Calling for Help: A Responsive Evaluation of Child Health Line

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Report submitted to

Royal Children's Hospital Foundation

2009

Acknowledgments

We would like to thank the organisations who funded this project:

- Queensland University of Technology (Strategic Links Scheme)
- Royal Children's Hospital Foundation
- Community Child Health Service, Royal Children's Hospital and Health Service District
- Perpetual

The authors particularly thank Evelyn Day, Nurse Unit Manager, for her advice and support of the project. Thank you also to the Child Health Line nurses and parent callers who participated so willingly in the project.

The authors also acknowledge the prior work of Dr Toni Dowd and Fairlie McIlwraith who contributed to earlier work on this project.

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ISBN: 978-1-74107-287-7

Contents

9. Appendices

Executive Summary

The project examined the responsiveness of the telenursing service provided by the Child Health Line (hereinafter referred to as CHL). It aimed to provide an account of population usage of the service, the call request types and the response of the service to the calls. In so doing, the project extends the current body of knowledge pertaining to the provision of parenting support through telenursing.

Approximately 900 calls to the CHL were audio-recorded over the December 2005-2006 Christmas-New Year period. A protocol was developed to code characteristics of the call, the interactional features between the caller and nurse call-taker, and the extent to which there was (a) agreement on problem definition and the plan of action and (b) interactional alignment between nurse and caller. A quantitative analysis examined the frequencies of the main topics covered in calls to the CHL and any statistical associations between types of calls, length of calls and nurse-caller alignment. In addition, a detailed qualitative analysis was conducted on a subset of calls dealing with the nurse management of calls seeking medical advice and information.

Key findings include:

- Overall, 74% of the calls discussed parenting and child development issues, 48% discussed health/medical issues, and 16% were information-seeking calls.
- More specifically:
    - 21% discussed health/medical and parenting and child development issues.
    - 3% discussed parenting and information-seeking issues.
    - 5% discussed health/medical, parenting/development and information issues.
    - 18% exclusively focussed on health and medical issues and therefore were outside the remit of the intended scope of the CHL. These calls

caused interactional dilemmas for the nurse call-takers as they simultaneously dealt with parental expectations for help and the CHL guidelines indicating that offering medical advice was outside the remit of the service.

- Most frequent reasons for calling were to discuss sleep, feeding, normative infant physical functions and parenting advice.
- The average length of calls to the CHL was 7 minutes.
- Longer calls were more likely to involve nurse call-takers giving advice on more than one topic, the caller displaying strong emotions, the caller not specifically providing the reason for the call, and the caller discussing parenting and developmental issues.
- Shorter calls were characterised by the nurse suggesting that the child receive immediate medical attention, the nurse emphasising the importance or urgency of the plan of action, the caller referring to or requesting confirmation of a diagnosis, and caller and nurse call-taker discussion of health and medical issues.
- The majority of calls, 92%, achieved parent-nurse alignment by the conclusion of the call. However, 8% did not.
- The 8% of calls that were not aligned require further quantitative and qualitative investigation of the interactional features.

The findings are pertinent in the current context where Child Health Line now resides within 13HEALTH. These findings indicate:

1. A high demand for parenting advice.
2. Nurse call-takers have a high level of competency in dealing with calls about parenting and normal child development, which is the remit of the CHL.
3. Nurse call-takers and callers achieve a high degree of alignment when both parties agree on a course of action.

4. There is scope for developing professional practice in calls that present difficulties in terms of call content, interactional behaviour and call closure.

Recommendations of the project:

1. There are numerous opportunities for further research on interactional aspects of calls to the CHL, such as further investigations of the interactional features and the association of the features to alignment and nonalignment. The rich and detailed insights into the patterns of nurse-parent interactions were afforded by the audio-recording and analysis of calls to the CHL.
2. The regular recording of calls would serve as a way of increasing understanding of the type and nature of calls received, and provide a valuable training resource. Recording and analysing calls to CHL provides insight into the operation of the service, including evidence about the effectiveness of triaging calls.
3. Training in both recognising and dealing with problem calls may be beneficial. For example, calls where the caller showed strong emotion, appeared stressed, frustrated or troubled were less likely to be rated as aligned calls. In calls where the callers described being 'at their wits end', or responded to each proposed suggestion with 'I've tried that', the callers were fairly resistant to advice-giving.
4. Training could focus on strategies for managing calls relating to parenting support and advice, and parental well-being. The project found that these calls were more likely to be rated as being nonaligned.
5. With the implementation of 13HEALTH, future research could compare nurse-parent interaction following the implementation of triaging. Of the calls, 21% had both medical and parenting topics discussed and 5.3% discussed medical, parenting and information topics. Added to this, in 12% of calls, there was ambiguity between the caller and nurse call-taker as to whether the problem was medical or behavioural.

1. Introduction

1.1 Background

The project was funded by Perpetual Royal Children's Hospital Foundation Community Child Health Service, Royal Children's Hospital and Health Service District, and Queensland University of Technology. The aim was to evaluate the responsiveness of the CHL to parents' calls for support, information and advice.

Internationally, and in Australia, there is pressure on health systems to reorientate the way in which their health services are provided. Consumers are demanding better access to quality health advice, support and information that is both timely and affordable. One of the most rapidly growing services has been telephone health lines. The establishment of telehealth services can reduce the number of patient presentations to emergency rooms and community GP health clinics, thus having positive cost benefits on governments and consumers whilst also reducing waiting room times and access to services (Bunn, Byrne, & Kendall, 2004). As a result, primary healthcare telenursing is the most rapidly growing specialty in a number of countries (Valanis, Moscato, & Tanner, 2003).

Queensland Health's community-based health services have a strong history of supporting families through the provision of a range of universally available early intervention services, which included the statewide 24-hour Child Health Line.
At the time of data collection for this study, the CHL had operated since 1991 as part of Community Child Health, Queensland Health. It developed in response to an increasing number of calls from parents for reassurance and advice. For metropolitan users, a local call cost applied and a toll free number was available to callers outside Brisbane. On each shift, calls were taken by two experienced nurses with a general nursing qualification as well as postgraduate midwifery and/or child health certificates.

A clinical nurse consultant oversees the provision of the service and staff performance. CHL answered approximately 50,000 calls per year, about 155 calls a day (Ferguson, 2005). Approximately half of these calls were able to be answered. This service now resides within 13HEALTH, and the incorporation of the service into a triage system through a central answering agency may have increased the service's capacity to answer calls.

Community health and its maintenance is a major social investment and challenge. Knowledge of patterns of health care use is important for planning service development, health policy, and creating a more accessible, responsive, quality service (Oberklaid, Goldfield, & Moore, 2003). In the current context, understanding the calling needs of users of CHL, and the effectiveness of the service, allows for the service to respond to the changing nature of the primary health care sector and its accessibility and effectiveness for the community.

1.2 Aims of the Project

The study aimed to examine the responsiveness of CHL in the provision of support and advice to parents who call the service. The research questions were:

1. What is the nature of a 'typical' call to CHL?
2. What are the main topics and issues that are discussed in calls to CHL?
3. Is there agreement and alignment between nurse call-takers and callers on the definition of the problem and its resolution?
4. Do CHL nurses offer advice, information, reassurance and support to callers?
5. What factors are associated with the length of calls and the alignment or nonalignment of calls?
6. What are the interactional features of calls to Child Health Line?
7. What are the implications for professional practice?

2. Method

(a) Quantitative

A protocol was developed as a means of coding the main content and interactional features of the calls. The protocol recorded basic details about the call, caller and child (age and gender of child, caller's relationship to child, location, length of call and so on), the main problem, the plan of action, and alignment between caller and nurse. Items examining interactional features of each call were organised in terms of the phases of the call – the opening, the body of the call, and the closing. The protocol was tested on a number of calls before use, and had inter-rater reliability assessed to a minimum level (Kappa=0.7). Three hundred calls were coded.

(b) Qualitative

Fifty entire calls were transcribed, as well as selected extracts from a further collection of calls. These were examined for recurring themes and interactional patterns. From this collection, instances where callers sought medical advice were analysed to examine the methods used by nurses in managing these calls. Analysis drew on ethnomethodology and conversation analytic methods (Sacks, 1995), which involves detailed examination of descriptive and sequential features of talk and social interaction.

A copy of the ethics application and approval is located in Appendix A.

3. Results

3.1 Descriptive summary

Mean duration of call - 7 minutes		**Topics covered in call**	
Range: 00:38 secs to 31:25 mins		Service Information	15%
		Health/Medical Information	18%
Mean age of child - 7 months			
Range: 3 days to 8 years		*Parenting*	
		Parenting Support	12%
Caller		Parenting advice	20%
Mother	87%	Parent well-being	9%
Father	10%		
Other	3%	*Child Behaviour*	
		Activities and difficulties	9%
Sex of child			
Male	54%	*Sleep*	
Female	40%	Sleeping patterns	30%
N/A/Unknown	6%	Settling practices	26%
		Feeding	
Reason for call		Bottle Feeding	38%
Parenting/child development	74%	Breast Feeding	42%
Health/medical	48%	Weaning/Solids	24%
Information	16%	Eating behaviour issues	17%
		Teeth/teething	7%
		Health/Medical	
		Urinary tract	9%
		Digestive tract	28%
		Skin	7%
		Growth and Development	10%
		Infection and ill-health	17%
		Injury	2%

3.2 Content of calls

3.2.1 Reasons for calls

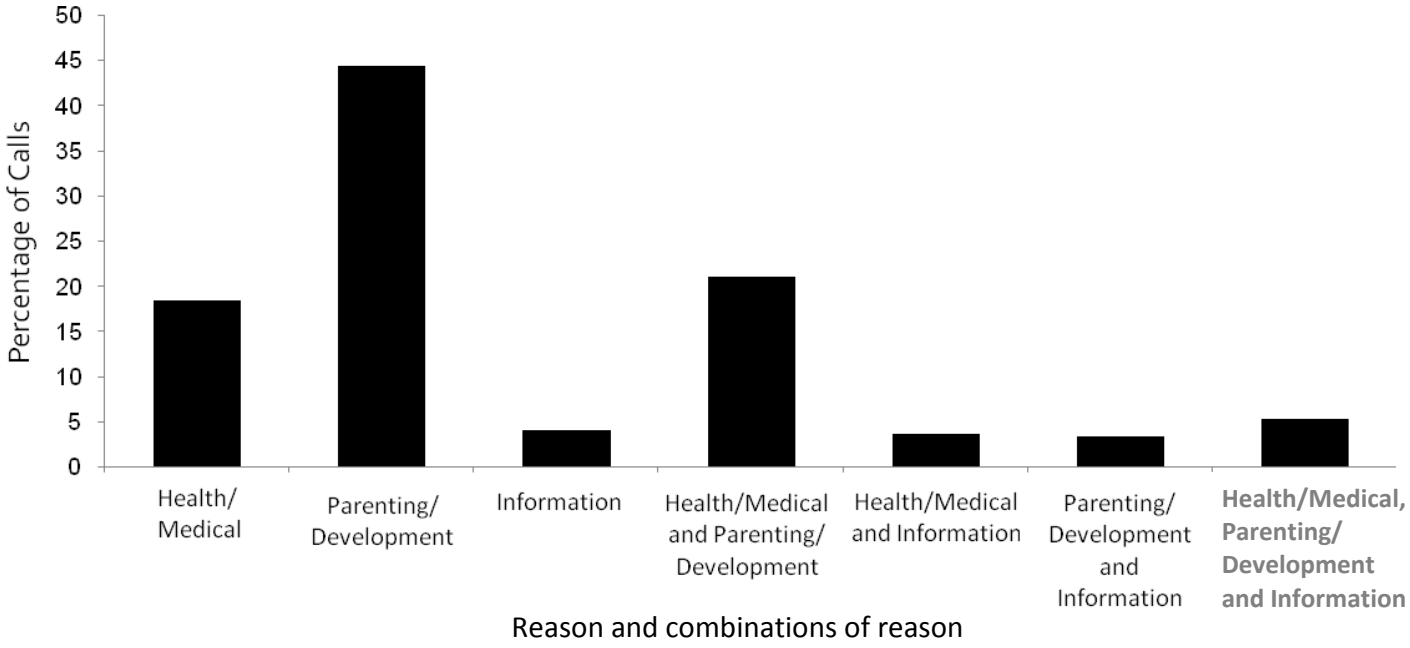

Figure 1. Percentage of calls by reason for calls (N = 300)

As shown in Figure 1, the majority of calls (44%) discussed only topics relating to parenting and child development issues. The content of the calls mostly related to feeding and sleeping issues: 42% of calls discussed bottle feeding, 38% discussed breastfeeding, 30% discussed sleeping patterns and 25% discussed settling techniques, which is consistent with the focus-population age (average age of child was 7 months).

