

## Working With Older People – A Rich Learning Opportunity for Pharmacists

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Worldwide, the pharmacy is in a constant state of development. In comparison to some other health vocations, the fundamental role of the profession has transformed quite markedly from its origin in compounding and dispensing, towards the provision and interpretation of sophisticated medicines information, and the adoption of true clinical pharmacy practice. Interestingly, although the ambition of a lot of pharmacy students is to practice clinical pharmacy, it is curious that many students, if asked to concisely define the word "clinical," may actually struggle to be able to do this. A popular definition that is sometimes cited is along the lines of "involving or concerned with the direct observation and treatment of living patients." The very nature of this definition tends to evoke a picture whereby clinical practice takes place, by necessity, in hospitals. Indeed, much of clinical pharmacy practice does indeed take place in hospitals and does involve the treatment of inpatients, but to present this as a sole and exclusive picture would be misleading. There are opportunities for clinical pharmacy practice in a multitude of settings. Moreover, the same can be said for clinical education for pharmacists. No one would argue that classroom based learning for pharmacy students is superfluous, and nor that clinical teaching for pharmacy students in hospitals is not extremely valuable. However, a broader picture is emerging in pharmacy education, and it is clear that clinical educators must seize diverse teaching opportunities where they exist.

Very valuable teaching opportunities are available for the clinical education of pharmacists in a range of settings where medication usage is extensive and complex. Sometimes this might involve the study of patients affected by complex disease states or those characterised by acute instability – examples might include some infectious diseases, acute coronary syndrome, or in a renal unit. However, another context for

clinical pharmacy education is becoming increasingly relevant. In the latter part of the 20<sup>th</sup> century, many public health initiatives began to bear fruit, and with this we have seen a progressive increase in life expectancy around the world. A discussion of the worldwide increases in life expectancy makes for fascinating reading. The US National Institute on Aging (NIA) makes the point that the marked increase in average life expectancy during the 20th century is especially noteworthy.<sup>1</sup> Japan presently has the longest life expectancy in the world, and although less developed regions of the world have experienced a steady increase in life expectancy since the 1940s, not all regions have shared in these improvements to the same extent.<sup>1</sup> Even so, the most dramatic gains in life expectancy have occurred in East Asia, where life expectancy at birth increased from less than 45 years in 1950 to more than 74 years today.<sup>1</sup> Further, the NIA makes the point that rising life expectancy amongst older people itself is increasing: people > 85 years account for 8% per cent of the world's population > 65 years (12 % in more developed countries and 6 % in less developed countries). In fact, in many countries, the oldest old are now the fastest growing part of the total population.<sup>1</sup>

With so many more people reaching old age, the disciplines of gerontology and geriatrics have become increasingly important. Many people working in health recognise that geriatrics is medical specialty focused on care and treatment of older persons. Gerontology is regarded as a more multidisciplinary science and is concerned with physical, mental, and social aspects and implications of aging. With more people living to an older age, the issues of multi-morbidity and polypharmacy are increasing widespread. This, in turn, creates considerable potential for medication-related problems and adverse drug events, important clinical issues that give rise to harm for

individual patients, as well as having significant economic impact measured in health service utilisation and a burgeoning effect upon the use of finite health resources.

In this context, clinical pharmacy has been able to have a major impact. The implementation of clinical pharmacy services has the ability to make an important difference. The deployment of clinical pharmacists with a focus upon the care of the elderly has great potential to reduce the prevalence and impact of drug-related harm. Terminology to describe some of the issues has become widespread. For example, the term "prescribing cascade" has been used to describe a situation where one of more drugs may be prescribed with the essential purpose of treating adverse effects associated with another medication.<sup>2</sup> Another term that is increasingly used is "deprescribing," which involves the systematic rationalisation of extensive polypharmacy.<sup>3</sup> There can be no doubt that better understanding of these important principles can guide increased participation of pharmacists in the delivery of health care for older people, yielding many benefits. Indeed, geriatric pharmacy is now recognised as an area in which pharmacists can become recognised through a system of certification that leads to the designation of an individual as a CGP – a certified geriatric pharmacist.<sup>4</sup> Moreover, by working in teams to refine the drug therapy provided to older people, pharmacists can make a measurable impact: for example, research demonstrates that the risk of mortality, incident of falls, disability and frailty all increase as each medication added to the medication regimen of an older person.<sup>5</sup> The potential for at least one drug interaction amongst people taking five or more medications concurrently is estimated to have a probability of 50%, with each medication added to increasing the risk of drug-drug interactions by 12%.<sup>6</sup>

All of this points to the rewarding aspects for pharmacists choosing a career that focuses upon the care of older people. However, there is another important aspect to consider, and this relates to the great potential for clinical tuition of pharmacy students in the context of gerontology. This means that experienced clinical pharmacists can teach students about the complexities of medication usage amongst the elderly, embracing the opportunities to provide teaching that not only addresses the complexities of safe and effective medication

use for people with complex multimorbidity, but also an understanding of how this information might be applied in the setting of complex sociological, psychological and economic challenges for elderly people in a modern world. This opens the door to all kinds of new opportunities to provide high quality clinical education – a challenge that must be embraced by educators and practitioners alike if the pharmacy profession is rise to the important challenges of contributing to safe, effective and dignified pharmaceutical care for our older people.