

joshua

Collaborating, sharing and building a base of shared knowledge

Context

In situations of child hospitalization, information exchange is vital and critical, but constrained by emotional stress, time and learning aptitudes. Parents need to comprehend information to make informed decisions regarding their child's care and practioners need parent information for diagnosis and care purposes. Currently, this exchange of information is shared informally through conversations between practioners and family members. Information is buried,

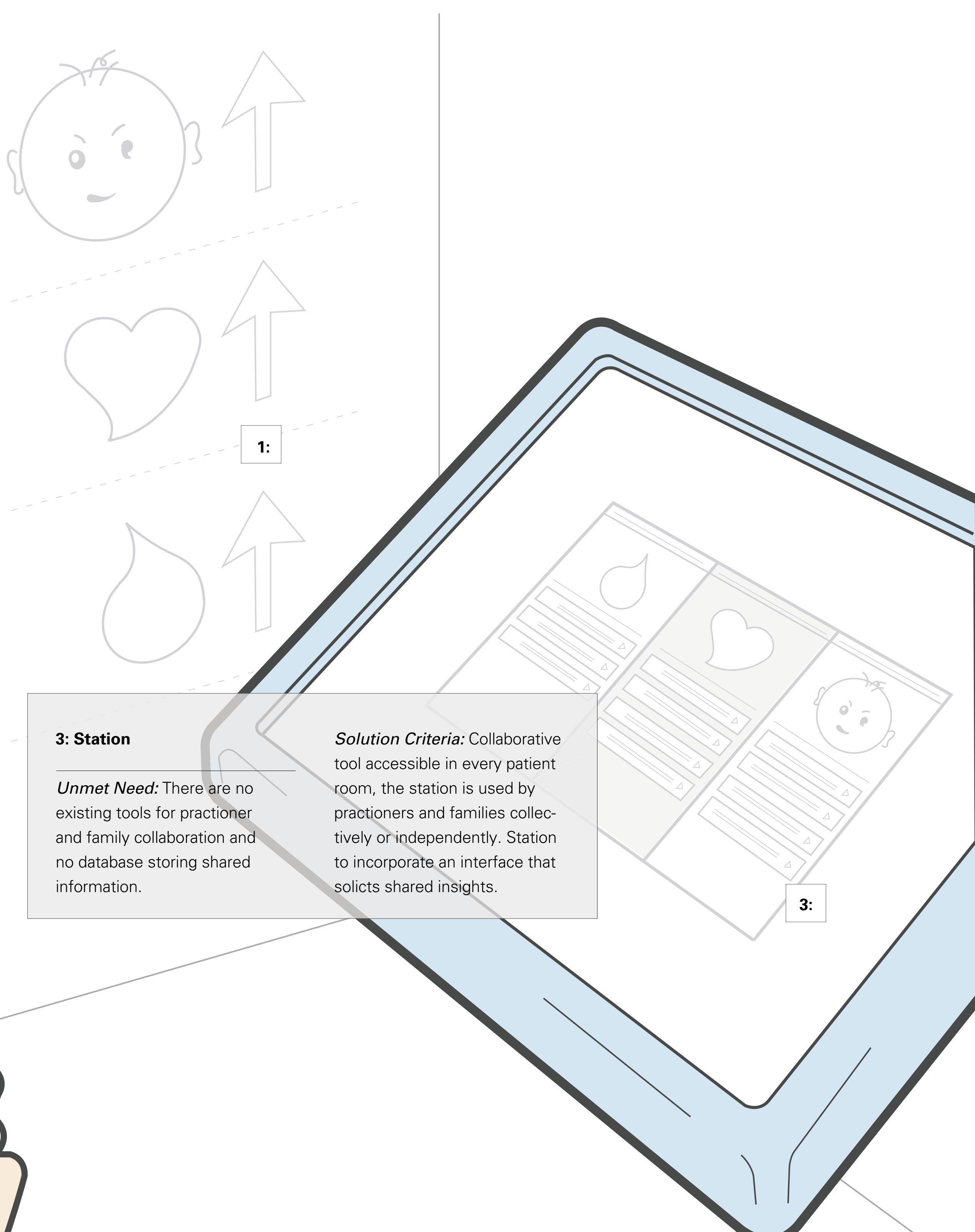
miscommunicated, or unexpressed. Futhermore, it is not accessible in a shared environment, but hidden by separate documentation.

Thus, parent's anxiety level remains high and the practioner (unaware of the parents' special knowledge of their child) cannot detect early warning indications, losing valuable treatment time. These add up to significant harms for the child, including possible mistreatment and prolonged hospitalization.

Solution

Joshua is an integrated system of collaborative hardware and software tools for practitioners, patients and their families to build a base of shared knowledge. Stations encourage practitioners and family members to consult and collaborate. A mobile smart badge allows parents time to reflect, record, and share. The child's progress is projected in the child's room, stimulating the environment with shared, trusted knowledge.

Decreasing family anxiety and increasing nurse efficiency through the documented exchange of information



1: Information Diorama

Unmet Need: Parents have no monitor display in which to measure child's progress. Current equipment monitors are designed for the educated practioner.