Despite some health and medical issues being outside the remit for CHL nurses, 18% of calls were solely about these issues. Given this, the nurses stated that they were unable to help in 2% of the openings of calls and 22% in the body of the call. Instead of nurses directly stating that they were unable to help, they managed situations by referring to other services (55% of calls). Of referred calls, 54% were made to doctors, 28% to hospitals and 5% to after-hours General Practitioners. Health and medical issues also

were embedded within calls that discussed parenting and child development issues (21%). In 12% of calls, there was ambiguity about whether a child's problem was a medical matter or not, with either the nurse or caller believing the issue to be medical when the other believed it to be behavioural or developmental.

Some calls were difficult for the nurse call-takers and are particularly pertinent for training and professional development. These included 7% of calls involving strong emotion displayed by the caller. Further, it was found that nurses offer reassurance in 13% of calls and show explicit affiliation or support in 17% of calls. This suggests that nurses may be responsive to parental emotion and provide the support that callers are seeking. That is, the nurses offer consolation, support and encouragement, use affiliative comments, and display understanding of the difficulties, concerns or worries faced by the callers. Examining these difficult calls as part of professional development training may provide insight for the nurse call-takers in how to best manage these calls.

3.3 Call duration

The average duration of calls to the service was 7 minutes. Calls that discussed more than one problem, that evidenced strong emotion from the caller, in which the caller "glossed" (i.e. were not specific about) the details of the problem in the opening of the call, and in which more than one attempt was made to end the call, were found to be significantly longer than calls that did not have these features. Longer calls dealing with strong caller emotions suggest that nurses are taking the time to listen to callers. This may be because they spend more time offering support or, because the caller glosses the problem, the nurse call-taker is required to spend time engaging in further questioning to establish the nature of the problem.

Shorter calls involved features such as nurses suggesting callers seek immediate attention or emphasising the importance of following through with the agreed plan of action. This suggests that the nurses' recommendations to act immediately are

accepted by the callers and there is a move to end the calls so that further action can be implemented as soon as possible. Call length also was associated with the main topic of the call (see Figure 2). Calls with a health/medical component were significantly shorter than other calls, and parenting/child development calls were significantly longer.

When looking at topic combinations, calls that involved discussions about parenting and development featured in the longest calls. Calls involving health, parenting/development and information were the longest (10mins 44secs), followed by parenting and information calls (9mins 49secs), parenting and health issues (7mins 11secs) and calls discussing parenting issues exclusively (7mins 10secs).

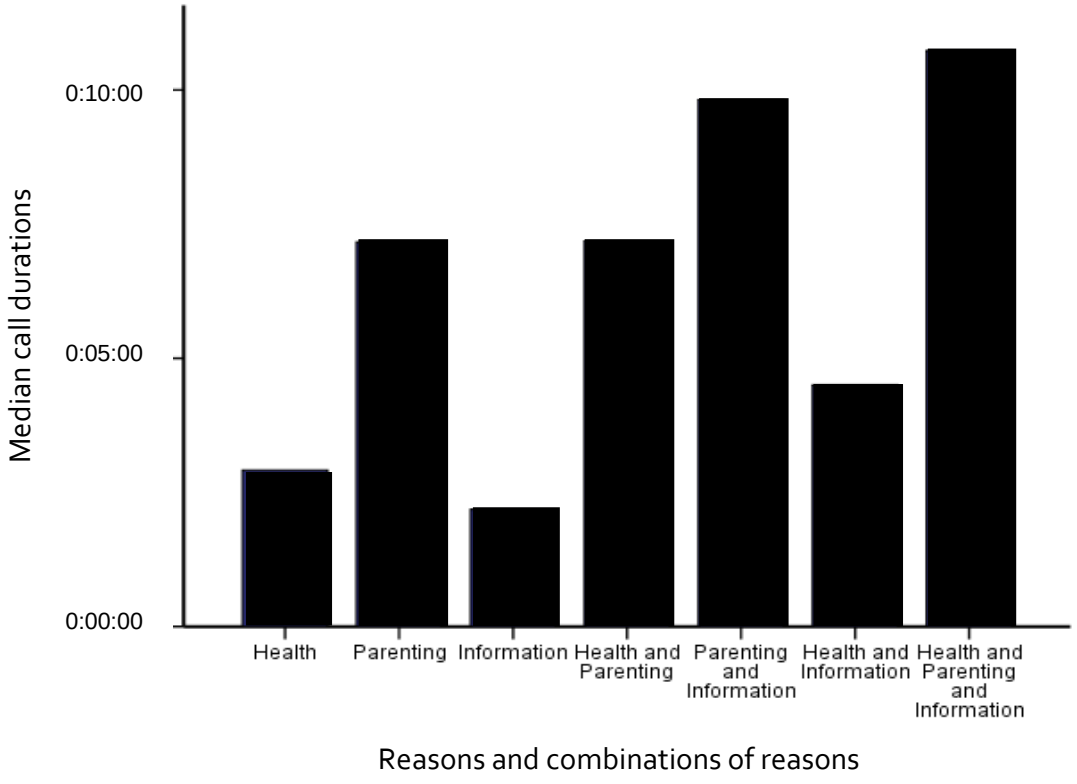

Figure 2. Median call durations for reasons for calls

Calls seeking information are only a small proportion of calls to the service (4%), and are the shortest calls (2min 11secs). The information usually sought in these calls included clinic times and locations. With the implementation of 13HEALTH, it is expected that these calls will be triaged at the first point of contact.

Though it is not always the case that multiple problems are presented across different topic groups, it may be the case that multiple problems within a topic are mentioned. Figure 2 illustrates that there are often multiple issues discussed in a call resulting in longer calls. Of all calls, 29% discussed more than one issue, 56% of which are presented separately, 49% emerging throughout the duration of the call, and in only 17% of these calls (5% of all calls) is the problem presented secondary to the initial problem taken as being a more important underlying issue.

3.4 Alignment

The length of call was not associated with overall ratings of call alignment. This is important for training and telehealth development as it indicates that a good call is neither a long nor short call but relates to caller need. Training needs to be directed towards managing interactional features.

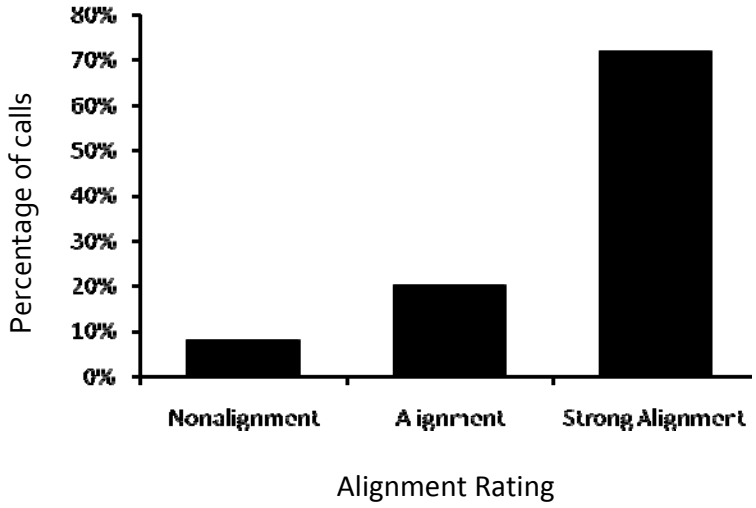

Figure 3. Percentage of calls across alignment groups

As shown in Figure 3, only 8% (24) of calls were rated as not being aligned at the end of the call (Q119), leaving an overwhelming positive amount of calls achieving alignment (92%). Of these, 72% were strongly aligned in that caller and nurse call-taker had agreed upon a plan of action.

3.4.1 Nurse and caller behaviour

Figure 4 looks further at the 24 calls that were rated as nonaligned ('there appears disagreement or lack of alignment between caller and call-taker at completion of the call'). Of these 24 calls, 87.5% (21 calls) also rated low ('seemed the caller received the information/advice/assessment that they called for') and 87.5% of calls also rated low ('the caller seemed reassured by the CT'). Twenty out of these 21 calls rated low on both, suggesting that caller behaviours contribute considerably to overall call nonalignment. This suggests that there are discrepancies between the caller's reason

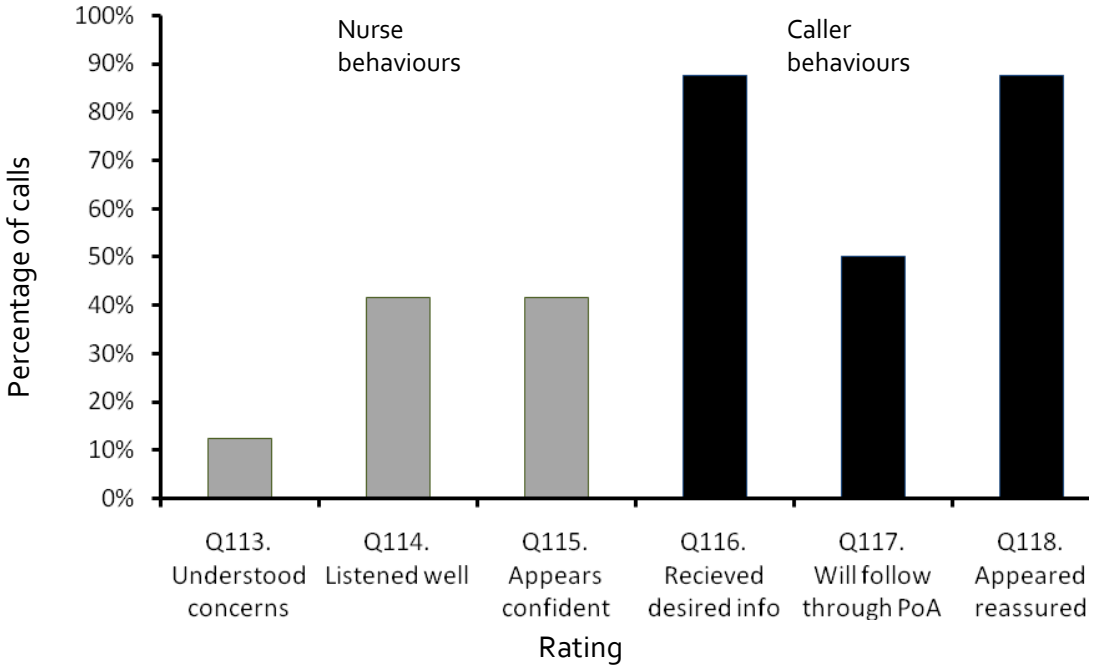

Figure 4. Percentage of nonaligned calls also rating low on nurse and caller behaviours

for contacting the service, what information or advice the nurse call-taker is able to offer and the nurse call-taker being able to reassure the caller impacts the overall alignment of the call.

In regard to nurse behaviours, only 3 calls rated the nurse as not understanding the problem. In most cases, the nurses ensured that they understood the caller's enquiry or request for help, and that they displayed this understanding to the caller. Ten calls rated the nurse as not listening very well or not appearing confident in the advice they gave. This suggests that, even though nurses seem to understand the problem presented in the large majority of calls, there are occasions when it seems that the nurses do not demonstrate to the caller that they are listening to the detail of the problem. That is, the nurse appears not to be listening to the callers' individual situation or concerns but generalises to a problem category, such as infant settling. For the issue of nurses not appearing confident in their advice, it may be the case that the problem is outside the remit of the nurse or telehealth service.

The results on nurse behaviour can inform training. Such training and supervision might include discussion of difficult case scenarios and how to manage them, to increase nurse confidence and to develop interactional strategies for how to manage problems presented by the caller that fall outside the remit of the health line. This approach also provides specialist training that builds on nurses skills and expertise in traditional face-to-face nursing to an alternative communication modality, that of telephone helplines and being able and confident to provide advice, care and support over the phone. Further to this, skills that enable nurses to manage discrepancies between the caller's reason for calling the service and the advice they are able to give would be beneficial.

3.4.2 Alignment and interactional features

Throughout the course of the calls there were a number of features that were associated with the overall alignment (significant to a level of $p < .05$). These are listed in order of features most frequently occurring in non-aligned calls to features most frequently occurring in strongly aligned calls:

- Callers sought assessment or diagnosis of the problem they presented.
- Calls involved discussion of parental support or parenting advice.
- Calls involved discussion of settling practices.
- Callers' ability to seek help was discussed.
- There was more than one attempt to end the call.
- Nurse call-takers referred to a developmental norm in the body of the call.
- Callers mentioned a second opinion that had already received.
- Callers referred to an illness/diagnosis in the presentation of the problem.
- Callers used response tokens (i.e. the use of 'yeah' and 'mmm').
- Calls ended with "good luck"/"take care".

