

Exploring Patients' Experience on Hospital Merger: Have they Benefited from Cluster Hospital Initiative in Malaysia?

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ABSTRACT

Cluster Hospital Initiative (CHI) in Malaysia is a hospital merger exercise to establish an integrated network of specialist and non-specialist hospitals. The resource sharing, services realignment, and better care coordination from this integration have been shown to improve operational efficiency and quality of care from the providers' perspective. However, there are very limited studies which focus on the effects of hospital merger

on patients. Therefore, this study aims to explore patients' and caregivers' experiences of CHI. A qualitative study using purposive sampling was conducted from July to August 2017 at the three pilot sites. Semi-structured in-depth interviews were conducted with 85 patients and caregivers who received healthcare services before and after CHI. Interviews were audio-recorded and transcribed verbatim. Data were analysed using thematic text analysis. Three main themes transpired from the analysis were changes in healthcare service delivery, time spent on healthcare-related activities, and financial implications. Firstly, participants

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were generally satisfied with the increased access to specialist services, better quality of care, and upgraded equipment and facilities. Secondly, many participants experienced a shorter waiting time and reduced travelling time after CHI. Thirdly, CHI led to financial savings for the participants in terms of reduced out-of-pocket expenditure and productivity loss. This study demonstrated that the implementation of CHI appeared to be well-received by the patients. The expected benefits brought on by hospital mergers were also acknowledged by the study participants. A follow-up study is recommended due to the short duration of CHI implementation and low awareness about the initiative among patients.

Keywords: Hospital consolidation, integrated care, patient-centred care, patient satisfaction, service delivery, thematic analysis

INTRODUCTION

In recent years, the activity of hospital mergers has been on the rise globally (Ovseiko et al., 2015). The American Hospital Association defines a hospital merger as a combination of previously independent hospitals formed by either the dissolution of one hospital and its absorption by another, or the creation of a new hospital from the dissolution of all participating hospitals (Keane et al., 2016). Hospital merger has been shown to improve the overall hospital efficiency through economies of scale and scope, reduced duplication of services, beneficial

synergistic impacts (Ovseiko et al., 2015; Satta & Edmonstone, 2018), and enhanced quality of care (Kreindler et al., 2017). From the patients' perspective, in a systematic review, Baxter et al. (2018) analysed hospital merger activity among member countries of the Organisation for Economic Collaboration and Development revealed that the intervention increased patient satisfaction level. Patients also reported enhanced treatment experience and better contact with healthcare personnel (Lim, 2004; van Veghel et al., 2019). Other advantages appreciated by patients through hospital merger was the convenience and reduced cost in receiving healthcare treatment as seen in the qualitative study conducted by McGrath (2015) on cancer patients in Australia.

The concept of hospital merger has been implemented in many countries, albeit with slight variations in the definition and operational terms. In Hong Kong, there are currently seven clusters of hospitals after the merger exercise in the 1990s to overcome issues such as uneven standard of care, inefficient resource allocation, and service duplication between hospitals. Each cluster comprises one tertiary hospital and five or six smaller satellite hospitals that provide a full range of healthcare services to different population areas (Caulfield & Liu, 2006; Kong et al., 2015). Likewise in Singapore, there are six regional health systems, each consisting of regional hospitals together with primary, intermediate, community, and long-term care support centres. The vertical and horizontal integration of public healthcare

services has enabled the smooth delivery of care at the respective geographical region (Okma et al., 2010; Saxena et al., 2015). Similarly, the Australian health authority has established the Local Hospital Network as part of the healthcare reformation in 2010. Geographical groupings of hospitals around a tertiary referral hospital were conducted to decentralise public hospital management and to enhance local accountability. It is also aimed to improve responsiveness to the healthcare needs of local communities via better access to service and increased clinician engagement (Anderson & Catchlove, 2012; Hall, 2010).

