

Matching needs to services: The quick response

Case study: St George Hospital and Community Health Services Best Practice Project

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Abstract

A Quick Response Program (QRP) was developed and implemented at St George Hospital during 1995 and 1996. The program sought to improve the service provided to elderly people presenting to the emergency department by offering a new rapid response service pathway to community-based care. Emergency department discharge planning and crisis intervention evolved as important QRP functions during the program's life. Evaluation findings indicated that QRP penetration into the elderly sub-acute emergency department patient population was high, and that hospital admissions were avoided without affecting emergency department process times. Health outcomes were not compromised by the program, and patient and general practitioner satisfaction were high. The program grappled with the inherent conflict of interest between the aims of the hospital (acute care services) and those of the community service (support and maintenance). The program sought to bridge the gap between these service parameters in the name of meeting patient needs.

Introduction

By the year 2001 the proportion of Australians aged 75 and over will increase to more than 5 per cent.

Although many older people remain in relatively good health until the last year or two before death, they use considerably more health care resources and occupy a disproportionate number of acute care hospital beds, as they are four times more likely to be hospitalised.

Given the heightened pressures for careful use of scarce resources, it is imperative that health care providers ensure that services are appropriate to the needs of the elderly. Important elements in such assurances are the adequacy, relevance and effectiveness of structures and processes which confront older patients at the entry points to acute care hospitals. Underlying these features is the concept of equity in terms of accessibility and continuity of care.

Emergency departments can expect to handle an increasing number of elderly patients. They are the most visible service available to the community 24 hours a day, seven days a week. The emergency department has become a focal point for 'sorting out' the health problems of the elderly. It is the place where there is easier access to multiple medical specialties and diagnostic procedures.

But with this reliance comes some risks, particularly for the aged. Iatrogenic risks with adverse drug reactions and hospital-acquired infection, as well as loss of independence and disruption to social and support networks, make the decision to admit elderly patients problematic.

There have been a number of investigations trialling alternatives to hospitalisation such as Hospital in the Home and Early Discharge Programs.

This best practice project explored the experiences of elderly persons presenting to the St George Hospital emergency department and provided an alternative care pathway of immediate, short-term intensive home support.

The key objectives were to:

- determine whether the hospital admission of some older patients was avoidable
- establish an optimal follow-up care protocol for elderly patients presenting to and discharged from the emergency department.

The rationale was to determine whether a program of accelerated emergency department assessment followed by a sustained but brief period of home support was achievable without jeopardising patient outcome.

The program was a partnership between the emergency department, hospital allied health services, community health nurses and general practitioners.

The program incorporated many of the best practice principles. It facilitated the integration of acute and primary community health services and promoted collaboration between a number of inpatient and community service strands. It contributed to workforce reform by expanding the role of the community health nurse and it developed new workplace relationships between community health nurses, emergency department staff, allied health professionals and general practitioners.

The program also emphasised process, with a commitment to continuous improvement and learning, as well as outcome, and its focus was on the needs of the customer – matching the health care needs of older people with services.

Fundamental to the program was the belief that the emerging model of care for the elderly had to be clinician-driven and patient-focused.

Background

The St George Hospital and Community Health Services is situated in the southern suburbs of Sydney in the South Eastern Sydney Area Health Service.

The hospital has over 600 beds and is a teaching hospital. The Community Health Service provides comprehensive centre- and home-based health services to the residents of the Kogarah, Rockdale and Hurstville areas. The hospital draws its patients predominantly from the local district of 200 000 residents, which has a higher than average proportion of aged residents when compared to all of New South Wales.

The St George Hospital has undergone major site redevelopment in recent years – construction of a nine-level, 400-bed ward tower block; renovation of the 200-bed 1972 ward block; rebuilding of the emergency department; construction of a clinical services building and a new cancer care centre.

Clinical services at St George also underwent substantial redevelopment. The Clinical Services Strategic Plan created in 1992 promoted development of a model teaching hospital culture.

Amid this the St George Hospital and Community Health Services embarked on a process of best practice, introducing customer charters, workplace charters, total quality management projects, development of critical pathways and use of critical indicators. In recent years, St George has been a participant in the

National Demonstration Hospitals Program as well as receiving funding for the Hospital Access Program and the Discharge Improvement Program.

The St George Hospital and Community Health Services has a management structure of seven clinical divisions. The Division of Continuing and Community Services encompasses both inpatient and community service provision. It includes inpatient rehabilitation and aged care wards, the hospital allied health departments and the community health services with community health nurses. A primary benefit resulting from this 'boundary spanning' organisational framework has been the development of cooperative relationships between community health services and inpatient services at St George. This enhances the potential for ensuring continuity of care. The Division of Continuing and Community Services was in the position to support this program administratively.

