

Moe After Hours Medical Service: 'pillars' of success

PETER O'MEARA AND ROGER STRASSER

Peter O'Meara is a Lecturer, and Roger Strasser is Professor of Rural Health and Head of School at Monash University School of Rural Health.

Abstract

This study aimed to identify and explore the factors that are crucial to the successful operation of rural after-hours medical services. It sought to determine the attributes that contribute toward the successful operation of after-hours medical services in rural towns.

It drew on computer-assisted telephone interviews with stakeholders, and operational, demographic and financial data. The findings were brought together and analysed within an integrated framework for the guidance of policy makers.

In a rural setting, the most important factors for a successful after-hours medical service are related to, 'place', 'process', 'people' and 'time'. These need to be integrated through effective management of relationships.

A rural after-hours medical service model

The Moe After Hours Medical Service (MAHMS) is located in the rural town of Moe in the Latrobe Valley, Gippsland, Victoria on a shared site with the Latrobe Community Health Service (LCHS), Rural Ambulance Victoria and the Central West Gippsland Division of General Practice. Since August 1998 it has provided after-hours medical care for ambulant patients from the Moe area.

The introduction of this model and the associated closure of the local hospital have required significant changes in attitudes and expectations of health service providers and the community. A feature of the model has been the collaboration between the community health service, the Division of General Practice and the Victorian Department of Human Services.

General practitioners in Moe have made themselves available to provide medical services on a roster organised through the Division. LCHS is responsible for the management and staffing of the Service, while the Department of Human Services underwrites the cost of providing reception and nursing staff, and the necessary infrastructure. The aim of MAHMS is to provide clients with high quality professional after-hours medical service that is responsive to their changing needs and acts in partnership with other service providers.

Monash University School of Rural Health was involved in the initial feasibility study that established MAHMS in 1998 and has maintained a monitoring and evaluation role during the three years of operation (O'Meara et al 1998). The Latrobe Community Health Service commissioned the School of Rural Health to:

- identify the factors that make the Moe After Hours Medical Service successful
- determine the common attributes that contribute toward the successful operation of after-hours medical services in rural towns.

The outcomes of this research will contribute to the future sustainability of the MAHMS model and have the potential to assist other rural communities considering the establishment of similar services to meet their own after-hours medical service needs.

Methods

The research drew on a client survey, MAHMS operational and financial data, population projections for the Latrobe Valley, and the use of soft systems methodology to answer the research questions. The findings are brought together in the discussion under a framework developed by the Emergency Demand Co-ordination Group of the Victorian Government Department of Human Services (EDCG 2001).

Client survey

Computer Assisted Telephone Interviews (CATI) of clients were conducted during early June 2001. The clients interviewed were from a list of 200 who had agreed to participate. They had been drawn from two months of clients who were over 18 years of age and residents of the immediate catchment area. The Monash University Standing Committee on Ethics in Research Involving Humans granted approval for the CATI on 20 February 2001.

The selected clients were contacted in the afternoon or early evening over a two-week period. The questions consisted of two open questions and one question where ten factors were rated on a five-point scale. The open questions were as follows.

- In your experience, what is the best part of the Moe After Hours Medical Service?
- Do you wish to say anything else about the Moe After Hours Medical Service?

The respondents were asked to rate the ten factors listed in Table 1 related to why they utilised MAHMS on a five-point scale from 'not important' to 'very important'.

Table 1: Factors rated in survey of MAHMS clients

• Location	• Medical care
• Friendly staff	• Cost
• Hours of operation	• Buildings
• Waiting time	• Range of equipment
• Nursing care	• Lack of transport to hospital

Operational management data

Latrobe Community Health Service provided data related to MAHMS, such as the number of clients seen, their medical problems, and the financial inputs into the system. Latrobe Regional Hospital, located near Traralgon, provided Emergency Department data on the number and residential postcode of ambulant patients. Latrobe City provided population projections for each of the main population centres in the Latrobe Valley.

These data were combined to calculate unit costs and utilisation rates for MAHMS. They also provided sufficient information to make a judgement about the relative impact of MAHMS on the ambulant patient throughput of the Latrobe Regional Hospital. Additional data were also gained from discussions with general practitioners and the staff of MAHMS, LCHS and the Division of General Practice.