An understanding of the relationship between these features and the alignment between the caller and nurse requires a closer analysis of the interactions themselves to examine possible patterns in terms of call content and rated alignment. While the presence of these features does not imply a non-aligned call, analysis of non-aligned calls indicate that some features increased the risk of non-alignment.

The feature most frequently occurring in non-aligned calls was the caller seeking an assessment or diagnosis: 19% of calls that had this feature were rated as nonaligned and only 55% of calls with this feature were strongly aligned. A focus topic of parenting support issues, child settling techniques or parenting support also increased the risk of non-alignment: 17% of parenting support, 17% of settling and 16% of parenting advice calls were non-aligned.

There are a number of explanations for the higher frequency of non-alignment calls with these specific features. Calls where callers suggest an assessment or diagnosis may involve a mismatch between the caller's expectations of the service and the nurse call-taker's role. The CHL guidelines indicate that nurse call-takers do not provide medical advice. It also may be the case that callers are seeking confirmation that their assessment is correct when in fact it may not be. For instance, one non-aligned call requested the nurse to confirm whether the doctor's suggested dosage for her child's antibiotics was correct. The nurse, in line with her professional role and the remit of the CHL service, did not answer the question and instead advised the caller to contact the pharmacy. Because the caller did not receive the information she sought, the call scored low in terms of alignment. The disparity in what the caller wanted to know and the limits of the nurse call-taker's knowledge, rather than the nurse call-taker's skill, were the issue.

Parenting support issues, child settling techniques and parenting advice involve situations where the caller is probably exhausted and frustrated and feeling that they have already tried every solution. Regardless of the nurse call-taker's strategies, the call may end with a sense of nonalignment as the nurse providing information on a child's normal behaviour may not provide the caller with the solution they are seeking. This is most often because there is no straightforward solution to the problem presented by the caller.

In regards to a higher percentage of calls being nonaligned when a nurse discusses the caller's ability to seek help, it is often the case that a nurse regularly enquires about a caller's access to transport or distance to travel when callers seemed hesitant about taking their child to the doctor or hospital. Therefore, it may not be the case that the nurse asking this question causes nonalignment, but rather it is a feature used when there is resistance and nonalignment between caller and nurse on the appropriate course of action.

A feature found to have the highest percentage of strongly aligned calls was nurses ending calls with statements such as "good luck" and "take care"; 26% of calls had this feature and it resulted in 84% of calls being strong aligned. For the 6% of calls that were nonaligned that had this feature, it may have been used as a last attempt by nurses to form alignment in difficult calls. Three quarters of calls in which the caller uses response tokens (such as "mmm" and "yeah") in the opening of the call and mention the child's age also were strongly aligned. Response tokens can be used to display close attention to what the speaker is saying and recognition that the speaker has more to say (Gardner, 2001). As such, this suggests that nurses (and callers) demonstrate that they are listening and understanding what the speaker is saying in the course of the call. Callers are more likely to appear to interrupt the nurse call-taker (in 21% of calls) than the reverse (13%).

In summary, the notion of alignment is complex and a joint interactional accomplishment. Failure to attain alignment should not be interpreted as representing any deficiencies on the sole part of either the nurse call-taker or the callers. Rather, nonalignment relates to specific interactional aspects of the calls themselves and callers' pre-existing motivations and explanations of the problem. We recommend training and development of telehealth practices to focus on ways of handling specific types of calls, and managing parental resistance to advice. The results suggest that while calls with such features are more likely than other features to be nonaligned, the majority of calls were rated as satisfactorily aligned. Nurses work hard to achieve alignment even with difficult calls.

3.5 Interactional features of calls

3.5.1 Opening of the call

In their opening turn, callers asked a question only 45% of the time. This suggests that, whilst most callers are seeking some sort of 'answer' with respect to their child's problem, whether this is advice, information or an assessment, callers tend to describe the problem or situation without necessarily asking direct questions. In responding to the caller's initial turn in the beginning of the call, the nurse is required to make some assumptions about the caller's motivation and problem. The caller's actual request for help is interactionally accomplished between the caller and the nurse call-taker. Half of all calls involved the caller making some direct reference to the sort of help they would like (e.g. "Could you please give me some advice", "I'd like some information"). The child's age is mentioned by the caller in 77% of calls and, where it is not mentioned, it is the most common first question asked by the nurse call-taker. This allows the nurse to orient to and define the problem.

Nurse call-takers begin to respond before the callers appear to have finished their opening turn in 9% of calls. Qualitative analysis shows that this occurs when the caller appears to 'leave out' some particularly relevant piece of information. In other cases, nurse call-takers begin to speak when the callers are just about to finish their turn. This displays the nurse's recognition of the completion of an opening query, and demonstrates their close attention to what the caller is saying and what information or advice is sought. In 11% of call openings, nurses seek clarification of what the caller has said or of the problem and, in so doing, ensure that they have the information necessary to best help the caller.

Typically, the nurse's first turn in the conversation is a question (70% of all calls) that seeks further information about the child's symptoms or problem (25%), asks the child's age (19%) or enquires whether the child is breast or bottle fed (16%). In a quarter of all calls, the nurse offers information in her first response to the caller. Advice is

offered in the first response in 14% of calls, and assessments of the information provided (e.g. referring to the impact of the problem on the caller or child) are offered in 9% of call openings.

3.5.2 Body of the call

While less than half of all callers asked questions in their opening turns, 75% asked a question in the body of the call.

In the body of the call, nurse call-takers referred to developmental or behavioural norms in more than half of all calls. This suggests that nurses draw on their expertise in the domain of child development in handling callers' requests for advice and information. Qualitative analysis also suggests that nurses refer to developmental norms as a way of managing requests for advice on medical matters – by providing general information about child development, they are able to address callers' concerns without offering specific advice. By referring to developmental norms, nurses also manage the problem of not being able to see the individual child. In some cases, parents ring with what they consider to be a medical problem, but the nurse's expertise in relation to child development allows them to respecify the situation as a development-focused issue. A further reason for a reference to developmental or behavioural norms is to offer reassurance, or to help parents make sense of their child's symptoms or actions.

3.5.3 Advice, information and assessment

Advice seeking, and receipt of advice, was the most common feature of the calls. Callers sought advice from the CHL nurse in 82% of calls, and nurses offered advice in 94% of calls. Information was sought by 50% of callers, and offered by nurses in 80% of calls. Callers sought an assessment or diagnosis of their child in 21% of calls, and an assessment or diagnosis was offered by nurses in 37% of calls. These figures suggest that nurses provide the advice, information and assessments sought by callers, and in

some cases provide these even when they are not explicitly sought by the caller. As such, it seems the nurses draw on their experience and expertise to assist callers, and are able to flexibly provide advice, information and assessments in order to meet the requirements of the caller's reported problem or situation rather than merely providing what the callers seek.

3.5.4 Closing of the call

The closing of the call was most often initiated by the caller, as indicated by the caller's use of 'okay' or 'alright' as a means of beginning to signal the end of the conversation (Beach, 1993). In over 60% of cases, however, the nurses began to speak again after the caller had initiated a closing. This typically involved repeating advice or information given earlier in the call, and calls where this occurred were significantly longer than calls in which this did not occur. As noted by West (2006) in a discussion of 'closings' in doctor-patient interaction, prolonging a closing is one way in which medical professionals display their attentiveness to the client. In the case of CHL calls, extending a closing sequence may be a means for displaying concern and interest in the caller's situation, as well as a way to ensure that the caller has understood the plan of action that is established in the call.

4. Qualitative Analysis

The focus of the qualitative analysis was to examine how calls requesting medical information and advice were managed by CHL nurses. Most calls to the CHL reflect the aims of the service to offer support and information about children's behaviour and health, with issues relating to children's sleeping, feeding and nutrition. However, it was not unusual for parents to ring with concerns about their child's health and specific medical issues. Such calls introduced a dilemma for nurses who were bound by call centre guidelines not to advise on illness, medications and diagnosis, or to provide specific medical information. From a preliminary analysis of the corpus, a subset of calls relating to health or illness were identified in which there appeared to be a tension between what the caller wanted to know, and what information or advice the nurse could (or could not) provide in line with the guidelines. A conversation analytic approach was used to explore how this dilemma was made relevant and consequential in such calls. The full paper is shown in Appendix B.

Three interactional practices were used by the nurses to offer support without breaching the constraints on what kinds of help they were able to offer:

1. Nurses explicitly describe their role and the limitations on what advice or information they can or cannot offer. For example, they suggest that the caller try to obtain the information they seek from somebody qualified to offer it, such as a doctor or pharmacist. In so doing, they emphasise the importance of seeking 'legitimate' knowledge and information.

2. Nurses privilege parental authority regarding decision making about seeking treatment for their child. For example, in calls regarding whether the child needed to be taken to the hospital, the nurse emphasised that such decisions were ultimately those for the caller to make.

3. Nurses use their expertise to respecify a situation. For instance, nurse call-takers orient to, and treat, parents' concerns regarding possible medical issues as potentially parenting or child development matters. There is often ambiguity as to whether a child's symptoms (i.e. vomiting, changes in bowel motion, inability to settle) are indications of illness, are 'normal' development, or are the consequences of parenting practices. The nurses offer non-medical explanations and action plans for some symptoms without presenting these as an 'alternative' to the medical explanations or treatments (which would suggest a diagnosis).

The CHL guideline, promoting the view that "the service does not offer medical advice," seems at the outset a straight-forward regulation for implementation. In other words, CHL nurses have a responsibility to help callers, but not to offer medical help. However, this guideline poses interactional tensions for the nurses as they attempt to respond to parents' requests for support and advice about their child's health and illness. By advising the parent to seek other expertise, or by explaining and framing their guidance within a child development approach or as a parenting strategy, nurses manage both the parents' concerns about their child's health and the guidelines required by the service.

The nurses' interactional practices and authority on non-illness related issues enable them to carry out the work of being a CHL nurse despite the call service guidelines not to offer medical help. Nurses clearly oriented to the limits of their knowledge and experience in offering advice and information on medical matters, but they are institutionally obliged to do so. They also managed the practical limitations on their ability to offer medical advice and information, due to the absence of visual contact. The knowledge and experience of the nurses are thus not merely resources drawn on to assess or advise on symptoms; they are fundamental to the management of institutional, practical and interactional features of calls seeking medical advice and information. While CHL institutional practices and guidelines can be understood in

terms of the limitations they pose for nurses, they also offer affordances for nurses to display their unique experience and expertise.

5. Summary of Findings

The majority of the callers to the CHL are mothers ringing about children under one year of age, with the average age being 7 months. Callers are more likely to be seeking advice than information. The main topics that are called about are parenting and child development, particularly with respect to feeding and settling techniques. Just under half of all calls have health/medical issues as the main topic of the call, with digestive tract problems and infection and ill-health the most frequently mentioned health issues.

The results showed that the CHL service was responsive to the needs of callers in the vast majority of cases, and that there was agreement and alignment between nurses and callers. Nurses typically show that they understand the problem for which the caller was seeking advice; they listen well and clarify with callers to ensure understanding; and they seem confident in offering advice, information and assessments. Callers usually indicate that they intend to follow the actions suggested by the nurse and appeared to be reassured by the call-taker. Nurses offer the advice and information sought by the caller, and often provided further information and advice which is not explicitly sought by the caller. They also regularly offer support and reassurance to callers.

The average length of calls was 7 minutes. Calls with more than one topic presented by the caller tended to be longer, along with calls where the caller displayed strong emotion. There was no association between the length of a call and the degree of alignment and agreement between nurse and caller.

In more than half of the calls, callers did not ask a direct question, suggesting the establishing the 'reason for the call' was accomplished through the subsequent interaction between caller and nurse. The nurse's first turn in the calls typically involved asking a question, demonstrating that they move straight into seeking further

information to help them assess the caller's problem or query. References to developmental norms were found in over half of the calls, which suggests that nurses are drawing on their specific expertise as CHL nurses in providing information and advice. However, nurses mention the limits on their ability to offer advice or information in one-fifth of all calls, and express doubt or uncertainty about the advice or information in just under half of all calls. These findings may reflect the number of calls in which callers seek specific advice and information that falls outside of the CHL remit, and may also be an indication of nurses avoiding sounding too directive.

Callers were more likely than nurses to begin to close the call, suggesting that nurses are not 'cutting-off' callers but leaving the decision to end the call up to the callers. In more than half of calls, however, nurses continued speaking after the caller appeared ready to end the call. This may be a way in which nurses ensure that the callers understand the advice or information that they have been given and is a way of demonstrating the nurses' attention to the callers.

