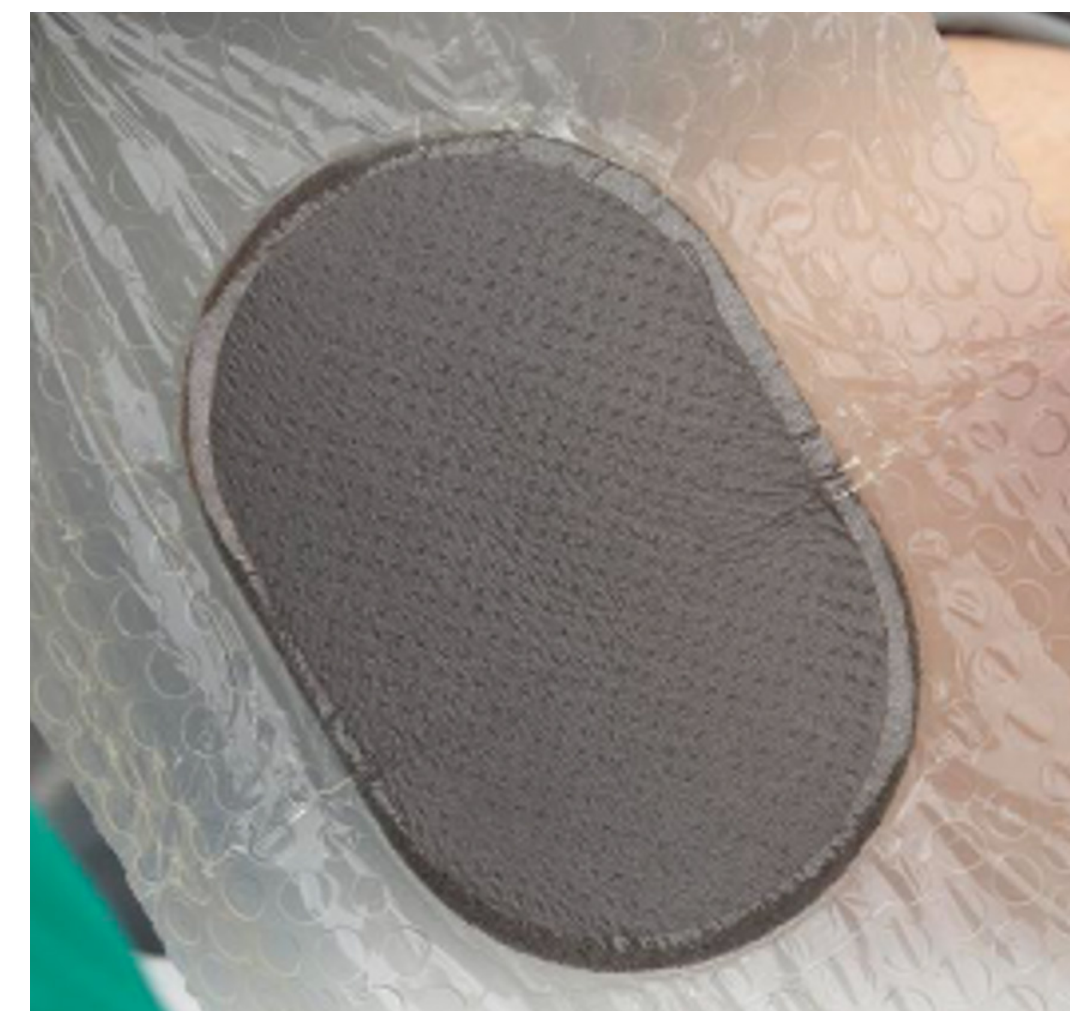


# Evaluating the Health Economic Value of Implementing an All-In-One, Extended-Wear Negative Pressure Wound Therapy Dressing

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## Introduction

- An all-in-one negative pressure wound therapy (NPWT) dressing\* (**Figure 1**) integrates foam and drape for easy application.
- Its ease of use and ability for extended wear (up to seven days) enables changes to wound care protocols.



