General practice ethnicity data:
evaluation of a tool

Pat Neuwelt PhD, MD (Can), FRNZCGP, FNZCPHM;[1] **Sue Crengle** PhD, MPH, FRNZCGP, FNZCPHM;[1] **Donna Cormack** PhD;[2] **Melissa McLeod** MPH, MBChB, FNZCPHM;[2] **Dale Bramley** MBChB, MPH, MBA, FAFPHM, FNZCPHM[3]

ABSTRACT

INTRODUCTION: There is evidence that the collection of ethnicity data in New Zealand primary care is variable and that data recording in practices does not always align with the procedures outlined in the *Ethnicity Data Protocols for the Health and Disability Sector.* In 2010, The Ministry of Health funded the development of a tool to audit the collection of ethnicity data in primary care. The aim of this study was to pilot the Ethnicity Data Audit Tool (EAT) in general practice. The goal was to evaluate the tool and identify recommendations for its improvement.

METHODS: Eight general practices in the Waitemata District Health Board region participated in the EAT pilot. Feedback about the pilot process was gathered by questionnaires and interviews, to gain an understanding of practices' experiences in using the tool. Questionnaire and interview data were analysed using a simple analytical framework and a general inductive method.

FINDINGS: General practice receptionists, practice managers and general practitioners participated in the pilot. Participants found the pilot process challenging but enlightening. The majority felt that the EAT was a useful quality improvement tool for handling patient ethnicity data. Larger practices were the most positive about the tool.

CONCLUSION: The findings suggest that, with minor improvements to the toolkit, the EAT has the potential to lead to significant improvements in the quality of ethnicity data collection and recording in New Zealand general practices. Other system-level factors also need to be addressed.

KEYWORDS: Data collection; ethnicity; general practice; primary health care

[1] Te Kupenga Hauora Maori, School of Population Health, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand

[2] Te Ropu Rangahau Hauora a Eru Pomare, University of Otago Wellington

[3] Waitemata District Health Board, Auckland

Introduction

There is a scarcity of information available regarding the quality of ethnicity data collection in primary care in New Zealand (NZ).[1,2] High quality ethnicity data provide valuable information regarding the health status of population groups, and allow the effectiveness of interventions to be assessed. Most importantly, high quality data support the monitoring of ethnic health inequalities.

Currently in New Zealand, primary care practice enrolment data, including patient ethnicity data, are collected on self-completed patient enrolment forms when a patient joins a general practice. The information is then entered into the patient's electronic records on the practice management system (PMS). Primary health organisations (PHOs) require practices to send their electronic enrolment data to the PHO on a regular basis, often quarterly. PHOs and general practices receive funding that is adjusted for ethnicity, as part of the population-based funding formula in primary care. This incentive has led to higher 'completeness rates' of general practice ethnicity data collection over time.[2]

Despite improvement in general practice ethnicity data completeness, there is evidence that the data collection is variable and that ethnicity

CORRESPONDENCE TO:
Pat Neuwelt
Te Kupenga Hauora Maori, School of Population Health, Faculty of Medical and Health Sciences, The University of Auckland, PB 92019, Auckland 1142, New Zealand
p.neuwelt@auckland.ac.nz

data recording in practices does not always align with the recommended protocols for the health and disability sector.[1,3] While some research has found no systematic disagreement on ethnicity between primary care data and other data sources,[4] other research suggests that Maori are more likely to be misclassified than any other ethnic group in primary care datasets.[3]

Although scarce, the literature on barriers and enablers to ethnicity data collection in primary care has reported a number of recurring factors. Barriers and enablers include staff members' understanding of the relevance and meaning of ethnicity data, staff concern about causing offence to patients, lack of knowledge about how to collect and record the data, and a lack of staff access to training.[2]

In 2010, The New Zealand Ministry of Health (MoH) funded a project with the aim of developing a tool to audit the collection of ethnicity data in primary care settings. The project was a partnership between Waitemata District Health Board (WDHB) and Harbour PHO (later Waitemata PHO), with specialist input provided by experts from The University of Auckland and the University of Otago. The Primary Care Ethnicity Data Audit Framework, or Ethnicity Data Audit Tool (EAT), and a background literature review were the result of the project. This paper reports on the piloting of the tool in general practices in the Auckland region.

