

A Novel Urostomy Pouching System with Leakage Detection and Multi-Orientation Features

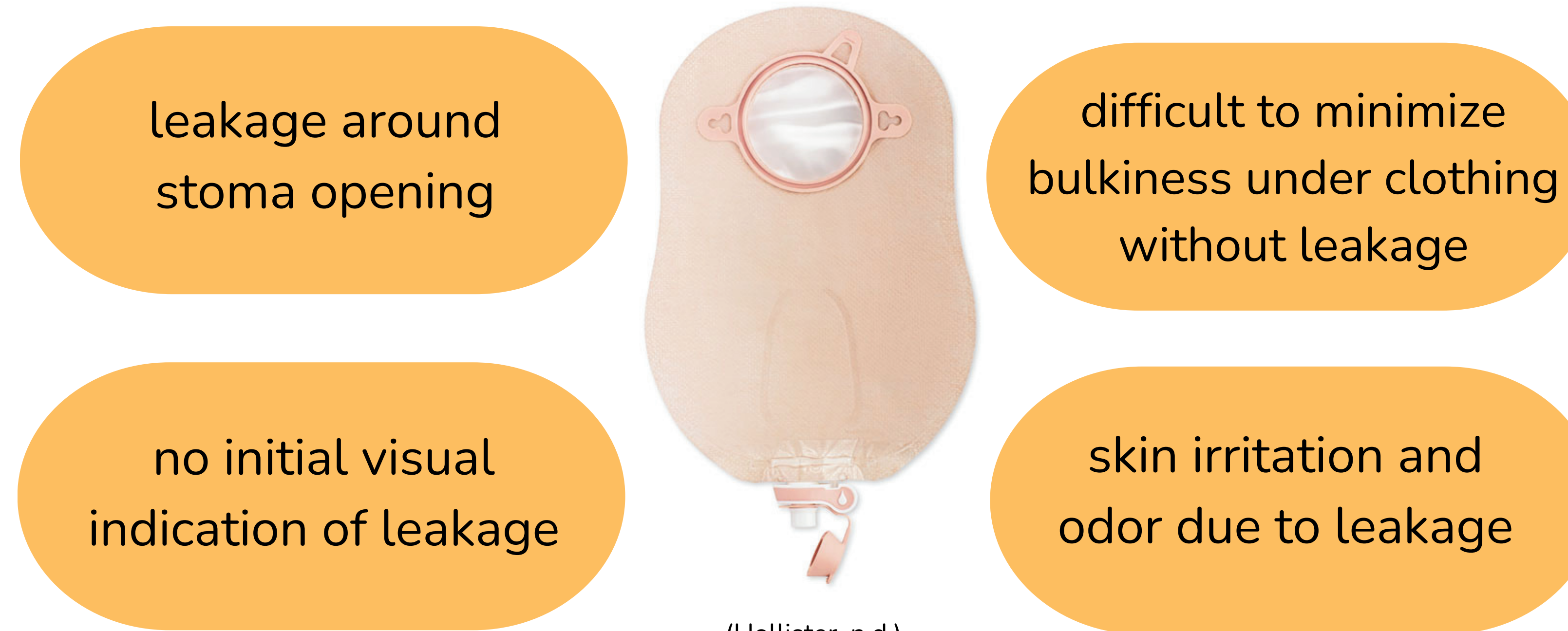
