

# Collaboration of the delivery of rural health services between NSW Ambulance and Greater Southern Area Health Services

**Bob Neumayer<sup>1</sup>, Graeme Malone<sup>2</sup>**

<sup>1</sup>Greater Southern Area Health Service, <sup>2</sup>Ambulance Service of NSW

## Introduction

Health services in rural and remote communities face many challenges in providing quality health care to their communities. In order to address these challenges, it is vital to develop collaborative health care teams and partnerships to develop flexible health service models that could enhance the efficiency, effectiveness, and sustainability of existing rural health care services.

Greater Southern Area Health Service (GSAHS) and Ambulance Service of NSW (Ambulance) developed an integration pilot project to address working with small rural health services to investigate ways in which the ambulance service and health service can work together to increase access to services in these isolated communities. The project sought to formalise integration activities that were currently happening, to trial new activities, to provide training and recognition for staff who are involved in the projects and to research the outcomes of the project. It was hoped that the outcomes would include increased access to services for members of the communities' involved and increased satisfaction for staff as a result of the enhanced work roles and increased skills. Four pilot sites were chosen for this project on the basis of the size and activity level of the local ambulance station, the potential to integrate with the local service and the extent of local support for the project.

A number of areas were identified where it was possible for ambulance paramedics to have an increased involvement in health care—this included increased involvement of ambulance paramedics in emergency department care, in community based care, and shared training between ambulance service and health service staff. The guiding principles underpinning the projects were that (1) the ambulance service's core function will not be compromised and (2) each support activity is not a substitution for existing services but is an enhancement to what is already being provided.

Once general agreement was reached between health service and ambulance staff at the proposed sites to be involved in the pilot projects, then the scope of the projects was determined. This was followed by development of a project plan to identify and plan for any training requirements. Interviews with all participating staff were undertaken as part of the evaluation program for the project.

The project evaluation demonstrated the ability of the health and ambulance paramedic's to work collaboratively on various integrated health projects in small rural communities. These activities included both working within the ED and in Community Health.

## Method of study

The pilot study commenced towards the end of 2007 using a qualitative methodological approach. A consultation paper was disseminated throughout Ambulance and the GSAHS titled, Enhancing the Health Care of Rural Communities—“*A collaborative initiative between the Ambulance Service of NSW*”

and the Greater Southern Area Health Service" which outlined plans to pilot an expanded role for paramedics.

Whilst the prime focus of the project was to maintain the Ambulance Service's core function while also assisting other existing services by utilising available capacity in the Ambulance Service, a program of community engagement was an essential component in the construct of the pilot project to effectively test the potential to provide better services.

Following approval from the GSAHS Ethics Committee, the project commenced with a series of four focus group discussions conducted locally at the pilot sites with health service, ambulance and community stakeholders. The aim of the focus group discussions was to facilitate stakeholder engagement in shaping potential models for enhancing the delivery of health care in their local communities. The outcome of the discussions also led to overarching agreements concerning the integrated activities that each site might engage. These included:

ED and transfers: IMEDS and monitoring of 6 common pharmacology's, 12 Lead ECG reporting and patient observations.

Community Health: wound care, medication checks, lymphoedema bandaging, welfare checks, and some informal falls prevention checks. Many of these activities were to be engaged in outside of normal Community Health Nurse working hours.

Health service and ambulance staff were interviewed pre, mid and post project. They also completed a job satisfaction survey<sup>1</sup> pre and post project. Participants were interviewed about their job roles, working conditions, expectations of their involvement with the project and outcomes for the community. Processes and outcomes of care for patients attended by paramedics were collected to evaluate the ability of health and paramedic staff to work collaboratively on various integrated health projects in small rural communities. The survey was designed to assess respondents' views on their perception of the job satisfaction, especially in relation to how it might change after involvement with the project.

## Site identification

The pilot sites were chosen on the basis of location, the volume of activity<sup>2</sup> for both Ambulance and health services and an indication from local staff and community of their interested and willingness to be involved in the pilot projects<sup>3</sup>. The four pilot sites identified include Barham, Jerilderie, Hillston and Hay, all located in rural NSW.

All pilot sites were supported by full time paramedics working eight hour day shifts followed by on-call after hours. The pilot communities have small rural populations and are supported by community non-acute hospitals (< 22 beds) which are generally serviced by up to three locally based General Practitioners.

The Barham pilot agreed to focus on inter-facility transports using IMED infusion pumps and joint training and professional development activities.

---

<sup>1</sup> Job satisfaction survey. Paul E. Spencer, Department of Psychology University of South Florida.

<sup>2</sup> ORH Rural report (2002). *Operational Review*, Operational Research Ltd.

