Abstract

Background

The primary health care sector delivers the majority of health care in western countries through small, community-based organizations. However, research into these healthcare organizations is limited by the time constraints and pressure facing them, and the concern by staff that research is peripheral to their work. We developed Q-RARA—Qualitative Rapid Appraisal, Rigorous Analysis—to study small, primary health care organizations in a way that is efficient, acceptable to participants and methodologically rigorous.

Methods

Q-RARA comprises a site visit, semi-structured interviews, structured and unstructured observations, photographs, floor plans, and social scanning data. Data were collected over the course of one day per site and the qualitative analysis was integrated and iterative.

Results

We found Q-RARA to be acceptable to participants and effective in collecting data on organizational function in multiple sites without disrupting the practice, while maintaining a balance between speed and trustworthiness.

Conclusions

The Q-RARA approach is capable of providing a richly textured, rigorous understanding of the processes of the primary care practice while also allowing researchers to develop an
organizational perspective. For these reasons the approach is recommended for use in small-scale organizations both within and outside the primary health care sector.

Keywords

Primary health care; organizations; qualitative research; qualitative analysis; mixed method research
The primary health care sector delivers the majority of health care in western countries through small, community-based organizations. In Australia, the vast majority of primary care is delivered through general practice. Understanding the processes that are central to the delivery of quality primary care is crucial to the ongoing maintenance and improvement of practice, yet to date much research into primary care has relied on quantitative, or single-method qualitative research. The importance of qualitative research methods in primary care has been emphasized since the mid-1990s, spearheaded by the British Medical Journal [1,2,3], but the range of methods used has tended to be limited, typically focusing on interviews as the primary data source.

Several reasons have been put forward to explain the limited range of methods used in primary care research. As a rule, general practices are small businesses with few staff members all working under strict time constraints and pressure [4]. Because of the competing demands for time in general practice, staff may view research as peripheral to the purpose of the organization [5]. For both these reasons, researchers may choose qualitative methods that are least intrusive for the organization and the individuals within it. An additional challenge for researchers is the diversity of primary care organizations in terms of structure, funding, and function within and between countries [6]. Such plurality may make inference problematic if research is based on a limited number of field-sites.

The aim of this article is to present an overview of an approach to researching small-scale primary care organizations that is rapid and rigorous and extends the use of a qualitative mixed methods research design. We call it Q-RARA; the Qualitative Rapid Appraisal, Rigorous Approach. Q-RARA draws on two main influences; rapid appraisal and qualitative mixed methods research design (or QUAL-qual methods). The approach takes into account the need to
minimize the impact of conducting research in small organizations, while maximizing the
capacity to produce rich, detailed contextual findings; and Q-RARA may have application to
other small organizations. We initially developed the approach during the Australian General
Practice Nurse Study (AGPNS) between August 2005 and December 2008 and made subsequent
analyses and refinements. In this article we present: (1) an overview of the background to the
approach—rapid appraisal and qualitative mixed methods design (2) the approach itself, and (3)
a critical discussion of the broader literature regarding mixed methods design and issues of rigor.
We identify the strengths and weaknesses of the approach, as well as its potential contribution to
researching primary care organizations by extending the use of a qualitative mixed methods
design.

Antecedents of Q-RARA

Rapid Appraisal

Rapid appraisal was pioneered in 1960s in the field of rural studies [7], but not used
systematically in health-related fields until the 1980s when rapid social science information was
collected by trained [8] and, more controversially, untrained [9] researchers, on illness profiles,
the understanding of disease terms, and health practices. A parallel endeavour had existed for
some time in public health, where communicable disease epidemiologists used quantitative rapid
appraisal methods to investigate disease outbreaks [10].

Rapid appraisal has since been used in many other settings, including humanitarian
crises, and its variations are now largely referred to under the banner of Rapid Evaluation and
Assessment Methods (REAM) [11]. REAM is an umbrella term that offers little detail about the
processes involved in implementing a rapid appraisal approach, particularly using qualitative mixed methods. The epistemological underpinnings of REAM range from realist, objectivist epistemology (as in studies used to provide quick assessments of program performance [12]) to constructionism (in studies used to assess the impacts of policy [13] or roles [14]). The epistemological diversity of these studies reflects an under-theorization of methodology in this research area.

**Qualitative Mixed Methods**

The other antecedent for our method is mixed methods research. Mixed methods research is understood to be research that is informed by and situated along a spectrum of quantitative through to qualitative paradigms, and generally refers to the combination of quantitative and qualitative methods carried out “for the broad purposes of breadth and depth of understanding and corroboration” [15]. It is not new in general practice, having first been advocated over thirty years ago [16, 17]. One of the caveats of this method in primary care, however, is that it can prove time-consuming and overwhelming for small institutions [18].

