

# Identification of Aboriginal and Torres Strait Islander status by general practice registrars: Confidence and associations

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## Background

Identification of Aboriginal and Torres Strait Islander status in healthcare settings is essential for the delivery of culturally appropriate care. Under-identification is common and practitioner confidence is a known barrier.

## Objective

The objective of this research was to document the self-reported confidence of general practice registrars in identifying the Aboriginal and Torres Strait Islander status of their patients, and associations of this confidence.

## Method

This research used cross-sectional analysis of survey and patient encounter data of general practice registrars training across five Australian states.

## Results

Of the 698 registrars (97.5% response rate) who participated in the study, 74.5% had a high level of confidence in identifying a patient's Aboriginal and Torres Strait Islander status. Older and more senior registrars had significantly greater confidence. There was also a significant association with the registrars' training provider.

## Discussion

More than a quarter of registrars reported low confidence for this basic consultation skill. Our findings will inform general practice vocational training and continuing professional development, and reinforce the importance of a comprehensive, system-wide approach to the identification of patients' Aboriginal or Torres Strait Islander status.

Aboriginal and Torres Strait Islander peoples continue to have significantly worse health outcomes when compared with non-Indigenous Australians.<sup>1</sup> This includes higher rates of chronic and communicable diseases, mental illness and trauma, as well as a substantially reduced life expectancy. There are multiple factors contributing to this greater burden of ill health, including socioeconomic determinants<sup>2</sup> and barriers to accessing health services.<sup>3</sup> General practice plays a vital role in the provision of healthcare for Aboriginal and Torres Strait Islander peoples.<sup>4</sup>

Identifying and recording a patient's Aboriginal and Torres Strait Islander status in healthcare settings has been identified as a key issue in addressing the Council of Australian Governments' (COAG) commitments to Closing the Gap (CTG).<sup>5</sup> Accurate identification is essential for many reasons, including planning and evaluating health services,<sup>6</sup> and assessing the effectiveness of public health interventions like immunisation programs.<sup>7</sup> Identification of patients' Aboriginal and Torres Strait Islander status is also a vital component of high-quality, culturally appropriate patient care.<sup>4</sup> In practical terms, this allows the use of appropriate clinical guidelines (eg preventive care,<sup>8</sup> cardiovascular risk assessment,<sup>9</sup> management of acute conditions),<sup>10</sup> access by patients to specific general practitioner (GP)-mediated health initiatives<sup>11</sup> and culturally safe care.<sup>12</sup>

However, Aboriginal and Torres Strait Islander peoples are under-identified in many health data sets.<sup>13</sup> We recently established that Aboriginal and Torres Strait Islander status is not recorded in approximately half of general practice patient clinical records.<sup>14</sup> Barriers to the identification of Aboriginal and Torres Strait Islander patients in general practice have been well described elsewhere.<sup>15-17</sup> These comprise a number of practice- and community-level factors, but interpersonal (doctor-patient) factors also exist. These include apprehension regarding the reactions of patients to the question, fear of offending patients and a lack of confidence.<sup>16,17</sup>

Training in Aboriginal and Torres Strait Islander health is a core component of the Australian General Practice Training (AGPT) program, reflected in the curricula of The Royal Australian College of General Practitioners (RACGP)<sup>18</sup> and the Australian College of Rural and Remote Medicine (ACRRM).<sup>19</sup> This reflects the critical importance of establishing best practice knowledge, skills and attitudes early in the career of GPs.

The aim of this study was to document the levels of self-reported confidence of general practice registrars in identifying the Aboriginal and Torres Strait Islander status of their patients, and establish registrar and practice associations of this confidence.

## Methods

This was a cross-sectional analysis of data collected during the Registrar Clinical Encounters in Training (ReCEnT) cohort study. The ReCEnT study methodology was described in detail elsewhere.<sup>20</sup> Briefly, ReCEnT is an educational and research project investigating the clinical and educational exposure of general practice registrars to patients.<sup>21</sup> It is undertaken by five general practice regional training providers (RTPs), encompassing major cities through to very remote practices in five Australian states.