The Ethnicity Data Audit Tool (EAT)

At the outset of the pilot process, the EAT consisted of a user guide and a three-stage audit process for general practices. The user guide contained details of how to complete the audit, and resources such as a summary of the protocol requirements from *Ethnicity Data Protocols for the Health and Disability Sector.*[5]

The EAT pilot process involved general practice staff undertaking a series of actions in three stages. At each stage, they were asked to review their current practice against the *Ethnicity Data Protocols for the Health and Disability Sector.*[5] (These protocols were incorporated into the EAT guidelines). Then the practice was to undertake

a needs-assessment and plan of action. The first two stages involved reviewing two aspects of system compliance, as follows:

- Stage One (Systems Compliance Audit): the practice's current methods of collecting, recording, storing and 'outputting' ethnicity data;
- Stage Two (Staff Survey): the relevant staff members' understanding of the Stage One elements.

Stage Three (Data Quality Audit) required practice administrative staff to undertake a data quality audit by requesting ethnicity data from 100 consecutive patients in the practice, and then comparing those new data to the ethnicity data held in the patient's electronic record within the PMS.

This article reports key findings from an evaluation of the primary care EAT pilot carried out. It includes recommendations for improving the EAT for use in general practice that have been taken into account in the revised version of the tool.

Methods

Recruitment and sample

The evaluation of the EAT pilot received ethics approval from the Northern X Regional Ethics Committee in 2010 (NTX/10/EXP/133, extension Nov/11). The pilot commenced in the WDHB region in February 2012, led by Waitemata PHO. The intention was to pilot EAT in 10 practices, varying by size and location in north and west Auckland.

The MoH provided a list of potential practices to approach, which varied by the number and demographics of enrolled patients. Practice managers (PMs) or a general practitioner (GP) in the first 10 practices on the list were visited by a Waitemata PHO liaison nurse who explained the project and sought consent to participate. When a practice declined, the next practice on the list was visited. Over a two-month period, 14 practices were invited to participate. Two practices declined and two withdrew at a later stage, leaving a sample of eight practices. The reasons for declining involvement in the pilot are unknown; however, the two

practice withdrawals from the pilot were due to PM time constraints. Once consent was obtained, the practice details were passed to the pilot evaluator (author PN), who telephoned the PM or GP to discuss the timeline for the audit, answer any questions, and arrange follow-up interviews.

Data collection

Feedback about the pilot process was gathered by questionnaires and interviews, which aimed to provide an understanding of practices' experiences in piloting the tool. Participants chose whether questionnaires were self-completed or completed during telephone or face-to-face interviews with the evaluator. The questionnaires, and subsequent interviews, explored the practice's experience of each stage of the EAT process, including the PMS audit, the new data collection from patients, and the staff survey, its assessment and feedback to staff.

In six of the eight practices, staff opted to have questionnaire completion occur through a structured interview with the evaluator, who documented participant responses. Interviews only took place with the person(s) in each practice responsible for the EAT process. In the two largest practices, the questionnaires were fully self-completed; however, the evaluator also carried out a face-to-face interview to clarify findings. Three GPs, four PMs and two receptionists engaged in face-to-face interviews (n=9).

Data analysis

This paper reports on pilot data from two main sources: 'free text' questions on questionnaires, and face-to-face interviews with practice staff. Analysis was undertaken in two steps. Firstly, questionnaire and interview data were organised and analysed in relation to the questions asked, consistent with an evaluative 'simple analytical framework'.[6] Secondly, both sets of data were analysed thematically using a general inductive method[7] by the first author, with a cross-comparison of interpretation carried out by the second author. Analysis and interpretation were developed in an iterative fashion, with 'analytical insights' recorded by the first author during fieldwork with the practices, in

WHAT GAP THIS FILLS

What we already know: Ethnicity data collection is important for measuring and monitoring population health status, for implementing evidence-based individual care, and for health services funding and planning. Ethnicity data collection in New Zealand general practice is now commonplace, but the processes and quality of data collection are variable.