**Figure 1.** All-in-one integrated foam dressing with drape.

## Purpose

- This research study aimed to determine the economic value, based on time and cost savings, associated with introducing the all-in-one dressing into the acute care or home health care settings in the United States.

## Methods

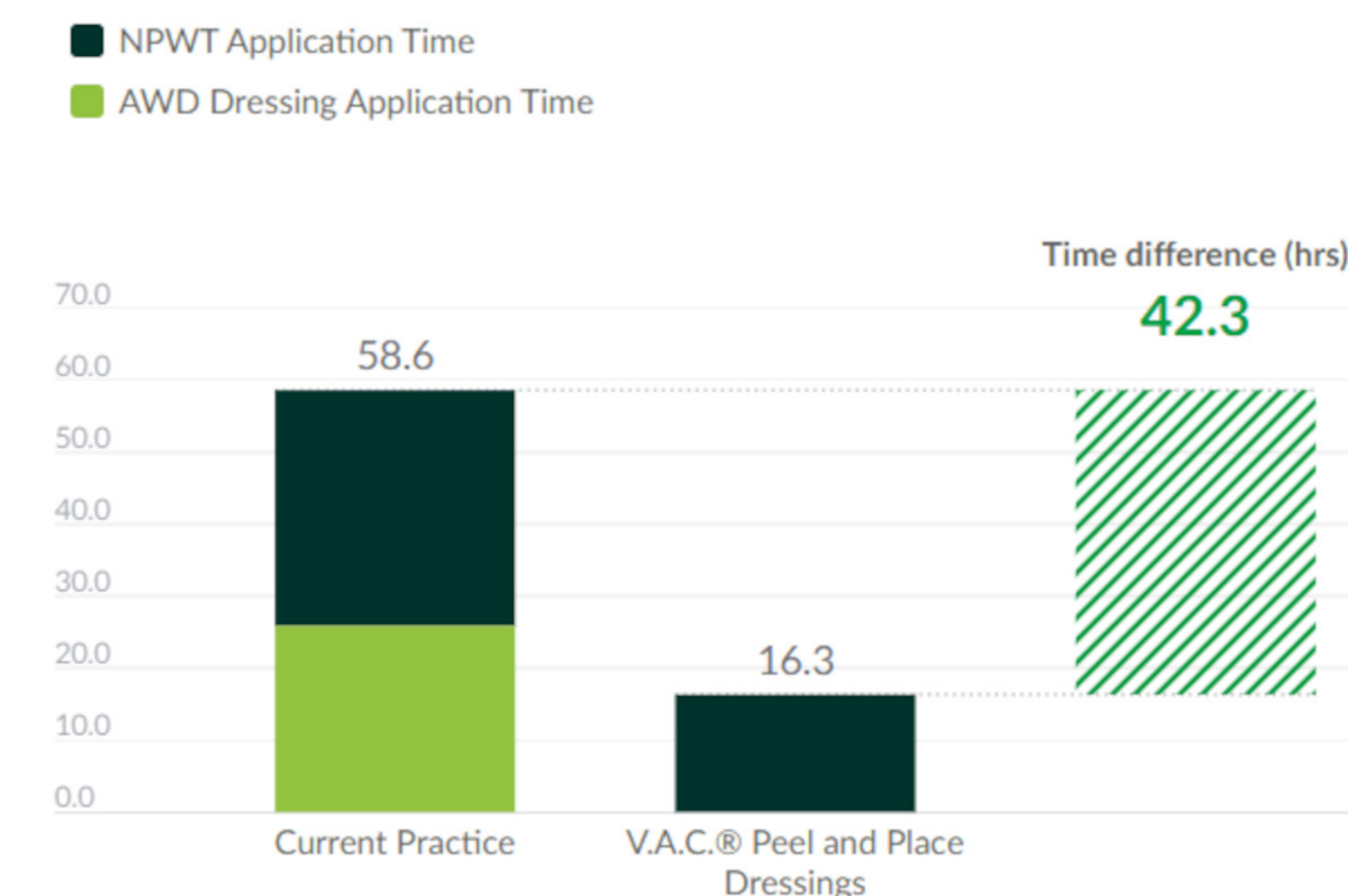
- Budget Impact Assessments were developed for 1) acute care and 2) home health settings, evaluating the impact of implementing the all-in-one dressing (changed weekly) to replace existing dressings.
- In the acute care setting:
  - Usage, cost, and application time assumptions included 100 advanced wound care dressings (AWD; 4x weekly, 27 secs) and 100 traditional NPWT dressings† (3x weekly, 4 min 40 secs).<sup>1</sup>
  - This model included a \$5 cost for consumables per dressing change and a nursing hourly rate of \$41.38.<sup>2</sup>
- In the home health care setting:
  - The assumption was to replace standard of care for 10 patients using AWD (4x weekly, 2 visits) and 10 patients using traditional NPWT dressings (3x weekly, 3 visits) per month.
  - Monthly mean reimbursements were \$2,989 per patient,<sup>3</sup> and the mean cost per wound care visit was \$168.40.<sup>4</sup>