Data relating to the characteristics of the participating registrars and practices, along with a number of other clinical and educational issues, are collected for each participating registrar. This was obtained during each of the three compulsory general practice training terms (six-monthly for full-time registrars and 12-monthly for part-time registrars), via a self-administered, paper-based questionnaire. These data were primarily used in the current analysis. Data from registrars working in Aboriginal Medical Services (AMSs) were excluded.

Registrars also recorded, during each term, the details of 60 consecutive clinical consultations using a paper-based encounter form. The data included the Aboriginal and Torres Strait Islander status of each patient. From this, we calculated

the proportion of consultations that registrars of each RTP had with Aboriginal and Torres Strait Islander patients.

## Outcome factors

The primary outcome factor was the registrars' self-reported confidence in identifying a patient's Aboriginal and Torres Strait Islander status. Registrars were asked to rate their 'level of confidence in asking about the Aboriginal and Torres Strait Islander status' of their patients on a four-point Likert scale ('Not confident' through to 'Extremely confident'). Where registrars rated their confidence level on more than one occasion (ie in different training terms), we used data from their most recent (more senior) training term.

## Independent factors

Independent variables were categorised as registrar or practice factors. Registrar factors included age, gender, training term, whether they qualified as a doctor in Australia and the RTP with which they trained. Practice factors included the size, rurality, and socioeconomic status of the practice. The practice's postcode was used to define the Australian Standard Geographical Classification – Remoteness Area (ASGC-RA)<sup>22</sup> classification (the degree of rurality), and the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-Economic Disadvantage<sup>23</sup> was used to determine the socioeconomic status of the practice location.

## Statistical analysis

Analysis was performed on three rounds of data collection in 2014–15. For the primary outcome of confidence in identifying a patient's Aboriginal and Torres Strait Islander status, we dichotomised the four possible responses:

- 'Not confident' was combined with 'Somewhat confident' to create 'Low confidence'
- 'Moderately confident' was combined with 'Very confident' to create 'High confidence'.

Univariable associations with independent variables were tested with

logistic regression. Variables with a *P* value <0.20 and a relevant effect size in the univariable analysis were included in the multiple regression model.

In a post-hoc analysis, the proportion of registrars' clinical encounters in the study period that involved Aboriginal and Torres Strait Islander patients was calculated for each RTP with a 95% confidence interval (95% CI), using generalised estimating equations (GEEs) to adjust for clustering of consultations within registrars. Analyses were programmed using STATA 13.1 and SAS V9.4.

Ethics approval was obtained from the Human Research Ethics Committee of the University of Newcastle, New South Wales, Australia (reference number H-2009-0323).

## Results

The study achieved a response rate of 97.5%. Of the 698 registrars who responded, 65.3% (95% CI: 61.7–68.8%) were female, and their overall mean age was 32.6 years (SD = 6.1 years). Registrars who trained overseas comprised 16.7% (95% CI: 14.1–19.6%) of the total participants. The characteristics of the registrars, practices and RTPs are presented in Table 1.

Overall, 519 registrars (74.5%; 95% CI: 71.1–77.6%) had a high level of confidence in asking patients about their Aboriginal and Torres Strait Islander status (Figure 1). The proportion of registrars' clinical encounters for each individual RTP that involved Aboriginal and Torres Strait Islander patients ranged from 0.4% (95% CI: 0.3–0.5%) to 6.4% (95% CI: 4.8–8.6%; Table 1).

## Associations

Characteristics that are associated with confidence in identifying a patient's Aboriginal and Torres Strait Islander status are presented in Table 2. The multivariable associations of registrar confidence are presented in Table 3.

