

# Decreased Health Care Expenditure and Average Length of Therapy with Facilitated Transition Discharge Program for Negative Pressure Wound Therapy Patients

Leila Boti, MS; Laura Soloway, PhD, MPH; Deb Myers, BBA; Dinu Pillai, BS; Javad Zabihi, MS

3M, St Paul, MN

## Background

- Delays in hospital patient discharge are associated with increased cost, infection, lower patient satisfaction and even mortality.<sup>1,2</sup>
- Device consignment programs that allow for on-site home care equipment to be provided to the patient at or before hospital discharge can ease logistics and facilitate the transition out of acute care.

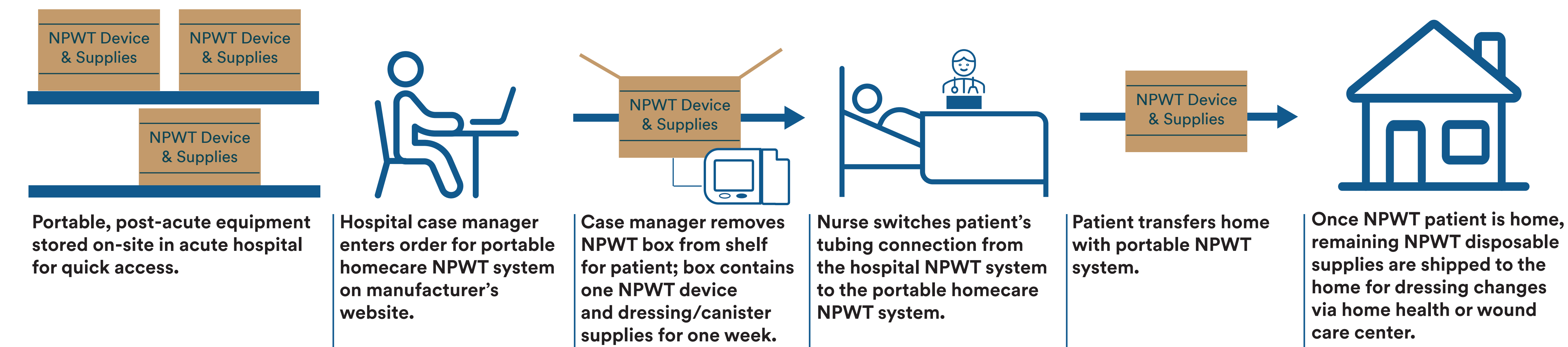
## Aim

- This study compares the average length of negative pressure wound therapy (NPWT) between patients discharged from acute care facilities that have instituted a facilitated transition (FT) discharge program allowing for on-site NPWT systems to be provided to the patient at or before hospital discharge vs patients in facilities without this program (non-FT).

## Methods

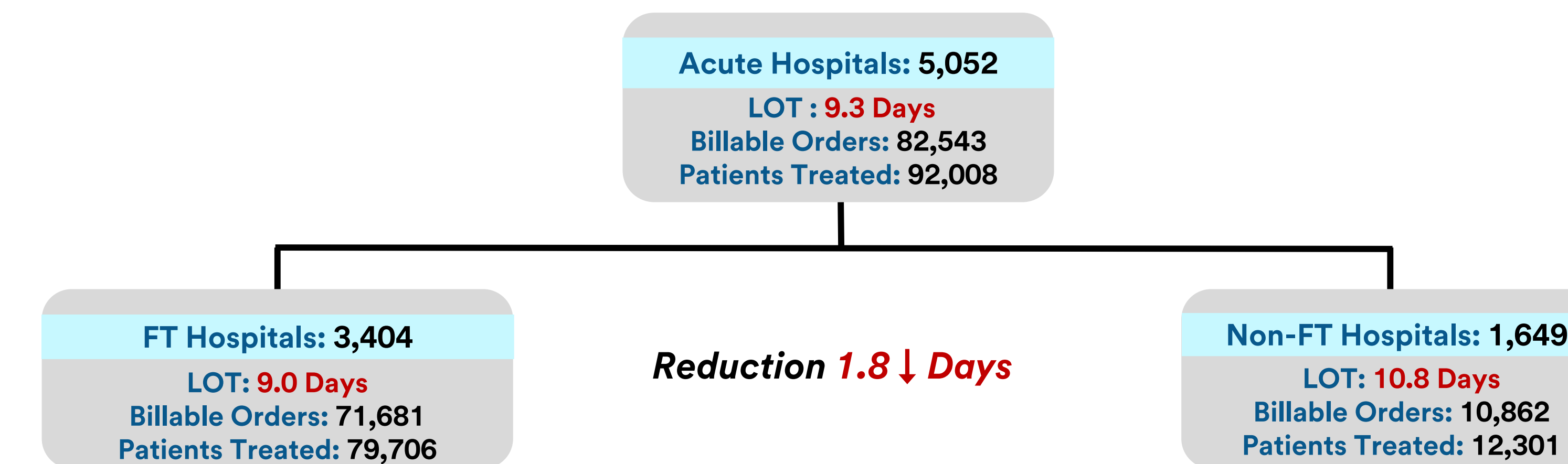
- Billable orders from January 2021-September 2021 were obtained through Oracle data sources and analyzed in 3-month rolling intervals.
- **Figure 1** is a description of the FT program.
- Hospitals with an FT discharge program\* were further segmented into active FT facilities (at least one FT program transition order within the prior 90 days) vs inactive FT facilities (FT program set up but no FT program transition orders during past 90 days).
- Billable orders were counted for NPWT systems<sup>†</sup> among patients treated with NPWT within the last 3 months.
- 82,543 billable orders and 92,008 patients were analyzed.
- Average length of therapy (LOT) was computed as: (sum of total therapy days)/(number of patients treated).

