

# Ageing and the role of pharmacists

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**Background:** As the global population ages, pharmacists will have the opportunity to support ageing people and to help them to maintain good health and quality of life as they get older. Therefore, the health care system (i.e. National Health Insurance in Taiwan) must prepare for implementing a multidisciplinary approach (e.g. Long-term Care Services; Homecare Pharmaceutical Services) which include physicians, pharmacists and other medical personnel to ensure patients are receiving better case management.

**Purpose:** To better understand the functions of pharmacists while caring the elderly and make specific recommendations to policy makers. This paper discussed the relevant literature and aggregated analysis in order to better understand the functions of pharmacists while caring the elderly and make some specific recommendations to policy makers.

**Methods:** Search the database for published literature since 2000 to carry out literature review.

**Results:** According to the “WPA2015 Report”, between 2015 and 2030, the number of people in the world aged 60 years or over is projected to grow by 56 %, from 901 million to 1.4 billion, and by 2050, the global population of older persons is projected to more than double its size in 2015, reaching nearly 2.1 billion.

Globally, the number of people aged 80 years or over, the “oldest-old” persons, is growing even faster than the number of older persons overall. In 2000, there were 71 million people aged 80 or over worldwide. Since then, the number of oldest-old grew by 77% to 125 million in 2015, and it is projected to increase by 61 % over the next 15 years, reaching nearly 202 million in 2030. Projections indicate that in 2050 the oldest-old will number 434 million globally, having more than tripled in number since 2015.

We all know that ageing influences individual’s behaviors, age-related changes, genetics, and disease. Also, the environment such as housing, assistive technologies, social facilities, and transport they live in will also affect the daily life of the elderly. These personal factors and environmental factors will eventually affect the health and wellbeing of older persons.

Table 1. Population aged 60 years or over, percentage of population aged 60 years or over and median age, 2015, 2030 and 2050.

	Population aged 60 or over <sup>a</sup> (thousands) <sup>a</sup>			Percentage <sup>a</sup> aged 60 or over <sup>a</sup>			median age <sup>a</sup> (years) <sup>a</sup>		
	2015 <sup>a</sup>	2030 <sup>a</sup>	2050 <sup>a</sup>	2015 <sup>a</sup>	2030 <sup>a</sup>	2050 <sup>a</sup>	2015 <sup>a</sup>	2030 <sup>a</sup>	2050 <sup>a</sup>
Taiwan(R.O.C.) <sup>a</sup>	4354 <sup>a</sup>	7243 <sup>a</sup>	9212 <sup>a</sup>	18.6 <sup>a</sup>	31.3 <sup>a</sup>	44.3 <sup>a</sup>	39.7 <sup>a</sup>	48.1 <sup>a</sup>	56.2 <sup>a</sup>
Japan <sup>a</sup>	41873 <sup>a</sup>	44808 <sup>a</sup>	45637 <sup>a</sup>	33.1 <sup>a</sup>	37.3 <sup>a</sup>	42.5 <sup>a</sup>	46.5 <sup>a</sup>	51.5 <sup>a</sup>	53.3 <sup>a</sup>
Republic of Korea <sup>a</sup>	9325 <sup>a</sup>	16501 <sup>a</sup>	21002 <sup>a</sup>	18.5 <sup>a</sup>	31.4 <sup>a</sup>	41.5 <sup>a</sup>	40.6 <sup>a</sup>	47.5 <sup>a</sup>	53.9 <sup>a</sup>
Spain <sup>a</sup>	11246 <sup>a</sup>	15361 <sup>a</sup>	18546 <sup>a</sup>	24.4 <sup>a</sup>	33.5 <sup>a</sup>	41.4 <sup>a</sup>	43.2 <sup>a</sup>	50.1 <sup>a</sup>	51.8 <sup>a</sup>
Portugal <sup>a</sup>	2801 <sup>a</sup>	3413 <sup>a</sup>	3793 <sup>a</sup>	27.1 <sup>a</sup>	34.7 <sup>a</sup>	41.2 <sup>a</sup>	44.0 <sup>a</sup>	50.2 <sup>a</sup>	52.5 <sup>a</sup>
Hong Kong SAR <sup>a</sup>	1581 <sup>a</sup>	2670 <sup>a</sup>	3334 <sup>a</sup>	21.7 <sup>a</sup>	33.6 <sup>a</sup>	40.9 <sup>a</sup>	43.2 <sup>a</sup>	48.6 <sup>a</sup>	52.7 <sup>a</sup>
Greece <sup>a</sup>	2961 <sup>a</sup>	3480 <sup>a</sup>	3958 <sup>a</sup>	27.0 <sup>a</sup>	33.2 <sup>a</sup>	40.8 <sup>a</sup>	43.6 <sup>a</sup>	48.9 <sup>a</sup>	52.3 <sup>a</sup>
Italy <sup>a</sup>	17108 <sup>a</sup>	21605 <sup>a</sup>	23016 <sup>a</sup>	28.6 <sup>a</sup>	36.6 <sup>a</sup>	40.7 <sup>a</sup>	45.9 <sup>a</sup>	50.8 <sup>a</sup>	51.7 <sup>a</sup>
Bosnia and Herzegovina <sup>a</sup>	853 <sup>a</sup>	1097 <sup>a</sup>	1244 <sup>a</sup>	22.4 <sup>a</sup>	30.6 <sup>a</sup>	40.5 <sup>a</sup>	41.5 <sup>a</sup>	47.2 <sup>a</sup>	53.2 <sup>a</sup>
Singapore <sup>a</sup>	1001 <sup>a</sup>	1969 <sup>a</sup>	2700 <sup>a</sup>	17.9 <sup>a</sup>	30.7 <sup>a</sup>	40.4 <sup>a</sup>	40.0 <sup>a</sup>	47.0 <sup>a</sup>	53.0 <sup>a</sup>
China(P.R.C.) <sup>a</sup>	209240 <sup>a</sup>	358146 <sup>a</sup>	491533 <sup>a</sup>	15.2 <sup>a</sup>	25.3 <sup>a</sup>	36.5 <sup>a</sup>	37.0 <sup>a</sup>	43.2 <sup>a</sup>	49.6 <sup>a</sup>
World <sup>a</sup>	900906 <sup>a</sup>	1402405 <sup>a</sup>	2091966 <sup>a</sup>	12.3 <sup>a</sup>	16.5 <sup>a</sup>	21.5 <sup>a</sup>	29.6 <sup>a</sup>	33.1 <sup>a</sup>	36.1 <sup>a</sup>

