



**Singapore Healthcare Management 2021**



**National Neuroscience Institute**  
SingHealth

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## Driving Change Through Data: Patient Education Brochures 2.0

### Background & Objectives

Based on NNI patient feedback surveys, 4 out of 10 patients do not fully understand their condition<sup>1</sup>. To help our patients and caregivers understand and retain information post-consultation, we reviewed patient education materials to:

- 1 Create brochure aids that are up-to-date and easier for patients to understand
- 2 Achieve resource efficiency and cost-savings for the organisation via an evidence-based approach

### Methodology

#### Step 1: Research

- Drew learning points and best practices from SingHealth, NHG, NUHS patient education materials
- Studied data on (a) patient load and (b) usage rate

#### Step 2: Review

- Worked with clinicians, nurses and AHPs to review relevance of brochures e.g. frequency of use, clinical updates required, if service is still provided

#### Step 3: Redesign

- Trimmed hardcopy brochures (58 to 28); unprinted titles available on website for continuous education

Real-time information on directions via Google Maps instead of static maps

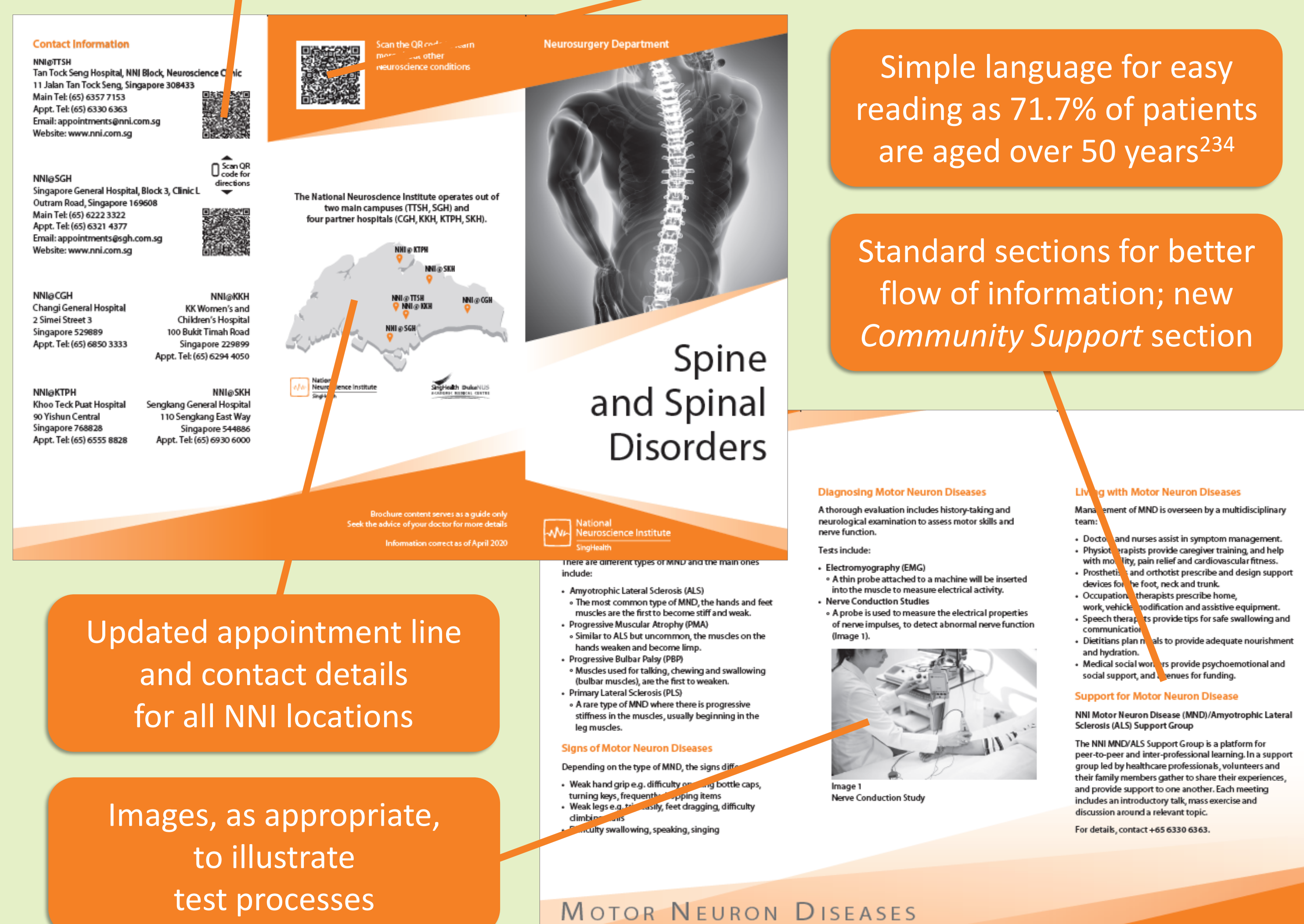
QR code to NNI website to support self-directed learning

