

HEALTHCARE

INNOVATION MATCH

INNOVATIONS ADOPTED AT SPEED, AT SCALE.

CENTRE FOR
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INNOVATION

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TOP LESSONS FOR THE FUTURE INNOVATOR

Find out what to look out for if you want a winning innovation

WRITTEN BY TJUT ROSTINA, CHI

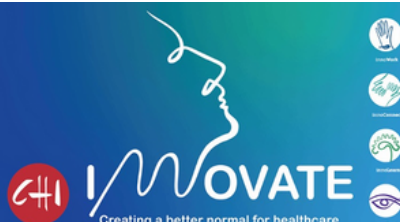
The recent Healthcare InnoMatch by Temasek Foundation and CHI has brought the spotlight on great solutions by start-ups/SMEs for an opportunity to test-bed their solutions at the Singapore General Hospital, the National University Hospital and Tan Tock Seng Hospital.

What are some of the lessons learnt for aspiring innovators at the finale pitch?

For Those in a Hurry...

- 1. Seamless and Hassle-Free Access to Services*
- 2. Care at your Fingertips*
- 3. Predict Patient's Condition*
- 4. Measure the Impact and Outcomes*

Hosted by:



Upper-limb rehab (H-MAN)



Hand & wrist rehab



Lower-limb rehab



CARE Platform



1. SEAMLESS AND HASSLE-FREE ACCESS TO SERVICES FOR PATIENTS

When innovating for the patient, always consider the patient experience. For example, will they be able to use the innovation on their own, is it available for them to use as frequently as required, and is it intuitive to operate?

By enabling patients to access technology and services on mobile or at home, patients are empowered to take charge of their health, to recuperate and carry out rehabilitation therapy at home.

An example of this quality can be seen in Articare's Smart Robot Therapists at Home, which allows patients to do robotics-assisted tele-rehabilitation at home. The system provides intelligently adaptable therapy exercise at home while enabling remote monitoring by clinicians.

The portable therapy robot is used to treat upper-limb sensorimotor impairments with personalised and minimally supervised training exercises. The cloud-based telecommunication software also keeps the clinician up to date on the patient's progress, and therapy settings can be adjusted from the clinician's own location when needed.

With this capability, the expected impact would be faster recovery through increased frequency of therapy sessions but without the usual hassle of physical visits to the hospital. Clinicians can also expect increased productivity, as they are now able to plan and monitor the patient's therapy programme remotely.





2. Care at your Fingertips

One way to encourage patients to take charge of their health is to take a step in the direction of incorporating rehabilitation into their day-to-day, without the need for additional equipment.

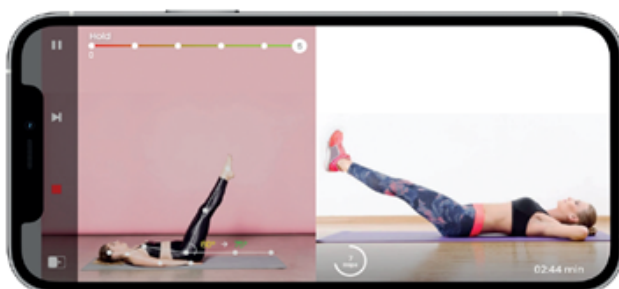
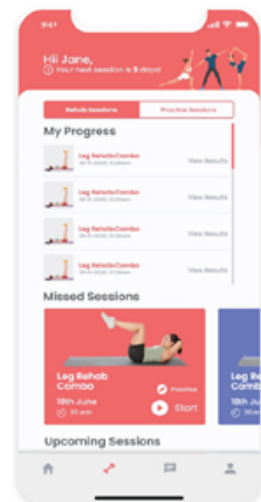
The convenience of using one's own phone and simply downloading an app offers great potential for fast adoption.

With accessibility at the fingertips via the patient's mobile phone, another innovation aimed at making rehabilitation accessible at home is RootAllly AI's tele-rehabilitation system.