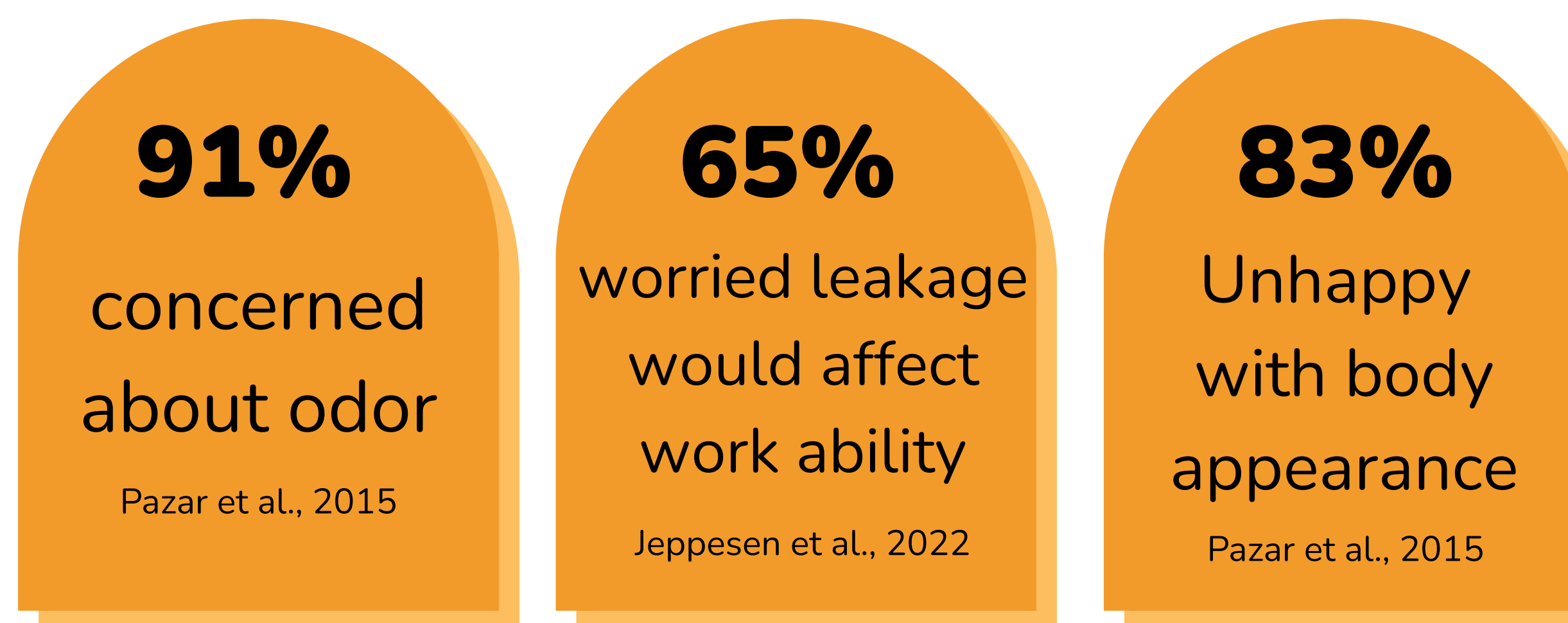
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Project Overview

