BACKGROUND: This project was carried out in a rural health clinic in Nepal. The village reported incidents of peptic ulcer disease and gastric cancer, which presented as abdominal discomfort. Abdominal discomfort is treated symptomatically with antispasmodic or bismuth. In a neighboring district, H. pylori prevalence is 70.5%. The prevalence in this community is unknown. As the prevalence of H. pylori is high in the region, the Doctor of Nursing Practice organized an evidence-based community-specific plan to diagnose and treat the different presentations of abdominal discomfort. The Institute of Healthcare Improvement’s Model for Improvement delineates a format to improve health delivery. This model starts with the identification of an aim statement. Deliberating the process for measuring process and disease outcomes is the next step.

AIM: The aim of this project was to improve health care quality by decreasing the prevalence of abdominal complaints at a Nepalese health post. This paper delineates a process to implement a quality improvement program in short-term service trek. The role of the DNP employing the DNP essential core measures facilitates improvement in health care processes to close the quality chasm in resource-poor communities.

METHODS: All methods are applicable to United States primary care clinics in solving patient care problems. This paper delineates a method to provide structure to health care delivery and to measure the quality of short-term service trek activities, using the skills and knowledge of a Nurse Practitioner with the Doctor of Nursing Practice. This program guides the DNP to properly diagnose and treat Helicobacter pylori (H. pylori) during a short-term service trek. Each clinical day, the chief complaint, final diagnosis, and treatment are recorded. This data is compared from visit to visit and plotted on a running chart. Recording disease prevalence after implementation of a plan evaluates the effectiveness of the health system processes. At each service trek, the collection of data on disease prevalence provides baseline and comparative information about system processes. This data directs the use of scarce resources, measures treatment outcomes, and guides improvements in care. Symptoms were recorded on a data collection sheet. An evidence-based algorithm was used to treat the other causes of abdominal discomfort. The decision to treat patients with antibiotics was dictated by the results of the monoclonal stool antigen test. In this initial quality improvement process, 24 patients were tested for H. pylori using antigen tests with sensitivity 96-98% and specificity 97-98%. In the second visit 29 patients were tested.

Impact: 89% Less Antibiotics Administered

RESULTS: All patients who tested positive for H. pylori were tested for cure and found to be negative one year later. Treating disease positive patients with antibiotics prevents the development of resistance to antibiotics. Before the initiation of the test and treat program, the empirical treatment with antibiotics was considered due to the remote location of the village and the 70% prevalence that was found in the neighboring village. Instead evidence-based guidelines were followed. They recommended a test and treat program in the diagnosis and treatment of H. pylori. If empirical antibiotic therapy had been administered, 99% of patients would have received antibiotics needlessly and subjected to potential super infections and antibiotic resistance. The incidence of positive H. pylori tests was 25% and 17%. Education [Sympoia] and gastric empaphal reflux disease was given to patients.