Older registrars had significantly greater confidence in asking patients

**Table 1. Characteristics of participating registrars, practices and RTPs**

Variable	Class (n)*	% (95% CI)
<b>Registrar factors (n = 698)</b>		
Gender	Male (242)	34.7 (31.2–38.3)
	Female (456)	65.3 (61.7–68.8)
Australian medical degree	No (116)	16.7 (14.1–19.6)
	Yes (580)	83.3 (80.4–85.9)
Age (years)	Mean (SD)	32.6 (6.1)
<b>Registrar-term or practice-term factors (n = 698)</b>		
Training term	Term 1 (262)	37.5 (34.0–41.2)
	Term 2 (104)	14.9 (12.4–17.7)
	Term 3 (332)	47.6 (43.9–51.3)
RTP	RTP 1 (152)	21.8 (18.9–25.0)
	RTP 2 (212)	17.3 (14.7–20.3)
	RTP 3 (98)	14.0 (11.6–16.8)
	RTP 4 (269)	38.5 (35.0–42.2)
	RTP 5 (58)	8.3 (6.5–10.6)
Worked at the practice previously	No (531)	77.6 (74.3–80.6)
	Yes (153)	22.4 (19.4–25.7)
Worked full-time	No (185)	26.7 (23.6–30.2)
	Yes (507)	73.3 (69.8–76.4)
Practice routinely bulk bills	No (565)	81.1 (78.0–83.8)
	Yes (132)	18.9 (16.2–22.0)
Number of FTE GPs in the practice	1–4 (253)	36.9 (33.3–40.6)
	5+ (433)	63.1 (59.4–66.7)
Rurality of practice	Major city (377)	54.0 (50.3–57.7)
	Inner regional (161)	23.1 (20.1–26.3)
	Outer regional or remote (160)	22.9 (19.9–26.2)
SEIFA Index (decile) of practice	Mean (SD)	5.5 (2.9)
<b>RTP variables of encounters (n = 41,072)</b>		<b>Aboriginal and Torres Strait Islander patients</b>
		<b>n (%)† (95% CI)</b>
	RTP 1 (n = 8,754)	198 2.5 (1.8–3.2)
	RTP 2 (n = 7,220)	112 1.7 (1.2–2.4)
	RTP 3 (n = 5,821)	92 1.7 (1.1–2.4)
	RTP 4 (n = 15,840)	57 0.4 (0.3–0.5)
	RTP 5 (n = 3,437)	213 6.4 (4.8–8.6)

\*Numbers may not total 698 due to missing data

†Percentages exclude missing data

CI, confidence interval; FTE, full-time equivalent; GP, general practitioner; RTP, regional training provider; SEIFA, Socio-Economic Indexes for Areas

about their Aboriginal and Torres Strait Islander status than younger registrars (odds ratio [OR] = 1.04;  $P = 0.0124$ ). Registrars in Term 3 had significantly greater confidence than those in Term 1 (OR = 1.89,  $P = 0.0015$ ). The RTP where the registrar trained was also significantly associated with their confidence. There were no significant practice associations.

## Discussion

Overall, we found that general practice registrars had a high level of self-rated confidence in identifying the Aboriginal and Torres Strait Islander status of their patients. However, more than a quarter (25.5%) rated themselves as somewhat or not confident for this consultation skill. To our knowledge, this is the first time the confidence level and associations of Aboriginal and Torres Strait Islander status identification have been described in any population.

The relatively high level of self-rated confidence is likely to be related to prior training, both undergraduate and postgraduate, and clinical experience. All Australian medical schools are required to deliver training in Aboriginal and Torres Strait Islander health in accordance with the Committee of Deans of Australian Medical Schools (CDAMS) *Indigenous Health Curriculum Framework*.<sup>24</sup> Aboriginal and Torres Strait Islander health is also a core element of the Australian curriculum framework for junior doctors for prevocational trainees.<sup>25</sup>

Confidence increases with greater registrar age and seniority in the training program. Although this is an association demonstrated in a cross-sectional analysis and temporal changes have not been demonstrated, the association with seniority within the training program is likely to reflect increased clinical experience with Aboriginal and Torres Strait Islander patients. It is also likely that specific RTP-delivered education in asking and recording Aboriginal and Torres Strait Islander status has contributed to this association.