A particular strength of mixed methods research is the formal integration of individual methods at some point in the research process [19]. Although integration produces a more detailed, richer understanding of the phenomena of interest in health care research integration is frequently neglected [20]. Furthermore, one of the pitfalls in mixed methods research is the conflation of integration with triangulation [21, 22]. In his influential book *The Research Act*, Denzin [23] popularized the concept of triangulation as “the combination of methodologies in the study of the same phenomenon” (p. 291). The multiple variants, processes and critical debate surrounding triangulation [7, 24] are beyond the purpose and scope of this article. We
acknowledge the necessity to engage with the epistemological assumptions of the relative
methods employed in any given mixed methods study so that issues of commensurability are
addressed.

Morse [25] challenged qualitative researchers to consider “if, when and how” the use of
two methods from the same paradigm, referred to as QUAL-qual methods, can be considered
mixed methods. QUAL-qual denotes a core project and a supplementary project whereby the
latter cannot be a stand-alone project. According to Morse [26] the data types, levels of analysis,
or participant perspectives of the core and supplementary components need “to be handled
differently and to be kept apart” (p 491).

Q-RARA attempts to marry the rapidity and limited intrusiveness of rapid appraisal
methods with the rigour and integration of mixed methods research. In this paper, we subject the
quality and rigor of Q-RARA to scrutiny through an assessment of its performance against
Lincoln and Guba’s well-established frameworks of trustworthiness and authenticity [27].

**Q-RARA: Qualitative Rapid Appraisal, Rigorous Approach**

*The Research Setting*

The research approach was developed as the main mechanism to conduct the Australian General
Practice Nurses Study. The AGPNS was conducted from 2005 to 2008. During this period there
was a nationwide, government-led promotion of practice nurses in Australia including the
provision of direct incentives, newly funded Medicare items, and the nursing workforce more
than doubled to nearly 9,000 [28]. This changing landscape of nursing resulted in a number of
questions about the interplay of micro, meso and macro determinants on the role of nurses in primary care practice.

The AGPNS research questions were:

1. How do nurses operate within the structure of general practice?
2. What are the local, individual and structural factors that determine the role development of nurses in different general practice settings?
3. What contribution do practice nurses make to the safety and quality of general practice? and
4. How might the development of new models of practice nursing be facilitated?

These questions have been answered in a series of publications [29-35].

Methodological Considerations of the Approach

The approach was informed by a critical realist epistemology, which Harper [36] describes as a position held by researchers who “assume that our data can tell us about reality but they do not view this as a direct mirroring” (p. 88). Data are understood as being constructed through an engagement with reality and also shaped by structures and practices [37]. We also operated from an interpretive theoretical perspective involving extensive analytic input from researchers by choosing to locate the study within the nurses’ work environment and interpret their actions, positions and the meanings they gave to their role. The research goals, aims and questions drove the choice of mixed methods and various types of data and analyses were conducted concurrently.
before being combined and subjected to further analyses [26]. Although there was a very small
quantitative component in the AGPNS, overall, it was a rapid, field-based approach [11] and
defined according to Morse [25] as a QUAL-qual method (Table 1).

INSERT TABLE 1 ABOUT HERE

We collected data from 25 practices that varied in size, organizational structure and
geographic location across two Australian states. Given a research setting that was undergoing
rapid change and stress it was imperative that our study had to be undertaken with minimal
disruption to health services. We modified Morse’s definition of QUAL-qual methods [25] by
including additional methods and continued to categorize all of these as being core or
supplement. These data were collected using in-depth interviews (Core 1), structured
observations (Core 2), unstructured observations (Supplement 1), photographs (Supplement 2),
floor plans (Supplement 3), and social scanning data (Supplement 4). The last comprised of a
collation of publicly available census and health service provision data to describe the socio-
geographic setting of each practice. A summary diagram of the research design is presented in
Figure 1.

INSERT FIGURE 1 ABOUT HERE

Data Collection

The impact of the research conducted on the practices was minimized by the allocation of only
one researcher to each research site and the completion of onsite data collection within one day.
The two field researchers had disciplinary backgrounds in social science and community
development and were not health professionals: a deliberate choice to optimize “naïve” or
“fresh” observations of nurses in practices that were not obscured by prior professional experience. The field researchers scheduled the first observation early in the day because it demonstrated respect for the working hours of the practice and contributed to the development of rapport with staff. The background discussions prior to the visit and the daylong presence of a researcher meant that they were often invited to sit in on organizational activities, such as practice meetings or lunch breaks in the tearoom. The inclusion of the researchers in these ways demonstrated that the approach was acceptable to the research participants and contributed to the quality of the field notes.

