

Original Research

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Exploring Key Components of Successful Distance Learning Programs: A Case Study in Palau

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ABSTRACT

Introduction: The Pacific faces multiple healthcare crises, including high rates of noncommunicable diseases, infectious disease outbreaks, and susceptibility to natural disasters. These issues are expected to worsen in the coming decades, increasing the burden on an already understaffed healthcare system. Improvements in technology and accessibility have increased telehealth's utility and have already proven to reduce costs and increase access to care in remote areas. Telehealth includes distance learning; a form of education that can help alleviate many healthcare issues by providing education to healthcare professionals and upskilling staff, which can promote workforce retention and decrease patient mortality. Distance learning programs at the Ministry of Health in the Pacific nation of Palau were examined and key elements to their success were identified.

Methods: Thirty-four people, mostly health professionals at the Belau National Hospital in Palau were interviewed. Standardized questions and surveys were conducted in person throughout the month of July 2019.

Findings: Two examples of successful distance learning programs were identified. Consulting with staff and analyzing each program, four factors for a successful distance learning program were identified: having a cohort, having a facilitator, dedicated study time off from work, and motivation.

Conclusions: In countries as geographically isolated as the Pacific, with poor access to specialists and resources, telehealth has the potential to radically change how healthcare is delivered. Palau shares similar resources and issues as other countries in the Pacific and the lessons learned from their successful programs can be adapted to help other Pacific nations develop their own distance learning programs.

Key words: Distance Learning, Palau, Telehealth

INTRODUCTION

The Pacific faces multiple healthcare crises, including the highest rates of noncommunicable diseases, multiple infectious disease outbreaks, and susceptibility to natural disasters.¹⁻⁴ These issues are expected to worsen in the coming decades, which threatens an already economically strained Pacific Nations and increases the burden on an already understaffed healthcare system.⁵⁻⁷ While several Pacific Island Nations meet the WHO recommended doctor-population ratio of 1:1000, care is often centralized to an urban center.⁸ In the Pacific, populations tend to be dispersed over multiple islands spread over thousands of miles, thus limiting access to centralized hospitals. Distance learning and telehealth have been proposed as a means to address these healthcare issues in the Pacific.⁹

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Rec: 27.06.2021 **Acc:** 01.12.2021 **Pub:** 30.12.21

Citation: Thorne T, et al. Exploring Key Components of Successful Distance Learning Programs: A Case Study in Palau. Pacific Health Dialog 2021; 21(8): 519-523. DOI: 10.26635/phd.2021.142

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Pacific island nations and states face multiple healthcare challenges, from the highest mortality rates of non-communicable diseases to tropical disease, all while caring for a population dispersed across multiple islands.¹³ Telehealth and distance learning are promising avenues to address these challenges, improve availability and quality of care, while reducing cost.¹⁴ Analyzing the distance learning programs at Palau, and what made them successful offers a successful guide to other island nations looking to develop similar programs.

A primary goal of healthcare is improving patient outcomes and quality of care and education of staff is key to improving these outcomes. One hospital in the United Kingdom found that a hospital with below average number of fully trained registered nurses is linked to a 3% increased risk in patient mortality for each day the shortfall persists and this increased risk cannot be alleviated by the addition of less trained unregistered nursing assistants.¹⁵ An increase in the emphasis of training of staff could not only reduce preventable hospital deaths but also cut referral costs. This could potentially cut referrals, reducing costs.

Telehealth is not new to the Pacific, but improvements in technology and accessibility have increased Telehealth's utility and have already proven to reduce costs, increase access to care in remote areas, and promote evidence-based practices.^{10,11} In countries with limited resources, telehealth can help meet the rising demands of non-communicable diseases among the community.¹² Under the umbrella of telehealth is distance learning, a form of education that can help alleviate many of these healthcare issues by providing continuing education to healthcare professionals, and upskilling staff. This report examined the distance learning programs in the Pacific Island nation of Palau with the intent of identifying characteristics of successful programs to better inform future programs in Palau. The characteristics identified in this report are applicable to other rural countries facing similar difficulties in educating medical staff in low resource and geographically isolated settings.

METHODS

Employed staff at the Belau National Hospital in Koror, Palau and some select others were interviewed to assess characteristics of past and current distance learning programs. This included physicians, IT personnel, public health department members, department managers of

allied health, the president of Palau Community College (PCC) and telehealth resource experts in the Pacific. In total, 34 people were interviewed. Semi-structured interviews with standardized questions and paper surveys were conducted in person throughout the month of July 2019 with the intent of evaluating current distance learning and telehealth knowledge and use, and future interests in distance learning and telehealth.

Statistical analysis was done via Microsoft Excel 16.42. As a quality improvement survey, this study was deemed Institutional Review Board exempt.

RESULTS

Among the departments, distance learning was one of the telehealth services most commonly desired. 100% surveyed (n = 34) stated that they would like to use distance learning, most commonly for professional betterment (88%) and upskilling of staff (82%). It was found that while the MOH does have access to different distance learning programs, many have low participation rates or high failure rates. Two distance learning programs that were successful were identified, success defined as completing the distance learning program and returning to work at the MOH.

Nursing had a successful bachelor's degree program run in 2015, through partnership with the MOH, Palau Community College (PCC), and Fiji National University. This was a 2.5-year hybrid program, combining distance learning modules with live class sessions held at PCC. A facilitator from Fiji would periodically come to support students and work on hands-on skills; students would have these times off from work to attend lectures. All 18 nurses who entered the program successfully graduated. Upon completion of the program, nurses received their degree and a pay increase.

Pharmacy also had a pharmacy technician program in collaboration with the University of Alaska Anchorage. This was a six course, yearlong accredited program with funding from the World Health Organization (WHO).

