Quality frameworks for telephone triage

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Abstract

The establishment of the Grampians After-Hours Service has led to the development of a quality framework for nurse telephone triage. The service providers believe this framework is the basis for the service's success. While quality frameworks including critical evaluation and peer review are not new to the health industry, the development of organisational systems to improve quality in after-hours services is innovative. The framework developed is comprehensive, evidenced-based and emphasises training, protocols and documentation. It also involves a continuous and non-punitive quality review process that operates at the individual, small group, organisation and whole-system level. The framework will continue to improve and at this time provides a foundation for discussion and further application in the pursuit of quality improvement in rural after-hours health services.

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What is known about the topic?

While more jurisdictions are implementing nurse telephone triage services, little has been documented about the supporting quality frameworks.

What does this paper add?

This paper outlines the quality components of training, use of protocols, and documentation of calls that were useful in the Grampians After-Hours Service.

What are the implications for practitioners?

A key concern for general practitioners is the quality and safety of telephone triage and the authors suggest these concerns can be overcome through an open participative quality assurance program.

WEST VIC DIVISION of General Practice, through the Australian Government's After-Hours Primary Medical Care Program, trialled a nurse telephone triage model in a large rural area. West Vic's interest was based on evidence that the availability of an after-hours service capable of taking pressure off general practitioners was a major factor in recruitment and retention of GPs in a rural area.[1,2] While GPs were strongly supportive of the idea of an after-hours service, there was considerable concern about the risks associated with the telephone triage methodology. The division consequently aimed to ensure that the same standards of safe, effective and appropriate care applicable to nursing practice in general should apply to telephone triage.[3] The service has progressively established a quality framework to operate at four levels: the individual practitioner, small group, organisation and system levels.

Service description, setting and participants

The Grampians After-Hours Service (GAHS) established by West Vic Division of General Practice is a nurse telephone triage service that involves GPs switching their practice phones through to a dedicated 1800 after-hours telephone number. When a patient calls a practice after hours, the call is automatically diverted to a trained telephone triage nurse located in a rural hospital. The patient's details are taken and, via a set of protocols, the triage nurse assesses whether the patient requires an ambulance, nursing advice and reassurance, a local medical appointment the next day or advice or treatment from their local

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doctor on call. A patient requiring assessment is referred to the local emergency department (ED). The telephone triage nurse is not permitted to make a diagnosis over the phone.

The service commenced in October 1999 in Stawell with the Stawell hospital nurses providing the telephone triage and the two Stawell general practices diverting calls to the service. Stawell covered a population of about 10 000 people. The service is now offered to the entire division region, covering a population of about 80 000 over 62 500 kilometres. Seventy GPs currently access the service. Telephone triage shifts are conducted on four hospital sites across the division on a rotating roster. The service refers to all 28 practices and the 12 health services within the division's area. It receives an average of 2573 calls per annum,[4] and there were 2907 triage calls in 2006.*

The quality framework

The GAHS implemented a quality framework with three key components. These components, acknowledged by experts as critical to telephone triage,[5,6] are training, use of protocols, and documentation of calls.

Training

Nurse telephone triage reflects general nursing processes of assessment, diagnosis, planning, intervention and evaluation[3] but service providers have offered varying opinions on the capacity of nurses who are experienced in normal triage to undertake the role.[7,8] The GAHS followed the advice but found that telephone triage requires different skills from those of face-to-face triage: even the most experienced nurse may not have the confidence or ability to function effectively without visual clues. Consequently, GAHS looked beyond ED-trained nurses and sought to recruit community health or bush nurses with significant nursing experience and practical skills in telephone communication and assessment.

Studies have shown that there is variation in the adequacy of assessment for patients calling for advice.[9,10] This may result from various experience levels as outlined by Crouch et al.[7] It may be due to a lack of training in telephone consultation skills. Evidence has also shown that there is a need for specific training in telephone triage.[9,11]

The GAHS provides specialised training developed and conducted by the Collaborative Health Education and Research Centre (CHERC) to all telephone triage nurses.† The service providers recognise that all nurses, regardless of knowledge and experience, must understand the importance and use of protocols and documentation and they must know how to structure a telephone conversation in order implement the appropriate level of care. After the initial training, the GAHS ensures that telephone triage nurses receive ongoing training in identified areas of need (eg, dealing with depressed people) and continue to be offered clinical up-skilling.

The telephone triage nurses are required to have a detailed knowledge of the local health care environment, the capacity of health care centres and the services that they offer. Geographical constraints are also understood by the nurses so they will not make referrals that are difficult in practical terms for patients.