Data source: United Nations (2015). World Population Prospects: The 2015 Revision.

From above table, we can see that **Taiwan's aging trend is quite serious**. By 2050, Taiwan's percentage aged 60 or over ranks first in the world. **If the aging trend is inevitable, then we should try to do best efforts to improve the health and the quality of life of the aging society.**

## What can we pharmacists do with this goal?

### 1. Pharmaceutical care task reform:

(1)Reduce Costs; (2) Enhance Patient Experience; (3) Improve Health Outcomes

### 2. Pharmacists in optimizing pharmacotherapy of ageing people:

(1)Pharmacists actively perform medication reviews and provide education.  
(2)Pharmacists are skilled. (3)Work in the context of a multidisciplinary team.

### 3. Pharmacist who committed to improve health and wellbeing should:

- (1). Improve the quality and efficiency of care:
  - a. Staffing levels; b. Education preparedness; c. Organizational culture
- (2) Pharmacists lead service models and clinics:
  - a. Pharmaceutical care in the home; b. Special clinic; c. Coordinated care



**Conclusion:** Within supportive multidisciplinary infrastructure – accessible and patient centered – **pharmacists can improve adherence to medicines, support self-care, provide public health education to prevent diseases and integrate medical resources for the elderly and increase cost effectiveness.**

With the increasing incidences of chronic conditions within the ageing population, their health care becomes more complex. **Pharmaceutical care strategies for ageing people must include a more comprehensive care plan; build up an action plan which included in the Long-term Care Services system to help identify patients who require follow-up, and implementation of a program to help to monitor those patients.**

In a word, just like Prof. Sir Michael Marmot said, **“Health is human right. We have to ‘Do something, Do more, and Do better’.”**

**To achieve SDG 3 “Ensure healthy lives and promote well-being for all.” and SDG 10 “Reduce inequality within and among countries.”**

Key words: ageing, pharmacist, Pharmaceutical Services

