

Minimizing Food Waste in Sri Lankan Hospitals: A Comprehensive Approach

Sri Lanka's private hospitals are taking significant strides toward sustainability by introducing the **Minimum Food Waste Toolkit**, an innovative initiative designed to reduce food waste while improving patient satisfaction and nutrition. Spearheaded by the Dietitians Association of Sri Lanka and funded by ICDA-SFS, this initiative addresses the pressing issue of food waste, which constitutes 10-15% of hospital solid waste, contributing to environmental degradation and economic inefficiencies.

Key Features of the Toolkit

The toolkit implements a **patient-centered and sustainable food service approach** by integrating nutritional science, operational efficiency, and real-time waste tracking. It focuses on key areas such as staff training, patient engagement, and individualized nutrition plans.

- Staff Training:** A comprehensive training program equipped food and beverage staff with skills in disease-specific diets, natural flavor enhancement, and standardized portion control. Ward coordinators and nursing staff were educated on effective communication and supporting patients' nutritional needs, while chefs and kitchen helpers were guided in preparing visually appealing, disease-specific meals in correct portion sizes to suit patient requirements.
- Screening and Monitoring Tools:** The toolkit incorporated a validated Visual Analog Scale (VAS) appetite screening tool, aligned with the Functional Assessment of Cancer Therapy (FACT), to identify patients with reduced appetite. Combined with malnutrition screening, these tools facilitated the development of tailored dietary plans to address individual nutritional needs effectively.
- Customized Nutrition Plans:** Personalized meal plans were designed based on patient preferences, medical conditions, and appetite levels. The flexibility of portion sizes and meal options, along with adjustments in texture and flavor, helped improve patient satisfaction and compliance with their dietary regimens.
- Real-Time Food Waste Monitoring:** The toolkit used digital imaging and the modified Comstock method for accurate visual assessment of leftover food, providing insights into waste patterns. Weekly tracking of garbage bin usage further helped measure the impact of the toolkit, highlighting significant reductions in food waste.

Notable Outcomes

- Waste Reduction:** Implementation of the toolkit reduced the number of food waste bags used in a 100-bed hospital by 33%, from 60 to 40 bags weekly.
- Improved Patient Compliance:** Approximately 70% of patients with reduced appetite completed their meals, significantly decreasing waste.
- Operational Efficiency:** Enhanced meal preparation and delivery processes led to better alignment with patient needs and reduced waste.

Challenges and Future Directions: Despite the toolkit's success, challenges persist, such as limited dietitian resources, as personalized care requires significant time and effort. Proposed solutions include integrating AI-driven meal planning tools and increasing the dietitian workforce. Accurate waste segregation remains another hurdle, with issues stemming from non-edible waste and external food contributions, necessitating improved segregation systems and patient education. Future efforts will focus on adopting advanced technologies, expanding staff capacity, and refining food service systems to enable broader implementation across hospitals in Sri Lanka.

Conclusion: The **Minimum Food Waste Toolkit** sets a benchmark for sustainable healthcare practices, aligning with global efforts to minimize waste and enhance operational efficiency. By addressing both environmental and nutritional concerns, this initiative demonstrates how Sri Lanka's healthcare sector can lead by example, inspiring similar reforms across the country and beyond.

For more information and to view the patient education video on reducing food waste, [click here](#).



Figure 1: Real time visual estimations of food waste conducted immediately after meal tray return to document waste accurately before further mixing or disposal.