Prescribing issues for Aboriginal people

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SYNOPSIS

Aboriginal people have higher rates of morbidity and mortality than other Australians and compare poorly to similar populations in other developed countries. In spite of this, access to medicines by Aboriginal people is poor, even for those living in urban areas. In remote areas there are different patterns of disease and bacterial infections are very common. The threshold for prescribing antibiotics is generally lower because Aboriginal patients are at higher risk of serious sequelae. Drug regimens should be simplified to increase the chance of successful treatment. Improving Aboriginal health will require reforms including improved access to and quality use of medicines, and legislative reform to support involvement of Aboriginal health workers in managing medicines.

Index words: antibiotics, drug therapy, National Medicines Policy.

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Introduction

> *'Our services are tired of seeing patients go without medicines and get really ill because they physically can't get to a chemist shop, or because they can't afford their medicines. They're also tired of seeing patients come back sicker because they didn't have the right people on hand to explain properly to them how to use the medicines, and so they didn't take them or they made mistakes with them.'*
>
> – The late Dr Puggy Hunter, October 2000

The statistics of Aboriginal ill health are familiar to many of us. These include the 20-year shortfall in expectation of life at birth, the three-fold excess of infant mortality and many other health disparities between Aboriginal and non-Aboriginal Australians.

What is not widely appreciated is how poorly Australia compares with other developed nations. While Aboriginal people have seen no improvement in all-cause standardised mortality over the last generation, rates for Maori fell by 41% in the 20 years to 1994 in New Zealand and by 28% for Native Americans in the USA.[1] In these countries, expectation of life at birth now approaches that of the general populations. Key policy differences in Australia include woefully confused responsibility for funding and service delivery between different levels of government, manifest underexpenditure on indigenous health care and essential services, and our lack of a treaty underpinning indigenous rights.[2]

Mortality and morbidity

Over 70% of the excess mortality among Aboriginal people is accounted for by cardiovascular disease (26%), respiratory conditions (16%), injury and poisoning (15%) and diabetes (10%).[1] The striking feature of Aboriginal mortality is the massive excess of death in middle age – a profile almost without comparison in the world.[3]

Acute morbidity patterns in Aboriginal primary health care include a marked excess of infectious diseases related to crowding and poor environmental health (skin and middle ear infections, rheumatic fever, trachoma). There are also high rates of sexually transmitted infections which the available evidence suggests is related to poor access to treatment rather than behaviour.[4] Chronic morbidity is highly prevalent in Aboriginal communities. Diabetes affects about 10–30% of adults[4], and the prevalence of end-stage renal failure in many areas is 20-fold higher than in the general population and has been doubling every five years in northern and central Australia. There are regional variations in patterns of infectious diseases (such as trachoma) and substance misuse (for example intravenous drug use versus petrol sniffing), but patterns of chronic disease are reasonably consistent. Population mobility means that 'remote' conditions will often show up in urban areas and vice versa.

Access issues

Despite the importance of medicines, given the massive excess of acute infectious and chronic disease, there are real problems with access. A review of Aboriginal access to medicines subsidised under the Pharmaceutical Benefits Scheme (PBS) documented major barriers for Aboriginal people that were remarkably consistent across urban, rural and remote communities.[5] Underuse of medicines is evidenced by the fact that government PBS expenditure per head is only a third of that spent on our mostly healthy and largely urban general population and a sixth of that spent on concession card holders.[6]

Implications for prescribing practice

Access is one of several prescribing issues which need to be considered when selecting an appropriate treatment regimen.

Ensuring supply

Of the four arms of Australia's National Medicines Policy[7] (community access; standards of quality, safety and efficacy; quality use; and a responsible and viable pharmaceutical industry) access is clearly the most problematic for Aboriginal

people. Noting 'substantial access barriers and evidence of under-use of medicines' by Aboriginal people, the policy commits all of us – government, industry, consumer and health professional groups – to do more. Barriers include distance, poverty, administrative matters (such as lack of evidence of a person's entitlement to concessional charges) and the attitudes and behaviour of service providers.