What this study adds: This study presents the views of general practice administrative staff and general practitioners about the Ethnicity Data Audit Tool (EAT) to inform its refinement. The EAT appears a useful quality improvement tool for ethnicity data gathering in New Zealand general practice.

keeping with the emergent nature of qualitative research methods.[6]

Results are reported thematically, with quotes to highlight the key themes. The practices are referred to by letter (A to H). Staff members' roles are identified as practice manager (PM), receptionist (R), or general practitioner (GP). Six of the practices were located on Auckland's North Shore (B, C, E, F, G, H) and two in west Auckland (A, D). Two were solo practitioner practices, and the others had between two and nine GPs. Four of the practices had PMs.

Findings

The practices' experiences of using the EAT are reported, followed by key themes emerging from the interviews.

Experience of using the EAT

The people responsible for the audit tasks varied by practice (see Table 1). The four larger practices (A, B, C, D) had PMs who coordinated the EAT process and undertook the ethnicity data quality audit (Stage Three). In the practices without PMs, the EAT was coordinated by receptionists, GPs, or both.

The majority of participants felt the EAT was a useful tool for quality improvement with regard to patient ethnicity data. The EAT coordinator for the two smallest practices in the sample did not find value in the tool, however. In these practices, the EAT process was left incomplete.

Table 1. Distribution of Ethnicity Data Audit Tool responsibilities in pilot practices (N=8).

	Receptionist(s)	Practice manager (PM)	General practitioner (GP)
Coordinated EAT pilot in the practice	2*	4	3*
Collected new patient ethnicity data	8*	1*	0
Analysed/audited ethnicity data	2	5	1

EAT Ethnicity Data Audit Tool

*   In one practice, the GP and receptionist appeared to be co-coordinators of the pilot; in another, a PM collected data along with receptionists.

Each was a sole GP practice that reported having an ethnically homogenous patient population.

The average time taken to complete Stage Three of the audit (collection of ethnicity data from 100 consecutive patients) was nine days (range 2–20 days). Six practices completed data collection on 100 patients, and two practices collected data from 90–99 patients. Participants reported that the patients were 'as close to consecutive' as was possible, given practical limitations, such as how busy the reception desk was.

There were five key themes evident from the 'free text' questionnaire data and interview data collected during the pilot process, which are now reported, along with recommendations for improving the EAT.

Value of ethnicity data collection

Despite a practice having consented to participate, some of the practice EAT coordinators expressed ambivalence about the pilot at the time of initial contact with the evaluator. Some individuals, PMs and GPs, stated that they did not understand the point of the EAT, but would complete it because they had been asked to complete it by the PHO. Some expressed significant confusion about the meaning of 'ethnicity'.

Despite some initial hesitation, by the time of the evaluator's follow-up visit, the practices with PMs (four of the eight practices) were positive about the impact of the audit on staff and practice systems. As previously noted, staff from sole GP practices (n=2) were less convinced of the value of auditing practice systems for ethnicity data.

Categorising and recording ethnicity

A requirement of the data quality audit was that the audit form was to be completed by the patient in order to collect self-identified ethnicity. A number of receptionists, PMs, and GPs expressed discomfort with the ethnicity categories on the audit form, despite knowledge that these were the same as the New Zealand Census question, which is the recommended standard question for the New Zealand health sector.[5]

A small number of receptionists expressed a lack of satisfaction with the selection(s) that some patients had made on the audit form. For example, two receptionists expressed confusion about what to do when patients 'tick the wrong category'. One stated, 'Should I complete [transfer to the medical record] what box the patient ticks, or what I know?' While they did not admit to altering people's choices by recording them differently in the PMS, they did imply that they considered such action to be valid.

There were also suggestions made for changes to the audit's (Census) ethnicity question. For example, one practice manager and also a receptionist expressed the strong view that 'Other European' should be added to the form, to better suit migrants from the UK. The practice manager interpreted a patient's choice as follows:

> For example, a Scots patient who's lived in NZ for 35 years, ticked 'NZ European' because there was no other option with 'European' in it on the form. (PM, Practice A)

A further example came from practices that cater to people from particular ethnic groups. Two receptionists stated their belief that it is offensive for their patients not to see their ethnicity listed more explicitly in the level 2 categories of the Census question. For example, for people of 'Asian' ethnicities, the categories listed in level 2 include only Southeast Asian (41), Chinese (42), Indian (43), Other Asian (44) and Asian Not Further Defined (40).[5]

We wonder if we should give our patients the level 2 list. [Ethnic group] Patients can't see themselves listed there. (R, Practice H)

We have a largely [ethnic group] practice population and it's offensive to them to have to tick 'Other'. (R, Practice E)

Overall, there was evidence that receptionists might add categories to the audit's ethnicity question, or even record data in the PMS differently to the patient-identified categories, if carrying out a data audit in future.