Nurses displayed a number of strategies for dealing with calls seeking medical advice, particularly those in which callers sought a diagnosis or advice about seeking further medical help. By describing the limits of their expertise as a nurse, advising the parent to seek other expertise, or by drawing on their expertise in child development and parenting strategies, the nurses managed both the parents' concerns about their child's health and the institutional guidelines about offering medical advice.

6. Recommendations

There are 5 recommendations:

1. There are numerous opportunities for further research on interactional aspects of calls to the CHL, such as further investigations of the interactional features and the association of the features to alignment and nonalignment. The rich and detailed insights into the patterns of nurse-parent interactions were afforded by the audio-recording and analysis of calls to the CHL.
2. The regular recording of calls would serve as a way of increasing understanding of the type and nature of calls received, and provide a valuable training resource. Recording and analysing calls to CHL provides insight into the operation of the service, including evidence about the effectiveness of triaging calls.
3. Training in both recognising and dealing with problem calls may be beneficial. For example, calls where the caller showed strong emotion, appeared stressed, frustrated or troubled were less likely to be rated as aligned calls. In calls where the callers described being 'at their wits end', or responded to each proposed suggestion with 'I've tried that', the callers were fairly resistant to advice-giving.
4. Training could focus on strategies for managing calls relating to parenting support and advice, and parental well-being. The project found that these calls were more likely to be rated as being nonaligned.
5. With the implementation of 13HEALTH, future research could compare nurse-parent interaction following the implementation of triaging. Of the calls, 21% had both medical and parenting topics discussed and 5.3% discussed medical, parenting and information topics. Added to this, in 12% of calls, there was ambiguity between the caller and nurse call-taker as to whether the problem was medical or behavioural.

7. Dissemination

1. Paper in special issue and chapter in edited text:
    - Special issue: "Communication in Healthcare settings: policy, participation and new technologies". Butler, C., Danby, S., Emmison, M. & Thorpe, K. *(in pres*s, 2009). Managing medical advice seeking in calls to Child Health Line. *Sociology of Health and Illness.* (see Appendix B)
    - Chapter in edited text: Editors: Alison Pilnick, University of Nottingham; Jon Hindmarsh, King's College London; and Virginia Teas Gill, Illinois State University
2. Three psychology Post-Graduate Diploma these*s* and poster presentations.
    - Daveson, N. (2008) Working Towards Alignment: A Mixed Method Analysis of Calls to a Child Health Line.
    - McDowall, R. (2008) Alignment of calls to the Child Health Line: Analysis of call type and interactions in the opening of calls.
    - Foley, A. (2008) Calling for Help: What is Associated with an Aligned Call
3. One psychology honours thesis and poster presentation:
    - Edwards, Jason (2009) Infant Sleep Problems.
4. One Vacation Scholarship student:
    - Slater, Jaclynn (2009) Infant Sleep Protocol Analysis.
5. Seminar held at the Ellen Barron Family Centre, November 2008.
6. Meeting, School of Medicine, Otago University, January 2009.
7. Submission of 2 abstracts for the Adelaide Child Health Conference May 2009.

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Appendix A

Ethics application and approval

Queensland University of Technology

University Human Research Ethics Committee

LEVEL 2 (Expedited)

APPLICATION FOR APPROVAL TO UNDERTAKE RESEARCH INVOLVING HUMAN PARTICIPANTS

Reference No.

4121H

Some research which involves the participation of humans, or impacts upon humans may qualify for review under Level 2 and this form is used to determine whether or not the project can be granted ethical clearance within this Level. The following types of research may qualify:

- research involving a standard or previously approved data instrument;
- research where the risks associated with the study can be easily minimised, or if they do manifest, easily managed;
- multi-institution research (where the project has already been granted ethical clearance by another HREC);
- research which can be characterised as evaluative or quality improvement activity; or
- renewal applications (to extend an existing ethical clearance beyond 5 years).

Projects which involve drug trials, any invasive physical procedures, or research involving sensitive personal or cultural issues do not qualify for Level 2.

A qualifying project is considered by the Expedited Review Panel which consists of the Chair, University Human Research Ethics Committee (UHREC), the relevant Faculty Research Ethics Advisor and an external member of the UHREC. The decision of this Panel is subject to ratification by the next meeting of the UHREC but the researcher can commence their research upon being advised of the Panel's decision. Please forward the completed form to the Research Ethics Officer, Office of Research, O Block Podium, Gardens Point Campus.

Section One

Project Title	Calling for help: A Responsive Evaluation of the Child Health Line
Chief Investigator	Dr Toni Dowd
	FACULTY OF HEALTH
	SCHOOL NURSING
	TELEPHONE X9607
	EMAIL T.DOWD@QUT.EDU.AU
	CONTACT ADDRESS N315, Kelvin Grove Campus, B Block.
Supervisor (If relevant)	
	TELEPHONE
	EMAIL

Other Investigators	Dr Susan Danby, Faculty of Education, QUT
	A/Prof Karen Thorpe, Faculty of Education, QUT
	A/Prof Michael Emmison, School of Social Science, The University of Queensland
	Robert Ferguson, Nursing Director, Riverton State Wide Program, Community Child Health Service
	Claire Halle, Child Health Nurse, Child Health Line, Riverton State Wide Program, Community Child Health Service

DURATION OF THE PROJECT

from ____01_ / __07___ / _2005____ to _01____ / __07___ / __2008___

DESCRIPTION OF PROJECT

Please provide a description of the project (in terms which are easily understood by the lay reader, using non-technical language).

Please see attached (Appendix A)

Section Two

Please insert Yes or No to indicate your answer to the following questions

Q.1 Respondent's identity [N]
Is it possible for an individual, business or community group to be identified by the published data?

Q.2 Unable to consent [N]
Will the study involve participants who are unable to give informed consent?

Q.3 Minors [N]
Does the proposed research involve the active participation of minors?

Q.4 Dependent relationship [N]
Does the research involve participants who may be in a dependent or captive relationship?

Q.5 Cultural issues [N]
Will the study involve the intentional recruitment of Aboriginal or Torres Strait Islander groups (rather than coincidental inclusion)?

Q.6 Treatment / Procedures / Tests [N]
Are drugs, narcotics, poisons, placebos, invasive diagnostic, therapeutic or medical procedures to be administered to the participants?

Q.7 Tissue extraction [N]
Will blood, body fluid or tissue samples be obtained from participants?

Q.8 Pain / psychological distress [N]
Is physical pain (more than mild discomfort) or psychological stress likely to result from the study?

Q.9 Ionising radiation [N]
Does the project include the use of ionising radiation?

Q.10 Commonwealth Privacy Act [N]
Will the research involve the collection, use or disclosure of personal information by a Commonwealth agency that may breach an Information Privacy Principle?

Q.11 Inducements [N]
Will payment or other financial inducements be offered to participants?

Q.12 Sensitive information [N]
Will the survey/interview involve questions about sensitive aspects of participants' behaviour (illegal conduct, drug use, sexual behaviour, religious belief)?

Q.13 Deception [N]
Does the research involve deception of the participants?

Q.14 Liability [N]
Could disclosure of the responses outside the research place the participants at risk of criminal, civil liability, financial standing, or employability?

Section Three

Q.15 PARTICIPANT POOL

Who will be approached to participate in the project?

The data will consist of the audio-recorded calls to the Child Health Line . There are two groups of participants

1. the callers who are parents and caregivers calling about their infants and children
2. child health nurses who respond to these telephone calls.

How many persons will be included in the participant pool?

It is anticipated that 50 calls to the Child Health Line over a 4 week period will be audio-recorded.
Therefore participants are

1. 50 individual clients of Child health line
2. All nurses who are rostered to the 24 hour Child Health Line during the research period. Information from the Riverton Early Parenting Centre suggests there are 2 nurse per shift (morning, evening, night) . There is a core group 6 highly experienced staff who regularly work on CHL and , additionally and other staff are relieve as necessary.

How will the participants be recruited?

The callers will be notified at the outset of the call that the call may be recorded for safety and research purposes and that they should notify the child health nurse if they do not wish the call to be audio-recorded. (see appendix D)

Will the potential participants be screened?

There is no specific screening for the research project. But note within the protocols of the Child Health Line service any call presenting an emergency or "at risk" situation is referred for appropriate intervention (eg Crisis Care or Police) this requires taking details from the mother of identity and location. These calls will be removed from the data set because there may be doubt over consent.

(For further information regarding the recruitment of participants, please refer to Booklet 10 of the University Human Research Ethics Manual http://www.research.qut.edu.au/oresearch/ethics/manpro2.jsp)

Q.16

What data collection procedures will be utilised (questionnaires, survey, interview questions or focus groups)?

Questionnaire	Survey	Interviews
Focus Groups	**Other instrument** **Audio-recorded Child Health Line calls**	**Archival Records** The completed call report generated by the child health nurses at the time of the call briefly records demographic information, the problem, and the advice given by the nurses.

Please provide a copy of the relevant instrument, protocol or other written form used to guide or collect data or include an explanation of the method by which the data will be collected.

(For further information regarding questionnaire-based research, please refer to Booklet 24 of the University Human Research Ethics Manual http://www.research.qut.edu.au/oresearch/ethics/manpro2.jsp)

Q.17

What consent mechanism will be provided to participants? (Voluntary and informed consent must be obtained from research participants, even when the project is low risk.)

Verbal consent script		Written informed consent package		Questionnaire coversheet	
Other consent mechanism	X	Please see Appendix D for recording voiceover message at outset of call. Callers who do not wish to participate will notify the child health nurse at the beginning of the telephone consultation. Please see Appendix E for information and consent package for child health nurses.			

(For further information regarding the preparation of informed consent packages, please refer to Booklet 11 of the University Human Research Ethics Manual: http://www.research.qut.edu.au/oresearch/ethics/manpro2.jsp)

Q.18	CLINICAL TRIAL / INVASIVE PROCEDURE / SENSITIVE ISSUES					
	Does the project involve?					
	Clinical trial	no	Invasive physical procedures	no	Sensitive, personal or cultural issues	no
	(If Yes, the project cannot quality for approval under Level 2. Please complete a Level 3 application form (Link) for consideration by the University Human Research Ethics Committee.)					

Q.19	DATA INSTRUMENT					
	Will the project utilise a standard or previously approved data instrument?					
	Survey	no	Test	no	Procedure	no
	(If Yes, please indicate whether the instrument is listed in the *University Register of approved procedures, pharmaceuticals and other data collection* instruments, or could be characterised as a standard, tried and tested instrument.)					

Q.20	RISKS					
	Please indicate if there are any potential risks associated with the project?					
	Physical risks	no	Social risks	no	Legal risks	no
	Psychological risks	no	Any other risks	no	Any risk identified by the caller with disclosure of sensitive information will be managed and minimised by the child health nurse giving assurances that this call will not be used in the research.	
	If you have answered Yes to any of the above, please state the nature of the risk involved, whether the risks are considered to be higher than those undertaken in normal day-to-day living, and how you intend to protect against or minimise the risks.					

Q.21	EVALUATIVE / QUALITY ASSURANCE	
	Can the project be characterised as evaluative or as a quality improvement activity? (For example, comparing a new program to an existing practice.)	
	no	.

Q.22	MULTI-INSTITUTION PROJECT	
	Does the project quality for review under the multi-institution arrangements?	
	yes	Royal Children's Hospital and Health Service District Human Ethics Research Committee approval is being sought.
	no	Is a project that is being transferred from another institution (because the staff member or student will be transferring to QUT) and the HREC of the other institution has granted ethical clearance to the project.
	A copy of this application is attached (Appendix F).	

Q.23	RENEWAL APPLICATION			
	Is this application a request for renewal?			
	No			
	(Extensions of the original project within 3-5 years are considered by the Chair, University Human Research Ethics Committee. Extensions beyond the 5 year limit must be forwarded to the Expedited Review Panel for consideration.)			

Q.23 RENEWAL APPLICATION

Is this application a request for renewal?

No

(Extensions of the original project within 3-5 years are considered by the Chair, University Human R rch Ethics Committee. Extensions beyond the 5 year limit must be forwarded to the Expedited Review Panel for considerati

Section Four

DECLARATION BY CHIEF INVESTIGATOR

I believe that this project qualifies for Level 2 clearance and does not require full ethical revi by the University.

I will notify the Research Ethics Officer immediately of any adverse effects arising from is study (eg unexpected adverse outcomes, unexpected community / subject risk factors or complaints, etc).

