C-DIAS
Center for Dissemination & Implementation At Stanford

How Can Human-Centered Design and Implementation Science Ensure Data Dashboards Are Used, Sustained, and Impactful?

The Public Health Problem

Dashboards are widely found within healthcare, policy, business, and other sectors to organize and summarize key data—but their impact depends on actual use. Few studies measure dashboard use, and the ones that do, show limited use. When dashboards go unused, their value and impact are lost

Background

Dashboards come with challenges that often limit their use, such as lacking value for users, relying on poor-quality data, causing unintended negative effects, or being too costly and resource-intensive to sustain. These challenges must be addressed to enhance dashboard use.

What This Article Addresses

The authors argue that long-term, successful dashboard use requires integrating human-centered design and implementation science methods throughout the design-to-sustainment process.

What They Did *(Methods)*

The authors provide eight recommendations for dashboard developers and implementers on enhancing dashboard use, guided by the Exploration, Preparation, Implementation, and Sustainment (EPIS) Framework.

What They Discovered *(Findings)*

Here are four of the eight recommendations provided in the article:

Determine data metrics of value and data accuracy: Identify data metrics of value to all relevant actors. Ensure continuous data accuracy.
EPIS phases: all phases

Early and ongoing multi-level needs assessment/identification of implementation barriers and facilitators: Involve relevant actors from the start. Ensure alignment of goals and values and address implementation barriers and facilitators.
EPIS phases: exploration, preparation & implementation

Consider appropriate outcomes: Clearly define dashboard purpose. Select context-appropriate evaluation metrics.
EPIS phases: preparation, implementation & sustainment

Plan for sustainment: Identify and address potential facilitators and barriers to sustained implementation. Ensure workflow integration.
EPIS phases: all phases

Opportunities for Action

The study findings highlight opportunities for:

Dashboard developers
- Ensure that dashboards reflect the needs of target users, systems, and organizations.
- Ensure dashboards are built for sustainment.

Dashboard implementors
- Evaluate dashboard implementation using a wide range of outcomes.
- Measure or estimate how much or how well the dashboard fulfills its intended purpose.

Dashboard users
- Provide feedback on the dashboard's shortcomings to dashboard developers and implementers.