

Development & Evaluation of an Illustrated Medicines List: A Patient Education Tool for Indigenous Australians

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Background

- ❖ Communicating medicines information to patients of limited health literacy, including Indigenous Australians, is an often overlooked-challenge faced by pharmacists and other healthcare professionals.
- ❖ With the burden of disease in Indigenous population exceeding more than three times that of non-indigenous counterparts¹, there is pressing need for strategies to help these patients better understand and perform required healthcare activities, including medication management.
- ❖ Illustrations are being increasingly adopted by healthcare professionals to communicate medicines information to those of lower health literacy², however there is a lack of qualitative study determining what comprises good illustration for low-literacy patients, particularly in cross-cultural contexts.
- ❖ Although pictorially based resources are available³, an individually tailored and pictorially centred medicines list for Indigenous Australians does not currently exist

Objective

- ❖ To develop and evaluate a preliminary model of an individualised, illustration-focussed medicines list as a patient education tool for Indigenous Australians.

Methods

In collaboration with the Centre of Aboriginal and Remote Health³, and with permission of the illustrator of the 'Medicines Book for Aboriginal and Torres Strait Islander Health Practitioners (4th edition)', culturally sensitive medication related illustrations were sourced and employed in the development of a sample of five individualised, illustrated and non-illustrated medicines lists (Figure 1 & 2).

Formative evaluation of these patient education tools was conducted through face-face interview and survey of a panel of Aboriginal Health Workers at the Aboriginal Liaison office at the Royal Adelaide Hospital. Survey and interview questions assessed comprehension of medication indication, dosing schedule, relevant administration advice and adverse effects using both the non-illustrated and illustrated medication lists.

Qualitative feedback provided by the panel facilitated review and modification of the illustrated medication schedule in preparation for future summative assessment through use and evaluation by a sample of Indigenous patients.

MEDICINES LIST		Prepared by: Wala Haj Ali (Intern Pharmacist) The Queen Elizabeth Hospital 28 Woodville Road Woodville South, SA 5011 Hospital Switchboard: 8222 6000 Pharmacy Department: 8222 6648		
Name: Fred FLINTSTONE	Date of Birth: 01/01/1956	U.R.N.: 123456		
Allergies: Penicillin - rash	Date: 22/05/2019			
Questions about your medicines? Speak with a pharmacist. SA Pharmacy Medicines Information Service, 9am – 5pm weekdays ☎ 8161 7555				
MEDICINE NAME AND STRENGTH	BRAND NAME(S)	WHY THIS MEDICINE IS USED	RECOMMENDED DOSING SCHEDULE	OTHER IMPORTANT INFORMATION YOU SHOULD KNOW ABOUT THIS MEDICINE
Your Regular Medicines				
BISOPROLOL Tablets 10mg <i>*Regular use is essential*</i>	Beprol, Bicard Bicolor, Biso, Bispro, plus other brands	To improve the strength and efficiency of the heart in heart failure	Brkfst 7-9am Lunch 11-12pm Dinner 4-6pm Bed 8-10pm 1	This medicine may cause dizziness or tiredness especially at the start of treatment or when the dose is increased; if affected, do not drive or operate machinery. Do not stop taking this medicine suddenly unless your doctor tells you to.
FUROSEMIDE (FRUSEMIDE) Tablets 40mg	Frusax, Frusid, Lasix, Uremide, Urex, plus other brands	To remove excess fluid from the body (Diuretic)	Brkfst 7-9am Lunch 11-12pm Dinner 4-6pm Bed 8-10pm 1	This medicine can sometimes cause dizziness early in the course of treatment. Rise slowly from a sitting or lying position to prevent dizziness occurring. This medicine is usually taken once daily in the morning. If you are taking it twice a day, take the first dose in the morning and the second dose at lunchtime.
SPIRONOLACTONE Tablets 25mg	Aldactone, Spiractin	To remove excess fluid from the body and reduce potassium loss (Mild diuretic)	Brkfst 7-9am Lunch 11-12pm Dinner 4-6pm Bed 8-10pm 1	Best taken with food to avoid stomach upset. This medicine can reduce the blood pressure, and can sometimes cause dizziness early in the course of treatment. Rise slowly from a sitting or lying position to prevent dizziness occurring. May cause breast soreness or an increase in breast size.
SITAGLIPTIN Tablets 25mg <i>*Regular use is essential*</i>	Januvia	To help control blood glucose levels in diabetes	Brkfst 7-9am Lunch 11-12pm Dinner 4-6pm Bed 8-10pm 1	Take at the same time every day. This medicine can be taken with or without food. Can cause mild gastrointestinal upsets and muscle and joint pain. See your doctor if these persist. Make sure that you and your friends and family know how to recognise & treat hypoglycaemia.

