Communication Vulnerability within Singapore’s Healthcare Environment

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Abstract
Communication difficulties can, and often do, create barriers between patients and healthcare workers (HCWs). We examined the perceptual differences between patients and caregivers; and HCWs with regards to their perceived communication vulnerabilities and identified communication needs in a tertiary hospital. A survey was conducted in selected outpatient settings among patients, their caregivers and HCWs, in a cross-sectional study. Respondents rated the reasons and frequency of encountering the communication difficulties during a hospital visit. Fifty-four percent of patients and caregivers cited poor hearing in the presence of noise, while HCWs cited patient’s poor vision (87%) as their primary communication barrier that requires improvement. Majority of HCWs (90%) had encountered patients who presented multiple communication barriers a quarter of the time. A third of HCWs felt that such encounters were especially challenging during communication, with very limited strategies available to deal with such communication vulnerable individuals. Patients, caregivers and HCWs universally experience communication challenges, even if their perceived barriers to communication happen to differ. Such perceptual difference between patients and HCWs may lead to inconsistent use of communication strategies by HCWs, potentially compromising patient’s healthcare needs. Nonetheless, the onus is on healthcare providers to bridge this communication gap to improve patient care.

Keywords
communication vulnerable patients, communication access, communication barriers, communication needs, healthcare settings

Introduction
Effective and clear communication between patients and healthcare workers (HCWs) is essential to ensure the delivery of high-quality optimal care.1 Patients’ communication abilities can be compromised by age or disease-related functional deterioration, cognition decline, language or literacy limitations; or when experiencing discomfort and pain.1 Communication vulnerability (CV) refers to a state where individuals cannot communicate effectively within their social environment or have difficulties expressing their needs or understand information.2 Individuals with CV have been reported with poorer health, utilised healthcare more frequently, had greater difficulties accessing care than persons without communication disabilities.3 Considering the varied causes of communication vulnerability, this group may be under-represented in estimates of disability and thus medically under-served. For instance, hearing loss (HL) accounted for 57% of Singapore’s sense organ disease burden,4 exacerbated by the fact that the overwhelming majority of hearing-impaired adults were not fitted with hearing aids.5 Patients with hearing loss are more prone to medication errors and other negative impact on care quality.6 Apart from that, 37% of sense organ disease burden was due to blindness and vision impairment.4 Visually-impaired patients are unable to receive written information in inaccessible formats, or face loss of privacy when someone else has to read the information for them. Additionally,

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cognitive impairment negatively affects social communication. However, in Singapore, most older adults were late-diagnosed with cognitive decline after the age of 75 years. Poor literacy could be more common in older adults. One local study had found that only 3 in 10 older adults with less than secondary education were confident in their literacy skills.

This situation would be further compounded by an inconsistent use of communication strategies to cater to patients with CV. One study on community pharmacists found the lack of training and awareness on the communication needs of patients with sensory impairment (visual, hearing and dual impairment) had led to sub-optimal pharmaceutical care. Hence, it is likely that patients with CV are less equipped to self-manage medications and to achieve treatment adherence as compared to those who are not. To our knowledge, the provision of healthcare for patients with CV and how this impacts important care goals like medication adherence is not well-studied in Singapore.

In a 2018 white paper, the Joint Commission International (JCI) has highlighted common contributors to communication lapses that can lead to suboptimal patient health outcomes. This research report is focused on identifying perceived communication barriers by individuals. These include the aforementioned barriers caused by age-related challenges (such as sensory impairments and cognitive decline); literacy or language difficulties; and speech and comprehension difficulties due to pre-existing medical conditions or a result of treatment.

To understand the types and extent of communication barriers perceived by HCWs, patients and their caregivers, a cross-sectional survey was carried out in selected outpatient clinics of Tan Tock Seng Hospital between August 2020 to October 2020. The adapted version of the Hospital Consumer Assessment of Healthcare Providers & Systems (HCAHPS) has retained communication-related questions with HCWs and about their medication and was rephrased to describe outpatient settings. Additionally, participants were asked to identify communication barriers they have experienced during their visit. The survey received responses from a convenience sample of 39 patients (mean age: 74±10), 24 caregivers (mean age: 75±12), and 30 frontline HCWs (mean age: 33±11) from the outpatient retail pharmacy (74%), the Ear, Nose and Throat Clinic (13%), and the Geriatric Medicine Clinic (13%). Overall, 44% of patients have reported some degree of difficulties communicating with hospital staffs. Majority of patients (97%) and caregivers (96%) and all HCWs (100%) surveyed agreed for a need to improve communication in these settings.