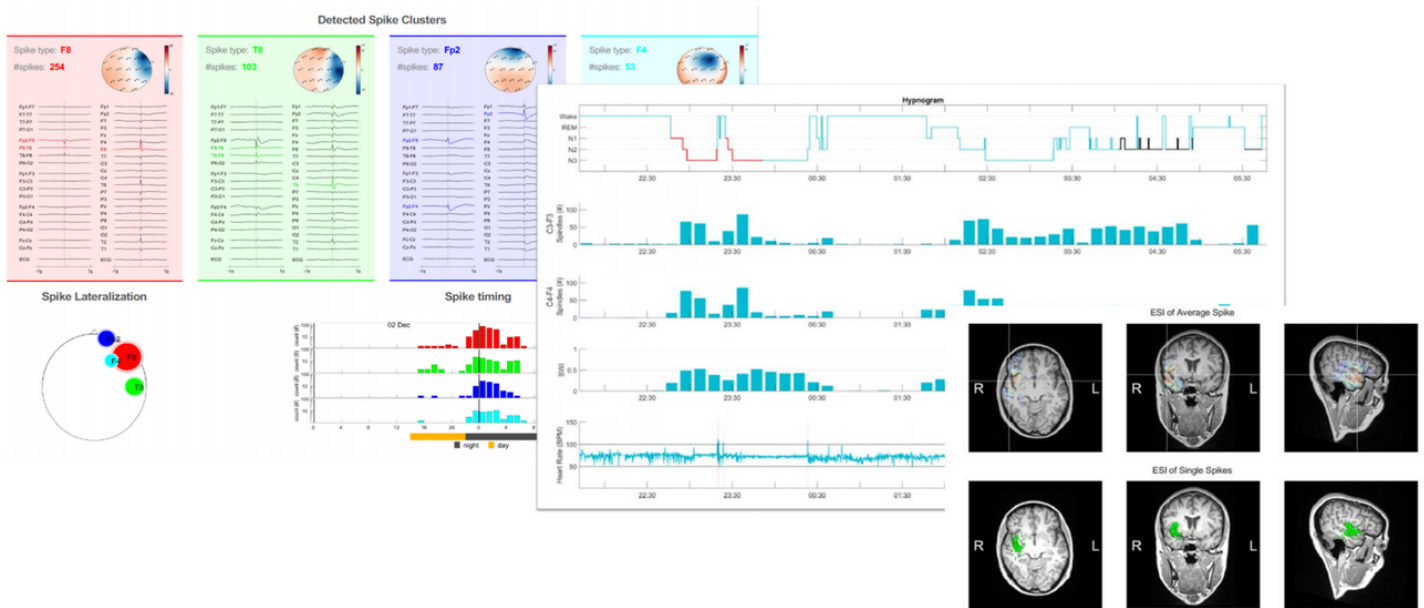
Based on real-time monitoring and using a secure mobile app, it can identify and track the movement of the patients' joints captured in live video or stored as files, without the need for the patient to use any additional device on their body.

Patient App

- Perform rehabilitation anywhere
- Receive real-time posture feedbacks
- Screencast video on external display
- Keep track of past rehabilitation sessions
- Have additional practice outside of rehabilitation schedule
- Get notified of upcoming consultations and rehabilitations



Examples of visualisations in the EEG passport



3. PREDICT PATIENT'S CONDITION

Healthcare shifts from communicative care to intelligent care when clinicians are able to predict a patient's condition, such as a seizure, before it occurs. With data on the patient's behavioural habits presented in a clear and comprehensive manner, it is possible to predict and in doing so, prevent accidents or a deterioration of symptoms.

Epilog's EEG Solutions effectively shows how data can aid in prediction. The EEG report or "passport" provides parameters of the brain health, and has been likened to a test for epileptic brains similar to a blood control test for cholesterol patients.

The report can be easily accessible by the healthcare professional to intervene in almost real time through telehealth. Patients can be closely monitored on the effect of their treatment and eventually predict seizure clusters, so they can move towards a more "predictable life".

Looking ahead, the solution has the potential to be scaled up and modularised, where it can be incorporated as wearable technology, enabling prediction to take place anytime and anywhere.





4. Measure the Impact and Outcomes

Before embarking on an innovation project, list down the expected outcome and impact of this innovation on the target group of patients or area of care.

By comparing this list with the actual outcome and impact at various phases of development, the innovator can understand how well the solution has been received, and the areas that need to be tweaked.

This will also serve as a guide for the development of an improved solution. Examples of measured outcomes and aspects to be considered, are clinical outcomes, functional outcomes, patient experience, feasibility, and cost effectiveness.

Need more insights? Here are resources you can access

To find out how the startups/SMEs at InnoMatch pitch their innovations, catch the replay at:
<https://www.youtube.com/watch?v=hcl0-36ackA&t=1357s>

For more info on the challenge:
<https://bit.ly/CHISELHealthcareInnomatch>

Press Release: <https://bit.ly/3jbQqKl>

