AJRH The Australian Journal of Rural Health

NATIONAL RURAL HEALTH ALLIANCE INC.

Aust.J. Rural Health (2016) **24**, 278–283

Original Research

Consumer perspectives of a community paramedicine program in rural Ontario

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Abstract

***Objective*:** *To evaluate a community paramedicine program in rural Ontario, Canada, through the perceptions and experiences of consumers.*

***Design*:** *An observational ethnographic approach was used to acquire qualitative data through informal discussions, semi-structured interviews and direct observation of interactions between consumers and community paramedics.*

***Setting*:** *The study was conducted in rural Ontario where a community paramedicine program has been established consisting of four components: ad hoc home visiting, ageing at home, paramedic wellness clinics and community paramedic response unit.*

***Participants*:** *Fourteen adult consumers participated, representing all program components.*

***Main outcome measures*:** *Consumer satisfaction and perceived benefits.*

***Results*:** *Three main interlinked themes were identified: (i) improved health monitoring and primary health care access close to home; (ii) improved sense of security and support for vulnerable residents in the community; and (iii) improved consumer education and empowerment for enhanced health management.*

***Conclusions*:** *Consumers' reflections on their experiences and perceptions of a rural community paramedicine program indicate acceptance of paramedics in non-traditional preventative health care roles. This supports the desirability of investigating the potential development of community paramedicine programs in rural Australia to meet identified health service needs.*

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Site: Ontario, Canada (paramedic service de-identified).

Accepted for publication 24 September 2015.

KEY WORDS: *ambulance, community engagement, integration, primary care, rural health.*

Introduction

For over a decade, paramedic roles in North America have been expanding to meet the health care needs of vulnerable rural communities.[1,2] Community paramedics are new health care professionals providing innovative, preventative and primary health care services, in addition to emergency medical response.[3] Evidence supporting the cost-effectiveness and success of community paramedicine programs in reducing paramedic service utilisation and hospital attendance and improving health outcomes is emerging[4,5]; however, no research to date has explored consumer perceptions of these programs.

Traditionally, paramedics respond to emergency calls, render treatment and transport patients to hospital. With not all patients requiring transportation, paramedics are increasingly providing basic assessment, treatment and referral to appropriate health and community services.[1] This is evident with seniors and medically vulnerable residents in rural communities, where health workforce shortages result in paramedic services filling essential primary health care service gaps.[6] Community paramedicine differs from the traditional emergency response and transportation model as it supports paramedics to apply their training and skills in primary care and community-based environments.[7] Community paramedics practise within an expanded scope or role using existing or additional specialised skills.[8] Peer-reviewed research studies of community paramedicine are sparse[9]; however, an Australian research team has explored rural paramedic roles, recently focusing on North America.[3] The purpose of this article is to report on a community paramedicine program in rural Ontario, Canada, through the perceptions and experiences of consumers. The findings provide valuable consumer feedback on program performance and challenge

doi: 10.1111/ajr.12259

***What is already known on this subject*:**
- *Paramedic roles are expanding outside traditional emergency response as a direct result of health workforce shortages and ageing populations in rural communities.*
- *Community paramedicine programs are reducing paramedic service utilisation and hospital attendance, and improving health outcomes.*
- *Community paramedicine programs result in significant health care cost savings.*

***What this study adds*:**
- *This is the first observational ethnographic study focused on consumer experiences/perspectives of a community paramedicine program.*
- *Our findings demonstrate consumer acceptance of community paramedics as frontline primary health care providers.*
- *Consumer acceptance of community paramedicine is important to the future development of this innovative model of care.*

Australian paramedic services to consider community paramedicine as a means of improving rural health service provision and to address health workforce shortages.

Methods

Design

An observational ethnographic approach was used to acquire qualitative data through informal discussions, semi-structured interviews and direct observation.[10,11] This approach provided rich descriptions of lived experiences and helped us understand consumer perceptions.[12] A similar approach was used in a 2005 United Kingdom study that investigated consumer satisfaction of extended care paramedics.[13] Ethical approval was granted by La Trobe University Human Research Ethics Committee (FHEC 12/8).

Setting

The study took place in rural Ontario, Canada, in a county encompassing 17 municipalities spread over 8000 km^2 with a resident population of approximately 100 000 people. The participating paramedic service has 150 employees, including advanced care and primary care paramedics based at seven leased stations, providing 24/7 emergency ambulance coverage.[14] An allied health human resource crisis in the county prompted the paramedic service to recognise some years ago that they could provide prevention and health maintenance services to assist people to remain living independently at home with appropriate health and social service supports. A program was established consisting of four components: ad hoc home visiting, ageing at home, paramedic wellness clinics and community paramedic response unit.[3] In Ontario, paramedic services are funded by and accountable to provincial and local government, with clinical standards and service delivery regulated through the provincial health system.[15] In early 2014, the provincial government announced extension of financial support to expand community paramedicine programs throughout Ontario.[16]

Participants

Fourteen community members (patients, relatives and carers) referred to as 'consumers' were recruited through purposive sampling. Sample size typically relies on saturation, or the point at which no new themes are observed in the data.[17] At the time of the investigation, the program was not servicing First Nation communities, and therefore all participants were Caucasian Canadians. Where the aim is to understand common perceptions and experiences among a group of homogenous individuals, it is recommended that 12 interviews suffice.[17] Study enrolment was voluntary and participants were given an explanation of the methods and data collection techniques being employed. Written informed consent was gained prior to enrolment. Participants were advised that they could withdraw at any time.