In-depth Interviews

In-depth interviews were conducted with practice staff to generate participant accounts and to assay different perspectives on the nurses’ roles. Practice nurses provided insight to their lived experience, practice managers were able to reflect on the administrative and managerial aspects of the practice nurses’ work, and general practitioners recounted their experiences both before and after they had decided to employ a nurse, and the impact of this decision.

Structured Observation

The structured observation involved a small quantitative element in that observations were recorded in ten-minute lots. Some elements, such as the number of contacts with the nurse, were counted. The observations were undertaken in two one-hour periods using a paper-based system with a timer marking every ten minutes. If the practice employed more than one nurse, the field researcher attempted to observe a different nurse in the afternoon session. Preliminary trials in general practice revealed that some of the nurse contacts or activities over the period of an hour
related to the same task, iteratively continued between other tasks (e.g. locating a missing file, providing follow-up advice for patients). The observation tool was therefore adapted to capture the cyclical nature of a nurse’s work. The trials also indicated that recording observations at intervals of less than five minutes was technically impossible for observers using a pen-and-paper observation tool unless they provided very limited details on the activities themselves. The data collection tool comprised a table in landscape format over two pages, where each row represented a 10-minute interval and each column represented a task (Figure 2). The cells were completed with as much information as possible (e.g. the contents, location and participants of nurse interactions and activities). The field researchers had been briefed that the observed tasks were likely to fall into one of four categories: brief contacts, telephone calls, direct patient care, and practice administration. They were directed not to observe clinical interactions with patients, and to record the detail of them only if the nurse chose to recount to the observer what had taken place.

After a two-day training workshop, and in tandem with a chief investigator, each field researcher trialled Q-RARA to check the quality of their interview and observational skills. The concordance rate between the field researcher and the chief investigators for the time-motion studies was between 94% and 96%. As each site was visited, the data were double checked by other researchers, and the field researchers were able to debrief on the process of data collection. Many practice nurses reflected upon their activities to the researcher, resulting in a slowed-down version of the nurses’ activities over an hour. Even so, the number of activities and contacts undertaken by nurses was very high, with an average of 28 discrete activities per hour (range 6 to 60). In addition to activities, nurses sometimes moved rapidly between the consulting rooms.
responding to doctors, as well as communicating with patients in the waiting room. One nurse
had 36 direct brief contacts with staff and patients in the hour; an average of one every 100
seconds.

**Spatial and Social Contextual Data**

The floor plan was obtained or drawn by the observer, with patient areas and nurse workspaces
marked in, and nurses were asked to identify key work areas to be photographed. The observer
also collected written material from the family practice, such as practice information leaflets, and
practice websites supplemented the other material. Finally, each practice was subject to social
contextual mapping, which involved obtaining local demographic and contextual information
about the availability of health services. Details collected for each practice included:
geographical classification, distance from nearest acute hospital and community based services,
number of regional family practices, allied health service availability, population data, and
regional socio-economic indicators such as unemployment rates.

**Data Analysis**

The researchers involved with the AGPNS had a range of disciplinary backgrounds including
nursing, general practice, sociology and health policy, and they met regularly over twelve
months to analyse the data and generate the findings. All data that were related to one general
practice were combined to make a case. Analysis occurred in three stages: (1) All like data, such
as interview data, were coded, (2) data that related to an individual general practice were
examined as an *intra-case study*, and, (3) each practice was compared with all other practices via
an *inter-case study*. 
Like data. Interviews and field-notes were coded using NVivo 7.0 software (QSR International) by two researchers and two research assistants, employing a coding framework developed concurrently with the interview schedules. This framework was then continuously revised throughout the analysis as advised by research undertaken using emergent design.

Observational data. These data were coded using a framework that distinguished tasks as administrative, clinical, servicing (e.g. stocking and sterilizing), or communicative (e.g. brief contacts with colleagues), and were then presented as pictograms. Each pictogram captured four distinct elements of the nurse’s work world: time (when), tasks (what), people (who) and locations (where), and the relationships between these elements. Producing each pictogram was an integral part of the analytic process [38]. Our pictograms functioned both as a taxonomy—an elaborated list of all the meaningful elements within the sociocultural context of a practice nurse’s work—and as a concept chart that illustrated how the key concepts of time, tasks, people and locations relate to each other temporally, processually and locationally [38]. The raw observational data were also coded into activity type and tasks funded or not funded through existing Medicare arrangements.