## Methods (Cont'd)

- Per application, costs were \$20.27 for AWD, \$49.87 for traditional NPWT dressings, and \$109.95 for all-in-one NPWT dressings.
- The implementation of the all-in-one NPWT dressing is limited to wounds without tunnelling and undermining >2 cm, and wound depth should be no greater than 6 cm.

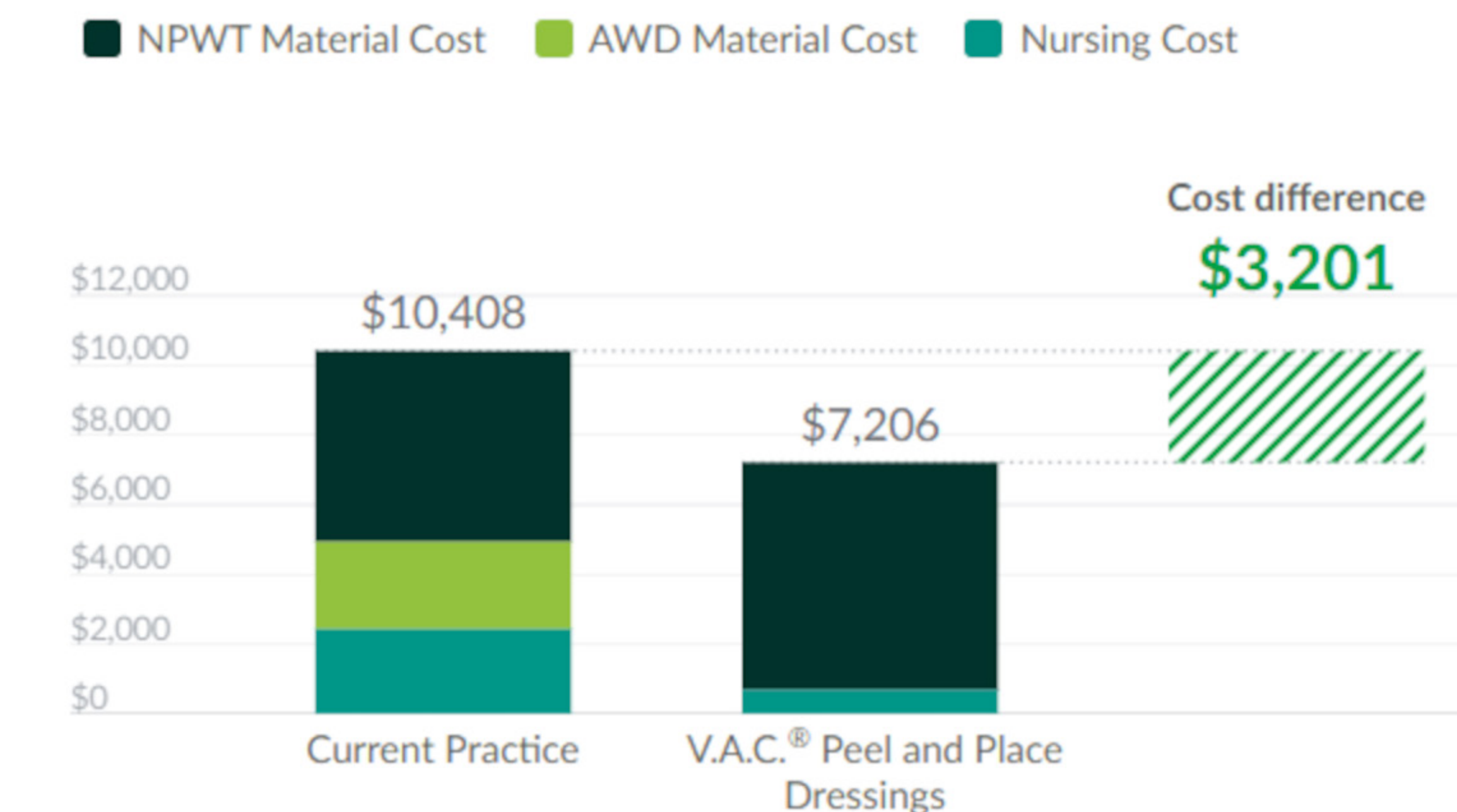
## Results

- In the acute care setting:
  - Replacement of 100 traditional NPWT dressing changes and 100 AWD dressing changes would require only 58.3 all-in-one NPWT dressing changes, which could save 42 hours (72%) of nurse working time (**Figure 2**).
  - There is a potential reduction by \$3,201 in total cost, including \$ 1,452 material cost savings (**Figure 3**).
- The cost savings of the acute care model scenario is highly sensitive to the frequency of dressing changes and unit costs. While nursing cost is the main contributor to overall cost savings, the model is less sensitive related to the hourly nursing cost.
- The break-even point for a cost-neutral exchange of traditional NPWT dressings in acute care settings is reached when the mean wear time of all-in-one NPWT is 5 days (1.4 dressing changes week).



