

Making a Difference in Patient Engagement & Wound Outcomes

with Innovative "Point of Care" Fluorescence Imaging in the Mobile Wound Care Setting.



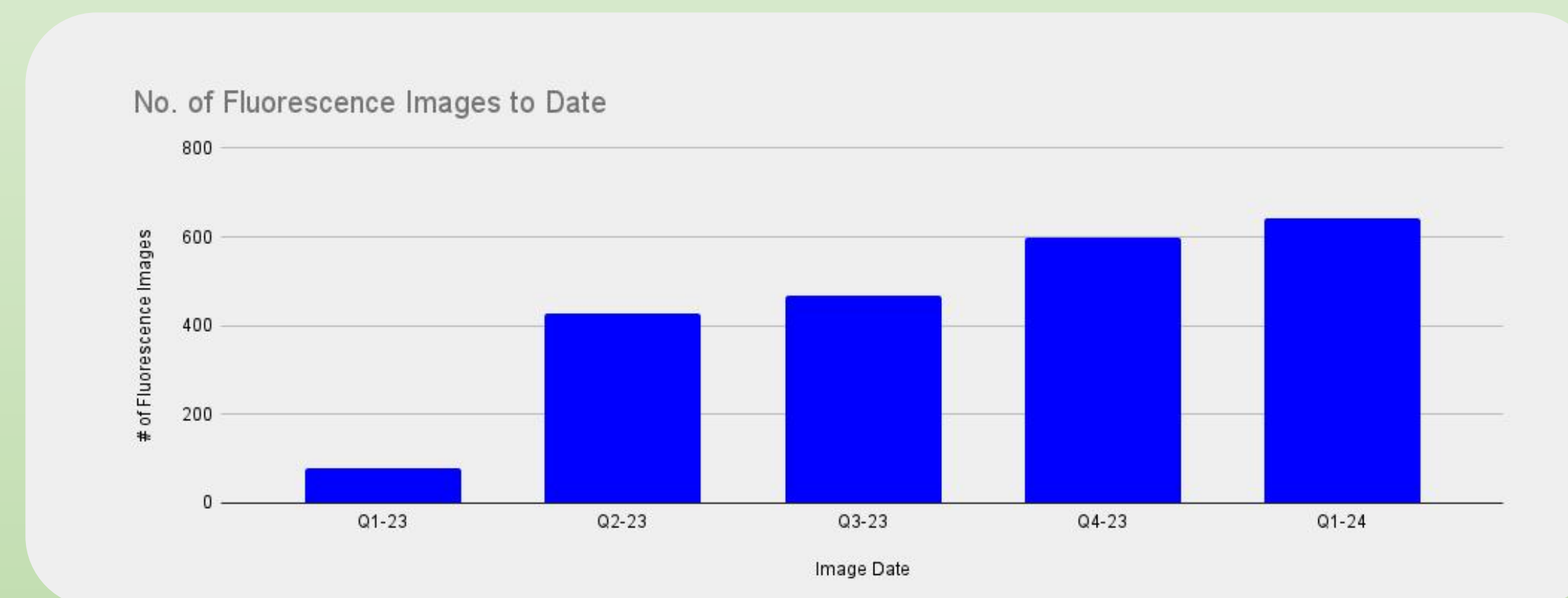
Authors: Ali Saberi, MD | Christina Asher, APRN | Amber Gephart, APRN, FNP-C | Patrick Reid, APRN | Yisel Ruiz, APRN | Lori Back, APRN | Evan Brewer, APRN | Audrey K Moyer-Harris, BSN, RN, MBA, CWS

