

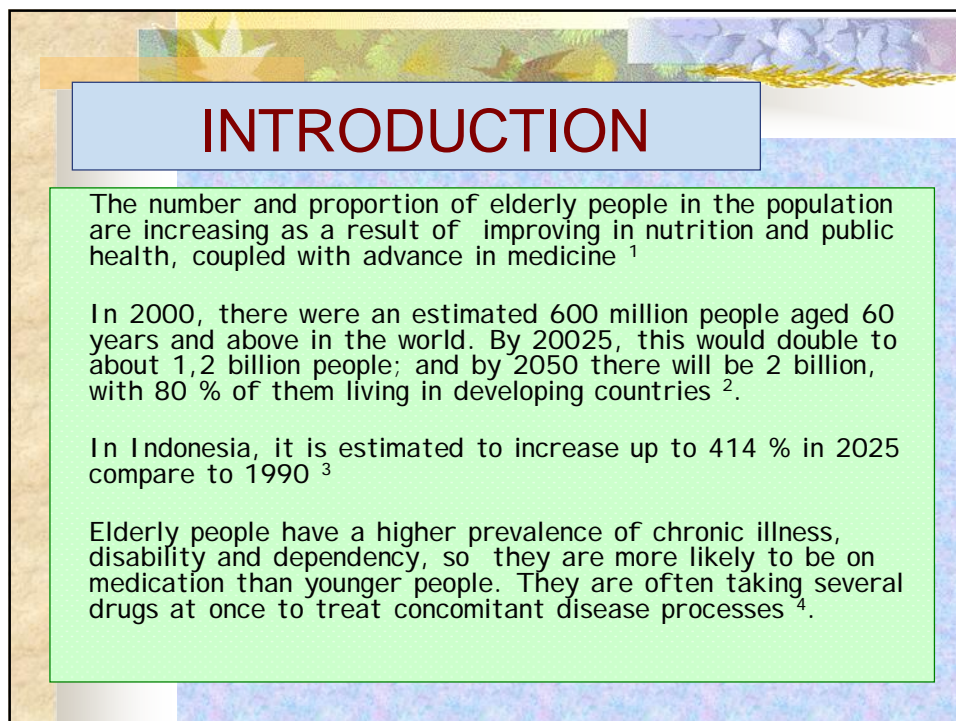


Slide 1 features a decorative header with a gold star emblem on the left and the Universiti Sains Malaysia (USM) logo on the right. The main title is centered in a pink box, and the authors' names are listed in a blue box below it. A green box at the bottom provides affiliation details for each author.

**Unnecessary Drug Therapy and Cost Saving
Among Hospitalized Geriatric Patients
in Yogyakarta, Indonesia**

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INTRODUCTION

The number and proportion of elderly people in the population are increasing as a result of improving in nutrition and public health, coupled with advance in medicine ¹

In 2000, there were an estimated 600 million people aged 60 years and above in the world. By 2025, this would double to about 1,2 billion people; and by 2050 there will be 2 billion, with 80 % of them living in developing countries ².


In Indonesia, it is estimated to increase up to 414 % in 2025 compare to 1990 ³

Elderly people have a higher prevalence of chronic illness, disability and dependency, so they are more likely to be on medication than younger people. They are often taking several drugs at once to treat concomitant disease processes ⁴.

The use of several drugs concomitantly in the treatment of multiple chronic disease may cause polypharmacy⁴. The unnecessary drug therapy problems frequently tend to be overlooked in polypharmacy prescribing⁵


Multiple medications may lead to drug related problem (DRPs), including drug interactions, adverse drug reactions, therapeutic failure and patient non compliance⁴. Some studies have shown that cost highly correlated with DRPs,

Little is known about relationship between unnecessary drug therapy and cost saving especially in geriatric patients.



OBJECTIVE

The aim of this study was to identify unnecessary drug therapy on hospitalized geriatric patients in both government and private hospitals in Yogyakarta, Indonesia and to calculate the waste of cost spent on unnecessary drugs



METHOD

Research type was descriptive.

Data taken prospectively and retrospectively through medical record in 100 geriatric patients hospitalized in government hospital and private hospital in Yogyakarta

The study was conducted by accidental sampling with inclusion criteria: patient aged 65 year and above, complete medical record, patient admitted to Internal Medicine Department in 2006 and 2007.



