Telemedicine helps to overcome gender-based barriers to healthcare

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An Atlas-award winning study reported in the journal *Telematics and Informatics* has found that healthcare services delivered via video conferencing or mobile phones are helping to improve access to care for women and girls. The findings in rural Nepal are likely to be applied to many other parts of the world where computers and mobile phones are increasingly accessible.

The study has been selected by an international scientific committee to receive this month's Atlas Award from 10 nominations that could significantly impact people's lives around the world or have already done so. The winning research is presented alongside interviews, expert opinions, multimedia and much more on the Atlas website.

"Women and girls access to healthcare is affected by gender roles and norms," said Rajan Parajuli, lead author of the study from the Asian Institute of Technology in Bangkok, Thailand. "We have found those barriers are reduced after introduction of telemedicine services. Thus, I'm hopeful it might be an effective approach to tackle geographic and cultural difficulties in countries facing similar problems like rural Nepal."

To explore these dynamics in the new study, Rajan Parajuli and study co-author, Philippe Doneys, used a mixed method design, tackling the question in multiple ways in hopes of coming to a more convincing conclusion. First, they obtained telemedicine records from two hospitals in Kathmandu, Nepal and three local telemedicine centers in western

Nepal. Those records provided a list of 175 women and girls who had used telemedicine services, either via video conferencing or mobile phone.

About 100 women and girls completed surveys comparing their access to healthcare before and after the introduction of telemedicine. The researchers also conducted in-depth interview with a smaller sampling of the women. In addition to the women and girls, the researchers spoke with a local network provider, health post chiefs, village leaders, school principals, and others about the influence of telemedicine.

The findings show that telemedicine has reduced the frequency of long-distance travel to hospitals as women can receive care from the comfort and ease of their own communities. The vast majority of girls and women in the study reported travel of less than one kilometer to receive healthcare via video conferencing. Mobile phone users reported no need to travel for healthcare services at all. That's especially important because women in rural Nepal often struggle to get the permission they need to travel. The survey and interview responses also highlighted the importance of telemedicine in reducing healthcare costs.

Study participants reported increased comfort in seeking consultation through telemedicine for sexual and reproductive health matters. Overall, the study showed that telemedicine tends to reduce barriers to healthcare for women and girls in rural areas.

"By shrinking distance to healthcare services, telemedicine reduces travel, making it easier to manage time out from household chores, reduces treatment expenses, and reduces apprehension female patients may have sharing their sexual and reproductive health problems," Parajuli and Doneys wrote. "This should help us understand the gender dynamics of information and communication technologies in healthcare, but also shows the interrelation between gender, technology and health."

More information: Rajan Parajuli et al. Exploring the role of telemedicine in improving access to healthcare services by women and girls in rural Nepal, *Telematics and Informatics* (2017). DOI: 10.1016/j.tele.2017.05.006