Introduction

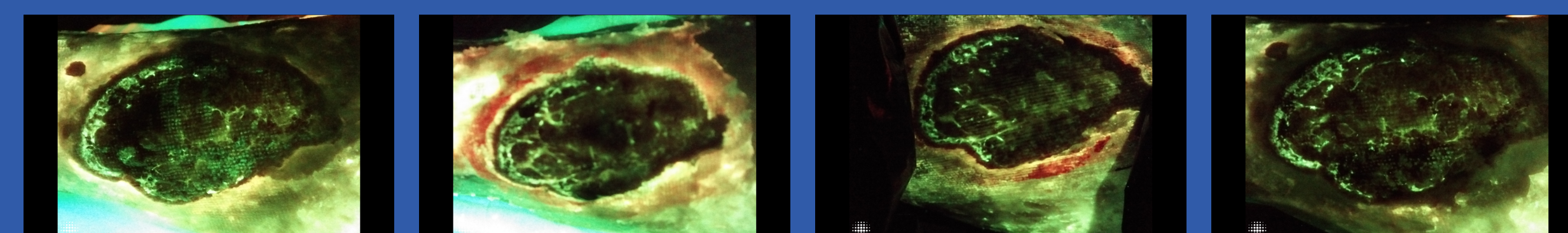
Providing advanced wound healing in the mobile setting (patient's home) has many challenges of its own. However, over a short period of time this mobile advanced wound care program has evolved in many ways. They have quickly adapted to limited resources, long commutes between patients and early adoption of "innovative" advanced adjunctive therapies and technologies. This includes incorporating "point of care" bacterial autofluorescence imaging into their patients plan of care. This advanced wound care solution provides "real-time" point-of-care wound imaging for the detection of the presence and location of elevated bacterial loads and digital wound measurement.

Methods

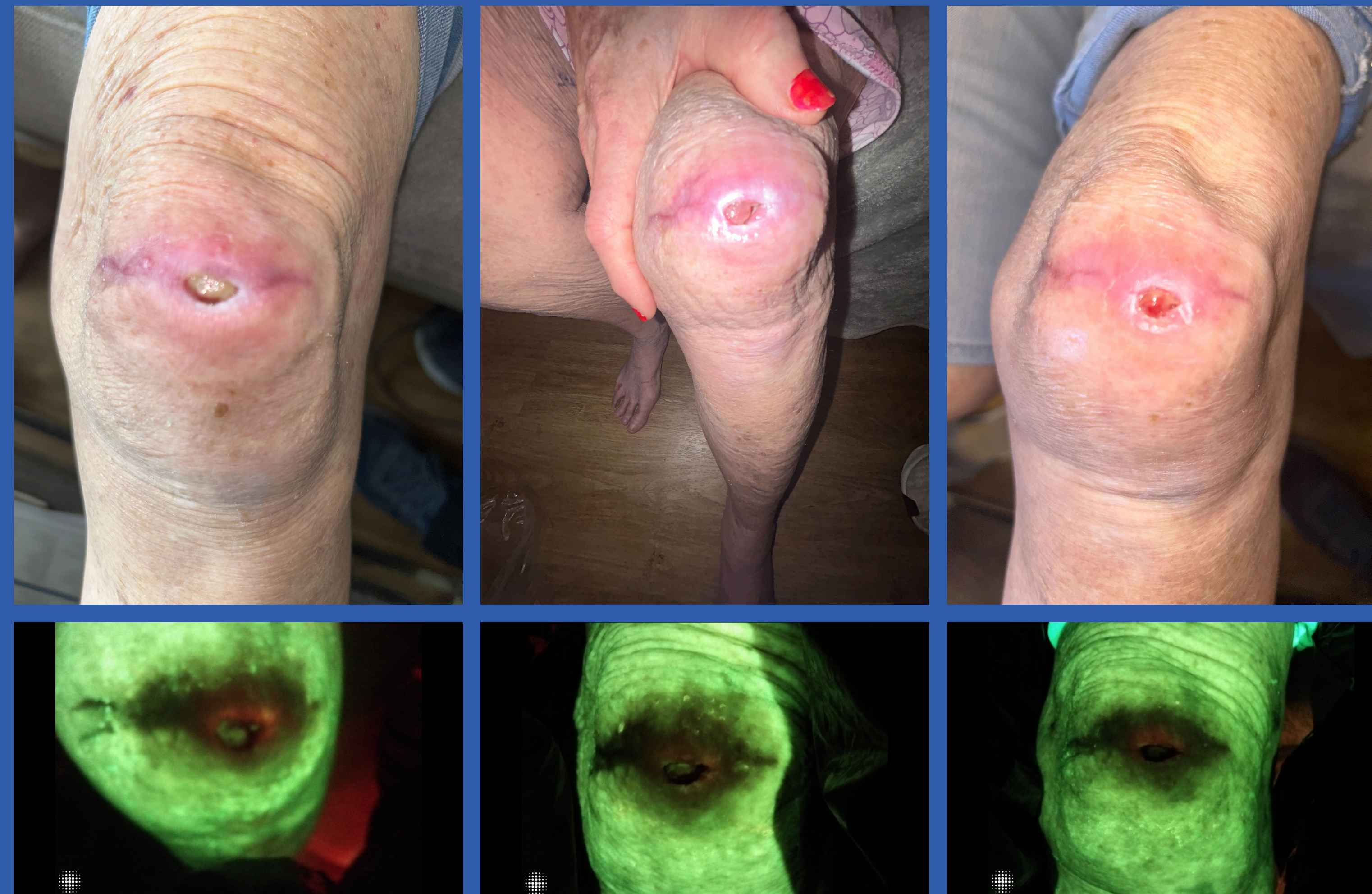
Wound care providers have incorporated fluorescence imaging into their portfolio of innovative technologies to assess and manage patients with elevated bacteria bioburden levels greater than 10.4. Having "real-time" diagnostics allows the providers to make "real-time" decisions for their patients plan of care. By being able to detect the bacterial presence, location and load at point-of-care, it enhances the decision-making plan of care in the moment and improves outcomes.



