The Evolution of Regulatory Compliance in the use of Psychotropic Medications through an Interdisciplinary Approach

Presented By:
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Objectives:

• Participants should be able to understand regulatory requirements surrounding the use of psychotropic pharmacotherapy within the long-term care facilities.

• Understand the evolution regarding pharmacological and non-pharmacological approaches to treatment of Dementia, Anxiety, Depression, Insomnia and Psychosis.

• Understanding the Interdisciplinary approach to evaluation(s) and recommendation(s) for psychotropic pharmacotherapy.

• Understanding the value of the Pharmacy Consultant’s role in providing direction for the interdisciplinary approach to psychotropic pharmacotherapy.
The Perception:

The problematic use of medications, such as antipsychotics, is part of a larger, growing concern. This concern is that nursing homes and other settings (i.e. hospitals, ambulatory care) may use medications as a “quick fix” for behavioral symptoms or as a substitute for a comprehensive care approach that involves a thorough assessment of underlying physical, functional, and psychosocial causes and individualized, person-centered interventions.
Historically, antipsychotics and benzodiazepines have been used excessively (and without appropriate diagnosis or monitoring for side effects) in nursing home residents, often solely for the convenience of staff.
Reality:

Studies have found that most residents of long-term care facilities receive at least one psychotropic medication.
Meanwhile, antidepressants have been underutilized because depression is often overlooked as a cause of behavioral disturbances in this population.
The misuse of psychotropic drugs exposes patients to medication side effects and can lead to deterioration of medical and cognitive status.
The Fix began:

To combat this problem, the federal government passed nursing home reform legislation, the Omnibus Budget Reconciliation Act (OBRA) of 1987. This legislation was directed at protecting residents of long-term care facilities from medically unnecessary “physical or chemical restraints imposed for purposes of discipline or convenience."
The Omnibus Budget Reconciliation Act (OBRA) of 1987 limited the use of psychotropic medications in residents of long-term care facilities.
Updates of OBRA guidelines have liberalized some dosing restrictions, but documentation of necessity and periodic trials of medication withdrawal are still emphasized.
Problem behavior

1. Identify or rule out medical and environmental causes and psychosocial stressors
2. Medical and environmental solutions fail, and a drug is needed to improve or maintain functional status

Acceptable diagnosis

Psychosis or psychotic mood disorder
- Hiccups, nausea, vomiting, or pruritus
- Huntington’s chorea
- Tourette’s syndrome

Dementia

Insomnia

Prescribe an antipsychotic with no restrictions (see Table 6).

Target behavior is documented, permanent, persistent and causing psychotic symptoms or danger to the patient or others

Prescribe a short-acting sedative-hypnotic (see Table 5):
- Limit daily use to less than 10 days unless dosage reduction is unsuccessful.
- Attempt dosage reduction three times in 6 months unless harmful to the patient.

Prescribe a short-acting anxiolytic (see Table 5):
- Limit daily use to less than 4 months unless dosage reduction is unsuccessful.
- Attempt dosage reduction twice a year unless harmful to the patient.

Do not prescribe an antipsychotic in only for the following:
- Indifference to surroundings
- Fidgeting or nervousness
- Uncooperative attitude or behavior
- Impaired memory
- In sociability
- Depression without psychosis
- Agitated behaviors not dangerous to the patient or others
- Poor self-care
- Restlessness
- Wandering
- Insomnia
- Anxiety

If indicated, prescribe an antipsychotic:
- Routine orders are preferred.
- Prescribe the antipsychotic as needed only if:
  - Titrating dosage upward for symptom relief, downward to avoid side effects or downward for dosage reduction.
  - Managing unexpected, harmful behaviors that cannot be handled in other ways.
- Attempt dosage reduction and behavioral interventions unless:
  - Dosage reduction has been attempted twice a year and failed.
  - A psychiatric diagnosis is present, and symptoms have stabilized without side effects.
  - Written justification is provided.
- Monitor for side effects (emphasizing tardive dyskinesia, cognitive/behavioral impairment, orthostatic hypotension, akathisia and parkinsonism).