Simple language for easy reading as 71.7% of patients are aged over 50 years<sup>2,3,4</sup>

Standard sections for better flow of information; new *Community Support* section

Updated appointment line and contact details for all NNI locations

Images, as appropriate, to illustrate test processes



### Conclusion & Results

- **Patients & Caregivers:** Updated and easy-to-read brochures increased likelihood of patients reading and understanding, bridging knowledge gaps
  - Improved readability with Flesch-Kincaid Grade Level<sup>5</sup> for sampled brochures dropping from average **8.78** to **5.88**
- **NNI:** Achieved cost and resource efficiencies
  - Estimated savings of **\$12,000/year** after reducing hardcopy titles from 58 to 28
  - Estimated **44,000** less brochures to manage/year, resulting in efficient inventory management

### What's Next: Brochures 3.0

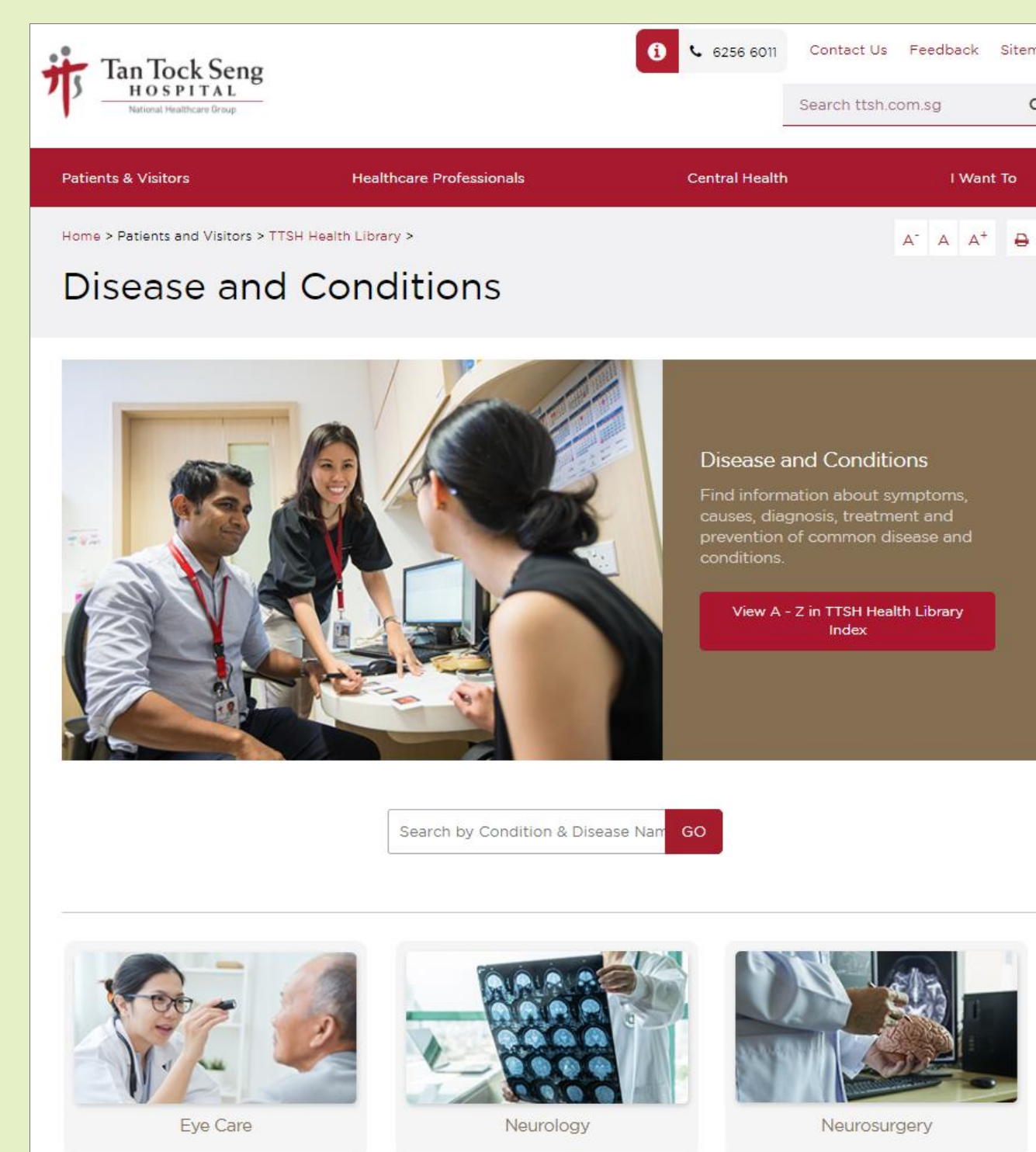
- As partners-in-care, involve patients in the review, redesign and testing of brochures
- Distribute digital brochures (on-campus and through partners), reducing usage of hardcopies further

