Grane Rx
PHARMACY MADE SIMPLE

Transmission Risks
in Medication Administration

4-Part Series from Grane Rx

OVERVIEW

Raising the Bar on Medication Administration

Limiting exposure to communicable diseases like COVID-19 is the best protection and defense. The current pandemic underscores the critical nature of everything we do in the pharmacy.

At Grane Rx, the rigorous safety protocols in place paired with the use of advanced technologies and automation have proven highly effective in reducing transmission of the Coronavirus and other deadly pathogens when filling and administering medications. Here's how...

Points of Transmission

There are four primary points of contact where transmission can occur. Recognizing these vulnerabilities is the first step in mitigation, followed by proactive best practices. Here is a breakdown of the risk factors and Grane Rx solution set.

PART I: PACKAGING

PART II: STORAGE

PART III: ADMINISTRATION

PART IV: MEDICATION REGIMEN

PART I: PACKAGING: HIGH VS. LOW RISK

Packaging makes a big difference when it comes to transmission. The type of packaging used determines the number of times it needs to be handled. There are two predominant types of packaging: punch cards and pouch packs. Here is a look out how each fairs when it comes to transmission potential.

Risk Factor HIGH: Punch Cards

Punch cards—also referred to as blister or bingo cards—are a high-touch packaging system. Nurses and caregivers have to handle them each and every time they administer medications to a resident or participant, typically multiple times a day. Each pill that needs to be "punched-out" requires touching the packaging, thereby increasing the chances of transmission. The very nature of the punch card, while useful for "pill counting", creates a scenario where cards are handled frequently by multiple individuals up to dozens of times a day.

104 Touches a Day

It's not uncommon for a resident to have as many as 13 daily medications that need to be taken twice a day. This scenario requires a nurse to touch each card a minimum of 52 times PER medication pass (flipping through, pulling out, punching out and returning each card to the medication cart). At two medication passes a day, that's a minimum of 104 touches in a single day. This number increases exponentially if a card is missing, misfiled or dropped on the floor.

Nurses also come into regular contact with punch cards (even those they don't need), when rifling through crowded medication carts to find a particular card they are looking for. Not only is this filing system cumbersome, but it adds additional unnecessary touches to medication packaging.

The punch card system dramatically adds to transmission potential in both SNF and PACE environments.

Risk Factor LOW: Pouch Packs

Medication pouch packs, on the other hand, require the least number of touches per day. Grane Rx SimplePack pouches are "touch and toss". Each participant or residents' medication regimen comes in a neatly organized roll of multi-dose packs separated by day and time of dose. All medication rolls are created in the pharmacy using automation, thus eliminating any touches during assembly.

Once medication leaves the pharmacy, the SimplePack system reduces the number of touches by consolidating medications in single pouches as part of a sequential roll of tear-off pouches. Each pouch necessitates a single touch and then is immediately disposed of. The Grane Rx SimplePack solution significantly mitigates risk and saves measurable amounts of time on administration.

SimplePacks in the Nursing Home

Grane Rx delivers its SimplePacks to nursing homes in single rolls transported in disposable totes. **This system reduces the number of required touches to as little as two.** A nurse handles the roll of SimplePacks a single time to separate them by resident, placing each resident's regimen in its respective, individual bin. The only other touch that occurs is during administration itself. The packaging is then immediately disposed of via Grane Rx's "touch and toss" system.

Grane Rx's SimplePack barcode printing capability is an added benefit and transmission mitigator. For SNF's equipped with a barcode scanner, Grane Rx can produce barcodes compatible with the facility's EHR system. This enables quick, easy and contactless medication verification for accuracy and documentation.

SimplePacks in PACE

PACE home delivery through Grane Rx's **Meds2Home** program takes medication administration out of the center and directly into the home. This contactless delivery method eliminates virtually all touches with a participant's medications.

In this scenario, participants are either self-administering their medications that arrive in personalized **Meds2Home** boxes, or a single caregiver in the home is administering their meds via the SimplePack roll system. The caregiver is typically someone the participant either already lives with or is in regular contact with via daily care. In either case, external influences and potential for transmission are reduced.

PART II: HANDS-OFF MEDICATION STORAGE SOLUTIONS

When storing prescription medications, it's not the storage itself that's problematic for transmission, it's how the medications are stored and accessed that makes the difference. Minimal touch storage solutions are optimal for reducing transmission.

Storage and packaging are closely related. In Part I of this series we compared punch card packaging to pouch pack packaging. Grane Rx SimplePacks are ideal for reducing points of transmission. Here we explore the role of medication storage in transmission.

Storage Transmission Considerations

- **Filing** - a finely tuned organizational system saves time and touches.
- **Accessibility** - medications need to be easily accessible without compromising security or safety and must be considered a potential for transmission.
- **Environmentals Controls** - the storage environment needs to support shelf stability accounting for medication sensitivities to light, air, moisture and temperature.
- **Transmission Reduction** - unnecessary handling of medications and medication packaging should be avoided.

