



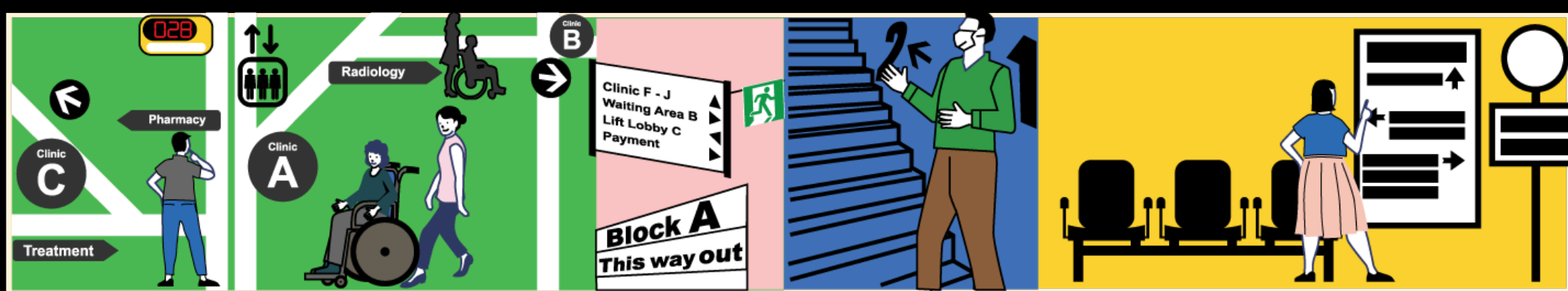
Co-appraising wayfinding and signage with patients and caregivers to improve navigation experience

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INTRODUCTION



Wayfinding shapes a significant part of patients', visitors' and staff experience, by determining how safely and easily they can make it to their appointments or visit a loved one.

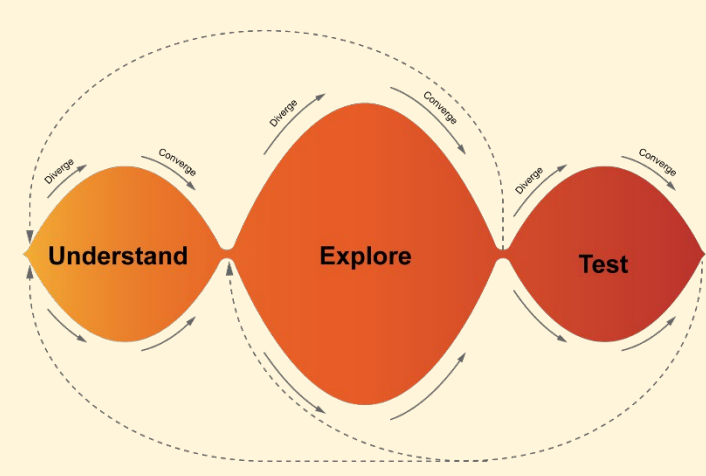
This is especially important for the newly opened 540-beds SingHealth Outram Community Hospital (OCH) which is housed in the larger 43-hectre (about 80 football fields) healthcare campus in Singapore General Hospital Outram Campus (SGHOC).

AIM



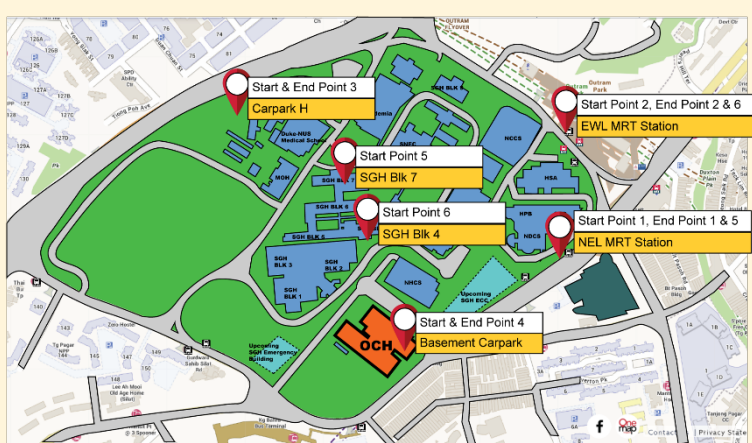
To evaluate the effectiveness of Design Thinking (DT) methodology in gaining insights to improve wayfinding and signages in SGHOC and OCH.