Soft systems methodology

The operation of the MAHMS model was disassembled using soft systems methodology, a pluralist approach that 'bounces' different perspectives back-and-forth (Checkland 1999). The model was also explored through the drawing of 'rich pictures' to illustrate the relationships between the stakeholders, the contextual environment and the activities being undertaken.

The findings were brought together and analysed within the Emergency Demand Co-ordination Group framework (EDCG 2001). It was used to describe the ingredients for the successful operation of an after-hours medical service in a rural setting.

Findings

Client survey

A total of 121 clients participated in the CATI survey. The participation rate for the survey was 78 percent of those contacted and 60 percent of the total sample. For those declining the opportunity to take part, the main reason was inconvenience.

The first question asked respondents to identify in their own words the best part of MAHMS. These were then clustered into the common areas of 'place', 'process of care', 'people providing the service', and 'time factors'. The results indicated that all four were of equal importance to respondents (Table 2).

Table 2: Client perspective - best part of MAHMS

Category	Frequency	Percent
No Answer	6	5.0
Place	28	23.1
Process of care	26	21.5
People providing care	28	23.1
Time factors	33	27.3

The respondents were asked to rate the importance of ten previously identified local factors. The results are reported in Table 3. Location, friendly staff and the clinical care provided appeared to be the most important factors for clients with well over half the respondents rating each of these factors as 'very important'. While important to many of the respondents, the hours of operation, waiting times, equipment and buildings produced less definite views.

The issue of cost was rated as unimportant for 76.9 percent of the clients who participated in the survey. No 'out-of-pocket' expense to clients may have contributed to this lack of concern about cost and has been the major reason for this result. The issue of poor access to transport in the Moe district for clients wishing to attend Latrobe Regional Hospital produced a bipolar result, with respondent opinions clustered at each end of the scale with 33.1 percent rating the issues as 'unimportant' and 44.6 percent rating them as 'very important'.

Table 3: Importance of issues (percent)

Rating of importance	1	2	3	4	5
Location	0	0	4.1	11.6	84.3
Friendly staff	0.8	1.7	13.2	19.8	64.5
Hours of operation	2.5	5.0	28.9	30.6	33.1
Waiting time	12.4	12.4	24.8	19.8	30.6
Nursing care	0	0	6.6	21.5	71.9
Medical care	0.8	0	2.5	15.7	81.0
Cost	76.9	7.4	5.0	2.5	14.9
Buildings	34.7	20.7	20.7	14.9	9.1
Range of equipment	10.7	9.1	29.8	23.1	27.3
Lack of transport	33.1	8.3	6.6	7.4	44.6

The second open question asked respondents if they had any other comments about MAHMS. In total, 75 (62 percent) took the opportunity to make further comments. Most of the comments were of a positive nature, making suggestions about how to enhance service delivery.

"The service I received was great, so I couldn't see any reason to change it now."

"The service there is top notch and shouldn't be changed."

Almost a third of respondents suggested an extension of opening hours, from a modest increase on weekends to the establishment of a 24-hour medical service. This is consistent with growing expectations of consumers in developed countries for ready, cheap and quality services. It contrasts with the decreasing ability and desire of providers to work the necessary hours to provide that service (Pegram 2001).

Almost a third of respondents made positive comments about the location and facilities of the service. On the other hand, a small number suggested that the waiting room was too small.

"There were a few people in the waiting room when I was there and I thought it was a bit too small."