Data collection

An Australian paramedic research student undertook a field visit for this observational ethnographic study of consumers of this community paramedicine program in August 2013. Semi-structured interviews were used because of their ability to encourage detailed, emotive responses without constraint.[3] This enabled flexibility, allowing the interviewer's questioning to shift in response to the natural flow of the conversation.[10] Consumers were asked open-ended questions, which allowed them to reflect on their own experiences and elicit detailed feelings and perceptions of the community paramedicine program. Interviews and direct observa-

tion of practice were predominantly undertaken in the consumers' homes, enabling capture of in-depth data encompassing the richness and diversity of the engagement within naturalistic settings.[18] Interviews were audio-recorded for later analysis, and field notes representing the investigator's personal feelings of witnessed events were systematically documented in order to rigorously validate consumer accounts.[19]

Analysis

Interviews were transcribed, de-identified, coded and analysed using thematic analysis techniques through manual methods consistent with the recommendations of Strauss and Corbin.[20] These techniques enabled identification of common themes within these qualitative data and allowed the building of an explanatory theory without the constraint of having to establish how themes link together or explain all facets of the data.[18] Transcripts were analysed by a second researcher to check the reliability of coding.[20]

Results

Three main interlinked themes were identified: (i) improved health monitoring and primary health care access close to home; (ii) improved sense of security and support for vulnerable residents in the community; and (iii) improved education and empowerment for better health management.

Improved health monitoring and primary health care access close to home

An ageing population and inclement winter weather in Ontario can compound issues of isolation and chronic health concerns. In some communities, workforce shortages have an impact on waiting times for medical appointments. Community paramedics are helping to bridge these gaps.

> We generally see a doctor every three months. When the paramedics first came they gave us these books so we can keep a monthly record and take that into the hospital with us (Consumer 1).
> They are trying to keep an eye on the seniors up here because we are out in the rural area. If we need anything we can always call down to them (Consumer 2).

Travelling excessive distances to access primary health care services was another ongoing challenge for ageing residents that the community paramedicine program is addressing.

> It's fantastic for me because it means somebody is checking on me. My doctor is an hour and a half drive away. There's lots of people that can't drive. It means that they can talk to these fella's [paramedics] and they can ask them quick questions. That's a big part of people's lives as they get older. Their aches and pains and they just want some assurance (Consumer 3).
> It's to help the people around the area. To stop them travelling so far for one thing. We are fortunate we've got vehicles but other people have to depend on other people to go different places. With this here, different people really take advantage of it (Consumer 4).

Increased sense of security and support for vulnerable residents in the community

Although rural patient consultation rates are often attributed to lower expectations and stoical, self-reliant or fatalistic attitudes,[21] the most isolated and vulnerable rural residents were reported to be using the program.

> I think it keeps people in the community. They don't have to move away from where they have an established place and where they are quite comfortable; they just need some support to stay there (Consumer 3).
> When [Community Paramedic] comes in and says my blood pressure and all this is alright I feel like doing the happy dance. It gives me peace of mind and it's a wonderful support system. It gives you a sense of security and comfort (Consumer 8).

Relatives of participants in the program expressed gratitude for the support and reassurance the community paramedics have brought to their lives.

> It makes it possible for my mum to stay at home. I physically cannot do everything by myself. She's happier; she's doing better here than I think she would ever in long term care (Consumer 12).
> If we didn't have the help from the program it would be impossible to have her here and from a financial point of view, it costs less to keep her at home than in a full time nursing home (Consumer 11).
> It will allow people like mum who can function relatively well on their own at home to be able to stay at home getting the support they need without occupying more institutional space. We can go away on holiday and know that there is somebody keeping an eye on mum (Consumer 10).

Improved consumer education and empowerment for enhanced health management

Empowerment is an educational process designed to help patients develop knowledge, skills, attitudes and self-awareness to effectively assume responsibility for their health-related decisions.[22] Numerous consumers

identified that the program had given them the confidence and insight to better manage their own health.

> Well it's helped me to understand more about my health (Consumer 6).
> I think it's a lifeline and actually has helped me to become familiar with the health programs that are out there. I keep hammering on about the educational piece but I see it as being the most important. It feels like they [paramedics] are more accessible (Consumer 13).

It was observed in the way that community paramedics were welcomed into people's homes that consumers are satisfied with the program. The community paramedics were highly regarded and respected, and their interactions with and knowledge of their patients' medical and social histories extended beyond a traditional paramedic.