Urostomy is a type of urinary diversion that reroutes urine flow through the creation of a stoma. Current urostomy interventions often cause discomfort and impact on patients' work abilities and social activities due to issues such as **leakage, body appearance, odor, and skin irritation**. Many of these issues are rooted in the design of urostomy appliances, highlighting the pressing need for an improved urostomy intervention that addresses these multifaceted challenges amongst urostomy patients.

We present a novel pouching system comprising **Stomify Baseplate and Stomify Pouch**. The Stomify Baseplate integrates a leakage absorption and detection mechanism allowing user to check for leakage during routine pouch emptying every 2 to 4 hours. The Stomify Pouch is designed for flexible orientation, enabling users to wear it both vertically and horizontally without flow interruption due to external pressure from clothing.



(Hollister, n.d.)

Our Novel Solution

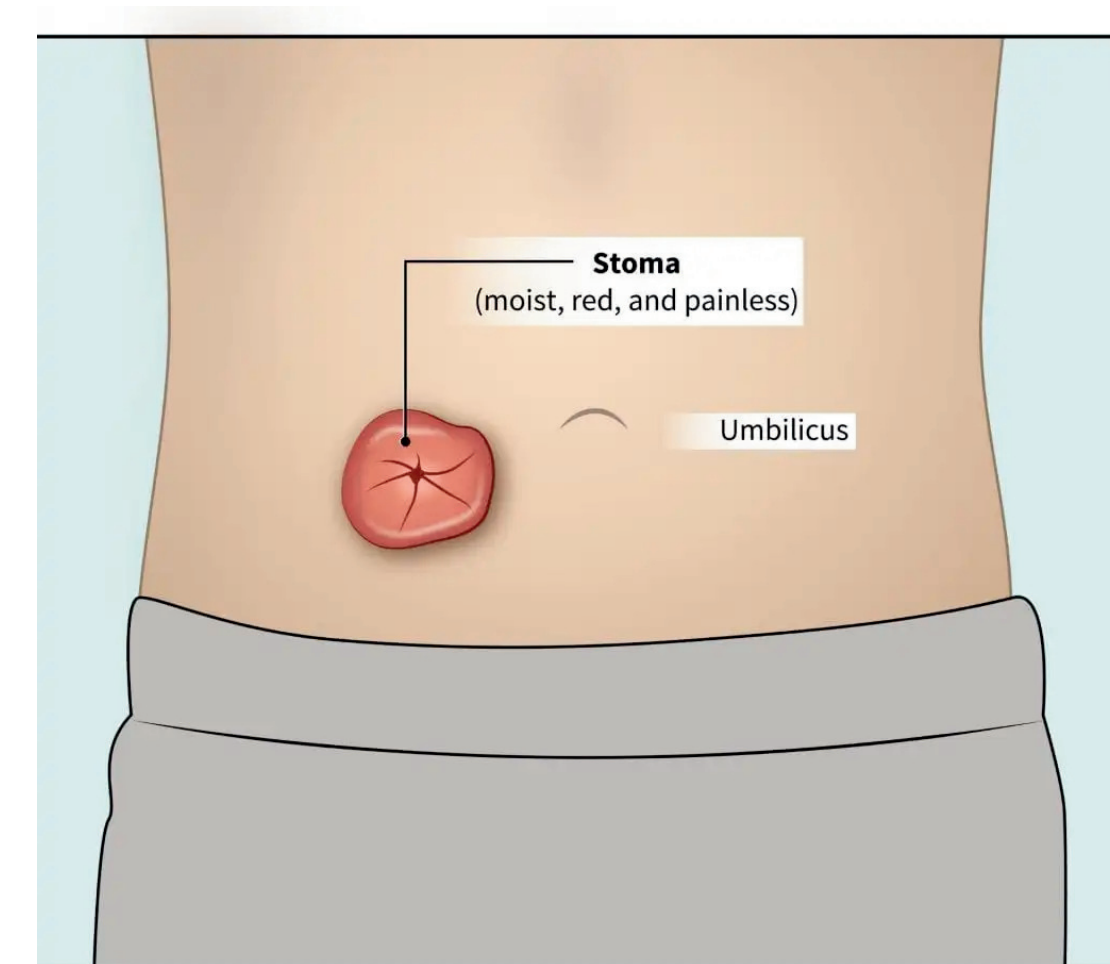
- Early detection and prevention of leakage
- Ability to wear bag vertically or horizontally without backflow
- Uninterrupted flow with different bag placement and clothing items

Background

A urostomy is a surgical procedure that creates an opening in the abdomen for the passage of urine called a **stoma** (Tanna et al., 2022)