Risk Factor HIGH: Punch Card Storage

Medication carts became popular in the early 2000's to address a number of medication storage and administration challenges in nursing homes and medical facilities, namely security, safety, and mobility. In the wake of COVID-19, transmission prevention has joined the mix and understandably become a top priority. While medication carts are convenient for accessing medications, what and how you store medications within the cart increase transmission potential.

Punch cards were the original go-to companion for the medication cart. We've since discovered the drawbacks of this pairing system in both transmission and time consumption.

Punch card filing forces nurses into a multi-touch process. The more a nurse has to handle medication packaging within the cart, the more opportunities to inadvertently introduce unwanted pathogens. Not to mention the wasted time that comes from "leafing through" dozens of punch cards.

Risk Factor LOW: Pouch Pack Storage for Skilled Nursing

SimplePacks on the other hand, are a multi-dose pouch packaging system produced by Grane Rx that solve this problem by providing patient medications in **pre-packaged rolls assembled via "no-touch" automation in the pharmacy**. The packaged rolls are then stored in **individual patient bins** within the medication cart. Storing rolls of medications eliminates the need for a nurse to rifle through the cart and unnecessarily touch anything other than what the nurse actually needs.

Grane Rx's SimplePack and bin solution significantly reduces transmission potential and provides organized, easy to access and secure medication storage.

LOWEST Risk Factor: SimplePack Storage for PACE

PACE centers have traditionally faced the same storage and transmission challenges as nursing facilities. That is until Grane Rx introduced the **Meds2Home** program.

Meds2Home significantly reduces the need for center medication administration and virtually eliminates the need for any onsite storage of participant medications.

Instead, participant medications are packaged in multi-dose pouch packs—SimplePacks—at Grane Rx's offsite pharmacy and shipped securely and directly in personalized **Meds2Home** boxes to the participant's home with a contactless delivery protocol.

With **Meds2Home**, nearly all external handling of participant medications is eliminated.

In a post-pandemic world, **Meds2Home** provides an optimal transmission mitigation solution with the added benefits of convenience, increased adherence and accuracy.

Emergency Kit Storage Transmission Considerations

Risk Factor LOW: Electronic Medication Cabinets for SNF & PACE

Prescription changes and unanticipated medication needs require both SNF and PACE centers to store an inventory of medications onsite in case of emergency. This emergency supply requires the same storage and transmission considerations as any other medication storage. Grane Rx's SimpleAccess electronic medication cabinets safely store and manage medications at point of care providing nurses with quick and easy access to single unit doses of packaged medications.

To reduce transmission and ensure the safe storage of emergency medications, Grane Rx's SimpleAccess cabinets have multiple enhanced safety features including automated inventory management, formulary flexibility, remote temperature management, unique drawers for high-risk medications and controlled substances, barcode scanning capabilities and more.

PART III: LIMIT TRANSMISSION IN MEDICATION ADMINISTRATION

The recent pandemic has given us cause to reexamine medication administration in disease transmission and assess how we can mitigate potential risks in both clinical and non-clinical settings.

Nurses and caregivers play an important role in disease transmission prevention. By implementing best practices and taking proactive measures, they can have a significant impact on limiting the spread of disease during medication administration.

Physical distancing is one of the most effective ways to prevent disease transmission. However, this strategy is often not realistic or feasible in the senior care environment. Healthcare workers must continue providing resident and participant care, pandemic or not, to ensure their charges are receiving the medications they need, when they need them.

While we can't eliminate contact in senior care altogether, nor would we advise it due to the health benefits of human connections, we can limit contact for safety purposes. Reducing the frequency of medication administrations is an effective way to limit the spread of disease.

Strategies for Skilled Nursing Facilities to Reduce Transmission in Medication Administration

Consider Medication Formulations

- Analyze resident medication regimens to identify opportunities to optimize medication administration. For medications that are scheduled multiple times a day, consider switching to a long-acting formulation or another agent that can be given less frequently. If there are multiple individual medications being given, determine if there may be a combination product available to reduce the total number of medications and pills being administered.

Adopt Flexible Administration Schedules

- For medications that do not require administration at specific times, consider switching to a flexible or universal medication schedule. This includes evaluating medications that can safely be given at the same time in order to reduce outlier medication administration times. This strategy will help minimize the total number of administration times per day, allow more flexibility for the nursing staff to consolidate administrations, and generally provide a more patient-friendly experience.

- The overall goal is to eliminate multiple medication administrations in close time proximity to one another other by consolidating. This effectively eliminates unnecessary touch points and can contribute to transmission reduction.