Since achieving independence in 1957, Malaysian healthcare has gradually transformed from a largely government-led and tax-funded public service into a dichotomous parallel system with a thriving private sector. The three main types of hospitals in Malaysia are government-operated public hospitals, privately-owned hospitals, and non-profit private hospitals. Public hospitals are fully funded by the government and they provide comprehensive services at highly subsidised rates to all citizens (Ahmad, 2019). They can be further categorised into specialist hospitals, non-specialist district hospitals, and special medical institutions. In 2016, these public hospitals make up a total of 144 hospitals and 41,995 beds, as compared to 187 private hospitals that provide only 13,957 beds (Ministry of Health Malaysia, 2017). Majority of the population prefers public hospitals due to the much lower charges. With an admission

rate that is twice that of the private hospitals, public hospitals in Malaysia face perennial problems of long waiting time, congestion, and heavy workload. The situation is further aggravated by the unequal distribution of specialists with 30% of the public hospital specialists treating 70% of the acute cases in the country (Ahmad, 2019). Moreover, the increasing double disease burden and the ageing population in Malaysia also call into question the financial sustainability of public healthcare services.

In view of this, the Malaysian Ministry of Health (MOH) formed a technical committee to explore the hospital merger concept in 2010 prompted by the reported success in other countries. Cluster Hospital Initiative (CHI) was later conceptualised based on the Health Service Goals of Malaysia's Health Vision under the 10th Malaysia Plan. The goals included Care Provided At Home or Close To Home, Seamless and Continuous Care, as well as Effective, Efficient, and Affordable Services (Institute for Health Management [IHM], 2017). Nonetheless, the MOH was initially cautious with CHI implementation because of evidence from published studies showing that hospital merger may lead to unintended outcomes such as increased treatment costs, bureaucracy due to diseconomies of scale, ambiguous effects on quality of care, and poorer patient experience (Beaulieu et al., 2020; Gaynor, 2011; Kristensen et al., 2010; Mutter et al., 2011). Therefore, the technical committee recommended for CHI to be first introduced as a pilot project prior to nationwide expansion. Cluster

Hospital Policy Framework and Standard Operating Procedures for the pilot project was developed by the working committee with inputs and contributions from various stakeholders to provide a blueprint for CHI implementation (IHM, 2017).

CHI consolidates public hospitals within the same geographical location as an integrated cluster network that shares resources, manpower, and equipment (IHM, 2017). Each cluster is made up of one lead hospital (LH), which is a specialist hospital, and one or more non-lead hospitals (NLH), which may be smaller specialist or non-specialist facilities in less urban areas. Prior to CHI, specialist hospitals were overcrowded while district hospitals were underutilised (Ang, 2014; Ang et al., 2013). CHI strives to overcome these issues through the formation of strategic partnerships and resource optimisation between the hospitals. For example, healthcare services are delivered in the optimal setting by reducing unnecessary patient referrals from NLH to LH, whereas medically stable patients requiring long term care are transferred from LH to NLH. Simple procedures are conducted in NLH, while only the complex surgeries are performed in LH. Besides that, CHI can increase healthcare providers' competency level via the sharing of best practices and improve their job satisfaction through a more balanced workload distribution. In addition, CHI emphasises patient-centred care by bringing specialist-level care closer to the patient's home to make healthcare accessible to all (IHM, 2017). Patients

are also expected to benefit from reduced waiting time for treatment and better care quality as a result of more efficient work processes and a competent workforce.

CHI started with three pilot clusters in 2014, namely the East Sabah Cluster in East Malaysia, and Melaka Cluster, and Central Pahang Cluster in Peninsular Malaysia (Figure 1). These pilot sites were identified based on their distinct geographical locations to reflect the different needs for urban, semi-urban, and rural populations. Due to financial and human resource constraints, not all the specialty departments were clustered in these three pilot clusters. Based on the situational analysis, the departments with more urgent needs were the first to be clustered (IHM, 2017). Central Pahang Cluster commenced with general medicine and emergency departments, Melaka Cluster started with departments of plastic and reconstructive surgery, orthopaedics, emergency, and general medicine; while the East Sabah Cluster focused on the obstetric department. Since the implementation of CHI, various improvements had been observed from the healthcare providers' perspective, for example, increased bed occupancy rate (BOR) and a number of procedures performed in NLH, reduced congestion in LH, and shorter waiting time for procedures (IHM, 2017). As for the patients, their experience with CHI has not been fully explored. It remains unclear whether the objective of attaining patient-centred care via CHI has been achieved, thus it formed the theoretical basis for this study. Among

the three pilot clusters, only Central Pahang had conducted a small-scale cross-sectional study using a survey questionnaire. The study showed that the percentage of satisfied patients increased from 75.9% in 2013 to 83.0% in 2015 (IHM, 2017). Apart from that, all the public hospitals under MOH have been using SERVQUAL KKM as a patient satisfaction measurement tool since 2007. However, it is a generic tool applied across all types of MOH hospitals. Thus, it is not able to provide an in-depth exploration of

patients' experience towards CHI (Ghazali et al., 2010). Patients' feedbacks as the end-users would be valuable in identifying the barriers and facilitators towards improving CHI (Pope et al., 2002) and serve as part of the evaluation for the pilot project before the initiative can be expanded on a larger scale. Hence, this study aimed to explore patients' and caregivers' experience in the utilisation of public healthcare services in the three CHI pilot sites.

