Medication Management Quick Path
Overview

Although medication error rates at 5% or greater and/or significant medication errors are frequent deficiency citations, neither F332 nor F333 appeared among the top ten citations nationally during FY 2016. (Beginning November 28, 2017, F332 becomes F759 and F333 becomes F760.) Both F tags can initiate an extended survey process and can be cited at a substandard quality of care (SQC).

Nurses are the last step in the medication administration process and are the most important link to ensure residents are safely given medications while in a nursing facility. Not only are nurses responsible for reviewing orders and for assessing residents before giving medications, but they often have to do quick dosage calculations at the bedside while juggling a barcode scanner and an electronic healthcare record system.

In long-term care facilities, licensed nurses can spend 50% or more of a shift's allotted hours administering medications. There are no federal nurse to resident staffing ratios. Where state-specific nurse staffing requirements do exist, they are minimum levels. In practice, nurse staffing can vary by shift, by unit size, and by resident care complexities; *e.g.,* treatments, services, frequency of physician rounds, *etc*. Staffing changes sometimes do not keep up in response to census changes or acuity changes, and most nursing facilities lack any standardized parameters for staffing changes.

Polypharmacy is an on-going challenge in nursing facilities. Long stay residents often have multiple chronic conditions, each managed with multiple medications. Short stay residents often resemble the hospital medical/surgical patients or step-down critical care unit patients seen in previous decades.

The very specific process of medication administration – matching orders to dispensed medication and identifying the right dose, person, time, route, *etc.* – has been drilled into a nurse's head in nursing school and clinical rotations. Nurses know how to do "it" right. When especially busy shifts, endless interruptions, fatigue, and stress seem to become the norm, shortcuts can begin to take root in every day medication administration. Examples of shortcuts include:

➢ Relying on memory from earlier in the day or the previous shift for some steps.
➢ Stopping in the middle of the process to answer an alarm and then rather than restarting the process, picking up where we think we left off.
➢ Trusting the pharmacy sent the right dose/medication.
➢ Gauging timing as "close enough" and may be the only opportunity.
➢ A scanner isn't working or someone else has it.

The flexible medication administration times of person-centered care have helped to reduce the pressure associated with traditional 2-hour time blocks. Drug regimen reviews, gradual dosage reductions of psychoactive medications, and antibiotic stewardship programs have not only helped nursing facilities better manage each resident's care but have also reduced the overall number of medications to be administered. Barcode scanners and computerization of order entry, of Medication Administration Records (MARs), and of response documentation have certainly assisted with efficiency.

Many areas of the United States have been and are facing significant licensed nurse shortages. In response, several states have implemented medication aide certification programs whereby licensed nurses delegate some tasks associated with medication administration.

The practice of nursing under a professional license is a privilege. The nurse must understand that this responsibility includes accountability for one's actions and judgements during the execution of professional duties. An understanding of the nurse practice act and the rules and regulations established by the state boards of nursing for the various levels of entry -- practical nurse, registered nurse, and nurse practitioner -- is a solid foundation for beginning practice. Many state boards have developed specific guidelines for registered nurses to use when delegating medication duties to assistive personnel.

Standards of care are guidelines developed for the practice of nursing. These guidelines are defined by the nurse practice act of each state, by state and federal laws regulating health care facilities, by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and by professional organizations such as the American Nurses Association (ANA), and other specialty nursing organizations.

Nurses must also be familiar with the established policies developed by the nursing facility. Such policies may be more stringent than the minimum standards of federal or state regulatory authorities. Employment within the nursing facility implies the willingness of the nurse to adhere to established standards and to work within established guidelines to make necessary changes in the standards.

Examples of facility-based policy statements relating to medication administration include the following:
  ➢ Educational requirements of professionals and non-professionals authorized to administer medications.
    Many nursing facilities require passage of a written test to confirm the knowledge and skills needed for medication calculation, preparation, and administration before granting approval to administer any medications.
    Many facilities require upon hire and annual medication pass competency observations.
  ➢ Approved lists of intravenous solutions and medications that the nurse can start or add to an existing infusion.
  ➢ Lists of restricted medications (*e.g.,* antineoplastic agents, allergy extracts, lidocaine, and heparin) that may be administered only by certain staff members.
  ➢ Lists of abbreviations that are not to be used in documentation to avoid medication errors.

Before administering any medication, the nurse must have a current license to practice, a clear policy statement that authorizes the act, and a medication order signed by a practitioner licensed with prescriptive privileges. The nurse must understand the individual resident's diagnosis and symptoms that correlate with the rationale for drug use. The nurse should also know why a medication is ordered, the expected actions, usual dosing, proper dilution, route and rate of administration, minor side effects to expect, adverse effects to report, and contraindications for the use of a particular drug. If drugs are to be administered using the same syringe or at the same intravenous (IV) site, drug compatibility should be confirmed before administrations.

If unsure of any of these key medication points, the nurse must consult an authoritative resource or the pharmacist before administering a medication. The nurse must be accurate in calculating, preparing, and administering medications. The nurse must assess the resident to be certain that therapeutic and

adverse effects associated with the medication regimen are reported. Nurses must be able to collect resident data at regularly scheduled intervals and record observations in the resident's chart for evaluating a treatment's effectiveness. Claiming unfamiliarity with any of these nursing responsibilities, when an avoidable complication arises, is unacceptable; in fact, it can be considered negligence of nursing responsibility.

Nurses must take an active role in educating the resident, family, and significant others in preparation for discharge from the nursing facility. Specific teaching goals should be developed and implemented. Nursing observations and progress toward mastery of skills should be charted to document the learner's degree of understanding.

Here are some relevant definitions from national and international agencies:

➢ **Medication Error:** A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. (Source: National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP))

➢ **Harm:** Impairment of the physical, emotional, or psychological function or structure of the body and pain or injury resulting therefrom. (NCC MERP)

➢ **Adverse Drug Event (ADE):** An injury resulting from medical intervention related to a drug. (Source: Institute of Medicine (IOM))

➢ **Adverse Drug Reaction (ADR):** Any response to a drug which is noxious and unintended which occurs at doses normally used in man for prophylaxis, diagnosis, or therapy of disease, or for the modifications of physiological function. (Source: World Health Organization (WHO))

Those of us who work in long-term care facilities, however, must be particularly attentive to the definitions adopted by the Centers for Medicare and Medicaid Services in the Interpretive Guidelines of the State Operations Manual. A thorough discussion of these definitions as well as the actual survey task are included in the **Leadership Tips and Strategies (Administration** section) and **Audit** sections of this QuickPath.

Medication Management Quick Path
Leadership Tips and Strategies

If the only goal is to avoid a survey citation for F759 (Medication error rates are not 5% or greater) or F760 (Residents are free of any significant medication errors) during the annual survey, the strategies are somewhat straight forward.

Prior to the annual survey:

➢ Share the actual survey form (CMS-20056) with the licensed and non-licensed staff who pass medications.
➢ Prepare nurses and non-licensed staff who pass medications for being observed using the same tools and techniques as the surveyors. This can be done by facility management nurses, regional or corporate nurses, pharmacy staff, or outside consultants.

At the time of annual survey, many nursing facilities employ the following measures:

➢ Identify the strongest; *i.e.,* most accurate and least intimidated by being watched by a surveyor, licensed or unlicensed staff members to perform the medication passes being watched by the surveyor.
➢ Assign staff members who know the residents and their medication regimens rather than float/PRN staff, administrative nurses, or agency nurses to conduct medication passes when being watched by the surveyor.
➢ Assign facility management nurses to observe the surveyors observing the staff members administering medications.
➢ Assign facility management nurses to audit all orders, medication administration records, and medication carts/storage for accuracy/availability each day (each shift) of the survey until the Medication Administration task is complete.
➢ Assign facility management nurses to coach specific nurses regarding nasogastric tube medication administration; injection practices and sharps safety (especially insulins); topical, ophthalmic, and inhalation medication administration prior to surveyor observation.

If survey citations do occur, the plan of correction format stresses the need to identify the systemic approaches the nursing facility will put in place to prevent the reoccurrence of the deficient practice. Often the plan of correction's systemic response is focused rather narrowly. This can be due to the limited time frame to correct the deficiency and/or the advice from risk managers or attorneys to avoid creating a plan that is too broad and thus potentially exposes the nursing facility to delayed substantial compliance or additional citations.

The medication management system is complex. Identifying the root cause(s) associated with either survey-identified errors or facility-identified errors can make the process much easier. The 5 key processes in nursing facility medication management systems are:

➢ Prescribing
➢ Documenting (Transcribing)
➢ Dispensing

➢ Administering
➢ Monitoring

Let's look at each step.

Prescribing

A complete medication order must include all of the following components:

➢ The right patient
➢ The right drug
➢ The right route
➢ The right time
➢ The right dose
➢ Abbreviations allowed from an acceptable abbreviation list only

Questions about any component of the medication order are referred back to the provider prior to fulfilling the order.

Prescribing a medication in a long-term care setting involves multiple steps and multiple members of the health care team. Physicians, nurses, nursing assistants, pharmacists, and family members all play a role in the prescription process. Steps of the prescription process include:

➢ Recognition of the problem
➢ Initial evaluation of the person
➢ Review of the history
➢ Identification of the need for treatment
➢ Selection of appropriate medication or modification of existing regimen
➢ Writing of the prescription

Certain classes of drugs have been associated with preventable adverse drug events in nursing facilities. They include:

➢ Anticoagulants, parenteral and oral
➢ Chemotherapeutic agents
➢ Hypoglycemics
➢ Insulins
➢ Parenteral nutrition preparations
➢ Opioids

Of these drugs, warfarin has been most frequently cited as problematic. Special attention to high-alert medications during all stages of the medication use process may help to reduce the rate of errors related to high-alert medications.