Patients most frequently cited their inability to hear what HCWs were saying (54%), inability to remember/recall details (44%), and poor understanding of what they were told (41%) as main communication barriers. Patients’ caregivers have similarly identified patient’s poor hearing (54%), poor ability to understand instructions (42%) and poor literacy (38%) as barriers to effective communication with HCWs. HCWs felt that patient’s poor vision (87%), speech impairment (77%), poor ability to understand conversations (73%) and poor hearing (70%) were the main communication domains that requires improvement (Table 1). Notably, most HCWs (90%) had seen patients with multiple communication barriers at least 25% of the time. A third of HCWs (33%) felt that half the time, such encounters had been challenging during communication.

It is crucial that HCWs involved in the communication process uses good communication strategies consistently.

### Table 1. Perceived communication barriers in hospital outpatient settings and the need for improvements. (A) Demographic characteristics of respondents. (B) Communication barriers identified by respondents.

| A. Demographic characteristics | Patients N = 39 | Caregivers N = 24 | HCWs N = 30 |
|-------------------------------|----------------|------------------|-------------|
| Mean age (years, standard deviation) | 74 ± 10 | 75 ± 12 | 33 ± 11 |
| Education level (N, %) | 8 (20.5) | 0 | |
| Tertiary education | 3 (7.7) | 0 | |
| High school | 12 (30.8) | 5 (20.8) | |
| Secondary school | 11 (28.2) | 9 (37.5) | |
| Primary school | 5 (12.8) | 10 (41.7) | |
| No formal education | | | |
| Years of service (N, %) | | | |
| 10 years or more | | | |
| 5–9 years | | | |
| 1–4 years | | | |
| Less than a year | | | |
| In retirement (N, %) | 31 (79.5) | 22 (91.7) | |

| B. Communication barriers identified | Patients N (%) | Caregivers N (%) | HCWs N (%) |
|-------------------------------------|----------------|------------------|------------|
| 1. Poor eyesight. Need bigger words to read better. | 6 (15.4) | 3 (12.5) | 26 (86.7) |
| 2. Poor hearing. Need hospital staff to speak louder to hear in noisy situations. | 21 (53.8) | 13 (54.2) | 21 (70.0) |
| 3. Unable to understand what was told. Need simpler and slower explanations. | 16 (41.0) | 10 (41.7) | 22 (73.3) |
| 4. Unable to remember what was told. Need simple written instructions. | 17 (43.6) | 7 (29.2) | 18 (60.0) |
| 5. Unable to speak English. Need help with translation. | 2 (5.1) | 9 (37.5) | 19 (63.3) |
| 6. Unable to speak. Need writing tools to convey intentions. | 1 (2.6) | 2 (8.3) | 23 (76.7) |
| Need to improve communication addressing any or more than one of the identified barriers | 38 (97.4) | 23 (95.8) | 30 (100) |
Only 48% of surveyed HCWs would complement verbal instructions with written simple instructions for patients with poor hearing, while 34% of HCWs would reaffirm hearing-impaired patients’ understanding by requesting a read-back of information. No augmentative tools (e.g. consumer-grade personal sound amplifier) were available to improve hearing for patients with poor hearing. Other CVs would likely require specific augmentative tools to further aid communication. A collection of communication tools could be assembled into an easy-to-use toolkit and made readily available to HCWs to function as a ‘first-aid kit’ for communication. Our team is currently evaluating a set of low-cost tools to enhance communication with such patients.

This study has highlighted the inconsistent usage of communication strategies by HCWs when dealing with patients with CV and underscores a need to correctly identify the CV and to employ effective strategies to enhance communication. Taken together, effective communication between patients and HCWs are vital to effective healthcare provision that promotes positive outcomes for patients and can increase patient satisfaction, acceptance, compliance, and cooperation with healthcare provider. It is likely that with a rapidly ageing population, there is increased likelihood of frontline HCWs encountering patients with communication disabilities which may impact their ability to engage in effective shared decision-making. HCWs can benefit from an increased awareness of this problem and to be trained and better equipped with evidence-based solutions to help meet patients’ communication needs.

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Author contributions
Go T.W.W., Ho E.C., Mok H.T. and Suelo D.C. contributed to the conception and study design. Acharyya S. contributed to data analysis and interpretation. All authors critically revised and approved the final draft.

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Ethical approval
(include full name of committee approving the research and if available mention reference number of that approval)

Ethics approval was obtained from the National Healthcare Group Domain Specific Review Board as it involved a clinical study on a novel set of communication toolkit. (DSRB Reference Number: 2020/00378).

Informed Consent
Verbal informed consent was obtained from all participants before the study. Written informed consent was not obtained as the current study involved a survey where participants were not identified, tracked or at any risk.

Trial Registration (where applicable)
NA

Availability of data
The data sets generated and/or analysed during the current study are available from Dr Go upon request.

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