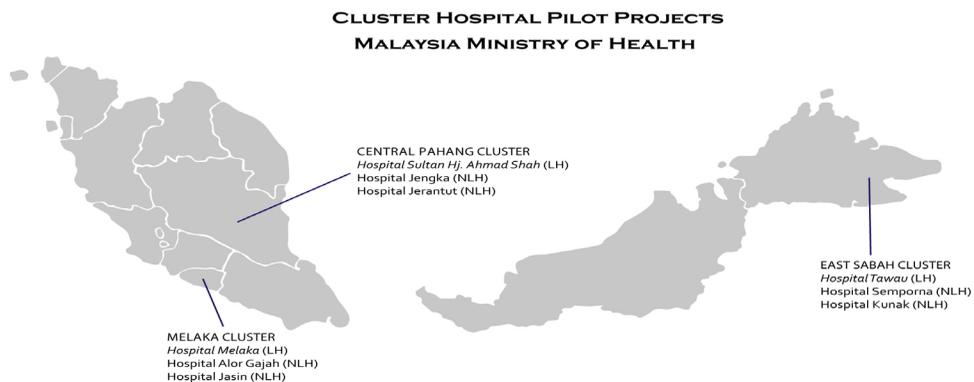


Figure 1. Map of Malaysia and cluster hospital pilot project sites

METHODS

Study Design

A qualitative study using in-depth interviews was performed to explore patients' and caregivers' experience of the healthcare service delivery after CHI. As CHI is a new concept in this country, the qualitative method would be a more flexible and preferable approach in exploring the

participants' perspective and experience (Al-Busaidi, 2008; Kemparaj & Chavan, 2013; Pope et al., 2002). In-depth interviews also enabled two-way communication and engagement between the research team members and participants which allowed for a deeper understanding of emergent issues (Grossoehme, 2014; Kemparaj & Chavan, 2013).

Study Setting and Participants

This study was conducted between July to August 2017 in the three pilot clusters. The hospitals for Central Pahang Cluster are Hospital Sultan Haji Ahmad Shah (LH), Hospital Jengka, and Hospital Jerantut (NLH). Melaka Cluster includes Hospital Melaka (LH), Hospital Jasin, and Hospital Alor Gajah (NLH). East Sabah Cluster includes Hospital Tawau (LH), Hospital Kunak, and Hospital Semporna (NLH). Table 1 shows an overview of the features of the respective hospitals.

Due to the nature and objective of this research, all participants were chosen through a purposeful sampling technique. This sampling method was the most appropriate option to ensure the selected participants were patients and caregivers who had received healthcare services before and after CHI. Inclusion criteria were those aged 18 and above, able to understand Malay/English/ Mandarin language, and received treatment services under the specialties which had been clustered. Only those who were actively involved in the inpatient care and/or follow-up appointments of patients were approached to be interviewed as caregivers. A list consisting of a total of 639 potential participants fulfilling the inclusion criteria was prepared by the local corresponding officers of each cluster. Random purposeful sampling was then applied whereby 40 potential participants for each cluster were approached by the research team members (NRJ, NNEM) via telephone calls. If they agreed to participate, an appointment would be set up to interview

them at facilities within the hospital such as meeting rooms and clinic consultation rooms. The most common reasons for refusal to participate were time constraints and unwillingness to participate.