Checklist for Assessing Medication Use Process: Prescribing

		Yes	No	Person Responsible	Comments
1	Guidelines for components of the history and physical that the nurse needs to complete prior to calling the practitioner?				
2	Recommendations that the indication for treatment be included in the original medication order?				
3	A list of acceptable abbreviations and look-alike, sound-alike drugs that is easily accessible?				
4	Standards for legible handwriting?				
5	Access to list of high-alert medications?				
If any of the above elements are missing, choose one element to focus your quality improvement efforts first. http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf					

The Institute for Safe Medication Practices (ISMP) has free, downloadable tools that can be made available to prescribers and nurses:

- ➢ ISMP List of High-Alert Medications in Long-Term Care (LTC) Settings
  https://www.ismp.org/Tools/LTC-High-Alert-List.pdf
- ➢ Oral Dosage Forms That Should Not Be Crushed 2016
  http://www.ismp.org/tools/DoNotCrush.pdf
- ➢ ISMP's List of Error-Prone Abbreviations, Symbols, and Dose Designations
  http://www.ismp.org/tools/errorproneabbreviations.pdf
- ➢ ISMP Guidelines for Optimizing Safe Subcutaneous Insulin Use in Adults 2017
  http://www.ismp.org/tools/guidelines/Insulin-Guideline.pdf
- ➢ ISMP Safe Practice Guidelines for Adult IV Push Medications
  http://www.ismp.org/tools/guidelines/IVSummitPush/IVPushMedGuidelines.pdf
- ➢ ISMP's List of Confused Drug Names
  https://www.ismp.org/Tools/confuseddrugnames.pdf
- ➢ ISMP Medication Safety Self-Assessment for Antithrombotic Therapy
  https://www.ismp.org/selfassessments/Antithrombotic/2017/2017_ISMP_Antithrombotic_Self_Assessment.pdf

The Joint Commission (JCAHO) "Do Not Use" List of Abbreviations can be found here:
https://www.jointcommission.org/facts_about_do_not_use_list/

Beers Criteria, a list of potentially inappropriate medications used in older adults, were updated by the American Geriatrics Society in 2015. The article can be downloaded here:
http://onlinelibrary.wiley.com/doi/10.1111/jgs.13702/full

Improving communication strategies within nursing facilities and between nurses and physicians or physician extenders can help in obtaining early and accurate treatment for acute changes in condition. The INTERACT[TM] Quality Improvement Program incorporates evidenced based best practice tools such as "Stop and Watch," SBAR, and Care Paths to assist with identification, evaluation, and communication of condition changes. Free downloaded resources are located here: http://www.pathway-interact.com

Controlled substances (Schedules I – V) are also high-risk medications for errors, theft, or loss. Federal and state laws/regulations closely govern each phase of the medication system. Note the following resources for further information:

- Guidance for practicing clinicians
  http://www.tmda.org/sites/default/files/Tip+Sheet+on+Prescribing+CS+in+LTC.pdf
- Guidance for state statutes
  http://www.namsdl.org/library/A6E61ABB-F923-A510-F44FA458B898567B/
- Drug Enforcement Administration (DEA) Disposal Act
  https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_ltcf.pdf
- Controlled Substances -Quick Reference
  https://www.dhs.wisconsin.gov/publications/p01807.pdf

Documenting (Transcribing)

Transcription, or writing out, of a medication order can be done by a physician or physician extender who can write the order directly into the chart or by a nurse who transcribes an order into the chart after receiving a verbal order from a physician or physician extender. In both cases, the medication order must then be transcribed onto the medication administration record (MAR) and then onto a pharmacy order sheet or communication sheet. Even under the best circumstances, a medication order will be transcribed at least twice and sometimes many more times than that. Attention to accurate spelling, legible handwriting, use of appropriate abbreviations, and good communication skills are all aspects of transcribing a medication order. Specific features of the transcribing process include:

- ➢ Verbal orders
- ➢ Illegible handwriting and noisy work environment
- ➢ Monthly editing process
- ➢ Transmission of medication order onto the MAR
- ➢ Transmission of medication order to the pharmacy
- ➢ Computerized physician order entry

Medication orders may be written by hand, entered directly into a computer system, or given verbally (verbal orders given face-to-face or over the telephone). Regardless of the method used, the medication order must be correctly transcribed onto the telephone order sheet and/or onto the physician's order sheet, transmitted to the pharmacy, and then transcribed onto the medication administration record (MAR). Errors can occur at each stage of this process.

Steps to reduce transcription errors include:

- ➢ The use of verbal orders should be limited to circumstances when direct written or electronic communication is not possible.
- ➢ The verbal order should be "read back" by the nurse receiving the order. The read back should be verbatim to the ordering physician and should include the name, dose, and route of the drug. The spelling of the drug and dosage should be verified…i.e. "M" as in "Mary"; "16" should be read as "one six" to avoid possible confusion with 60.
- ➢ The order should be transcribed directly into the chart whenever possible. Minimize the number of times the order is transcribed.
- ➢ All elements of a medication order (refer to prescribing tab) also need to be present for a verbal order. Name and signature of person receiving the verbal order should be included.
- ➢ Only accepted abbreviations should be used.
- ➢ Any questions or concerns should be verified prior to sending the order to the pharmacy to be filled. Utilize drug reference books, facility list of standard abbreviations and similar sounding medications. Facility protocol should encourage nurses to contact MD/NP/PAs with any questions or concerns about a verbal order.
- ➢ Adopt standards for legible handwriting. Any illegible handwriting should trigger automatic review and contact of MD/NP/PA for clarification. Block writing minimizes errors related to illegibility.
- ➢ Verbal orders should be reviewed and countersigned by the MD/NP/PA as soon as possible.

> To prevent errors in the monthly editing process, the editing should ideally be done on the 11-7 shift on the last day of each month. Delegation of this task to two nurses who would work together to edit and verify orders may also help reduce transcription errors.

	Checklist for Assessing Medication Use Process: Transcribing				
		Yes	No	Person Responsible	Comments
1	Does your facility have a policy about verbal orders?				
2	Does your facility have a policy about legible handwriting?				
3	Does your facility have a policy about monthly editing?				
4	Does your facility have a policy about transmission of medication orders to the pharmacy?				
5	Does your facility have a list of acceptable/ unacceptable abbreviations?				
6	Does your facility have a list of look-alike/ sound-alike medications?				
If any of the above elements are missing, choose one element to focus your quality improvement efforts first. http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf					

Medication Reconciliation

Medication reconciliation is a complex process that affects all persons as they move through all health care settings. It is a comparison of the person's current medication regimen against the physician's admission, transfer, and/or discharge orders to identify discrepancies. Any discrepancies noted are discussed with the prescriber, and the order is modified, if necessary.

Medication reconciliation is a process to decrease medication errors and patient harm in the following ways:

> Obtaining, verifying, and documenting the person's current prescription and over-the-counter medications—including vitamins, supplements, eye drops, creams, ointments, and herbals—when he or she is admitted or re-admitted.
> Considering the person's pre-admission/home medication list when ordering medicines during a short-term or long-term stay and continuing home medications as appropriate.
> Comparing the person's pre-admission/home medication list to ordered medicines and treatment plans to identify unintended discrepancies (*i.e.,* those not explained by the person's clinical condition or formulary status).
> Verifying the person's home medication list and discussing unintended discrepancies with the physician for resolution.
> Providing an updated medication list and communicating the importance of managing medication information to the person when he or she is discharged from the nursing facility.

The INTERACT^{TM} Quality Improvement Program includes an evidenced based best practice tool for medication reconciliation at http://www.pathway-interact.com.

"Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation" can be found at https://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/match/index.html

Dispensing

Dispensing medication is a process that occurs primarily at the pharmacy and follows a predictable, logical process. Errors in the dispensing process are infrequent but can occur in any of the "five rights" with patient medication; the right patient, drug, dose, route, and time can all be misinterpreted and dispensed improperly. Safeguards in the dispensing process include:

➢ Pharmacist check of the medication order prior to release from the pharmacy for delivery
➢ Nurse check of the medication order upon receipt of the medication order
➢ Computer alerts to the pharmacist regarding appropriate drug-drug interactions, therapeutic duplication, and potential side effects

Medications are also dispensed from the emergency kit in long-term care facilities. Special attention to resident allergies and the five rights by the nursing staff is particularly important when dispensing medication from the emergency kit.

Timely delivery of medication will reduce adverse drug events related to dose omission because the medication was not available. Policies regarding delivery times for routine and "stat" orders can be developed by a team of caregivers consisting of staff from the nursing facility and the pharmacy.

The dispensing step in the medication administration process occurs primarily at the contracted pharmacy. The medication order is called in by telephone, faxed, or received in written form. Once the medication order reaches the pharmacy, the following steps occur:

➢ The medication order is received and is evaluated for clarity, complete information, and legibility.
➢ Any problems identified with the medication order are clarified by the pharmacy staff with the nurse at the facility or the prescribing MD/NP/PA. Problems may include unclear handwriting, questions about dose, route, or drug.
➢ The medication order is interpreted as the MD/NP/PA intended and is therapeutically sound.
➢ The medication order is then entered into the pharmacy computer system and the pharmacist is alerted to allergies, potential drug interactions, and possible therapeutic duplications.
➢ The medication is prepared, packaged, labeled, and stored appropriately.
➢ The medication order is checked by the pharmacist for completion, appropriate label, allergies, drug interactions, potential therapeutic duplication, and right patient, drug, dose, route, and time.
➢ The medication is dispensed to the facility.
➢ Upon receipt of the medication, the nurse at the facility verifies the patient, drug, dose, route, and timing of the medication against the order in the medication administration record and stores the medication in the appropriate place *(i.e.,* the refrigerator, medication cart, or locked controlled substance box). The nurse should visually inspect the medication in the "blister pack" prior to storing it. If a controlled substance is delivered, it is appropriately logged into the facility controlled substance logbook according to facility policy and procedure.

