Improving medication uptake in Aboriginal and Torres Strait Islander peoples

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Abstract

Background: Poor medication adherence is associated with adverse health outcomes. Improving access and adherence to pharmacological therapy is important in achieving optimal health outcomes for Indigenous populations. In spite of the impressive evidence base for cardiovascular pharmacotherapy, strategies for promoting adherence and evidence based practice are less well refined and the challenges for Indigenous populations are more pronounced. **Aim:** To identify factors impacting on medication adherence in Aboriginal Australians and identify solutions to improve the quality use of medicines. **Method:** The World Health Organization adherence model was used to classify barriers to adherence. Key elements of this model are (1) health care team/health system; (2) socio-economic factors; (3) therapy; (4) patient; and (5) condition related. **Results**: Entrenched socio-economic differentials aggravate challenges to medication adherence among Aboriginal Australians. Initiatives to promote the quality use of medicines, such as the Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islander People (QUMAX) Program, are important strategies to promote adherence. **Conclusions:** Medication adherence is a complex issue and addressing modifiable factors is imperative to improve health outcomes. Subsidised access to medications whether living in urban, regional, rural or remote areas is an important strategy in Closing the Gap.

Keywords: Medication adherence, Aboriginal and Torres Strait Islanders, cardiovascular disease

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Introduction

Burden of cardiovascular disease among Aboriginal Australians

The burden of cardiovascular disease (CVD) in Aboriginal and Torres Strait Islanders is well documented yet the solutions to address this problem are less apparent. [1 2] Aboriginal Australians suffer a disproportionate burden of CVD morbidity and mortality, including a high number of premature deaths. Accessing appropriate and timely health care services is important in the context of high cardiovascular risk burden to improve health outcomes. Unfortunately, many Aboriginal and Torres Strait Islanders present to health care facilities with advanced disease. A recent position statement released by the Heart Foundation and the Australian Healthcare and Hospitals Association has identified disparities in hospital care for Indigenous Australians with acute coronary syndromes. [3] This report identifies that Indigenous Australians have twice the in-hospital mortality rate and have a 40% lower rate of angiography and a 40% lower rate of percutaneous coronary interventions. Reticence for reform, discrimination, racism and alienating health care environments are identified as barriers to accessing health care systems. [4 5] Medication adherence is defined as the extent to which patients take medications as prescribed by their health care providers. [6 7] Medication adherence is important across all areas of health care delivery but of particular concern is that Aboriginal and Torres Strait Islanders people are 19 times more likely to discharge themselves from hospital than non-Indigenous individuals. [3] This means that within the context of advanced disease they are less likely to have access to evidence-based pharmacological therapy.

Link between adherence with cardiovascular medications and outcomes

Pharmacotherapy is crucial to the effective management of cardiovascular disease. [7] Failure to adhere with prescribed medications is a challenge for both Indigenous and non-Indigenous populations. Poor

adherence to prescribed medication is well documented and associated with adverse health outcomes. [8] The increasing recognition of the prevalence of non-adherence and the contribution to the cost and quality of health outcomes is increasingly of concern to clinicians, funders and policy makers. [7] Many medications for CVD have proven beneficial effects including reducing mortality and hospital readmission rates [9] yet, recent research has shown that 10% to 25% of newly diagnosed CVD patients discontinued their medications by six months from the start of therapy. [10] At 24 months, these rates of medication non-adherence doubled. [10] It is estimated that 50% to 70% of individuals with hypertension do not take medications as prescribed. [11, 12] The concept of medication adherence is complex and multifaceted and needs to be considered within the context of patient, provider and system issues.[13]

Indigenous Australians face unique challenges that are underpinned by fundamental social, economic and health differentials. [14] These disparities and are further hindered by a mainstream health care system which is often perceived as non-welcoming by many Aboriginal Australians. [15] There are a range of factors inhibiting Aboriginal Australians use of medications. The World Health Organization (WHO) has categorised factors impacting adherence into five dimensions which provides a useful framework to systematically address barriers and facilitators. Elements of this framework are: (1) healthcare team/health system, (2) socioeconomic factors, (3) therapy related, (4) patient related, and (5) condition related. [16] This model of adherence underscores the need to consider a wide range of factors in addressing the causes and outcomes of poor adherence. It is also important to consider the Aboriginal view of health that stems beyond the individual to focus on the individual to integrate the community, land, body, mind and spirit. [17]The WHO model suggests that solutions are unlikely to have a single focus but rather a whole of system approach. Improving the health and well-being of Indigenous peoples underscores the salience of this approach. In addition to the poor health outcomes experienced by individuals and the distress to their families, it is widely accepted as result of

medication non-adherence, significant financial burden can result. [6] In one study cost-related medication restriction in people with CVD resulted in more angina and higher rates of non-fatal heart attacks and strokes identifying the deleterious impact of short-term, expedient solutions. [18]

Barriers to medications use in Aboriginal Australians

The 1997 Keys Young Report for the Health Insurance Commission documents widespread and persistent barriers to accessing health care and medicines by Aboriginal people. Barriers identified in this report were greater levels of poverty than for other Australians, low awareness and the inoperability of the safety-net scheme for Aboriginal patients. [19] Other reported obstacles were increased patient mobility due to social obligations, frequent non-listing of children on guardians' concession cards, the "shame" involved in accessing prescriptions in culturally alienating settings, a lack of timely supply, inadequate support for continued use of medications and geographic isolation.[19]

Despite the high burden of chronic disease in Aboriginal people, there is low expenditure, suggesting substantial under-use of medicines.[20] Barriers to accessing Pharmaceutical Benefits Scheme (PBS) medications are evident in all areas, including metropolitan areas. Currently, Aboriginal health services spend hundreds of thousands dollars each year in providing medications directly to patients and to cover co-payments.[20].