Data Collection

A trained interviewer from the research team briefed the participants individually prior to the interview. A semi-structured interview protocol (IP) adapted from current literature about hospital mergers (Gordon et al., 2010; McGrath, 2015), objectives of CHI, and expert opinions of MOH top management personnel were used as guidance during the interviews. The IP enabled the research team members to address topics of interest while allowing the participants to answer on their own terms and for new topics to develop throughout the interview (Pope et al., 2002). Topics covered in the IP included participants' experience in receiving treatment at the hospitals, awareness of CHI, changes noticed in the services provided, and suggestions for improvement. Written informed consent was obtained from the participants before starting the interview. The research team members informed the participants that they were interested in exploring participants' experience in CHI. The interview was conducted by any of the research team members (NRJ, NNEM, NSEM, RAS, SZSAY) under the supervision of either senior researchers (MIO, NB) who had previous experience in conducting qualitative research.

Table 1

Overview of the hospitals in the three CHI pilot projects

Cluster	Specialist hospital (LH)	Non-specialist district hospital (NLH)	Non-specialist district hospital (NLH)
<i>Central Pahang</i>	<i>Hospital Sultan Haji Ahmad Shah</i>	<i>Hospital Jengka</i>	<i>Hospital Jerantut</i>
Year started operation	2005	1994	1977
Total operating beds	550	70	77
Staffing	2,009	295	329
BOR (%)	91.3	72.2	49.5
Services offered	14 specialties	Visiting specialists	Visiting specialists
Distance from Hospital Sultan Haji Ahmad Shah	-	48km	60km
<i>Melaka</i>	<i>Hospital Melaka</i>	<i>Hospital Jasin</i>	<i>Hospital Alor Gajah</i>
Year started operation	1934	2005	2013
Total operating beds	1,041	76	78
Staffing	3,666	351	508
BOR (%)	84.2	51.0	47.5
Services offered	26 specialties	Visiting specialists	Visiting specialists
Distance from Hospital Melaka	-	28km	24km
<i>East Sabah</i>	<i>Hospital Tawau</i>	<i>Hospital Kunak</i>	<i>Hospital Semporna</i>
Year started operation	1922	2006	1975
Total operating beds	334	48	70
Staffing	1,630	250	276
BOR (%)	85.6	47.7	50.5
Services offered	11 specialties	Visiting specialists	Visiting specialists
Distance from Hospital Tawau	-	80km	110km

Each interview lasted approximately 30-60 minutes in duration. It was designed to elicit participants' experience using open-ended questions to trigger responses, with prompts given when necessary for clarification purposes. Mono-, bilingual, or mixed languages were used during the interviews depending on the fluency and preference of both participants and research team members. Interviews were conducted for each cluster until the point of saturation was met and no new perspectives appeared. This entire process was then repeated for the subsequent clusters. The interviews were audio-recorded, transcribed verbatim, and, where necessary, translated into English. All places, names, and identifiable information were anonymised. Each participant received 30 Malaysian ringgit (RM) (USD 7.20) as the reimbursement for the time spent on the interview and travel expenses. This study was registered with National Medical Research (NMR) with the registration number (NMRR-17-297-34718) and funded by the Malaysia MOH grant. Ethical approval was obtained from the Malaysia Medical Research Ethical Committee (Ethics approval number (5)KKM/NIHSEC/P17-496).

Data Analysis

Research team members who were involved in the data collection independently reviewed the transcripts using thematic text analysis (Braun & Clarke, 2006). The transcripts were first read and then codes were allocated manually according to the descriptive or inferential meaning (Basit, 2003). The

constant comparison method of analysis was adopted throughout the research process to produce an extensive list of codes until saturation was achieved. Categories were then created from similar groups of codes and eventually broad overarching themes were derived. To avoid researcher bias, peer review via regular meetings were conducted. The consensus from all research team members was reached on the final main themes and sub-themes. The analysis was conducted in multiple stages involving the independent analysis and consensus meetings to ensure the trustworthiness of the findings.

Results

A total of 85 participants were interviewed before reaching the point of saturation, with 27 from East Sabah Cluster and 29 each from Melaka Cluster and Central Pahang Cluster. Table 2 summarises the demographic characteristics of the participants.

From the interviews conducted, three themes emerged relating to the patients' and caregivers' experience in utilising healthcare services after CHI, namely (1) Changes in healthcare service delivery, (2) Time spent on healthcare-related activities, and (3) Financial implications.

Changes in Healthcare Service Delivery

The significance of CHI in improving the quality of healthcare was highlighted in the first theme. Participants described an increased level of satisfaction as a result of improved healthcare service delivery. This theme can be further categorised into

three sub-themes in terms of availability of specialist care at NLH, better quality of care by staff, and upgraded equipment and facilities.