Protocols

Nurse telephone triage protocols are the core of the triage function. Protocols assist nurses in asking appropriate questions to quickly assess the severity of a problem and to help the caller make an informed decision about health service utilisation.[12] Protocols provide a mechanism to address potentially serious conditions in a consistent and precise manner when unable to see the person, without basing assessment on opinion.[12,13] They are a sorting or prioritising tool designed to eliminate common practice errors.[3] The need for protocols to ensure quality and safety is well established.[11]

There are several specific telephone triage protocols available in both paper and computer form. Computerised protocols are beneficial for

* Unpublished division records.

† The training has now become a module within the Graduate Diploma of Advanced Clinical Nursing at Latrobe University.

1 Examples of response to problems and complaints

Source of complaint/ problem identification	Nature of problem	Service response
Carer	Practice not able to provide an appointment in the morning despite triage nurse's advice to patient to attend.	Redesigned process to ensure that practice managers check the triage faxes each morning and take the initiative to telephone patients.
Nurse	Lack of information about details of services at each hospital led to patients being directed to inappropriate sites.	List of services available at each relevant hospital now available to triage nurses at all triage sites.
General practitioners	Quality Assurance Review form problematic.	The form was redesigned to be more streamlined and appropriate to GP needs.
GPs and nurses	Nurses were giving medication advice that was outside the scope of the nurse role.	A medication protocol was developed to define the limits to the nurse's advice role and the matters that must be referred.

larger call centres with dedicated nurses based at a desk. West Vic Division decided that these do not suit a rural telephone triage model; paper protocols are less expensive and can be carried by nurses involved in other tasks within a hospital setting.

The development of protocols can be extremely labour intensive, so the GAHS chose to adapt existing protocols, choosing those developed by Briggs.[12] Adaptation was critical to ensure the protocols were locally relevant and had GP involvement and consent as well as telephone triage nurse approval. The GAHS also adopts the principle that protocols based on a published source must be updated as the published source is. Regardless, protocols are also completely reviewed every 2 years, or earlier if deemed clinically appropriate.

The GAHS chose decision-support protocols, rather than algorithmic protocols, on the grounds that protocols cannot cover in a straightforward manner every single complaint that may arise. Therefore the nurses must have the flexibility to exercise skilled clinical judgement. This decision is controversial, although supported by Rutenburg.[14,15]

Documentation

Accurate documentation offers proof of advice given and increases defensibility should a legal case arise.[3,16,17] Secondly, it allows accurate quality review, for example, identification of problems with protocols or identification of how the service is being accessed (eg, time of call, day of call, who calls, why are they calling).

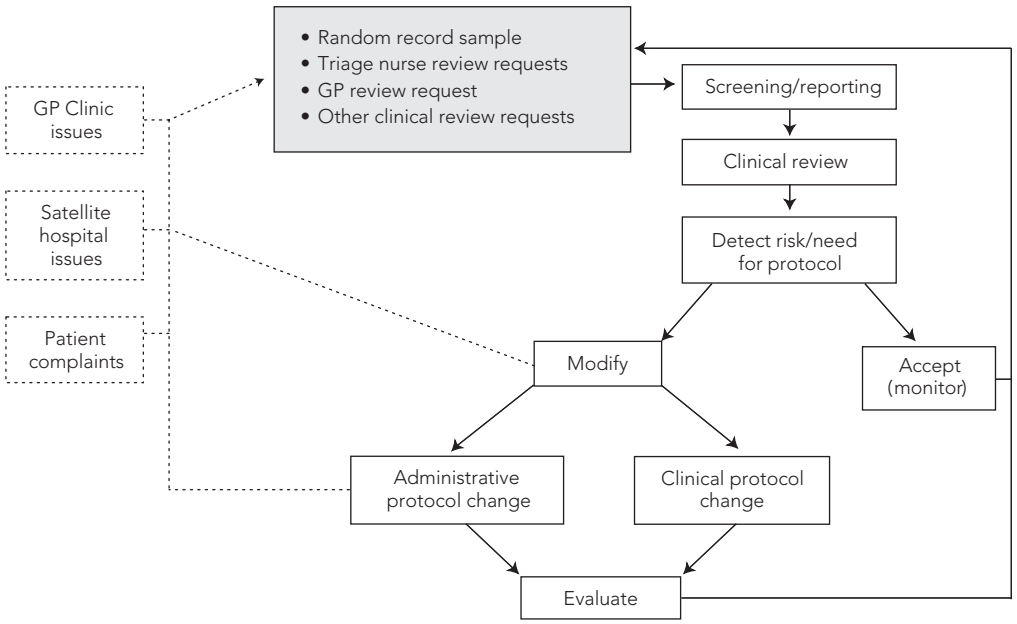
The GAHS focused on sound documentation procedures as the third arm of its quality assurance strategy. Documentation includes date and time of contact, who is calling, patient gender, age, reason for call, advice given, reaction to advice given, outcome of call, protocol followed.