METHOD



Different phases of design thinking methodology

The DT methodology is adopted as it built on the principles of empathy and user involvement. Starting from DT's Understand phase, the team aims to understand the current state of patients', caregivers' and staff wayfinding experience to and from OCH within SGHOC.



Map of SGHOC and the starting and end destination location

6 different starting and departure points were identified to be some of the most common patients' and caregivers' arrival and end destination seeking services in OCH.



The 3 team for the morning participatory session. From left: Lim Yong Kang (IPSQ), Anna Wirijia (OCH), Alexander Lek (CGH), Keith Heng (IPSQ), Nidhi Rotary (SPAN), Irene Gwee (SPAN), Nicholas Sim (SPAN), Shanti (IPSQ) and Bernice Teo (IPSQ).



The 3 team for the afternoon participatory session. From left: Lim Yong Kang (IPSQ), Uma D/O Dena Dayalan (KKH), Ong Zhiwei (KKH), Kelly Ang (SPAN), Lena Lim (SPAN), Carol Lim (SPAN), Mohan Pillay (SPAN), Keith Heng (IPSQ), Shanti (IPSQ), Bernice (IPSQ) and Anna Wirijia (OCH).

Facilitated by 3 DT leads, 7 patients and caregivers from the SingHealth Patient Advocacy Network (SPAN), and 3 SingHealth staff from non SGHOC, were invited to be part of the session. The session asked participants to consider some of the following questions such as:

- Considering this as if it was their first time navigating within SGHOC
- Getting lost and how they can self-navigate to their destination without assistance

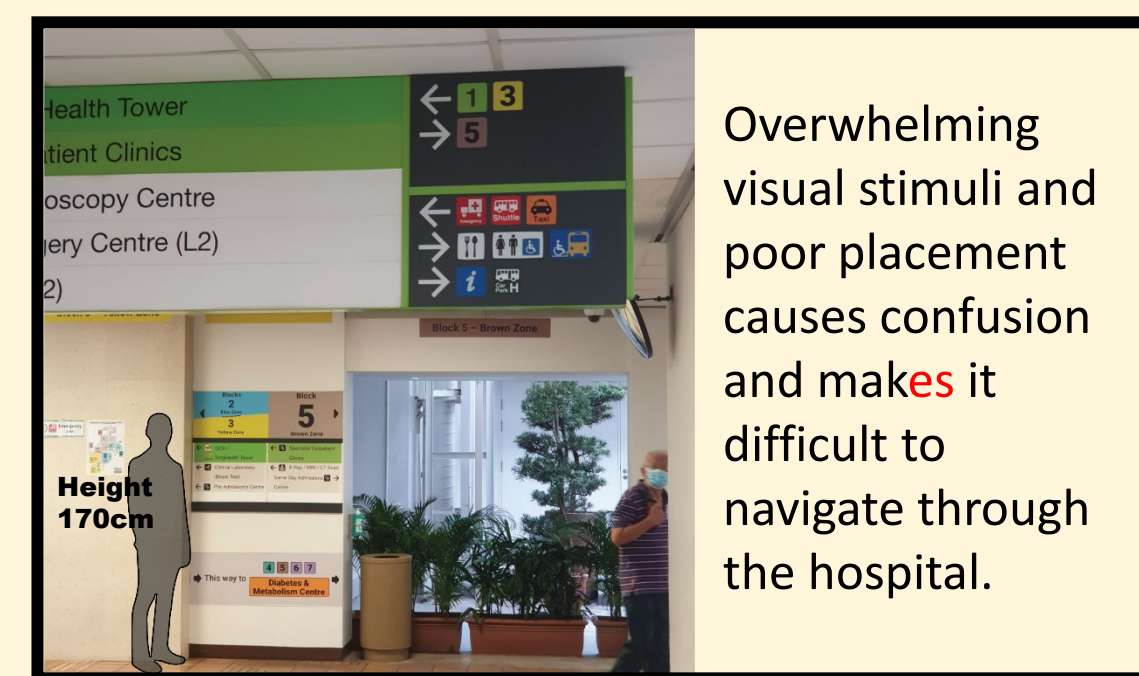
Their first-hand wayfinding experience were undirected and provided genuine responses. Their feedback were consolidated and analysed to help identify and explore opportunities to improve patients' and caregivers' navigation experience within SGHOC.