The association with the host RTP may reflect regional variations in clinical exposure, RTP-specific education, and

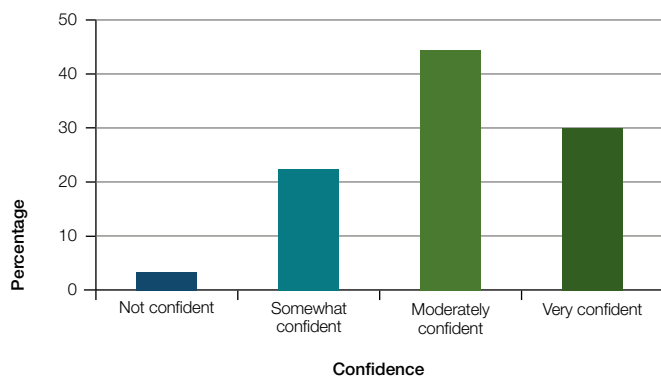


Figure 1. Registrars' level of confidence in asking Aboriginal and Torres Strait Islander status

Table 2. Characteristics associated with confidence in identifying Aboriginal and Torres Strait Islander status

Variable	Class	Level of confidence n (%)		P
		Low (n = 178)	High (n = 519)	
Registrar age	Mean (SD)	31.4 (5.0)	33.0 (6.4)	0.0036
Registrar gender	Male	68 (28.1)	174 (71.9)	0.2585
	Female	110 (21.2)	345 (75.8)	
Australian medical degree	No	20 (17.2)	96 (82.8)	0.0275
	Yes	157 (27.1)	422 (72.9)	
Registrar training term	Term 1	80 (30.6)	181 (69.4)	0.0462
	Term 2	26 (25.0)	78 (75.0)	
	Term 3	72 (21.7)	260 (78.3)	
Number of FTE GPs in the practice	0–4	63 (24.9)	190 (75.1)	0.7165
	≥5	113 (26.2)	319 (73.8)	
Rurality	Major city	109 (29.0)	267 (71.0)	0.0219
	Inner regional	41 (25.5)	120 (74.5)	
	Outer regional remote	28 (17.5)	132 (82.5)	
RTP	RTP 1	19 (12.5)	133 (87.5)	<0.0001
	RTP 2	38 (31.4)	83 (68.6)	
	RTP 3	25 (25.5)	73 (74.5)	
	RTP 4	89 (33.2)	179 (66.8)	
	RTP 5	7 (12.1)	51 (87.9)	
SEIFA Index (decile) of practice	Mean (SD)	6.0 (3.1)	5.3 (2.8)	0.0055

FTE, full-time equivalent; GP, general practitioner; RTP, regional training provider; SEIFA, Socio-Economic Indexes for Areas

region-specific contextual factors relating to Aboriginal and Torres Strait Islander health that were not measured in this study. For example, despite a significantly higher proportion of Aboriginal and Torres Strait Islander encounters in RTP 5, registrars in that RTP did not have a significantly higher level of confidence than registrars in RTP 1. In 2003, a national framework for the delivery of Aboriginal and Torres Strait Islander health was developed and all RTPs are required to adhere to this in the delivery of training.<sup>26</sup> However, our findings raise the possibility of differences between RTPs in the effectiveness of training in this area.

### Strengths and limitations

A major strength of our study is the very high response rate,<sup>27</sup> with 97.5% of registrars participating. The study was also conducted across five Australian states and all ASGC-RA classifications. Thus, the study has strong external validity.

One significant limitation is that our outcome measure was self-reported confidence of registrars in identifying Aboriginal and Torres Strait Islander status. Confidence is not equivalent to competence, nor does it necessarily translate to better actual identification in the clinical practice of Aboriginal and Torres Strait Islander patients. Previous studies in other medical learning contexts have demonstrated poor correlation between self-assessed confidence and formally assessed competence.<sup>28,29</sup> Nevertheless, our self-reported measure of confidence is a valid outcome measure of this limited construct. Importantly, our finding of a lack of confidence in more than a quarter of respondents has significant implications for quality practice. If, as in other areas of medical education, self-rated confidence overestimates competence, this would strengthen rather than attenuate the import of our findings.

