

Uptake of influenza vaccine among Aboriginal and Torres Strait Island adults in north Queensland, 2002

Jeffrey N Hanna,¹ Bradley G McCulloch²

Abstract

Since 1999, the Commonwealth has provided free annual influenza vaccine for all at-risk Aboriginal and Torres Strait Islander adults. The uptake of the vaccine in this population in north Queensland in 2002 was determined using the state-wide computerised immunisation register. Although 59.4 per cent of Aboriginal and Torres Strait Islander adults aged 50 years or over were vaccinated, the uptake in this age group exceeded 80 per cent in only the Cape York and Torres Strait and North Peninsula Area Health Service Districts (HSDs). Assuming that a third of Aboriginal and Torres Strait Islander adults 15–49 years of age had a medical risk factor, it was estimated that 85 per cent of those at-risk were vaccinated. There was considerable variation between HSDs, ranging from 159 per cent uptake in the Torres Strait and North Peninsula Area Health Service District to 48.7 per cent in the Cairns HSD. *Commun Dis Intell* 2003;27:102–104.

Keywords: influenza, Indigenous population, immunisation

Introduction

Annual influenza vaccination is recommended for those at increased risk of influenza-related complications, including all Aboriginal and Torres Strait Islander adults aged 50 years or over. Since 1999 the Commonwealth has provided funding for free, annual immunisation of all Aboriginal and Torres Strait Islander adults aged 50 years or over and all Aboriginal and Torres Strait Islander adults 15–49 years of age with a medical risk factor.²

Since 1999, details of pneumococcal and influenza vaccines provided to Aboriginal and Torres Strait Islander adults in Queensland have been recorded on the state-wide immunisation database, Vaccination Information Vaccination Administration System (VIVAS).³ This report details the uptake of the influenza vaccine in Aboriginal and Torres Strait Islander adults in north Queensland in 2002, using data extracted from VIVAS.

Methods

A listing of all influenza vaccinations for 2002 was extracted from the VIVAS database. These data were checked for consistency with regards to address, date of birth and vaccination. The data then aggregated into the Health Services Districts,⁴ as approximated by an aggregation of 1996 Statistical Local Area boundaries.⁵ The counts of Aboriginal and Torres Strait Islander populations in north

Queensland by HSDs were obtained from the 2001 national census.⁶

Because the vaccine is recommended for all Aboriginal and Torres Strait Islander adults aged 50 years or over, the uptake in this age group in each HSD could be readily calculated. The prevalence of medical risk factors in Aboriginal and Torres Strait Islander adults aged 15–49 years is not known with any precision in north Queensland. However, the uptake in this age group was calculated assuming that one third of this age group has a risk factor and is therefore eligible for immunisation.

Results

The number of doses given to, and the uptake of influenza vaccine in, Aboriginal and Torres Strait Islander adults aged 50 years or over in north Queensland in 2002 are shown in Table 1. Table 2 compares the number of doses given to Aboriginal and Torres Strait Islander adults aged 50 years or over in 2002 with those given in 2001.

The number of doses given to, and the uptake of influenza vaccine (assuming a risk factor prevalence of 33%) in, Aboriginal and Torres Strait Islander adults 15–49 years of age in north Queensland in 2002 are shown in Table 3.

1. Public Health Physician, Tropical Public Health Unit Network, Queensland Health, Cairns, Queensland

2. Epidemiologist, Tropical Public Health Unit Network, Queensland Health, Cairns, Queensland

Corresponding author: Dr J Hanna, Tropical Public Health Unit, PO Box 1103, Cairns QLD 4870. Telephone: +61 7 4050 3604. Facsimile: +61 7 4031 1440. Email: Jeffrey_hanna@health.qld.gov.au

Table 1 Influenza vaccine doses given to Aboriginal and Torres Strait Islander adults aged 50 years or over, north Queensland, 2002

Health Service District	Vaccinated n	Uptake* %
Bowen	52	28.4
Cairns	482	39.8
Cape York	405	88.0
Charters Towers	29	26.4
Innisfail	160	61.5
Mackay	131	43.7
Moranbah	4	11.1
Mt Isa and Gulf	556	57.8
Tablelands	235	59.6
Torres Strait and North Peninsula Area	758	87.3
Townsville	531	63.0
Total	3,343	59.4

* Based upon Census 2001 population estimates

Table 3. Influenza vaccine doses given to Aboriginal and Torres Strait Islander adults 15–49 years of age, north Queensland, 2002

Health Service District	Vaccinated n	Uptake* %
Bowen	56	22.7
Cairns	1,009	48.7
Cape York	978	146.6
Charters Towers	49	31.4
Innisfail	335	84.2
Mackay	204	35.4
Moranbah	7	10.8
Mt Isa and Gulf	1,081	77.2
Tablelands	691	105.3
Torres Strait and North Peninsula Area	1,786	159.0
Townsville	1,523	88.4
Total	7,719	85.0

* Based upon the assumption that 33 per cent of the Census 2001 population estimate had a risk factor.