RESULTS

Over 60 findings were successfully gathered from the DT guided co-evaluation sessions, and consolidated according to these 6 broad themes:

1. SIGNS PLACEMENT

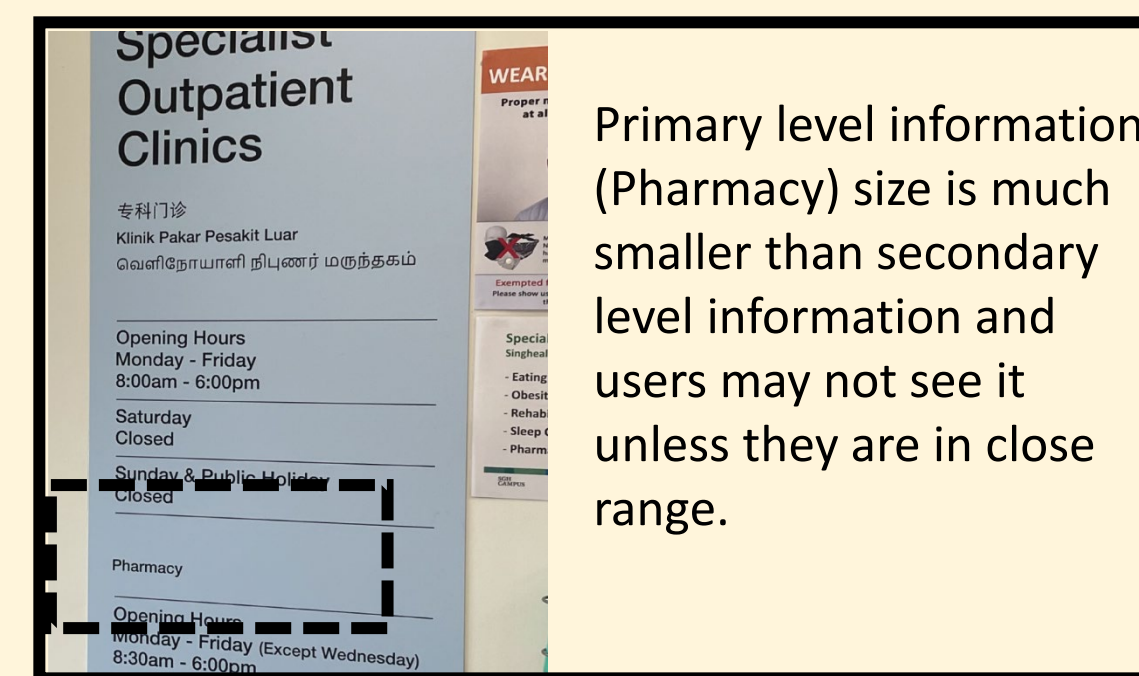
Careful considerations should be given to positioning of signs, as it can influence the visibility, legibility and effectiveness of the wayfinding system.



Overwhelming visual stimuli and poor placement causes confusion and makes it difficult to navigate through the hospital.