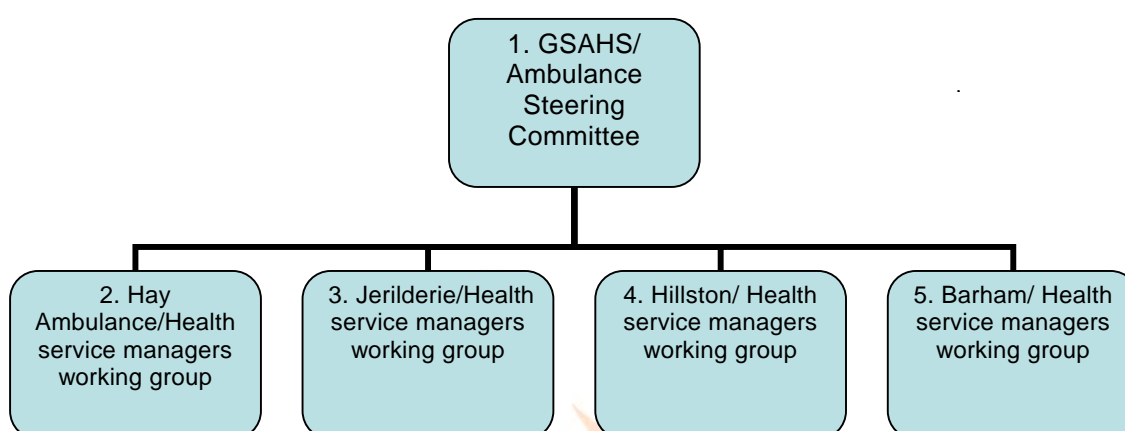
<sup>3</sup> Individual paramedic and health service staff participation in project activities was not compulsory, however all staff were encouraged to participate.

The Jerilderie, Hillston and Hay pilot sites focused on assisting the ED staff, community care and training and professional development activities.

## Project governance

A robust governance framework supported the development of the project over time. The governance framework encompassed both clinical governance and project governance which linked existing structures in the GSAHS and Ambulance to optimise efficiency and project synergies, as well as delivering a framework for accountability, participation amongst stakeholders and provide clarity about the roles and reporting lines of all of the committees involved in project governance (Figure1).

**Figure 1** Committee 1 was created specifically to oversee the project. Committee's 2, 3, 4 and 5 developed project site specific activities



## Barriers to implementation

A number of barriers were identified which delayed the implementation of activities within each of the pilot sites. These ranged from health service personnel disapproval to the pilot based on the professional crossover of duties, remuneration, liability and replacing nursing positions with paramedics. Similarly some paramedics raised concerns over increased pressure due to fatigue, payment for services and some couldn't understand the rationale as to why Ambulance would want to formalise activities which have been performed "unofficially" for years.

Whilst this paper does not provide detailed explanation of the barriers, the broad categories of issues took an extremely long time to resolve, and to an extent, some issues were left unresolved as these barriers originated from staff located outside of the identified pilot sites. Locally, many of the barriers were resolved through the construct of business rules which provided a framework that emphasised the core underpinning principles that eventually provided a way forward to commence the pilot activities in January 2008.

## Funding arrangements

There were no funds specifically allocated to this project. The time allocated to the researchers from the organisations was considered as part of their job roles, with each organisation providing “in-kind” support via staff release for travel, training and incidental costs.

## Staff training

Although individual paramedic participation in project activities was not compulsory, all staff were encouraged to participate. Paramedics at each of the pilot sites received training in the first training module of the Expanded Decision Making course<sup>4</sup>. This course focused on patient safety and management of clinical risk in non-transport situations, paramedics completed a one-day (8 hour) training course in Clinical Risk Management. The Clinical Risk Management modules are designed to provide paramedics with an increased ability to identify, assess, and manage clinical risk with a particular focus on non-transport situations. It also increases awareness in regard to medico-legal issues such as proper and complete Ambulance Patient Health Care Record (PHCR) documentation and patient consent. In addition, paramedics were required to undertake skill/procedure orientation and/or course of instruction prior to being deemed competent to utilise any hospital based skills by either an ambulance clinical training officer or health service nurse educator.

Skills that currently fall outside the Ambulance paramedic clinical skills set gained for use within the scope of the project were specifically endorsed by Ambulance’s Senior Medical Adviser for use within the confines of the designated health care facility. These skills include: 12 lead electrographs, Troponin Test, snake/envenomation detection, venipuncture and blood collection, cardiac arrest drills, wound care and medication management.

In situations where paramedics continued on-going patient care within the health care facility’s ED while awaiting the arrival of a Doctor or Nurse and a formal patient handover had not been performed, the paramedic continued treatment using Ambulance protocols and pharmacology. The paramedic would continue to clearly document the ongoing treatment on the Ambulance’s PHCR.