Need for training and incentives

PMs consistently noted that involvement in the pilot process had led to staff becoming better educated about 'ethnicity' and ethnicity data collection. The Staff Survey had highlighted that many receptionists had little or no understanding about the measurement of ethnicity. PMs and GPs did not appear to be surprised by this finding, and reflected on the lack of training available on this topic. One GP highlighted the importance of not only information (such as is provided in the EAT toolkit) but also training sessions for GPs and practice staff.

Overall, the tool… is time-consuming. They [authors] are asking too much when we haven't been given the information to begin with, through the PHO. Our [ethnicity data] match isn't high because we didn't know! This needs an information drive. We didn't even get the information through CORNERSTONE [The Royal New Zealand College of General Practitioners' [RNZCGP] General Practice Accreditation Programme] when we did it last year. We haven't had anything to base our ethnicity data collection on. We need information and training. What do they [MoH, DHB, PHO] want? (GP, Practice H)

Incentives were also seen to be important. One PM argued that if accurate ethnicity data collection is a priority, then it needs to be incentivised by the PHO in the same way that the quality of other data collection is incentivised financially.

This is important at a government level but doesn't relate to the practice level. This doesn't make us

money! If the PHO drove it, we'd be more inclined to do it… some funding to 'drive it'. In our PMS we always put Maori first, then PI, if patients list it, for funding reasons. Every quarter the PHO requires practices to send enrolment data. If there is no signature or no enrolment date, the capitation funding is reduced; but there is no money lost if ethnicity data is missing or wrong, therefore there are no financial implications for practices. (PM, Practice D)

Two GPs recommended that carrying out a practice ethnicity data audit should be incentivised for GPs by offering MOPS (RNZCGP Maintenance of Professional Standards) points as part of their continuing medical education activities.

Conflicting standards

During face-to-face interviews, PMs, GPs and receptionists generally perceived value in improving the quality of ethnicity data collection in the practice. However, a number expressed confusion and frustration that the EAT seemed to be 'at odds' with other 'standards' for ethnicity data collection in primary care.

The practices' patient enrolment forms were created by PHOs. During the pilot, some PMs and GPs pointed out that the ethnicity question on their own patient enrolment forms did not match the Census question. (Note: The standard PHO enrolment form, as provided in the 2011 guidelines for PHO enrolment, now contains the Census 2001 question). Further, some PMs and GPs were unclear how many levels (e.g. level 2 or 4) of ethnicity data are uploaded from the PMS by the PHO. Some expressed their 'right to know' what levels of ethnicity data are uploaded from practices, and how they are utilised by the PHO.

One GP described having sought information from both the PHO and the National Health Index (NHI) helpdesk with regard to ethnicity data collection, with limited success. She was frustrated by the lack of consistency about ethnicity data collection between the PMS, the PHO and the MoH. Other GPs and PMs expressed similar frustration. Two participating practices had been accredited through the RNZCGP CORNERSTONE programme within the previ-

ous year, and had been advised at that time that their enrolment data collection and recording were appropriate. Their data collection, however, was not in keeping with the standard for the sector, as outlined in the EAT. (Note: Since then CORNERSTONE has updated its quality standards to state that data collection must be in line with sector protocols).

Recommendations for improvement

Recommendations for improvement of the EAT primarily related to streamlining and simplifying it, for it to be more easily used in the busy practice context. Participants, excluding those from the sole GP practices, were positive about the usefulness of the EAT, with the proviso that the language be simplified, the toolkit shortened, and the inclusion criteria for the patient data audit made more explicit.

The pilot process has highlighted practice-level confusion about the relevance and meaning of ethnicity data, and an ongoing lack of knowledge about how to collect and record high quality data

Many participants requested a simpler structure to the EAT that was easier to follow, including a one-page checklist or flowchart at the beginning. Some considered that the EAT contained too much jargon (for example, 'the standard ethnicity question' and 'PMS'), and called for simplified language. Overall, participants reported that the toolkit should be shortened. In fact, in half of the practices, the practice EAT coordinator indicated that he/she had not read the entire EAT user guide, due to its length. Time constraint was the most common reason identified for this.