The expenditure data suggest that the conventional model of general practice prescribing/community pharmacy supply with co-payments and a safety net has largely failed Aboriginal people. As further evidence of this, most Aboriginal health services dispense medicines directly to patients by one means or other – by maintaining a dispensary or imprest stock or through an account with the local pharmacist. Ensuring that Aboriginal patients are actually able to get the medicine they need is a critical consideration for the prescriber.

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While some argue that supply of 'free medicine' might lead to waste and encourage dependency, denying medicine to the sick, poor and marginalised is a dubious 'lesson' in self-reliance. For many Aboriginal patients, there are cogent reasons for the prescriber to dispense pharmaceuticals at the point of provision of primary health care – better integration of care, the opportunities for involvement of Aboriginal health workers, and minimisation of cultural, educational, financial and transport barriers. At the very least, there is an obligation on the prescriber to help broker supply.

Simplifying dosing regimens

Aboriginal patients commonly face difficulties with drug regimens. The demographic profile means that up to a third of the population are 10 years of age or less – which compounds the problem of securing or refrigerating medicines. Other barriers include educational disadvantage, poverty, shared crowded households and harsh environmental conditions.

For all these reasons, simplified once- or twice-daily dosing regimens or single dose treatments are often preferred. Benzathine penicillin is widely used. Antibiotic regimens requiring three or four doses daily are commonly simplified to twice daily with appropriate dose adjustment. The listing of azithromycin for genital chlamydia and trachoma has greatly improved the effectiveness of therapy for these conditions (and for Donovanosis – a rare but important cause of genital ulcer disease).

The use of simplified regimens is not confined to antibiotics. Injectable and implantable progestogens for contraception are in widespread use.

Infectious disease

Prescribers should be aware of important differences in the epidemiology and microbiology of infectious diseases in the Aboriginal population. In general, there are lower thresholds for antibiotic treatment and antibiotic choices need to reflect the differing microbiological aetiology (Table 1).

Chronic disease

Diabetes and hypertension commonly coexist with other 'metabolic syndrome' risk factors including dyslipidaemia. As renal failure is the commonest cause of diabetes-related death in Aboriginal populations, ACE inhibitors are typically first-line therapy for hypertension and are also used for normotensive people with diabetes and proteinuria.

'Non-compliance' is an unhelpful construct in the Aboriginal health context and is often inappropriately used to defend poor standards of practice. The difficulties Aboriginal people face in adhering to medication regimens are real. Prescribers need to make the effort to ensure there is full understanding of the reasons for and the nature of treatment as well as an assessment of likely barriers that patients will face. Aboriginal health workers have a particularly important role in this respect.

Brand substitution

Aboriginal patients are used to a particular physical appearance of their medicines so brand substitution is a common cause of concern and confusion. Such changes should be avoided and careful explanation is required if substitutions are made.

Legal framework

The morbidity of Aboriginal people has major implications for a medicines regulatory and supply system that aims to support the timely, safe and efficacious use of medicines. Dispensing by healthcare workers other than doctors or pharmacists is widespread in Aboriginal health care, particularly but not exclusively in rural and remote communities. This often involves standard treatments for infectious disease (for example sexually transmitted infections, otitis media, skin infections, rheumatic fever chemoprophylaxis) as well as support with chronic disease medication (patient education, use of dosage administration aids, issuing repeat prescriptions).

In the Aboriginal health setting, prescribers commonly confront the dilemma of quite reasonable and well-established medication practices by Aboriginal health workers and registered nurses that fall outside various laws and regulations. While there has been limited statutory reform to cover dispensing of prescription drugs by registered nurses in many jurisdictions, this still often falls short of what goes on in remote practice.

