

Pharmacy 492  
Winter Quarter 2007

## Clinical Pharmacy Services in Long-term Care Facilities

Annie Lam, Pharm.D, CGP, FASCP

---

---

---

---

---

---

---

### Objectives

- Clinical needs of the elderly population
- Pharmacist activities in LTC
- Drug regimen review (DRR)
- Monitoring criteria
- Communicating clinical interventions and recommendations

---

---

---

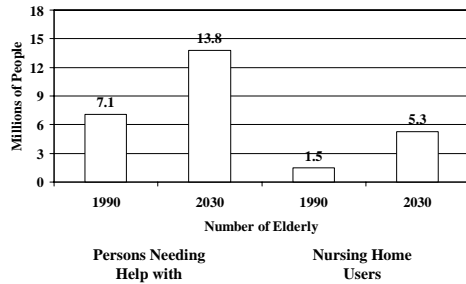
---

---

---

---

Number of Elderly Needing Long-Term Care  
1990 and 2030



---

---

---

---

---

---

---

## Clinical Needs

- Fastest growing segment of population
- Multiple disease states
- Multiple medications
- Reduced organ reserve capacity
- Greater risk of adverse drug reactions
- Most regulated industry

---

---

---

---

---

---

---

---

## Percent of Over 65 Population in Selected Age Group

Year	65-74	75-84	85 years and over
1995	56.1	32.3	11.6
2010	53.4	30.0	15.5
2020	59.5	27.7	12.8
2030	54.9	32.8	12.4
2050	46.1	31.6	22.3
2080	44.6	31.7	23.7

---

---

---

---

---

---

---

---

## Pharmacist Activity in LTC

- Drug regimen review (DRR)
- Health Initiative Programs
- Psychoactive Meetings
- In-service education
- Quality Assurance Committee Meetings
- Medication pass observation
- Medication storage review

---

---

---

---

---

---

---

---

## Drug Regimen Review

- Federal indicator for use of “unnecessary drugs”
  - Corresponding diagnosis for each medication
  - Appropriate dose and duration
  - Adverse drug reactions
  - Adequate monitoring
- Identify drug-related problems

---

---

---

---

---

---

---

## Clinical Monitoring

- Drug effectiveness
- Drug utilization
- Adverse drug reactions
- Appropriate laboratory data for monitoring
- Pharmacokinetic dosing
- Psychotropic drug monitoring

---

---

---

---

---

---

---

## Types of Drug Regimen Reviews

- General review
  - Review all medications for appropriateness
- Focused review
  - Specific disease state or medication therapy

---

---

---

---

---

---

---

## General Drug Regimen Review

- Review problem list
- Review current physician order sheet and telephone orders
- Confirm diagnosis for each medication
- Review laboratory data
- Review progress notes for assessments
- Review MAR for utilization & compliance

---

---

---

---

---

---

---

---

## Example

- Pharmacist receives an order for a new hypertension medication for a resident in a nursing facility:  
Lisinopril 10 mg QD
- What are some information the pharmacist should look up before processing this order:
  - Other hypertension meds currently on profile and adherence
  - Blood pressure control in the past 3-6 months
  - Renal function, drug allergy
  - Any past reports of dizziness, falls, unsteady gait

---

---

---

---

---

---

---

---

## General Drug Regimen Review

- Advantages:
  - Identify all medication related problems
  - Screens residents for:
    - appropriate drug use
    - duplication of therapy
    - drug/drug, drug-disease, drug/food interactions
    - adverse drug reactions
  - Process-fast

---

---

---

---

---

---

---

---

## General Drug Regimen Review

---

- Disadvantages:
  - Repetitive
  - May not offer detailed review
  - Process-oriented instead of focusing on resident care issues

---

---

---

---

---

---

---

## Focused Drug Regimen Review

---

- Choose disease state or problem
- Review current therapy
- Review therapeutic outcomes
- Identify possible cause of therapy failure

---

---

---

---

---

---

---

## Example

---

- Pharmacist receives an order to increase a patient's lisinopril dose from 10 mg QD to 10 mg BID.
- What kind of drug regimen review should be done?
- What are some of the parameter the pharmacist should examine?

