SILENT STRUGGLES, INVISIBLE BARRIERS: BEHAVIOURAL INSIGHTS IN MEDICATION MANAGEMENT FOR DEAF AND BLIND POPULATIONS

EP027



MINISTRY OF HEALTH MALAYSIA
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INTRODUCTION

Deaf and Blind populations are frequently facing "invisible barriers" that lead to suboptimal care and dependent medication management. Behaviourally informed interventions are essential to reduce reliance on assistance and improve patient safety.

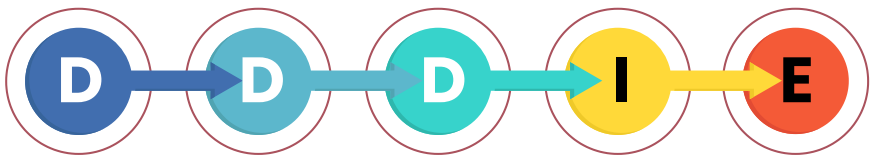
OBJECTIVES

The Santuni OKU Programme aims to:

1. Improve medication safety and adherence among Deaf and Blind populations
2. Promote independent medication management and autonomy
3. Enhance access to medication information
4. Strengthen provider–patient communication
5. Deliver inclusive healthcare using Behavioural Insights approaches

METHODOLOGY

The initiatives for Santuni OKU Programme was developed using D.D.D.I.E Framework:



Define: Identify barriers

Diagnose: Map behavioural bottlenecks

Design: Develop targeted BI interventions

Implement: Nationwide rollout across facilities

Evaluate: Monitor uptake, satisfaction, and reach

Key Behavioural Interventions:

Communication Nudges

- Sign language training for pharmacists
- Drug Information for Deaf Community (DIDCOM) platform

Environmental Restructuring

- Braille-integrated medication labels
- Unit-dose packaging for oral liquid medications

Digital & Choice Architecture

- Upgraded medication labels with QR codes linking to accessible content

Social Norms and Education

- Accessible social media content (sign language, subtitles, audio)

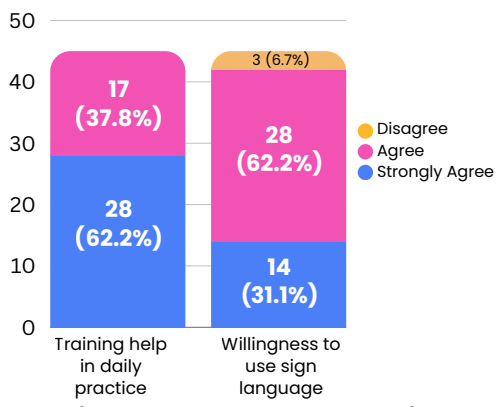
RESULTS

1) Malaysian Sign Language (BIM) Training

938

TRAINED PHARMACISTS

Impact of BIM Training on Pharmacists (n=45)



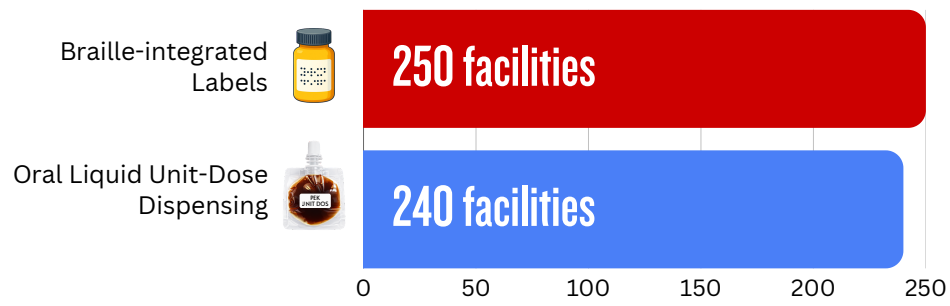
2) User Satisfaction with Drug Information for Deaf Community (DIDCOM) Platform (n=49)

96% VERY SATISFACTORY

4% SATISFACTORY

RESULTS (cont'd)

3) Nationwide Strategy Implementation for the Blind



4) Accessible Health Education Output for the Blind and Deaf

Production of public education videos with accessible features:

PUBLIC EDUCATION VIDEOS 173

- **87** medication administration
- **6** learning modules
- **80** general health education

DISCUSSION AND CONCLUSION

Behavioural Pathway: Improving Medication Management

Barriers → BI Interventions → Behaviour Change → Outcome

The findings demonstrate that behaviourally informed interventions improved **communication, accessibility, and implementation at scale,** addressing both structural and behavioural barriers in medication management for Deaf and Blind populations.

The initiative highlights how Behavioural Insights (BI) can **shift behaviour by redesigning the environment in which decisions are made,** rather than relying solely on individual effort.

Key Behavioural Strategies Applied

- **Environmental restructuring**
  Braille labels and unit-dose packaging reduce cognitive and physical burden, enabling safer and more independent medication use.
- **Multi-sensory nudges**
  Integration of visual (QR videos), tactile (Braille), and auditory elements enhances comprehension and recall.
- **Friction reduction**
  DIDCOM and sign language-trained pharmacists minimise communication barriers, facilitating smoother interactions and reducing reliance on caregivers.
- **Salience and accessibility**
  QR-coded labels and accessible digital content make critical medication information more noticeable and actionable at the point of use.

These approaches align with global recommendations by the World Health Organization (WHO) and behavioural applications highlighted by OECD, supporting inclusive, user-centred health system design.

CONCLUSION: The Santuni OKU Programme demonstrates that **behaviourally informed, multi-sensory interventions can effectively reduce invisible barriers,** leading to improved medication safety, adherence, and patient autonomy. This scalable model reinforces the role of Behavioural Insights in advancing **equitable and inclusive Quality Use of Medicines (QUM)**.

Acknowledgement

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