"Involving the community pharmacist for better patient care"

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Importance of medication safety

In 1999, the Institute of Medicine (IOM) released a ground-breaking report called "To Err is Human: Building a Safer Health System" and raised awareness of the importance of a safety culture in health care. Medication safety was highlighted as a key concern, partly because medication errors are so frequent and partly because a number of evidence-based practices were already known and needed wider adoption. In 2006, IOM published another report called "Preventing Medication Errors", which concluded that at least 1.5 million preventable medication errors cause harm in the United States each year. The report estimated that medication errors in hospitals alone cost $3.5 billion a year. Unfortunately, in Singapore, there are currently no published data or statistics on medication errors or near misses.

The term "medication error" has been defined in many ways. The US National Co-ordinating Council for Medication Error Reporting and Prevention defines it as: "any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of health professional, patient or consumer." Serious errors harm patients and expose health professionals to civil liability and possible criminal prosecution. Minimising medication errors in the total medication use process is therefore of strategic importance to improving patient safety in the healthcare system.

The risk of medication errors increases with the number of medications and/or number of comorbidities. A report of 9 studies in Australia documented that 2-4% of all hospital admissions in Australia are due to drug-related problems and 75% could have been preventable. Complex medication regimes in the older patient could also lead to readmission for an adverse drug event. Polypharmacy usually creeps in over a number of years as more and more medicines are added to a patient's repeat prescription list. Patients can end up on the same medicine for 10 or 20 years, or even longer, even if the indication has changed or ceased. Changes to patients' circumstances, such as becoming frailer or developing additional long-term conditions, may have altered its appropriateness.

Medication reconciliation is recommended at transitions of care to avoid medication-related discrepancies which may lead to medication errors and adverse outcomes. In fact, medication reconciliation has been identified by the Ministry of Health's National Medication Safety Committee (MOH NMSC) as one of the medication safety priorities.

Current landscape of eldercare

In Singapore, the number of senior citizens (more than 65 years old) is expected to surpass 900,000 by 2030, equivalent to one-fifth of the resident population. Both the specialists in the acute hospitals and the family physicians in the long-term care setting share the responsibility of providing geriatric care for the elderly patients. However, in terms of care facilities, we are no longer limited by the more traditional choices of acute hospital care, and nursing home care. Instead, a spectrum of aged care services and facilities is progressively being developed to enable the seniors who are frail and less independent to "age-in-place" successfully. The first purpose-built Senior Care Centre (SCC) was opened by NTUC Health at Silver Circle (Serangoon Central) and serves more than 100 clients. In addition to social and exercise programs, the centre offers active rehabilitation, community nursing and dementia care for clients with higher care needs, to cater to a broad spectrum of seniors with varying needs.

Besides the specialists and family physicians playing an important role in caring for the seniors, a multidisciplinary healthcare team is increasingly crucial in caring for the seniors, as seniors are heterogeneous and often have multiple needs and comorbidities. The traditional members of the multidisciplinary team include the doctor, nurse, therapist (physiotherapist and occupational therapist) and medical social worker. In the long-term care setting, SPICE (Singapore Programme for Integrated Care of the Elderly) centres have used multidisciplinary teams to cater to frail seniors with greater nursing and medical care needs and would otherwise have to enter nursing homes. The SPICE programme was first piloted at the Salvation Army's Bedok Multiservice Centre in 2010 and has since grown to 10 centres across Singapore.

Pharmacists' Role in medication management in the community

Pharmacists are well-positioned to identify drug-related problems, by conducting medication reconciliation, medication optimisation, de-prescribing for chronic diseases and patient counselling and education to improve medication compliance. Through the years, pharmacists have extended their outreach beyond the hospital and community pharmacies to provide more person-centric services in the nursing homes and patients' homes. One of the initiatives is the partnership between PSS and AIC for pharmacists to support the medication management process in nursing homes and hospices since 2011.

In Singapore, Agency for Integrated Care (AIC) coordinates an existing programme known as Aged Care Transition (ACTION) team made up of care coordinators, who are sited at various acute hospitals. The ACTION team provides transitional care to high-risk patients to reduce unnecessary readmission to acute hospitals. A hospital pharmacist would provide medication reconciliation and review services to these patients to reduce the drug-related problems and medication errors. This is supported by evidence obtained from the Pharmacist-Outreach Programme (POP) which was a collaboration project between aged care transition (ACTION) team and hospital pharmacist on medication management at home.

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Through this project, 75% of patients whom were referred to POP had their drug-related problems (DRPs) resolved and at least 90% of them felt that they could better manage their medications after the programme. Similar pharmacist services are still not commonly offered to other community-dwelling geriatric clients, who also have polypharmacy issues, after being discharged from hospitals.

Modelling and future plans for spread

AIC works closely with community care providers (such as nursing homes, centre-based services and home-based services) to support them in improving the quality of care for the geriatric clients. As medication use in older adults often presents challenges, AIC in partnership with pharmacists as part of the National Pharmacy Strategy initiative to promote Pharmaceutical Care Excellence, plans to pilot the provision of geriatric pharmaceutical care service for elderly patients with polypharmacy issues in selected SPICE centres. The aim is to empower the patient and/or the caregiver to manage medication in the community setting.

Geriatric pharmaceutical care service is a structured service by pharmacy staff to identify and address medication related issues with the client and/or caregiver and healthcare professionals. A pharmaceutical care plan [including a Patient's Medication List ("PML")] will be developed for the geriatric client who has multiple comorbidities and polypharmacy issues. The care plan will accompany the client as he/she moves across the various transitions in care settings and will be a single accurate plan for all care team members, such as the doctor, centre, pharmacist and outpatient specialists.

One of the key success factors for the pilot is to establish and refine a framework and workflow for seamless and timely communication of the client's pharmaceutical care plan between the care team involved in the client's care. Healthcare professionals involved in the care of the patient are now able share and access the pharmaceutical care plan as a part of the National Electronic Health Record (NEHR). The NEHR integrates and shares patients' medical records nationwide to support the seamless delivery of patient care and is progressively being rolled out to both public and private healthcare institutions across Singapore.

On a longer term, the plan is for larger scale implementation of the geriatric pharmaceutical care service to all clients in the community setting who require the service beyond the SPICE centres.

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