A further limitation is the lack of data for individual registrars on the level of specific training in identifying Aboriginal and Torres Strait Islander status, or

**Table 3. Associations of registrar confidence in identifying Aboriginal and Torres Strait Islander status: Multiple logistic regression**

Variable	Class	Univariate		Adjusted	
		OR (95% CI)	P	OR (95% CI)	P
Registrar training term	Term 2	1.33 (0.79–2.22)	0.2838	1.21 (0.70–2.09)	0.4894
Referent: Term 1	Term 3	1.60 (1.10–2.31)	0.0134	1.89 (1.28–2.81)	0.0015
Rurality	Inner regional	1.19 (0.79–1.82)	0.4047	0.86 (0.51–1.46)	0.5760
Referent: Major city	Outer regional, remote and very remote	1.92 (1.21–3.06)	0.0058	1.43 (0.74–2.76)	0.2812
RTP	RTP 2	0.31 (0.17–0.58)	0.0002	0.25 (0.13–0.48)	<0.0001
Referent: RTP 1	RTP 3	0.42 (0.22–0.81)	0.0096	0.36 (0.17–0.75)	0.0062
	RTP 4	0.29 (0.17–0.49)	<0.0001	0.30 (0.17–0.55)	<0.0001
	RTP 5	1.04 (0.41–2.62)	0.9324	0.95 (0.33–2.77)	0.9315
Registrar age		1.05 (1.02–1.08)	0.0036	1.04 (1.01–1.08)	0.0124
SEIFA Index (decile) of practice		0.92 (0.87–0.98)	0.0055	0.95 (0.89–1.01)	0.1102

Note, removal of 'qualified as doctor in Australia' did not substantively alter the final model so this covariate was not included in the final model. CI, confidence interval; OR, odds ratio; RTP, regional training provider; SEIFA, Socio-Economic Indexes for Areas

their previous experience in working in Aboriginal and Torres Strait Islander health settings. Our data do not allow us to fully explore the factors underpinning the marked variability in registrar confidence between different RTPs beyond the overall exposure to Aboriginal and Torres Strait Islander patients within individual RTPs. We also cannot assess particular aspects of the educational programs of RTPs that may have contributed to any differences in registrar confidence. We adjusted for rurality and socioeconomic status of practice location and for practice size in our analyses, but other unmeasured variables related to regional demographic and contextual or cultural factors may be operating.

We conducted a cross-sectional analysis; however, longitudinal analysis of observations over a longer period would provide stronger evidence for causality in the relationships of our measured variables with registrar confidence.

Additionally, data from registrars currently working in an AMS were not included in the analysis. It might be expected that, if practising in non-AMS practices in the future, they may bring

enhanced confidence in asking about Aboriginal and Torres Strait Islander status to their work.

### Implications for future research

Our findings raise a number of questions for further research. These include assessing the confidence levels of established GPs and other practice staff, measuring the link between specific training and increase in confidence, and investigating other factors that improve confidence in the identification of patients' Aboriginal or Torres Strait Islander status via a longitudinal methodology.

### Implications for general practice

The ability to confidently identify a patient's Aboriginal and Torres Strait Islander status is an essential skill. Aboriginal and Torres Strait Islander patients account for approximately 1.6% of general practice consultations.<sup>30</sup> More specifically, general practice registrars see Aboriginal and Torres Strait Islander patients in 1.0% of consultations.<sup>31</sup> Thus, our findings have implications for education and training. Our finding

that more than a quarter of registrars rated a low level of confidence in identifying the Aboriginal and Torres Strait Islander status of their patients is of concern. The disparity in confidence between educational organisations (RTPs) suggests that a review of RTP-level educational approaches may be appropriate. The needs of established GPs who may have never received specific training in this skill may also need to be addressed through continuing professional development.

Our findings also reinforce the importance of a comprehensive systems approach to identification of patients' Aboriginal or Torres Strait Islander status in general practice, which may help to overcome a lack of confidence in asking the question. The RACGP has developed guidelines on the identification of patients' Aboriginal or Torres Strait Islander status that address both these areas.<sup>32</sup>

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