



The Pill Station® by Senticare is a home based monitored pill dispenser. This Pill Station® helps a patient comply with drug regiments and avoid expensive hospitalization due to over and under dosage. Senticare conceived of a call-center based communication link in order to monitor home-care patients with critical medications. The PillStation® has a scanning camera that takes a picture of the pill tray contents and sends this to the call center. The call center then compares this picture to the patients drug plan. A speaker and microphone provide a one touch link to the call center. A display and signal light provides additional communication.

Start-Up Program

Bleck Design Group provided Senticare a complete *Start-up* set of design services. This represents our classic set of services that help new companies launch ground-breaking innovative products.

Founders and Investors

We helped the founders explain the design to investors and estimate the development costs. The concept was illustrated in models and drawings to provide an easy to understand product explanation.

Definition and Specification: Users were researched through interviews and presenting alternative concepts. Technology and components were selected, evaluated and transformed into feasibility models. User needs and technology were considered to make trade-offs and optimize performance and cost.

Concept to Production: Bleck Design Group provided industrial design, mechanical engineering, prototypes, and production sourcing. We provided a virtual design and engineering department for Senticare and worked as a part of their team as the design entered manufacturing.

Pill Tray - User Centered Design

The PillStation® has a novel (patent pending) pill tray designed to meet a wide range of behaviors in active patients.



Filling the Bin: Research showed patients and caregivers often organize medication once per week by sitting at a table and carefully loading each dose. Sitting at the PillStation would be impractical. So the entire weeks pills are snapped into a removable frame. This allows a caregiver to sit down at a table and carefully organize the doses.

Patient Impairments: Patients often have impaired vision, reduced tactile sensation or arthritis. The daily bins snap into the frame and have a large "push" button to eject the tray. The tray has three chambers (AM, Noon, PM) with individual doors allowing easy access the pills. The doors have large easy to grab handles.

Monitoring: The tray is placed in the PillStation® and a picture is taken of the pills by a camera and lighting that move behind the seven daily bins. This creates a recorded picture of the tray contents that is sent by a telephone connection to a call center. The call center then quickly reviews the tray status and compares this to the plan.

Communications: A speaker, microphone, graphical LCD and signal light provide easy to understand communications. One button push connects the patient to the call center for help. Positive messages arrive when a patient is on-plan. Alerts are sent when patient deviates from the plan.

<http://www.bleckdesigngroup.com/medicalproductdesign/>