

How can GPs drive software changes to improve healthcare for Aboriginal and Torres Strait Islander peoples?

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Background

Changes to the software used in general practice could improve the collection of the Aboriginal and Torres Strait Islander status of all patients, and boost access to healthcare measures specifically for Aboriginal and Torres Strait Islander peoples provided directly or indirectly by general practitioners (GPs).

Objective

Despite longstanding calls for improvements to general practice software to better support Aboriginal and Torres Strait Islander health, little change has been made. The aim of this article is to promote software improvements by identifying desirable software attributes and encouraging GPs to promote their adoption.

Discussion

Establishing strong links between collecting Aboriginal and Torres Strait Islander status, clinical decision supports, and uptake of GP-mediated health measures specifically for Aboriginal and Torres Strait Islander peoples – and embedding these links in GP software – is a long overdue reform. In the absence of government initiatives in this area, GPs are best placed to advocate for software changes, using the model described here as a starting point for action.

Accredited general practices are required to collect and record the Aboriginal and Torres Strait Islander status of all patients, and use clinical guidelines specific for Aboriginal and Torres Strait Islander peoples.¹ However, support provided by general practice software packages to meet these goals is inconsistent. While some packages are better than others, problems include:

- Aboriginal and Torres Strait Islander status not displayed prominently on screens used by general practitioners (GPs)
- Aboriginal and Torres Strait Islander status entered by receptionists and not visible to GPs
- Standard Aboriginal and Torres Strait Islander question and responses not used
- Aboriginal and Torres Strait Islander status completion not mandatory
- Aboriginal and Torres Strait Islander status not linked to clinical decision support²
- Few software 'short cuts' to facilitate delivery of Aboriginal and Torres Strait Islander-specific health measures²
- Aboriginal and Torres Strait Islander status not included in GP-generated documentation from which national data are collected.³

For over a decade, reports into improving Aboriginal and Torres Strait Islander data collection and service delivery in the general practice sector have identified improving software design as a key reform⁴⁻⁸ needed to drive:

- standardisation of processes to ascertain and record Aboriginal and Torres Strait Islander status in line with the national Aboriginal and Torres Strait Islander status question (Box 1)
- uptake of GP-mediated health measures specific for Aboriginal and Torres Strait Islander peoples (Box 2)
- recording of Aboriginal and Torres Strait Islander status in datasets that rely on GP-generated data (including cancer registries and mortality data).

Direct users of general practice software may include administrative staff (such as receptionists and practice managers), clinicians (GPs, practice nurses and Aboriginal health workers) and others (data managers and community liaison workers). While not direct users of software, other groups affected include recipients of software-generated requests, referrals and prescriptions and, of course, patients themselves.

Role of mainstream general practice

While Aboriginal Community Controlled Health Services are vital, about 50% of Aboriginal and Torres Strait Islander peoples access healthcare elsewhere.^{9,10} Mainstream GPs, therefore, play an important role in Aboriginal and Torres Strait Islander health. However, Aboriginal and Torres Strait Islander health is not front-of-mind for most GPs and it is

perhaps not surprising that user demand for software changes that support optimal care for Aboriginal and Torres Strait Islander peoples has been minimal.

Aboriginal and Torres Strait Islander peoples comprise only a small percentage of most practice populations, and not all have their status accurately recorded. A 2009 estimate suggested 70% of mainstream practices may never (knowingly) treat an Aboriginal and Torres Strait Islander patient.¹⁰