In the nursing home, medications may also be dispensed from the facility emergency kit or "e-kit." The contents of the e-kit are limited to medications that would need to be administered immediately after

they are ordered and could not be delayed until the next delivery from the contracted pharmacy. Some examples of medications in the e-kit include antibiotics, narcotics, and anticonvulsants. Facilities should have policies to ensure safe dispensing from the e-kit. Suggestions to consider in e-kit dispensing include:

➢ Requiring two nurses to verify the name, dose, and route of the medication being signed out.
➢ A sign-out form attached to the e-kit which would require the nurse to provide the resident name and allergies each time a medication is dispensed from the e-kit,
➢ Each order is countersigned by a second nurse.

	Checklist for Assessing Medication Use Process: Dispensing				
		Yes	No	Person Responsible	Comments
1	Does the nursing facility have access to and knowledge about the pharmacy dispensing policy and/or protocols?				
2	Does the nursing facility have a time frame policy in place for timely delivery of routine and "stat" medications?				
3	Does the pharmacy have a computer system that alerts them to inappropriate doses, potential side effects, allergies, drug-drug interactions and therapeutic duplication?				
4	Do the nursing facility and contracted pharmacy have the same list of accepted abbreviations?				
5	Does the nursing facility have a policy about dispensing medications from the emergency kit?				
If any of the above elements are missing, choose one element to focus your quality improvement efforts first. http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf					

Administering

This portion of the Medication Administration QuickPath will focus on compliance with the requirements of participation associated with F759 and F760 (F332 and F333 prior to November 28, 2017.)

Those of us who work in long-term care facilities must be particularly attentive to the definitions adopted by the Centers for Medicare and Medicaid Services in the Interpretive Guidelines of the State Operations Manual 42 CFR Part B, Appendix PP, at §483.45(f), §483.45(f)(1), and §483.45(f)(2); also known as F759 and F760.

The State Operations Manual can be downloaded at: https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Advance-Appendix-PP-Including-Phase-2-.pdf. Information regarding F 759 and F760 can be found pages 498 – 509 of 696 pages.

> **"Medication Error"** means the observed or identified preparation or administration of medications or biologicals which is not in accordance with: 1. The prescriber's order; 2. Manufacturer's specifications (not recommendations) regarding the preparation and administration of the medication or biological; or 3. Accepted professional standards and principles which apply to professionals providing services. Accepted professional standards and principles include the various practice regulations in each State, and current commonly accepted health standards established by national organizations, boards, and councils.

> **"Significant medication error"** means one which causes the resident discomfort or jeopardizes his or her health and safety. Criteria for judging significant medication errors as well as examples are provided below. Significance may be subjective or relative depending on the individual situation and duration, *e.g.,* constipation that is unrelieved because an ordered laxative is omitted for one day, resulting in a medication error, may cause a resident slight discomfort or perhaps no discomfort at all. However, if this omission leads to constipation that persists for greater than three days, the medication error may be deemed significant since constipation that causes an obstruction or fecal impaction can directly jeopardize the resident's health and safety.

> **"Medication error rate"** is determined by calculating the percentage of medication errors observed during a medication administration observation. The numerator in the ratio is the total number of errors that the survey team observes, both significant and non-significant. The denominator consists of the total number of observations or "opportunities for errors" and includes all the doses the survey team observed being administered plus the doses ordered but not administered. The equation for calculating a medication error rate is as follows:

> ***Medication Error Rate = Number of Errors Observed divided by the Opportunities for Errors (doses given plus doses ordered but not given) X 100.***

The error rate must be 5% or greater in order to cite F759. Rounding up of a lower rate (*e.g.,* 4.6%) to a 5% rate is not permitted. A medication error rate of 5% or greater may indicate that systemic problems exist. The survey team should consider investigating additional potential

noncompliance issues, such as F755– Pharmacy Services, related to the facility's medication distribution system.

Significant and Non-Significant Medication Errors: Determining Significance

The relative significance of medication errors is a matter of professional judgment. Follow three general guidelines in determining whether a medication error is significant or not:

- o **Resident Condition** - The resident's condition is an important factor to take into consideration. For example, a diuretic (fluid pill) erroneously administered to a dehydrated resident may have serious consequences, but if administered to a resident with a normal fluid balance may not. If the resident's condition requires rigid control, such as with strict intake and output measurement, daily weights, or monitoring of lab values, a single missed or wrong dose can be highly significant;
- o **Drug Category** - If the medication is from a category that usually requires the resident to be titrated to a specific blood level, a single medication error could alter that level and precipitate a reoccurrence of symptoms or toxicity. This is especially important with a medication that has a Narrow Therapeutic Index (NTI) (*i.e.,* a medication in which the therapeutic dose is very close to the toxic dose). Examples of medications with NTI include: phenytoin (Dilantin), carbamazepine (Tegretol); warfarin (Coumadin); digoxin (Lanoxin); theophylline (TheoDur); lithium salts (Eskalith, Lithobid); and
- o **Frequency of Error** - If an error is occurring repeatedly, there may be more reason to classify the error as significant. For example, if a resident's medication was omitted several times, it may be appropriate, depending on consideration of resident condition and medication category, to classify that error as significant.

Significant medication errors are cited at F760 in the following circumstances:

- o When the surveyor observes a significant medication error during a medication preparation and/or administration (regardless of whether the overall facility error rate is 5% or greater);
- o When the surveyor identifies a significant medication error(s) during the course of a resident record review.

Examples of Medication Errors:

- ➢ Omissions (Medication ordered but not administered at least once)
- ➢ Unauthorized Medication (Medications without a physician's order) (This would include administering a medication to the wrong resident.)
- ➢ Wrong Dose
- ➢ Wrong Route of Administration
- ➢ Wrong Dosage Form
- ➢ Wrong Medication
- ➢ Wrong Time
- ➢ Failure to Follow Manufacturer's Specifications or Accepted Professional Standards

Failure to follow manufacturer's specifications or accepted professional standards encompasses a wide variety issues and includes significant updates in the Phase 2 Requirements of Participation. The Interpretative Guidelines take note of the following:

- Failure to "Shake Well" or Mix a Suspension
- Crushing Medications and Administering Medications via Feeding Tube
- Giving Adequate Fluids with Medication
- Medications that Must Be Taken with Food or Antacids
- Nutritional and Dietary Supplements
- Medications Administered into the Eye
- Sublingual Medications
- Metered Dose Inhalers (MDI)

Contained within the Interpretive Guidelines are references for additional information; however, be aware of this note also contained within the Interpretive Guidelines:

> NOTE: References to non-CMS sources do not constitute or imply endorsement of these organizations or their programs by CMS or the U.S. Department of Health and Human Services and were current as of the date of this publication.

While observation is the preferred method for citing medication errors, the surveyor may identify medication errors based on evidence from other sources, such as documentation of a change in the resident's condition determined to be due to medication errors, reports from family members that medication was given incorrectly and investigation supports that a medication error occurred, or discrepancies in the MAR that lead to identification of a medication error. The surveyor must conduct any follow up investigation to obtain corroborating information regarding the error, such as interviews with the nurse, Director of Nursing, or the pharmacist, and review other relevant documents. Surveyors should evaluate whether past non-compliance exists using the survey protocol.

Medication errors identified through methods other than observation are not counted in the medication pass observation and not cited at F759, but, any significant medication errors would be cited at F760 if evidence supports the citation.

In addition to deficiency citations at F759 and F760, surveyors may also reference F755 regarding "Provision of medications and/or biologicals and pharmaceutical services to meet the needs of the resident," F761 regarding appropriate "Labeling and storage of drugs and biologicals," F880 regarding "Infection prevention and control practices," and/or F658 regarding meeting "Professional standards of quality."

An audit tool based upon the Medication Administration Observation tool CMS-20056 updated 5/2017 is included in the section on Audits.

While observation is the preferred method for citing medication errors, the surveyor may identify medication errors based on evidence from other sources, such as documentation of a change in the resident's condition determined to be due to medication errors, reports from family members that medication was given incorrectly and investigation supports that a medication error occurred, or discrepancies in the MAR that lead to identification of a medication error. The surveyor must conduct any follow up investigation to obtain corroborating information regarding the error, such as interviews with the nurse, Director of Nursing, or the pharmacist, and review other relevant documents. Surveyors should evaluate whether past non-compliance exists using the survey protocol.

Medication errors identified through methods other than observation are not counted in the medication pass observation and not cited at F759, but, any significant medication errors would be cited at F760 if evidence supports the citation.

In addition to deficiency citations at F759 and F760, surveyors may also reference F755 regarding provision of medications and/or biologicals and pharmaceutical services to meet the needs of the resident, F761 regarding appropriated labeling and storage of drugs and biologicals, F880 regarding infection prevention and control practices, and/or F658 regarding meeting professional standards of quality.

Monitoring

The best medication monitoring process is multidisciplinary. Industry guidelines and standards mandate pharmacy, physician/physician extender, and nursing roles and responsibilities in the monitoring process.

CMS guidelines dictate that each resident has a medication record review performed by a licensed pharmacist at least monthly. The pharmacist performs a comprehensive review of the resident's medication regimen, assessing for the use of medication without a supporting diagnosis, the use of a medication deemed inappropriate for frail elders, drug interactions, duplicate therapy, and adverse drug reactions. The pharmacist must report any irregularities to the medical director, attending physician, and the director of nursing and the report must be acted upon. The attending physician is required to assess the resident's overall condition and plan of care including medications and assess for and document the presence or absence of adverse drug effects at each visit. Front line caregivers including nurses, nursing assistants, and therapy staff are frequently the first ones to observe a change in resident status suggesting an adverse drug event. Upon recognition, the nurse performs a complete evaluation of the presenting problem, considers any recent changes in the medication treatment, and then communicates the change to the attending physician/physician extender.