Following a patient handover or if the paramedics were requested by the health care facility to work as part of the health care team (as part of the project), the paramedics were under the medical direction/supervision of the doctor or senior nurse and were required to document patient observations and/or treatments using the health services patient record/notes. All ambulance paramedics received orientation to each of the health service pilot site documentation procedures.

## Results

### Interview outcomes

The participants were interviewed pre and mid point during the project having been presented with semi-structured questions. The participants were then asked to complete the questionnaires at the end of the pilot project privately on paper and return to the principle investigator for data collection. These questions included asking about their current roles and duties, involvement with the chosen activities, interest in doing them, expectations and apprehensions about involvement, how

---

<sup>4</sup> The ECP training course was developed by Ambulance for a proof of concept project in Metropolitan and Regional areas.

participation in the project may change their job role, potential community benefits and beliefs about service delivery and any change to multi-disciplinary teamwork approach.

### Pre-project interviews

The pre-project interviews demonstrated an overall willingness by both the Health Staff and the Ambulance paramedics to participate in the project at various levels as described above. Both parties believed the project would allow them to:

- work more closely as a team and build better working relationships
- increase benefits to the community and patients
- improve patient care and overall health service access and delivery
- learn new skills for the ambulance staff.

The major apprehensions included:

- losing control and being taken over by the other service
- a blurring of roles and duties
- understanding each other's protocols
- losing core business duties, especially ambulance.

### Mid-point interviews

The mid point interviews showed what was working successfully at each site and generally how the participants felt about their involvement to date with the project.

Ambulance paramedics engaged in the community work were especially pleased. They felt they were truly contributing to community health needs and were becoming seen within the community not just as an emergency service but as health-related support staff. Paramedics at some sites wanted to engage in more community related activities but felt they needed greater support and increased communication and organisation with the Community Health Nurses or other staff to be involved in more activities.

At one site, paramedics were regularly informed and updated by the Community Health Nurse to engage in wound care, medication checks, lymphoedema bandaging and welfare checks. This has greatly supported the Community Health Nurse with her workload and out of hour visits to peoples' homes. The involved paramedics stated their job had much more meaning by being regularly involved in these activities. It appears that the success of paramedic involvement in community health activities is dependent on 1) their desire to participate and 2) the community health staff willingness to incorporate them into the activities.

Within ED, there was some success in integrated activities, especially with IMEDS, 12 Lead ECG reporting, and overall support to the Registered Nurse's (RN's) in the ED. The use of IMEDS during inter-facility transfers enabled the RNs to remain within the health site and thus not have to be involved with direct transfers. This was greatly appreciated by the RNs as well as health site management.

There was some concern expressed by both parties that some ED sites have guidelines/protocols that restrict paramedic's ability to participate in the ED. This is especially so for providing pain medication. It is suggested that GSAHS management review its ED site guidelines and establish uniform procedures across all sites in order to enhance this project.

Both ED and community health activities engaged in by the paramedics had some clear benefits for them as well as the health staff. The paramedics felt more engaged with their communities as a whole and also felt they provided a better overall health service provision along with the health staff. The health staff believed that paramedic participation supported them with their high workloads and allowed for enhanced health service delivery in both the health sites and in community health.

Both health staff and paramedics participating in the project believed that it was improving communication, cooperation, teamwork, and was creating an overall improved working environment. But they were also concerned that the project needed additional support and progression in a variety of ways. These include improved support and direction from the management teams, as well as clearer guidelines and protocols from both organisations.

The major apprehensions stated by the participants in the first interview were largely dismissed, especially by those that engaged in the integrated activities under question. The real remaining concern was in understanding each other's protocols, and that was mainly in ED. The remaining three apprehensions were not described as an issue or problem by the participants during the 2nd interview.

### Final written responses

The final written questionnaire and survey outcomes were not yet completed at the time of this paper being submitted but responses to date demonstrated the following:

Again, it appears the best outcomes of the project for the paramedics were in delivering Community Health support services. By being regularly involved in community patient care via wound dressings, lymphoedema bandaging, medication administration and welfare checks the paramedics felt they were more involved in patient care, could identify changes in patient conditions and in general increased community awareness and knowledge of Ambulance Service NSW.

Ambulance paramedics still felt there were too many restrictions placed on them to fully participate in the overall project. These included 'red tape' and slowing down what they had hoped to participate in regularly through the project. Also, there were not enough protocols in place by Ambulance and GSAHS to guide the health and ambulance staff in knowing what they could fully participate in at a safe level. This includes both Emergency Department and Community Health activities. In ED examples included paramedics being allowed to administer drugs and what level of treatment they can perform when a GP is not present. In Community Health the paramedics were largely controlled by the willingness of the Community Health Nurse to participate and include the paramedics in the activities.