Between 2003–04 and 2013–14, the rate of general practice Medicare Benefits Schedule (MBS) items claimed by Aboriginal and Torres Strait Islander peoples has doubled and is now similar to the non-Indigenous rate.⁹ However, performance in recording Aboriginal and Torres Strait Islander status has changed little: the percentage of patients recorded by GPs as being Aboriginal and Torres Strait Islander varied between 0.7% and 1.6% during 1998–99 to 2007–08¹¹ and between 0.9% and 1.7% during 2006–07 to 2015–16.¹² Under-identification clearly affects these results. In 2015–16, national surveys showed over 10% of patient encounters were missing Aboriginal and Torres Strait Islander status,¹² while a smaller 2012 regional study showed almost 20% of Aboriginal and Torres Strait Islander patients did not have this status documented.¹³ A study of patient records in seven general practices in Sydney showed high rates of either ‘refused/ inadequately stated’ (nearly 60% in one practice) or ‘unidentified’ (six practices had rates ranging from over 25% to 100%).²

Aboriginal and Torres Strait Islander-specific health measures

One way in which general practice could improve healthcare for Aboriginal and Torres Strait Islander peoples is by increasing access to targeted programs designed to overcome health disparities between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.¹⁴ Some of the most important of these are:

- Aboriginal and Torres Strait Islander-specific annual health checks (MBS item 715), which aim to address the life expectancy gap between Aboriginal and Torres Strait Islander peoples and non-Indigenous people
- Aboriginal and Torres Strait Islander-specific follow-ups (MBS items 10987 and the 81300–60 range; 14 items corresponding to follow-ups from different allied and other health professionals), which aim to address needs identified by health checks
- Cheaper, or free, access to Pharmaceutical Benefits Scheme (PBS) medicines through the

Closing the Gap PBS co-payment measure¹⁵ – a breakthrough for Aboriginal and Torres Strait Islander peoples facing financial barriers in accessing medicines.

Despite the number of health checks more than doubling between 2010–11 and 2014–15, over 75% of Aboriginal and Torres Strait Islander people did not have one in 2014–15.¹⁶ Even where checks are done, in isolation they have limited capacity to improve health outcomes, and the uptake of Aboriginal and Torres Strait Islander-specific follow-up is low.¹⁷

There are multiple barriers to increasing uptake of Aboriginal and Torres Strait Islander-specific measures,^{2,18–19} and

Box 1. National standard Indigenous status collection

Question

Are you [is the person] of Aboriginal or Torres Strait Islander origin?

Responses

- No
 Yes, Aboriginal
 Yes, Torres Strait Islander

For clients of both Aboriginal and Torres Strait Islander origin, both ‘Yes’ boxes should be marked. Alternatively include:

- Yes, both Aboriginal and Torres Strait Islander

Recording responses

1. Aboriginal but not Torres Strait Islander origin
2. Torres Strait Islander but not Aboriginal origin
3. Both Aboriginal and Torres Strait Islander origin
4. Neither Aboriginal nor Torres Strait Islander origin
9. Not stated/inadequately described

Source: Australian Institute of Health and Welfare 2010. *National best practice guidelines for collecting Indigenous status in health data sets. Cat. no. IHW 29. Canberra: AIHW.*

Box 2. GP-mediated Indigenous-specific health measures

- Indigenous-specific health checks (MBS item 715)
- Follow-ups after a health check from:
 - practice nurses or registered Aboriginal health workers (MBS item 10987)
 - allied health providers (MBS items 81300–81360)
- Pneumococcal and influenza immunisations for Indigenous adults
- Different immunisations for Indigenous children in some states and areas
- Listings on the Pharmaceutical Benefits Scheme (PBS) specifically for Indigenous people
- Cheaper medicines through the PBS co-payment measure
- Support via Indigenous-specific Care Coordinators

Source: Australian Institute of Health and Welfare 2016, www.aihw.gov.au/indigenous-australians/indigenous-identification/ *National best practice guidelines for collecting Indigenous status in health data sets. [Accessed 19 October 2016].*

software reform cannot address them all. However, its potential impact is far-reaching. Inexperience among practice staff, such as confusion about establishing Aboriginal and Torres Strait Islander status, could be mitigated by good software design.

