**The problem** with current IV pump systems is that they often obscure and muddle important infusion information that doctors need. This wastes valuable time and **puts lives at risk.**

**Our solution** is an easy-to-read, one-stop interface that lets doctors identify valuable information at a single glance.

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**OUR DESIGN**

**Brain Grouping**

Each Alaris Brain Module can support up to four IV pumps and syringes, labeled A, B, C, D. The identification and grouping system in the dashboard mirrors the physical layout of the IV system for easier synchronized usage.

**Rate / Dosage**

For doctors and nurses, rate and dosage are the most important IV numbers when monitoring a patient. We made these numbers clearly visible so physicians can ensure patients are safe.

**Status Bar**

Currently, physicians are forced to read slow, scanning text to identify alerts. This can be dangerous in life-threatening situations. For faster problem solving, we added a status bar to provide a quick and easy way to scan potential errors or warnings.

The status bar also changes color on varying levels of alert severity: green indicating no alerts, yellow indicating warnings, and red for severe errors.

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**OUR PROCESS**

**RESEARCH**

Through a series of interviews and competitive analysis, we learned that there is difficulty reading many of the displays due to their size and spacing. Additionally, physicians struggle to identify alerts efficiently. We decided to color-code displays to reduce the user's cognitive load of visually organizing important information.

From our literature review and competitive analysis, we learned that medical displays use colors to categorize. Specifically, blue, green, and white colors are used because the visualization is clear and easy to read. We incorporated this color palette in our design.

**IDEATION**

We analyzed our research findings in a session brainstorming and sketching solutions. By grouping commonalities, we identified and ranked “important” information for how physicians reference the piece of information: weight, IV fluids, rate, dosage, and battery life. Then, we ranked each item by importance: **red** for vital, **orange** for useful, **yellow** for contextual, and **green** for easily understood. VTBI is important when the battery is running low. It is a numeric changing number, the IV pump is designed to be wrench-free so not to fail completely. Since near-end alerts are the most common alert physicians deal with, we designed a VTBI progress bar for physicians to anticipate the alert and quickly identify alarming modules.

**PROTOTYPING**

Through a series of critique sessions and usability testing, we found that alerts, history, and IV fluids are vital for physicians when they transfer patients between departments. Since this is not information that is used all the time, we designed the battery bar to be hidden, if not needed in order to provide more space. We also designed a VTBI alert that shows when the battery has to be replaced. We used this information to develop a rapid, quick-turnaround design. Although the A/N/D/O infographics was the priority, we also designed a battery bar to be hidden when not needed. We included the A/N/D/O alerts and implemented a grid-based layout to ensure the physical IV system layout to our dashboard.