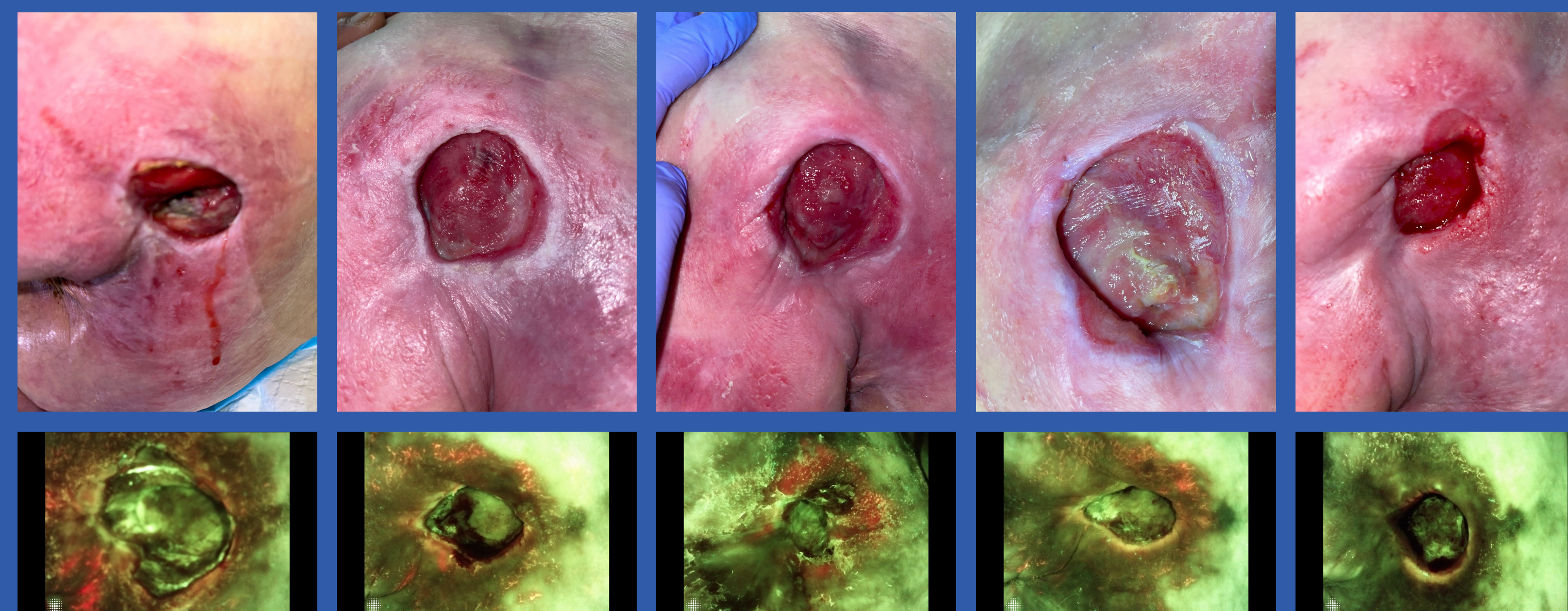
Assessed and managed over 2200 wounds with "real-time" diagnostics, impacting decision-making for plan of care.



