Assist with Self Medications

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Disclosures

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Audience

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Accreditation

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Course Objectives

At the end of this comprehensive two hours course the health care provider will be able to:

1. Understand legal issues regarding assisting with medications
2. Know what an assistant can or cannot do
3. Know the various routs of drug administration
4. Remember various commonly used medications
5. Understand and know the indications, contraindications, interactions, side effects, adverse reactions, dosages, proper storage and disposal of various drugs
6. Identify acceptable abbreviations and their meanings
7. Name and apply the 7 "rights of medication administration"
8. Remember the common uses, contraindications, side effects and implications of common medication classifications.
9. Know how to apply infection control principles to assisting with medications
10. Understand the difference between over the counter medications and prescription medications
11. Interpret the information of pharmacy labels and prescriptions precisely
12. Demonstrate the correct documentation for medication administration and medication refusals

Course Description

This two hours comprehensive course has been developed for the healthcare providers who help the patients with self-administration of their medications. No doubt, the patients must be capable of taking their own medication, but some type of assistance or monitoring with self-administration of their own medication should also be there. The healthcare provider must go through this course before carrying out this highly sensitive medication responsibility.

Legal issues

A law called as “Assisted Living Facility Law” has been made to assist the patients with self administration of their medications. This law states:

"Administration means the obtaining and giving of a single dose of medicinal drugs by a legally authorized person to a patient for her or his consumption” (Florida State Statute, 2010).

The law mentioned above provides the health care provider with a legal permission to help the patients with self-administration of their own medications. The patients who are well aware of self-administering their own medications without support should always be encouraged and allowed to do so [1].

The goals of the law are as follows:

- To provide the availability of proper services for the elderly patients and adults with disabilities in the least limited and most homelike environment
- To provide the health, safety, and welfare to all patients

An unlicensed person is the person who is:

- Not currently licensed or allowed to practice nursing or medicine
- Employed by or under contract to an assisted living facility

- Who has received training regarding assisting with the self-administration of medication

Most of the time, the licensed person is the Certified Nursing Assistant (CNA) or the Home Health Aide (HHA). Any type of assistance with self-medication by an unlicensed person should be provided only after getting a written informed consent of the patient or the patient's surrogate, guardian, or attorney. The legal definition of informed consent is:

"Informed consent means advising the patient, or the patient's surrogate, guardian, or attorney in fact, that an assisted living facility is not needed to have a licensed nurse on staff, that the patient may be getting assistance with self-administration of medication from an unlicensed person, and that such assistance, if provided by an unlicensed person, will or will not be overseen by a licensed nurse" [1,2].

Self-administered medications include:

- Over-the-counter oral drugs
- Topical dosage forms like ophthalmic, ear, and nasal dosage forms including solutions, suspensions, sprays, and inhalers [2].

Do's of assistance with self-administration of medication

Followings are the "DO'S" of assistance with self-administration of medication:

- Bring the drug to the patient from where it is stored and use it from its previously dispensed and properly labeled container
- Perform the following steps in the presence of the resident:
    - Read the label
    - Open the container
    - Remove a prescribed amount of medication from the container
    - Close the container

- Place the required dose of oral medication or drug in the patient's hand or in another container and then help the resident by lifting the container to his or her mouth.
- Application of topical drugs.
- Keep back the drug container to proper storage.
- Keep a record of when a patient receives assistance with self-administration under this section [2,3].

Don'ts of assistance with self-administration

The assistance with self-administration does not include:

- Mixing, compounding, converting or calculating drug doses, except:
    - For measuring a prescribed amount of liquid medication
    - Or breaking a scored tablet
    - Or crushing a tablet as prescribed.
- The preparation of syringes for injection
- The administration of drugs by any injectable route
- The administration of drugs through intermittent positive pressure breathing machines
- The administration of drugs through a nebulizer
- The administration of drugs through a tube placed or inserted in a cavity of the body
- The administration of par-enteral medications
- Irrigations or debriding agents used in the treatment of skin diseases
- Use of rectal preparations
- Use of urethral preparations
- Use of vaginal preparations [2,3]

Forms and Routes of Medications

Drugs or medicines are prepared in many forms and various routes can be used for administration of these medicines. Some medicines are prepared in more than one form and similarly some medicines can be administrated via more than one route, if the correct form of medicine is used. Complete medicine orders must describe the route and the form of medicine.

