



# Comparing the use of Soft Total Contact Cast and Hard Shield Total Contact Cast in the Management of Diabetic Foot Ulcer



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## Introduction

Diabetic foot ulcers (DFU) are still posing a challenge to physicians in producing an effective treatment plan. The total contact cast (TCC) is currently the standard of care for treatment of DFU's. However, total contact cast can themselves cause new wounds. Furthermore limitations of TCCs including cost, complexity and time, commitment for application calls for an alternative option.

## Objective

**Primary Objective** -To compare the healing rates of diabetic foot ulcers data of diabetic foot ulcers treated with total contact casts. treated with soft contact cast to national benchmark data of diabetic foot ulcers treated with total contact casts.

**Secondary Objective(s)** -To compare complication rates in patients with diabetic foot ulcers treated with soft contact casts to national benchmark

## Methods

Using Epic slicer dicer, 180 patients were selected within patients with DFUs that were treated at our Mercy Hyperbaric and Wound Care clinic between 6/1/2022-12/31/2022.

Of the 180, 25 patients who were treated with soft contact cast were randomly selected. After reviewing the charts, 11 patients and 13 wounds are reviewed for our study.

## Inclusion criteria

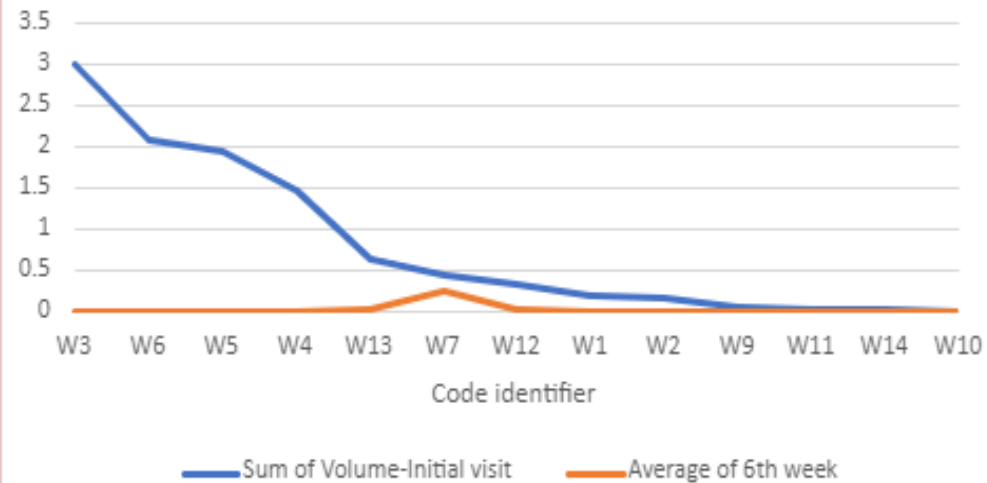
- Age ≥ 18 years
- All genders
- Patients with subcutaneous/superficial foot ulcers-defined as grade 0,1 of Wagner Diabetic foot ulcer grade classification

## Exclusion criteria

- All ulcers of grade II, III, IV, V of Wagner's grading
- Underlying osteomyelitis
- Ischemic ulcers
- Noncompliance
- Ulcers treated with total contact casts.

## Results

'Sum of Volume-Initial visit', 'Average of 6th week' by 'Code identifier'



## Results

In our analysis, we calculated a mean healing time of 5.84±6.2 weeks with a p-value of 0.08. This is comparable to 8.4 weeks with TCCs.

Of the 11 patients, 18% (2 patients) developed 3 new wounds.

No falls or new infections were observed in any of the patients.

## Conclusion

Our findings show no statistically significant difference (P=0.08) in mean healing times with TSCC compared to TCC. We propose that treatment with TSCCs is comparable to the current standard of care (TCC) in treatment of superficial DFUs with fewer complications.

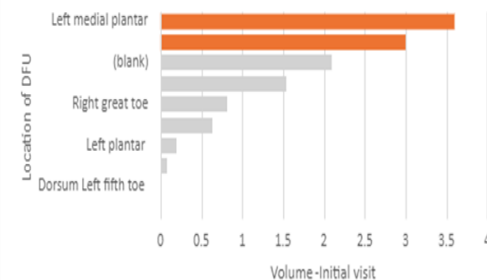
## References

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Zhang P, Lu J, Jing Y, Tang S, Zhu D, Bi Y. Global epidemiology of diabetic foot ulceration: a systematic review and meta-analysis †. Ann Med. 2017 Mar;49(2):106-116. doi: 10.1080/07853890.2016.1231932. Epub 2016 Nov 3. PMID: 27585063.

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'Location of DFU': Left medial plantar and Left great toe have noticeably higher 'VolumeInitial visit'.



'Time till complete wound healing' by '5th week'