Consulting with the heads of these distance learning programs and evaluating the differences between programs that were less successful, common traits for success emerged. These included having a cohort, a facilitator, dedicated study time, and motivation.

DISCUSSION

Distance learning can also save time and money on the end of the learner, as staff can study from their home country rather than having to relocate while enrolled in coursework. In addition, training of staff in their home country as opposed to traveling for studies can help retain workforce. Through multiple interviews across nearly every department there was a shared experience of young professionals or students traveling abroad to obtain education or certifications but never returning to Palau. This places a strain on a workforce and perpetuates a lack of skilled professionals, with few options to avoid this issue. By promoting distance learning and upskilling staff locally, this provides the opportunity to increase the workforces of skilled professionals by providing education at home while increasing the odds of workforce retention.

At the MOH, two examples of successful distance learning programs are the Pharmacy Technician Program and the Nursing Department's Bachelor of Nursing program. Looking at the factors that made these programs successful, as well as consulting with various staff who undertook other distance learning programs with less success, four factors for successful completion of programs were determined: having a cohort, having a facilitator, dedicated study time off from work responsibilities, and motivation. Success in this case referring to applicants completing the program and returning to work at the MOH. These four factors are further discussed below.

Cohort

One of the top challenges for distance learning courses at the MOH that had less success was the lack of support for individuals taking challenging courses. The Pharmacy and Nursing programs attribute their prior success to having a cohort. Students benefit from cohorts as it provides them with others to problem solve with and accountability. Additionally, it is easier to coordinate review sessions with faculty, tutors, or respective experts, who often have limited hours, or are in different time zones when utilizing technologies like Zoom. The head of the Nursing Department stated that having a cohort with varying ages greatly helped as the younger students were able to teach the older nurses how to properly use computers. This cohort model has also been successful in the PCC's Online San Diego State University Bachelor's Degree. Dr. Patrick Tellej, President of PCC, explained that the cohort is integral to the success of any educational program. He stated that having classes in groups is beneficial because while somebody always emerges as a leader, success depends on the weight of everyone. He

emphasized the importance of a group of students who are willing to lift each other even when the course becomes difficult.

Facilitator

Both the PCC and Pharmacy Tech programs have facilitators who oversee and support the programs. The facilitators ensure that students are studying and support where they can. While it is helpful to have a facilitator that is a content expert it is not necessary as long as the facilitator knows how to connect students with an expert. Additional qualities needed to be an effective facilitator include being sociable to help develop a group cohesiveness and having a degree of technical literacy to help solve issues that may arise.

Dedicated Study Time

Across all programs, a reason cited for the failure of students was the lack of dedicated study time. Staff work many hours, many have families to take care of when they are home, and may not have access to course material at home. Committing a certain amount of hours to a study time in a dedicated study location such as the library, to avoid the distractions of work responsibilities, could help in the success of the students. The head of pharmacy employed this strategy with her last cohort of pharmacy technicians; each student was given one hour of paid time during the workday to study online. The additional benefit of this strategy was that Ms. Matlab, the head pharmacist, would be in the vicinity while the students were studying to help answer any questions, acting as both the facilitator and content expert. In regard to the successful nursing program, nurses not in the bachelor's program were asked to cover busier nursing shifts to ensure that the students had adequate dedicated studying hours. While this dedicated study time may initially stress the already overextended system, the benefit of skilled and knowledgeable workers could outweigh the negatives.

Motivation

Across all departments interviewed at the MOH, lack of motivation and incentive was expressed as a barrier to higher education. Some staff members expressed disappointment over promises in higher pay that were never fulfilled upon completion of online education programs. Furthermore, since pay increases are generally only offered upon completion of accredited-degree learning programs, there is little incentive to complete other online educational opportunities like certificates or diplomas that, while helpful in attaining new skills and knowledge, are not accredited. A potential solution the authors recommend was to support

policies that encourage continuing education courses that earn students credit that can count towards a degree. With this in place, policy would support learning programs, and staff would be rewarded for continuing education.

When asked about the motivation of his students, the President of PCC expressed his unique strategy to success. He explained that each student is important and when someone is struggling, he makes sure to meet with them and inform them that their education is not just for themselves- it is for the organization, the state, and for their country. He explained that each student is an investment, especially in this country with very limited resources. Due to this, he explicitly makes sure the struggling student is made to feel important and shows that he is there to support them. In a field such as healthcare, the health of the nation is in the hands of the many local staff and physicians. Fostering this sense of national pride and duty to the community could motivate staff to continue education.

While this case report was written with the intent to offer insight to factors needed for successful distance learning programs in rural or island healthcare settings, there may be site dependent factors that must be overcome that may not be reflected in the current report.

CONCLUSION

In countries as geographically isolated as the Pacific, with poor access to specialists and resources, telehealth has the potential to radically change how healthcare is delivered. Palau shares similar resources and issues as other countries in the Pacific and the lessons learned from their successful programs can be kept in mind to help other Pacific nations in developing and sustaining their own distance learning programs.

Acknowledgements

Through the cooperation of the Palau Ministry of Health, the Palau Community College-based Palau Area Health Education Center, and the Hawai'i Pacific Basin Area Health Education Center at the University of Hawaii John A. Burns School of Medicine, this situational analysis was performed. We would like to thank Minister of Health Emais Roberts, MD, and all those at the MOH who made the time to speak with us for this study and helped make the authors feel welcomed while in Palau. We would also like to thank Dr. Greg Dever who helped facilitate this project to completion.

Conflicts of Interest

None

Funding

Tyler Thorne and Maiya Smith received funding from the Area Health Education Center at the University of Hawaii, John A. Burns School of Medicine to stay in Palau during the duration of the study period.

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