Forms

Medicines are available in following different forms [3,4]:

- Tablets
- Capsules (regular and sustained release)
- Elixirs
- Suppositories (vaginal and rectal)
- Oral suspensions
- Syrups
- Tinctures
- Ointments
- Pastes
- Creams
- Drops (eye)
- IV suspensions and solutions
- Metered dose inhalers

Routes

Medications can be administrated via following different routes [2]:

- Oral
- Inside cheek (buccal)
- Under the tongue (sublingual)
- Topical (on the skin)
- Ophthalmic (eye)
- Otic (ear)

- Vaginal
- Rectal
- Nasal
- Via a nasogastric or gastrostomy tube
- Inhalation
- Subcutaneous (under skin)
- Intramuscular (in the muscle)
- Intradermal (in the skin)
- Transdermal (through the skin)
- Intravenous (into the vein)

Complete Medicines Order

A medicine order or prescription written by a health care provider must contain the following components:

- Patient's name, age and sex
- Date of the order
- The time of the order
- Name of the medicine
- Dose
- Route
- Form
- Time or frequency that it should be taken
- Signature of the MD or nurse practitioner [3].

Labels

All labels must have the following components:

- Patient or resident name
- Name of the medicine
- Strength of the medicine
- How much to take
- Route
- Form

- When to take it
- Date of the order
- Date that the bottle or container was filled
- Date that it expires and can no longer be used
- The name of the person who ordered it
- Any special instructions like keep out of light [3]

Route and Form Concepts

The best route for children is the oral route. In case when a patient has difficulty in swallowing, as many older people have, the following alternatives can be offered:

- Crush the tablet or open the capsule and keep it in something like applesauce. But, the following medications cannot be opened or crushed
  - Time release capsules
  - Some coated tablets
  - Effervescent tablets
  - Medicines that upset the stomach
  - Bad tasting medicines
  - Sublingual medicines
- Use a liquid form of drug in patients who have difficulty with swallowing or who have trouble with tablets or capsules [3]

Age Specific Route and Form Concepts

- **Infants-** administer oral liquid medicines using a syringe, dropper or nipple
- **Toddler-** administer oral liquid medicines using a spoon or a cup
- **Preschool and School Age Children-** tablets or capsules forms of medication can be easily used, if this does not work, one can crush or open the capsule for use.
- **Adolescents-** adult doses, routes and forms of medicines are usually now allowed [2]

Route and Form Concepts With in Florida

In the State of Florida, a health care provider can assist with ordered prescription and over-the-counter medicines with the following routes [3,5]:

- Oral

- Topical
- Topical ophthalmic
- Otic
- Nasal [3,4]

How to Administer Medicines via Different Routes

Administration of Drug via Topical Route

Always use the intact skin surface to apply the medicines unless the medicine is being used to treat broken skin. Use the following steps for administering the drug via topical route:

1. Open the medicine tube or container.
2. Keep the top upside down to keep it clean.
3. Put on gloves.
4. Place the medicine on a tongue depressor.
5. Use sterilized gauze for the face.
6. Apply it in long strokes going with the direction of the hair growth [3].

Administration of Drug via Transdermal Route

1. Select non-hairy place like upper arm or chest.
2. Clean or wash the area with soap and water.
3. Dry the site.
4. Put on gloves
5. Place the dose on the patch or strip and do not let it touch your own skin.
6. While placing the medicine down and against the skin, the patient should be told to gently move the strip over a 3 inch area to spread it out.
7. Do NOT rub.
8. Wrap it in the plastic packing or special dressing and tape it in place so that it does not misplace or fall off.
9. Write the date, time and your initials on the cover [2,5].

Administration of Drug via Oral Route

1. Give the patient the medicine.
2. Do not leave the patient until the medicine(s) is swallowed [3].

Administration of Drug via Buccal and Sublingual Route

In buccal route, medicines are kept between the teeth and the inside of the cheek while in sublingual route the medicines are placed under the back of the tongue.

