

Older Adults Aging in Place: The impact of remote monitoring and education in the prevention of lower extremity wounds



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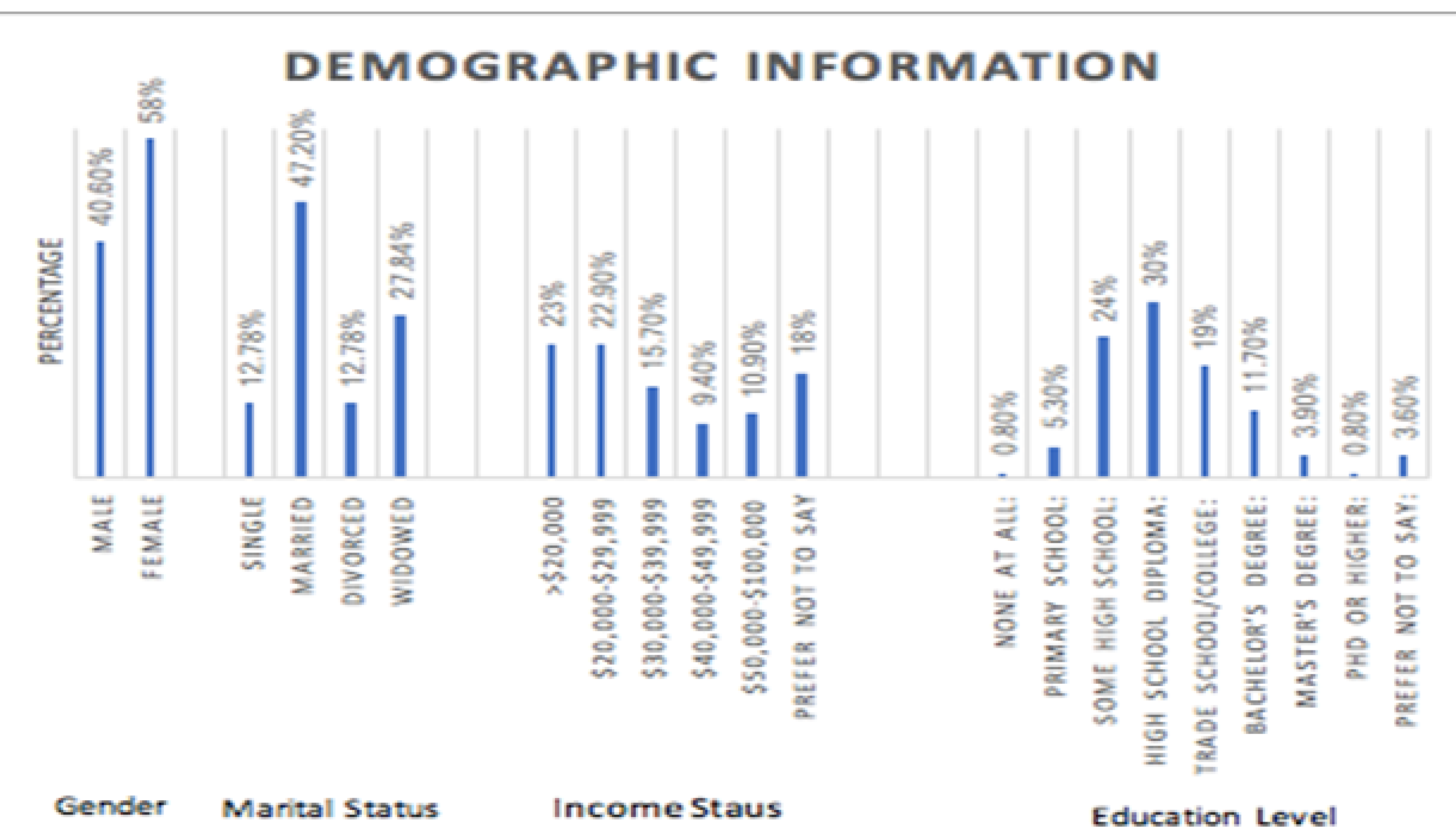
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Objective

Outreach foot care can be used as a tool for engagement with older adults, enabling healthcare professionals to gain entry to the older adults' home.

