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Taking the pulse: A survey of design for health development in Singapore

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Keywords

Introduction
The field of design for health in Singapore is in its nascent stage of development. However, awareness and interest towards investigations at the intersection of design and art, health and well-being appear to be gaining traction. The emergence of several activities and initiatives in recent years among design and art practitioners, policymakers, and stakeholders in the healthcare, social care, and education sectors, indicate growth of activities in design for health. What are some of the recent design for health initiatives? What is the state of Design for Health development and education in Singapore? What might be some of the considerations to further develop and grow the field? This presentation provides an overview of activities currently shaping the field of design for health in Singapore. The first section will first highlight several recent initiatives before introducing a range of design for health explorations occurring at the School of Art, Design and Media, Nanyang Technological University, Singapore. Lastly, this presentation will conclude with a discussion of plans at the Art and Design for Health Lab (AD4HLab), a new initiative at the university that aims to support and grow design for health explorations and capability development in Singapore.

A growing consciousness and appreciation towards Design for Health
Although the field of design for health in Singapore is less formalised than other international counterparts, such as the UK and the US, the island republic is not short of innovations at the nexus of design and health. The emergence of initiatives in recent years, such as the inaugural Design and Health Asia Pacific 2013 International symposium and exhibition, the launch of the Design2025 master plan, and social design initiatives led by the DesignSingapore Council, indicate a growing consciousness and appreciation toward the role and value of design in health.

The DesignSingapore Council (DSC), a national agency for design formed in 2003 to encourage and support the use of design for business growth, nurtures local design talents and innovation, as well as promotes Singapore Design. A key thrust of DSC is to use design to contribute to social progress. For example, following the launch of The Design 2025 master plan in March 2016, which aims to use design to engage and address complex societal problems, DSC launched several initiatives to encourage a process of
people–centred design that can be useful to improving and shaping safer and more inclusive community living. These initiatives include:

- The Better Life by Design, a social innovation project that aims to innovate and reimagine the nation's social services and bring improvement to the quality of life for People with Disabilities (PwDs), involving people with physical, intellectual, visual impairment, hearing loss, or autism spectrum disorders. PwDs’ caregivers and stakeholders from public service, healthcare, and social service sectors also participated in and contributed to the research;
- “AccessAbility” and “Design for Dignity” (2016), a two-part exhibition-seminar event organized by The Embassy of Sweden and the Swedish Institute, in partnership with DesignSingapore Council and the National Council for Social Service. This event explores how design can increase accessibility and promote independence for people with disabilities;
- Designathon (2017), a collaborative and networking platform launched by DSC DesignSingapore for designers, developers, entrepreneurs, students, healthcare workers, and social service providers to collaborate on identifying design solutions for people with intellectual disabilities, autism spectrum disorders, sensory (sight or hearing) disabilities, or physical disabilities in Singapore. Although the aforementioned initiatives may not target health specifically, they provide indication of increased interest in deploying and engaging design to improve quality of life and promote inclusiveness.

**Redefining Hospital Designs**

The design of a hospital’s physical environment can positively affect patient outcomes by promoting recovery and shortening the length of stay (Devlin and Arneill 2003, Ulrich 1992). Another indicator for the growing consciousness and appreciation for design for health can be found in the designs of the two newest public hospitals in Singapore: Khoo Teck Phuat Hospital (opened in 2010) and Ng Teng Fong General Hospital (opened in 2015). Drawing upon the understanding that encounters and visual contact with greenery promote relaxation (Grinde and Patil 2009), both hospitals incorporated lush greenery into the hospital environment to optimise patients’ exposure, thereby providing a comforting environment for convalescence. Viewing the outdoors can have a positive influence on recovery and promote restoration (Ulrich 1984, Kaplan 2001). In these two hospitals, every bed has a window view. Also taking into consideration to the importance of privacy to the physical, mental, emotional, and spiritual well-being of patients (Woogara 2001), these new hospitals have adopted a fan shape layout for its multi-bed wards. The staggered bed arrangement afforded by the fan shape layout enhances the privacy of the patients by creating enclaves that partially obscure the patient from view.

