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Department of Pharmacology
& Pharmacy
香港大學藥理及藥劑學系



Drug Related Problems in Home Dwelling Elderly

Eliza Tam

Lecturer

Department of Pharmacology and Pharmacy

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Background Information ¹

The Elderly Population

- Estimated 1.163 million elders living in Hong Kong in 2016
- 16% of the total population
- Increase of 36.4% from 2006

The Living Condition

- 91.9% lives in domestic households
- 13.1% lives alone
- 25.2% lives with spouse

1. 2016 Population By census Thematic Report: Older Persons



Background Information ²

The Polypharmacy Issue (based on estimation of 1.129 million reported)

- 65% were receiving five or more prescription items in 2010
- 70% has at least one chronic illnesses
- With hypertension, diabetes and arthritis being the top 3 chronic illnesses reported
- On average they are admitted to hospital 1.6 times per year
- **62.3% (703 700) of all elderly residing at domestic household requires pharmaceutical treatment**

2. Thematic Household Survey Report No. 40, published in 2009 by the Census and Statistics Department of Hong Kong



Pharmacists Care



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An One- Off Pharmaceutical Care: Challenges

- Cannot review progress
- Cannot review home conditions, particularly storage of drugs
- Sometimes questions are very specific – cannot review the whole picture



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Collaboration of Aberdeen Ka Fong Association (AKA) – create 3-wins situation

From AKA

- Identify and obtain consents for visits
- Elders who are taking more than 5 medications or seeing 2 or more specialty clinic
- Lives alone or with spouse
- Social worker identifies difficulties in medication management
- Support students throughout the program

From HKU

- Arrange students to visit 5 times over 8 months
- Arrange pharmacist to accompany students to second and last visits
- Academic component/ Research component



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Collaboration with Local NGO - AKA





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The Research Part - 2017-2019 Study

Demographics (n=46)	Mean \pm SD
Age	80.2 \pm 6.71
Gender	Female 56.5% Male 43.5%
Number of medications	9.65 \pm 3.59
Number of chronic conditions	4.52 \pm 1.64
Number of DRPs	3.09 \pm 2.04
Prevalence of DRP	93.5%

Correlation	Pearson's correlation (r)	P-value (two-tailed)
Number of chronic diseases	0.377	0.010
Number of medications	0.702	0.001



The Research Part - 2017-2019 Study

Use of medications – n (% of 46 subjects)		
<u>Gastro-intestinal system</u>	17	(77.3%)
<u>Cardiovascular system</u>	44	(95.7%)
Respiratory system	14	(30.4%)
<u>Nervous system</u>	27	(58.7%)
Endocrine system	21	(45.7%)
Genito-urinary system	10	(21.7%)
Blood and nutrition	13	(28.3%)
Musculoskeletal system	9	(19.6%)
Eye	6	(13.0%)
Skin	11	(23.9%)
Chinese Medicine	9	(19.6%)



The Research Part - 2018-2019 Study

Classification of Clinical DRP Causes according to PCNE classification v8.02

Primary Domain	Drug Related problems % (n=77)
<u>Patient Related Factors (C7)</u>	<u>64.94%</u>
Patient uses/takes less drug than prescribed or does not take the drug at all	20.78%
Patient stores drug inappropriately	15.58%
Patient administers/uses the drug in a wrong way	14.29%
<u>Drug Selection (C1)</u>	<u>15.58%</u>
No drug treatment in spite of existing indication	3.9%
Too many drugs prescribed for indication	3.9%
Inappropriate combination of drugs or drugs and herbal medication	2.6%



Summary and Acknowledgement

- Pharmacists role in primary care setting
 - Focus on those with multiple medication use and multiple chronic conditions
 - Sustainability of the service
 - Extension of the service
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- Heartfelt thanks to our collaborator AKA
 - Mr. Anthony Ip (P17) and Mr. Zachary Ho (P18) in helping the research



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