Background

Diabetic Foot Ulcers (DFU) are one of the most serious and common complications of diabetes accounting for 70% of all non-traumatic lower limb amputations in Canada (1,2) and are documented as one of the top five most costly hospital admissions (3). Research shows that regularly scheduled interventions can prevent 80% of all DFUs (4-6). Yet, Canada was reported to have the lowest rate of high-risk diabetic foot screening among the UK, USA, New Zealand, Australia, and Germany (7). Through the Mobile Seniors' Wellness Network (MSWN) a multidisciplinary team focused on a holistic assessment, education, and problem-solving with the older adult to enhance their ability to remain in their home safely and with confidence. Approximately 50% of the older adults in the MSWN project are living with diabetes, and many struggle with self-management due to limited income, access to health services, and transportation. Foot care is a service that many older adults cannot afford and have not experienced, thus the MSWN team was able to step-in and fill the gap.



Methods

The MSWN is an intervention study that took place between November 2020 and December 2022 that engaged with English-speaking people, 55 years of age and older, living within a 90-minute radius of the capital city during the global pandemic. The CFCN visited six times to provide foot care, health assessments, education, and completed wellness referrals. During this timeframe, the Registered Social Worker focused on addressing holistic needs related to quality of life and connected the older adult with required home support services. Validated tools were used to assess anxiety, depression, diabetic knowledge, fall efficacy, frailty, loneliness, quality of life, and diabetic foot ulcer wound classification. The mobile multispectral near-infrared spectroscopy device paired with a smartphone was integrated into foot care to provide tissue oximetry and temperature of the feet. This additional quantitative data was valuable to the CFCN's assessment and foot care interventions.

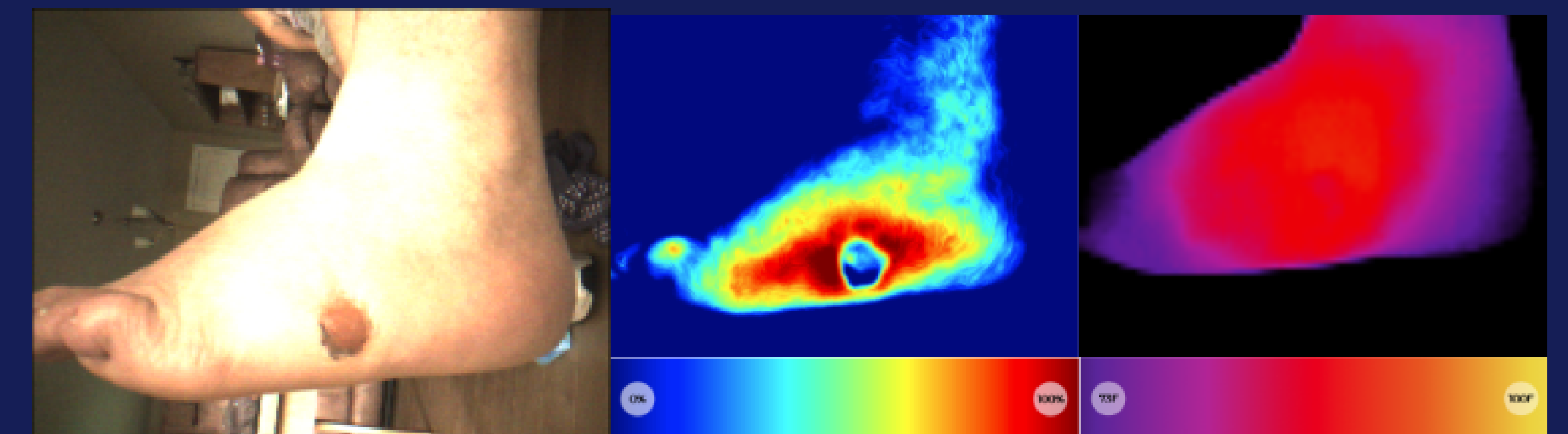
Conclusion

Implementing a widespread diabetic foot screening strategy in Canada such as CFCNs being deployed to the homes of older adults as outlined in the MSWN project has the potential to save healthcare resources while preventing DFUs.