The more medications a resident takes, the greater the risk of an adverse drug event. The most common adverse drug events are neuropsychiatric: over sedation, confusion, hallucinations, delirium. Others include falls, bleeding, and gastrointestinal disturbances. It is extremely important for nurses to recognize that any change in condition should prompt consideration of an adverse drug event. Nurse aides, housekeepers, dining room staff, recreation staff, and volunteers can be recruited to identify early warning signs of condition changes using the INTERACT[R] "Stop and Watch" tool. Nurses can then do further evaluation using INTERACT[R] SBAR and Care Paths found at http://www.pathway-interact.com/.

Medication monitoring involves both qualitative and quantitative measures. In addition to clinical observation for the occurrence of symptoms, there are many objective tests available to assist with monitoring. Some examples include:

- MDS 3.0 RAI Manual (BIMS and PHQ-9 and PHQ-9 OV)
  https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/MDS30RAIManual.html
- AIMS (Abnormal Involuntary Movement Scale) with Instructions
  http://www.cqaimh.org/pdf/tool_aims.pdf
- DISCUS (Dyskinesia Identification System: Condensed User Scale) with Instructions
  http://hrstonline.com/wp-content/themes/healthrisk/article/DISCUS.pdf
- Mini-Mental Status Exam (MMSE) with Instructions
  http://www.heartinstitutehd.com/Misc/Forms/MMSE.1276128605.pdf
- Geriatric Depression Scale (Short Form) with Instructions
  http://geriatrictoolkit.missouri.edu/cog/GDS_SHORT_FORM.PDF
- Laboratory monitoring for therapeutic drug levels

Actions to reduce monitoring errors include:

- Collaboration between the facility and consultant pharmacist to develop recommended monitoring schedules for drugs with narrow therapeutic windows (*e.g.,* Digoxin, phenytoin)
- Include schedules for lab monitoring when patients are on a drug with narrow therapeutic window (*e.g.,* Digoxin, phenytoin) in the patient's care plan
- Follow up with providers regarding the consultant pharmacist's monthly drug reviews and recommendations for monitoring
- Increase staff awareness about medication monitoring via printed materials or posters in high visibility areas
- Include discussion of medication-related topics at every staff meeting and at change of shift
- Develop systems within the facility that will identify, monitor, and track symptoms such as confusion or over sedation that are commonly associated with adverse drug events
- Education targeting nursing assistants since they spend so much time at the bedside and are often the first to notice that a resident is "not right"
- Enhance the change of shift report/"team huddle" to include two-way exchange of information between caregivers

Checklist for Assessing Medication Use Process: Monitoring					
		Yes	No	Person Responsible	Comments
1	Are there policies and/or tools in place for monitoring high-risk medications such as psychoactive medications?				
2	Does your facility have a policy in place for monitoring warfarin?				
3	Are residents on greater than 9 meds routinely assessed for adverse drug effects?				
4	Does your facility have standards for therapeutic blood levels and monitoring recommendations for drugs with narrow therapeutic windows such as Digoxin or Phenytoin?				
5	Are all caregivers encouraged to report any change in patient condition to the nurse or practitioner responsible for the resident?				
If any of the above elements are missing, choose one element to focus your quality improvement efforts first. http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf					

SAMPLE

MEDICATION RELATED LABORATORY TEST MONITORING POLICY

Purpose: To establish a guideline for timely and appropriate monitoring of medication related laboratory tests.

Policy:
1.   This policy is intended to supplement the facility's policy on laboratory services and testing.
2.   The Medical Director, in consultation with the Administrator, Pharmacy Consultant, and others, shall establish, communicate, and monitor the implementation of medication specific laboratory tests in accordance with generally recognized standards of care, government regulations, and medication manufacturers recommendations.
     a.   Established medication related laboratory tests will be "ordered" automatically in accordance with the facility-established policy. Nurses will schedule the laboratory tests at the time that they transcribe the related medication orders. Provider pharmacy may print order sheets that include facility-specific, medication-related laboratory tests.
     b.   Specific physician order for laboratory monitoring may supersede policy.
3.   Laboratory test results will be monitored and communicated to the prescribing physician.
     a.   Prescribing physician will review and/or adjust medications as appropriate in response to laboratory findings, individual resident needs, and standards of care.
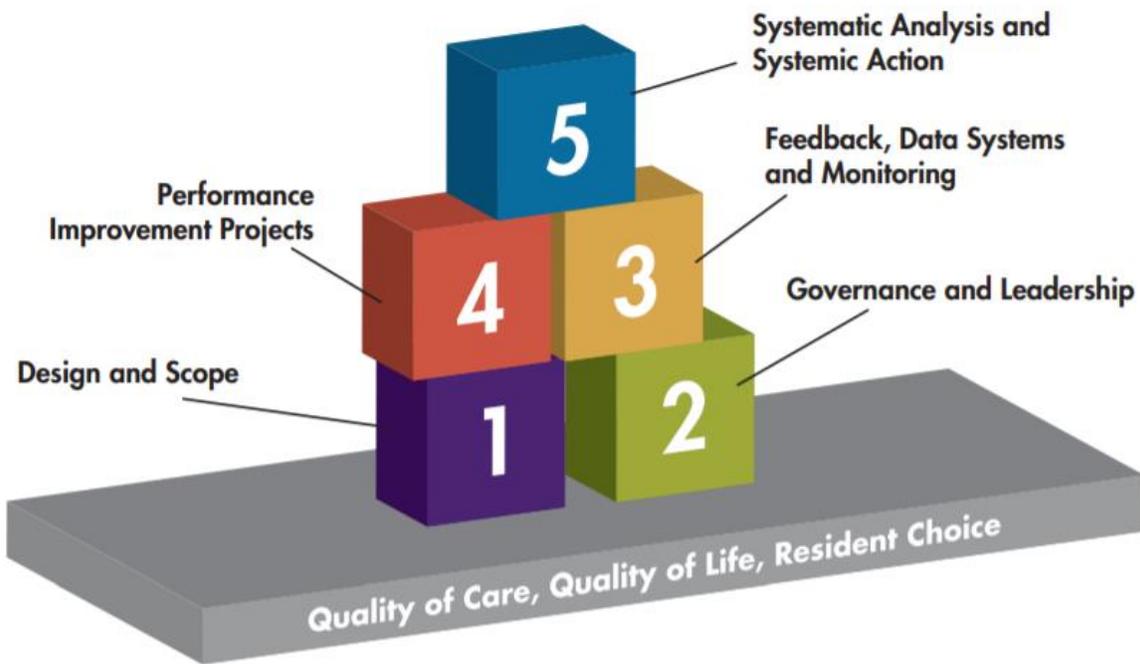
Sample Automatic Drug/Laboratory Guide	
Drug	**Laboratory Testing**
Digoxin	Digoxin Level: ➢ On admission or within 30 days of start of medication ➢ Whenever toxicity is suspected ➢ Annually SAMPLE ONLY
Coumadin	➢ PT/INR daily on start of medication until therapeutic, stable results ➢ Weekly for 4 weeks ➢ If stable, monthly or as otherwise clinically indicated ➢ Daily upon any change in dose or other occurrence that may alter anti-coagulation SAMPLE ONLY

4.   Facility/program will develop specific guidelines for medication-related laboratory monitoring. Comprehensive guidelines for all anti-coagulation therapy is strongly recommended. Guideline should include laboratory monitoring for additional medications including, but not limited to the following:

ACE Inhibitors	Dilantin	Lithium	Quinidine
Aminoglycosides	Diuretics and electrolyte replacement	Methenamine therapy	Tegretol
Avandia (rosiglitazone) and Actos (pioglitazone)	Epoetin therapy (Epogen / Procrit)	Methotrexate	Theophylline
Cordarone (amiodarone)	Hematinic therapy (Iron, Folic Acid, B12 supplementation)	Nitrofurantoin	Thyroid replacement therapy
Coumadin	Hypoglycemics	Phenobarbital	Thyroid suppression
Digoxin	Lipid lowering agents	Procainamide	Valproic Acid

QAPI Best Practice for Medication Management

If the goal is to provide an overall reduction in medication events (errors) and improved safety for all residents at all times, a Quality Assurance and Performance Improvement (QAPI) program is the foundational process of any long-lasting, system-wide improvement. CMS has identified 5 strategic elements that are basic building blocks to effective QAPI. These provide a framework for QAPI development.

Source: https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/QAPIAtaGlance.pdf

The design and scope of a safe medication practices QAPI program is large but worthwhile. Reduction of medication errors begins with organizational commitment and creating an environment where safety is the priority.

Medication use in the long-term care setting involves multiple disciplines and practitioners: administrator, medical director, director of nursing, attending physicians, nurse practitioners, nurses, pharmacists, supportive personnel, laboratory services, clerical staff, residents, and family caregivers. Transforming medication management systems and making process changes requires leadership to support interdisciplinary teamwork and drive a system approach.

Quality is not the result of a task, regulation, or committee. It is the result of an integration of people, values, behaviors, and structures focused on a common goal. It can be difficult and time consuming to

orient an organization toward new values, mindsets, and behaviors. A pervasive quality culture will differentiate superior organizations from mediocre ones.

Genuine organizational commitment involves activity in the following areas:

➢ Create an organization-wide awareness and priority of medication safety.
➢ Ensure the quality assurance and performance improvement (QAPI) committee monitors medication safety and outcomes for medication errors and adverse drug events and keeps staff aware of progress.
➢ Ensure improvement in the medication management system is approached from an interdisciplinary perspective and represents all staff affected by the processes.
➢ Analysis of medication events is approached from a "just culture" and a system approach allowing for reporting of all errors including near misses.
➢ Organization-wide assessment is performed to look for ways to improve systems and processes to ensure safe medication practices.