Figure 1: Exemplar SA Pharmacy individualized, Non-illustrated Medicines List

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Allergies: Penicillin - rash	Date: 22/05/2019			
Questions about your medicines? Speak with a pharmacist. SA Pharmacy Medicines Information Service, 9am – 5pm weekdays ☎ 8161 7555				
Your Regular Medicines				
MEDICINE NAME AND STRENGTH	BRAND NAME(S)	WHY THIS MEDICINE IS USED	DOSING SCHEDULE	SIDE EFFECTS
BISOPROLOL Tablet 10mg <i>Do not stop taking medicine – you may not feel different, but medicine will help stop damage to your heart and kidneys. Do not drive or operate machinery if sleepy.</i>	Beprol, Bicard Bicolor, Biso, Bispro, plus other brands	To help your heart work better	Brkfst Lunch Dinner Bed 1	Nausea, Dizzy, Diarrhoea, Sleepy, Dizzy when standing up, Low BP, Breathing trouble, Slow pulse (heart rate)
FUROSEMIDE (FRUSEMIDE) Tablet 40mg <i>Take in the morning to reduce night time waking</i>	Frusax, Frusid, Lasix, Uremide, Urex, plus other brands	To help you pass water	Brkfst Lunch Dinner Bed 1	Rash, Dizzy when standing up, Dehydration, Gout
SPIRONOLACTONE Tablet 25mg <i>Check potassium levels every week for 1 month, then once a month for 2 months, then every 3 months</i>	Aldactone, Spiractin	To help you pass water	Brkfst Lunch Dinner Bed 1	Headache
SITAGLIPTIN Tablet 50mg <i>Exercise every day. Healthy food. Take with food or milk</i>	Januvia	To lower your sugar levels	Brkfst Lunch Dinner Bed 1	Headache, Stomach trouble – pancreatitis

Figure 2: Exemplar SA Pharmacy individualized, Illustrated Medicines List

Results

- ❖ 100% of respondents believed there was merit in an illustrated medicines list, particularly for rural and remote clients and 75% considered the medication illustrations employed, culturally appropriate for the specified patient demographic.
- ❖ Furthermore, in comparison with the non-illustrated medicines list, 100% of respondents considered the images an “effective” means of conveying medication indication, dosing schedule and side effect profile.
- ❖ Regarding image clarity and interpretation, 50% of the panel considered the images “very clear”, whilst the other 50% suggested some images could be misinterpreted, thereby not only highlighting the need for further modification of particular illustrations and textual descriptors, but also the fact that these pictorial aids should function to supplement and not replace simplified text and verbal counselling in order to ensure correct interpretation.

Conclusion

- ❖ For Indigenous patients, a pictorially focussed medicines list may have merit in improving medication understanding.
- ❖ Future summative evaluation of this illustrated medication list will determine the validity of this tool in improving patient comprehension and self-efficacy in medication management in the indigenous and other low literacy populations.

References

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2. Barros, I.M., et al., The use of pictograms in the health care: a literature review. Res Social Adm Pharm, 2014. 10(5): p. 704-19.
3. Remote Primary Health Care Manuals (2017). Medicines Book for Aboriginal and Torres Strait Islander Health Practitioners (4th edition). Alice Springs, NT: Centre for Remote Health.