Reduce Transmission Potential by nearly 70%

- ***Scenario:*** *A resident has three medication orders - one for evening, one for bedtime and every 12 hours. As long as there are no contraindications or restrictions, these medications can be given "in the evening" at the same time. This effectively reduces the number of medication passes from three to one and transmission potential by 2/3rds.*

De-prescribe Medications

- Regularly evaluate medication regimens for potentially unnecessary medications. One common culprit is medications that were previously prescribed but are no longer needed or no longer align with care goals. The goal of de-prescribing is to reduce the number of medications in a resident's regimen, in turn reducing the number and frequency of administrations. Eliminating unnecessary medications has the added benefit of minimizing medication interactions and potentially dangerous adverse effects.

Meds2Home Takes PACE Medication Administration out of the Center and into the Home

Grane Rx's **Meds2Home** program provides the optimal solution for transmission reduction. All participant medications are packed at a Grane Rx off-site pharmacy using no-contact automation and then shipped directly to participant homes. This contactless delivery method eliminates virtually all touches with a participant's medications. From there, a participant is either self-administering their medications, or a single caregiver in the home is administering them. All medications come in pre-sorted, multi-dose packs in order of administration time further reducing unnecessary touches by the participant or caregiver.

Typically, the caregiver is someone the participant already lives with or is in regular contact with via daily care. In either case, external influences and potential for transmission are significantly reduced.

By adopting the above medication administration strategies for skilled nursing facilities and implementing the **Meds2Home** program for PACE, we can significantly reduce transmission of diseases and streamline how medications are administered.

PART IV: DE-PRESCRIBING TO REDUCE TRANSMISSION

When it comes to medication regimens, less is actually more in reducing transmission. The fewer number of medications that need to be administered, the fewer opportunities for potential disease transmission to residents and participants. This is where de-prescribing can be beneficial.

What is De-prescribing?

De-prescribing is the active process of optimizing a person's medication list to remove medications that are no longer beneficial or could be causing harm. De-prescribing is part of good prescribing – backing off when doses are too high, or stopping medications that are no longer needed.

Medication Accumulation

The number of medications that a person is prescribed can accumulate in different ways over time. On-going de-prescribing considerations should be a part of any comprehensive medication management program. Monitoring and regular evaluations help ensure that residents and participants are only taking the medications they truly need at any given time.

There are many benefits to de-prescribing both clinically and for health and wellbeing. The recent pandemic underscores one of the primary benefits—the effectiveness of de-prescribing in limiting disease transmission in medication administration.

Considerations for de-prescribing

- Goals of care
- Limiting the potential for adverse medication events
- Reducing pill burden
- Reducing nursing time needed for medication management
- Improving participant experience
- Improving clinical and financial outcomes

De-prescribing is a collaborative and progressive process with notable benefits.

How to Safely De-prescribe

1. Establish a Process

- Create an interdisciplinary team to determine the who, what, why, when and how that will work best for your organization.

2. Identify Your Target Population

- Those individuals with...
  - A high number of medications.
  - Prescribed specific target medications.
  - Changing quality of life considerations or care goals.

3. Identify Medication Focal Points

- Medications with the potential to be discontinued (permanently or temporarily) or re-formulated.
  - Include vitamins, supplements, herbal products or long term preventative medications.
  - Evaluate medications with no clear diagnosis or indication for use.
  - Potential utilization of long acting or combination formulations.
- Medications with specific or highly involved monitoring parameters.
  - Blood glucose monitoring orders, heart rate or blood pressure parameters.
  - Frequency of laboratory monitoring orders (i.e. – INR, CBC, LFT, etc.)
- Re-alignment of medication administration times.
- Overall goal is reduction of the number of medications, number of pills to be administered and/or number of defined administrations per day.

4. Create Awareness & Collaboration

- Actively involve participants, residents, caregivers, pharmacists and providers in the process.
- The participant/resident and their care goals are your focal points. Explain all plans and changes thoroughly to all involved parties.

5. Establish Specific Timelines and Rigorous Monitoring Protocols

- While some changes can be done immediately, others may require more in depth planning, titrations or a step-wise approach.
- Participant/resident monitoring and follow-up are essential for safe de-prescribing.

6. Continually Evaluate Opportunities to Deprescribe

- De-prescribing is a progressive and on-going process which should be continuously evaluated.
- Collaboratively create a step-wise approach with defined time lines to promote on-going commitment to the process.

De-prescribing Reduces Transmission Leading to More Positive Outcomes

Clinical Benefits Identified

- Reduced risk for adverse effects, medication interactions, falls and resulting hospitalizations.
- Improved participant adherence.
- Improved fiscal management.
- Fewer medication administration intersections reducing potential for transmission.

Participant & Resident Benefits

- Minimized exposure to and transmission of potentially harmful pathogens.
- Reduced medication intake and pill burden.
- Optimized medication regimen to support quality of life.

Every opportunity to reduce transmission risk in aging adults is a good one, pandemic or not. When done right, de-prescribing can help reduce exposure and lead to improved overall patient health.

This concludes Grane Rx's 4-Part series on how to identify and mitigate transmission risks in medication administration.

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