Quality Improvement of Data Collection and Utilization of Health Information from Dhulikhel Hospital Outreach Centers

Yaa Asare¹, Alla Balabanova¹, Matthew Masur¹, Geoffrey Fauchet¹, MD
Shrinkhala Shrestha², MPH
University of Colorado School of Medicine¹, Dhulikhel Hospital²

Background

Dhulikhel Hospital is a community hospital in Nepal that serves 1.9 million people across 6 districts. An outreach program was established in 2015 to provide health services and education to 16 underserved rural villages and communities, with no standardized way to collect patient health history and track interventions performed by the healthcare team. Nearly 80% of people living in the rural areas of Nepal do not have access to a public hospital or provider within 30 minutes of their home, and the most common causes of death and disability are related to nutrition, infection, and sanitation. In Nepalese children aged 6-10 years, mean height-for-age relative to WHO reference was 3rd-5th percentile for males and females. Between 1990-2010, diarrheal diseases and lower respiratory infections were the leading causes of healthy life years lost in Nepal. Less than 30% of the population has access to adequate sanitation and safe drinking water. Given the relationship between poor sanitation, undernutrition, and infection risk, the ability to quantify these issues in the rural regions served by the hospital allows appropriate allocation of resources and can inform health policy.

The objective of the project was to create a questionnaire and to have collected health status data in 10% of the target sites by August 2019.

Methods

We conducted a retrospective review of 3084 patients aged 6-16 years who had presented to the Dhulikhel Hospital Pediatric Department between January and June 2018. The data available to our team included patient age, gender, and reason for visit or diagnosis. The diagnoses of these patients are characterized in Table 1. Age distribution is presented in Table 2.

Table 1. Age distribution is presented in Table 2.

Results

The Dhulikhel Hospital Outreach Centers can support changes in public health policy and monitor health trends over time. This questionnaire has potential to be a comprehensive and useful tool to satisfy the rural clinician around Dhulikhel and the many rural regions of Nepal. It will be translated to Nepali and Hindi languages to account for the majority of patients served at the outreach centers. Future plans include receiving and incorporating feedback from the Dhulikhel Hospital Public Health Department and the Pediatric Department.

Limitations

Data provided by the outpatient pediatric department is only representative of patients who had the means to travel to the hospital. While the questionnaire was developed to be as comprehensive as possible, it likely does not capture some conditions suffered more often than those by the served by the outreach programs.

Issues that may hinder usefulness of the questionnaire include patient inability to remember or understand prior diagnoses due to loss of prior medical records and lack of medical literacy. The length of the questionnaire may also be extensive and increases the risk of patients declining to respond.

Discussion

We were not able to achieve our goal of a final draft or collection of information from 10% of the target sites as we are extrapolating that it is also true to the districts served by the outreach centers. Future plans include receiving and incorporating feedback from the Dhulikhel Hospital Public Health Department and the Pediatric Department.

Acknowledgements

Disclosures

There are no financial or personal conflicts of interest to be disclosed.

References

[1] Shrinkhala Shrestha, MPH (Dhulikhel Hospital) - project manager
[2] Dr. Srijana Dangol (Dhulikhel Hospital) - providing outpatient data
[3] Dhulikhel Hospital Pediatric Outpatient Department
[4] Rotary Clubs of Denver, Evergreen, and Aurora for generous funding
[5] Center for Global Health for financial and academic support