Table 2

Sociodemographic characteristics of the participants (N=85)

Characteristics of Participants	n (%)
Age Group	
18 - 20 years old	3 (3.5%)
21 - 40 years old	23 (27.1%)
41 - 60 years old	38 (44.7%)
>60 years old	21 (24.7%)
Gender	
Male	40 (47.1%)
Female	45 (52.9%)
Ethnicity	
Malay	68 (80.0%)
Chinese	8 (9.4%)
Indian	4 (4.7%)
Others	5 (5.9%)
Cluster	
Central Pahang	29 (34.1%)
Melaka	29 (34.1%)
East Sabah	27 (31.8%)
Specialty	
Obstetrics	14 (16.5%)
Orthopaedic	43 (50.6%)
General Medicine	22 (25.8%)
Plastic & Reconstructive Surgery	6 (7.1%)
Role	
Patient	77 (90.6%)
Caregiver	8 (9.4%)

Availability of Specialist Care at NLH.

Prior to CHI, many patients and caregivers had to travel further to LH for follow-up at specialist clinics. With this new initiative, specialist services were made available at NLH and this was highly complimented by most of the participants.

“I am satisfied with the specialist who comes to the non-lead hospital as he explains very well.” [Mdm. M, orthopaedic, aged 49]

“Previously there were no specialists in Hospital B [NLH], often we had to be referred to Hospital A [LH]. But now the specialists are coming here every month to see the patients which is much more convenient for us as we do not need to travel to the town.” [Mr. M, general medicine, aged 45]

Nevertheless, majority of the participants were not aware that these changes were brought on by CHI. Furthermore, there was still room for improvement as a few participants opined that the frequency of specialist clinics with high patient load should be increased.

“I don’t know [about Cluster Hospital], I have never heard about it. But here [NLH] is better, the process seems to be more systematic and faster.” [Mr. A, orthopaedic, aged 24]

“Cluster should be expanded to other specialties, and with more frequent specialist clinics.” [Mdm. H, obstetrics, aged 30]

“The specialists should come here [NLH] more often, currently they come only on Friday.” [Mdm. J, mother of orthopaedic patient, aged 37]

Better Quality of Care by Staff. Apart from the provision of specialist care in district hospitals, the participants also expressed satisfaction with the quality of care at NLH after CHI. Many participants perceived the standard of healthcare services and interaction with staff had improved as compared to their previous visits prior to CHI. This could be attributed to the higher staff: patient ratio and less stressful working environment at NLH.

“Truthfully, the specialist service here [NLH] is better as there are too many patients [at LH]. The specialists here are well-mannered and very helpful, their explanations are very good.” [Mdm. N, obstetrics, aged 32]

“I think Hospital B [NLH] is better. Because Hospital B is less crowded, the doctors will come to see you, that’s one. Secondly, here in Hospital A [LH], [there are] too many patients. [It is] over-crowded and [faces] shortage of nurses.”

They have no time to come and see us for medication and other things. In Hospital B, because the patients are less, so for medication or any other things we can call the nurses.” [Mr. B, plastic and reconstructive surgery, aged 62]

Upgraded Equipment and Facilities. In addition, another positive experience from CHI was the less congested wards and upgraded facilities at NLH to accommodate the specialist services. One significant example was the refurbishment of operation theatres (OT) in Melaka Cluster and East Sabah Cluster.

“Yes, I like it here [referring to NLH], the facilities are okay. It is not too crowded. I visited my sister who delivered at Hospital A [LH], it was so overcrowded there. I can feel it was not comfortable at all. My sister herself said that here [NLH] is comparable to private hospitals.” [Mdm. H, obstetrics, aged 32]

“My operation was done in Hospital B [NLH] because the operating theatres in Hospital A [LH] were fully occupied. I will have to wait for one month in Hospital A, but I can get it done within days in Hospital B. Nowadays I see that Hospital B is already furnished with many equipments and various procedures can be done here.” [Mr. S, orthopaedic, aged 40]

Nonetheless, not all the facilities were equipped with the necessary equipment to cater to all types of surgical procedures. A few participants had commented on the inadequacy of certain vital equipment for the provision of comprehensive specialist care.

