

POLYPHARMACY AND PILLS BURDEN ON GERIATRIC PATIENTS

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1. DEFINITION

Polypharmacy can be referred as taking four or more different drugs that have the potential to interact with each other (Taylor, 2011). There are strong correlation between increased age and polypharmacy, and polypharmacy and pills burden (Slabaugh et al., 2010).

Pills burden refers to the number of tablets, capsules or other dosage forms that a patient takes on a regular basis. High pills burden decreases compliance with drug therapy. It is associated with adverse medication reactions, drug-drug interactions, hospitalization, medication errors, and increased costs for the patients. There are two components of pills burden: polypharmacy and the frequency of administration (Polypharmacy, 2011).

2. EFFECTS OF POLYPHARMACY AND PILLS BURDEN

Polypharmacy → Pills Burden → Non-compliance → Hospital Admission

- Polypharmacy → Increases pills burden by making a drug regimen more complicated (Collier, 2012).
- Pills Burden → Increases non-compliance to the medical regime (Sergi et al., 2011).
- Non-compliance → Increases drug resistance, comorbidity, morbidity, mortality, disability and hospitalization (Richardson et al., 2011).
- Hospitalization → Increases health care cost and tax health care resources (WHO, 2003).

3. PILLS BURDEN AND REASON FOR NON-COMPLIANCE

(Cited in Hennessey & Heryer, 2011, World Health Organization, 2003)

Financial Burden	Higher medication cost, lack of insurance, limited sources of income and lack of public funding (3 in 10).
Physical Impairment	Difficulty opening containers, arthritic fingers, swallowing difficulty and other physical limitation (Hennessey & Heryer, 2011).
Mental Impairment	Memory loss, dementia, alzheimer disease and confusion over medication, schedule and placement (Perry, 2011).
Knowledge Deficit	Lack of knowledge about importance of taking medication and lack of understanding of side effects of medication (WHO, 2003).
Other	Complex schedule, irregular medicine, changing medication regime and other physical and personal problems (WHO, 2003).

4. KEY NURSING STRATEGIES

Understand the Effects of Polypharmacy

There are two types of drug reactions. Type A reactions are exaggerated reactions to the prescribed drugs given at a therapeutic dose and type B reactions are defined as non-predictable effects such as anaphylaxis. More than 80% of adverse reactions in hospital are type A. Therefore, nurses must understand how polypharmacy and pills burden occurs and affects patients' health outcome. In geriatric patients, liver reduces in size with age and its ability to metabolize drugs also decline which increases the risk of toxicity (Taylor, 2011). Risks of adverse effects increase as the number of medications increases (Slabaugh et al., 2010).

Perform Routine and Complete Assessment

During admission, a complete health and medication history is very important to minimize the adverse reactions and toxicity (Taylor, 2011). Health care providers can use four concepts such as connectedness and collaboration, open-ended questions, positive attitude and encourage support to develop coaching skills that can be applied to improve patient adherence (Hennessey & Heryer, 2011).

Build and Maintain Close Relationship

Nurses should be able to recognize problems and report concerns over polypharmacy. To recognize problems, nurses require skills to build close relationships with patients. Nurses require to play an important role in keeping patients safe and well (Perry, 2011). To increase the compliance nurses can also motivate patient to use modern tools such as dosette boxes, alarm clock and reminders.

Educate and Motivate Patients

Educational interventions can minimize the incidence of adverse reaction and non-compliance (Bista et al., 2009). Mainly, nurses are advised to implement multidimensional interventions, that is, to combine educational/cognitive, counseling/behavioral, and psychological/affective interventions (Berben et al., 2011).

Monitor and Identify the Barriers

Nurses need to address perceptual and practical barriers to medication adherence. Perceptual barriers are when patients choose not to take their medicine and practical barriers are when patients are unable to take their medicine because of a lack in capacity and other physical limitation (Auyeung & McRobbie, 2011).

Consult with Multidisciplinary Team Members

Nurses must review patient's physical, functional and mental status regularly and discuss with multidisciplinary team members (Sergi et al., 2011). Since, patients' economic status also associated with non-compliances, nurses need to consult with social workers to complete detail assessment (Mishra, 2011).

Follow-up the Progress, Document and Report

Nurses' follow up and counseling skills such as motivational interviewing can reduce non-compliance. Addressing patients' concerns about their medicine can improve adherence (Auyeung & McRobbie, 2011). Nurses must monitor compliances and report as soon as possible (Sergi et al.).

Advocate for Patient's Safety and Wellness

Collaboration between patients, nurses, pharmacist, social worker and physicians is very important to ensure that all prescribed medications are necessary and benefit clearly outweigh the burden such as side effects, cost and compliance (Elon, 2010).

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