Unnecessary drug:
- Excessive dose
- Excessive duration
- Inadequate monitoring
- Inadequate indications
- Adverse consequences
- Duplicate drug

Dementia with agitated behaviors that are documented, persistent and causing danger to the patient or others
- Psychiatric diagnosis with anxiety
- Panic disorder
- Generalized anxiety disorder

Treatment fails

Prescribe a short-acting benzodiazepine (see Table 5):
- Limit daily use to less than 4 months unless dosage reduction is unsuccessful.
- Attempt dosage reduction twice a year unless harmful to the patient.
The Health Care Financing Administration (HCFA), an agency responsible for regulating nursing homes participating in the Medicare and Medicaid programs, developed interpretive guidelines for fulfilling OBRA requirements.
These guidelines were implemented nationally in 1990 and remain in force. Updated guidelines were implemented in July 1999.
Summary of OBRA Interpretive Guidelines
All psychotropic drugs (antidepressants, anxiolytics, sedative-hypnotics and antipsychotics) are subject to the “unnecessary drug” regulation of OBRA. According to the HCFA guidelines, “residents must be free of unnecessary drugs,” which are defined as those that are duplicative, excessive in dose or duration, or used in the presence of adverse effects or without adequate monitoring or indication. The remaining regulations apply to anxiolytic, sedative-hypnotic and antipsychotic drugs only.
Medical, environmental and psychosocial causes of behavioral problems must be ruled out, and non-pharmacologic management must be attempted before psychotropic drugs are prescribed to nursing home residents. Because treatment with psychotropic medications is indicated only to maintain or improve functional status, diagnoses and specific target symptoms or behaviors must be documented, and the effectiveness of drug therapy must be monitored.
• Specific dosage limits must be observed, and periodic dosage reductions or drug discontinuations must be undertaken.

• Side effects (of antipsychotics, in particular) must be monitored. Barbiturates and certain other older tranquilizers may not be prescribed unless they were being used successfully before a patient was admitted to a long-term care facility.

• Phenobarbital can be used solely to control seizures.
# Drugs Not to Be Used in Nursing Homes

<table>
<thead>
<tr>
<th>Barbiturates</th>
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<tbody>
<tr>
<td>Amobarbital (Amytal)</td>
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<tr>
<td>Amobarbital-secobarbital (Tuinal)</td>
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<tr>
<td>Aspirin-butalbital-caffeine (Fiorinal)</td>
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<tr>
<td>Butabarbital (Butisol)</td>
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<tr>
<td>Pentobarbital (Nembutal)</td>
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<tr>
<td>Secobarbital (Seconal)</td>
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<tr>
<td>Other tranquilizers</td>
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<tr>
<td>Ethchlorvynol (Placidyl)</td>
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OBRA restricts the use of antipsychotic drugs only in patients with dementia. None of the OBRA dosage restrictions or monitoring requirements apply in patients with psychotic disorders (e.g., schizophrenia).
Each nursing home is surveyed annually. Because facilities that do not meet HCFA’s legislated requirements may be denied Medicare reimbursement, physicians who prescribe medications for nursing home residents must document the medical necessity of noncompliance with regulations (e.g., drug prescriptions in excess of OBRA-mandated dosages).

As a resource for physicians and facilities, a local consultant pharmacist reviews all charts monthly and assists with compliance.
• According to the OBRA strategy, the long-term care facility, rather than the prescribing physician, is accountable for monitoring drug use.

• Some consider that this approach better reflects the realities of nursing home practice, in that the prescribing physician only visits the facility occasionally.