A researcher coded the practice floor plans and photographs using the principle that the floor plans functioned as a set for a theatrical performance, while the photographs gave insights into the way the set was used [39]. The floor plans were classified first into different zoned areas (unrestricted public areas, restricted public areas, staff-only areas, and places of clinician/patient interaction). We then catalogued the ways in which nurses moved through the practice to describe the itineraries of nurses across different spaces, comparing these with the ways other staff and patients used these spaces.
Intra-case analysis. The purpose of this level of research was synoptic, because we sought coherences across the different data types to make a finding about a particular practice, and a nurse’s role in that practice. For example, comments about space in the interviews were matched to the floor plans and photos of nurse workplaces, and were considered in the light of the time and motion studies and researcher field-notes. The intra-case analyses were returned for comment to the participant practices to establish the credibility of our generated findings [27].

Inter-case analysis. Two team members from different disciplinary backgrounds working independently analysed in detail the data for each emergent finding and subsequently presented their analyses to the rest of the team for discussion. A third team member was appointed to assist with the synthesis of data and identify discrepancies in the analysis; this prevented superficial synthesis of the data, or discordant analysis. The iterative approach of the multidisciplinary team drawing on a number of data sources was able to generate a more trustworthy interpretation than would have been achieved otherwise. An example of an evolving interpretation of data from the study from a range of disciplinary perspectives is presented in Appendix A.

Performance of Q-RARA in General Practice

We assessed the quality and rigor of the data and findings generated by Q-RARA, and interrogated its capacity to adequately reflect the stakeholders’ views, against the adequacy criteria suggested by McNall & Foster-Fishman [11] in their adaptation of the framework by Guba and Lincoln [27]. Guba and Lincoln proposed that trustworthy data are credible, transferable, defendable and confirmable. Data should also be assessed for authenticity, a domain
that includes fairness, and educative, ontological, tactical and catalytic authenticity. These assessments are presented in Tables 2 and 3.

**Trustworthiness**

One of the clear challenges in assessing our approach against Guba and Lincoln’s criteria for trustworthiness was that they maintain that credible data are developed through prolonged engagement. Our method is predicated on short-term, intense engagement and cannot be compared with ethnography, which is predicated on long-term (prolonged) engagement.

However, we did note that field researchers achieved some degree of meaningful relationship and trust with the participants even in a short period of time; demonstrated by being regularly invited to join the staff in areas that were considered private, such as the tea-room, and where different communication content was revealed such as staff making comments that were designed to lighten and make fun of serious situations otherwise known as “black humour”. Visitors to the practice, including other researchers, were customarily placed in the waiting room. We were also unable to demonstrate persistent observation, though we did undertake to repeat the observations during the one-day visit. We considered that within a short-term engagement we had achieved a sense of intense engagement that was sufficient to meet the goals of the larger project in terms of data collection but that this time frame may not be suitable for some other types of projects. Against other criteria for the domain of trustworthiness the method performed well as outlined in Table 2.

**Authenticity**

INSERT TABLE 2 ABOUT HERE
The method was able to meet all the criteria contained within the domain of authenticity, as outlined in Table 3. The ability of this method to generate authentic data reflects, in part, its roots in rapid appraisal, a method that is pragmatic and purposive. On the other hand, the fact that the method also performed well against the trustworthiness criteria in general reflects the formalization of the mixed methods approach to frame rapid appraisal. An instructive comparison with our approach is research into the impact of financial incentives on clinical autonomy and internal motivation on family physicians in the UK [40]. This ethnographic study developed detailed case studies of five British family practices at a time of structural policy change, including the introduction of the National Service Frameworks and the new General Medical Services contract. The study involved in-depth, long-term contact with each of the practices. The data from this study also scored highly on both trustworthiness and authenticity criteria, but the research itself was time-consuming and the generalizability of the data in some instances was limited; lending further support for our approach.

Discussion

The approach to using Q-RARA, developed through the AGPNS, demonstrated three main features: (1) a high degree of acceptability in the field, (2) the operationalization of a modified QUAL-qual method, and (3) quality and rigor. First, the approach was well received by the research participants, particularly the practice nurses who believed that the interest of the researchers validated their work. In common with traditional rapid appraisal methods, the Q-RARA in general practices was carried out with minimal disruption to the research site while gathering a large quantity and range of data. Feedback from the nurses indicated that the Q-
RARA did not disrupt their work unduly beyond the issues described above, indicating its potential advantage over an ethnographic approach often requiring lengthy periods of time spent in the field. Consequently, the high degree of acceptability of the Q-RARA paves the way for more field-based work in small-scale health care organizations. It also has relevance for research in other small organizations, or can be employed, as Murray [41] has demonstrated, as a mechanism for public involvement in the collection of data about social and health needs in primary care.