The St George Hospital Quick Response Program (QRP) was adapted from Canadian Quick Response Team/Program models. It used the existing community health nursing service and hospital allied health services to provide a coordinated mobile rapid response to the older person's needs.

Best practice project design

The best practice project was designed with three key components: the QRP; expanded general practitioner/community nurse relationship; and an extended hours community health nursing service.

The QRP provided a new service pathway for elderly patients referred by emergency department medical staff and general practitioners. It targeted those patients with an acute medical problem where hospital admission could be avoided by providing prompt intensive nursing and allied health care in the patient's home.

A second group targeted were those requiring prompt access to community services on discharge from the emergency department. This group also included those who were to be admitted, but because of access block (no beds in the wards) were unable to be transferred. These patients remained in the emergency department receiving treatment and were able to be discharged before a bed on the ward was available.

The expanded general practitioner/community health nurse relationship component was concerned with upgrading the relationship between general practitioners and community health nurses. The development of a case management relationship between these two groups complemented the

functioning of the QRP. General practitioners had access to a 'quick responding' community care option, and could liaise and co-manage their patients' progress.

This element necessitated streamlining the communication links between general practitioners and community health nurses. Traditionally, the nurses were not contactable until they went back to the centre to pick up supplies, messages, and so on. This would often be inconvenient for the general practitioner. The introduction of mobile phones for the community health nurses allowed effective access and immediate resolutions. An underlying motivation in improving communication between general practitioners and community health nurses was to demonstrate to both parties the advantages of shared management of suitable patients. It was hoped that the QRP experience would foster such insight.

Extending the availability of community health nursing services from 8.00am to 10.00pm, seven days a week, was necessary to operate the QRP. An extended hours service allowed nurses to provide a wider range of services to patients, for example, treatment of unstable diabetes, palliative care, chemotherapy and wound care, and be able to offer two to three visits daily. The extended range of services and availability helped to market community health nurses to general practitioners.

Project management

The project was overseen by a management committee consisting of representatives from unions, staff (clinical and management) and key stakeholders. Four project teams developed the various aspects of the project. These were as follows.

- *The QRP operation project team:* key tasks were to develop eligibility criteria, an assessment tool, service delivery protocols and a community information package.
- *The skills/practice and education project team:* key tasks were to identify QRP-specific education needs of community health nurses and allied health staff, and develop appropriate education programs to meet identified needs.
- *The general practitioner and community nursing liaison project team:* key tasks were to establish a marketing plan, develop general practitioner/community health nursing liaison protocols and QRP bulletins for dissemination to local general practitioners.

- *The evaluation and research project team:* key tasks were to establish evaluation methodology, oversee data collection/analysis and report generation.

Quick Response Program in operation

A QRP liaison nurse (a community health nurse with gerontological training) was based in the emergency department from 8.30am to 7.00pm, seven days per week, and had the role of:

- identifying potential candidates by using the Emergency Department Information System and actively liaising with emergency department staff (nursing, medical and social work)
- determining eligibility of the patients for the program by using the established criteria
- assessing the patient with the multi-dimensional assessment tool
- liaising with emergency department staff and patient general practitioners regarding care/treatment plans
- developing care/treatment plans in collaboration with QRP service providers
- notifying the QRP service providers and other community support services of the initial care/treatment plan, which these services further develop in a person's home
- advocating for the best outcome (whether that be admission or discharge) for older people presenting to the emergency department.

Importantly, the QRP arranged to transport the patient home and provided intensive short-term community health nursing and allied health services within a few hours of the patient leaving the emergency department or following referral from their general practitioner.

QRP services continued for a maximum of five days, at which time a decision was made by the case coordinator (usually a community health nurse), in consultation with the patient's general practitioner, whether to continue with the QRP for a few more days, discharge to self-care or to regular community health/support services, or consider other options (admission to hospital, respite care, nursing home placement).

During the last six months of the program, general practitioners were encouraged to use the QRP directly for patients who would benefit from quick access to

home-based services, so as to prevent a hospital admission. By contacting the QRP liaison nurse, an assessment in the community (the patient did not need to present to the emergency department) was promptly organised to ascertain if the QRP could meet the patient's needs.

Implementation

During the early stages of the best practice project (prior to program commencement), project staff devoted considerable energy to selling the QRP concept. Most clinicians were initially unenthused by the program as the target group for QRP services was difficult to define in advance. The Canadian literature provided some clues, however, the Australian health service system has some fundamental structural differences. Our challenge was to adopt the Canadian model for use in our health service environment. This required implementing a flexible model, monitoring its reception (by the emergency department staff, community staff and patients) and developing processes which worked for all players.

Emergency department medical staff were initially dubious and the program needed to develop clinical credibility. This took up to two months. Once credibility was established, the program was quickly embraced by all clinicians based in the emergency department.