Solution Criteria: Projected on a wall of the room, the child's progress is represented by symbols antotating child's mood and significant data, such as heart rate.

2: Mobile Smart Badge

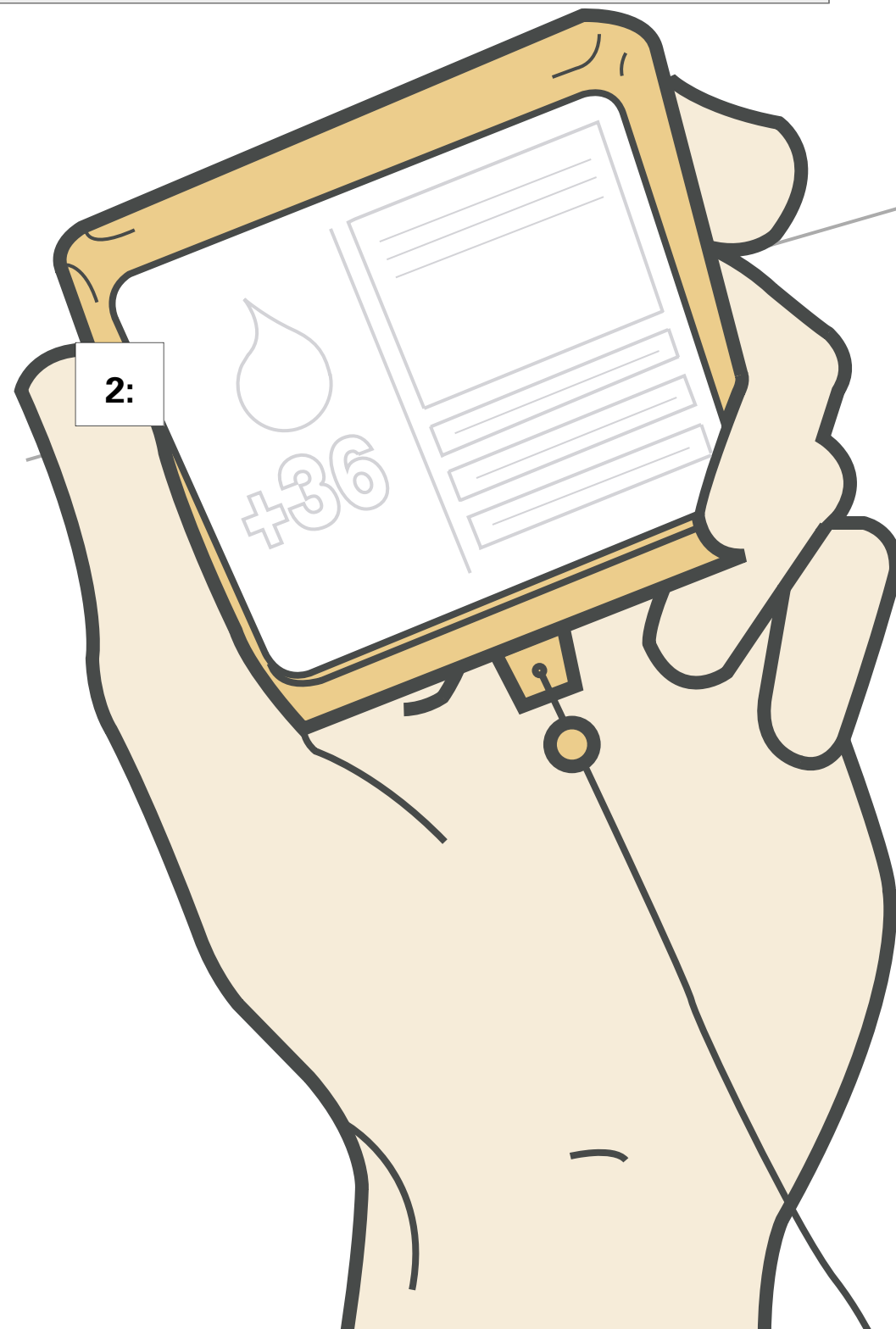
Unmet Need: Parents have no formal means to share insights with practioners or to receive updates remotely.

Solution Criteria: Worn at all times, parents can communicate remotely with the system database, checking child's progress and notating any forgotten information. Badge also contains identification tag,

3: Station

Unmet Need: There are no existing tools for practioner and family collaboration and no database storing shared information.

Solution Criteria: Collaborative tool accessible in every patient room, the station is used by practioners and families collectively or independently. Station to incorporate an interface that solicts shared insights.



Observations:
Hand drawn signs posted above the child's bed are evidence of attempts to draw attention to pertinent information.

Prototyping:
Binders, assembled by parents, hold record of child visits and other personal information. Parents comment that keeping this record "gives them control."

Research and Demonstration
Advisors: Dale Fahnstrom and Greg Prygrocki



Research and Demonstration applies relevant theories and/or methods to an assigned problem area within the product and communication tracks. The project is a comprehensive investigation of a range of possible solutions including final realization of one concept and complete documentation of the process.