2. INFORMATION HIERARCHY

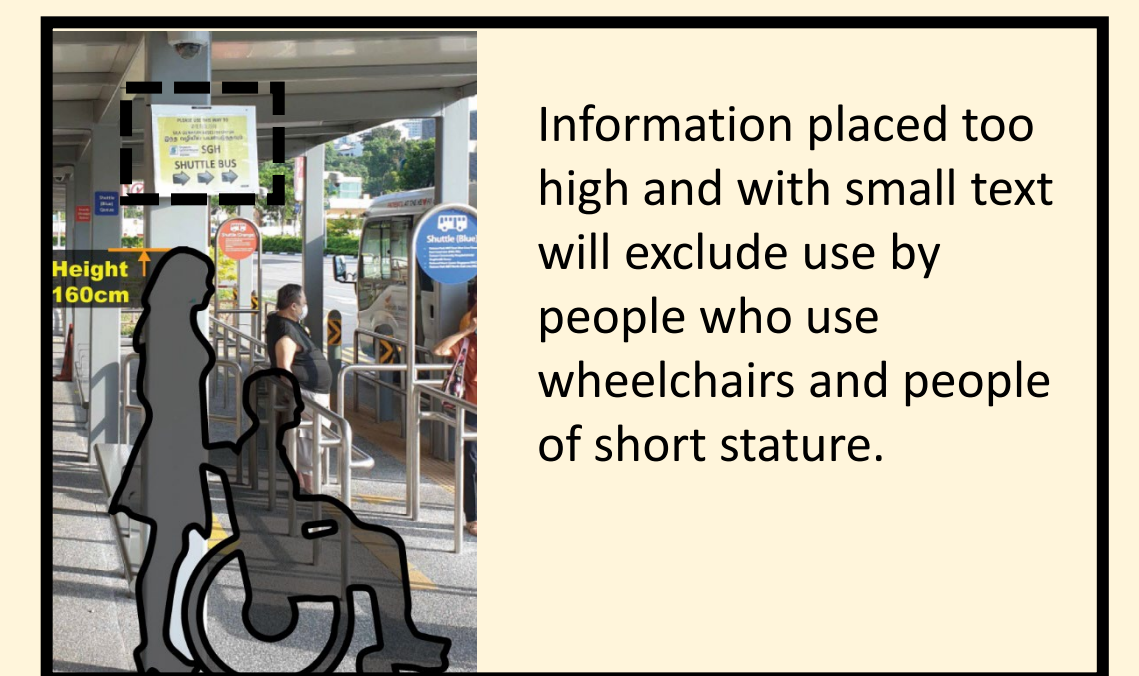
Information hierarchy principles dictate that more important the information, the higher its visibility should be to direct users to key functions.



Primary level information (Pharmacy) size is much smaller than secondary level information and users may not see it unless they are in close range.

3. CONSIDER NEEDS OF OTHER USERS

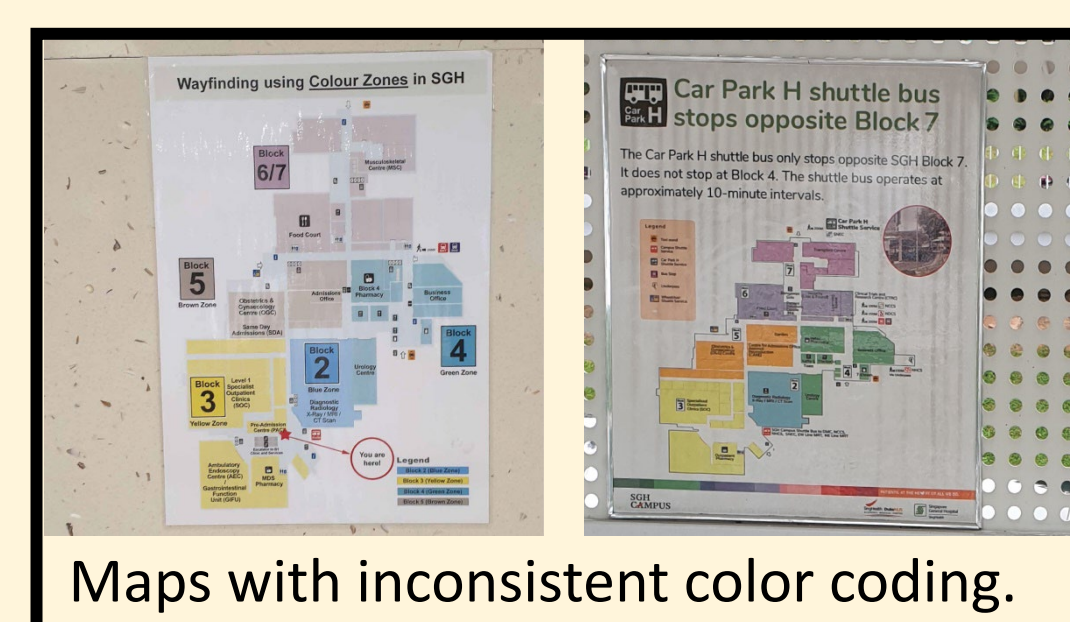
The signage should be adequately sized and placed to ensure its visibility and legibility caters to different users.



