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School-Based Telemedicine: Perceptions About a Telemedicine Model of Care

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Abstract

A school-based store-and-forward telemedicine program, which is delivered to school children by school staff is an acceptable model of care for treating skin infections. This indicates that non-clinicians have potential to play a key role in telemedicine. Benefits include empowerment and role redefinition of staff, and potential improvements in health awareness of children, with no major issues perceived in the current program.

Keywords:

Telemedicine, school health services, staphylococcal skin infections

Introduction

Telemedicine is the delivery of medical care, involving an element of distance, and involves the use of information and communications technology (ICT). [1] Store-and-forward (SAF) telemedicine involves a collection of information which is sent to a physician who can respond in their own time. [2] In New Zealand (NZ), an SAF telemedicine program has been implemented in 21 schools in the Far North and in South Auckland as a potential solution and facilitator of access to care for children with skin infections. In NZ, the incidence of serious skin infections in children aged zero to 14 is high, with increasing hospitalizations which almost doubled between 1990 and 2007. [3] This program is delivered by school staff including teachers, principals, and administration staff. Within this telemedicine program, health information of children is collected and entered into an application (app) on a tablet or smartphone. This is sent to a clinical team who can remotely assess it and develop a management plan, which is authorized by a doctor. The research question is: How is a telemedicine model of care for skin infections in school children perceived by the school staff delivering the program? Sub-questions are: 1) How acceptable is telemedicine for school children to non-clinically trained people administering it? 2) What are some perceived benefits and issues with the current program?

Methods

This exploratory, descriptive study has been approached with qualitative methods, specifically an interpretivist approach. Sampling first involved sampling the schools, and secondly sampling staff within the schools. Schools were selected through convenience sampling. 13 schools were approached, with five agreeing to participate, and eight school staff being interviewed. A sociotechnical theory developed by Lamb and Kling reconceptualizes the user of ICT as a social actor. [4] The four constructs of this model: identities, affiliations, interactions, and environments, guided interviews, and analysis.
A semi-structured interview, using an interview schedule was adopted in order to elicit narratives. Interviews were one-on-one, lasting up to one hour.

Results

Telemedicine aligned with *identities* of staff, fulfilling a duty to care for students, and fulfilling school values. *Affiliations* and close relationships with children, support from the community, and the telemedicine team enabled the program. Delivering telemedicine is an opportunity for staff to have *interactions* with children, and interactions between children reflected empowerment and awareness of health. *Environments,* in terms of embedded practices of the school, were influenced by the initial challenge for staff fitting telemedicine into workflows, and some concern of overuse of program by children. Physical environments were flexible, and staff recognized the importance of balancing the need for privacy while protecting a child's vulnerability.

Conclusion

School-based telemedicine delivered by school staff who are not clinicians is perceived as an acceptable model of care for skin infections in school children. Benefits include empowerment, potential improvement in health awareness, and literacy. No major issues perceived, except initial challenges to day-to-day practices, and balancing privacy and vulnerability. Non-clinicians can play a key role in telemedicine delivery.

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