A review of the literature identifies unique challenges for Aboriginal Australians and these are summarised in Table 1. Although some of these issues are not unique to Indigenous people, there is often a cumulative effect of social advantage and barriers to care increasing the burden of disease and the need for systematic strategies to reduce inequity. In discussing medication adherence it is also important to note that Aboriginal individuals and communities are not homogenous and face unique challenges. For example, Aboriginal people living in rural and remote and urban areas confront issues

requiring tailored solutions that are appropriate to their needs. Adherence to anticoagulation therapy following valvular surgery and percutaneous coronary interventions is of particular concern in people returning to remote communities after surgery. [21] In addition, many of the enabling strategies, such as susbsidised medications, are not readily available to those Aboriginal people living in urban areas. This identifies that a one size fits all approach is neither appropriate nor applicable in addressing medication issues in Australian Aboriginals.

In a systematic review Haynes and colleagues have identified strategies to promote adherence. [22] For short-term drug treatments, counselling, written information and personal phone contact were found to promote adherence. For long-term treatments, no simple intervention, and only some complex ones, led to improvements in health outcomes emphasising the complexity and challenge of promoting medication adherence. A combination of strategies such as ensuring more convenient access to care; providing information, counselling and reminders; self-monitoring, reinforcement, family therapy, psychological therapy, mailed communications, crisis intervention, manual telephone follow-up, and other forms of additional supervision or attention suggest they may improve adherence. [22] Even with these strategies improvements in medication usage were not large, particularly in the longer term. In spite of these challenges, as a general principle clinicians can strive to promote adherence through simplifying dosages, organising medications in dosette boxes or Webster packs and conveying to the individual the importance of the medication. Other techniques, such as motivational interviewing, where ambivalence towards medication usage is explored, may also be useful. [23] It has been suggested that the fatalism, brought about from decades of marginalisation, exclusion and experience of tragedy, can alter views of engaging in positive health seeking behaviours for Aboriginal people. [24, 25] The stigma associated with diagnosis of a chronic condition and perception of the connotations of Aboriginality in interacting with mainstream services can also be a barrier to adherence. [26] The quality

of the relationship between the health care provider and patient impacts on adherence, emphasing the importance of cultural competence training to facilitate therapeutic relationships. [27]

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Patient-centred strategies to improve medication uptake

Larkin and Murray[28] reported on strategies to improve medication uptake in Aboriginal Australians which involve patient-specific approaches such as effective communication and simplifying drug regimens. [28] In tailoring drug regimens, the need to take medicines regularly should be emphasised in patient education as it may not fit patients' understandings of how medicines are to be used. [28] The importance of health literacy, the extent to which individuals have the capacity to obtain, process and understand health information and services needed to make appropriate decisions about their health is increasingly recognised. [29] Discussing administration of medications, clarifying concepts to elucidate meanings, and using educational tools to foster communication and shared understandings, particularly in the case of asymptomatic chronic diseases, are useful approaches. [28] Consideration should also be given to dosing intervals, appropriate combinations, dose forms, storage considerations, and dose administration aids, although keeping regimens simple makes adherence easier. [28] Empowering individuals to interact with health professionals and in particular engaging community pharmacists in promoting adherence and engagement are important considerations in improving uptake and adherence of medications.

Initiatives for Aboriginal and Torres Strait Islander people

Section 100 is a provision developed by the Pharmacy Guild of Australia and National Aboriginal Community Controlled Health Organisation (NACCHO) in 1999 to facilitate medication supply through community pharmacists to Aboriginal Health Services, particularly when PBS medicines cannot be conveniently and effectively supplied.[30] Section 100 arrangements extend to all remote area Aboriginal health services to improve Aboriginal access to the PBS. As part of this agreement,

pharmacies supply eligible Aboriginal primary health care services with PBS listed drugs on a bulk supply basis and are reimbursed directly by the Government. The Aboriginal health service supplies the medications to individual clients, through the support of the community pharmacist. [31] However, many Australian Aboriginals live beyond remote communities and also require strategies to promote medication adherence.