Only the Northern Territory and Queensland have provision for use of prescription drugs by Aboriginal health workers. For Aboriginal health workers, training and accreditation in use of medicines is of vital interest, because it is one of the few areas of health practice that is specifically regulated by statute. While legislation does not prevent Aboriginal health workers from assessing and treating patients, administering injections, performing venepunctures or taking cervical smears, the

Table 1

Common infectious diseases in the Aboriginal population, and prescribing issues

Disease	*Issues*	*Typical antibiotic choices*
Otitis media	Otitis media is a massive public health problem. It causes deafness, educational disadvantage and suppurative complications. Nasopharyngeal colonisation with pathogenic bacteria in infancy (related to overcrowding and inadequate health hardware) sets Aboriginal children up for recurrent acute otitis media and chronic suppurative otitis media. Unlike the general population where a viral aetiology is common, Aboriginal children are an 'otitis-prone' group among whom bacterial pathogens (mostly streptococci) predominate. Chronic suppurative otitis media affects up to 30% of children and syringing and topical antibiotics are effective first-line therapy.	Oral amoxycillin Dilute povidone-iodine syringing (gentle) and topical antibiotics (Sofradex or preferably ciprofloxacin) for chronic suppurative otitis media
Sore throat	Rheumatic fever rates for Aboriginal people in central and northern Australia are among the highest reported in the world. Sore throat should always be treated with an adequate course of antibiotics, regardless of clinical appearance.	Benzathine penicillin (single dose)
Pneumonia	Aboriginal people die of pneumonia at 10 times the rate of the general population.[4] Early empirical antibiotic treatment is vital as tragic deaths result when treatment is delayed beyond the 'point of no return'. Pneumococcal vaccination is effective prevention and should be offered to Aboriginal adults with predisposing conditions (including substance misuse, diabetes, renal and heart disease) as well as all those over 50 years of age.	Procaine or benzathine penicillin +/- oral amoxycillin 'Third generation' cephalosporins should be considered with diabetes and alcohol misuse. Cover for melioidosis should be considered in the tropical north.
Suppurative skin infections	Suppurative skin disease caused by Group A streptococci is common in northern and remote areas and is substantially related to endemic scabies. Treatment of individuals typically involves topical permethrin +/- penicillin. Mass community treatment with scabicide, as well as alleviation of crowding and improvement of water supply and ablutions, are effective disease control measures.	Benzathine penicillin (single dose) Oral penicillins, macrolides or cephalosporins Permethrin
Trachoma	Trachoma continues to be a problem in many remote Aboriginal communities. Management involves treatment of clinical cases with a single dose of azithromycin as well as treatment of the 'crèche' (care-givers and other close children).	Azithromycin (single dose)
Bacterial sexually transmitted infections	For the jurisdictions where indigenous status is captured in surveillance data (NT, SA and WA) some 70% of total syphilis and gonorrhoea cases and 40% of total chlamydia cases are attributable to Aboriginal people[4] and this is associated with high rates of ectopic pregnancy and infertility. Prescribers need to maintain a high index of suspicion and offer regionally appropriate empirical treatment according to the presentation. Routine screening for genital chlamydia among all young sexually active women is increasingly recommended by international authorities; for young Aboriginal women, this should be extended to include gonorrhoea tests. Asymptomatic men and women with risk factors should also be offered screening. Nucleic acid amplification tests have greatly simplified screening options (first-pass urine specimens for men and self-administered swabs or tampons for women).	Gonorrhoea treatment is informed by regional antibiotic sensitivity patterns. Amoxycillin is still first-line in the Northern Territory and Western Australia. Azithromycin for chlamydia (single dose) Benzathine penicillin for syphilis (single dose or weekly doses for three weeks depending on duration)

Poisons legislation limits who is able to prescribe medicines. The formalisation of medicines training and reform of statutory law are important for Aboriginal health workers in defending their established clinical practices. Without such reforms, Aboriginal health workers risk being relegated to 'nurse assistant' roles.