• Regardless of where final responsibility lies, physicians need to be aware of the CMS interpretive guidelines for the fulfillment of OBRA requirements.
The updated HCFA regulations change some antipsychotic dosing restrictions. Medications considered potentially hazardous to the elderly are listed in Beer’s Criteria List.
### Drugs with a High Potential for Severe Outcomes in the Elderly

<table>
<thead>
<tr>
<th>DRUGS</th>
<th>COMMENTS</th>
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<tbody>
<tr>
<td>Psychotropics</td>
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<tr>
<td>Amitriptyline (Elavil)</td>
<td>Strongly anticholinergic and sedating</td>
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<tr>
<td>Barbiturates</td>
<td>More side effects than most sedative-hypnotic drugs; should not be used except to control seizures (phenobarbital)</td>
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<tr>
<td>Long-acting benzodiazepines</td>
<td>Long half-life and, hence, prolonged sedation; associated with an increased incidence of falls and fractures</td>
</tr>
<tr>
<td>Doxepin (Sinequan)</td>
<td>Strongly anticholinergic and sedating</td>
</tr>
<tr>
<td>Meprobamate (Miltown)</td>
<td>Highly addictive and sedating</td>
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</table>
Changes Since 1987
• Change is upon us in providing care to the resident with Dementia.

• The change includes alternative measures besides pharmacotherapy for treatment

• Documentation regarding alternative measures will be evaluated by surveyors

• Proper Diagnosis and aligning that diagnosis with the antipsychotic agent through the clinical record will be a must.
• Each facility should be working with its medical director, pharmacy vendor, and consultant pharmacist to use facility-level pharmacy data to identify residents on antipsychotic medications.

• Each resident should be examined by the interdisciplinary team, including the attending physician and pharmacist, to determine whether the dose of the medication could be gradually reduced or discontinued.
F-329 signifies an important standard and is perhaps the most important F-Tag for inappropriate antipsychotic drugging, a serious and widespread problem in nursing homes that is receiving increasing attention by both the public and regulators. The first purpose of F-329 related to antipsychotic drug use is to prevent nursing home staff from giving a resident an unnecessary antipsychotic drug.
The second purpose of this F-Tag relating to antipsychotics is to ensure that facilities take steps to wean residents off of antipsychotics drugs whenever the drugs are given. This goal is accomplished through either the implementation of behavioral interventions (unless diagnoses do not call for such interventions) or through recorded and monitored gradual dose reductions (GDR) (or, most likely, a combination of the two).
F-329

- Reasons why facilities may be cited for inappropriate use of an antipsychotics medication.
- Diagnoses that are considered clinically appropriate for the use of an antipsychotic medications.
- Gradual dose reduction (GDR) requirements for antipsychotic use with appropriate diagnosis.
- Gradual dose reduction (GDR requirements for antipsychotic use in resident with BPSD
Treating BPSD (F-329)

Use of antipsychotics to treat Behavioral or Psychological Symptoms of Dementia (BPSD) must meet certain criteria (see #1 below).

1. All of the above highlight many of the conditions/diagnoses where antipsychotic medications may possibly be appropriate, but diagnoses alone may not warrant the use of an antipsychotic (except for the hiccups or nausea and vomiting) unless the following criteria are also met ([A or B]; and C):
Treating BPSD cont.

A. The symptoms are identified as being due to mania or psychosis (such as: auditory, visual, or other hallucinations; delusions, such as paranoia or grandiosity); OR
Treating BSPD cont.

B. Individualized, person-centered behavioral interventions have been attempted and included in the plan of care, except in an emergency.] AND
Treating BPSD cont

C. The behavioral symptoms present a danger (this includes significant impact on functional ability) to the resident or to others
F-Tag 428. “Medication Regimen Review” is defined as: “A thorough evaluation of the medication regimen of a resident, with the goal of promoting positive outcomes and minimizing adverse consequences associated with medication. The review includes preventing, identifying, reporting, and resolving medication-related problems, medication errors, or other irregularities, and collaborating with other members of the interdisciplinary team.”
Impact of OBRA on the Prescribing of Psychotropic Drugs
• Several multiyear, multi-facility reviews have examined the impact of OBRA regulations on the prescribing of psychotropic drugs in nursing homes.

• Researchers confirm an encouraging trend toward increased awareness of the indications for neuroleptic drugs and the side effects of these medications.²
Since OBRA was enacted, overall use of antipsychotic drugs in nursing home residents has declined by nearly one third, and prescriptions for antidepressants have increased (by almost 85 percent in one study).

