their mistake and understand how to prevent it in the future.
- Ongoing or repeat self-administration assessments can assure the continued safety of this practice or identify if someone is no longer able to self-administer their medications.

Medication Occurrences in 2009

Real Data from MORs reported through HCSIS to DDS in FY'09

Relatively Few Errors

In 2009 over 105,000 doses of medication were dispensed per day in DDS community settings to which the MAP applies, translating to almost 40 million doses annually.

In FY'09, 4,539 MORs were reported in the DDS MOR system. The resultant error rate is about **0.11 errors per 1,000 doses, or 0.01% of all doses result in error**.

Compared to other more acute or transitional settings (i.e. hospitals, nursing homes), **the rate of medication occurrences for DDS consumers in the community is substantially lower.**

What type of errors occur?

About three-quarters of the MORs were wrong time or medication omissions. Wrong Dose errors accounted for about 20% of MORs, wrong medication and wrong person MORs were less common at 2-3% each. 44 incidents resulted in medical intervention, (defined as a visit to a health care provider or ER, lab work, vital signs or hospitalization), 11 in illness, and 1 in injury.

Contributing Factors

In some MORs, staff were able to identify contributing factors. 18% of MORs cited the medication not being available. 8% involved documentation errors, and 3% involved a failure to accurately record or transcribe the medication order.

Analysis of Medication Occurrences FY'09

In a separate analysis, MORs were reviewed to identify risk factors for individuals living in supported community programs to which the MAP applies and who are on one or more medication. In FY'09 70% of consumers did not experience an MOR in FY'09. 16% experienced one MOR, and 13% experienced two or more during the year.

What type of consumers are likely to have medication occurrences?

The group that was most likely to experience a medication error was individuals who participate in their own medication administration at least part of the time (self-administration). People who self-administer were estimated to be over 4 times more likely to experience one or more MOR's over the course of the year.

Factors Increasing Risk

People with the following characteristics are at a higher risk of experiencing one or more MORs:

- An inability to communicate with others
- participation in their own medication administration, at least part of the time (self-administration)

People with the following characteristics were associated with higher risk of multiple MORs:

- presence of a behavior plan (at a residential and/or day program)
- being on warfarin (*blood thinner with frequent dose changes and a narrow therapeutic window*)
- the need for assistance with personal hygiene
- the need for assistance with eating,
- diabetes (any type)
- a current diagnosis of cancer
- allergies to one or more types of medication

Factors Lowering Risk

People with the following characteristics were associated with a lower number of MORs *(i.e. people who experience one MOR are less likely experience another during the year):*

- the involvement of a guardian
- communication through gestures
- a normal response to medical exams
- the presence of nursing supports at the program who coordinate healthcare

Some characteristics showed more complex patterns:

- Age: Older people are more likely to experience an MOR, but are less likely to experience multiple MORs in a year.
- Epilepsy: People with epilepsy appear to overall have a lower risk of experiencing an MOR than people without epilepsy, but those that do experience an MOR are more likely to have multiple MORs in a year. This may be because people with well-managed epilepsy tend to be on consistent long-term doses of anti-epileptics that lower the risk for error. In contrast, people with epilepsy that is not well-managed may have frequent changes in antiepileptic medications that increase the risk for error.

Analyses conducted by:
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