President's Global Innovation Fund Helps Launch Teledentistry Project in Kenya

Africa in Nairobi
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Dr. Shantanu Lal's Children's Global Oral Health Initiative has launched a teledentistry project in Kenya, the first of its kind by a U.S. dental school.

Teledentistry – short for telemedicine in dentistry – uses digital and telecommunication technology to support long-distance health care, patient and professional health education, public health and health administration. This emerging technology includes wand-like cameras lighter than electric toothbrush, along with videofconferencing and streaming media.

"Using a $70 intraoral camera and a refurbished tablet or laptop, it is now possible for anyone with minimal training to stick a camera in the mouth and receive a dental checkup from a world away," said Dr. Lal, an associate professor at Columbia University's College of Dental Medicine.

Lal's project received planning funds from the President's Global Innovation Fund, designed to provide support for faculty who wish to use the resources or facilities of one or more of the University's eight Global Centers for teaching or research activities. The aim is to increase opportunities for research, teaching and service around the world.

Staff members at the Center in Nairobi – Columbia Global Centers Africa – were instrumental in connecting Lal with Kenyan dental leaders and coordinating his agenda during his team's visit in January.

"The facility and staff under the leadership of Belay Begashaw was everything I had come to expect from a global center," Lal said.

Lal, principal investigator on the research project, worked with faculty this week from the Nairobi Dental School to establish proof of concept for the project by transmitting secure, store-and-forward clinical imaging from the AIDS orphanage and the Maasai Mara community Clinics. He said children at the orphanage will benefit from the year-round digital monitoring of dental and oral infections that can serve as a marker for HIV progression, especially in the absence of affordable or conventional testing.

The model is being expanded to include remote early cancer detection and other diseases in collaboration with the other healthcare professions at the Columbia University Medical Center. Ultimately, these initiatives also foster capacity building in host nations while advancing Columbia University's vision of excellence in research and education in an increasingly globalizing world.