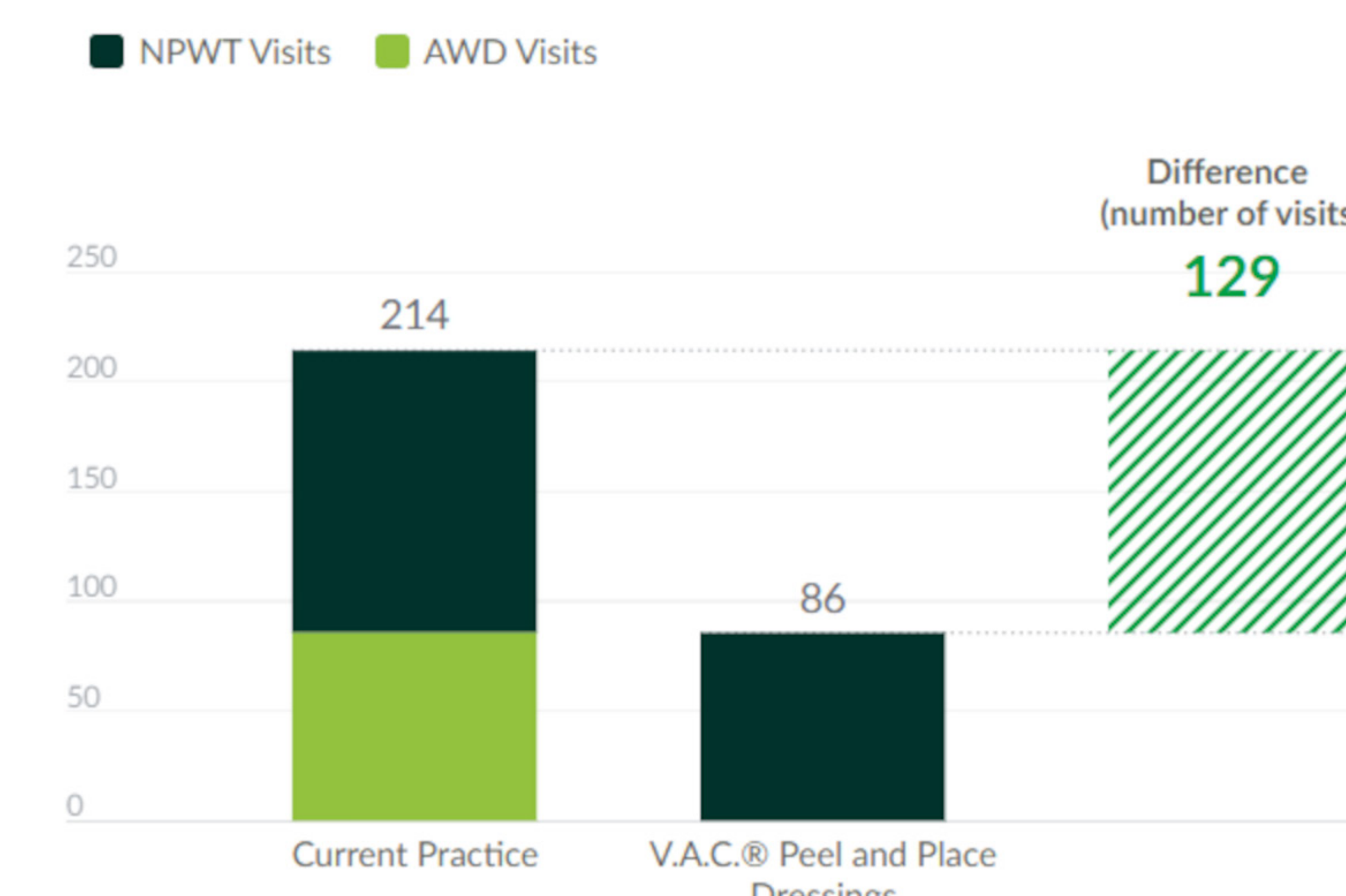
**Figure 2.** Time savings in acute care settings.