Unfamiliarity with Aboriginal and Torres Strait Islander-specific health measures can mean practices have little reason to seek Aboriginal and Torres Strait Islander status of all patients, but good software design could help to establish self-reinforcing cycles to highlight patient-appropriate measures and capture the clinical outcomes already foreshadowed in early studies.^{20, 21} Similarly, focus group studies with Aboriginal and Torres Strait Islander people indicate a clear explanation of the rationale for declaring one's Aboriginal and Torres Strait Islander identity is an important factor in doing so.^{22, 23}

GPs point to lack of time and resources as barriers to Aboriginal and Torres Strait Islander-specific care and, again, good software design could streamline processes, reduce duplication of data input, and embed best practice guidelines to make them more useable. Better software processes could also help secure funding available through Aboriginal and Torres Strait Islander-specific measures. For example, as at February 2017, the MBS schedule fee for Aboriginal and Torres Strait Islander-specific health checks is about \$210, while the Practice Incentive Program Indigenous Health Incentive pays practices \$1000 for signing on, and up to \$500 per eligible patient per calendar year in registration and outcomes payments.²⁴

Propositions for software redesign

National stakeholder workshops on improving the identification of Aboriginal and Torres Strait Islander status in general practice were held in 2011 and 2012.⁸ Outcomes from the workshops, together with findings of previous studies, indicate that software improvements should:

- Be flexible – support best practice, but be sufficiently adaptable to accommodate different service models across different practices and future changes (such as developments in e-health).

- Be clinically relevant – the link between Aboriginal and Torres Strait Islander status information and its clinical impact should be clear. Information of little clinical relevance risks desensitising GPs.²⁵
- Integrate necessary information – GPs rarely have time to follow multiple links, download material and scan lengthy documents. Instead, needed information should be made available as a seamless part of clinical workflow.²⁶
- Minimise required effort – supporting Aboriginal and Torres Strait Islander-specific health measures should be as easy as possible.²⁷ User-friendly short cuts (such as prompts and pre-populated templates) should reduce time barriers to improving Aboriginal and Torres Strait Islander-specific care.

Model for general practice software

Keeping the above propositions in mind, attributes important for improving the recording and clinical application of Aboriginal and Torres Strait Islander status were developed and then grouped into five areas of practice as common themes emerged through stakeholder consultation.²⁸

To collect and record Aboriginal and Torres Strait Islander status, software should:

- be adaptable to various processes (whether asked by administrative/clinical staff, in writing/orally)
- use standard Aboriginal and Torres Strait Islander status question-and-response codes

- make Aboriginal and Torres Strait Islander status a mandatory field
- ensure Aboriginal and Torres Strait Islander status data are prominent and available to clinical staff
- provide suggested patient advice to support explanations of Aboriginal and Torres Strait Islander-specific health measures (Box 3).

To provide Aboriginal and Torres Strait Islander-specific health measures, software should:

- prompt appropriate use of GP-mediated Aboriginal and Torres Strait Islander-specific health measures
- guide implementation according to MBS requirements and relevant clinical guidelines through embedded best practice protocols
- include wizards/templates, and maximise pre-population using existing patient data.

To optimise preventive healthcare, software should:

- embed relevant recommendations from the *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people*²⁹
- include both Aboriginal and Torres Strait Islander-specific and general decision support materials.

To improve quality of care and patient information and recall systems, software should:

- report all data by Aboriginal and Torres Strait Islander and non-Indigenous status
- generate Aboriginal and Torres Strait Islander-identified patient recall systems.

Box 3. Suggested patient explanation

Whoever asks the Aboriginal and Torres Strait Islander status question should be able to explain why it is being asked. This should include the implications for care provided, which stem from a patient's decision to identify or not identify. Where patients are given a paper form to complete, the information should be included on the form.

Why do we need to ask patients their Aboriginal and Torres Strait Islander status?

Knowing who our Aboriginal and Torres Strait Islander patients are enables us to offer them the best healthcare, including access to the targeted programs designed to overcome the health disparities between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians. These programs specifically for Aboriginal and Torres Strait Islander peoples include Aboriginal and Torres Strait Islander-specific health checks, free or cheaper access to medicines through the Pharmaceutical Benefits Scheme, and specific adult and childhood immunisations.