Service records are sequentially numbered to ensure records are not removed and can be tracked. The service also recognised the need to have a duplicate copy, which could be faxed to the patient's normal GP or practice for their records and continuity of care. This entails the need to have all participating organisations sign a privacy agreement. The GAHS policy is to store all records for a minimum of 25 years from the date of creation either in hard copy, on disk or electronically.

Quality assurance method

A regular process of quality assurance was implemented to address quality issues at the individual, small group, organisation and system levels. Quality assurance at the individual and group level is addressed by a series of interlocking committees and roles that provide a comprehensive quality review process. The GAHS has a

2 Quality review process



Modified from Wolff et al Med J Aust *2001; 174: 621–5.*[18]

service management committee, a triage nurse committee, a quality assurance nurse monitor and a number of GP record reviewers, with established communication procedures between each of the roles and committees. This structure allows the service to respond quickly to problems, as illustrated in Box 1.

Quality assurance meetings for the nurses are held every 12 weeks. These are attended by health professionals asked by nurses to provide updates or discussion on issues of concern (eg, psychiatric services on dealing with difficult patients, a pharmacist for discussion of medication issues). Outcomes of these meetings have resulted in documentation form changes, increased references and resources, and administrative or process changes. Quality assurance record review discussion also occurs at these meetings. This process helps to protect telephone triage nurses from legal liability.

The GAHS uses the processes outlined in Box 2 to ensure professional quality review of the service and especially of advice given. The full review process is conducted three or four times per annum. The process allows review of medical care to be non-punitive, objective, and to ensure an emphasis on a professional response rather than personal judgement. Records are generated from a number of sources either identified or randomly selected and entered into the same review process. A 25% sample of all telephone triage records as well as records of patients who have called the service more than once per night are also included in the review.

Record review includes assessment of compliance with protocols and identification of issues of clinical concern. Review may result in modification of clinical or administrative protocols, or further education or increased supervision for new staff. Depending upon the cases requested for review, feedback is provided to the appropriate group or person making the complaint. Several researchers[19,20] have found that such a process reduces error rates (considered errors in assessment, advice and triage), resulting in an improved system.

All those involved in the after-hours service provision enter into service delivery contracts. The GAHS has contracts for the telephone triage nurses, GPs, medical clinics and the service delivery organisations. Quality assurance at the system level looks at the telephone software, reporting mechanisms, professional review and documentation processes. Customer (patient and GP) surveys are an important means of determining how a service or system is functioning. These surveys are conducted annually.

Outcomes

Evaluation of the service found that fewer than 50% of calls that formerly went to GPs now require GP contact.[21-23‡] The service has developed to include the entire division — an implicit vote of confidence in quality. GPs have indicated that the service is significant for the recruitment and retention of GPs in the region.[1] Participating GPs have found it reassuring that they have the support of highly skilled nursing professionals to respond to after-hours calls. Consumers have also welcomed the service. The service implementers believe these results have occurred as a result of the emphasis on the need to ensure a quality framework for the provision of successful, timely and medically safe telephone triage advice.

Problems/conflicts/constraints

Apart from GP anxiety about the safety of nurse telephone triage there was also some reluctance on the part of nurses to participate in a potentially threatening quality review process. At a certain point the service changed from using nurses with other roles to using nurses dedicated to the service. Once this occurred there was greater willingness to share concerns and discuss cases.

‡ Other studies confirm the significant reduction in GP workload resulting from nurse telephone triage.[22] A formal evaluation based on pre and post population surveys noted that there was no change in service uitilisation but this evaluation did not measure the actual call-outs to GPs on call.[23]

Those GPs hesitant about joining the service have been offered the opportunity to be part of the quality assurance review process. Many have taken up this opportunity. Importantly, no GP has withdrawn from accessing the service once they have commenced.

Conclusion

At a time of critical workforce shortages in health, the nurse telephone triage system makes a vital contribution to the retention of the GP workforce in a rural area. But a key concern for GPs is the quality and safety of such a service. The most controversial aspect is the use of decision-based protocols rather than the algorithmic protocols used in other systems such as "Nurse-on-Call".[24] The decision-based protocols place greater reliance on the training, experience and judgement of the nurses.

Given these concerns it was vital for West Vic Division of General Practice to develop a comprehensive quality assurance process that would protect consumers from harm and GPs and nurses from liability. West Vic's quality assurance model is well founded in the literature, but its application to this type of service is unique. The non-threatening process has encouraged all relevant health professionals to participate. Finally, the preparedness and capacity to modify the system immediately a problem has been identified is critical to the success of the system and to the confidence of the participants in using it. Future developments may include systematic evaluation of individual components of the model and the trial of audio taping as a tool for reviewing consistency and quality.

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Competing interests

The authors declare that they have no competing interests.

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