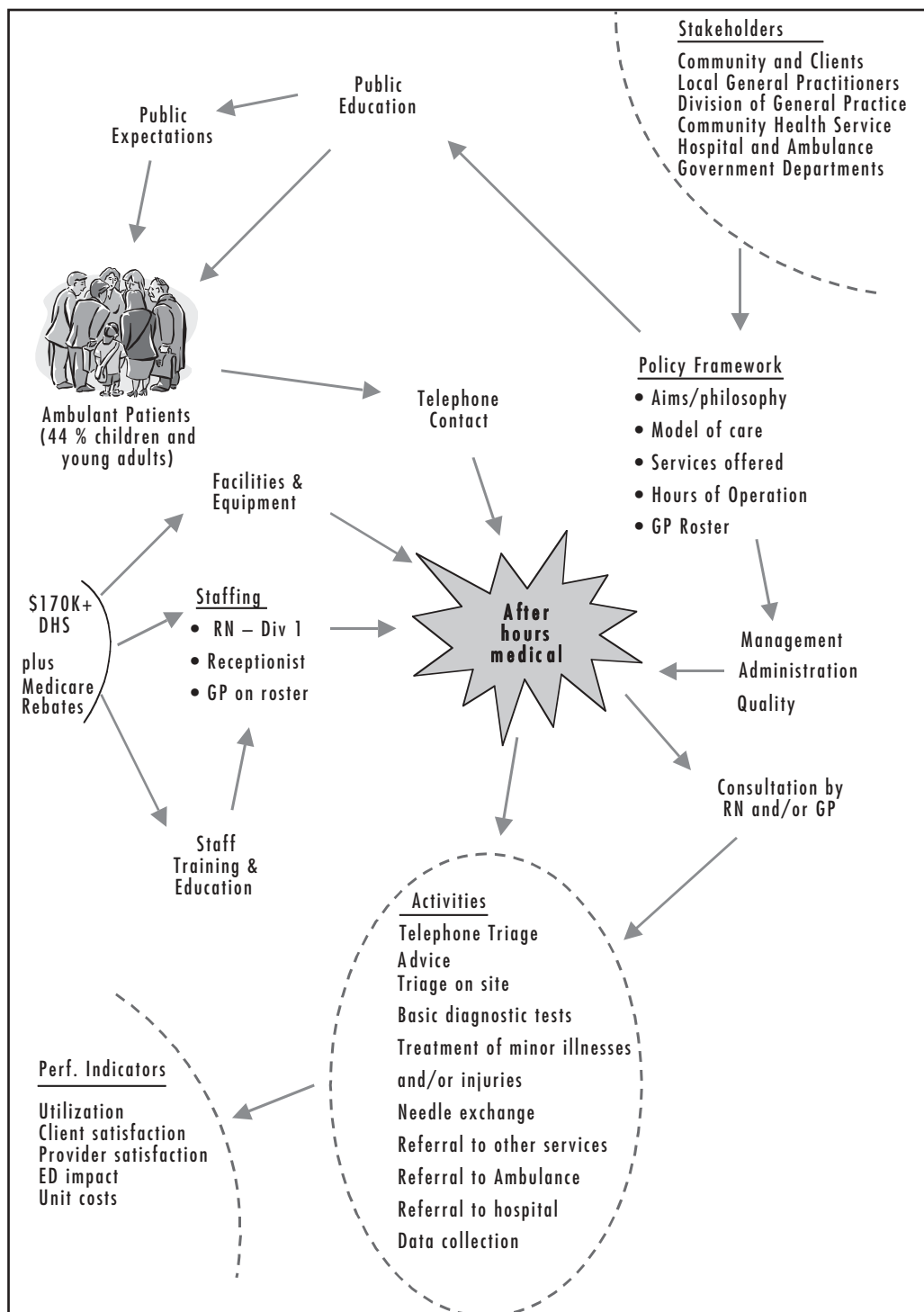
Apart from the perceived problem with the size of the waiting room and the limited opening hours, the other negative comments related to waiting times when the doctors were not present and the triage of patients. One person summed up the respondent views in brief:

"It would be good if the service opened as soon as the other clinics closed. It's easier to go to MAHMS than to Traralgon [20 kilometres distant] for minor problems, it saves travelling and waiting time. I have been to MAHMS once and the doctor had already left, so it would be better if the doctor stayed from when it first opens till the end."

Description of MAHMS model

The second stage of the study produced a critical description of the MAHMS model in terms of: its aims and service philosophy; services provided; the population served; providers of service; management; funding requirements and resources; and constraints and limitations. Figure 1 provides an overview of the model using 'rich pictures'.

Figure 1: 'Rich Picture' of MAHMS Model



Aims and service philosophy

The MAHMS model aims to provide after-hours primary health care to ambulant patients as a 'safety-net' service for clinical problems that are not of an emergency nature. It complements existing GP and hospital services and as a 'public good', patients are not expected to pay any out-of-pocket expense.