1. Give the patient the medicine and inform the patient to place the medicine inside their cheek or under their tongue until it dissolves.
2. Advise the patient to keep the medicine in its position so that it can be completely absorbed [3].

Administration of Drug via Ophthalmic Route (Eye)

1. Put on your gloves.
2. *Advise the patient to sit or lie in supine position*
3. Ask the patient to tilt his or her head back.
4. Ask the patient to look up and away.
5. Pull down the lower lid of the patient.
6. Put the number of drops into the eye under the lower eye lid.
7. Pull down the lower lid for an eye ointment.
8. Ask the person to squeeze the tube so that the medicine is kept on the inside of the lower eye lid.
9. Do not touch the eye with the tip of the tube.
10. Advise the patient to close their eyes.
11. Clean the excess off with a tissue [2].

***Administration of Drug via Otic (Ear)* route**

1. Make the temperature of ear drops near to body temperature by warming.
2. Ask the person to lie on their side
3. Pull the ear lobe up and back to open the ear canal.
4. Guide the patient how to place the drops against the side of the ear as you continue to hold the ear lobe in place until you cannot see any more drops.
5. Keep the person's head to the side for at least 10 minutes [5].

Indications for Use of Medicines

Every medicine has its own indications. Most of these indications are related to the desired actions of the medicine, while other actions are related to a medicine's side effects. For example, an antihistamine drug named diphenhydramine is used for both allergies as well as for sedation as one of its side effects is drowsiness. So, it is important to check for indications of the medicines you are going to assist for self administration [6].

Precautions and Contraindications

Every medicine has some types of contraindications i.e. these are not allowed for use. For example, oral hypoglycemic drugs are contraindicated in liver and kidney diseases. It is very important to know the major contraindications of the used medicine while other medicines can only be used with some caution. For example, a medicine can sometimes be used, but only with caution, for an older person. It is also very important to observe and report the patient's responses to the medicine when it is being used with caution. Although there are many contraindications of medicines, but an allergy or sensitivity is the most common contraindication. You should know the patient's allergies before you assist the person. If you find NKA on the patient's chart, this means that the person has no known allergies [3].

Allergies

Allergy occurs in the form of a rash and even a life threatening reaction after the intake of sensitive medicine. *Anaphylaxis* is the most severe form of allergic reaction that can occur if a person is allergic to a food like peanuts or shellfish, a substance like latex or a medicine like penicillin or cephalosporin. It is a medical emergency and it needs an immediate attention.

The signs and symptoms of allergic reaction:

- Nausea
- Vomiting
- Abdominal cramping
- Loss of consciousness
- Itching
- Hives
- Swelling of the throat
- Trouble breathing
- Shortness of breath

- A drop in blood pressure
- Irregular heart rhythm
- Death [2,7]

Interactions

Medicines can interact with:

- other medicines
- foods
- herbs
- alcohol

This interaction can inhibit or increase the action of original drug being used. Information about these interactions can be found in drug reference books [2].

Side Effects and Adverse Reactions

All medicines have some type of side effects e.g. nausea and vomiting are the most common side effects. Some *side effects* are minor while others can be life threatening. *Adverse drug reactions* are serious side effects that can also lead to death. Some medicines also have *toxic effects at doses more than the normal*. For example, tinnitus is a sign of toxicity with aspirin. Being an assistant, you must know about the side effects, adverse drug reactions and the toxic effects of all medicines your patients are taking. You must observe for these effects and report them to the sensible authority [7].