Table 2. Influenza vaccine doses given to Aboriginal and Torres Strait Islander adults aged 50 years or over, north Queensland, 2001 and 2002

Health service District	2001	2002	Difference
Bowen	45	52	+7
Cairns	503	482	-21
Cape York	392	405	+13
Charters Towers	49	29	-20
Innisfail	148	160	+12
Mackay	117	131	+14
Moranbah	3	4	+1
Mt Isa and Gulf	561	556	-5
Tablelands	221	235	+14
Torres Strait and North Peninsula Area	722	758	+36
Townsville	514	531	+17
Total	3,275	3,343	+73

Discussion

There was an overall increase of approximately 480 doses of influenza vaccine used in north Queensland in 2002 compared to 2001 (data not shown). Most (approximately 410 doses) of the increase were in Aboriginal and Torres Strait Islander adults 15–49 years of age, and it is likely that most of the increase was in the Torres Strait and North Peninsula Area Health Services District.

The Commonwealth Department of Health and Ageing has suggested as an uptake target that 80 per cent of Aboriginal and Torres Strait Islander adults aged 50 years or over should receive the influenza vaccine annually.² Although both the Torres Strait and North Peninsula Area, and Cape York HSDs have reached the proposed target, the other HSDs have a considerable way to go. This is a concern; not only has this program been in place in north Queensland for at least five years,⁷ but it also seems that many HSDs have made little recent progress (Table 2).

Because the prevalence of risk factors in Aboriginal and Torres Strait Islander adults 15–49 years of age is unknown, the uptakes in Table 3 are based on an assumption that 33 per cent of those in this age group have a risk factor. However, the uptakes of more than 100 per cent in three HSDs suggest that an estimated prevalence of risk factors of 33 per cent may be too low, and that an estimate of 45 per cent may be more accurate. Alternatively, the prevalence of risk factors may vary widely by HSD.

Nevertheless, assuming a risk factor prevalence of 33 per cent and an annual uptake target of 80 per cent of this group,² the low uptake in two HSDs with large populations in this age group, namely Cairns, and Mt Isa and Gulf, is of concern. The apparent difficulty in providing effective immunisation services to Aboriginal and Torres Strait Islander populations in Cairns, in particular, has been previously documented.⁸

High uptake of influenza vaccine is important for the immediate protection of at-risk Aboriginal and Torres Strait Islander adults. Concerns about pandemic influenza have highlighted the importance of high uptake of the vaccine 'in identified cohorts and high-risk groups' in the inter-pandemic period.⁹ Further innovations will be required to improve influenza vaccine uptakes in Aboriginal and Torres Strait Islander adults aged 50 years or over, and in 'at risk' Aboriginal and Torres Strait Islander adults 15–49 years of age, particularly in Cairns.

Acknowledgements

Tanya Akee, Ruth Bullen and Claire Ziegler have had a major role in supporting this program in north Queensland. We also wish to thank Kathy Lort-Phillips and Fiona Tulip.

References

1. National Health and Medical Research Council. *The Australian Immunisation Handbook*, 7th ed. Canberra: Australian Government Publishing Service, 2000:143–144.
2. Department of Health and Family Services. The implementation of the National Aboriginal and Torres Strait Island Pneumococcal and Influenza Immunisation Program (discussion paper). Canberra: Office for Aboriginal and Torres Strait Islander Health Services, 1998.
3. Selvey LA, Peterson KV. A state-based immunisation register (letter). *Med J Aust* 1998;169:59.
4. Queensland Health. North Queensland District Health Services: Selected Demography. 1996 Australian Bureau of Statistics Census of Population and Housing. Cairns: Tropical Public Health Unit Network, 1996.
5. Australian Bureau of Statistics. 1996 Census of Population and Housing (final release). Australian Bureau of Statistics: Canberra, 1997.
6. Australian Bureau of Statistics. 2001 Census of Population and Housing (first release, Aboriginal and Torres Strait Island profile by Statistical Local Area). Australian Bureau of Statistics: Canberra, 2002. Available from: <http://datahub.govnet.qld.gov.au/ausstats/abs@census>.
7. Hanna JN, Young DM, Brookes DL, Dostie BG. The initial uptake and impact of the pneumococcal and influenza vaccination program for at-risk Aboriginal and Torres Strait Islander adults in Far North Queensland. *Aust N Z J Public Health* 2001;25:543–546.
8. Hanna JN, Malcolm RL, Vlack SA, Andrews DE. The vaccination status of Aboriginal and Torres Strait Island children in Far North Queensland. *Aust N Z J Public Health* 1998;22:664–668.
9. Communicable Diseases Network Australia, Influenza Pandemic Planning Committee. Australian Action Plan for Pandemic Influenza. Canberra: Commonwealth Department of Health and Ageing, 2002.