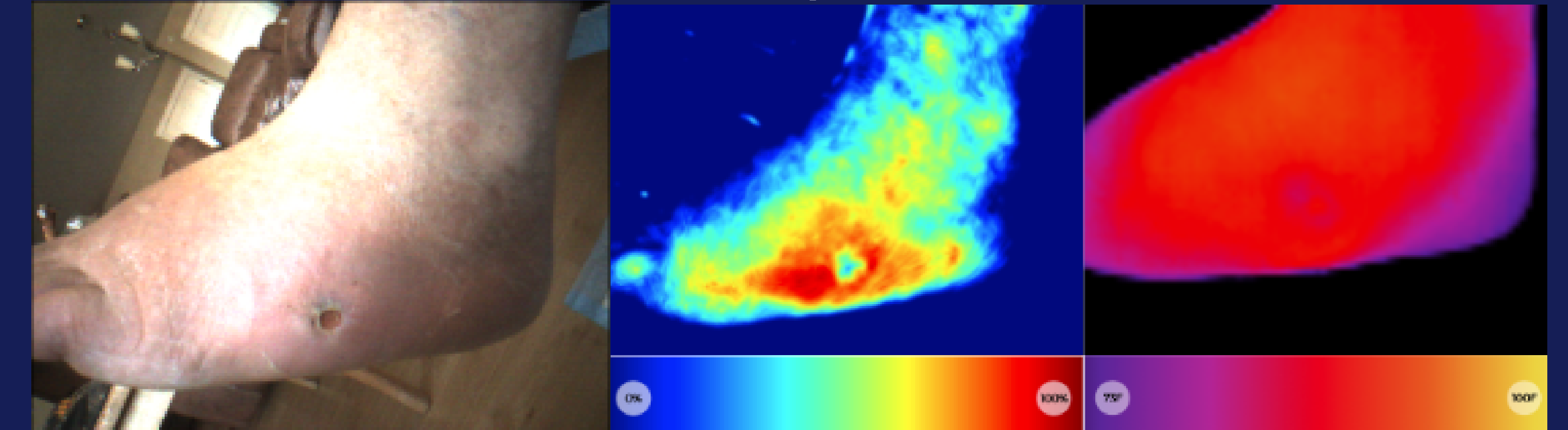
RESULTS

- 366 older adults enrolled, 313 completed with a mean age 75.6 (95% CI +/- 0.89)
- 53.8% were high or urgent risk based on the InLow with the score after three visits significantly lower (Mdn = 1; moderate risk) than the baseline (Mdn = 2; high risk), $z = -2.09$, $p = .036$.
- 6% were living with active DFUs
- A significant increase ($M = 84.6\%$, $SE = 1.2\%$) average diabetic knowledge score after six visits
- Using the Brief Patient Health Questionnaire, depression scores changed from mild to none/ minimal, $t(229) = 2.1$, $p = .04$
- The WHO-QoL-100 Score increased from baseline, though not statistically significant (72.50), mean difference= 3.61, $t(89) = 1.5$, $p=0.14$
- It was found that overall anxiety and quality of life scores improved with the team's interventions.

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“It was nice to have someone check in on you. Not just the foot care – it's a social thing. It was nice to have access to information if we needed it. I felt wanted – like old people finally matter. We sometimes feel like we are part of the scrap pile.”

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