Table of Common Side Effects [2,3]

Signs or symptoms	Treatment or action to be taken
Photosensitivity	Wear sunglasses or hat; avoid prolonged to light
Dryness of oral cavity	Increase fluid intake; rinse mouth often; Ice chips
Constipation	Increase water intake; increase exercise; eat green vegetables or bran or fiber cereals
Stomach pain	Drink small amounts of water; eat dry saltines or toast. Do not use antacids without consulting the doctor
Dizziness	Get up slowly from sitting or lying position
Fatigue	Take a brief rest period during the day

Dryness of the skin	Use mild soap and shampoo; use hand and body lotion.
Weight gain	Take exercise
Mild restlessness, muscle stiffness	Exercise; short walks; stretch muscles; relaxation techniques

Dosage schedule

Each medicine has specific dose depending upon the weight and age of patient. Sometimes the dose of a medicine is lowered under special circumstances to reduce its side effects and thus minimizing the chances of drug toxicity. The examples of such circumstances are:

- Old age
- Immunocompromized state
- Kidney disease
- Liver disease
- Drug sensitivity [3]

Abbreviations

Though abbreviations are very helpful and save time, but they may also cause life threatening effects. Some of the abbreviations that we have been using for the last many years are now being prohibited because they have caused serious errors. Some of these abbreviations are [3]:

Abbreviation	Meaning
a.m	morning
ASA	aspirin
a.c	Before meal
Ad libASA	Freely Aspirin
b.i.d	Twice a day
BM	Bowel movement
BP	Blood pressure
BS	Blood sugar
C (with line over it)	With
Cap	Capsule
Cc	Cubic centimeter
disc or D.C.	Discontinue
disp.	Dispense

elix.	Elixir
Ext	Extract
fl or fld	Fluid
g. or Gm. or g	Gram
Gr	Grain
gtt.	Drop
h. or hr.	Hour
MEq	Milliequivalent
Min	Minute
Mg	Milligram
ML	Milliliter
NPO	Nothing by mouth
NTG	Nitroglycerin
p.c.	After meals
p.m.	Evening
p.o.	By mouth
Prn	When needed
Q	Every
Qh	Every hour
Qid	Four times a day
s (with a line over it)	Without
SOB	Shortness of breath
Sol	Solution
ss.	One half
Stat	Immediately
susp.	Suspension
Syr.	Syrup
tab.	Tablet
Tbsp	Tablespoonful
Tid	Three times a day
Tinc	Tincture
Top	Topically
tr.	Tincture
tsp.	Teaspoon
ung.	Ointment
w/	With
w/o	Without

Prohibited medicines along with their alternatives are given below (3):

ABBREVIATION	Mistaken For	alternative
Q.D. (every day)	Q.O.D	"daily"
Q.O.D.(every other day)	Q.D	"every other day"

Some of the Major Medicine Groups [2,3,8]

Alpha- blockers

Examples

- Dihydroergotamine mesylate
- Phentolamine mesylate

Uses:

- Hypertension (high blood pressure)
- Urinary retention in prostatic hyperplasia

Side effects*:*

- Diarrhea, nausea, and vomiting.
- Postural hypotension (low blood pressure)
- Nasal congestion
- *Tachycardia*

Contraindications:

- Myocardial infarction
- Angina

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Antacids

Examples

- Aluminum carbonate
- Calcium carbonate

Uses:

- Gastro-esophageal reflux
- Gastritis

- Peptic ulcer

Side effects:

- Constipation
- Diarrhea
- Flatus, abdominal distention,

Contraindications:

Allergy and sensitivity

Antiangina medicines

Examples
Captopril
Propranolol
Verapamil
Uses:

- Angina
- Hypertension (high blood pressure)
- Heart failure

Side effects:
- Headache, edema, dizziness
- Postural hypotension
- Fatigue
- Arrhythmia

Contraindications:

- Increased intracranial pressure
- Intracranial bleed

Anticholinergics

Examples
Atropine sulfate
Scopolamine

Uses:

- Decrease the gastrointestinal, urinary and gallbladder motility
- Relieve nausea and vomiting

Side effects:

- Dryness of the mouth
- Paralytic ileus
- Constipation
- Urinary problems (retention and hesitancy)
- Dizziness and headache

Contraindications:

- GI or urinary obstruction
- Narrow-angle glaucoma
- Myasthenia gravis

Anticoagulants

Examples

- Warfarin
- Heparin

Uses:

- Myocardial infarction
- Pulmonary embolus
- Deep venous thrombosis

Side effects:

- Hemorrhage
- Diarrhea
- Fever
- Rash

Contraindications:

- bleeding disorders

Anticonvulsants

Examples:

- Phenytoin
- Diazepam

Uses:

- Seizures
- Epilepsy

Side effects:

- Depression of bone marrow
- Gi problems
- Ataxia

Contraindications:

Allergy

Antidepressants

Examples:

- Sertraline
- Amitriptylyline
- Bupropion
- Phenelzine

Uses:

- Depression

Side effects:

- Orthostatic hypotension
- Mouth dryness
- Dizziness, drowsiness
- Urine retention,
- High blood pressure

- Kidney failure

Contraindications:

- Large prostate
- Seizures
- Kidney
- Liver and heart disease

Antidiabetic medicines

Examples:

- Insulin
- Metformin

Uses:

- Diabetes

Side effects:

- Hypoglycemia
- Kidney and liver damage

Contraindications:

- Kidney and liver disease

Antidiarrheals

Examples:

- Bismuth subgallate
- Kaolin and pectin mixtures

Uses:

- Diarrhea

Side effects:

- Constipation
- Paralytic ileus

- Stomach pain

Contraindications:

- Colitis

Anitdysrhythmics

Examples:

- Digoxin
- Quinidine

Uses:

- Cardiac arrhythmias

Side effects:

- Low blood pressure
- Bradycardia

Antihistamines

Examples:

- Diphenhydramine hydrochloride
- Chlorpheniramine maleate

Uses:

- Allergies

Side effects:

- Drowsiness, headache
- Urinary retention

Contraindications:

- Asthma
- Peptic ulcer
- Narrow angle glaucoma

Antihypertensives

Examples:

- Captopril
- Propranolol

Uses:

- Hypertension
- Heart failure
- Angina

Side effects:

- Hypotension (high blood pressure)
- Tachycardia
- Bradycardia
- Nausea, vomiting and headache

Contraindications:

- Heartblock

Anti-infectives

Examples:

- Penicillin
- Tetracycline

Uses:

- Infections

Side effects:

- Diarrhea, nausea, vomiting,
- Bone marrow depression
- Anaphylaxis

Contraindications:

- Allergy

Cough medicines & Expectorants

Examples:

- guaifenesin
- codeine

Uses:

- Cough from bronchitis, TB, pneumonia, cystic fibrosis and COPD

Side effects:

- Dizziness, drowsiness and nausea

Contraindications:

- Iodine sensitivity
- Pregnancy, lactation
- Over active thyroid

Nonsteroidal anti-inflamatories (NSAIDS)

Examples:

- Ibuprofen
- Naproxen

Uses:

- Pain,
- Arthritis
- Dysmenorrhea

Side effects:

- Stomach pain
- Lack of appetite, anorexia
- Dizziness and drowsiness

Contraindications:

- Asthma,
- Severe liver and/or kidney disease.

Laxatives

Examples:

- Psyllium
- Docusate sodium

Uses:

- Constipation

Side effects:

- Cramping
- Diarrhea
- Nausea

Contraindications:

- Large colon, stomach pain
- Nausea, vomiting, impaction, GI obstruction, gastric retention and colitis

Other groups

- Opiod analgesics
- Diuretics
- Anxiolytics
- Corticosteroids
- Antivirals
- Anti cancer drugs
- Antipsychotics
- Antiparkinsonism drugs

The Seven "Rights" Of Medical Assistance

1-The Right Medicine

Always use right medicine *i.e.*

- Do NOT use any medicine that has an ambiguous label.
- Do NOT use any medicine without a complete label.
- Read the label against the medicine record at least 3 times
- If the patient has taken a wrong medicine, always report it.

2-The Right Patient

Select the right patient i.e.

- Check the identity of patient before assisting in medication
- When a person takes another person's medication, alwayse report it.

3-The Right Time

Choose a right time i.e.

- The medicine must be given on the right time. For example, if the medicine is to be given in three divided doses, each dose should be given at the interval of every 8 hours.

4-The Right Dose

- Check the dose twice before giving medication.
- Overdose must be reorted

5-The Right Route

- Check the label to search out the right route. Medication via wrong rout must be reported.

6-The Right Form

- Check the label against the order to make sure that you have the right form.

7-The Right Documentation

- All documentation must be complete and precise [2].

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