

Medication Safety:

**Exploring interventions to support
vulnerable patients taking high-alert
medications**

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Certificate of original authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and in the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are appropriately acknowledged within the thesis.

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Abstract

Ensuring patient safety around high-risk medications such as oral anticoagulants is a global challenge. Several patient-focused interventions have been used to support vulnerable patients such as older persons taking oral anticoagulants. However, limited research has been done to support those with limited health literacy, and those from cultural and linguistic diverse (CALD) backgrounds.

Qualitative and quantitative methods were used to identify the limitations in health literacy, warfarin knowledge gaps, patient's and carer's needs and preferences for medicine information about oral anticoagulants.

A double-sided A4 size Warfarin action Plan leaflet was developed, and feedback was obtained from patients and their carers. Several benefits of the action plan were highlighted such as its concise format and understandable content, the use of visuals and how it was interactive. The action plan also addressed the knowledge gaps of patients and carers who had been using warfarin for several years, highlighting the need for regular follow up and education. An unexpected finding was that the WAP had a positive impact on behaviour.

Based on the findings from the feedback on the WAP leaflet and knowledge gaps about NOACs, web-based education materials were assessed to see if they would also have a similar benefit in terms of understandability and actionability. The majority of materials were understandable, however, were not actionable. These findings suggest that there is a need for high quality NOAC medicines information that are actionable.

Overall, this thesis highlights the beneficial role of the written WAP leaflet in supporting older persons taking oral anticoagulants and their carers. The implications of this leaflet is that it could also be used for NOACs and be provided to patients and their carers in a variety of settings such as the hospital and home.

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List of Abbreviations

AF	Atrial Fibrillation
CALD	Cultural and linguistically diverse
DOACs	Direct-acting oral anticoagulants or Direct oral anticoagulants
HLQ	Health Literacy Questionnaire
HMR	Home Medicines Review
INR	International Normalised Ratio or International normalized ratio
MMP	Medicines Management Pathway
NSW	New South Wales
NOACs	Novel or new oral anticoagulants or Non-Vitamin K antagonists
NPS	National Prescribing Service
PEMAT	Patient Education Materials Assessment Tool
POC	Point of care
REALM	Rapid Estimate of Adult Literacy in Medicine
SDM	Shared Decision-Making
TTR	Time in Therapeutic Range
WAP	Warfarin action plan
WHO	World Health Organization

List of Definitions

Medication safety is defined as freedom from preventable harm with medication use (ISMP Canada, 2007).

People-centred care refers to an approach to care that consciously adopts the perspectives of individuals, carers, families and communities as participants in, and beneficiaries of, trusted health systems that are organised around the comprehensive needs of people rather than individual diseases, and respects social preferences. People-centred care also requires that patients receive the education and support they need to make decisions and to participate in their own care. Patient- and person-centred care should encompass both clinical encounters as well as attention to the health of people in their community and their crucial role in shaping policy and health services (World Health Organization Sixty-ninth world health assembly 2016).

Patient-centred care (the more widely used term) refers to the provision of care that is respectful of, and responsive to, individual patient preferences, needs and values, and that ensures that the patient's values guide all clinical decisions (Institute of Medicine 2001)

Person-centred care is a model in which healthcare systems are encouraged to partner with patients to co-design and deliver personalised care that provides people with the high-quality care they need and to improve healthcare system efficiency and effectiveness (Santana et al. 2018). Person-centred care is respectful of, and responsive to, the preferences, needs and values of patients and consumers. Key dimensions of person-centred care include respect, emotional

support, physical comfort, information and communication, continuity and transition, care coordination, involvement of carers and family, and access to care (Australian Commission on Safety and Quality in Health Care 2011). This is also known as patient-centred care or consumer-centred care (Australian Commission on Safety and Quality in Health Care (ACSQHC) 2017).

Consumer-centred care refers to the provision of care that is easy for patients to obtain when they need it and ensures that healthcare staff respect and respond to patient choices, needs and values. Partnerships are formed between patients, their family, carers and healthcare providers (Australian Commission on Safety and Quality in Health Care 2010).

Medication incidents refers to problems that occur in the prescription, dispensing and administration of medications (Roughead & Semple 2009).

Adverse drug events are defined as the proportion of medication incidents that result in patient harm (Roughead & Semple 2009)

High-alert medications are drugs that confer a heightened risk of causing significant patient harm when they are used inappropriately. Although mistakes may or may not be more common with these drugs, the consequences of an error are clearly more devastating to patients (Institute for Safe Medication Practices (ISMP) 2014).

Older persons are defined here as persons aged 65 years and older (Orimo et al. 2006; World Health Organization 2018a).

Limited health literacy is defined by the WHO as “the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health” (World Health Organization 2018b).

Culturally and linguistically diverse (CALD) is defined in Australia as those people born overseas, in countries other than those classified by the Australian Bureau of Statistics as “main English-speaking countries”. The term CALD is also referred to as ‘ethnic minorities’ (Alhomoud et al. 2013; Mohammad, Saini & Char 2015), ‘multicultural’, ‘migrants’ and ‘from a non-English speaking background (Smith V and Schaffer E. 2014).