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Original Research

Remote health solutions in Far East Gippsland: a mixed-methods, co-designed evaluation of health service availability in isolated communities

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ETHICS APPROVAL

Ethical approval for this project was granted by the Federation University Human Research Ethics Committee. Approval number: A22-032

Abstract

Introduction: Australians living in isolated communities are more likely to experience poorer health outcomes as a result of rurality. This article provides a needs assessment of healthcare services in a geographically isolated region of Victoria, Australia.
Methods: The research project employed a mixed-methods design. The study population consisted of members of the isolated communities in Victoria. The incorporation of qualitative data added depth to the quantitative data, ensuring that voices of community members were adequately represented in the needs assessment. Data analysis was undertaken using descriptive statistics and thematic analysis techniques.
Results: Survey respondents from isolated regional locations highlighted the extended travel time and increasing wait times to see a medical practitioner, leading to a delay in seeking healthcare assistance. Respondents were less likely to have access to and use telehealth services, yet highlighted the service as beneficial to isolated regions. Survey findings were supported by in-depth interviews, with participants stating access to care was difficult, providing place-based suggestions of services to remove barriers to care such as a virtual care model and mobile services visiting the isolated regions.
Conclusion: Access, use and facilitation of appropriate place-based health care within isolated Australia has the potential to increase wellbeing and enables residents to remain in regions that hold long historical and familial connections. By incorporating innovative technologies and models of care that have been evaluated across other isolated regions of Australia and globally, there is an opportunity to adapt existing models to conform to a post-COVID world.

Keywords

Australia, evaluation, feasibility, mixed methods, model of care, primary health, remote, rural, sustainability, telehealth.

Introduction

The majority of Australia is classified as 'Very Remote' by the Australian Standard Geographical Classification System, with geographical isolation, unforgiving terrain and weather conditions making many parts of the country difficult to access[1]. Despite the documented access concerns for isolated regions of Australia, 28% of the population still reside in regional, remote or very remote areas, with an 11% increase in population in these areas from 2011 to 2021[2,3]. As rurality increases, life expectancy decreases[4]. Lack of access to appropriate primary care services, lower socioeconomic status and higher rates of smoking and alcohol consumption lead rural and remote Australians to experience greater negative health outcomes compared to their metropolitan counterparts[4].

A lack of appropriate and sustainable resources – such as workforce and supplies, infrastructure (including unreliable internet connectivity) and funding and governance – impacts the sustainability and feasibility of healthcare delivery in isolated areas[4-6]. Approaches to overcome service delivery concerns have included implementing mobile locum services, fly-in-fly-out medical practitioners and telehealth models of care with diverse implementation and incomes, yet promising success[7-9]. Current literature highlights several potential models of care, barriers and enablers to implementing these models and workforce options to ensure the sustainability and feasibility of any healthcare service implemented in isolated Australian regions. Literature suggests that a telehealth model or mobile model of care may be most appropriate for these regions, due to barriers in cost-effective, appropriate and timely services[7,10-13]. Although telehealth has been highlighted as potentially the most feasible and sustainable model of service delivery in isolated regions, the rural 'eHealth paradox' as outlined by Liaw and Humphreys[14] suggests that regions that may benefit most from telehealth solutions are the least likely to have infrastructure and resources to support the model.

Lack of appropriate health service delivery has been a key topic for communities in Far East Gippsland. This region borders with New South Wales, at the easternmost tip of Victoria, Australia[15]. Impacted by devastating bushfires and the ongoing impacts of COVID-19, many communities in the region remain isolated from the rest of the state. The Errinundra to Snowy Sub District is classified as a subdistrict of the Orbost district in the East Gippsland Shire, made up of nine communities and hosting a population of approximately 338 people[16]. The area is best known today for its livestock and plantation farming opportunities, with large uninterrupted land mass and rolling hills. Previously, the area was known for gold and silver mining, then later a booming timber industry, which is no longer in operation[16]. Today, the Errinundra to Snowy Sub District has a few shops and services including the Country Fire Authority, Australia Post service, Neighbourhood House services and town halls in the smaller localities. One larger locality also has accommodation, a general store, a pub, one primary school and one Multi-Purpose Service for health needs. The subdistrict is experiencing an ageing population, with 75% of the population aged between 50 and 69 years. The population is also facing potential decline, with a recent community survey suggesting that approximately 15% of the population wouldn't stay or were unsure if they would remain in the district due to safety of roads and inability to access employment. Furthermore, only one in five residents believed healthcare services were adequate in the subdistrict[16]. Findings prompted further investigation and research into needs assessments and service equity projects within the subdistrict to increase awareness of lack of healthcare access, prompting policymakers to renew focus in the area after COVID-19 and the Black Summer bushfires.

The Black Summer bushfires in Victoria and New South Wales occurred between August 2019 and March 2020, burning a total of 19 million hectares, destroying over 3000 homes and displacing many more families. Thirty-three people lost their lives, and it was estimated that over a billion wildlife fatalities occurred. The Errinundra to Snowy Sub District was significantly impacted by the bushfires, with many losing their homes and livelihoods[17].

This article provides a needs assessment of healthcare services in the Errinundra to Snowy Sub District after COVID-19 and the Black Summer bushfires. The project aimed to investigate the current healthcare services available to residents, as well as highlighting service strengths and gaps. Through investigation of current needs and available services, this study provides suggested feasible and