Services provided

After-hours primary health care services are provided to ambulatory patients in the evenings, public holidays and on weekends. The hours of service are:

Weekdays 7.30pm to 10.30pm

Saturdays 4.30pm to 10.30pm

Sundays and Public Holidays 2.30pm to 10.30pm

MAHMS is not an emergency service, but is capable of providing limited emergency care and basic life support if required. Clients are encouraged to make telephone contact before attending in person. This facilitates a limited form of triage where clients are assessed to determine whether they would benefit from the services offered at MAHMS.

Population served

The population served is a stable population of 20,717 with little prospect of growth for the next twenty years. The most frequent users of MAHMS are the residents of the Moe area who constituted 89.1 percent of the 4,889 client contacts in the year 2000/2001 (Table 4).

Table 4: Residence of MAHMS Clients (percentage)

Location of residence	Contacts	Clients
Moe/Newborough	89.1 %	87.8 %
Remainder of Latrobe Valley	5.6 %	8.3 %
Other places	5.3 %	3.9 %

The utilisation rate for Moe residents was 210.3 contacts per 1,000 population, which is within the expected range of 150 and 300 services per 1,000 patients per year (Pegram 2001). On average, the service sees 2.4 clients per hour of operation. The combined utilisation rate for MAHMS and the emergency department of Latrobe Regional Hospital (LRH) at 530 contacts per 1,000 population is comparable to the other towns in the Latrobe Valley using the emergency department alone (Table 5).

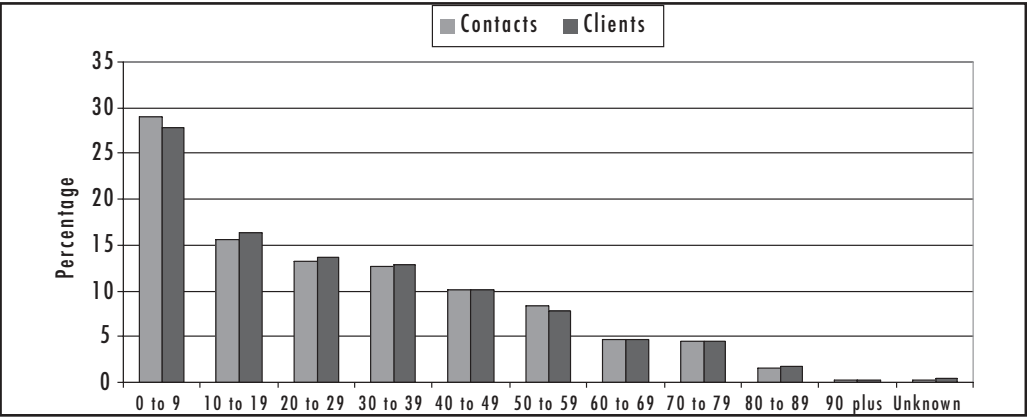
Table 5: Combined MAHMS and LRH Emergency Dept. ambulant contacts by postcode

Age Range	Moe (MAHMS)	Moe (LRH)	All Moe	Morwell (LRH)	Traralgon (LRH)	Total
0 to 9	1258	1313	2571	2308	3552	8431
10 to 19	682	991	1673	1471	2607	5751
20 to 29	581	1062	1643	1583	2592	5818
30 to 39	552	906	1458	1452	1910	4820
40 to 49	446	681	1127	994	1375	3496
50 to 59	360	509	869	623	851	2343
60 to 69	200	389	589	457	514	1560
70 to 79	190	476	666	489	543	1698
80 to 89	70	258	328	229	452	1009
90 plus	7	35	42	43	71	156
Unknown	11	N/A	11	N/A	N/A	11
Total Presentations	4356	6620	10976	9649	14467	35092
Monthly Average	363	552	915	804	1206	2924
Population			20717	17282	24625	62624
Utilization Rate/1000	210	320	530	558	587	560