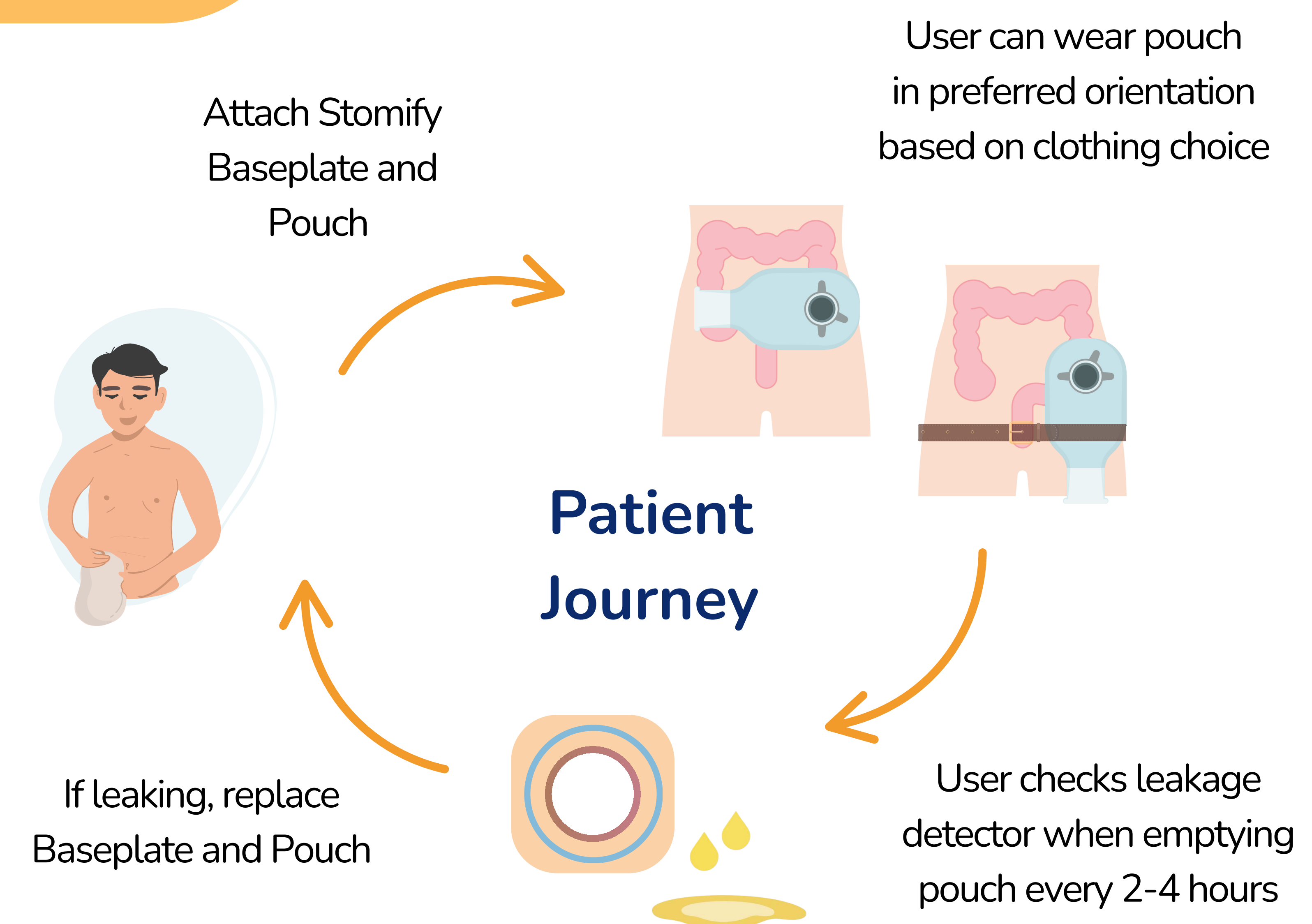
38,000
Urostomies per year
in the US

(United Ostomy Association of America, 2024)



(Charles, 2022)

Individuals with urostomy need a solution that **discreetly diverts urine from the stoma site to minimize leakage and inconvenience in daily activities**



References

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- [4] Jeppesen, P. B., Vestergaard, M., Boisen, E. B., & Ajslev, T. A. (2022). Impact of stoma leakage in everyday life: Data from the Ostomy Life Study 2019. *British Journal of Nursing*, 31(6). <https://doi.org/10.12968/bjon.2022.31.6.s48>
- [5] Hollister. (n.d.). New image two-piece urostomy pouch. New Image Two-Piece Urostomy Pouch. <https://www.hollister.com/en/products/ostomy-care-products/two-piece-pouching-systems/urostomy-pouches/new-image-two-piece-urostomy-pouch>
- [6] United Ostomy Association of America. (2024). UOAA New Ostomy Patient Guide.