The Quality Use of Medicines Maximised for Aboriginal and Torres Strait Islander People Program (QUMAX) commenced in July 2008 and is funded by the Commonwealth Government Department of Health and Ageing as part of an agreement with the Pharmacy Guild of Australia, developed in collaboration with the National Aboriginal Community Controlled Health Organisation (NACCHO). [32] The program focuses on medication compliance and quality use of medicines (QUM). The QUM strategy (to complement Section 100) focuses on appropriate management of conditions, choosing suitable medicines as necessary; and the safe and effective use of medications. [33] This program provides structured support for QUM in Aboriginal Community Controlled Health Services (ACCHSs) including training for staff, cultural awareness training for community pharmacists, on-call pharmacist assistance to the ACCHS for urgent medication, queries or after hours dispensing of medicines, transport support for the delivery of prescriptions or medicines between the ACCHS and the local pharmacy, improved recording of PBS safety-net entitlements for ACCHS clients, Medication Access and Assistance Packages (MAAPs) for patients with a high level of need, including provision of dose administration aids, and enhanced enrolments in diabetes and asthma subsidy programs and Home Medicines Reviews. [33] However, this is a time-limited program and reforms to ensure medication access for Aboriginal Australians need to be incorporated in sustained policy reforms.

A way forward to improving medication adherence for Aboriginal Australians

Improving medication adherence is no easy task and is going to require a multi-pronged approach. As identified by the WHO, barriers to adherence are complex and multifaceted. Improving medication adherence requires interventions at the system, provider and patient level. Addressing endemic social inequalities are fundamentally important in improving Aboriginal health. Acknowledging the rights of Aboriginal Australians and implementing strategies to promote equality are necessary in achieving reforms. This involves fostering education and advancement of the health care profession in relating to Indigenous health issues. Engaging Aboriginal communities in developing appropriate and acceptable policy strategies is also needed. At the *system* level we need to make sure that health care settings, both mainstream and Aboriginal Controlled Community Organisations, are welcoming and provide culturally safe settings so that Aboriginal people feel comfortable. Implicit in goal is not only involving communities in service planning but also building the capacity and skills of the workforce, both Indigenous and non-Indigenous. Ensuring medications are affordable and accessible is important, both for rural and urban, communities. Economic modeling suggests that subsidising medications for high risk populations is likely to be effective and should likely be considered. [34] Further, the tailoring of PBS items, such as that for nicotine replacement therapy, should be adapted to meet the unique needs of Aboriginal Australians and acknowledging that multiple attempts to quit are positive and more likely to lead to cessation in the longer term. [25, 35] It is also important to ensure that strategies are implemented to increase the interface between primary, secondary and tertiary care. Transitions between these care settings is noted as challenging in all chronic conditions – but these challenges are accentuated in Indigenous Australians.

Strategies to promote medication adherence are summarised in Table 2. At the *provider* level we need to ensure that all health professionals are aware of the unique health needs of Aboriginal Australians and particularly their view of health. This involves health care delivery systems, professional

organisations and educational providers to provide training in cultural competence. Within organisations, the presence of racism should be acknowledged, monitored and vetoed. Ensuring capacity in the Indigenous workforce requires systematic planning and collaboration and is an important issue in improving health. At the *patient* level, acknowledging the individual's country, values and belief and how these influence their health seeking behaviours is crucial. Reducing the stigma associated with the diagnosis of many chronic conditions is also vital. Introducing strategies, such as motivational interviewing, to increase the individual's self-efficacy to engage in self-management may be useful and decrease the sense of fatalism.

The recent report of the Health and Hospital Reform Commission highlights the importance of improving health outcomes for Aboriginal Australians and identifies three key issues for reform:

1. Tackling major access and equity issues that affect health outcomes for people;
2. Redesigning the health system so that it is better positioned to respond to emerging challenges; and
3. Creating an agile and self-improving health system for long-term sustainability.[36]

Achieving improvements in medication adherence for Aboriginal Australians is contingent on achieving these goals. In particular, improving the interface between the Aboriginal Community Controlled Organsiations and communication across health care professionals and health care jurisdictions is important. Increasing the capacity for Aboriginal Health workers to engage in health care teams and also increasing participation of Aboriginal Australians in the health workforce are essential solutions to improving care for Aboriginal Australians. [37, 38] Ongoing research is required to develop and evaluate strategies to promote culturally competent medication adherence. Ongoing trials of the polypill, being undertaken by the Kanyini Vascular Collaboration, are encouraging as they are being conducted within Australian Aboriginal communities and appropriate to the models of care delivered in these settings . [39]

Conclusions

Addressing issues impacting on adherence is not possible without a key appreciation of culture, clinical practice, policy as well as perspectives of consumers and health professionals. Decisions made by government have a pronounced effect on medication policies and as a consequence the health outcomes of those living with chronic conditions.[40] Australian Prime Minister Kevin Rudd's 2008 apology to Aboriginal people and Stolen Generations emphasised the importance of improving health services for Indigenous people to reduce health inequities. Guaranteed access to standard medicines and treatment protocols is a critical step to reducing the Gap for indigenous Australians. [2] Overcoming challenges to optimal medication adherence require the capacity of mainstream health professionals to appreciate the culture and background of Aboriginal Australians and in particular the challenges they face. In partnership with strategies to reverse social and health inequalities, engaging in an understanding of social and cultural influences on patients' health beliefs and behaviors will contribute to optimising patient-provider interactions to improve medication adherence.

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