#### Step 4: Check

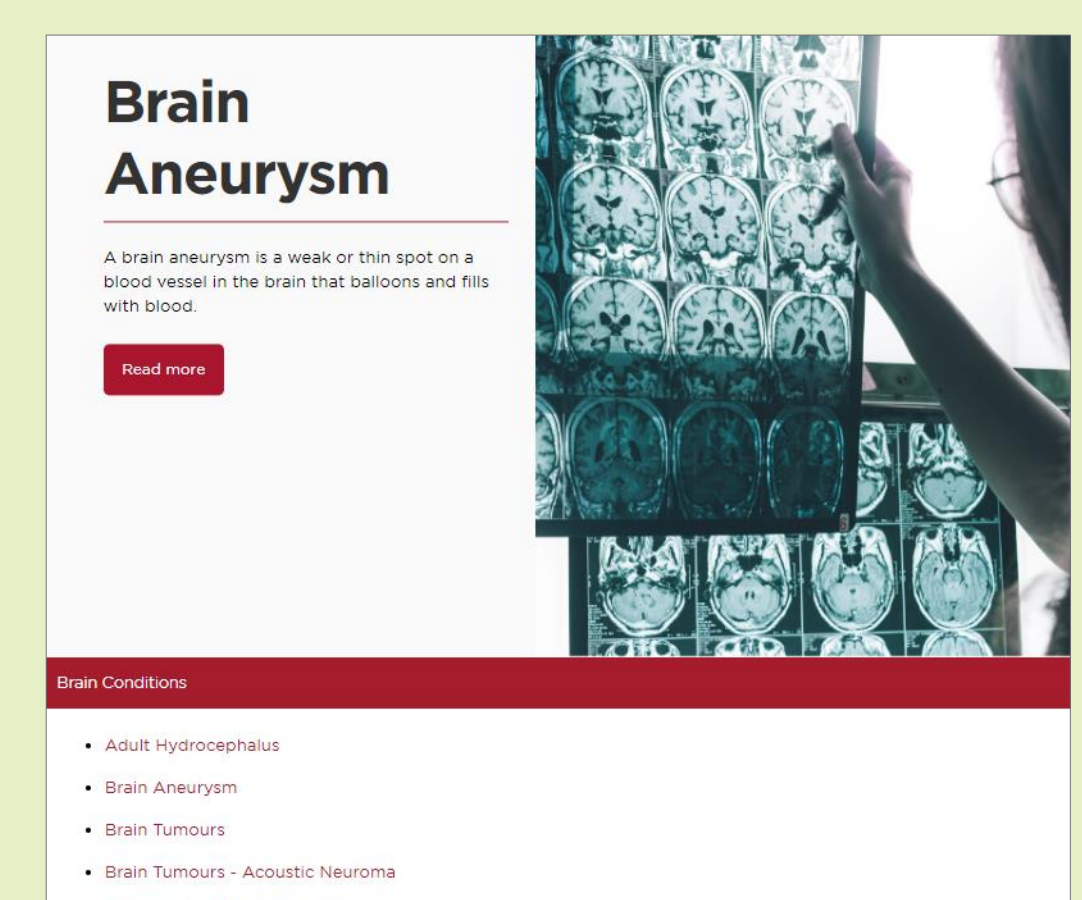
- Checked on brochure accuracy with medical teams

#### Step 5: Distribute

- Reduced wastage and saved on storage by basing print volume on (a) patient load and (b) usage rate
- Expanded distribution of print brochures to four other hospitals with NNI services
- Uploaded brochures onto NNI and partner websites (TTSH), for access by patients any time, any where



Neurology and Neurosurgery related brochures uploaded onto TTSH Health Library



#### Footnotes:

1. NNI Outpatient Services Feedback Survey, FY18: 43.45% of patients surveyed did not answer 'Yes, definitely': Did you understand the symptoms and health problems to look out for after your visit?
2. NNI Patient Demographics, 2020: 71.7% of unique patients seen at NNI@TTSH Campus were aged 50 years and above
3. Organisation for Economic Co-operation and Development, 'Survey of Adult Skills', 2015: Older Singaporeans, particularly 55 – 65 year olds have low scores in literacy with 1 in 2 scoring 1 or below out of 5 (Highest Level)
4. Department of Statistics Singapore, Census of Population, 2020: Almost half (49.7%) of Singapore residents aged 55 and older left school without secondary school qualifications
5. American Medical Association and the National Institutes of Health: Patient materials should not exceed 6 on the Flesch-Kincaid Grade Level test which measures how easy it is to read a material