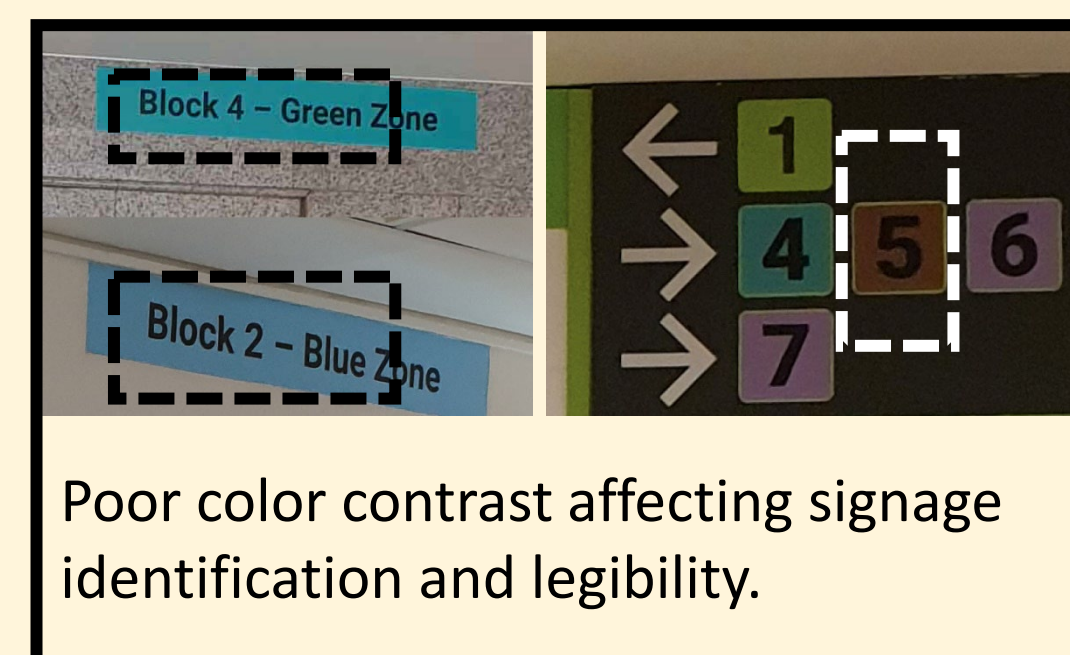
Information placed too high and with small text will exclude use by people who use wheelchairs and people of short stature.

4. COLORS IN WAYFINDING

Colours, along with words, symbols and shapes are important considerations that can add to the identity of a zone. However, choice of colors, contrasts between colors and application consistency are important considerations.



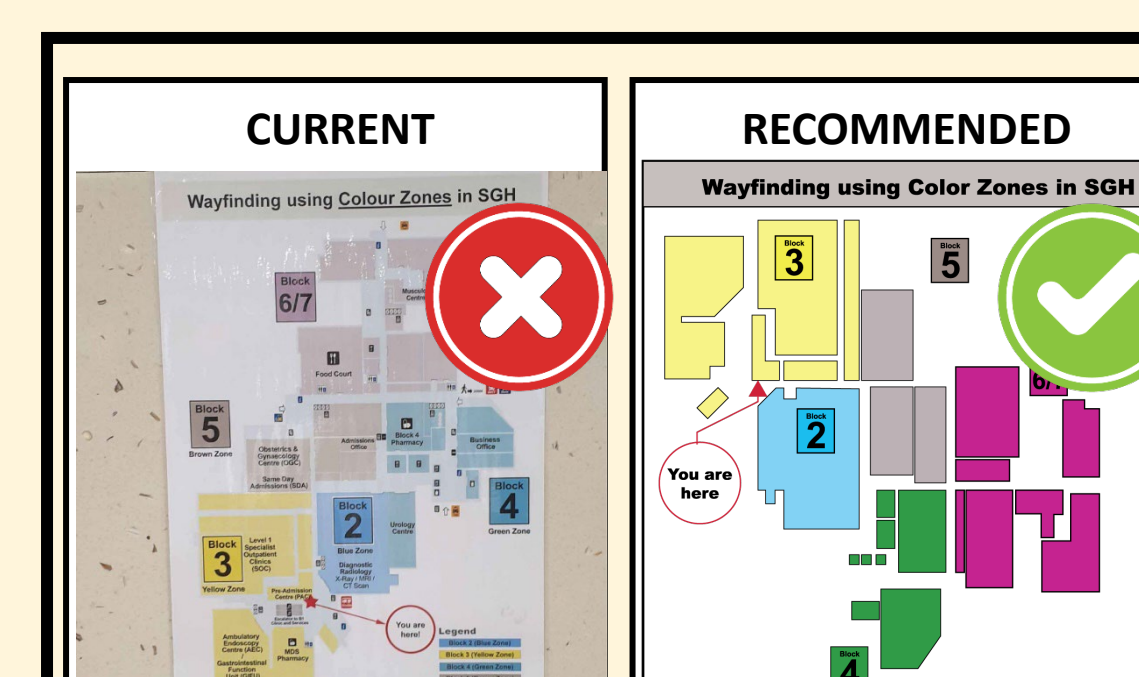
Maps with inconsistent color coding.



