

Pharmacy Student Education Helping To Improve Indigenous Medication Management & Health

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Abstract: *The health of Indigenous Australians remains appalling (ABS/AIHW 1999). The causes of this situation are multifactorial, however one contributing factor is poor medication compliance within Indigenous populations (Mobbs 1991, Murray 2003, Hamrosi 2004).*

In 2004, as one element of a partnership building process between the Faculty of Pharmacy of the University of Sydney and Mid West Area Health Service (MWAHS), the pharmacy students enrolled in the second year of the Bachelor of Pharmacy (Rural) on the Orange campus of the University undertook a unit of study entitled "Health & Cultural Issues in Rural Australia". The purpose of the unit was to assist them to have better understanding of Indigenous health issues. Through cultural awareness training, information sessions, communication workshops and an excursion the students were encouraged to adopt communication strategies and to design information packages that were culturally appropriate for Aboriginal Health Workers (AHWs) and the Indigenous community. They also learned the importance of the AHW's role in assisting pharmacists and doctors to deliver health messages to the Indigenous community, particularly with respect to medication management. The AHW training packages prepared and presented by the students were outstanding and the MWAHS AHWs who attended their presentations were favourably impressed. The MWAHS Aboriginal health co-ordinator wrote: "I would have no hesitation in utilising any or all of the packages presented ... and if yesterday was an indication of the quality of pharmacists that hopefully one day may be working in our communities, we can only see progression and improvement in Aboriginal Health."

Keywords: *Indigenous health, Pharmacy student education, medication management*

Introduction

The health of Indigenous Australians remains appalling with the life expectancy being 15 to 20 years below that of other Australians, infant mortality 2-4 times higher, and adult death rates 3-4 times higher (ABS/AIHW 1999). The causes of this situation are multifactorial, however one contributing factor is poor medication compliance within Indigenous populations (Hamrosi et al, 2004). A general lack of understanding of the purpose & benefit of prescribed medication, as well as confusion over dosing instructions appear to be the predominant factors affecting medication taking within the Indigenous population (Hamrosi et al 2004, Murray 2003).

The definition of an Australian Indigenous person currently used by the Commonwealth of Australia is 'a person of an Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she is associated' (Australian Indigenous HealthInfoNet, 2004)¹. The Australian Bureau of Statistics reported in the August census that there were approximately 410,003 Indigenous people living in Australia in June 2001, with the state of New South Wales having the largest total population of Indigenous people at approximately 29%. However, the Northern Territory has the highest proportion of Indigenous people among its population at 25.1% (ABS Yearbook Australia, 2002). Throughout this paper the term Indigenous Australians or Indigenous is used unless a specific Aboriginal group/community, is referred to. In that case the term Aboriginal or Torres Strait Islander is used.

While Indigenous Australians often consider pharmacists as more accessible and less intimidating than other health professionals, to date pharmacists have had little or no training in Indigenous

health or cultural issues and consequently may fail to convey the correct messages about medication usage in terms understood by their indigenous clients. AHWs can play a vital role in bridging the gap between health professionals and indigenous patients both by preparing health professionals for better interaction with their indigenous clients and by being trained in the quality use of medicines (Emerson, 2001). In addition, pharmacists can play a key role in helping to train AHWs, in disease state management and the quality use of medicines. However, to be effective and confident, pharmacists themselves need to be trained in cultural awareness and culturally appropriate communication. Such training could be conducted by AHWs for pharmacists already practising and also those studying at university.

Currently pharmacists, like other health professionals, are in short supply in rural Australia. The majority of pharmacists practicing in rural areas are approaching retirement and thus the shortage is likely to increase (AIHW, 2000). As a consequence, in 2003 the University of Sydney established a Bachelor of Pharmacy (Rural) at its campus in Orange, NSW. The rural setting and the B.Pharm (Rural) degree were designed to encourage pharmacy students to remain and practice in rural areas. In 2004, as one element of a partnership building process between the Faculty of Pharmacy and Mid West Area Health Service (MWAHS), the Pharmacy students enrolled in the second year of the Bachelor of Pharmacy (Rural) undertook a unit of study designed to assist them to have a better understanding of indigenous health issues through cultural awareness training, information sessions and communication workshops.

The purpose of this paper is to describe the structure of the course and the communication strategies the students adopted when designing culturally appropriate information packages for AHWs and the Indigenous community. In order to assess its effectiveness the course was evaluated from the perspective of the students, the academic staff and the local AHWs.

Method

In second semester 2004 the second year B.Pharm (Rural) students at Orange undertook seven units of study that were identical or similar to that of the B.Pharm students in Sydney. In addition, these students undertook a rurally specific unit, entitled "Health & Cultural Issues in Rural Australia". This unit of study was designed to ensure that students had a better understanding of rural, and in particular, Indigenous health issues and built on the communication skills taught throughout their Pharmacy Practice courses in both semesters. The therapeutics being taught concurrently related to diabetes, cardiovascular disease, respiratory disease and infection treatable with antibiotics. The students had to use this knowledge when researching and designing training packages for use by Aboriginal Health Workers.