The QRP liaison nurses then went on to develop an invaluable role in the emergency department as aged care nursing consultants. QRP assessment provided emergency department medical decision-makers with additional information regarding patient function and home situation/circumstances (often unavailable pre-QRP, because of time or skill-based restraints). Consultancy alone was not enough to provide real help to emergency department medical decision-makers. Rapid access to services, after hours and seven days per week, provided emergency department clinicians with a new referral pathway for elderly patients presenting to them. In this sense, the central tenet of the program – matching need with service – was demonstrated to the emergency department.

Emergency department nursing and social work staff remained highly enthusiastic about the value of the QRP. They were particularly welcoming of the presence of aged care management, discharge planning and crisis intervention expertise in the emergency department.

At the community service provision end of the project, community health nurses initially experienced difficulty in clarifying the level/intensity of services required for this 'new' group of patients. Confident case management was identified by

QRP liaison nurses as vital to achieving good patient outcomes. A number of community health nurses were relatively unfamiliar with assessing and case managing elderly people immediately following a medical or traumatic crisis. It became apparent that the community health nurses' aged care assessment skills needed to be strengthened, so education strategies were implemented.

Community health nurses initially had problems in adjusting caseloads to accommodate the quick response assured in the emergency department. The first QRP patient visit often required a lengthy assessment and 'sorting out' process and the QRP community health nurse needed to be able to reduce his or her caseload at short notice. The importance of providing relief back-up to community health nurses responsible for the QRP was quickly identified and implemented.

Initial frustrations experienced by the community aged care and rehabilitation service in working with the QRP were substantially allayed by installing the service's patient database in the emergency department. Timely contact was then initiated by the QRP to relevant case managers when a patient known to the service was being considered for QRP intervention. QRP involvement amongst elderly presenting to the emergency department generated activity for the community aged and rehabilitation service – a prompt response was sought from them for 6 per cent of QRP patients.

Allied health services were contracted from hospital-based physiotherapists, occupational therapists and social workers. Urgent cases were seen in the emergency department before being transported home, and visited at home where necessary. Non-urgent cases were referred to the regular community allied health services for ongoing treatment. At times, allied health staff experienced difficulty in making a quick response without adjusting existing caseloads. The skills/practice project team promoted considerable discussion regarding role boundaries between allied health staff and community health nurses. As the community health nurses were the core service providers, protocols were developed regarding allied health input.

Local general practitioners were represented on most project teams. The response to the QRP among general practitioners was relatively good. Many were pleased with the program's ability to monitor or support their frail elderly patients post-crisis, and saw considerable scope for its development. When contacted by the QRP, most were prepared to make home visits following their patients' emergency department discharge. A minority were unhappy with the 'nature' of the program. This group often saw the QRP as interference, and expressed a preference for continuing to manage their patients on their own.

The QRP utilised a full spectrum of community health and support services available to the district. Many links were made with public and privately funded agencies, as well as local council services.

Because the QRP model relied heavily on the use of existing services, there was little service duplication generated by the program. Where patients were already connected with an existing service (such as a community aged care package), the QRP sought to negotiate on the patient's behalf regarding level of service provision required, as the patient may have needed a short-term increase in service intensity. If existing services could meet patient need, ongoing QRP services were not implemented. Many patients, however, required an amalgam of QRP and other services.

After the QRP had become well known to community agencies, they would often contact the liaison nurse and flag patients who would be presenting to the emergency department that day.

The QRP functioned as a conduit between the emergency department and community services, and as a bridge between the patient and the system, advocating for the best option for the patient. This may have been admission or discharge with or without service. This broad approach strengthened the program's credibility in the emergency department and in the community. The success of the QRP was then recognised as not simply keeping patients at home but matching need and service – getting it right for the patient.

Evaluation

During the 12 months of program operation, a database was maintained and information regarding its activity and patient details were collected.

The main methods used to evaluate the program included a retrospective cohort study conducted using Emergency Department Information System patient records; an outcome study; a carer interview survey and action research.

The first phase of the cohort study entailed examining the characteristics of QRP patients in relation to the characteristics of all elderly patients who presented to the emergency department (in sub-acute triage categories).

Multiple logistic regression was employed to assess associations between a range of patient characteristics and admission to the QRP in a large sample of elderly patients who presented to the emergency department during the QRP period (June 1995 to May 1996). A model predictive of QRP admission resulted from this analysis.

The predictive model was then used to build an historical sample group (that is, patients who presented the previous year who were similar to those who received treatment under the QRP) for comparison with a sample group of patients who received treatment under the QRP. The historical sample group was built by matching four historical 'controls' for each QRP patient on five variables identified as significantly predictive of admission to the QRP. Hospital admission rate was derived for the comparison group and emergency department process times were compared between the QRP and comparison group.