Second, in terms of the modification of the QUAL-qual method, the original definition of mixed method design proposed by Morse and Neihaus [42, p. 9] stated that it “consists of a complete method (i.e. the core component), plus one (or more) incomplete method(s) (i.e. the supplementary component[s]) that cannot be published alone, within a single study.” Morse [26] went on to specify that the data types, level of analysis or participant perspectives must be sufficiently different that they need to be handled separately prior to integration. The stipulation that one of the qualitative methods must be seen as supplemental might imply an inadequacy in the primary method, and consequently, that the need for supplemental strategies arises from “a lack of clarity on the conceptual framework of the study” [43, p. 281]. In contrast, the qualitative methods used in the AGPNS were driven by the research questions and conceived prior to the site visits. Our study is not alone in this regard with many other studies in the broader health sector employing more than one complete, qualitative method [44-46].

In our approach we modified the QUAL-qual method by adding more than one standard qualitative method central to the study; both the in-depth interviews and the structured observation were core components. We suggest that the successful operationalization of this extended version of the QUAL-qual method may require alternate wording for the definition of
mixed qualitative method design that addresses the concerns outlined above: QUAL-qual
method design comprises several different qualitative methods, the choice of which is driven by
the researchers’ epistemological position and theoretical perspective, and the research objectives.
One or more of the methods may be able to generate sufficiently coherent and convincing
findings to be published alone, but the authenticity and trustworthiness of the findings are
increased by the planned use of additional research strategies that are insufficiently robust to
generate defensible findings alone. The data types, level of analysis, or participant perspectives
must be sufficiently different to warrant separate handling prior to integration. However, the
findings generated by the different methods must be combined at some point in the research
process.

The modifications to using the QUAL-qual method that were made in our approach are a
development from existing rapid appraisal studies in primary care in that they directly engage
with epistemology and integration, unlike other studies—such as Murray et al. [41, 47] where the
main research objective appears to be to advocate for the relevance of rapid appraisal methods in
primary care, specifically interviews and focus groups or quantitative rapid appraisal methods,
rather than a deeper engagement about method. Further to this, in studies where there is an
exclusive qualitative mixed methods design, such as Manthorpe et al. [48] it is typical for details
about individual methods to be described but a discussion of integration to be absent.

Third, the use of exploratory mixed methods provided a range of data that would have
been missing had we limited ourselves to the original definition proposed by Morse [25,26].
These diverse data, in conjunction with the multidisciplinary team and an iterative approach to
data analysis allowed us to engage in a dialogue with the data and produce authentic and
trustworthy findings. The location of the nurse’s station as a way of reinforcing her centrality in
the general practice provides an example of an evolving authentic understanding that would not
have been otherwise achieved. The dialogic engagement with the data also enabled us to
articulate previously unrecognized elements of the social world, that of the practice nurses’ role
as agents of connectivity. The QUAL-qual method also revealed the nuances of social life,
particularly in the way that they relate to differences in power and authority. For instance, it
became apparent that the general practitioners were unaware of the range of tasks undertaken by
practice nurses and their corresponding skill set [29].

The conduct of the AGPNS and development of our approach, like any field-based
method, can be derailed by major events. A site visit had to be curtailed because the general
practice principal collapsed and had to be taken to hospital. Nevertheless, the field researcher
was able to observe and comment on the way the organization functioned in a crisis. The most
difficult component of data collection was securing an interview with the general practitioner
due to time pressures on their work. Consequently, some interviews were conducted by
telephone after the practice visit. Furthermore, the intensive nature of the day-long visits to
practices could be a significant drain on the field researchers, who were required to collect a
great deal of data in a concentrated period of time, without disrupting the practice or losing
rapport with practice staff. The two field researchers travelled very long distances to visit the
sites, and were initially over-scheduled. Sufficient time between site visits is needed to collate
field-notes, to recover from the trip and to prepare for the next one. Consequently, the 25 site
visits were undertaken over a period of four months, equivalent to one site visit by each
researcher every 10 days.

We noted that the structured observation tool could be improved by using more advanced
technology. Nurses could be trained to use personal digital assistants or smart phone applications
to record their own time use patterns, and this may result in more valid data on the time use of nurses [49] but at the loss of reflections-in-action, which the field researchers then used to refine the focus of their interview schedule. Alternately, the field researchers could continue to record the data using tablet computers.