Furthermore, selective serotonin reuptake inhibitors (SSRIs), nortriptyline (Pamelor) and trazodone (Desyrel) are being prescribed significantly more often, and amitriptyline (Elavil) and doxepin (Sinequan) are being used less often.8
• The prescribing patterns for anxiolytic and sedative-hypnotic drugs are less consistent.

• One large study documented a 12 percent increase in prescriptions for anxiolytics but found decreases in the prescribing of particular agents, such as diazepam (Valium) and diphenhydramine (Benadryl).

• Two studies unequivocally cited the implementation of OBRA regulations, rather than other educational and consultative interventions, as being responsible for decreased use of neuroleptic drugs and lower dosages of these agents when they are used.
• A recent review found that specific guidelines (on appropriate diagnosis, target symptom documentation and reasonable dosage level) were widely followed, with compliance rates ranging from 70 to 90 percent.

• Less specific guidelines (on attempts to use non-pharmacologic interventions and the monitoring of drug efficacy and safety) were less well followed, with compliance rates below 55 percent.
Recommendations for the Clinical Use of Psychotropic Drugs
Prescribed judiciously, psychotropic drugs can enhance the physical and psychologic well-being of the elderly. However, altered drug disposition makes this age group particularly sensitive to undesirable side effects, which can lead to a decline in medical and functional status or the use of additional prescriptions and an increased risk of drug interactions. Psychotropic medications, including side effects and recommendations on use in the elderly, are briefly reviewed in the following sections.
ANTIDEPRESSANT DRUGS:

OBRA requirements for the prescribing of antidepressant drugs are limited. The legislation mandates only documentation of an appropriate diagnosis, use of a reasonable dosage, clinically acceptable duration of use and monitoring for common adverse reactions.
Nevertheless, choosing antidepressants with suitable side effect profiles is important in geriatric patients. The older tricyclic antidepressants, although highly effective, have side effects to which the elderly are especially sensitive. Of particular concern are excessive sedation, anticholinergic effects (dry mouth, constipation, urinary retention, blurred near vision, tachycardia and confusion), orthostatic hypotension and electrocardiographic changes. In elderly patients, it is better to use tricyclic antidepressants that cause less severe anticholinergic effects and orthostatic hypotension, such as nortriptyline and desipramine (Norpramin).
Subtle differences among SSRIs should also be considered.

The half-lives reported for fluoxetine (Prozac) and its active metabolite are long (84 and 146 hours, respectively). Because of fluoxetine's long half-life and the persistence of side effects (sometimes for weeks after discontinuation), this drug is generally not recommended for use in elderly patients.

Sertraline (Zoloft) and its metabolite have considerably shorter half-lives (25 and 66 hours, respectively).

Paroxetine (Paxil), which has no active metabolite, also has a considerably shorter half-life (24 hours) than fluoxetine.
• Most SSRIs are associated with significant drug interactions.

• Fluoxetine, paroxetine and, to a lesser extent, sertraline inhibit the metabolism of warfarin (Coumadin), benzodiazepines, quinidine, tricyclic antidepressants, theophylline and some statins.

• In patients at risk for these interactions, citalopram (Celexa). Studies have shown that compared with other SSRIs, citalopram has less of an inhibitory effect on the cytochrome P450 System. Citalopram is as effective as fluoxetine and sertraline in the treatment of depression.
Trazodone is also recommended for use in the elderly. Trazodone are fairly sedating and therefore are useful in elderly patients with depression and agitation or insomnia. Because trazodone is associated with significant orthostatic hypotension, nighttime dosing may be preferable.
Venlafaxine (Effexor) and bupropion (Wellbutrin) are effective, well-tolerated antidepressants that lack significant anticholinergic side effects. Because bupropion is structurally related to stimulants, bedtime administration should be avoided.

Bupropion in dosages above 400 mg per day is associated with seizures. In dosages exceeding 200 mg per day, venlafaxine causes increased blood pressure in 3 to 13 percent of patients. Therefore, higher dosages of these drugs are not recommended.
The tetracyclic drug mirtazapine (Remeron) is another newer antidepressant. This drug is a weak blocker of alpha-adrenergic and muscarinic receptors.