"Health & Cultural Issues in Rural Australia" adopted a multifaceted and collaborative approach. Each week, for 12 weeks the students participated in a mixture of web based reading and study, a one hour tutorial highlighting issues relating to the web modules, a one hour lecture on diseases affecting indigenous populations and a one hour practical workshop. The students also undertook an excursion to a western area of NSW. Throughout the course there was strong collaboration between the University of Sydney and the Indigenous health workers from MWAHS. For further information on the course structure refer to Figure 1 which outlines the course timetable.

Yooroang Garang, the School of Indigenous Health Studies at the University of Sydney, provided the web based learning module developed by Anton Clifford. This learning module included an historical overview, an overview of the health of Indigenous Australians, an outline of the National Aboriginal Health Strategy and Aboriginal Community Controlled Health Organisations as well as guidelines for health professionals working with Indigenous people.

Initially the students participated in 4 hours of cultural awareness training delivered by 6 AHWs. This was a crucial element of the program and set the scene for the subsequent sessions. Designed by MWAHS over the last 5 years, the interactive cultural awareness program gave the

students a much greater understanding of the history, culture, sensitivities and issues of Indigenous people.

The tutorials were designed to “bring to life” the information in the web module. AHWs from the Mid West Area Health Service outlined a number of the health programs that have been introduced with great success into some of the region’s Indigenous communities. These included programmes in Sexually Transmitted Diseases, Otitis Media and Maternal health. The students also learnt about the establishment of the Maari Ma Aboriginal Corporation, a culturally sensitive health service at Broken Hill, a remote township in the far west of NSW. They heard about peer learning strategies that are currently being used by AHWs to train other members of their communities. Videoconference links were established with pharmacists working in the Kimberley region of Western Australia and in Alice Springs in the Northern Territory. These pharmacists outlined the challenges and rewards of working with Indigenous communities. The lectures on diseases affecting Indigenous populations, included topics such as tuberculosis, skin diseases, trachoma, leprosy, cardiovascular disease, diabetes and respiratory and kidney diseases

The excursion to Condobolin Community Health Centre and Hospital, Condobolin Aboriginal Medical Service & to the Murrin Bridge Aboriginal community introduced students to “frontline” health professionals. The students saw first hand some of the problems associated with distance, housing and low socio-economic status faced by indigenous communities.

The students had a number of tasks to perform in their workshops such as participating in role plays in which they had to play a pharmacist counselling an Indigenous customer while showing awareness of culturally sensitive issues and appropriate language. Students were asked to design a number of materials to aid better understanding of medication management. Firstly they had to design a poster suitable for a doctor’s surgery or clinic that would prompt Indigenous people to have a check for sexually transmitted diseases and then to create a medication information leaflet that a pharmacist could use as a tool in his/her counselling session about respiratory diseases.

Having received feedback on their role plays, posters and leaflets the students were then asked to work in groups of 4 to design and present training packages for AHWs. These training packages consisted of a PowerPoint presentation, a workbook, learning aids, training games, medication compendiums and materials which AHWs could use in their communities. The training package topics were hypertension, hyperlipidaemia, angina, diabetes, asthma, upper respiratory tract infections and tuberculosis.

The materials in the training package prepared by the students were assessed by academic staff on 6 five point scales:- ability to communicate key messages to AHW, content, quality use of medicines, use of support materials to assist learning, material which AHW could use in the community and overall package presentation/professionalism. Marks were awarded to each group and these contributed to a maximum of 20% of the marks for the course. AHWs who had conducted the initial sessions were invited to attend the student presentations of the developed packs and to give verbal feedback to the students and academic staff on the progress of the students in terms of their awareness of Indigenous cultural and health issues.

Answers to the web based questions contributed 20% of the total assessment, other class activities and the excursion report contributed 20% and students were formally examined on their understanding of Indigenous cultural and health issues in a written essay style examination (40%).

At the end of the course the students completed a standardised University of Sydney Unit of Study Evaluation form on which they were asked to indicate whether they agreed or disagreed with various statements about the course on a differential scale of 1 to 5 (1= strongly disagree to 5= strongly agree). The statements included such items as clarity of learning outcomes and standards, whether the teaching helped effective learning and development of generic skills, and whether the workload was too high.

Results

The students learned to communicate at the appropriate level for the Indigenous population. Through their role plays they demonstrated an understanding of appropriate communication and cultural differences and patient feedback was used to assess the patient's comprehension of instructions. Students learned the benefit of pictograms and diagrams as opposed to verbal communication. These valuable skills can be adapted and utilised whatever the population group

Through discussions with the AHWs they met, the students determined that the medication leaflets currently available in pharmacies are inappropriate. The leaflets the students designed were deemed as "much more appropriate and very useful" by the AHWs.

