

Health and Telecast: a milestone for Tonga into the 21st Century

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Abstract

An efficient Telehealth system for Tonga is currently but a dream. The kingdom of Tonga consists of 36 inhabited islands occupying 669kms² and a population of 97,784 (1996). There is a referral hospital in the Capital and three other district hospitals, 14 peripheral health centres, 32 maternal child health clinics and eight general practitioners. Within the kingdom the use of the telephone, telegram and some use of fax are the main ways of contact between the hospitals and the more remote health centres. Patients needing specialty care not available locally are referred, and possibly transferred, to New Zealand from the referral hospital in the Capital. There are seldom any communications with other health professionals or institutions through telecast. This article details the present situation and discusses the perceived advantages and difficulties in establishing a functional Telehealth service in Tonga.

Introduction

Improvement in technology of communication has made the globe seemed small, and thus paling the problem of isolation. The phenomenal development in technology of telecommunication has taken professionalism forward in terms of accessibility, exchange and update of information, research, dialogue across the miles, career development, decrease professional isolation, and just keeping in touch with fellow colleagues and friends all over the world. This technological development has enabled Pacific countries and territories to achieve some of those benefits through telemedicine, PACNET and Western Pacific HealthNET.

Tonga is the only Kingdom in the South Pacific. It is made up of an archipelago of about 170 islands with only 36 inhabited occupying 669 km² with a total population of 97,784 (1996)¹. The group is serviced by one referral hospital, which is in the capital, and 3 other district hospitals, 14 peripheral health centres, 32 maternal, child health clinics, and 8 General Practitioners (GP). Health care services are free for all Tongans except the GP, and the Government is heavily subsidised for it.

The phone, telegram and some use of fax are the main means of contact with those hospitals and health centres in the remote areas. Except for some administrative matters, most of the contacts regard patient's referral who in the end of the discussion/consultation may be transferred over to the referral hospital for further management. Patients who need speciality care not available locally are referred and possibly transfer for treatment in New Zealand under the Bilateral Treatment Scheme agreed upon between Tonga and New Zealand governments. It is the doctor(s) from the referral hospital in the capital who will further handle the referred patient from the islands to the hospital overseas. Apart from consultations for patient's referral, there is hardly any other reason for communicating through the telecast with other health professionals or institutions.

Apart from the urgent referral and consultations, there are other obvious needs from the health professionals, whether in the capital or in the outer islands, that need to be addressed. They include continuing education and training, career development, update and share health information, minimising professional isolation, and provision of best available diagnostic means for management of patients, and feed-backs to the health professional in isolated islands regarding their referred patients' ongoing management. These needs can be addressed from the local scene without the professionals having to leave Tonga.

This paper aims at putting Tonga into perspective in terms of telehealth and its effects and/or visionary effects on the health professionals and as a service as of now and into the coming millenium.

Situation analysis

The health infrastructure of Tonga is considered to be well-developed². Demographic and health related indicators from various sources show Tonga fares very well in

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comparison to its neighbouring islands except some Pacific territories³⁻⁵. This implies that health status of Tongans in Tonga is considered satisfactory⁶. However there are existing opportunities for better development and upgrading the environment surrounding the health professionals especially in the areas of training, creating practical incentives, affordable means of communication and sharing between fellow colleagues, etc. There are specific areas need to be specified and addressed accordingly in the context of our limited resources.

Health care services

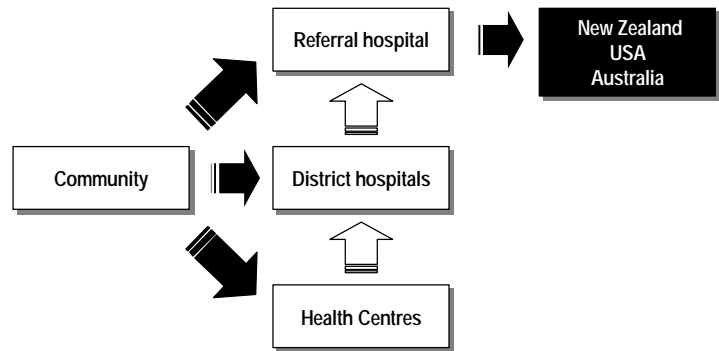
Health care services in Tonga are free except for the general practitioners. That means that the Government is heavily subsidised for the health service. The whole kingdom is serviced by one referral hospital, 3 district hospitals and a network of health centres and MCH clinics. Most of the more qualified and specialised doctors concentrate in the referral hospital, leaving the hospitals in the outer islands to be managed by young and recently graduated doctors and near retired ones. The health centres are mainly managed by health officers. The MCH nurses are responsible mainly for all mothers and children in the community but they are based in the Centre for their antenatal clinic days.

The communication between these islands or villages with Health Centre to the hospitals is via telephone, telegrams and some with fax. These, especially using the telephone and fax, may suffice for administrative matters including urgent referrals for transfer. Very occasionally there is consultation from the district health centres to the referral hospital or to one of the district hospitals in the outer islands when they have a problem case. But once the final outcome or solution for that consultation is reached that is the end of such dialogue. Very very occasionally or not at all there is a feed-back from one side to the other of the result that occurred after the patient is being managed.