## Results (Cont'd)



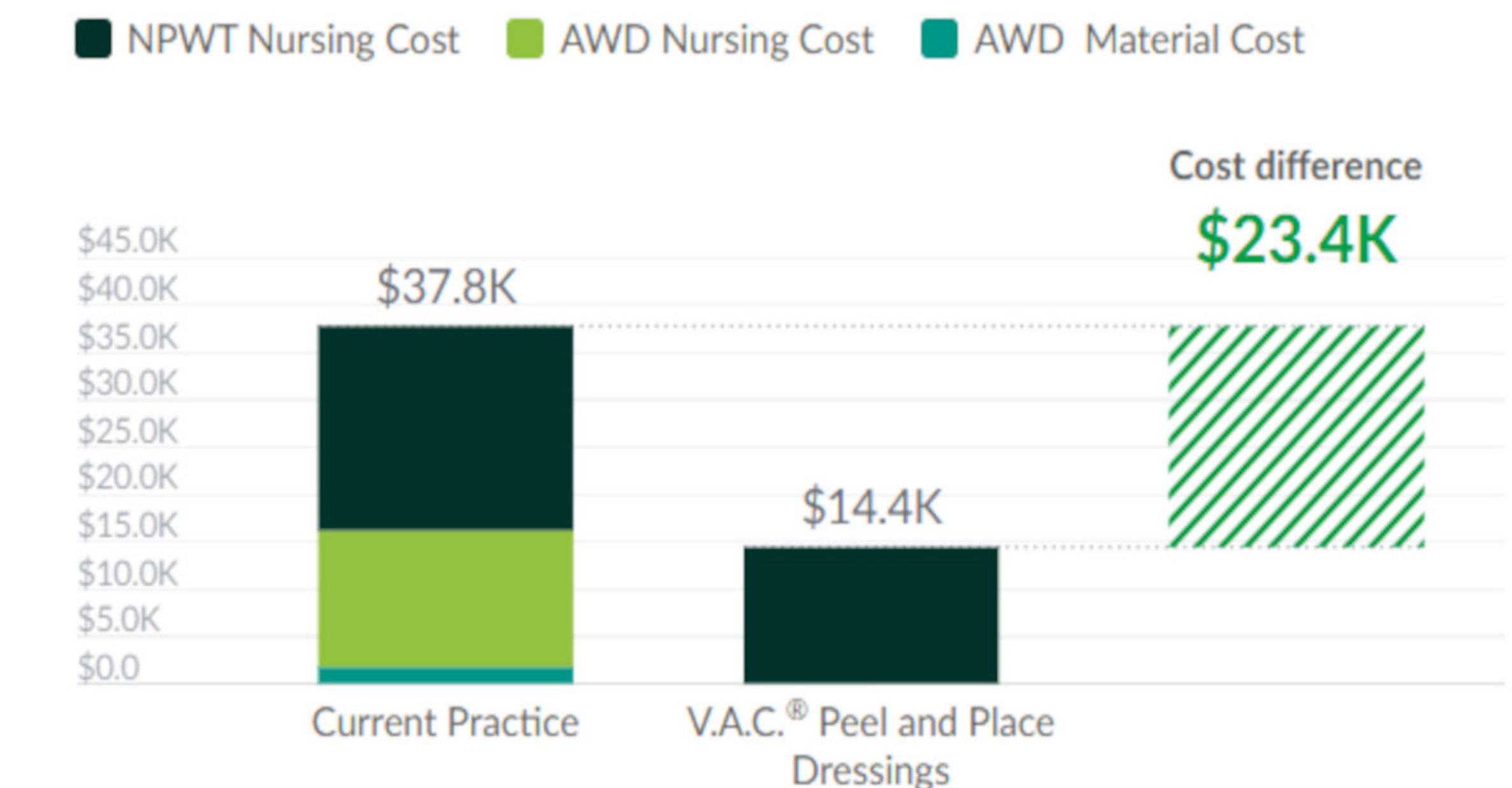
**Figure 3.** Cost savings in acute care settings.

- In home health care setting:
  - Switching 10 patients from traditional NPWT dressings and 10 patients from AWD to all-in-one NPWT could result in 129 (60%) fewer visits (**Figure 4**) and \$23,400 (61.8%) savings (**Figure 5**).
  - With fewer dressing changes, the cost of care can be reduced by >60% with the implementation of all-in-one NPWT.
  - In a scenario focused on replacement of traditional NPWT only, a 67% reduction of nursing visits can be realized.



**Figure 4.** Fewer visits in home health care settings.

## Results (Cont'd)



**Figure 5.** Cost savings in home health care settings.

## Conclusions

- The cost-benefit in acute care settings is mainly dependent on nursing time savings, while in home health care, it is the reduced frequency of visits.

## References

1. SAT-MTF-05-995965 Marketing Study for 3M V.A.C. Peel and Place dressing. 2023
2. The 2022-2023 mean hourly rate of US registered nurse USD \$41,38 US Department of Labor: <https://www.bls.gov/ooh/healthcare/registered-nurses.htm>
3. 2024 Medicare average monthly rate for wound care patients, estimated with 2024 average wound related case mix weight x 2024 base rate of \$2,038.13 according to: <https://www.federalregister.gov/documents/2023/11/13/2023-24455/medicare-program-calendar-year-cy-2024-home-health-hh-prospective-payment-system-rate-update-hh>
4. CMS Issues Final 2024 Home Health Payment Rule for Medicare Providers - LeadingAge New York ([leadingagency.org](https://www.leadingage.org)).