I will request approval from the University Human Research Ethics Committee for any d gence from the protocol which would result in any change to the responses provided in this application.

Signed: L. J. Lloyd

Date: 22 / 06 / 05

Chief Investigator to circle as required

Please forward advice to Research Students Section Y / (N) Relates to: _____ study

Please forward advice to Research Grants Section (Y) / N Relates to: STR[illegible] grant + RC[illegible] Fundation

DECLARATION BY POSTGRADUATE RESEARCH SUPERVISOR (APPROPRIATE)

I believe that this project qualifies for Level 2 clearance and does not require full ethical revi by the University.

The qualifications and experience of the Chief Investigators is appropriate to the study to be dertaken.

Signed:

Date: / /

HEAD OF SCHOOL / ~~CENTRE DIRECTOR~~ / HEAD OF DISCIPLINE

NOTE: When the Head of School, ~~Centre Director or~~ ead of Discipline is also a listed applic (or is a supervisor for the project) the Dean or Associate Dean (Research) should sign below.

I believe that this project qualifies for Level 2 clearance and does not require full ethical rev by the University.

The qualifications and experience of the Chief Investigators is appropriate to the study to undertaken. The research merit and safety issues associated with this research have been considered and approved.

Signed: M. Courtney

Name (print): MARY COURTNEY

Position: DIRECTOR RESEARCH.

Date: 22 / 6 / 05.

Title: Calling for Help: A Responsive Evaluation of the Child Health Line

Aims, Objectives and Expected Outcomes of the Proposed Research

The proposed study will examine the responsiveness of a 24-hour telenursing support service. The particular focus of the project is sleep management problems in infants which are the most frequently presenting problem to the current service and one which is associated with attachment to the child, parental well-being and mental health. A central aim of the program of research is to identify the structure and procedures required to ensure that the Riverton Child Health Line service provides easily accessible support and advice to parents/guardians of infants and young children who are experiencing sleep and associated difficulties. It will address the following questions:

1. How responsive is the current Riverton Child Health Line service?
2. What are the characteristics and needs of individuals who use the Riverton Child Health Line service?
3. What are the callers' and nurses' experiences with the Riverton Child Health Line?
4. What is required for an effective tele-nursing support service to operate in Queensland?

The proposed study aims to examine the responsiveness of a tele-nursing support service for infant sleep management problems by analysing *the calls that occur as part of normal everyday service provision*. This study seeks to audio-record these calls in order to analyse them. Therefore the only modification to existing services is pre-recording advising the caller that their call will be audio-recorded unless they inform the child health nurse that they do not want the call recorded.

Data Design: Participants and Data Sources

The purposes of data collection are to:

1. To identify service users' characteristics and the needs of this population. *This information is already routinely obtained as part of the child health nurse standard protocol.*

- Socio-demographics of the callers such as sex and relationship to the child
- Specific characteristics of the infants and children (age, physical health, etc).
- Frequency of sleep and associated problems (eg fatigue) and the way in which these are presented by service users

2. To audio-record the everyday calls between caller and child health nurse

- Analyse the caller's reason for the call and the conduct of the interaction throughout the call.

Timeframe:

Stage One: Development Work

- Obtain Ethics approval from RCH and District Ethics Committee, Queensland University of Technology and Riverton Statewide Early Parenting Centre.
- Develop protocol and procedure to ensure calls between individuals using the call service and clinical nurses can be recorded for further analysis

Stage Two: Data Collection and collation

- Audio-taping and transcription of 50 calls during a period of 4 weeks

Stage 3: Data Analysis and write up

- Conduct quantitative and qualitative data analysis. Analyse transcripts of all audio-taped calls (N = 50) for content. A subset of these calls will be analysed in detail to understand the interactions between the callers and the nurses. For example, analysis will investigate how the caller and nurse identify the problem and their decision making processes (see for example, Potter & Hepburn, 2003).
- Write up report and submit to Royal Children's Hospital Foundation,
- Make recommendations to Royal Children's Health, Health Services District Community Child Health Services and Riverton Statewide Early Parenting Centre
- Commence dissemination of results through presentations and publications

Ethical considerations

Given that the data is naturally occurring, the ethical considerations deal with

1. informed consent – this is addressed by the recorded message prior to the call (see Appendix D). This is standard procedure for accessing data of this type e.g Queensland Health's Health Direct is also using this protocol.
2. Content of the call - the content of the call may raise issues of safety of either the caller or the child. Child Health nurses will follow the standard protocols developed for the Child Health Line.
3. caller and child health nurse identities will be anonymised and any identifying information will not be revealed in any publication or dissemination of research.
4. There are a core of 6 nurses and other nurses rostered to work on the Child Health Line, and so the pool will be sufficiently large so as not to identify any one individual.
5. If any of the audio-recorded data confirms that the child health nurse has not followed management protocols, the individual will not be able to be identified as their responses are anonymised.

Significance and Innovation of Proposed Research

The outcome will inform telenursing services on best practice guidelines and increase the number of individuals receiving assistance for infant sleep difficulties. This aims to ultimately reduce the burden to traditional health services as well as reduce the risk of harm to infants and young children and enhance infant-child/parent attachment (Mair et al., 2000; Valanis et al., 2003a).

Internationally there has been pressure on health systems to reorientate the way in which services are provided and to whom they are provided. The driving force behind the growth in health service delivery options are due to traditional health service industry limitations. The health care industry continues to struggle with the provision of accessible and appropriate care, while balancing service quality with cost attainment. Additionally, consumers are demanding better access to quality health advice and information that is both affordable and timely.

The role of telephone intervention for non-medical information, support and guidance of new parents remains the most promising but under-researched field of health service delivery. Telenursing provides an opportunity for teaching and guidance from health care professionals, and parents welcome the opportunity to be reassured. As a result, primary healthcare-telenursing is the most rapidly growing speciality in a number of countries (Valanis et al., 2003b).

The research program has the potential to significantly increase the ability and responsiveness of the current Child Health Line to provide support and advice to parents within Queensland who experience difficulties with parenting. In total, early intervention in the development trajectory in the early years has the potential to influence the mental health of the child throughout their lifespan.

1. On average the service receives approximately 2000 per week. A key issue for the program, and the present research program, is that on average 1000 calls are not taken every week. As a

result a number of important, and unanswered, questions remain regarding the call back rate, what callers do if they cannot contact a clinical nurse via the telephone, and what modifications are needed to the program to increase the proportion of calls that are received by clinical nurses. Furthermore, recent comparisons and modelling between the states has estimated that the demand in Queensland should be closer to 270,000 calls per year. There are a number of possible reasons that may explain why the Child Health Line call traffic does not register this amount, including (a) low staff numbers, (b) limited technology and/or services provided and (c) limited marketing. As a result the potential impact that the Child Health Line may have on primary health care services and specifically, management of infant sleep problems may be greatly improved with an examination of current practice.

2. From a comprehensive literature review search (see, for example, Wahlberg & wredling, 1999; Andrews & Armstrong, 2002, Williams et al, 1995; Bristol, 1993; Delichatsios et al, 1998), it has become evident that previous research has focused predominantly on the impact of telenursing services on child sleep patterns, while neglecting vital areas such as caller and nurse perspective of the service, the ability of the service to cater for the needs of as many callers as possible and carer and child characteristics that affect successful outcomes. The scant research in these key areas has led to this present research project.

3. Given the high proportion of calls that remain unanswered each week at the Riverton Child Health Line Centre, there is a clear need to examine additional services and options that may be implemented to increase the ability of the service to cater for the needs of the population. These include the use of e-mail correspondence, web-sites and the provision of brochures, as well as the investigation of callers' willingness to use such options and their effectiveness to meet caller needs.

4. In addition, standardised data collection procedures have not been developed between telenursing services within Australian states, thus making centre comparisons or analysis extremely limited. Any effort to coordinate or provide a consistent collective approach in the delivery of service, to date, has been via informal communication channels. As a result in remains crucial to begin the process of developing effective and efficient data collection procedures to promote the shared lessons learnt through different call centres as well as the management and development of telenursing services within Australia.

Knowledge of patterns of health care use is important for planning service development, health policy, and creating a more accessible, responsive, quality service Cariello, 2003; Lobely, 1997, Oberklaid et al, 2003, Goldfeld et al, 2003). In summary, health and its maintenance is a major social investment and challenge. In the current context, it is essential to understand the calling needs of users of the service as well as investigate and improve the current effectiveness of the Riverton Child Health Line, in order to respond to the changing nature of the primary health care sector and ensure that this service is both accessible and effective for the community.

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Appendix B: Partner letter of support from Patricia Meaney, Executive Officer, Grants, Royal Children's Hospital Foundation

Appendix C: Email showing funding of project through QUT Strategic Links with Industry funding

Appendix D: Script of recording to be played to callers before the call is answered

Appendix E: Information and Consent Package

Appendix F: Copy of the ethics application for RCH

Appendix D: Script extract of recording to be played to callers before the call is answered by a child health nurse on Child Health Line.

The usual message from Child Health Line will be played to advise the caller that they have reached the Child Health Line and that they have been placed in a queue, and that they are advised not to hang up, and to act immediately if their call is of an urgent nature and the poisons information number is given out.

For the duration of this study, the following will be added:

> **Your call may be recorded for safety and research purposes. Please advise the child health nurse if you do not wish your call to be monitored.**

Appendix E

QUT logo Royal Children's Hospital logo The University of Queensland logo

Calling for help: A Responsive Evaluation of the Child Health Line

Participant Information Sheet
(for child health nurses on Child Health Line)

The proposed study will examine the responsiveness of Child Health Line, a 24-hour telenursing support service. This study is being conducted by Dr Toni Dowd, Dr Susan Danby and A/Professor Karen Thorpe from Queensland University of Technology; Mr Robert Ferguson and Ms Claire Halle from Riverton State Wide Program; and A/Professor Michael Emmison from The University of Queensland.

A central aim is to investigate the calls from parents and caregivers to the Riverton Child Health Line service and the child health nurses' support and advice to parents/guardians of infants and young children who are experiencing sleep and associated difficulties. The purposes of data collection are to identify service users' characteristics, including the socio-demographics of the callers such as sex and relationship to the child, and specific characteristics of the infants and children (age, physical health, etc) and to investigate the reason for the call and conduct of the interaction throughout the call

The data will consist of a corpus of already naturally-occurring data:
- audio-recorded calls between caller and child health nurse that occur as routine everyday activities of the Child Health Line
- The completed call report generated by the child health nurses at the time of the call briefly records demographic information, the problem, and the advice given by the child health nurses.

You will not be required to change your usual practice on the Child health line. We are requesting your permission to record you calls with parents/caregivers and to transcribe and analyse these for research purposes. Your participation in this study is voluntary. In writing up the results of the study your name or other identifying information will not be disclosed. If you are concerned about any particular call you can have this withdrawn from the study without comment or penalty. Your decision to participate will in no way impact upon your current or future relationship with Queensland University of Technology, University of Queensland or the Queensland Health, Community Child Health Service, Riverton State Wide Program.

Please contact us if you require further information about the project, or to have any questions answered. If you have any concerns or complaints about the ethical conduct of this project, please contact the Research Ethics Officer on 3864-2340 or ethicscontact@qut.edu.au.

Yours sincerely

Dr Toni Dowd, Chief Investigator
Faculty of Health
Queensland University of Technology
Phone: 07 3864 9607
Fax: 07 3864 3814
t.dowd@qut.edu.au

Toni Dowd, 11:50 AM 15/07/2005, Re: Level 2 (Expedited) Ethical Clearance - 4121H

To: Toni Dowd <t.dowd@qut.edu.au>
From: Wendy Heffernan <w.heffernan@qut.edu.au>
Subject: Re: Level 2 (Expedited) Ethical Clearance - 4121H
Cc:
Bcc:
Attached:

Dear Toni

I write further to the response received regarding ethical clearance for your project, "Calling for help: A Responsive Evaluation of the Child Health Line" (QUT Ref No 4121H).

On behalf of the Chair, University Human Research Ethics Committee, I wish to advise that the response has addressed the additional information required by the Expedited Ethical Review Panel.

Consequently, you are authorised to immediately commence your project on this basis.

The decision is subject to ratification at the 20 September 2005 meeting of UHREC. I will only contact you again in relation to this matter if the Committee raises any additional questions or concerns in regard to the clearance.

The University requires its researchers to comply with:

- the University's research ethics arrangements and the QUT Code of Conduct for Research;
- the standard conditions of ethical clearance;
- any additional conditions prescribed by the UHREC;
- any relevant State / Territory or Commonwealth legislation;
- the policies and guidelines issued by the NHMRC and AVCC (including the *National Statement on Ethical Conduct in Research Involving Humans*).

