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Project Title: Unomedical UnoMeter™ Safeti™ Plus
Category: Industrial Products
Client Company: Unomedical
Date of Entry: 3 June 2009

2. Executive Summary

Design has transformed a commodity product in a mature market into a highly successful product that has delivered competitive advantage and a strong financial performance to the manufacturer.

The key to the success of the UnoMeter™ Safeti™ Plus was that the design effort was based on a clear understanding of the international market drivers including user needs and commercial frameworks. This was achieved by working closely with Unomedical and conducting research with all the market stakeholders. The combination of designers and behavioural psychologists in the PDD research team resulted in a broad understanding of the practical and emotional challenge of urine monitoring. The same team remained involved in the translation of the research into design solutions, market validation and throughout development to ensure that the frameworks for success established through the research and the design intent were not compromised.

3. Project Overview

3.1 Outline of Project Brief

PDD was commissioned by Unomedical to research and develop the successor to their successful UnoMeter™ Safeti™ urine monitoring device for catheterized patients. The condition of a critical patient can change from one hour to the next. This makes the monitoring of urine production a significant indicator of patient condition.

3.2 Description

PDD conducted research in hospitals across the UK, France and Germany with the aim of identifying where opportunities existed to improve user and patient safety (especially in relation to infection control) and ease of use. The study mapped the product life from purchasing through to disposal and defined the touch points and roles, needs and attitudes of all the stakeholders. Comparing the variables in process, use and attitudes across the 3 countries enabled the team to define common unmet needs and gain a clear understanding of purchasing drivers. A clear message that emerged was that, although infection control is an important issue, the market considers the device a commodity item and would not tolerate a premium price. Another clear message was that nurses are under constant pressure during their working day and would value any usability features that would make their working day easier.

With this very clear message on the price sensitivity, the challenge was to add value at little additional cost. This was a difficult challenge as the current product had been progressively value engineered over its ten year lifespan. It was also important to maintain familiarity with the current device as many of the features were well liked by users. The team consulted users throughout the design and development process, testing concepts, prototypes and products to ensure proposed designs were validated by the people that would have to use them daily.

3.3 Overview of Market

The European market for urine meters is worth approximately 35 million euros (approximately 7.2 million units per year) and is mature with a 5% market annual growth rate. The market is composed of a few international players, Unomedical, B. Braun, Bard and Tyco, and some local players.

In a mature market, differentiation is hard to achieve. Unomedical has built its position as the European market leader through high quality products and well-documented infection control features by using design and innovation as a key differentiator.

3.4 Project Launch Date

UnoMeter™ Safeti™ Plus was launched in the UK market in Sept 07 and the European market in Q4 2007 and Q1-Q2 2008.

3.5 Size of Design Budget

Not for publication

3.6 Outline of Design Solution

PDD worked closely with Unomedical marketing and production to redesign the UnoMeter™ Safeti™ with numerous improvements to both usability and infection control. Close collaboration with the toolmaker and moulders also enabled PDD to optimise product manufacture and assembly and control final unit cost.

The new features included:

- Flexible hanging options mean that the nurse can attach the device securely to the wide range of bed variables used in the different hospital departments.
- Reducing the overall height of the device reduces the risk of floor contamination.
- Drainage time (=nurses time) has been reduced by 40% by improving the venting and drain channel geometry.

- Separating and enhancing the scale graphics has made accurate measurement easier.
- A new lever design improved the ergonomics of draining and made the open vs closed state of the valve clearer and therefore safer.
- Changes were made to the central drain chamber to enable the system to be placed face up on the bed during transportation thus preventing backflow between measurement chambers.
- A EasiMT feature for an easy and controlled urine handling when using the UnoMeter™ Safeti™ Plus was built in.
- A patented feature to ensure an easy and controlled handling of the bags when changed was incorporated.

4.0 Summary of Results

By combining the valued and familiar details of the previous device with the new added value features and clean contemporary design, the UnoMeter™ Safeti™ Plus has been extremely well received in the market with demand currently exceeding all expectations.

4.1. Increase in sales

2008 sales were much higher than expected—by over 50%.

4.2 The design's effect on company turnover

The product was launched as an Unomedical product (now part of the ConvaTec family) and the UnoMeter™ Safeti™ Plus had an effect on the topline, but was also the single biggest significant driver of Unomedical's innovation rate.

Unomedical is committed to insuring that innovation is a key driver in the success of the business. They track how new products impact their total turnover each year and set targets. The UnoMeter™ Safeti™ Plus achieved revenues 18% higher than the expected Safeti™ Plus innovation rate target.

4.3 Delivering ROI

In two and a half months, Unomedical's investment in design and innovation had achieved breakeven.

4.4 Other Influencing Factors

Unomedical did not run any special marketing campaigns or events that might have boosted sales.