The structured observations were also limited because the researcher was not permitted to observe patient-nurse interactions. This meant that our analysis under-represented clinical care aspects of the nurse’s role. However, the fact that the nurse-patient interactions were not observed made the presence of the researcher more acceptable to the family practice itself. A method of this nature, where the researcher is only present for a short period, does not allow the researcher to develop trusting relationships with patients as, for example, an ethnographer may be able to do. To observe patient-nurse interactions would have imposed the burden of explaining the study to successive patients upon the reception and nursing staff, and slowed down the work of the practice.

**Conclusion**

The dominance of interviews in qualitative general practice research typically drives researchers to explore one cadre within the practice, such as patients or healthcare providers. Consequently, there is a need for methods with proven utility that enable researchers to undertake studies of the organization itself and consider the health policy environment. We adapted and formalized REAM within a mixed-methods approach by taking the broad area of REAM and QUAL-qual methods, integrated these into a practical approach that is efficient, acceptable and rigorous and successfully trialled the resultant rapid QUAL-qual method in primary health care settings; an area that has seen little field-based research. We found our Q-RARA approach to be acceptable
to participants and effective in collecting data on organizational function in multiple sites without disrupting the practice, or requiring the researcher to have a long-term presence in the practice. It was also able to strike a balance between speed and trustworthiness. Q-RARA seems capable of providing a richly textured rigorous understanding of the processes of the primary care practice while also allowing researchers to develop an organizational perspective. For these reasons the approach is recommended for use in small-scale organizations both within and outside the primary health care sector.
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Box 1

Case Study of Evolving Insights into the Social Geography of Nurses’ Stations in General Practice

The maps of general practices showed that nurses’ stations were located either in treatment rooms or in retrofitted areas like alcoves and areas off the reception desk. There were very few nurses who had their own dedicated consultation rooms.

Initial interpretation. Our initial interpretation of this allocation of social space was that it reinforced the marginalization of nurses in general practice. Although it was recognized that urban practices had to retrofit their spaces to incorporate nurses, doctors on the research team felt that not having their own rooms indicated that nurses were marginalized. This view was supported on the online discussion board by some nurses.

Second interpretation. The sociologist wondered if the location of nurses’ rooms reflected more than professional hierarchies. She noted that nurses’ stations were usually spatially central in the practice, and co-located with the patient bed upon which the most acutely ill patients would be located. The field researchers’ notes recorded numerous instances of nurses citing the treatment room as their ideal professional locale. Review of data showed that the treatment room and the waiting rooms were the two patient-centred spaces, and that nurses visited these the most.

Revision of second interpretation. Field researcher reflections noted the reluctance of nurses to enter general practitioner spaces, except to find things. However, observation data and their reflections indicated that a reverse recognition was occurring with doctors reluctant to enter the treatment room without permission if it was occupied by the nurse.
Final interpretation. Locating the nurse’s station in the treatment room (provided the treatment room was large enough) was not seen as inappropriate or demeaning by most nurses, but rather acted as a way of reinforcing their status as parallel clinicians within the practice.
### Table 1. Type and Quantity of Data Collected From 25 Family Practices Using the Rapid Method