Please do not hesitate to contact me further if you have any queries regarding this matter.

Regards
Wendy

University Human Research Ethics Committee
Information in relation to ethical clearance

What is the duration of my ethical clearance?

The ethical clearance awarded to your project is valid for three years commencing from 8 July 2005. Recruitment, consent and data collection / experimentation cannot be conducted outside the duration of the ethical clearance for your project.

Please note that a progress report is required annually on 8 July or on completion of your project (whichever is earlier). You will be issued a reminder around the time this report is due. The progress report pro forma can be located on the Research Ethics webpage.

Extensions to the duration of your ethical clearance within the 3-5 year limit must be made in writing and will be considered by the Chair under executive powers. Extensions beyond 5 years must be sought under a renewal application.

Standard conditions of approval

The University's standard conditions of approval require the research team to:

1. conduct the project in accordance with University policy, NHMRC / AVCC guidelines and regulations, and the provisions of any relevant State / Territory or Commonwealth regulations or legislation;

2. respond to the requests and instructions of the University Human Research Ethics Committee (UHREC)

3. advise the Research Ethics Officer immediately if any complaints are made, or expressions of concern are raised, in relation to the project;

4. suspend or modify the project if the risks to participants are found to be disproportionate to the benefits, and immediately advise the Research Ethics Officer of this action;

5. stop any involvement of any participant if continuation of the research may be harmful to that person, and immediately advise the Research Ethics Officer of this action;

6. advise the Research Ethics Officer of any unforeseen development or events that might affect the continued ethical acceptability of the project;

7. report on the progress of the approved project at least annually, or at intervals determined by the Committee;

8. (where the research is publicly or privately funded) publish the results of the project is such a way to permit scrutiny and contribute to public knowledge; and

9. ensure that the results of the research are made available to the participants.

Modifying your ethical clearance

The University has an expedited mechanism for the approval of minor modifications to an ethical clearance (this includes changes to the research team, subject pool, testing instruments, etc). In practice this mechanism enables researchers to conduct a number of projects under the same ethical clearance.

Any proposed modification to the project or variation to the ethical clearance must be reported immediately to the Committee (via the Research Ethics Officer), and cannot be implemented until the Chief Investigator has been notified of the Committee's approval for the change / variation.

Requests for changes / variations should be made in writing to the Research Ethics Officer. Minor changes (changes to the subject pool, the use of an additional instrument, etc) will be assessed on a case by case basis and interim approval may be granted subject to ratification at the subsequent meeting of the Committee.

It generally takes 5 -10 days to process and notify the Chief Investigator of the outcome of a request for a minor change / variation.

Major changes to your project must also be made in writing and will be considered by the UHREC. Depending upon the nature of your request, you may be asked to submit a new application form for your project.

Audits

All active ethical clearances are subject to random audit by the UHREC, which will include the review of the signed consent forms for participants, whether any modifications / variations to the project have been approved, and the data storage arrangements.

At 04:08 PM 13/07/2005, you wrote:
Wendy,

Forgot to mention that I changed the commencement date to 1st August 2005 if that's O.K. as we have not yet started the research per sec.

Thanks - Toni

At 03:50 PM 13/07/2005, Toni Dowd wrote:
Hi Wendy,

I have placed in bold below your queries and our response. Please advise if you need further clarification.

Thank you - Toni

At 04:27 PM 11/07/2005, you wrote:
Dear Toni

I write further to the application for Level 2 (Expedited) ethical clearance received for your project, "Calling for help: A Responsive Evaluation of the Child Health Line" (QUT Ref No 4121H). This application was recently considered by the University Human Research Ethics Committee (UHREC) Expedited Ethical Review Panel.

On behalf of the Panel, I wish to advise that your project has been granted conditional ethical approval.

This approval is subject to:

- clarification regarding how the child health nurses will be approached to participate;

All Child Health Nurses at Riverton who work on the Child Health Line (CHL) will be presented with an information package and consent form prior to the commencement of the study. Any nurse declining to participate will not be rostered onto the CHL during the period of the study. In the event that they may be required to work on the CHL their calls will on be recorded.

- clarification regarding how objective 3 will be achieved; and

Nurse and caller experiences will only be obtained through examination of the call transcripts. There will be no other means of data collection in this preliminary research though further studies will seek to interview.

- provision of two sentences on the prerecorded message for obtaining consent - one to address the safety aspect and the other the research project - as the significance of the inclusion of research may be lost on the caller.

We will edit Appendix D to read prior to the call with the nurse
The usual message from the Child Health Line (CHL) will be played to advise the caller that:

- **they have reached the CHL**
- **have been placed in a queue**
- **they should not hang up**
- **they should contact the poisons information centre, an ambulance and/or accident and emergency department should they require an urgent response.**

For the duration of the study, the following will be added:

Your call may be recorded for safety and research purposes. Please advise the child health nurse if you do not wish your call to be monitored.

Commencement of this project must not occur until a satisfactory response has been provided to the outstanding conditions.

Please provide a response by 1 August 2005. Failure to submit this information by the due date may result in withdrawal of this conditional ethical approval.

Please do not hesitate to contact me further if you have any queries regarding this matter.

Regards
Wendy

Wendy Heffernan
Research Ethics Officer
Office of Research
O Block Podium
Gardens Point Campus
Tel: 07 3864 2340
Fax: 07 3864 1304

CRICOS No 00213J

Dr Toni Dowd,

To: t.dowd@qut.edu.au
From: Wendy Heffernan <w.heffernan@qut.edu.au>
Subject: Level 2 (Expedited) Ethical Clearance - 4121H
Cc:
Bcc:
Attached:

Dear Toni

I write further to the application for Level 2 (Expedited) ethical clearance received for your project, "Calling for help: A Responsive Evaluation of the Child Health Line" (QUT Ref No 4121H). This application was recently considered by the University Human Research Ethics Committee (UHREC) Expedited Ethical Review Panel.

On behalf of the Panel, I wish to advise that your project has been granted conditional ethical approval.

This approval is subject to:

- clarification regarding how the child health nurses will be approached to participate;
- clarification regarding how objective 3 will be achieved; and
- provision of two sentences on the prerecorded message for obtaining consent - one to address the safety aspect and the other the research project - as the significance of the inclusion of research may be lost on the caller.

Commencement of this project must not occur until a satisfactory response has been provided to the outstanding conditions.

Please provide a response by 1 August 2005. Failure to submit this information by the due date may result in withdrawal of this conditional ethical approval.

Please do not hesitate to contact me further if you have any queries regarding this matter.

Regards
Wendy

Wendy Heffernan
Research Ethics Officer
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O Block Podium
Gardens Point Campus
Tel: 07 3864 2340
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CRICOS No 00213J

Appendix B

Butler, C., Danby, S., Emmison, M. & Thorpe, K. (in press, 2009). Managing medical advice seeking in calls to Child Health Line. Sociology of Health and Illness.

Butler, C., Danby, S., Emmison, M. & Thorpe, K. (in press, 2009). Managing medical advice seeking in calls to Child Health Line. *Sociology of Health and Illness.*

Child Health Line is a 24-hour Australian helpline that offers information and support for parents and families on child development and parenting, staffed by nurses with expertise in these domains. The service operates with a policy of not offering medical advice; however, the helpline regularly receives calls seeking advice about illness and injury. This paper examines how domains of knowledge, expertise and institutional guidelines are oriented to in the management of these calls. Three ways in which the child health nurses manage medical advice and information seeking are discussed: invoking membership as a nurse to establish boundaries of expertise; avoiding being heard to give medical advice by invoking lay knowledge and privileging parent's access to information about their child's condition; and respecifying a problem as a child development issue. The paper has important implications for policy, training and practice in relation to telephone health lines, and the work of nursing more generally, by demonstrating how service guidelines are relevant for the in situ organization and classification of healthcare interactions.

Keywords: *telemedicine, nurse, child health, policy, conversation analysis*

Child Health Line is a 24-hour Australian telephone service staffed by registered nurses with postgraduate qualifications in child health and/or midwifery. The service offers support and information on children's behaviour, health and development, but does not offer medical advice. Most calls to Child Health Line reflect the purpose of the service and relate to issues such as children's sleeping, feeding, nutrition and growth. However, it is not unusual for parents to ring with concerns about their child's health and illness. These calls introduce a practical dilemma for nurses as they are bound by call centre guidelines not to offer such medical advice.

Parents request medical advice with the assumption that the child health nurses have the professional knowledge and expertise, as well as an institutional warrant, to offer such advice – an assumption is not surprising given the name of the service and a common-sense understanding of the mutual relevance of health and illness. However, the boundary between wellness and illness is not always clear cut and there may be ambiguity as to where a child's behaviour may sit on the health continuum. Part of the nurses' work involves discerning whether the problem falls within their realm of expertise, and managing this discriminatory work within the bounds of the institutional guidelines and the local contingencies of the interaction. Calls about illness and injury are thus managed on both an institutional and interactional level.

Membership in the category of 'medical professional' involves specialized knowledge and experience that is occasioned and displayed in interaction. Parties to a medical encounter orient to an asymmetrical distribution of knowledge and authority (e.g. Gill 1998; Heritage 2005; Maynard 1991; Peräkylä 1998; Have 1991). While patients display authority over their experiences (Gill 1998), they demonstrate an orientation to the authority of the doctor in terms of assessing and treating medical problems (Drew 1991;

Gill 1998; Heath 1992). Doctors' authority and entitlement to know about medical issues are balanced by accountability in the delivery of diagnosis– showing 'how they know' and communicating this to the patient (Peräkylä 1998).

As well as bodies of knowledge being distributed between medical professionals and their patients, medical knowledge is also distributed between various medical practitioners who specialize in certain areas of health and medicine. Professionals, including pharmacists (Pilnick 1998, 1999), HIV counselors (Peräkylä 1995; Silverman 1997), genetic counselors (Sarangi & Clarke 2002) and nurses (Heritage & Sefi 1992; Pooler 2007; Leppanen 1998), draw on domains of expertise, knowledge and skills that are related to, but distinct from, those of doctors. As Sarangi and Clarke (2002) suggest, "what counts as an authoritative professional opinion (i.e., invested with legitimacy) is derived from institutionally sanctioned roles" (p 141). These institutionally sanctioned roles can have implications for the types of knowledge medical professionals have access to, and how that knowledge and authority is displayed and oriented to in the course of an interaction.

Expertise and authority in one domain of healthcare is often 'bounded' in the sense that there are limits in terms of the specifics of medical advice or information that can be offered. These boundaries can be invoked in the course of medical interactions. For example, Sarangi and Clarke (2002) describe how genetic counselors engage in hedging and contrast their expertise with other medical professionals to formulate uncertainty in their responses to clients' requests for information and advice. In this way the counselor's construct their "zones of expertise" and invoke their professional knowledge and institutional roles. Pooler (2007) discusses how nurse advisors in the National Health Service Direct (a UK based telephone help line) are constrained in terms of an institutional requirement that they do not offer diagnostic assessments. The nurse advisors engage in what is described as 'boundary setting' in the initial stages of a call by advising callers that they cannot diagnose a problem. Following the use of a computer assisted clinical assessment system, nurses offer problem formulations which are formulated in a way that displays caution and uncertainty and downgrades the nurses' epistemic authority.

Specialization in an area of health care also involves demonstrations of authority and expertise. In a study of interactions between British health visitors and first-time mothers, Heritage and Sefi (1992) showed how the health visitors' status as 'baby experts' was made relevant in advice giving sequences. While the health visitors are authorities on child development and parenting, the display of this authority could be understood to undermine and make moral judgments about mothers' competencies (see also Heritage & Lindström, 1998).

Like the British health visitors, Child Health nurses are experts in the area of child development and behaviour. However, whilst the advice of the health visitors was often unasked for, callers to the Child Health Line service are specifically seeking out the expertise of the nurses. The problem addressed in this paper is that callers do not always seek out advice or information that within the nurses' domain of expertise. In these cases

there is a lack of alignment between the caller's expectations about the help that can be provided by the nurse, and both the professional knowledge and institutionally sanctioned role of the child health nurse (see Danby & Emmison, 2007; Vehviläinen, 2003 on advice seeking in counseling, where counselors operate under a principle of not giving advice).

In this paper we discuss how child health nurses orient to domains of knowledge, expertise and institutional responsibilities in calls seeking medical advice. An ethnomethodological conversation analytically informed approach is used to examine when and how epistemic and institutional entitlement and authority are occasioned in relation to calls seeking diagnostic assessment, advice about seeking medical attention, and information about ostensibly medical conditions. We describe three ways in which the child health nurses manage medical advice and information seeking: by invoking membership as a nurse to establish boundaries of expertise; avoiding being heard to give medical advice by invoking lay knowledge and privileging parent's access to information about their child's condition; and, by respecifying a problem as a child development issue.