---

---

---

---

---

---

---

### Example cont'd

- In addition to list of actions suggested for general drug regimen review, the pharmacist should consider additional review of:
  - Reasons for increase in dose: BP control, concurrent health problems and changes
  - Review patient's lifestyle and adherence to medications
  - Review adverse drug events, potential for drug/disease/OTC herbal interactions
- Other actions to be taken:
  - Formulate and implement follow-up care plan with facility or patient

---

---

---

---

---

---

---

---

### Focused Drug Regimen Review

- Advantages
  - Provides variety and challenge
  - Enhances knowledge in specific disease or medication therapy
  - Outcome-oriented
- Disadvantages
  - Time-consuming
  - Potentially overlooks other problems

---

---

---

---

---

---

---

---

### Drug Regimen Review Pearls

- Resident specific
- Proactive
- Comprehensive
- Interdisciplinary
- Systematic

---

---

---

---

---

---

---

---

## Health Initiative Programs

---

- Focus on disease state management
- Examples:
  - Heart failure
  - Atrial fibrillation
  - Depression
  - Osteoporosis
  - Hyperlipidemia

---

---

---

---

---

---

---

## Health Initiative Programs

---

- Identify “at risk” residents
- Goal:
  - Optimize existing care
  - Identify untreated diseases
  - Decrease total cost of care
  - Increase overall quality of care

---

---

---

---

---

---

---

## Formulary issues

---

- Geriatric Pharmaceutical Care Guidelines
  - Information on drug products in a therapeutic class to best serve needs of the elderly
  - Clinical evaluations based on pharmacokinetics, efficacy, safety, toxicity, patient considerations
  - Relative cost of drug products within a therapeutic class
  - Physicians prescribing drugs clinically rated as preferred has resulted in improved health care and cost savings for residents

---

---

---

---

---

---

---

### Clinical Intervention Outcomes

- Terminate unnecessary medications
- Correct drug-related problems
- Simplify dosing regimens
- Provide cost savings
- Add needed medications that were not being used

---

---

---

---

---

---

---

### Communication of DRR reports

- Present the problem with supporting data
  - Data from nurses, medical records
  - Concise and brief
- Present recommendations
  - Be diplomatic and non-threatening
  - Examples of statements:
    - “Perhaps consideration might be given to...”
    - “Please consider...”
    - “If clinically warranted...”
    - “This appears to be a potential problem...”

---

---

---

---

---

---

---

### Communication of DRR Reports

- Be prepared to cite references
  - Provide evidence
- Thank physician for considering recommendations

---

---

---

---

---

---

---



### In-service Education

- Effective way to impact drug therapy by providing education to nursing and other facility staff
- Topics should be tailored to meet specific needs of the facility
- Keep in-service short, simple, and practical

---

---

---

---

---

---

---

### Quality Assurance Meetings

- Discuss policies and procedures to help ensure resident receives best possible care and gives staff solid direction about how to handle unfamiliar or difficult situations
- Discuss Problems/Trends
- Work with medical director and other disciplinary team members
- Networking opportunities to share drug therapy topics with other members

---

---

---

---

---

---

---

### Medication Storage Review

- Performed by consultant pharmacists or nurses
- Check treatment cart for date, proper separation of medications, proper labeling
- Check refrigerator for proper temperature, outdated medications
- Check medication room for any items that should not be stored there
- Check E-kit

---

---

---

---

---

---

---

## Medication Pass Audits

---

- Right medication, strength, patient, dose, time given
- Proper administration of medication (i.e., crushing medications when inappropriate)
- Other issues: hand washing, locking medication carts, resident rights

---

---

---

---

---

---

---

## Being a Consultant Pharmacist

---

- Flexible scheduling
- Variety in schedule
- Personal and professional challenge

---

---

---

---

---

---

---

## Being a Consultant Pharmacist

---

- Strong professional support
  - Teamwork, call for help
  - Monthly consultant meeting to share experiences, problem solve and team building
  - Resources: journals, published articles, audio and video tapes for continuing education
  - Free continuing education programs for pharmacists

---

---

---

---

---

---

---