A culture of safety produces an environment where nurses and senior leaders can learn together about how to create safer systems of care. It requires a philosophy that safety is everyone's business, and an environment in which staff members feel it is safe to report a problem so the system can be changed to prevent a recurrence.

Administrators and senior leaders must understand medication safety as a business issue, as well as an ethical issue. Costs related to adverse drug events are realized in payment for extra procedures, redoing work, and claims resulting from harm to residents.

Administrators need to model behaviors for creating a resident-directed care setting for improving the quality of health care. To move the effort forward, leaders need to take concrete steps:

➢ Pursue self-development and education in safer health environments.
➢ Take the lead in establishing an environment of trust and pursuing policies that encourage event reporting and investigation.
➢ Set the expectation of involvement of staff, residents, and families in safety planning.
➢ Integrate safety into every aspect of care delivery through daily implementation of safe practices and allow for the allocation of resources.
➢ Prioritize effective education systems to ensure accountability and competence of staff.
➢ Spread your commitment of safe medication practices outside of your organization, and engage in activities that promote efforts to improve resident/patient safety.

Key Points to Creating a Culture of Safety

➢ Communicate and involve residents, families, resident representatives, and staff in creating a safe environment.
➢ Take a personal interest when something goes wrong. Talk to the resident and resident representative, as well as the health care professionals involved.
➢ Attend follow-up staff sessions examining what happened to support changes that need to be made to systems.

- Establish a "just atmosphere." Consider eliminating systems that penalize employees for making mistakes that can be traced to system problems.
- Educate your governing board about the systems approach to reducing medication errors.
- Make resident safety one of the organization's top strategic goals.
- Produce an economic analysis of the cost of an error in your organization and make a place for medication safety initiatives in your budget.
- Invite a human factors consultant to observe a care unit or care process.
- Investigate options for automating medication practices. Ensure the option doesn't add complexity and potential for mistakes.
- Work on appropriateness of discipline policies.
- Don't ignore near-misses. They can be an effective early warning system.
- Recognize that once you reduce barriers to error reporting, the numbers will look worse before they get better. Be prepared to explain.

The following 3 tools will help start the process:

- Organization Commitment to Medication Safety Assessment
- Medication Error Prevention System Plan of Action
- Reduction in Medication Errors in LTCF Checklist for Action Planning

Organizational Commitment to Medication Safety Assessment

Instructions: Consider the standards as you evaluate the organization

	Standards	Strongly Agree	Agree	Neutral	Disagree	Strongly Agree	Unable to Agree
		1	2	3	4	5	N/A
1	All leadership (Medical Director, Administrator, DON, and Department Managers) demonstrate a personal commitment to safe medication practices – prescribing, documenting, dispensing, administering, monitoring, and event reporting.						
2	Clinical practitioners (physicians, NPs, pharmacists, nurses) demonstrate a personal commitment to safe medication practices - prescribing, documenting, dispensing, administering, monitoring, and event reporting.						
3	Safe medication use practices have been identified as organizational priorities. Medication safety practices are addressed by an interdisciplinary team and report to QAPI committee.						
4	The attitude toward medication events (errors) fosters a systems approach rather than blame assignment.						
5	Medication events (errors) are thoroughly and candidly evaluated as they occur.						
6	Evaluation of medication events includes "near misses."						
7	The approach to medication event analysis is a non-blaming systems approach.						
8	Employees look for ways to improve the systems and processes to ensure safe medication practices.						
9	Employees are educated on safe medication practices and regularly utilize information from expert organizations on safe practices to enhance the quality of their work.						
10	Medication practices are resident-focused and are carried across different healthcare settings.						
11	Policies and procedures are present for the medication management system and are implemented.						
	Areas that score greater than "3" suggest need for improvement.						

Medication Error Prevention System Plan of Action

Key Interventions/Tasks	What is Needed? Action Items	Who is Responsible?	Target Date
Leaders demonstrate personal commitment to safe medication practices.			
Clinical practitioners demonstrate personal commitment to safe medication practices.			
Safe medication use practices have been identified as an organizational priority.			
The attitude toward medication events (errors) fosters a systems approach rather than blame. The approach is a "just" systems approach.			
Medication events (errors) are thoroughly evaluated as they occur.			
"Near misses" are evaluated.			
Employees look for ways to improve safe medication practices.			
Employees are educated on safe medication practices and use information from expert organizations.			
Medication practices are resident-focused and carried across different health care settings.			
Policies and procedures are present and implemented for the medication management system.			

Reduction in Medication Errors in LTCF Checklist for Action Planning

Action/Intervention Required	Responsible Party	Due Date
Organizational Commitment		
Policies and Procedures		
Staff Education		
Prescribing		
Documenting/Transcribing		
Dispensing		
Administering		
Monitoring		
Error Tracking		
Quality Improvement		
Warfarin		
Reconciliation		
Educating Residents and Families		
Regulations and Resources		

Just Culture

Healthcare is complex. Whether an individual provides direct hands on care, cares for the physical environment, supports the business operations, is an outside supplier, or oversees the provision of care, ultimately all tasks are directed toward the safety and well-being of the residents. Often, perfection in completing each task is demanded. But designing better systems and being more critical of our everyday choices within the systems is the best culture for both residents and those who provide their care.

The term **"Just Culture"** refers to a values-supportive system of shared accountability where healthcare institutions are accountable for the systems they have designed and for supporting the safe choices of both providers and staff. Staff in turn are accountable for the quality of their choices – knowing that, as humans, we cannot will ourselves to be perfect, but we can strive to make the best possible choices available.

Human Error

As humans, we all make mistakes even when trying our best. When mistakes do occur, we must learn to see these errors in the context of the system we are in, and of the process we have created to manage the individual errors in that system. Knowing that "to err is human," a strong culture is one that designs systems anticipating that humans will be susceptible to slips, lapses, and mistakes. A strong culture is one that sees the single failure path (one human error or one equipment failure away from harm) as a sign of system vulnerability.

Human errors are inadvertent actions, as known as slips, lapses, and mistakes. Consoling the person is the appropriate one-on-one intervention. Using the data from the error, mitigate future occurrences by examining and changing if necessary processes, procedures, training, and designs.

At-Risk Behavior

While we may not like to admit it, not only do humans err, but humans drift away from safe behaviors as well. As our perceptions of risk fade and we try to accomplish more with fewer resources and less time, we can begin to drift away from the procedures we have been taught. As we gain experience, we tend to gain false confidence in our at-risk behaviors and the habits we have learned or developed, thinking we are safe because nothing undesirable has recently occurred. A strong culture is one that anticipates these at-risk behaviors and designs barriers and controls to keep organizations on the safest possible path.

At-risk behavior is a choice where either the risk was not recognized or the person believed taking the risk was justified. Coaching the person is the appropriate one-on-one intervention. Using data from the error, mitigate future occurrences by removing incentives for at-risk behaviors, creating incentives for healthy behaviors, and increasing situational awareness.

Reckless Behavior

While we like for it to be rare, we can also anticipate that humans will put their own self-interest ahead of those they serve. Reckless behavior, where employees know they have put residents or values into

an unsafe place, must be addressed through a strong disciplinary or punitive response. In this behavior, accountability rests with the individual who chooses the reckless act.

Reckless behavior is a conscious disregard of unreasonable risk. Remedial action and punitive action are indicated.

Management Tasks for a Just Culture

- ➢ Creating an open learning environment
- ➢ Learning when to console and when to coach employees
- ➢ Committing to the limited use of warnings and punitive actions in the narrow circumstances where it will benefit system values
- ➢ Striving to understand why human errors occur within the organization
- ➢ Striving to understand why at-risk behaviors occur within the organization
- ➢ Learning to see common threads – to prioritize risk and interventions
- ➢ Working with staff to design systems that reduce the rate of human error and at-risk behavior, or mitigate their effects
- ➢ Learning to measure risk, at both the unit and organizational level

Provider and Staff Tasks for a Just Culture

- ➢ Looking for risks in the systems in which we work
- ➢ Looking for risk in our own behavioral choices
- ➢ Evaluating risk versus benefit – looking for the risks that do not provide value to those we serve
- ➢ Reporting hazards and adverse events
- ➢ Participating in the learning culture – being open and honest about what happened
- ➢ Always making safe choices

No human endeavor can be risk-free, and healthcare is certainly no exception. We are fallible. We design imperfect systems and sometimes make imperfect choices.

Just Culture is not about willing ourselves to be perfect. Just Culture is about designing systems around healthcare providers and relying on them to make safe choices within those systems.

We cannot guarantee perfect outcomes for our residents, but we can commit to being the best stewards of the limited resources we have to fulfill the potential of the healthcare system.

A Case Study

Staff nurses, particularly on the evening shift, identified distractions and interruptions as a significant issue in an increasing number of medication events. They went on to define distractions and interruptions as anything that disrupts an individual from the current task by diverting the person's attention. Sources for interruptions and distractions included noise, other people, and electronic devices. Noises included alarms, ringing phones, and other clinicians. Electronic distractions included beepers, text messages, emails, or cell phones.

Over time and with the support of nursing management and administration, they identified the following interventions:

➢ Eliminating personal mobile phones on the care units
➢ Eliminating overhead paging except as part of emergency plans
➢ Reducing the number of bed and chair alarms as interventions for fall prevention or reduction
➢ Adjusting unit secretary hours or staggering unit manager, social services, supervisor hours to cover phones and resident or family questions through the supper hour
➢ Establishing a quiet area/room where physicians or physician extenders could write or enter prescriptions and where nurses could transcribe or enter telephone orders
➢ Setting a policy that asks families to return non-emergency calls to nurses during times outside medication pass times
➢ Establishing a no interruption zone (NIZ) where respectfully crafted, easily readable signs and/or symbols on the side of medication carts or on computers asked for quiet – except in cases of emergency --so medications could be administered safely.