Poor color contrast affecting signage identification and legibility.

5. ORIENTATION

Building directories and maps are often the main point of orientation information upon entering a space or building. Maps and directories should provide an overview of the site or the building, their current location and where viewer's destination may be located.

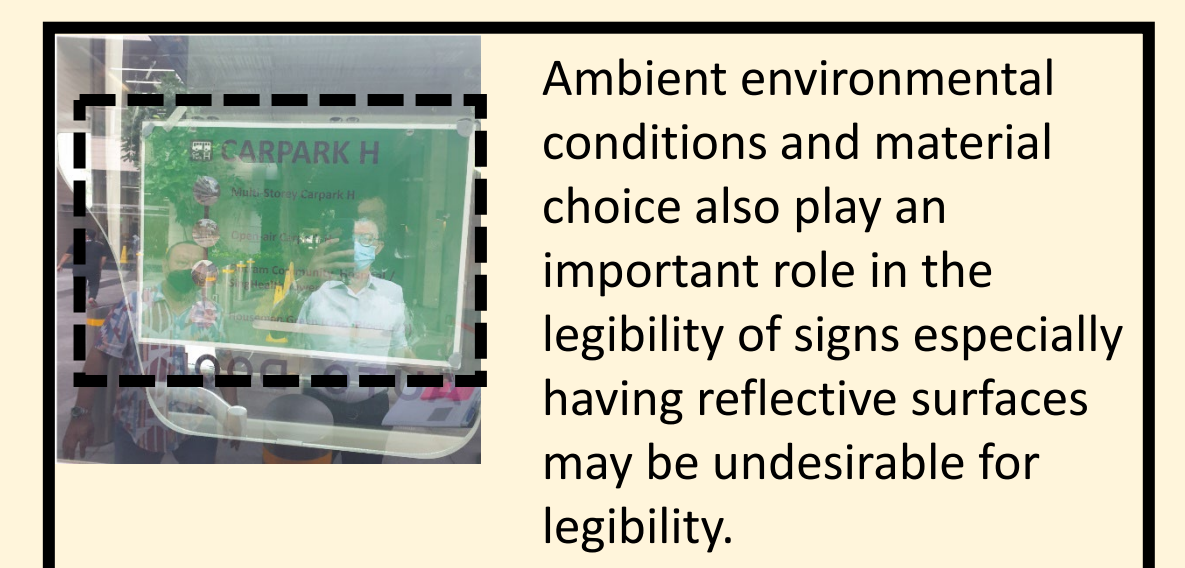


Many of the maps posted are not orientated to relate to the environment in which it is located.