Besides fostering a healing environment, the newest public hospital, Ng Teng Fong General Hospital, prides itself on several patient-centred innovations, environment, and service design. The patient-centred innovations aim to provide a seamless service that address and support the needs of patients at various stages of their recuperation. Some of the notable innovations include:
• The Mobility Park, a patient rehabilitative facility that equipped with features that stimulate public transport settings and disability friendly facility such as ramps to enable the patients to re-adapt to their daily lives. The park, shown in Figure 1, is the first of its kind in Singapore designed to support patients’ recovery process;

• The Arts & Health Programme, steered by an art advisory committee, has introduced a variety of art engagement programmes and commissioned art project to help create a relaxing, engaging and caring healing environment such as commission artwork projects for the Intensive Care Unit. The hospital is also the first to actively consider and incorporate Arts for health as a part of its service delivery.

![Mobility Park](image1.jpg)

**Figure 1. The Mobility Park at Ng Teng Fong General Hospital**

### Nurturing Design for Health Capability

There is currently no formalised education programme that focuses specifically on design for health in Singapore. The School of Art, Design, and Media at Nanyang Technological University is an advocate for this field. Exploration at the nexus of design and health has been encouraged and supported via: (a) independent study approaches in the form of final year projects (FYPs), (b) supervisions, and (c) the URECA Programme, an undergraduate research programme for top performing students to undertake independent research. Some of the examples of design for health projects by students include:

Sensory Pizza, a therapy tool developed in collaboration with Occupational Therapists, for use during sensory therapy for Children living with Sensory Processing Disorder (SPD) (see Figure 2).

• *The Great Hospital Adventure in Space*, shown in Figure 3, is an illustration book project that facilitates communication of medical procedures to children.
- **Rabbit-Ray**, shown in Figure 4, is a paediatric education device developed by Esther Wang, a Product Design Undergraduate. The device enables medical professionals to explain medical procedures to children through play. Following further development by Wang upon her graduation, Rabbit Ray is now used by leading hospitals across five countries including Johns Hopkins Children’s Centre (USA), Great Ormond Street Hospital, Evelina London Children’s Hospital (UK) and National University Hospital (SG).

![Figure 2. Sensory Pizza: Therapeutic application of Surface Design for Children living with Sensory Processing Disorder by Chong Tong Pei.](image)

Figure 2. Sensory Pizza: Therapeutic application of Surface Design for Children living with Sensory Processing Disorder by Chong Tong Pei.

![Figure 3. The Great Hospital Adventure in Space, an illustration book project by Serene Ng Wei En.](image)

Figure 3. *The Great Hospital Adventure in Space*, an illustration book project by Serene Ng Wei En.
More recently, a group of URECA students collaborated with Ng Teng Fong General Hospital to develop engagement tools for staff and hospital volunteers to use with patients.

Conclusion

While the field of design for health in Singapore is in its nascent stage of development, the various activities highlighted in this presentation illustrate the growing awareness and interest towards investigation at the intersection of design and art, health, and wellbeing. As an effort to further develop and promote exploration in this area, the School of Art, Design and Media at Nanyang Technological University has recently established an initiative, the Art and Design for Health Lab (AD4HLab) to promote creative art and design research for the promotion of health and well-being of individuals and communities in various settings. AD4HLab aims to:

- Promote exchange and collaboration among practitioners and researchers in the arts, design, humanities, health, medicine, and other related fields to explore the potential of creative practices and design strategies to improve experiences, services and product for health and wellbeing.
• Connect with end users and community partners to co-create innovative approaches and outcomes that provide insight or address health and wellbeing issues and challenges in various settings.
• Develop capability and scholarship in art and design for health through project supervision and workshops.
• Promote networking and build relationships with local and international institutions, organisations and individuals working in this dynamic area of interdisciplinary research.
• Develop resource to support and facilitate research, practice and education in art and design for health and wellbeing.

Some of the short-term goals of the AD4Hlab include to grow relationship with partners in the health and social care sector to explore project partnership. It also aims to engage the DesignCouncil Singapore to explore ways to help further develop capability in this area. Lastly, to promote exchange with international colleagues in the field, the initiative looks forward to hosting an annual conference to promote awareness in the Asia region and encourage contributions from the region.

Reference List