The outcome study relied on surveys and structured interviews to gauge opinion, perception and satisfaction among patients. Sixty consecutive QRP patients were followed up at 60 days with interviews. Fifty-six (93 per cent) of their corresponding general practitioners agreed to be interviewed. A clinical record audit was conducted for each enrolled patient.

This study design allowed a three-pronged approach to understanding patient outcomes among a representative sample of QRP patients.

The carer interview survey approached carers, spouses or relatives of the 60 patients for interviews regarding the impact of the QRP intervention on their lives. Thirty-eight (63 per cent) carers agreed to be included.

The action research entailed clinicians being involved in reflective individual and group discussion sessions throughout the program's life. Program components were implemented, then reviewed and evaluated, and findings fed back to clinicians. Program implementation was guided by the results of the inquiry process.

The action research approach was principally used with community health nurses (the group most affected by QRP introduction). Discussion/reflection sessions were also held with emergency department clinical staff and community aged care staff, and the results of these were also used in program implementation. This incorporation of results into the implementation process formed the continuous feedback loops required for action research.

The methodology made more visible the workload and work practice issues raised by the QRP and provided us with insight into the unfolding of the change process. In this sense, the approach allowed us to support, guide and investigate the changes in practice implicit in introducing QRP services in the St George district.

Results

The QRP patient population is very elderly (80 per cent aged above or equal to 75 years) and predominantly female. More than half of QRP patients lived alone.

Falls (resulting in fractures or other injuries) represented the most prominent presenting problem (33 per cent). A wide range of medical problems accounted for 62 per cent of presenting problems. Two-thirds of the QRP patient population had not presented to hospital in the three months before their emergency department presentation.

Most QRP patients presented to the emergency department in crisis, having arrived by ambulance.

From the data collected, it was found that one-third of those on the QRP are likely to have avoided admission to the ward. Emergency department waiting time and length of stay were not affected by the QRP, despite the sorting out time being slightly increased. Likely bed-day costs saved from this, minus the cost of QRP presence in emergency department and the community service provision costs, proved that QRP intervention is cost-efficient and could realise a saving to the hospital if beds were closed equal to the bed-days saved.

The results also indicated that the greatest predictors of those patients requiring treatment under the QRP were increasing age, arrival by ambulance, and a major diagnostic category (MDC) of injury or respiratory, circulatory, digestive, urological or musculoskeletal illness.

Of presenting problems targeted by QRP intervention, 70 per cent were resolved/improved within 60 days. Problems which had a high resolution were cardiac problems, fractures and acute medical conditions. Low resolution was usually for those with a chronic medical condition or those with underlying problems which caused the presentation to the emergency department.

The 'packed suitcase' syndrome was not found – only 24 per cent of patients expected hospital admission upon emergency department attendance and only 5 per cent of QRP patients presented to the emergency department with coping problems.

Around two-thirds of QRP patients were not receiving community services at the time of their involvement in the program. After QRP involvement, around two-thirds were discharged from the program to regular community health or support services.

Of patients who were readmitted to hospital, at 60 days post QRP, a very small number (3 per cent of total sample) were rated as delayed admissions.

Satisfaction with the QRP service was high, with 85 per cent of patients content with the service. There was no difference in satisfaction between patients who expected admission and those who did not. The satisfaction of general practitioners with the QRP concept was also positive (79 per cent), and with arrangements made for their QRP patients (71 per cent). Communication and liaison also rated highly among general practitioners and, overall, general practitioner satisfaction did not differ in relation to intensity of their involvement with patients. Overall, 66 per cent of carers were satisfied with the program.

Clearly, the QRP has affected the burden borne by carers or spouses, who have experienced increases in patient-related activity. However, there was no evidence that the QRP had over-burdened carers or left the patient in a more vulnerable state.

Conclusion

The QRP began operation with a principal brief to seek to turn around avoidable hospital admissions among elderly presenting to the emergency department by offering a new rapid response service pathway to community-based care.

Early in the program's life it was recognised that this was a narrow brief. In seeking to improve the service provided to elderly people in the emergency department, the program evolved to incorporate discharge planning and crisis intervention for non-admitted patients as important QRP functions.

The QRP demonstrated that a significant proportion of elderly patients presenting to and discharged from St George Hospital's emergency department required assistance – discharge planning, community health, and support services. The program did prevent ward admissions for a select group of older attendees through the provision of a cost-efficient, rapidly deployed community health service.

It is unlikely that QRP services could be provided by emergency department clinicians. Their roles are not amenable to 'building in' aged care assessment and discharge planning tasks. This is principally related to the need for emergency department clinicians to respond according to urgency/acuity as it arises in the department.

The program grappled with the inherent conflict of interest between the aims of the hospital (acute care services) and those of the community service (support and maintenance). It sought to bridge the gap between these service parameters in the name of meeting patient needs.

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