To transmit Aboriginal and Torres Strait Islander status information beyond the practice, software should:

- automatically draw Aboriginal and Torres Strait Islander status data from the patient record, and include this in pathology requests, referrals and death certificates.

Next steps

Software providers make changes in response to market forces or government requirements, but to date neither have been applied to Aboriginal and Torres Strait Islander health needs. In the absence of government involvement, GPs themselves are in the best position to effect change. A comparison of current software with the model would highlight priority areas that can then be put to software providers. Requests from even a dozen GPs are taken seriously, while advocacy from GP groups with an interest in Aboriginal and Torres Strait Islander health would be likely to carry even more weight.

Other stakeholders can also support needed changes. For example:

- Purchasers of software could apply the model as an assessment checklist when selecting a package.
- Both Aboriginal and Torres Strait Islander-controlled and mainstream health bodies could endorse and promote the model to help raise awareness of the potential benefits of software changes.
- Software developers themselves could audit their products against the model and consider how gaps could be addressed.

The model should be refined through user feedback and as changes are made to MBS and other requirements. Importantly, input from Aboriginal and Torres Strait Islander patients should be sought. Management of health checks, follow-ups and care plans need to meet their needs as well as those of providers.

In the longer term, the model highlights that government-initiated Aboriginal and Torres Strait Islander primary health

programs can falter if they are not integrated into general practice software. Costing models and implementation processes should consider needed software supports, because in Aboriginal and Torres Strait Islander health, these do not develop spontaneously.

In addition, research should be undertaken to assess the benefits of model-compliant software, and help drive its adoption. In general, such software should reduce the numbers of missing or incorrect Aboriginal and Torres Strait Islander status records and increase the uptake of Aboriginal and Torres Strait Islander-specific health measures. For GPs, this means providing better clinical care and increased MBS billing. For patients, this means improved access to preventive care, support services and cheaper medicines. At a whole-of-population level, improved GP-generated data in national datasets will help improve service delivery.

Limitations

Individuals from a range of settings (including Aboriginal and Torres Strait Islander and non-Indigenous controlled, and GP and non-GP focused, organisations) were invited to provide feedback on the draft model. While valuable input was received, not all stakeholders were in a position to be involved or to formally endorse the model. The model should be seen as a living document that can be enhanced over time.

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References

1. Royal Australian College of General Practitioners. Standards for general practices. Melbourne: RACGP, 2015. Available at www.racgp.org.au/your-practice/standards/standards4thedition/ [Accessed 13 October 2016].
2. Schütze H, Jackson Pulver L, Harris M. The uptake of Aboriginal and Torres Strait Islander health assessments fails to improve in some areas. *Aust Fam Physician* 2016;45(6):415–20.
3. Australian Institute of Health and Welfare. The inclusion of Indigenous status on pathology request forms. Canberra: AIHW, 2013.
4. Improving Indigenous Identification in Communicable Disease Reporting Project Steering Committee. Improving Indigenous identification in communicable disease reporting systems. Canberra: Australian Government Department of Health and Ageing, 2004.
5. Kehoe H. Final Report Aboriginal and Torres Strait Islander Health Awareness Project. Canberra: ACT Division of General Practice, 2007.
6. Kelaher M, Parry A, Day S, Paradies Y, Lawlor J, Solomon L. Improving the identification of Aboriginal and Torres Strait Islander people in mainstream general practice. Melbourne: The Lowitja Institute, 2010.
7. Schütze H, Jackson L, Harris M. What factors contribute to the continued low rates of Indigenous status identification in urban general practice? A mixed methods multiple site case study. *BMC Health Serv Res* 2017;17(95): doi: 10.1186/s12913-017-2017-6.
8. Australian Institute of Health and Welfare. Taking the next steps: Identification of Aboriginal and Torres Strait Islander status in general practice. Canberra: AIHW, 2013.
9. Australian Health Ministers' Advisory Council. Aboriginal and Torres Strait Islander Health Performance Framework 2014 Report. Canberra: AHMAC, 2015.
10. Couzos S, Thiele D. Closing the gap depends on ACCHSs [letter]. *Med J Aust* 2009;190(10):541.
11. Britt H, Miller GC, Charles J, et al. General practice activity in Australia 1998–99 to 2007–08: 10 year data tables. Canberra: AIHW, 2008.
12. Britt H, Miller GC, Henderson J, et al. General practice activity in Australia 2015–16. Sydney: Sydney University Press, 2016.
13. Thomson A, Morgan S, O'Mara P, et al. The recording of Aboriginal and Torres Strait Islander status in general practice clinical records: a cross-sectional study. *Aust N Z J Public Health* 2016;40(Suppl.1):S70–74.
14. Reath J. RACGP—supporting GPs to work better in Aboriginal and Torres Strait Islander health. *Aust Fam Physician* 2005;34(10):845–48.
15. Department of Human Services. Closing the Gap – PBS Co-payment Measure. Canberra: DHS, 2016. Available at www.humanservices.gov.au/health-professionals/services/medicare/closing-gap-pbs-co-payment-measure [Accessed 15 March 2017].
16. Australian Institute of Health and Welfare. Indigenous health check (MBS 715) data tool. Canberra: AIHW, 2016. Available at www.aihw.gov.au.