Pt #1 - 77 year old female, LLE Venous onset date 1/31/21, 1st visit by our providers, 12/5/23 50.22 sq cm, currently over 80% healed - standard of care, vascular assessment/management, diagnostic evaluations/intervention & compression management including fluorescence imaging for "real-time" point of care evaluation and management of targeted hygiene and debridement.



Pt #2 - 92 year old female, fell on knee requiring sutures. Within a few days, wound reopened on September 1, 2023. 2.3 x 0.7 x 0.4 cm with 0.5 undermining. Standard of Care including management of infection (fluorescence imaging) knee brace. Wound is now 84% healed.



Pt #3 - 59 year old female, Multiple Scleroses, recurrent multidrug-resistant UTI, neurogenic bladder with chronic indwelling Foley catheter, underlying ESR and on Hemodialysis. Hx of Osteomyelitis Sacral Pressure Injury stage 4. Onset over a year prior to her 1st visit; onset 1st visit by our providers 4/13/23 15.5 sq cm with 1.5 cm depth and 6.0 cm undermining. Standard of Care including management of infection (fluorescence imaging). Currently wounds are 63%

Results

Retrospective analysis includes over 2200 non-contact real-time fluorescence wound images for bacterial presence, location, and load, per session. Having technology at your fingertips gives the providers the opportunity to manage and/or adjusting patients plan of care, including monitoring for success of Cellular, Acellular and Matrix-Like Products (CAMPs). The ability of taking pre and post imaging and videos has allowed the provider to evaluate their plan of care at the bedside, providing them with the opportunity to refine or complement their original plans of care and optimizing and accelerating healing. Providers are trained to interpret fluorescent images. Red fluorescence signals indicated the presence of Gram-positive and Gram-negative bacteria at loads (above 10.4 colony forming units per gram) and cyan signals (bright white center and a green/blue halo indicates the presence of Pseudomonas Aeruginosa 10.4 DFU. "Real-Time" results to differentiates of red-ranges of fluorescence indicating a variety of unspecified bacteria loads (at >104 CFU/g), or cyan fluorescence specifically identifying Pseudomonas Aeruginosa (at >104 CFU/g). These results give the provider the opportunity to change a plan of care in the moment, which may include additional wound hygiene, and debridement or modifying the treatment orders to include an antimicrobial dressing or even antibiotics if needed. These results immediately provides clinicians with objective information on the presence and location of high bacterial loads to better inform bacterial-infection management strategies. Between opening day of August 2022 until April 2024 our team Fluorescence Imaged over 2,441 wounds.

Discussion

Improving the providers opportunity to assess and manage in "real-time". Giving the provider "point of care" diagnostics to assess and manage elevated bacteria loads in the wound/ulcer bed and peri-wound. These results are reflected in their wound healing outcomes in many ways including but not limited to increasing wound / ulcer healing rates, decreasing antibiotic prescribing, decreasing antimicrobial dressing cost, and even preventing readmission rates. Most importantly, improves the patient's engagement to their plan of care and over all improves their wound healing outcomes.

References

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- Use of a bacterial fluorescence imaging system to target wound debridement and accelerate healing: a pilot study. Windy Cole and Stacey Coe. *Journal of Wound Care* 2020 29:Sup7, S44-S52



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