<table>
<thead>
<tr>
<th>Data collected</th>
<th>Count</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Qualitative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews with nurses</td>
<td>36</td>
<td>Explored life history, working roles, understanding of teamwork, experiences of a GP nurse, interactions with others, notions of quality practice</td>
</tr>
<tr>
<td>Mean, 41 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews with doctors</td>
<td>24</td>
<td>Explored history of practice and working life within it, roles of nurses within the practice, views of potential nurse roles</td>
</tr>
<tr>
<td>Mean, 27 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviews with practice managers</td>
<td>22</td>
<td>Explored history of practice and working life within it, roles of nurses within the practice, views of potential nurse roles</td>
</tr>
<tr>
<td>Mean, 26.5 minutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation of nurse activity</td>
<td>34 nurses; 51 hours of observation</td>
<td>2 separate hour-long structured observation of a nurse’s activities</td>
</tr>
<tr>
<td>Photographs of nurse-identified important working sites</td>
<td>35 nurses; 205 photographs</td>
<td>Photographs taken of important working sites identified by nurses within the practice</td>
</tr>
<tr>
<td>Maps of practice layout</td>
<td>7 hand-drawn &amp; 18 printed floor plans</td>
<td>These plans located the nurse’s station and other key sites identified by nurses or observed by researcher</td>
</tr>
<tr>
<td>Field notes</td>
<td>25</td>
<td>Field notes taken by researcher after each visit</td>
</tr>
<tr>
<td><strong>Quantitative</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary of staff numbers &amp; working hours</td>
<td>25</td>
<td>Questionnaire filled out by practice manager</td>
</tr>
</tbody>
</table>
Details collected for each practice included: RRMA classification, distance from nearest acute hospital and community based services, number of regional general practices, allied health service availability, population data, and regional SES indicators such as unemployment rates.
Table 2. Performance of Rapid QUAL-qua/Method Against Guba and Lincoln’s Trustworthiness Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Application in research</th>
</tr>
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<tbody>
<tr>
<td>Credibility</td>
<td>Extent to which findings accurately portray respondents’ constructions. Involves the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Prolonged engagement</strong> in targeted site to build rapport and trust between evaluators and setting members and provide evaluators with a deeper understanding of the relevant culture.</td>
<td><strong>Prolonged engagement</strong>: One day site visits precluded prolonged engagement.</td>
</tr>
<tr>
<td></td>
<td><strong>Persistent observation</strong> of site to provide sufficient understanding.</td>
<td><strong>Persistent observation</strong>: Although it is recognized that persistent observation was not carried out for this study, the researchers attempted to respond to this criterion through repeated observation periods.</td>
</tr>
<tr>
<td></td>
<td><strong>Peer debriefing</strong>: Extensive discussions of data and preliminary findings with one or more peers to refine thinking.</td>
<td><strong>Peer debriefing</strong>: RAs provided field notes and reflections for each site visit and were able to debrief with Research Manager (SH) as often as necessary. Furthermore, the questions in the qualitative interview schedule were clarified and streamlined in response to feedback from a research assistant.</td>
</tr>
<tr>
<td></td>
<td><strong>Negative case analysis</strong>: The constant reworking of hypotheses in light of disconfirming evidence.</td>
<td><strong>Negative case analysis</strong>: In most practices, leadership was vested in the general practitioner, and nurses were relative newcomers to the practice. Specific analytical attention looking for difference was paid to one practice where the nurse was the senior clinician who had worked longest in the practice as a negative case.</td>
</tr>
<tr>
<td></td>
<td><strong>Progressive subjectivity</strong>: Researchers identify and articulate any biases they hold, examine how their understandings shift during the project, and</td>
<td><strong>Progressive subjectivity</strong>: Assumptions were regularly challenged during fortnightly analysis meetings (see Appendix A).</td>
</tr>
</tbody>
</table>
Attend to how these biases might affect interpretations.

**Member checks** involve sharing and checking findings and interpretations with the people from whom the data were collected.

**Transferability**
Researchers describe features of targeted context in detail and suggest additional contexts to which findings might be generalized.

Extensive background and case information included in final report.

**Dependability**
Concerned with stability over time in researchers and methods. Assessed by means of a dependability audit, which involves reviewing project records to determine the extent to which project procedures and changes are documented.

This team included clinicians, academics and individuals engaged in organization policy and advocacy, who assisted in recruitment and in ensuring that the understanding of the project by the field sites was consistent. Regular meetings were held with all team members to monitor adherence to project procedures and to document changes in protocols.

The three chief investigators met regularly in person and via telephone, and a summary of the decisions made were routinely produced.

**Confirmability**
Extent to which findings are grounded in the data. Assessed by means of confirmability audits, which involve reviewing research records to determine if findings can be traced to data and data to original sources.

Kept all case-summary, substantive theme and pattern analysis documents.

Data and themes in all non-public documents were linked to subject IDs.