- gov.au/indigenous-australians/indigenous-health-check-data-tool/#t23 [Accessed 17 October 2016].
17. Bailie J, Schierhout GH, Kelaher MA, et al. Follow-up of Indigenous-specific health assessments — A socioecological analysis. *Med J Aust* 2014;200(11):653–57.
 18. Jennings W, Spurling GK, Askew DA. Yarning about health checks: Barriers and enablers in an urban Aboriginal medical service. *Aust J Prim Health* 2014;20(2):151–57.
 19. Kehoe H, Lovett R. Aboriginal and Torres Strait Islander health assessments: Barriers to improving uptake. *Aust Fam Physician* 2008;37(12):1033–38.
 20. Spurling GKP, Hayman NE, Cooney AL. Adult health checks for Indigenous Australians: The first year's experience from the Inala Indigenous Health Service. *Med J Aust* 2009;190(10):562–64.
 21. Dutton T, Stevens W, Newman J. Health assessments for Indigenous Australians at Orange Aboriginal Medical Service: Health problems identified and subsequent follow up. *Aust J Prim Health* 2015;22(3):233–38.
 22. Scotney A, Guthrie JA, Lokuge K, Kelly PM. 'Just ask!' Identifying as Indigenous in mainstream general practice settings – A consumer perspective. *Med J Aust* 2010;192(10):609.
 23. Australian Bureau of Statistics. Perspectives on Aboriginal and Torres Strait Islander identification in selected data collection contexts. Canberra: ABS, 2012.
 24. Department of Human Services. Practice Incentives Program Indigenous Health Incentive. Canberra: DHS, 2016. Available at www.humanservices.gov.au/health-professionals/services/medicare/practice-incentives-program [Accessed 15 March 2017].
 25. Ahearn, MD, Kerr SJ. General practitioners' perceptions of the pharmaceutical decision-support tools in their prescribing software. *Med J Aust* 2003;179(1):34–37.
 26. Eccles M, McColl E, Steen N, et al. Effect of computerised evidence based guidelines on management of asthma and angina in adults in primary care: Cluster randomised controlled trial. *BMJ* 2002;325(7370):941.
 27. James BC. Making it easy to do it right. *N Engl J Med* 2001;345(13):991–93.
 28. Australian Institute of Health and Welfare. General practice software model to support best practice in Indigenous health care. Canberra: AIHW, 2015.
 29. National Aboriginal Community Controlled Health Organisation and Royal Australian College of General Practitioners. National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people. South Melbourne: RACGP, 2012.

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