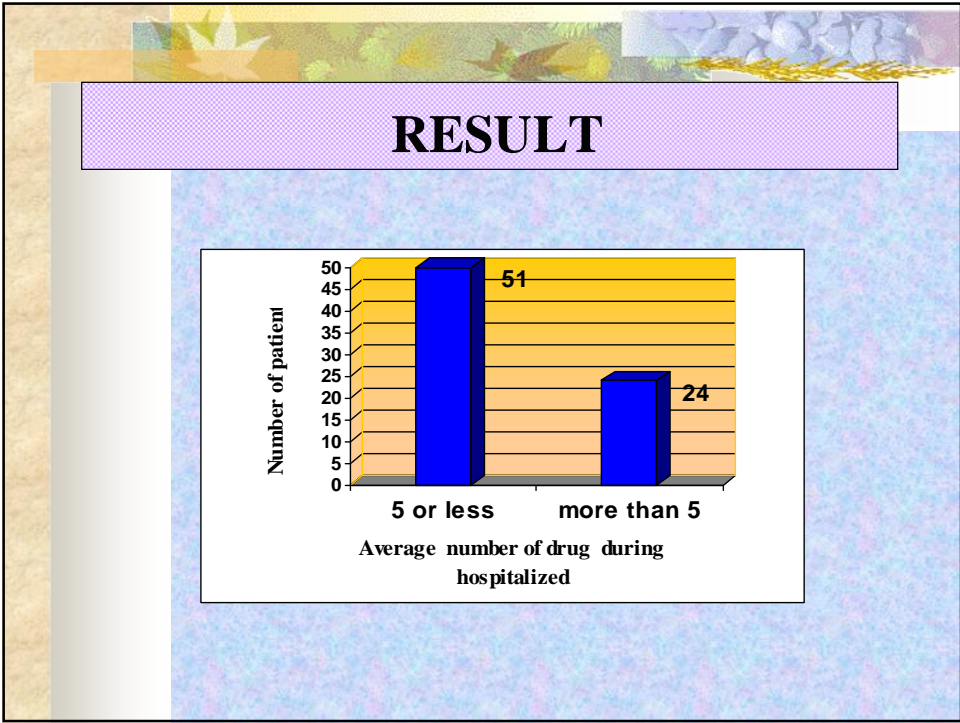
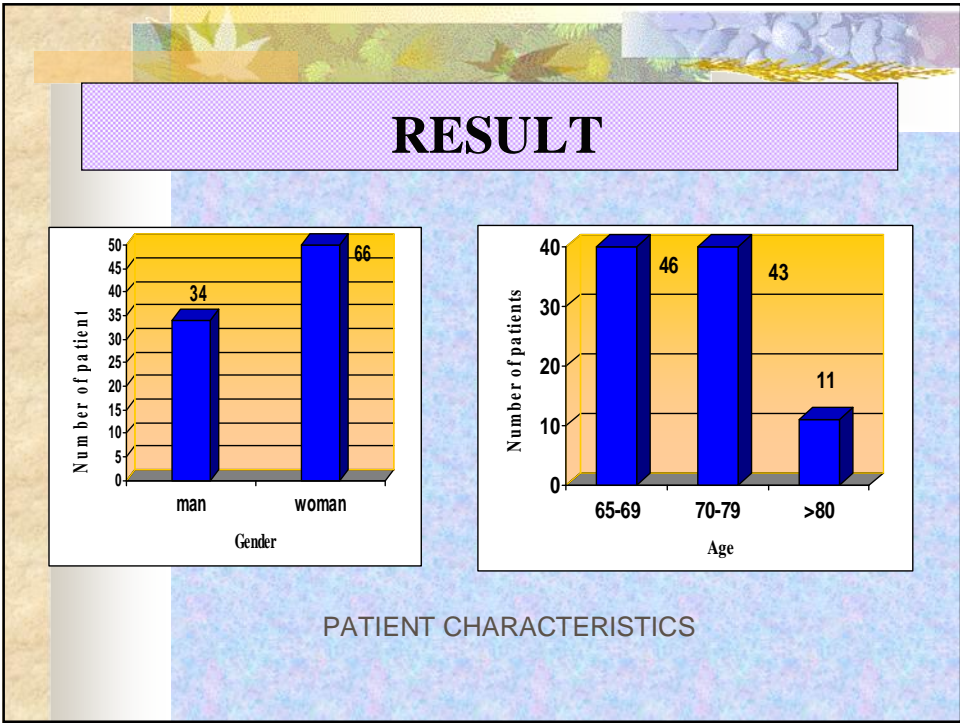
METHOD

Unnecessary drug therapy was divided into 4 categories, as following:

- No medical indication
- Addictive/recreational drug use
- Nondrug therapy appropriate
- Duplicate therapy
- Treat avoidable ADR

Pharmacist assessed unnecessary drug therapy prescribing by reviewing medical records, interviewing with the patients and conducting discussion with senior geriatric consultant.

Evaluation of the data was carried out descriptively.



RESULT

Our research found unnecessary drug therapy occurred in 63 cases (63 %) with total 117 unnecessary drug therapies.

The causes of unnecessary drug therapy were:

- no medical indication 89 incidences (76,1 %)
- no drug therapy was more recommended 5 incidences (4,3)
- duplication therapy 23 incidences (19 %)

The agent most commonly associated with unnecessary drug therapy were ranitidine, antibiotics (ceftriaxone, cefotaxime, ceftazidime, ciprofloxacin), citicolin.

RESULT

Patients who are exposed to unnecessary drug therapies can only realize the toxic potential of that drug and have little or no chance of realizing any positive outcome.

The cost of unnecessary drug therapy should also be considered, because the patients must pay the direct expenses associated with the consumption of unnecessary drug therapies ⁵.

Total expense of unnecessary drug therapy equal to Rp. 12.554.279, 00.



CONCLUSION

Prevention of unnecessary drug therapy problem can be conducted through reduction of drug use (it is recommended to eliminate all medications without therapeutic benefit, goal or indication).

Prevention of unnecessary drug therapy will also contribute in cost saving among elderly patients.

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