There was some confusion as to who was eligible for inclusion in the data audit, and more explicit guidelines were recommended. Two practices excluded children from the audit, despite the EAT having stated otherwise. Further, the EAT did not state whether casual, 'drop-in' patients were eligible for inclusion in the audit.

To summarise findings, overall practices found the experience of engaging in the pilot challenging but enlightening and helpful. Participation appeared to change behaviour. For example, PMs highlighted that the most useful part of the EAT was the 'Quick Reference Table' (for ethnicity coding) from the Ethnicity Data Protocols Supplementary Notes.[8] Two PMs copied this and posted it at the reception desk, while another scanned it and posted it on the computer at reception. Receptionists could then refer to it when coding ethnicity data as identified on patient enrolment forms. Further, as a result of participation in this EAT pilot, a number of PMs changed the practice PMS ethnicity categories to be more consistent with the Census categories.

Discussion

This paper presents key evaluation findings from the general practice pilot of the EAT. Participating general practices made recommendations for improving the EAT content and processes. Staff members also expressed their wider concerns and recommendations about ethnicity data collection in primary care.

The pilot process has highlighted practice-level confusion about the relevance and meaning of ethnicity data, and an ongoing lack of knowledge about how to collect and record high quality data. It is notable that many receptionists still express discomfort with the notion of self-identified ethnicity. Further, it is concerning that some general practice receptionists consider that their own interpretations of patients' ethnicity have as much validity as self-identified ethnicity. These findings highlight a lack of understanding among some general practice staff about ethnic identity and its measurement in New Zealand, consistent with previous research in the general practice setting.[2]

What is most notable from the EAT pilot is that, with information and training, there is now evidence that staff members in many practices are likely to be motivated to improve the quality of the ethnicity data they collect. Providing both staff training and incentives for accurate ethnicity data collection and recording in primary care settings is likely to improve data quality. How-

ever, these findings suggest that other system-level factors must also be addressed.

Participants called for more consistent messages about ethnicity data collection and coding across the primary care sector and for practice management systems that allow for accurate ethnicity data recording. They recommended that a consistent standard be utilised by PMS software, the PHO enrolment form and uploading processes, and the Ministry of Health NHI. System-level changes are necessary to support practice staff to collect and record high quality ethnicity data.[2] Agreement on accepting a standard approach to ethnicity data collection and recording among key stakeholder organisations in the primary care sector is key.

Significant progress has already been made in this regard. The RNZCGP general practice standard, *Aiming for Excellence 2011–14*,[9] now requires practices to collect, document and audit patient ethnicity data consistent with the *Ethnicity Data Protocols for the Health and Disability Sector*.[5] Further, the 2011 guidelines for PHO enrolment include the standard ethnicity question, so newer PHO enrolment forms will be consistent with the standard.[10] It will now be important for the PMS to incorporate the standard ethnicity categories, including options for multiple ethnicities and accurate coding. Without this change, a significant barrier to accurate primary care ethnicity data recording remains in place.

This pilot process had a number of limitations. The sample of practices was small, they were all based in Auckland, and demographic data (such as number and ethnicity of enrolled patients) were not made available to the evaluator. While the findings reported here are not necessarily generalisable to all NZ general practices, they do offer an indication of the issues that are likely facing many general practices with regard to ethnicity data collection and recording. General practices vary in size and style, and staff members vary in their levels of training and capability. Yet, across a range of practice sizes in this project, there was evidence of a need for training of general practice staff in the recommended procedures for accurate ethnicity data management in the health sector. Further, this pilot of the EAT suggests

that smaller practices, in which the management functions are carried out by one GP or multiple GPs, may require direct PHO support in order to improve the accuracy of their ethnicity data collection and recording.

Conclusion

The EAT has been revised, in light of this pilot, for use in the primary care sector. The findings of the pilot suggest that, with minor improvements to the toolkit, the EAT could significantly improve the quality of ethnicity data collection and recording in NZ general practices, alongside other necessary system-level changes.

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