Data

The data used in this study draws from a corpus of over 700 calls to Child Health Line that were recorded over four weeks during the 2005-2006 Christmas and New Year period. The calls were recorded within a call centre with two phones and two computers. Eleven nurses gave written consent to take part in the study, and callers were advised that calls would be recorded for research purposes. Both callers and nurses could opt out of having the call included in the corpus.

Analysis

From a preliminary analysis of the corpus, a subset of calls relating to health or illness were identified in which there appeared to be a tension between what the caller wanted to know, and what information or advice the nurse could (or could not) provide in line with the guidelines. The analysis considers the ways in which knowledge and authority were invoked and displayed, and focuses on orientations to institutional and epistemic boundaries.

Invoking limits of epistemic and institutional authority

One way nurses manage calls seeking medical assessment or advice is by making reference to the limits of their knowledge and institutional role, offering explicit descriptions of what advice or information they could or could not offer. Nurses suggest that the caller try to obtain the information, advice or assessment they seek from somebody better qualified to offer it, such as a doctor or pharmacist. In the extracts presented here, limits are invoked in cases where a medical assessment or diagnosis is implicated.

In the following example the caller has rung about giving medication to her son for his temperature. At about two minutes into the call she raises a further symptom – the appearance of welts on his hands and backs. The caller reports that her daughter had similar welts which were diagnosed by the doctor as an allergic reaction.

Extract 1
ZC5CNJ41P

```
 1   C:    But um my dau:ghter (.) for ages
 2   CT:   Yep=
 3   C:    =And a doctor saw this and just said it's
 4         an allergic reaction has been getting like
 5         hives, like welts coming up on her? .hh
 6         (0.3)
 7   CT:   °↑Yeah°=
 8   C:    =And then (.) today, like she's had this since
 9         the start of December, .hh and (.) today he
10         actually got a couple on his back and then on
11         his hands but they've just gone away again?
12         .hhh an'-
13   CT:   °↑Hmm°
14   C:    Both of them seem to be complaining about being
15         a bit itchy?
16         (0.6)
17   CT:   °O:h ri:ght?°
18   C:    Ye:ah.
19         (0.3)
20   CT:   .h Well i- um (1.3) we' I don't know what that
21         is but you could- ye:ah as you say the doctor
22         said it could be a reaction to something and I'm-
23         I'm just a nu:rse.=So I just have to depend on
24         the .hhh (0.3) the- what the doctor (0.4) diagnoses.
```

By reporting her daughter's symptoms and the doctor's diagnosis of an allergic reaction (lines 1 – 9), the caller offers this as a candidate explanation for her son's welts, and makes confirmation of this a possible next action by the nurse (Gill & Maynard 2006; Stivers 2002). The nurse responds initially with a newsmarker, 'oh right' (line 17), and then claims insufficient knowledge (Beach and Metzger 1997) to offer an explanation for the welts (line 20-21). The 'well's, delays, and perturbations mark this response as a dispreferred one (Pomerantz 1984). Recycling the caller's report about what the doctor said about the daughter's welts, the nurse accounts for her lack of entitlement to know what the welts might be by identifying herself as 'just a nurse' who has to 'depend on what the doctor diagnoses'. The nurse makes relevant her institutional category membership to downgrade her epistemic authority and defer to the doctors' entitlement to undertake medical assessment.

There are cases where nurses did allude to medical diagnoses, but, in line with Pooler's (2007) findings, the nurses display caution in their diagnostic activities. In the following example, the caller has rung regarding his six week old son whose belly button is 'bulging up hugely' (line 10, not shown here). After a series of questions regarding the bulging the nurse proposes an assessment of the problem (lines 56-58):

Extract 2
ZC5CRB21J

```
56  CT:   I- I mean I can't see him so I don't know but it
57        sounds like he's got you know a little .h (.)like a
58        little h↑ernia there [maybe?
59  C:                         [Yeah th-
60  CT:   >Yeah< >.h we're not allowed to give medical advice
61        so .h obviously .h you hav- .h see the doctor t- to
62        confirm (0.2) to confirm thi:s,
63  C:    Yeah.
```

The nurse suggests that the child may have a 'little hernia' (line 58). This possible diagnosis is prefaced with a disclaimer "I mean I can't see him so I don't know", and hedged with the evidential verb 'sounds like' and the 'maybe' at the end of the turn, which work to establish the assessment as cautious (see Pooler 2007). The caller comes in quickly with an agreement, and while more is projected to follow, the nurse begins a new turn (line 60). With the collective proterm 'we', the nurse draws on her membership as a Child Health Line nurse, and explicitly states the rules by which the service operates and whereby nurses are 'not allowed to give medical advice'. By suggesting that a bulge is a hernia, the nurse may be understood to have breached this rule, but by invoking the institutional rules immediately after offering 'medical advice' (and preventing too much of an uptake by the caller), the nurse hedges the diagnostic strength of her conclusion and establishes the assessment as no more than a candidate diagnosis. As in extract 1 the nurse orients to the doctor as the proper person to offer a diagnosis and confirm or otherwise what both the caller and nurse appear to suspect.

Avoiding giving medical advice
A number of calls to Child Health Line invite the nurses to engage in triaging – assessing whether a problem requires medical attention. When the child's symptoms appeared to clearly indicate a medical problem, Child Health nurses regularly advised callers to make an appointment with a G.P or to take the child straight to the hospital. However, nurses are unable to draw on their expertise to undertake the kinds of assessments they would do in face-to-face consultations and in a number of cases there is some degree of ambiguity as to whether medical attention is warranted. While the nurses are not supposed to offer medical advice, they have a professional, legal, and moral obligation to advise the caller to seek medical assessment when it appears necessary. They also need to avoid advising medical assessment when this is not necessary, particularly on evenings, weekends and public holidays where seeking medical attention may be expensive and/or time-consuming, as well as in cases where callers are some distance from a hospital or G.P.

In advising callers to seek medical assessment, nurses regularly downgraded the status of their information and advice as being 'medically informed'. In the extracts presented here, this was managed through appeals to shared, lay knowledge, and by privileging the right of the caller to make their own decision about seeking further medical advice or treatment. By doing so, nurses can be seen to avoid displaying authority with respect to making decisions about the need for medical assessment, and as such, avoid giving medical advice.

In the following example the caller's one year old baby had fallen off the bed and had a lump on her head. Prior to this extract the nurse had asked about the child's symptoms and it was established that the child appeared calm and happy, and not displaying any signs of injury.

Extract 3
ZC618820J

```
 1   CT:   ↑Because I↑ am not there with you I can't
 2         see her, [I can't (0.3) °ng° sort'v say  .h
 3   C:             [Yeih
 4   CT:   oh she's oka:y no she's no:t okay, [.hh I =
 5   C:                                      [Ye:ah
 6   CT:   =haf tuh say tuh you you should go (.)
 7         and get her checked out.=Okay?
 8   C:    Ye:s
 9   CT:   .h U::m (.) but it's you:r choice. It's your
10         decision?
11   C:    Yeah=
12   CT:   =On (.) o-on um: her (.) signs and symptoms of what
13         she's doing at the moment.
```

While all indications are that the child is 'okay' other than the lump on her head, the nurse avoids making an explicit assessment of the child. Medical advice can be heard in the nurse's recommendation to get the child checked out, but the nurse's authority to make this recommendation is downgraded. By referring to her limited ability to make an assessment as she is unable to see the child, and framing her advice as something she "has to say", the nurse invokes both practical and institutional constraints on the nature of her advice. In lines 9-10, the nurse invokes the caller's authority to get the baby checked out with "it's your choice. It's your decision". In this respect the nurse can be heard to withhold taking a position of authority or drawing on her expertise in advising the caller what actions to take.

The caller in the following extract has rung to ask whether they should be concerned about their child's temperature (37.4C/99.3F) following immunisation shots given earlier in the day. The nurse provided detailed information about possible (minor) reactions to immunisation shots and ways of managing this at home (e.g. "it's just a case of comforting them, giving them extra fluids, and if you need to according to what the doctor said, paracetomol"). In the extract below, the caller returns to the possibility of a reaction requiring medical attention.

Extract 4
ZC617GO6T

```
 1   C:    Okay and then: .hh if it's above thirty
 2         eight, then I: I- °m° I:'d prob'ly need tuh
 3         maybe consider (.) calling a doctor or going
 4         to a doctor or:: is that- .hh
 5         (1.5)
 6   CT:   .hh Ah:::m well it's ↑up↑ to you:,
```

While in earlier turns the nurse detailed scenarios where there would be no cause for concern, at lines 1-2 the caller proposes a situation in which the child's temperature might require medical attention - once it exceeds 38 (100.4°F) degrees. The caller's candidate advice is delivered as an assertion with the interrogative only apparent in the provision of an open-ended alternative at line 4, marking this as an invitation for the nurse to offer advice. The nurse's response is delayed and withholds any recommendations as to the proposed course of action by telling the caller that "it's up to you" (line 6). A few turns later the caller again invites advice as to when the child might need to be seen by a doctor:

Extract 5
ZC617GO6T (3:32 – 4:23)

```
29  C:    =.hh [bud- (0.6) I jist wanted to make sure .hh=
30  CT:        [>Yeh<
31  C:    =wha:t are thee warning signs where we need to
32        suddenly rush 'er off to a doctor or to: the-
33        the children's ho:spital.
34        (0.7)
35  CT:   Well I gue:ss u:m: ˚i- eh˚ i's sort'v ˚i-˚
36        yee- (0.4) agai:n y:ou'd have tuh go on h- you:r
37        gut i:nstinct there or watch (.) the signs and
38        symptoms that she's showing you,
```

The caller's question (lines 31-33) is designed as seeking information (about the 'warning signs'), but strongly implicates a proposed course of action and in this way is hearable as a request for advice. The nurse's response is delayed as in extract 4 and has a troubled beginning with a number of false starts. The nurse avoids offering either information or advice and, as before, leaves the decision to seek further help to the caller, suggesting he 'rely on his gut instinct'. There appears to be a lack of alignment between caller and nurse in that the caller seeks information and advice from a health professional, but the nurse does not appear to draw on her expertise or authority to offer advice. Ultimately, the caller is advised to rely on his own assessment of the child's symptoms in order to make a decision about treatment.

The nurses also downplayed their epistemic authority and entitlement by invoking lay understandings and knowledge about child health and symptoms. Medical advice and information was delivered without being offered as knowledge that the nurse had special entitlement to. An example is offered in the following extract which is also about a baby who fell and bumped her head. Earlier (lines 60-62) the nurse had described some of the tests that "nursing staff" would do if they saw the baby such as seeing whether the baby's pupils are equal and reacting. It is not implied that the caller can perform such tests, but below the caller suggests he will do 'those checks' (lines 92-94).

Extract 6
ZC5CRH39R

```
92  C:    =Mmm that's right exactly.=So .hh u:m (0.3) all right
93        well look I'll ↑do those checks if: u:m (0.5) you know
```

```
94          i:f: [(.) my wife's still
95    CT:         [Yeah.=And the other thing is if she's- the baby
96          starts vomiting you know like a [normal head injury=
97    C:                                    [Yep
98    CT:   =or .hh or first aid if you've got a first aid boo:k
99          all tho:se [(.) that sort of ty-=
100   C:               [Mmhm
```

The caller appears to be opening up a closing in lines 92-94 by formulating his next course of action. By suggesting that he would 'do those checks' it can be inferred that the caller has heard the account of how nursing staff would assess a child with possible head injury as advice. Such a situation is potentially dilemmatic as it seems the caller has assumed that these medical checks may be done by a lay-person[1]. Beginning a turn in overlap with the caller, the nurse establishes her advice as still in progress with the tying device 'and the other thing is' which shuts down the projected closing and opens up the interaction again.

The nurse offers further information that might be used by the caller to make an assessment about the seriousness of the baby's injury, including "if she starts vomiting" (line 96). The advice is formulated in such a way so as to downgrade this advice as being the exclusive domain of medical experts. It is presented as lay knowledge – something that 'anyone could know', which is accomplished by an attention to the 'normal' ("you know like a normal head injury", line 96), and resources that are publicly available – i.e. a 'first aid book' (line 98). The nurse draws on a shared stock of knowledge – something heard through the token "you know" and the generalized list completer (Jefferson, 1990) "all those (.) all that sort of.." where there is an assumption that the caller is capable of doing the completion. In this way the nurse appeals to the caller's access to the understandings of symptoms that may warrant seeking medical attention, and downgrades the relevance of her medical authority in providing information about possible warning signs.