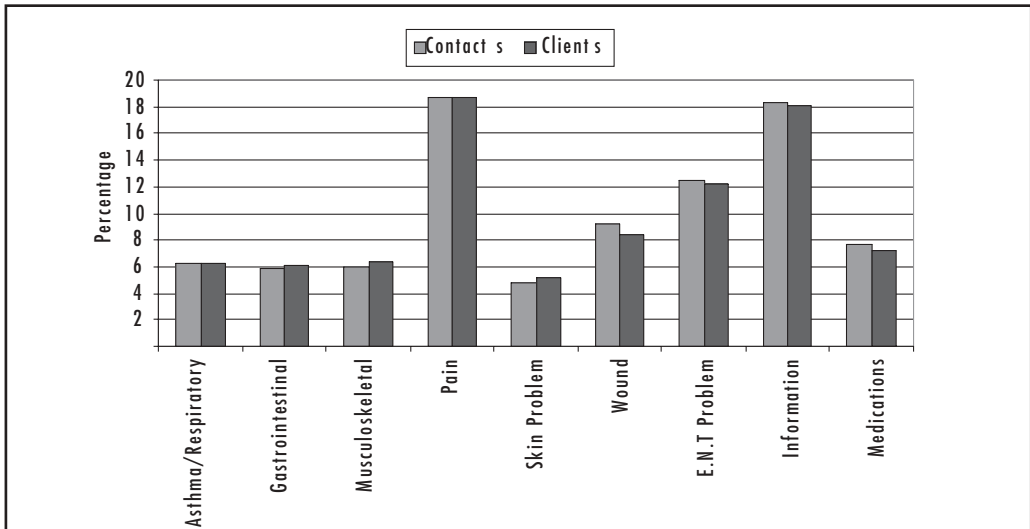
Notes. MAHMS figures exclude clients from outside the Moe postcode area. MAHMS sees over 100 clients per year from Morwell and Traralgon combined.

The major users of MAHMS are the young, with those aged up to 19 years comprising 44.5 percent of all contacts and 44.2 percent of all clients (Figure 2). This age group comprises 24.8 percent of the Moe population.

Figure 2: Age of MAHMS Users



The reasons for attendance varied, with the most prevalent problems or needs relating to pain relief, the provision of information and advice, and ENT problems. These and other common problems are summarised in Figure 3.

Figure 3: Main reasons for presentation at MAHMS

Providers of service

The service uses a multi-disciplinary model of care, consisting of nursing and reception staff employed through LCHS and rostered GPs from local group general practices. The nurses are experienced emergency department nurses.

The GP roster is organised through the Division of General Practice on the basis of each practice taking an equitable share of the roster slots. Allowance is made for those GPs who undertake 'obstetrics on-call' responsibilities. The GP roster is sometimes hard to fill because GPs lack the confidence to deal with emergencies and their commitments to the obstetrics roster.

Management

Management of the after-hours service is the responsibility of Latrobe Community Health Service. Other stakeholders are represented on an advisory committee that meets on a regular basis. LCHS takes responsibility for staff education and training, the implementation and accreditation of quality systems, along with liaison between the partners and other stakeholders.

Funding requirements and sources

The Department of Human Services provided capital funding for purpose built facilities in Moe. In 2000/2001 the total recurrent funding for the after-hours service operating for 29 hours per week was \$176,015. The major costs are for nursing and reception staff (74.3 %).

The Department of Human Services initially funded the service as a three-year trial and have recently approved continued funding. MAHMS will remain dependent on this funding for its continued operation. Cost recovery from patients through gap payments is not viable, nor acceptable to LCHS. General practitioners are paid through Medicare. The unit cost for each contact was \$36.00, plus the \$22.95 Medicare rebate to general practitioners. This compares favourably with the estimated cost of \$65.67 per patient for the treatment of ambulatory patients in the emergency departments of public hospitals (Bolton & Thompson 2001).

Constraints and limitations

The ability to operate this model is highly reliant on the ability and willingness of the majority of local GPs to participate on the roster. Goodwill and teamwork amongst GPs, the MAHMS staff and the managing organisations are vital for the model to operate successfully.