## Methods (Cont'd)

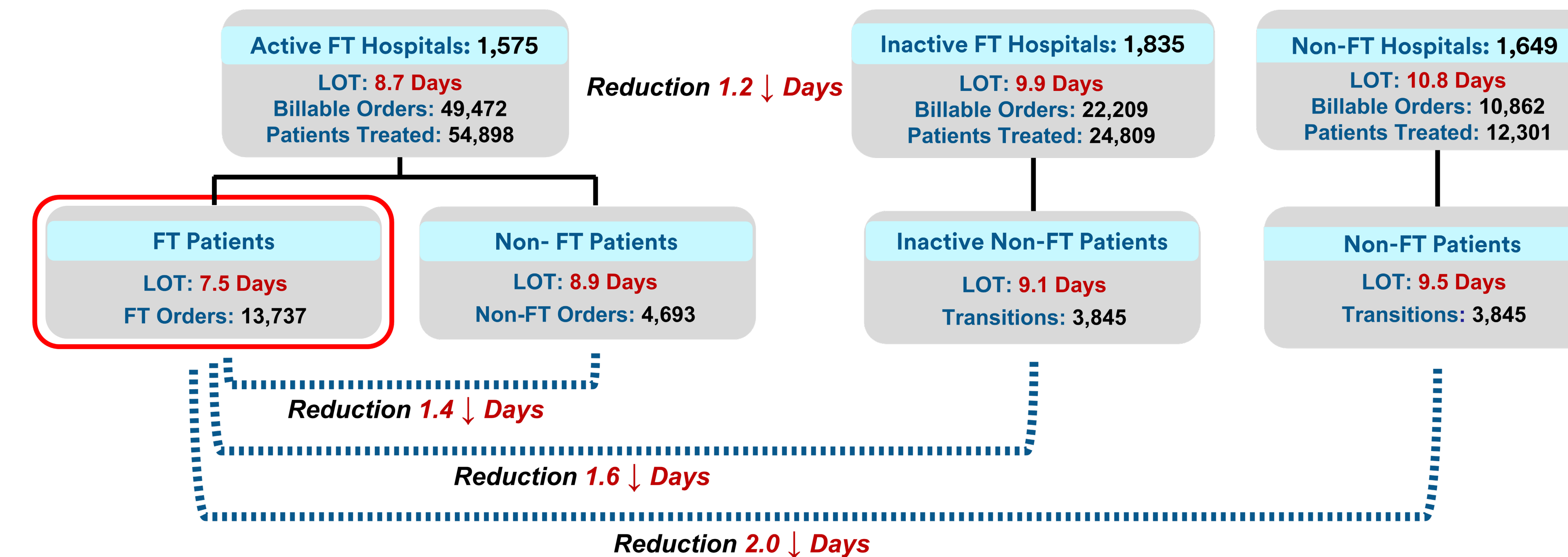


**Figure 1.** The facilitated transition process from hospital to home with NPWT

## Results



**Figure 2.** FT vs. Non-FT hospitals analysis results. LOT = Length of therapy



**Figure 3.** Active vs. Inactive FT hospitals analysis results. LOT = Length of therapy

## Results (Cont'd)

- Inpatient LOT was 1.8 days shorter for FT vs non-FT facilities (9.0 vs 10.8 days); this equates to a potential per patient hospital savings of \$5,071 (1.8 days X \$2,817 daily inpatient cost<sup>3</sup>) for FT facilities.
- 69% (49,472) of billable orders and 69% (54,898) of patients were in active FT facilities.
- 75% (13,737) of transitions from active FT facilities were placed via FT program.
- LOT was 1.2 days shorter in active FT vs inactive FT facilities (8.7 vs 9.9 days) and 1.4 days shorter from FT program vs non-FT program discharges in active FT facilities (7.5 vs 8.9 days).
- There was a 2.0 day LOT decrease for active FT program patients vs non-FT patients (7.5 vs 9.5 days).
- Results of the analysis are shown in **Figures 2 and 3**.

## Conclusions

- This study shows the benefits of shorter inpatient stays and LOT for patients hospitalized in facilities actively using the FT program.
- Shorter inpatient stays and LOT may potentially lower healthcare expenditures.

## References

1. Thorup CB, Hougaard M, Blindum PF, et al. Hospitalised patients' experiences during Negative Pressure Wound Therapy due to surgical site infection after vascular and cardiac surgery. *Int Wound J*. 2018 Oct;15(5):707-716.
2. Rojas-García A, Turner S, Pizzo E, et al. Impact and experiences of delayed discharge: A mixed-studies systematic review. *Health Expect*. 2018 Feb;21(1):41-56.
3. HCUP Reports. Healthcare Cost and Utilization Project (HCUP). Hospital Inpatient National Statistics 2017 (non-neonatal, non-maternal discharges only). Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/reports.jsp. Accessed Oct. 27, 2021.