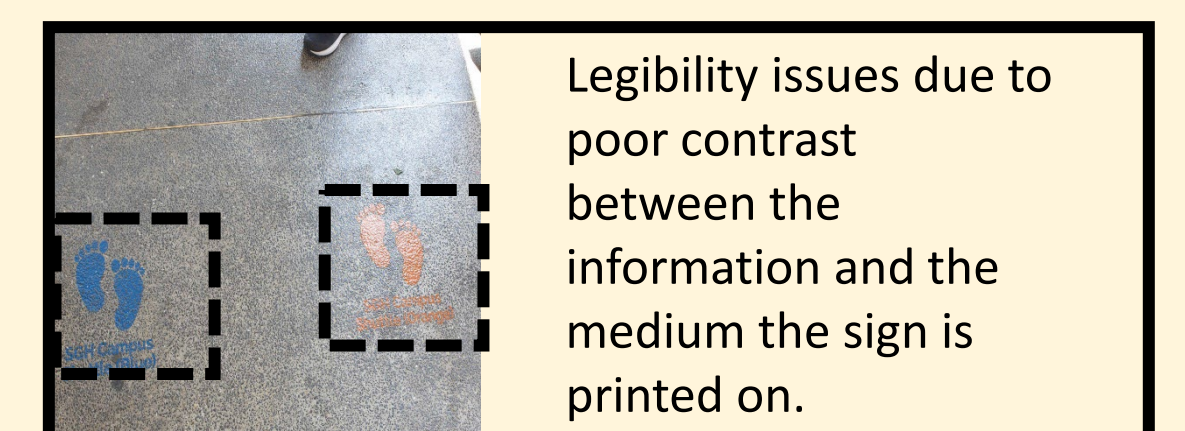
Map should also maintain consistent color coding across campus.

6. LEGIBILITY DUE TO MATERIAL CHOICE

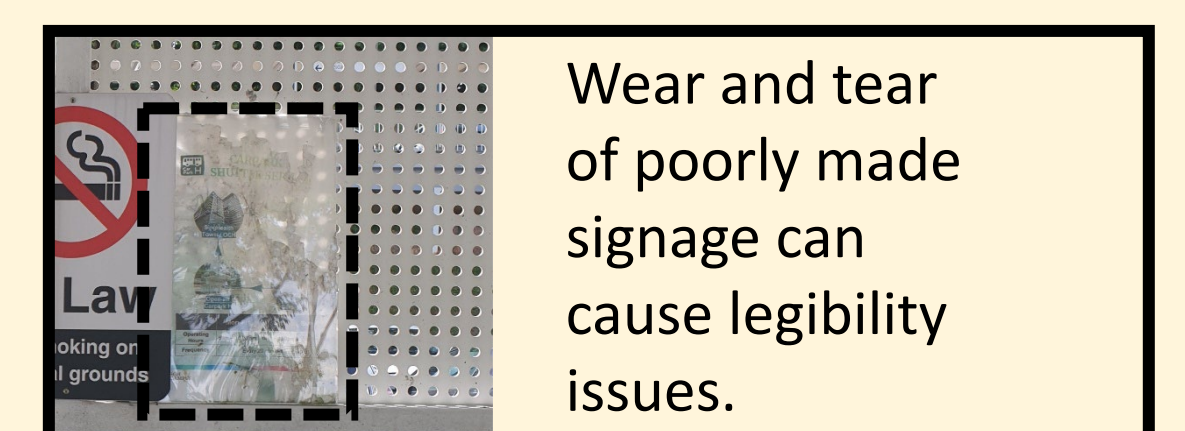
One of the main influences to improve signage legibility is larger size and stronger contrast between the information and its background.



Ambient environmental conditions and material choice also play an important role in the legibility of signs especially having reflective surfaces may be undesirable for legibility.



Legibility issues due to poor contrast between the information and the medium the sign is printed on.



Wear and tear of poorly made signage can cause legibility issues.

Wayfinding signage improvement opportunities were recommended to OCH Ops team for review to improve patient navigation experience. The co-evaluation sessions also saw good feedback from the participants with favourable comments such as "well planned" and had "greater appreciation of the work that goes into planning and designing wayfinding signage".

CONCLUSIONS

Involving patients and caregivers in the review of wayfinding and signage is essential for healthcare facilities to co-develop effective solutions through first understanding user's perspectives.

DT is an effective and structured method to gather feedback and ideas. The DT guided wayfinding design principles and signage will be shared with other institutions within SingHealth to promote co-design, testing and evaluating with users in this area.

ACKNOWLEDGEMENT

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