Medication Management Quick Path
Policy Components

Policies reflect an organization's position on matters of professional or public concerns. In turn, policies serve to guide organizational decision-making and action. While new policies and procedures on medication management alone will not change behavior, they reflect the organization's commitment to medication safety and the implementation of best practices to prevent medication errors.

The following key points will provide a broad overview on how to examine current practices. Move on to the "Checklist for Medication Management" to assist in identifying gaps. A sample policy and procedure is included demonstrating a straightforward approach.

Medication Management Policies: Key Points

➢ Start the process of policy development by reviewing the medication management policies provided by the contracted pharmacy.
➢ Based upon the unique needs and priorities of your facility, develop policies for medication management that are not provided by the pharmacy.
➢ Consider forming a medication safety committee to study, implement, and analyze changes in the medication management processes in your facility (QAPI).
➢ Ensure that a medication safety committee has representation from all disciplines.
➢ Changes in policies and procedures related to medication management should be effectively communicated to all clinical practitioners.
➢ Focus on patient safety when developing medication management policies.
➢ Keep the focus on patient safety when reviewing errors in the medication management system.
➢ Avoid blaming an individual when an error in the medication management system occurs.
➢ Focus on systems analysis and re-design when an error in the medication management system occurs.
➢ Institute an annual policy refresher for staff to prevent loss of institutional memory regarding policies and procedures that can occur. This is particularly important if there has been a significant turnover in staff.

Checklist for Medication Management and Policies

Each facility should review policies/procedures for medication management from the contracted pharmacy. Then, the facility can develop policies/procedures for medication management that were not covered by the contracted pharmacy. A medication safety committee, with representation from all disciplines, may be the best place for medication policies to be developed. Changes in policies/procedures for medication management are effectively communicated to all clinical staff.

	Does your facility have the following?	Yes	No	Assigned to	Comments
1	Guidelines for components of the history & physical that the nurse needs to complete prior to calling the practitioner?				
2	Recommendations that the indication for treatment be included in the original medication order?				
3	Standards for legible handwriting?				
4	A policy for medication reconciliation and a tool?				
5	Guidelines for warfarin and a warfarin worksheet or flowsheet for monitoring?				
6	Access to a list of high alert medications?				
7	A policy about verbal orders?				
8	A policy about monthly editing?				
9	A policy about transmission of medication orders to the pharmacy?				
10	A list of acceptable/unacceptable abbreviations that are the same as the pharmacy?				
11	A list of look-alike/sound-alike drugs?				
12	Access to the pharmacy dispensing protocol?				
13	A time frame policy in place for timely delivery of routine and "stat" medications?				
14	Access to contracted pharmacy computer system that alerts staff to inappropriate doses, potential side effects, allergies, drug-drug interactions & therapeutic duplication?				
15	A policy for drug administration that includes checking the right patient, dose, route, frequency, & dosage form?				
16	A policy requiring staff to demonstrate competency regarding medication administration upon hire and routinely thereafter?				
17	A morphine sulfate administration chart that is readily accessible to staff?				
18	A Do Not Crush List that is readily available to staff?				
19	Policies in place for monitoring high-risk medications such as psychoactive medications?				
21	A policy that requires review of patients on 9 or more medications?				
22	Standards for therapeutic blood levels & monitoring recommendations for drugs with narrow therapeutic windows such as Digoxin or Phenytoin?				
23	A standard of practice that encourages all caregivers to report a change in condition to the physician or nurse practitioner?				

Review the items for which there was a "no" response and rank in order of importance for your facility.
Adapted from "A Systems Approach to Quality Improvement in Long-Term Care: Safe Medication Practices Workbook"
http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf

SAMPLE

Table of Contents

List of Common Controlled Substances
Discontinued Medications
Return of Medications
Destruction of Medications
Medication Expiration
Storage and Stability Reference
Discharge Medications
Investigational Drugs
Patient Package Insert
SDS
Medications Not Covered by Third Party Payers
Physician's Medication Samples
Non-use of Medications
Medication Error Reporting
Adverse Drug Reaction Reporting
Drug Product Problem Reporting
Emergency Drug Recall
Influenza and Pneumococcal Disease Prevention
Medication Management (A)
Preventing and Detecting Adverse Consequences (B)
Continuous Quality Improvement (CQI) of Medication Use Process ©
Monitoring of Medication Administration (D)
Appendix 1: Medication Issues of Particular Relevance in Older Adults
Policy for RPh Medication Review Off-Site
Recommended Lab Monitoring Guidelines

Adapted from Hometown Pharmacy at http://hometownpharmacy.com/ltc/wp-content/uploads/2016/03/SNF-PP-Manual-2016.pdf

SAMPLE

ABC NURSING HOME

POLICY/PROCEDURE

DEPARTMENT: NURSING

SUBJECT: MEDICATION ORDERS

EFFECTIVE DATE: 03/01/2017

APPROVED BY: _____

Reviewed/Revised Date:				
Approved by:				

I.   **POLICY/OBJECTIVE:** Medications are administered only upon the clear, complete, and signed order of a person lawfully authorized to prescribe. Verbal orders are received only by licensed nurses, pharmacists, or other persons authorized by state law to do so and confirmed in writing by the prescriber.

II.   **PROCEDURE**

1. Elements of the medication order:

    A. Medication orders specify at least the following:

    1. Patient name

    2. Date of order

    3. Name of medication

    4. Name of person transmitting the order

    5. Strength of medication, where indicated

    6. Dosage

    7. Time or frequency of administration

    8. Route of administration

    9. Quantity or duration (length) of therapy.

    B. Any dose or order that appears inappropriate considering the person's age, condition, or diagnosis is verified with the attending physician.

C. PRN ("as needed") orders also specify the condition for which they are being administered; *e.g.*, "as needed every four (4) hours for moderate pain," "at bedtime as needed for sleep." When more than one drug within a class of medications is ordered for the same indication (*e.g.,* pain), the order should specify which drug should be given for which type/severity/location of pain (*e.g.,* acetaminophen for mild-moderate knee pain).

2. Documentation of the medication order:

A. Each medication order is documented in the patient's medical record with the date, time, and signature of the person receiving the order. The order is recorded on the physician order sheet or the telephone order sheet/Interim Order Form if it is a verbal order, and the Medication Administration Record (MAR).

B. The following steps are initiated to complete documentation:

1. Read order back to prescriber.

2. Clarify the order if needed. If illegible, see Clarification of Physician's Orders/Legibility of Medical Record Documentation.

3. Enter the orders on the telephone order sheet. Document as T.O./RBV per Dr. _____/nurse name.

4. Call or fax the medication order to the dispensing pharmacy.

5. Transcribe newly prescribed medications on the MAR. When a new order changes, the old order will be discontinued according to facility policy.

6. After completion, document each medication order noted on the physician's order form with date, time, and signature. Document as N&P/nurses signature.

C. Standing orders for prescription and non-prescription medications or treatments are accepted or implemented only when permitted by state and/or federal regulations.

3. Types of medication orders:

A. New handwritten orders.

B. New verbal, telephone or fax orders.

C. Written transfer orders.

D. Renewed or recapitulated (recapped) orders.

4. Scheduling new medication orders on the medication administration record:

A. Non-Emergency Medication Order: The first dose of medication is scheduled to be given after the regularly scheduled pharmacy delivers to the facility.

B. Emergency Medication Order (medication contained in emergency medication supply): Remove a sufficient number of doses to be administered prior to regularly scheduled pharmacy delivery.

C. Emergency Medication Order (medication not contained in emergency medication supply): An emergency order is placed with the dispensing pharmacy, and the medication is scheduled to be given as soon as received.

5. Receipt of orders from physician assistants and nurse practitioners: Orders may be accepted from a physician assistant or nurse practitioner licensed to work with the person's physician, if state law permits.

6. Blanket reinstatement orders are not acceptable.

7. Generic or brand name medications are acceptable.

8. Residents are monitored every 15 minutes X2 after the first dose of a new medication.

9. Critical lab results that are called to the facility will be read back to the lab for verification.

10. When reporting critical or stat labs to the physician/NP, and no orders are given, document "no orders given."

Adapted from "A Systems Approach to Quality Improvement in Long-Term Care: Safe Medication Practices Workbook" at http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf

34

SAMPLE POLICY

Administering Medications

Policy

Medications will be administered to residents as prescribed and by persons lawfully authorized to do so in a manner consistent with good infection control and standards of practice. Personnel authorized to administer medications do so only after they have familiarized themselves with the medication. The facility has sufficient staff to allow administering of medications without unnecessary interruptions.

Procedures

Preparation:

1. Only licensed nursing or other lawfully authorized staff may prepare, administer, or record medication administration.

2. An adequate supply of disposable containers and equipment is maintained on the medication cart for the administration of medications. Disposable containers are never reused.

3. Prior to administration, the medication and dosage schedule on the MAR is compared with the medication label. If the label and the MAR are different and the container is not flagged indicating a change in directions or if there is any other reason to question the dosage or directions, the physician's orders are checked for correct dosage schedule.

4. If breaking tablets is necessary to administer the proper dose, hands are washed with soap and water or alcohol gel prior to handling tablets and the following guidelines are followed:

   a. A tablet splitter is used to avoid contact with the tablet

   b. If the tablet is scored, every attempt is made to break along score lines.

   c. If using only one-half of the tablet from a unit dose package, the remainder is disposed of if not used within 24 hours according to facility procedure. If in a vial the half-tablet is returned to the vial.

   d. Administration of partial tablets is clearly identified or highlighted on the resident's MAR.

   e. Since unscored tablets may not be accurately broken, their use is discouraged if a suitable alternative is available.

   f. Where possible, the provider pharmacy is requested to package half tablets.