Because of these actions, mirtazapine can cause orthostatic hypotension and anticholinergic effects; however, these side effects are less severe than those occurring with tricyclic antidepressants.

Somnolence has been reported by more than 50 percent of patients treated with mirtazapine. Research on the use of this drug in geriatric patients has been limited.
Most antidepressants have a long enough half-life in the elderly that they may be given as a single dose in the morning or evening, depending on the sedative or activating properties of the particular drug. Dosages need to be titrated carefully: the more gradual the titration, the lower the likelihood of side effects.
ANXIOLYTIC AND SEDATIVE-HYPNOTIC DRUGS
Benzodiazepines are indicated for the short-term management of anxiety and insomnia, but nonpharmacologic measures should be tried first.

Emphasizing good sleep habits is a first step and should include decreasing afternoon caffeine intake, exercising regularly before dinner, avoiding naps, establishing regular sleep hours, treating nighttime pain, addressing nocturia and maintaining a comfortable bedroom environment (temperature, noise level, lighting, etc.).
• When benzodiazepine therapy becomes necessary for older patients, it is preferable to use short-acting agents.

• Elderly patients can better tolerate temazepam (Restoril) and lorazepam (Ativan), which have relatively short half-lives (three to 18 hours and 10 to 16 hours, respectively) and relatively short durations of action.

• Long-acting benzodiazepines, which have half-lives that may exceed 100 hours, carry higher risks for elderly patients. Indeed, the continuous administration of a long-acting benzodiazepine can lead to profound confusion, cognitive impairment and falls.

• For this reason, OBRA guidelines permit the use of long-acting benzodiazepines in residents of long-term care facilities only if a trial of short-acting benzodiazepines fails.

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Side effects of all benzodiazepines include excessive sedation, psychomotor slowing, cognitive impairment, confusion, forgetfulness, morning “hangover” effect, ataxia and falls. Occasionally, dysphoria, irritability and agitation develop in elderly patients treated with these drugs.
• OBRA regulations permit the use of antihistamines, but recent changes have declared these as “potentially inappropriate” such as:

• diphenhydramine and hydroxyzine (Atarax, Vistaril) for the management of anxiety and insomnia in elderly patients.

• However, even in low dosages, these drugs are associated with impairment of daytime functioning.

• Furthermore, the anticholinergic effects of antihistamines (delirium, confusion, disorientation, etc.) may exacerbate problem behaviors.
Sedating antidepressants in low dosages are often used to treat insomnia. Nortriptyline (in a dosage of 10 to 25 mg per day) and particularly trazodone (in a dosage of 25 to 150 mg per day), which exhibits no anticholinergic effects, are well suited for use in geriatric patients.
ANTIPSYCHOTIC DRUGS
Because of their many deleterious side effects, antipsychotics should be used only as a last resort in the management of behavioral problems in the elderly. The efficacy of these drugs for most problem behaviors is debatable. In several studies, antipsychotics have been no more effective than placebo. Some investigators believe that antipsychotic drugs should be used only for the management of psychotic features that cause patients “serious distress.”
Conventional (Typical) Antipsychotic Medications:

Haloperidol (marketed as Haldol)
Loxapine (marketed as Loxitane)
Molindone (marketed as Molindone)
Thiothixene (marketed as Navane)
Pimozide (marketed as Orap)
Trifluoperazine (marketed as Stelazine)
Chlorpromazine (marketed as Thorazine)
Fluphenazine (marketed as Prolixin)
Prochlorperazine (marketed as Compazine)
Atypical Antipsychotic Medications:

Aripiprazole (marketed as Abilify)***
Asenapine Maleate (marketed as Saphris)
Clozapine (marketed as Clozaril)
Iloperidone (marketed as Fanapt)
Lurasidone (marketed as Latuda)
Olanzapine (marketed as Zyprexa)
Olanzapine/Fluoxetine (marketed as Symbyax)
Paliperidone (marketed as Invega)
Quetiapine (marketed as Seroquel)***
Risperidone (marketed as Risperdal)
Ziprasidone (marketed as Geodon)
Appropriate Diagnoses for the use of an Antipsychotic Medication:

- Schizophrenia
- Schizo-affective Disorder
- Mood Disorder (e.g. bipolar disorder, severe depression w/psychotic features)
- Delusional Disorder
- Psychosis in the absence of Dementia
- Schizophreniform Disorder
- Medical illness with psychotic symptoms (e.g. neoplastic disease or delirium) and/or treatment related psychosis or mania (e.g. high-dose steroids)
- Tourettes Disorder or Huntington’s Disease
- Hiccups
- Nausea and vomiting associated with cancer or chemotherapy
Common side effects of antipsychotics include sedation, anticholinergic effects, orthostatic hypotension, extrapyramidal symptoms and tardive dyskinesia. Extrapyramidal symptoms include dystonic reactions, pseudo-parkinsonism and akathisia. All extrapyramidal symptoms should be reversible on discontinuation of antipsychotic drugs.
Dystonic reactions are acute spasms of muscle groups and can result in a fixed upward gaze, neck twisting, facial muscle spasms causing grimacing, a clenched jaw and difficulty with speech. Often painful, dystonic reactions can be quite frightening to patients. These reactions typically occur soon after an antipsychotic drug is initiated.
Pseudo-parkinsonism presents with classic Parkinsonian symptoms such as rigidity, slowed movements, shuffling gait, slow, monotonous speech and pill-rolling tremor. The symptoms develop over a few weeks of antipsychotic drug therapy.
Akathisia is a form of agitation. Symptoms include inability to sit still, pacing, restlessness, foot tapping, and rocking and shifting of weight while standing. It can be difficult to distinguish akathisia from the agitation that is often present in patients with dementia. Akathisia generally appears days after the initiation of an antipsychotic medication.
Although often considered an extrapyramidal symptom, tardive dyskinesia is a separate, mechanistically distinct phenomenon. It is a long-term side effect that may persist after an antipsychotic drug is discontinued. Typical symptoms are rhythmic involuntary movements of the tongue, lips or jaw, such as protrusion of the tongue or puckering of the lips. Irregular involuntary movements of the extremities or spine are also possible. All traditional antipsychotics may cause tardive dyskinesia.
Older neuroleptic drugs are classified as high, moderate or low potency. Antipsychotic drugs with higher potency have a greater affinity for dopamine receptors and tend to cause more extrapyramidal symptoms. Antipsychotics with lower potency have a greater affinity for histaminic, alpha-adrenergic and muscarinic receptors. These drugs are more likely to cause increased sedation, orthostatic hypotension and anticholinergic effects. Elderly patients are sensitive to all these side effects.
Mounting evidence indicates that newer antipsychotics given in low dosages are much less likely to cause extrapyramidal symptoms. These drugs, which include clozapine (Clozaril), olanzapine (Zyprexa), quetiapine (Seroquel) and risperidone (Risperdal), have a greater affinity for dopamine-D$_2$ receptors and are potent antagonists of the serotonin receptor.
Non-Pharmacological Approaches to Address Behaviors
CMS is emphasizing non-pharmacological alternatives for nursing home residents, including potential approaches such as:

- consistent staff assignments,
- increased exercise or time outdoors,
- monitoring and managing acute and chronic pain,
- and planning individualized activities.
Sensory stimulation approaches focus on stimulating the senses of the person with dementia. The aim of these approaches is to respond to the unmet needs for stimulation, to enhance the senses and to achieve therapeutic effects such as pain control, relaxation and reduction of anxiety. Some sensory stimulation approaches are informed by physiological models regarding the calming influence of sensory touch or proximity associated with some techniques such as massage. Examples include:

- Aromatherapy
- Light therapy
- Massage and touch therapy
- Music therapy
Psychotropic medications are sometimes required to maximize quality of life and functional status in nursing home residents. In tailoring pharmacologic regimens for these patients, physicians need to give careful attention to accurate diagnosis, appropriate dosing, side effects, drug interactions and pertinent drug pharmacokinetics. An ongoing evaluation of effectiveness requires reassessment at regular intervals to rethink medication regimens in light of changes in the health status of geriatric patients.