The fact that prescribing activities are often outside the legal framework is a failure of health policy rather than a reflection on appropriate multidisciplinary practice. Legislative reform to cover such realities should not get caught up in territorial disputes between professional groups; the focus should be on how to ensure community access to and quality use of essential medicines.

In practice, withholding treatment is just not an option. In most remote settings, the caseload is heavy, the treatments are standard, the margin of safety for most of the commonly used drugs is high and there is often no doctor or pharmacist available. A failure to initiate therapy promptly in the Aboriginal health setting leads to serious adverse outcomes – such as rheumatic fever, cellulitis and septicaemia, complicated pneumonia, and amputation of diabetic feet.

Ways forward

Access

Improved mechanisms for supplying medicines to Aboriginal people are urgently required. A Commonwealth supply

arrangement for remote Aboriginal health services, under Section 100 provisions of the *National Health Act 1953*, was brokered through the Australian Pharmaceutical Advisory Council and implemented in 1998. Under the scheme, approved Aboriginal health services in remote areas can obtain bulk supplies of PBS-listed medicines from a community pharmacy, and can also access funding to provide professional pharmacist support services. This scheme has made a real difference in remote areas. Similar initiatives to improve access to medicines in rural and urban areas are an identified priority for the Commonwealth government and its Australian Pharmaceutical Advisory Council. Such reforms are eminently affordable: bringing Aboriginal access up to the level of the general community would represent a less than 1.5% increase in current PBS outlays.

Clinical practice guidelines and training

What limited training that prescribers get in Aboriginal health has tended to be about history, cultural context, health determinants and barriers to care. While this is important, practitioners also need to be technically proficient in those areas where prescribing practice differs. The development of standard treatment manuals [8], and evidence-based resources that can support their development [4], continues to be an important strategy in supporting appropriate prescribing.

Statutory reform

It is no longer tenable to have a medicines regulatory system that fails to provide a framework for established, responsible prescribing practice in remote areas. In an increasingly litigious environment, medical practitioners and health service providers are rightly concerned about medicolegal implications and insurers are reluctant to cover 'illegal dispensing'.

Without a statutory framework, health services may leave treatment decisions to the discretion of remote health staff as they feel unable to expressly condone an illegal practice. This leaves individual health workers exposed and unsupported. To ensure timely, safe and efficacious use of medicines in Aboriginal communities, the way forward must include statutory reform.

Ideally, a regionally customised standard treatment manual should serve as approved 'standing orders'. A problem-orientated standard treatment manual, incorporating clinical assessment and management decision points, provides a quality use of medicines framework for the use of prescription medicines by nurses and Aboriginal health workers in remote areas.

This approach is preferred over simply approving a drug formulary as it allows a link to be made between medicines and the particular clinical circumstances of use (including exceptions, referral and follow-up protocols). This also suits the context of multidisciplinary care, particularly where staff turnover is high.

The position of Aboriginal health workers who have existing clinical roles needs to be particularly safeguarded. Prescribing practice is tied up with broader issues of professional development, standards and training for Aboriginal health workers. Reforms should help empower communities to improve resources for their own health.

Conclusions

The poor health status of the Aboriginal population and the lack of improvement over the last generation are particularly shameful in an international context. We know a great deal about the nature of the problems and how they should be addressed, yet commitment from governments to do more than incremental reform has been lacking. Improved access to medicines by Aboriginal communities is urgently required, as is legislative reform to support the role of Aboriginal health workers. Prescribers have an important role, not only in providing culturally safe, evidence-based health care appropriate to Aboriginal health problems and ensuring medicines supply, but in advocating for the health policy and service reforms that will make a real difference.

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Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 119)

5. In Aboriginal people, suppurative skin infections are often related to scabies.
6. Amoxycillin is no longer recommended for acute otitis media in Aboriginal children.