5. If it is safe to do so, medication tablets may be crushed or capsules emptied out when a resident has difficulty swallowing or is tube-fed, using the following guidelines.

   a. Long-acting or enteric coated dosage forms should generally not be crushed; an alternative should be sought.

b. Each medication preparation area includes a device that is specifically used for crushing medications.

c. Medications are crushed between two soufflé cups, or plastic bag made specifically for this purpose, to prevent contact between the medication and the crushing device. If contact occurs, the crushing device is to be properly cleaned prior to further use.

d. For residents able to swallow, tablets which can be appropriately crushed may be ground coarsely and mixed with the appropriate vehicle (*ex:* applesauce, pudding) so the resident receives the entire dose ordered.

e. If the resident is tube-fed, medications are crushed finely to prevent clogging the tube. This is best accomplished using a mortar and pestle. If it is not possible to use paper cups to prevent direct contact of medications with the mortar and pestle, the mortar and pestle are cleaned thoroughly after each use. If paper cups are used, paper is not ground into the medication.

f. The need for crushing medications is indicated on the resident's orders and the MAR so that all personnel administering medications are aware of this need and the consultant pharmacist can advise on safety issues and alternatives, if appropriate, during medication regimen reviews.

6. Liquid dosage forms may be a practical alternative in place of solid tablets, especially if tablets have a coating and will not crush finely. The nurse checks with the provider pharmacy to determine if a liquid form is available and covered by applicable payment programs.

7. When administering potent medications in liquid form or those requiring precise measurement such as Digoxin, devices provided by the manufacturer or obtained from the provider pharmacy (oral syringes) are used to allow accurate measurement of doses.

8. When administering as needed (PRN) medications at times other than the medication pass, the dose may be prepared in the medication cart storage area and taken to the resident's bedside, leaving the cart locked and secured.

Administration:

1. Medications are administered only by licensed nursing, medical, pharmacy or other personnel authorized by state laws and regulations to administer medications.

2. Medications are administered in accordance with written orders of the attending physician or physician extender.

3. If a dose seems excessive considering the resident's age and condition, or a medication order seems to be unrelated to the resident's current diagnoses or conditions, the nurse calls the provider pharmacy for clarification prior to the administration of the medication or if necessary contacts the prescriber for clarification. This interaction with the pharmacy and /or prescriber and the resulting order clarification are documented in the nursing notes and elsewhere in the medical record as appropriate.

4. Medications are administered at the time they are prepared. Medications are not pre-poured.

5. Medications are administered without unnecessary interruptions.

6. The person who prepares the dose for administration is the person who administers the dose.

7. Residents are identified before medication is administered. Methods of identification include:

　　a. Checking identification band

　　b. Checking photograph attached to medical record

　　c. Asking resident to say and/or spell his/her name

　　d. If necessary, verifying resident identification with other facility personnel

8. Hands are washed before and after administration of topical, ophthalmic, otic, parenteral, enteral, rectal, and vaginal medications.

9. At least 4 (four) ounces of water or other acceptable liquid are given with oral medications unless fluid restrictions apply.

10. Medications are administered within one hour before or one hour after scheduled time, except before or after meal orders, which are administered based on mealtimes. Unless otherwise specified by prescriber, routine medications are administered according to the established medication administration schedule for the facility.

11. Residents are allowed to self-administer medications when specifically authorized by the attending physician and in accordance with procedures for self-administration of medications.

12. Medications supplied for one resident are never administered to another resident.

13. During administration of medications, the medication cart is kept closed and locked when out of sight of the medication nurse. It may be kept in the doorway of the resident's room, with open drawers facing inward and all other sides closed. No medications are kept on top of the cart. The cart must be clearly visible to the personnel administering medications, and all outward sides must be inaccessible to residents or others passing by.

14. For resident's not in their rooms or otherwise unavailable to receive medication on the pass, the MAR is "flagged" with colored plastic strips, drinking straws, tags, or paper clips. After completing the medication pass, the nurse returns to the missed resident to administer the medication.

15. The resident is always observed after administration to ensure that the dose was completely ingested. If only a partial dose is ingested, this is noted on the MAR, and action is taken as appropriate.

Documentation:

1. The individual who administers the medication dose records the administration on the resident's MAR directly after the medication is given. At the end of each medication pass, the person administering the medications reviews the MAR to ensure necessary doses were administered and documented. In no case should the individual who administers the medication report off-duty without first recording the administration of any medications.

2. Current medications, except topicals used for treatments, are listed on the MAR.

3. Topical medications used in treatments will be listed on the Treatment Administration Record (TAR) using the same format and procedures as the MAR.

4. The resident's MAR and TAR are initialed by the person administering the medication, in the space provided under the date, and on the line for that specific medication dose administration. Initials on each MAR and TAR are verified with a full signature in the space provided.

5. When PRN medications are administered, the following documentation is provided:

    a. Date and time of administration, dose, route of administration (if other than oral) and, if applicable, the injection site.

    b. Complaints or symptoms for which the medication was given.

    c. Results achieved from giving the dose and the time results were noted.

    d. Signature or initials of person recording administration and signature or initials of person recording effects, if different from the person administering the medication.

6. If a dose of regularly scheduled medication is withheld, refused, or given at a time other than the scheduled time, the space provided on the front of the MAR for that dosage administration is initialed and circled. An explanatory note is entered on the reverse side of the record provided for PRN documentation. If two consecutive doses of a vital medication are withheld or refused, the physician is notified.

7. A standard list of conversions and abbreviations will be maintained and used in the facility.

Adapted from Hometown Pharmacy at http://hometownpharmacy.com/ltc/wp-content/uploads/2016/03/SNF-PP-Manual-2016.pdf

Medication Management Quick Path
Audit

	Medication Administration Observation
	Source: FORM CMS–20056 (5/2017)

Medication Administration Observation: Make random medication observations of several staff over different shifts and units, multiple routes of administration -- oral, enteral, intravenous (IV), intramuscular (IM), subcutaneous (SQ), topical, ophthalmic, and a minimum (not maximum) of *25 medication opportunities*. Do NOT preselect residents for observation. Observe and document all of the resident's medications for each observed medication administration (this does not mean all of the medications for that resident on different shifts or times). Additionally, if possible, observe medications for a sampled resident whose medication regimen is being reviewed. Otherwise, observe medications for any resident to whom the nurse is ready to administer medications.

General Medication Administration NOTE: There may be times when the surveyor should intervene before the person administering the medication makes a potential medication error. If a surveyor intervenes to prevent a medication error from occurring, each potential medication error would be counted toward the facility's medication error rate.

	Hand hygiene was performed prior to handling medication(s) and after administering medication(s) if resident contact was necessary.
	The correct medication was administered to the resident.
	The correct medication dose was administered to the resident.
	Medications administered with a physician's order.
	Medications administered as ordered (e.g., before, after, or with food such as antacids).
	Medications administered before the expiration date on the label.
	Medications administered to the resident via the correct route.
	Medication held and physician notified in the presence of an adverse effect, such as signs of bleeding or abnormal lab results with anticoagulants.
	Checked pulse and/or blood pressure prior to administering medications when indicated/ordered.
	Staff ensured medications were administered to the resident (e.g., left medications at bedside).
	Resident was properly positioned to receive medications (e.g., head of the bed is elevated at an angle of 30-45°).
	Resident was properly informed of the medications being administered.
	Medication cart was locked if left unattended in resident care area.
	If a controlled medication was administered, make sure the count in the cart matches the count in the facility's reconciled records.
	Insulin suspensions – "mix" or "roll" the suspension without creating air bubbles.
	Shake a drug product that is labeled "shake well," such as Dilantin Elixir.

	Nutritional and dietary supplements are given as ordered and documented by staff but not counted in the medication observation except for vitamins and minerals. Administration of vitamins and minerals are part of medication administration observation and errors with vitamins and minerals are counted in the error rate calculation.
Oral or Nasogastric Tube Administration	
	The administration of medications with adequate fluid as manufacturer specifies such as bulk laxatives, non-steroidal anti-inflammatory drugs, and potassium supplements.
	Staff did not crush tablets or capsules that manufacturer states "do not crush," such as enteric coated or time-released medications.
	Staff did not crush and combine medications and then give medications all at once either orally (*e.g.,* in pudding or other similar food) or via feeding tube.
	Prior to medication administration, nasogastric or gastrostomy tube placement is confirmed. (**NOTE:** If the placement of the tube is not confirmed, this is not a medication error. For concerns related to care of a resident with a feeding tube, refer to guidance at 483.25(g)(4)-(5), F693 Enteral Nutrition.)
	Nasogastric or gastrostomy tube flushed with the required amount of water before and after each medication unless physician orders indicate a different flush schedule due to the resident's clinical condition.
	Staff separate the administration of enteral nutrition formula and phenytoin (Dilantin) to minimize interaction. Simultaneous administration of enteral nutrition formula and phenytoin is considered a medication error.
Injection Practices and Sharps Safety (Medications and Infusates)	
	Injections are prepared using clean (aseptic) technique in an area that has been cleaned and is free of contamination (*e.g.,* visible blood, or body fluids).
	Needles, cannulas, and syringes are used for one resident.
	Medication vials (labeled single dose) are used for one resident.
	Bags of IV solutions and medication administration are used for one resident.
	Mixed the suspension *(e.g.,* insulin) without creating air bubbles.
	Multi-dose vials used for more than one resident are kept in a centralized medication area and do not enter the immediate resident treatment area (*e.g.,* resident room). If multi-dose vials enter the immediate resident treatment area they are dedicated for single-resident use only.
	Multi-dose vials which have been opened or accessed *(e.g.,* needle-punctured) are dated and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for the opened vial.
	Multi-dose vials that are not opened or accessed (*e.g.,* needle-punctured) should be discarded according to the manufacturer's expiration date.
	Insulin pens containing multiple doses of insulin are meant for single-resident use only, and must never be used for more than one person even when the needle is changed,
	Insulin pens must be clearly labeled with the resident's name and other identifier(s) to verify that the correct pen is used on the correct resident.