Managing the relationships between the formal organisational structures of management and the culture of general practice is very challenging and should not be under-estimated (Swenissen et al 2001). Using a 'rich picture' in Figure 1 to describe MAHMS recognises the difficulty of placing this type of service into neat boxes or organisational charts. The flexible approach taken at LCHS and the involvement of the Division of General Practice is a positive feature of the MAHMS model.

Discussion

The key characteristics that have made the Moe After Hours Medical Service successful are its stable management and sense of direction, with appropriate staff and resources in place, and the existence of strong relationships between the managers of the service, local general practitioners and other stakeholders. These results are similar to the success factors identified in a study of a long-standing after-hours GP co-operative in Queensland (Veitch et al 1999).

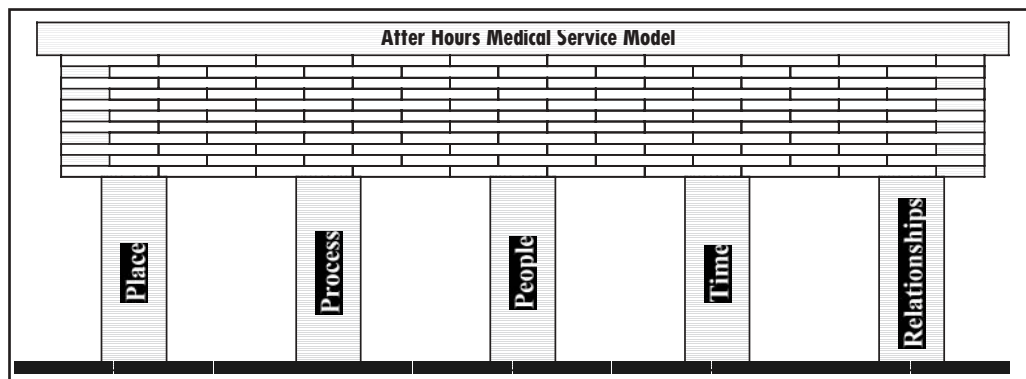
The client responses in the CATI survey consistently supported the notion that four factors – 'place', 'process', 'people' and 'time' – were of overwhelming importance to them. Other data and observations identified the management of relationships as a crucial factor in the operation of an after-hours medical service.

These success factors are not unique to after-hours medical services. They are shared with emergency medical services, where similar conceptual devices have been articulated (EDCG 2001). The most important factors for a successful after-hours medical service are:

- place of service delivery
- process of service delivery
- people delivering the service
- times service is available
- relationships between stakeholders.

These factors can be described as the pillars of success and they are illustrated in Figure 4. It is highly likely that these pillars of an after-hours medical service are transferable to other rural communities that share similar contextual settings to Moe. They can assist other rural communities considering the establishment of similar services to meet their own after-hours medical needs. The contrasting experience in Canterbury highlights the importance of putting in place, consultation and planning processes that engage local stakeholders from the earliest possible stage of development (Bolton & Thompson 2001).

Figure 4: pillars of success



MAHMS has been successful because the stakeholders have generally addressed these ingredients or pillars of success. The service is well accepted within the community, has satisfied clients and has reduced the workload of Latrobe Regional Hospital Emergency Department. In the broader sense, it is an economical service delivery

model well suited to its setting. The model is substantially more economical than having ambulant patients present at emergency departments.

The successful operation of MAHMS shows that a population of the size and character of Moe can support a limited after-hours medical service. A smaller population would have difficulty replicating this. A larger and more concentrated population base may lend itself to a model that is less dependent on government funding. Other centres of this type could be considered in rural areas with a greater emphasis on telephone triage, and nursing assessment and care. However, it is clear that they would have difficulty maintaining medical personnel without the active support of local GPs.

Five pillars of a rural after-hours medical service need to be in place. It needs to be located in the right place, the processes of service delivery must be clear, the providers must be appropriately skilled and motivated; the hours of service must meet the needs of clients and providers; and the relationships between all stakeholders must be managed in a co-operative and professional manner.

Without attention to these factors, an after-hours medical service is unlikely to meet the needs of clients, providers or the overall health system. The Moe After Hours Service has been successful because of its ability to incorporate these factors into its operation. For its continuing success, these pillars of success need to be constantly strengthened and enhanced in response to the needs and aspirations of its clients, providers, and the wider health care system.

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