At regular team meetings to discuss the ongoing analysis, members were encouraged to look for the "black swans", that is, evidence that might
contradict the finding under discussion.
2. **Authenticity Criteria**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definition</th>
<th>Application in research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairness</td>
<td>Extent to which different stakeholder perspectives are elicited and taken into account. Involves identifying all stakeholders, soliciting their perspectives, and engaging in open negotiations with them around recommendations and future actions.</td>
<td>We interviewed people holding a range of roles in each practice: practice nurses, a general practitioner, the practice manager and a receptionist. The Reference Group was particularly valuable in the final phases of the write-up, through the advice they gave on structuring the recommendations.</td>
</tr>
<tr>
<td>Ontological authenticity</td>
<td>Extent to which stakeholders’ perceptions of the world have been improved or expanded.</td>
<td>The research gave “voice” to the participants by publishing and presenting information that they knew, but was not well understood or recognized more broadly.</td>
</tr>
<tr>
<td>Educatively authenticity</td>
<td>Extent to which individuals have developed a better understanding of other stakeholders’ experiences and perspectives.</td>
<td>This work was distributed in multiple forms (peer review journals, conference, trade press articles etc.) to both nurses and doctors, and gave support to the notion that nurses play multiple functions, some under-recognized, by general practitioners and nurses.</td>
</tr>
<tr>
<td>Catalytic authenticity</td>
<td>Extent to which the research elicits action and change.</td>
<td>There is evidence at the macro level, that previously unnoticed element of practice nursing was the extent to which nurses were “educators” and yet “doctors tended not to recognize nurses’ educator [role] ... within the practice.” However, General Practice Education and Training, the national body responsible for preparing doctors for general practice, has now funded trials of practice nurses training general practice registrars.</td>
</tr>
<tr>
<td>Tactical authenticity</td>
<td>Extent to which stakeholders feel empowered by the evaluation and by the ability to influence the actions taken.</td>
<td>The findings (e.g. six roles of nurses [29]) were taken up at multiple levels by nurses from the Chief Nurse in Department of Health and Ageing to individual practice nurses. Spin-offs have</td>
</tr>
</tbody>
</table>
included further development of some of the
under-recognized roles such as the nurse as
educator role through specific project funding [50]
Figure 1. Exploratory, simultaneous, mixed QUAL-qual methods

Methods:
- In depth interviews (Core 1)
- Structured observations (Core 2)
- Unstructured observations (Supplement 1)
- Photographs (Supplement 2)
- Floor plans (Supplement 3)
- Social scanning data (Supplement 4)

Data Type:
- Accounts: Nurses, Doctors, Practice Managers
- Events: Type, Timing, Order
- Accounts: Research Assistant
- Workspace
- Workspace
- Context

Analysis:
- LIKE DATA
- INTRA-CASE
- INTER-CASE

Findings:
- Six roles for nurses: patient carer, organiser, quality controller, problem solver, educator, agent of connectivity
- Location & use of space is linked to connectivity role
- Determinants of quality: intrinsic, extrinsic
- Nursing time: fluid, non-contingent, valorised in nursing philosophy
- Success of funding mechanisms depends upon: interprofessional relationships, organisational climate
Using Qualitative Mixed Methods

**Figure II. Example of completed structured observation**

<table>
<thead>
<tr>
<th>Practice ID:</th>
<th>XXX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start time:</td>
<td>9.15am</td>
</tr>
<tr>
<td>End time:</td>
<td>10.15am</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIME</th>
<th>Brief contacts</th>
<th>Administration</th>
<th>Supplies</th>
<th>Equipment / treatment room</th>
<th>Patient contact</th>
<th>Informal chat with Research Assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Receptionist chat about problems with another staff member</td>
<td>Opening mail, sorting for FPs, updating records on computer</td>
<td>Drug rep arrives to do a free check on blood pressure machine</td>
<td>Sterilizer beeping to signal cleaning cycle is finished. She attends to it.</td>
<td>Took blood pressure on elderly patient.</td>
<td>Shows me internal email system</td>
</tr>
<tr>
<td>20</td>
<td>Reception enquiry about other nurse arrival time this morning</td>
<td>Continues to open mail</td>
<td>Conversation with drug rep about next visit</td>
<td></td>
<td></td>
<td>Talks about other nurses involvement in collaborative care program through division</td>
</tr>
<tr>
<td>30</td>
<td>FP checks his pigeon hole, inquires about our project.</td>
<td>Continues to open mail</td>
<td></td>
<td>Immunization (8 weeks)</td>
<td></td>
<td>Chat about immunization and re-calls paperwork. Keeping track of lapsed vaccinations. Her role as educator for parents about immunizations</td>
</tr>
<tr>
<td>40</td>
<td>Introduces FP to me</td>
<td>Patient file to FP</td>
<td></td>
<td></td>
<td>Enters data into computer to be added to immunization register.</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>FP ducks in.</td>
<td></td>
<td></td>
<td>Immunization (8 weeks)</td>
<td>Enters data into computer.</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Chat to Pathology courier.</td>
<td></td>
<td>Cleans plastic immunization dishes and puts away</td>
<td></td>
<td>Adult male for penicillin jab. 2 year old child for asthma medication. Education of mother on how to use ‘spacer’.</td>
<td></td>
</tr>
</tbody>
</table>

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*Figure 2*
Figure III. Exploratory, simultaneous, mixed QUAL-qual methods

Locations: Treatment room, reception, drug cupboard