	Insulin pens should be stored in a sanitary manner to prevent cross-contamination.
	The rubber septum on any medication vial, whether unopened or previously accessed, is disinfected with alcohol prior to piercing.
	Proper technique used for IV/IM/SQ injection.
	Sharps containers are readily accessible in resident care areas.
	Sharps are disposed of in puncture-resistant sharps containers.
	Sharps containers are replaced when the fill line is reached.
	Sharps containers are disposed of appropriately as medical waste.
	IM/SQ injection sites are rotated. Insulin pens used for one resident.
	Observe for the safe use of point of care devices (*e.g.,* blood glucose meter, International Normalized Ratio (INR) monitor).
	Finger stick devices (both lancet and lancet-holding devices) are used for one resident.
	If used for more than one resident, the point-of-care testing device (*e.g.,* blood glucose meter, INR monitor) is cleaned and disinfected after every use according to manufacturer's instructions. If manufacturer does not provide instructions for cleaning and disinfection, then the device should not be used for more than one resident.
	IV pumps are clean and a protocol exists for cleaning between residents.
Topical, Ophthalmic, and Inhalation Medications	
	Transdermal patch sites are rotated.
	Transdermal patch is dated and timed.
	Used transdermal patches are disposed of properly.
	Multiple eye drops administered with adequate time sequence between drops.
	Inhaler medication administered, handled, or stored according to physician's orders and/or manufacturer's instructions.
	Single-dose vials for aerosolized medications used for one resident.
	Metered dose inhalers administered per manufacturer instructions.
	Sterile solutions *(e.g.,* water or saline) are used for nebulization.
	Jet nebulizers used for single resident or cleaned and stored as per facility policy (*e.g.,* rinsed with sterile water, and air-dried between treatments on the same resident).
	Gloves worn when in contact with respiratory secretions and changed before contact with another resident, object, or environmental surface.

Medication Administration Observation

Source: FORM CMS–20056 (5/2017)

	Date Time	Resident Room	Drug/Dosage/Route	Error	Describe Error	Staff
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

Observer

Medication Administration Observation
Adapted from Source: FORM CMS–20056 (5/2017)

Observation Findings

Calculations for Medication Administration Observations

Step 1. Combine all observations into one overall calculation for the facility. Record the Total Number of Errors. Record the number of Opportunities for Errors (doses given plus doses ordered but not given).

Step 2. Medication Administration Error Rate (%) = Number of Errors divided by Opportunities for Errors (doses given plus doses ordered but not given) multiplied by 100.

Step 3. After the overall error rate is determined, the team will determine whether a facility citation is appropriate during the team meetings. If the Medication Administration Error Rate is 5% or greater, cite F759. If any one medication error is determined to be significant, cite F760.

- A. Total Number of Errors _____
- B. Opportunities for Errors _____
- C. Divide Total Number of Errors by Opportunities for Errors _____
  A/B = C
- D. Multiply the Result by 100 _____
  C X 100 = D
- E. The Medication Administration Error Rate _____%
  D%

Does the facility ensure that it is free of medication error rates of five percent or greater? Yes **No F759**
Does the facility ensure that residents are free of any significant medication errors? Yes **No F760**
Did the facility provide medications and/or biologicals and pharmaceutical services to meet the needs of the resident? Yes **No F755**
Did the facility appropriately label and store drugs and biologicals in accordance with currently accepted professional principles? Yes No **F761**
Did the facility implement appropriate infection prevention and control practices during medication administration including hand hygiene, injection safety and point-of-care testing? Yes No **F880**
Did the facility meet professional standards of quality? Note: If F658 is cited, an associated tag should be cited. Yes No **F658**

Medication Management Quick Path

Resources

Revision to State Operations Manual (SOM) Appendix PP for Phase 2, F-Tag Revisions, and Related Issues
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Advance-Appendix-PP-Including-Phase-2-.pdf

Medication Administration Observation QIS Tool
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/CMS-20056-Medication-Administration.pdf
Note: This link will take you to the tool last updated 5/2013

A Systems Approach to Quality Improvement in Long-Term Care: Safe Medication Practices Workbook
http://www.macoalition.org/Initiatives/docs/safe_medication_practices_wkbk-2008.pdf

Just Culture: Healthcare Services Overview
https://www.outcome-eng.com//wp-content/uploads/flipbooks/healthcare/healthcare.html

QAPI At A Glance
https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/QAPI/Downloads/QAPIAtaGlance.pdf

AHQR (Agency for Healthcare Research and Quality) Patient Safety Network
https://psnet.ahrq.gov

"Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation"
https://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/match/index.html

Institute for Safe Medication Practices http://www.ismp.org
  ➢ ISMP List of High-Alert Medications in Long-Term Care (LTC) Settings
      https://www.ismp.org/Tools/LTC-High-Alert-List.pdf
  ➢ Oral Dosage Forms That Should Not Be Crushed 2016
      http://www.ismp.org/tools/DoNotCrush.pdf
  ➢ ISMP's List of Error-Prone Abbreviations, Symbols, and Dose Designations
      http://www.ismp.org/tools/errorproneabbreviations.pdf
  ➢ ISMP Guidelines for Optimizing Safe Subcutaneous Insulin Use in Adults 2017
      http://www.ismp.org/tools/guidelines/Insulin-Guideline.pdf
  ➢ ISMP Safe Practice Guidelines for Adult IV Push Medications
      http://www.ismp.org/tools/guidelines/IVSummitPush/IVPushMedGuidelines.pdf
  ➢ ISMP's List of Confused Drug Names
      https://www.ismp.org/Tools/confuseddrugnames.pdf

- ISMP Medication Safety Self-Assessment for Antithrombotic Therapy
https://www.ismp.org/selfassessments/Antithrombotic/2017/2017_ISMP_Antithrombotic_Self_Assessment.pdf

Joint Commission on Accreditation of Healthcare Organizations (JCAHO) "Do No Use" List of Abbreviations https://www.jointcommission.org/facts_about_do_not_use_list/

National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) (http://www.nccmerp.org/sites/default/files/nccmerp_fact_sheet_2015-02-v91.pdf

ASPEN Safe Practices for Enteral Nutrition Therapy
http://journals.sagepub.com/doi/pdf/10.1177/0148607116673053

Administration of Eye Drops
http://www.aaaai.org/Aaaai/media/MediaLibrary/PDF%20Documents/Libraries/NEW-WEBSITE-LOGOeyedropinstruction_orig_HI.pdf and
http://journals.lww.com/nursing/Citation/2007/05000/Administering_eyedrops.14.aspx

Guidance for Industry: Safety Considerations for Container Labels and Carton Labeling Design to Minimize Medication Errors
https://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM349009.pdf and https://www.ismp.org/tools/guidelines/labelFormats/comments/default.asp

Centers for Disease Control and Prevention

- Disinfection and Sterilization
https://www.cdc.gov/infectioncontrol/guidelines/Disinfection/index.html
- Fingerstick Safety
https://www.cdc.gov/injectionsafety/fingerstick-devicesbgm.html and
https://www.cdc.gov/injectionsafety/providers/blood-glucose-monitoring_faqs.html
- Blood Glucose Meters
https://www.cdc.gov/injectionsafety/blood-glucose-monitoring.html

National Alliance for Model State Drug Laws (NAMSDL)
http://www.namsdl.org/library/A6E61ABB-F923-A510-F44FA458B898567B/

Drug Enforcement Administration (DEA) Disposal Act
https://www.deadiversion.usdoj.gov/drug_disposal/fact_sheets/disposal_ltcf.pdf

Prescribing Controlled Substances in LTC
http://www.tmda.org/sites/default/files/Tip+Sheet+on+Prescribing+CS+in+LTC.pdf

Narcotic Drugs: Handling and Documentation Course
http://www.rn.org/courses/coursematerial-10004.pdf

MDS 3.0 RAI Manual (BIMS and PHQ-9 and PHQ-9 OV)

https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/MDS30RAIManual.html

AIMS (Abnormal Involuntary Movement Scale) with Instructions
http://www.cqaimh.org/pdf/tool_aims.pdf

DISCUS (Dyskinesia Identification System: Condensed User Scale) with Instructions
http://hrstonline.com/wp-content/themes/healthrisk/article/DISCUS.pdf

Mini-Mental Status Exam (MMSE) with Instructions
http://www.heartinstitutehd.com/Misc/Forms/MMSE.1276128605.pdf

Geriatric Depression Scale (Short Form) with Instructions
http://geriatrictoolkit.missouri.edu/cog/GDS_SHORT_FORM.PDF

Health Care Association of New Jersey Medication Management Guideline Sample Test Monitoring Policy on page 32)
https://afmc.org/aippdocs/cchome/medicine_cabinet/Medication%20Management%20Guideline.pdf

Controlled Substances -Quick Reference
https://www.dhs.wisconsin.gov/publications/p01807.pdf

INTERACT (Interventions to Reduce Acute Care Transfers)
http://www.pathway-interact.com/

Beers Criteria of Potentially Inappropriate Medication Use in Older Adults
http://onlinelibrary.wiley.com/doi/10.1111/jgs.13702/full

Clinical Procedures for Safer Patient Care
https://opentextbc.ca/clinicalskills/