The excursion to Condobolin & Murrin Bridge highlighted the difficulties of distance, transport, lack of medical services, social and money issues faced by Indigenous people. The AHWs and other health professionals the students met were grossly overworked and under resourced. However, the students also observed the positive initiatives that the Murrin Bridge Aboriginal community were implementing such as the vineyard, building works and garbage contracting. They became aware how closely health issues are intertwined with social and educational issues, with issues of self-esteem and employment, housing and nutrition.

The marks the students achieved for the training packs ranged from 28 to 36/40 and the marks overall for the unit of study ranged from 72% to 88%. All students were fully engaged in their group work and demonstrated a change in attitude towards Indigenous health over the 3 months of the course from "I don't know what the fuss is about" to "Aboriginal health is a serious concern and pharmacists can help address some of the issues". Academic staff were extremely pleased with the personal growth which took place in the students.

The AHW Training Packages prepared and presented by the students were of outstanding quality. They included novel simple ideas to demonstrate the spread of infection by aerosol droplets, the passage of blood through blocked vessels and also instructions on taking medication for angina in simple language and steps. The MWAHS representatives who attended their presentations were extremely impressed. The MWAHS Aboriginal Health Co-ordinator sent the university a letter stating: "I would have no hesitation in utilising any or all of the packages presented yesterday. I would like to encourage your students to maintain their energy, enthusiasm and commitment when they venture into the workforce because if yesterday was an indication of the quality of pharmacists that hopefully one day may be working in our communities, we can only see progression and improvement in Aboriginal Health."

The Unit of Study Evaluation forms showed that 80% of students felt that this unit of study helped them develop generic attributes, such as communication skills; 73% of students agreed that this course was relevant to their degree, 79% that it allowed them to demonstrate what they had understood and 77% were satisfied with the quality of the unit of study.

Discussion

Whether a patient is from an Indigenous or non-English speaking background, elderly, hearing impaired, sight impaired or sick, the appropriate use of verbal and non-verbal communication in the explanation of medicines is extremely important. The ability of a pharmacist to explain the use of medication without ambiguity and the use of jargon is vital to correct use of medicine and ongoing compliance. Although this unit of study focused on the needs of and communication with Indigenous Australians, the skills learnt by the students can easily be transferred to other population groups.

Currently there are few materials available to aid in the communication of information about medication management to the Indigenous community. Information that is available about

medication is not designed for those with low literacy skills. AHWs found that Consumer Medicines Information leaflets (CMIs) were “too difficult to read and interpret, too long and the literacy levels required to understand them were generally above that of the Aboriginal person” (Mobbs, 1991). Often indigenous people are too shy or too proud to ask for assistance in their understanding of medication (Hamrosi, 2004). The “medication information leaflets” designed by pharmacy students at University of Sydney, Orange, show how existing materials need to be adapted if they are to become effective communication tools for pharmacists to use with their Indigenous patients. The AHW training packs developed by the students highlighted how appropriate resources could help pharmacists to network and train their AHWs and how in turn these AHWs can be assisted to pass on medication messages to their community.

AHWs are valued for their culture specific knowledge, accessibility and for their ability to liaise between non-Indigenous health professionals and the Indigenous communities. The National Review of Aboriginal & Torres Strait Islander Health Worker Training found that training opportunities for AHWs were “often poorly distributed in terms of location, were difficult to access and lacked the ability to meet the learning needs of many Health Workers” (Curtin Indigenous Research Centre). One of the recommendations of this report was that there was a need to foster “collaboration between Health Workers and other health professionals. The “Training re-Visions, A National Review of ATSI Health Worker Training” document shows that the various AHW training programmes have very little content on medication management (Curtin Indigenous Research Centre). Pharmacists, if properly trained, could make an impact on indigenous health both through their assistance in training AHWs and through better communication with indigenous patients as frontline health professionals

Funding is being sort to enable the student materials to be further developed. It is hoped that a programme will be implemented to train pharmacists to deliver the packages to their local AHWs and Indigenous communities and at this point the effectiveness of the packages can be evaluated fully. Hopefully the students who took part in this unit of study will help train AHWs in Quality Use of Medicines and assist AHWs in delivering these messages to their communities in the future. As frontline, accessible health professionals they will be able to play an important role in improving aboriginal health outcomes.

Conclusion

Through the University of Sydney B.Pharm (Rural) “Health & Cultural Issues in Rural Australia” course, pharmacy students in a higher education institution were equipped with a fundamental understanding of Indigenous health and approaches to help improve Indigenous health in their local rural areas. The combination of techniques used was suitable for the topics explored and could be adapted to other fields of study in health.

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