Drawing on expertise to respecify a problem

When callers ring with concerns about what they considered to be a medical issue, nurses are at times able to draw on their knowledge and experience in the areas of parenting and child development to offer information and advice that address the problem, without giving medical advice. In these cases, nurses were able to address the problem within the bounds of their area of expertise by respecifying a medical issue as a parenting or child development matter.

In extract 8 below, the caller initially asks if the help line was about 'medical health for babies' (lines 3-4). In this sense, the nature of the caller's request is framed as a medical

[1] The caller's uptake of the information about checks that nursing staff would perform indicates the kinds of problems that arise when nurses *do* draw on their medical expertise, and may serve to demonstrate the value in withholding or downgrading expertise in such calls. This problem is likely not restricted to interactions between Child Health nurses and callers, but may be relevant to telemedicine more generally where medical professionals are unable to assess patients as they would in face-to-face interactions.

matter. The nurse states that Child Health line is not a medical help line, but invites the caller to ask her something.

Extract 7

ZC5CSG59M

```
1    CT:   Child Health Line may I help you Kerry A:nne
2          speaking?
3    C:    Yeah is this u:m (0.3) medical health for
4          ba:bies?
5          (0.3)
6    CT:   No this is the Child Health Line. so it's
7          not a medical help. line.
8          (0.4)
9    C:    O::h=(I j-)
10         (0.4)
11   CT:   But I ca:n y- I mean if you wa:nna ask me something?
12         (0.2)
13   C:    A::h I'm jist I'm wo:ndering about projectile
14         vo:miting.
15         (0.2)
16   CT:   Sorry?
17         (0.5)
18   C:    I was wondering about projectile vo:miting?
19   CT:   How old is the ba:by.
     ((34 lines omitted in which nurse asks about timing and
       frequency of the vomiting))
53   C:    U:::m (0.8) tch .h we:ll be was burping like I burp
54         him after the [f- during the fee[d so yea:h he had=
55   CT:                 [Yeah            [yeah
56   C:    wi:nd.
57   CT:   Alrigh'=.h ↑what can happen with small babies is
58         they've go:t (.) imm:aturity at thee .h the bowel=at
59         the gut there?
60         (.)
61   C:    Yep.
62   CT:   And the milk will just pop up and down all
63         the time.=So sometimes different position[ns? .hh
64   C:                                             [((cough))
65         [>Yep<
66   CT:   [Like if you'd fed a baby one side and then you
67         lay them down?,
68   C:    Mm=
69   CT:   =and try to change the nappy so whilst you're lifting-
70         lifting their little le:gs up?,
71         (.)
72   C:    Ye::ah=
73   CT:   =You're lifting their .h tummy hi:gher >you know< you're
74         lifting [(            [          ) bring it out?
75   C:            [Ye::ah (0.8)  [ye:ah.
76         (0.4)
77   C:    Ye:ah=
78   CT:   >wil' jus'< come back (.) out through the mouth agai:n.
```

The caller asks about projectile vomiting as a topic rather than a symptom of her child – possibly in orientation to the opening turns in which it was established that Child Health Line does not give medical help. By asking the age of the child immediately after the caller's reason for calling (line 19), the nurse displays her understanding of the call as not simply a request for information about projectile vomiting, but relating to a symptom or condition of the caller's child. In lines not shown here, she asks a series of questions relating to the frequency and timing of the vomiting. After the caller confirms that the baby had wind (lines 53-53/56), the nurse offers an explanation for the child's vomiting.

The explanation for the vomiting draws on the nurse's knowledge of children's physical development, and describes what is effectively normal in 'small babies' – "immaturity of (…) the bowel (…) the gut", which means that milk "will just pop up and down all the time" (lines 62-63). The nurse's description of the milk just coming 'back out through the mouth again' (line 78) is a much milder version of what the caller had described initially as 'projectile vomiting', and establishes the problem as something that occurs when engaged in the everyday activities of child-care. Use of non-personalised information (Silverman 1997) through generic descriptors ('small babies', 'if you fed a baby', 'you're lifting their little legs up') serve as normalizing devices. The generalized account of babies vomiting is hearably an account for this baby vomiting. The nurse thus draws on her expertise in the area of child development and parenting to respecify the problem as non-medical and an expected and normal occurrence.

In the following extract the caller has rung regarding her eight week old child's lack of bowel motions. She had previously taken her child to the doctor (line 9-11, not shown) who prescribed medication leading to a bowel movement four days prior to the call. The reason for the call is concern about the absence of any movement since then, and indications that the baby is in some discomfort.

Extract 8
ZC5CV01R

```
13   C:    .hh but um ↑he hasn't been to the toilet since
14         and he's passing like a lot of wi::nd an- .hh
15         [(0.2) gets upset during the feeding¿
16   CT:   [H:m.
17         (0.3)
18   C:    t.hhhh[h  [like he has got a pai::n:- (0.2) there?
19   CT:         [Ye:[ah.
20   CT:   .h (0.3) Um:: and he- he's passing urine?=an' he's:
21         and he's gaining weight?=↑Your baby?
22         (.)
23   CT:   <E[v'rything like that's going well?
24   C:      [Yea:h.
25   C:    Yeah
26   CT:   .hh And- the doctor didn't talk about the- normal
27         behaviour where- °m° breastfed babies (.) at this
28         age don't poo for up to a coupla weeks?
29         (0.3)
30   C:    .h Well I said that to him, 'cos one of the um (.)
31         child (0.5) h:ealth: nurses at the ((hospital name))
```

```
32          had said that tuh me:.
33    CT:   Yea:p.
34    C:    .hh And he said no no that's not ri:ght.
35    CT:   Oh it i:s.
36          (0.4)
37    C:    .h Oh:. [hihihi .hhhh
38    CT:           [hihihi haheh very right;
39    C:    [ O:h. = 'Co]s then I'm thinking ↑o:h no=he's goin'=
40    CT:   [(Well-) we-]
41    C:    =oh no he should be going every day he should have
42          [three or four poops a da:y=an' I'm thinking ↑o:h=
43    CT:   [°M:m m:m.°
44    C:    =go:sh h .h
45    CT:   ↓No. .hh breastfed babie- I mean we deal with
46          breastfed babies all the time an' a norm↑al
47          baby¿=I s'pose¿=as child health nu(h)rses (…)
```

After describing the history and treatment of the problem, the caller presents her child's symptoms (no bowel motions, flatulence, upset while feeding, and apparent pain (lines 13-15, 18). The nurse responds by asking about further symptoms, and does so in a way which carries an assumption that there are no other symptoms. With a multi-unit turn (lines 21-22, 23), the nurse asks three questions which are anticipate a optimized response (Boyd & Heritage 2006), that is, "everything like that's going well". When the agreeing 'yes' response is offered by the caller, the nurse continues with a detailed interrogative regarding what the doctor 'didn't say' – about the 'normal behaviour for breastfed babies' (line 26). An assertion about the normal behaviour for breastfed babies at this age is embedded into the question, and sets up a preference for a 'no' response. While on the surface the question might appear to be seeking information, it accomplishes at least two other actions which are potentially more pertinent than the seeking of information. First, the question carries an assumption that the doctor did not provide the caller with this information. Second, it has an evaluative component in that the doctor's presumed lack of information provision, and the prescription of medicine is criticized.

In her response the caller reveals that a Child Health nurse had given this information to her and she had in fact raised it with the doctor, who had rejected the accuracy of the information as 'not right' (line 34). The nurse's response to this, 'oh it is' (line 35) comes in quickly and is said firmly and authoritatively, suggesting an independent epistemic position, which is then upgraded by the "very right' at line 38. After the caller continues with an account of her reaction to the doctor's assertion, the nurse does a bald disagreement – "No" (line 45), countering both the doctor's assessment/diagnosis, and the concern of the caller. The nurse then invokes her membership as a Child Health nurse to account for her disagreement. Demonstrating her institutional alignment with the nurse from the hospital with 'we' (line 45) and the category mapping 'as child health nurses' (line 47), the nurse's knowledge and experience as a Child Health nurse is used to establish her epistemic authority in this matter. As Child Health nurses, they see normal breastfed babies 'all the time' (line 46), and by contrast it is suggested that the doctor lacks experience and access to this specialized body of knowledge.

Over the next two minutes or so the nurse describes in great detail the normal behaviour of breastfed babies. Space limitations prevent us from presenting this description, but the closing of this informing sequence is shown below:

Extract 9
ZC5CV01R

```
89   CT:   But they're not constipated constipation is a hard
90         dry pebbly poo and that's the definition of it,=not
91         how often they go¿ but what the consistency of the
92         poo is when they do: go.
93   C:    Oh:ka:y
94   CT:   .h (0.2) So: ahm: I'll have to disagre:e [*er:* um=
95   C:                                             [Yeah
96   CT:   =(0.4) with the doctor, there's a lot of evidence
97         (0.3) er:m th't- (0.2) this is a no:rmal phenomenon in
98         breastfed babies and we see it a:ll the time.
99   C:    Oh okay, .hh
```

The nurse closes her account of normal bowel motions in babies with a definition of constipation (lines 89 – 92), and then explicitly formulates her disagreement with the doctor (lines 94, 96). Over these turns, the nurse establishes the factual basis of her knowledge of constipation – referring to the 'definition' of constipation, and the 'evidence' that supports this understanding of lack of bowel motions as a 'normal phenomenon'. Referring to her collective membership, in closing this extended turn, the nurse again invokes the epistemic authority of Child Health Nurses who "see it all the time". The nurse orients to both authority and accountability in her assessment of the problem (Peräkylä 1998), and contrasts her domain of expertise with that of the doctor's. In doing so, a problem that the caller initially presented as a medical matter on the basis of the doctor's treatment of the problem, is respecified as in fact an aspect of normal child development.

Conclusions

In discussing the restrictions on nurses issuing medical advice, the managing director of the Child Health Line service suggested that "whether or not a condition is considered to represent illness depends on knowledge and experience" (Ferguson 2005: 246). We have shown that knowledge and experience are not merely resources drawn on to assess or advise on symptoms, but are used to manage the institutional and interactional features of calls seeking medical advice and information. Nurses clearly oriented to the limits of their knowledge and experience in offering advice and information on medical matters, but they are institutionally obliged to do so. The nurses' expertise in non-illness related issues, as well as their interactional expertise, enable them to carry out the work of being a Child Health nurse despite the call service guidelines not to offer medical help.

Peräkylä (1998) showed doctors' diagnoses involve a balance between authority and accountability, in that doctors attend to their obligations to reveal the grounds on which a medical assessment is made. What we observe in calls to Child Health Line is a strong orientation to the accountability of nurses' assessments, information and advice. Nurses

contrasted their authority and epistemic access with doctors' (see Sarangi & Clarke, 2002), not only to downgrade their authority and rights to diagnose or advise, but also to upgrade their authority in respecifying a medical matter as a "wellness' matter. In some instances, nurses can be seen to withhold displays of authority as a practice for avoiding being heard to be giving medical advice. In this respect child nurses orient to, and establish, their domain of expertise in the course of negotiating calls about illness and injury within the bounds of the institutional guidelines.

As Drew (1991: 45) suggests, "when speakers orient to their asymmetrical position as regards some knowledge, they orient to the normatively organized social distributions of authoritative access to bodies or types of knowledge". Authority and expertise, and the boundaries of these, were displayed in self-categorizations as a nurse (extracts 1 and 2) or a *child health* nurse (extract 8), as well as in the production of turns at talk. Epistemic downgrading was accomplished through delaying devices and evidential verbs which suggest a degree of caution in offering medical assessments and advice (Pooler 2007; Sarangi & Clarke 2002). The downgrading of epistemic entitlement demonstrates how states of knowledge are treated as distinct from having rights to use that knowledge (Drew 1991; Gill 1998).

This paper has important implications for policy, training and practice in relation to telephone health lines, and the work of nursing more generally, by demonstrating how service guidelines are relevant for the in situ organization and classification of healthcare interactions. The Child Health Line guideline, promoting the view that "the service does not offer medical advice," seems at the outset a straight-forward regulation for implementation. In other words, Child Health nurses have a responsibility to help callers, but not to offer medical help. However, this analysis shows how the guideline poses interactional tensions for the nurses as they attempt to respond to parents' requests for support and advice about their child's health and illness. By advising the parent to seek other expertise, avoiding being heard to advise as a medical authority, or by explaining and framing their guidance within a child development approach, nurses manage both the parents' concerns about their child's health and the institutional guidelines for practice.

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