> I think it's doing an excellent job providing the services. All of the staff have been great. They get involved with the client as well as the family. It's not just a business relationship and they're constantly in contact, advising me of the things I need to check up on (Consumer 10).
> Everybody's personable, everybody's caring. Everybody that I've had has been excellent, caring and positive. Everybody that I talk to is happy to come. Everybody who comes is keen to do their job and that's a positive thing with paramedics that I've seen (Consumer 3).

It was observed that community paramedics are leaving lasting impressions on program participants and families while amassing enriched relationships along the way. They are extending the professional boundaries of traditional paramedic practice. 'They've always dealt, treated us with respect. They've been efficient, they've been professional, they've been sympathetic. I've also used them as a sounding board. It feels like paramedics are my friends. That's what I think this program does. I feel really good about our paramedics' (Consumer 13).

Discussion

Our observational findings indicate that consumers in rural Ontario perceive the community paramedicine program to be providing an expansion of primary health care services and support to ageing residents and their families within their homes and communities. Although it is questionable whether acceptance of the community paramedicine program has arisen from consumers previously having limited choice or access to primary health monitoring, our findings indicate that consumers are positively embracing community paramedics as frontline primary health providers. Consumers did not report any negative experiences across any components of the program.

It was suggested by one consumer that by expanding the skill set of community paramedics in the ageing at home program to include some medical directed procedures and medication administration, there was potential to alleviate further hospital attendances. Consumers in this program also identified that enabling community paramedics to oversee referrals, connect with resources and advocate as case managers can hasten home care services and improve continuity of care. In Ontario, care coordinators from the Community Care Access Centre (CCAC) are responsible for assessing and connecting consumers with government-funded home care and community and long-term supportive services. Consumers indicated that delays in accessing CCAC services were often attributed to high turnover of staffing and unfamiliarity with the individual client's needs.

Consumers expressed the view that the long-term relationships formed with community paramedics placed them in the prime position to advocate for their needs. Many consumers have been part of the Ontarian program since its inception, while others have campaigned for its extension into their communities. Engaging consumers at a local level is an important strategy towards the building of self-reliant communities and is pivotal to improving health care outcomes.[23] We found passion, professionalism and commitment displayed by community paramedics in these roles to be key ingredients of the success and acceptance of this community paramedicine program.

Limitations

This study sought to investigate consumer perspectives of a community paramedicine program in Ontario, Canada. While the feedback from consumers in person was overwhelmingly positive, a limitation of this research was our inability to follow up with consumers to substantiate our findings. Online follow-up has ethical implications and are impersonal[24] and was therefore not employed. While additional interviews might have strengthened or identified new themes in these data, the number of interviews and observations were constrained by the duration of the field investigator's visit.

Conclusion

This community paramedicine program is impacting on the lives of consumers in a meaningful way. Feedback from consumers is encouraging and suggests that the program should continue and build on the foundations already laid. Rural Australian communities face similar isolation and health workforce challenges to Canada,

with paramedics increasingly becoming frontline primary health care providers in small rural communities and developing additional professional responsibilities throughout the cycle of care.[2]

Health Workforce Australia has been instrumental in funding projects for the expansion of paramedic roles, including the extended care paramedic model which is an innovation aimed at the avoidance of unnecessary emergency department attendances. Extended care paramedics respond to low acuity emergency calls in predominantly urban centres, treating patients in their own homes, offering referral pathways and reducing the incidence of transportation to hospital.[6] In contrast, community paramedicine programs generally serve rural populations as a means of filling essential primary health care deficits in under-resourced communities.[9] Although both models serve to improve patient clinical outcomes and reduce hospital attendance, extended care paramedics rely on sufficient throughput of calls for the model's sustainability and can therefore be unsuited to rural locations.[25]

In Ontario, Canada, community paramedics conduct free welfare visits and actively engage in health promotion, education and early intervention through home visiting services and community initiatives. As community paramedicine gains momentum, international research addressing the cost benefits of such programs is emerging[4,5,14]; however, this is outside the scope of this study. Further research is needed to validate this study's findings.

Exploring the perceptions and experiences of consumers engaged in community paramedicine programs will assist and guide strategic direction and future planning for paramedic services driving such programs. Community paramedics play an integral role in holistic and emergency care provision. Consumer acceptance is imperative for the future expansion of community paramedicine services in under-resourced rural communities. Community paramedicine is a promising international initiative, with paramedics being integrated into interdisciplinary health care teams in rural communities to enhance primary health provision for vulnerable populations, address the social determinants of consumer needs and improve quality of life. In partnership with a wider team of health professionals, community paramedics have the adaptability, skill diversity and knowledge base to make an impact in rural and remote Australia, where health services are inadequate to meet identified consumer needs.

Acknowledgements

Special thanks to Paramedics Australasia (South Australia Chapter) and the South Australian Ambulance Service who funded AM's research scholarship trip to North America. The authors would like to sincerely thank the paramedic service and the community members who participated in this study.

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