

Hepatic Encephalopathy App for Liver Disease (HEALD)
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Impact “Mad Lib”

For patients with cirrhosis and their caretakers,

[who? Patient, provider, other stakeholder]

it’s a challenge to recognize when patients start to cognitively decline at home.

[accomplish a key activity; achieve a primary goal]

Today, their best option is to become aware of obvious signs of confusion and alert their clinicians, as currently available cognitive testing is impractical to administer at home,

[current approach or status; emerging solutions]

which, because of their limited ability to recognize hidden, earlier signs of encephalopathy leading to a delay in seeking care

[primary functional problem relating to activity]

yields both frequent and prolonged hospitalizations, and progressive, sometimes irreversible cognitive decline.

[bad/worst case outcomes or limitations]

Thus, there is a need for a diagnostic and monitoring tool that tracks early progression of hepatic encephalopathy to prompt timely treatment

[describe the unmet need in specific terms]

which, if solved, would have the impact of reducing unnecessary hospitalizations as well as maintaining patients’ cognitive function and independence at home.

[describe the specific impact in detailed, ideally quantifiable, terms]

Solving this need can be achieved by creating an easy-to-use app that utilizes a machine learning algorithm with multimodal inputs (e.g. voice, tactile) allowing for far more accurate diagnostic tracking compared to what can be achieved by cognitive testing alone

[specific solution approach that will achieve the quantifiable impact]

and will be demonstrated/proven by a prospective clinical trial comparing our solution to standard of care outpatient practice on outcomes such as mortality, days spent in the hospital, functional status (e.g. falls, ability to perform activities of daily living independently), and patient reported quality of life.

[what specifically will be measured to demonstrate the intended impact]