

**Editorial****Telemedicine for diabetic foot ulcers****Ravi Kumar Chittoria<sup>1\*</sup>**<sup>1</sup>Dept. of Plastic Surgery, Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry, India.**Received:** 20-04-2025; **Accepted:** 29-04-2025; **Available Online:** 03-05-2025

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For Diabetic Foot Ulcers, Telemedicine With an expected prevalence of approximately 536 million persons worldwide in 2021 and a projected rise to 12.2% by 2045,<sup>1</sup> diabetes mellitus is a global health concern. One China has the greatest number of diabetes cases to date, with a projected 141 million people between the ages of 20 and 79 having the disease in 2021.<sup>2</sup> Diabetic foot ulcers (DFU) are anticipated to develop in about 25% of these patients with diabetes.<sup>3</sup> One of the most costly and debilitating consequences of diabetes mellitus is DFU.<sup>4</sup> According to a meta-analysis, DFU has an exceptionally high overall mortality rate, with a 5-year death rate that approaches 50%.<sup>5</sup> Up to 27.3% of amputations are ascribed to DFU.<sup>5-6</sup> The results showed a substantial correlation between DFU and a higher risk of death from all causes (risk ratio 2.45, 95% CI 1.85–2.85).<sup>7</sup> DFU has a substantial negative influence on people's quality of life by contributing to higher hospital costs, decreased productivity, unemployment, social isolation, and depression.<sup>8</sup>

Telemedicine technology has arisen as a result of ongoing improvements to health care systems and the advancement of information technology. In order to provide safe and efficient foot care, this technology helps medical personnel monitor, educate, and manage patients with DFU. Patients who have mobility issues or who live in isolated towns or communities far from medical facilities would especially benefit from it. The use of telemedicine technology lessens the financial and physical strain on patients as well as the demand on

health care resources by cutting down on hospital visits and examination wait times.<sup>9</sup>

One innovative and prospective method of treating individuals with DFU is telemedicine technology.<sup>10</sup> It successfully lessens the clinical load through remote monitoring without raising the total cost of treatment.<sup>11</sup> In comparison to the face-to-face group, the telemedicine group showed comparable healing rates, healing times, and mortality rates, according to a systematic study. The telemedicine group also showed a trend towards reduced expenses. Twelve Telemedicine is seen by DFU patients as helpful for self-monitoring. However, due to a number of enabling and impeding circumstances, the true impact of telemedicine may differ.<sup>12-13</sup>

Telemedicine technology has shown several benefits, however its use to the treatment of diabetic foot disease is still debatable.<sup>14</sup> According to Rasmussen et al., the telemedicine group had a greater death rate than the group receiving normal outpatient monitoring.<sup>15</sup> An excellent strategy for managing DFU, enabling the sensible distribution of medical resources, and lowering medical expenses is telemedicine intervention. Its use can spread to remote locations or areas with little access to medical services, giving community hospitals the technical support of qualified experts to uphold high wound care standards.

According to research, telemedicine intervention costs are less than average, with this tendency being more noticeable in rural and isolated locations.<sup>16</sup> Using telemedicine is a viable way to improve patient compliance and self-care consistency, provide real-time reminders, and

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raise disease knowledge through telemedicine health education. Compared to hospital-based treatments, teleconsultations based on mobile health care pose more difficulties due to technological and knowledge application barriers. It is advised to create a multidisciplinary and multimodal telemedicine system, improve efficient communication between medical specialists, and set rules for telemedicine practice.

With a variety of implementation strategies, telemedicine can be used for consultation, diagnosis, monitoring, and mentoring.<sup>17</sup> In order to provide safe and efficient foot care, this technology helps medical personnel monitor, educate, and manage patients with DFU. In order to respond to a patient's condition more quickly, direct remote connection between patients and medical experts may provide more immediate and real-time observations and guidance. On the other hand, community nurses who communicate remotely could offer patients more complete care since they may have already performed on-site assessments and have a better grasp of the patient's history. More research should be done to determine whether telemedicine is better for patients and experts or for community nurses. Therefore, further research is advised to determine the best course of action in this respect.

### Conflict of Interest

None.

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