The current channel of consultation/referral is from the hospital in the outer islands or from the health centres in the main island to the referral hospital, which is in the main island group (see Figure 1).

Thus from the peripheral health services, all referred patients are to be primarily referred to the base hospital or Vaiola Hospital which is in the main island group. From Vaiola hospital the patient is referred/discussed with possible transfer to New Zealand, depending on what the receiving doctor's recommendation, which is primarily based on the case presentation of the local doctor through the phone. Laboratory or ECG results can be faxed or emailed, but ultrasound scan or x-ray do not have any mean of being accessed to by the receiving physician. Currently, Tonga Government has established a bilateral medical referral

Fig. 1. The current patient referral system from the periphery



system with the New Zealand Government. This is the usual channel of consultation and referral of patients. But other countries may agree to receive our patients but based on their own criteria.

There is an obvious need for the doctors, health officers and nurses in the peripheral hospitals, health centres and district clinics to be informed on the outcome of their referred patients. This may be the only mean of bridging the gap of being so isolated, and it also helps with updating their knowledge and possibly their skills by learning from their mistakes or being motivated with their great clinical diagnosis or intelligent guesses. Also, these staffs from the periphery may benefit with the communication with other colleagues in the main island, and may share the same information with colleagues in the other district hospitals and health centres.

Health care professionals

The ratio of a doctor/population is about 1/3000⁶. There were 45 doctors listed in the Annual Report of the Minister of Health, 1997 while 11 of them were away on leave with or without pay or on study, and two were on absolute administrative posts. The attrition rate of both doctors and nurses are high. Even though there has not been any study on the reasons for doing so, but job dissatisfaction is top on the list with no perceived incentives, hard to get into a postgraduate training program, and money reason comes later. This indicates poor planning and inappropriate management of the human resources. Some of the staffs that are being posted to the outer islands and the districts are left and forgotten there. Sometimes those staffs working in isolation eventually did something drastic then the administrators jump in to punishment without considering why this problem did occur and what the System has done to prevent it. From experience, the feeling of being isolated and no sense of belonging, of being remembered when opportunities for further training, short attachment or attending workshops come by. It is always those who are in the main island who got considered first if such opportunity arises.

Thus there is need to provide an environment that is inductive and conducive, less frustrating and isolated, attractive to work in, especially in the outer islands of the Kingdom. There may be specific needs apart from the salaries that need to be addressed in order to enhance the emergence and maintenance of the existence of such an environment. Telehealth network may be able to help alleviate the tension of the situation.

Telehealth: a milestone

While the idea of a telehealth system for Tonga is but a dream now, it should be a reality in the near future if health departments and donors realise its cost-effectiveness. There are many financial requirements and other needs to be met in order to set this network up and make it worthwhile. Also, health professionals should feel that this network belongs to them and not to the bureaucracy. This sense of ownership may contribute to the better use of it, to maintain the network, to indirectly contribute to better patient management and to increase job satisfaction while boosting professional self-esteem.

Funding is needed to procure hardware and software, and for installation; maintain a reliable energy supply; training of operators and maintenance staffs; maintenance of the commodity and ongoing funding for sustainability of the network. There are also natural conditions like weather and environment, that need to be considered for their compatibility with the hardware, especially in the outer islands.

The set up is not only between the main hospital of Vaiola in the main island and the overseas institution, but also link the outer islands and the main hospital, and the outer islands with each other, by an affordable yet practical means of communication. In the long run there is no doubt there would be ample benefits to the health professionals and the services in relation to training, communication and sharing, better quality health services, decrease professional isolation, reference/literature search, etc.

The availability of telehealth network may help to retain health professionals by availing allowing relevant courses to be done on using distance learning without having to leave our shores. However, the program should be offered and co-ordinated from a recognised institution, and should be tailored according to the country's need, and the interest of the professionals. However, the country's priority need will be based on sound, updated and correct information, a fact that most Pacific countries, including Tonga, are still struggling to reach. But to date, there is not enough information on which to base sound planning⁵. The other related task is for each country to construct a career ladder with parallel salary promotion in relation to courses completed in distance learning programmes. This may be the incentive that health professionals are waiting for.

Conclusion

The Pacific Telehealth Conference apparently marked the inception of the telehealth network setup, even if it was only in principle. The benefits to Tonga as well as other Pacific countries will get out of this telehealth network seem promising and fulfilling. However, there are financial requirements and other needs to be met before the network is to be in a good functional level. The Ministry of Health, with the help of its donor friends, will make this dream come true.

It is therefore envisaged that a functional telehealth network can help to decrease professional isolation for those working in isolated communities, increase opportunities for job satisfaction, career development with parallel ladder for promotion, communication and information sharing, distance learning opportunities, and improve the quality of patient management. It may also help to retain the trained health professionals in their home country. As seen, it is not only the linkage to overseas institution that is important here, but the communication with fellow professionals who are out there in the remote island groups of the Kingdom. This may be achieved, or greatly assisted by, the availability of an efficient, accessible, timely and appropriate yet affordable means of tele-communication - be it phone, fax or email. Such vision and endeavour may be greatly assisted by Tonga joining the networks, and to take part in the networking of networks through telehealth.

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