In general, the paramedics were disappointed in the lack of organised training and education they received to improve their health service skills, and the overall lack of support from the two organisations in monitoring, guiding and progressing the project activities.

Ambulance paramedics overall felt the project had some benefits to the community. These benefits included using IMEDS for transfers as it improved patient care and reduced the need for an RN to be in the ambulance and freeing that person to remain at the hospital site. They also felt it important in being able to assist hospital staff in patient care by acquiring additional skills outside of normal paramedic skills.

All of the paramedics said they would like to continue to be involved in the project but with better support and protocols to be established by the participating organisations.

The health staff were supportive of the project in its ability to develop new ideas and change how the ambulance service and health staff can more closely work together. Some of the health staff felt they

had formed better relationships with paramedics and there was a team culture developing with them as they shared some client workloads. They also felt the project was beneficial for the community in becoming more familiar with the paramedics outside of emergency care. The health staff also felt some work pressures on nursing staff were reduced with the additional support of the paramedics, especially in Community Health activities.

The health staff's greatest concerns were similar to the paramedics in expressing frustration over lack of training and having little input or knowledge into the project. They too would like to see improved coordination and support for activities from all layers of organisational management.

### Staff satisfaction survey

All participants in the project were asked to complete a staff satisfaction survey instrument at the beginning and at the end of the Pilot Project to obtain their reaction to a series of questions each using a six -point Likert scale (disagree very much, disagree moderately, disagree slightly, agree slightly, agree moderately and agree very much). The results were not yet finalised at the time of submitting this paper so could not yet be analysed.

## Discussion

The Ambulance Integration Project between Ambulance NSW and GSAHS has demonstrated some clear benefits for both services despite some ongoing constraints.

Both the ambulance paramedics and the health staff who participated in the Project developed some working partnerships and supported each other in providing aspects of improved health services to their local rural communities.

ED integration activities demonstrated overall improvement with IMEDS, 12 Lead ECG reporting, and overall support to the RN's in the ED. The use of IMEDS during inter-facility transfers enabled the RNs to remain within the health site leaving the direct transfers to the ambulance paramedics.

Community Health integration activities, although limited, showed how ambulance paramedics could be incorporated into home health visits including wound care, medication checks, lymphoedema bandaging and welfare checks. This could be expanded in other ways to incorporate falls prevention checks, pain management and other activities to support people at home.

The reluctance to participate from some ambulance paramedics and health staff at the beginning of Project was largely eliminated once they became involved in specific activities. Those participants unwilling to engage in certain activities (i.e. community health) remained sceptical despite hearing of the success and satisfaction from those who did participate. It appears that when staff are strongly supported and encouraged to participate in the Ambulance Integration Project, and once they are involved, their satisfaction by participating outweighs their prior concerns.

In order to progress further sites commencing the Ambulance Integration Project in rural NSW, several issues should be addressed. All sites need to establish specific goals and activities that meet the needs of their communities and fit within the interest and skill level of the participating paramedics and health staff. Local GPs need to be included in the decision making around chosen activities and appropriate protocols to be followed, be they in ED or Community Health.

In ED, consistent protocols need to be established across all sites so that ambulance paramedics fully understand what activities they are authorised to do while supporting the health staff. In Community

Health, communication links between the Community Health team leaders, nurses and ambulance paramedics needs to be established. There needs to be clear discussion about what activities the ambulance paramedics can do to support Community Health through home visits, and agreed upon activities for the ambulance paramedics to engage in with clients/patients in the community.

Training programs to upskill all participants needs to be clearly established and regularly delivered at all sites providing specific training for the activities in which they are involved. It is the role of management of both Ambulance Service of NSW and GSAHS to ensure all protocols and support mechanisms are established at all sites and that the various levels of management of each organisation remain regularly involved in and supportive of each site's activities.

## References

1. NSW Ministerial Advisory Committee on Health in Smaller Town, April 2000.
2. ORH Rural report (2002) *Operational Review*, Operational Research Ltd
3. *Australian Health Workforce, Productivity Commission Research Report* 22 December 2005.
4. *Taking Healthcare to the patient* Transforming NHS Ambulance Services, Department of Health, June 2005, UK.

## Presenter

**Bob Neumayer** is the Senior Service Planner for Greater Southern Area Health Service, NSW. He supports the Area Health Service in developing its strategic planning from a broad executive level to specific site planning with area health service managers. Prior to this position, Bob was the Head of School of Community Health at Charles Sturt University.