“The adequacy of the operating equipment is okay. I think maybe it will be better if an additional scan machine can be provided here [NLH].” [Mr. M, orthopaedic, aged 68]

“Increase the number of specialists or senior doctors who are visiting here [NLH], or just place them here. And of course, together with adequate and complete equipment.” [Mdm. R, obstetrics, aged 35]

Time Spent on Healthcare-Related Activities

The total amount of time spent on healthcare-related activities is a major concern to most patients. During the interviews, participants frequently mentioned the travelling time to the hospitals and the waiting time for medical consultations and procedures.

Waiting Time for Medical Consultations.

Overall, majority of the participants were satisfied with the availability of outpatient specialist clinics at NLH which led to shorter waiting time.

“Here [NLH] waiting time is not long. I waited for 20 to 30 minutes only before seeing the doctor in the specialist clinic.” [Mdm. F, general medicine, aged 68]

“It [CHI] really saves time. In Hospital A [LH], we usually have to wait for 3 to 4 hours, even if we arrive early for the appointment.” [Mr. F, son of a general medical patient, aged 41]

In contrast, long waiting time at the emergency department especially at LH was still a common grouse among the patients despite CHI. This was evidenced by the feedback from several participants who expressed that no discernible reduction in waiting time was observed.

“I have experienced a very long waiting time in the emergency department. My son was treated there [LH] after a road traffic accident. He arrived at 7 p.m. and he was yet to be seen at 5 a.m. the next day.” [Mr. M, father of orthopaedic patient, aged 54yo]

“It’s very long [waiting time]. Getting treated at the emergency department is very time-consuming.” [Mr. S, general medicine, aged 64]

Waiting Time for Medical Procedures. A more significant time-saving impact from

CHI was contributed by the improvement of the waiting period for medical procedures and surgeries. With the upgraded facilities and improved staffing at NLH, many interventions that were previously limited to LH could be performed at NLH after CHI. A few of the participants voiced out about their disappointments on the long waiting time or the procedure delay that frequently happened before CHI.

“Last time my son had a wound on his head. They said he needed to be sent to Hospital A [LH] as the specialist was there. At that time, the emergency department was congested with patients. I waited from afternoon until night. We were later informed that he would need wound suturing in the operating theatre but again we had a long wait as all the theatres were occupied.” [Mdm. S, obstetrics, aged 30]

“I had experienced [long waiting time] and heard [the same] from my family, relatives, and neighbours who have had operations done here in Hospital A [LH]. We had no choice but to wait and the waiting time can be very long.” [Mr. D, orthopaedic, aged 39]

However, majority of the participants responded favourably when asked if they had experienced any changes in this aspect after CHI. In fact, they indicated that apart

from the reduced waiting time for medical procedures, other processes such as ward admission and discharge were also more seamless and accommodative to patients' needs.

"It is good now that we can have the surgery done faster without having to wait for too long. If the condition can be treated, it should be done at the earliest possible to prevent possible complications and even death." [Mdm. A, mother of orthopaedic patient, aged 54]

"Here [at NLH], I had my surgery on Wednesday. I was admitted one day before, on Tuesday. Everything was fast. The doctor and the nurse had contacted me two days prior to my admission to follow up on me and to remind me about the ward admission." [Mr. M, orthopaedic, aged 24]

Travelling Time to the Hospitals. Among the three pilot clusters, participants from the East Sabah Cluster were the biggest benefactors in terms of shorter travelling distance and time. In the East Sabah Cluster, the distance between Hospital Kunak (NLH) and Hospital Tawau (LH) is 80km. With the newly upgraded OT in Hospital Kunak under CHI, many patients expressed their relief as they no longer need to spend substantial time and resources to access obstetrics services. The patients in Hospital

Semporna (NLH) were also benefited as they were able to receive necessary care in the nearer Hospital Kunak (30km away), rather than having to travel 110km to Hospital Tawau.

"During an emergency, it is so much of a hassle to go [to LH]. It is truly inconvenient, especially for those poor patients with no own transportation. If a family has to visit the patients, with small children, expecting mothers... [very inconvenient]" [Mdm. J, obstetrics, aged 36]

"It takes one and a half hours to travel to Hospital A [LH] to see the specialists. After taking the queue number, we need to wait for another one to two hours for the consultation before we can go back. There was once we left home at 6 a.m., and only reached home by 2 p.m. So now with the availability of specialist services here in Hospital B [NLH], it is easy and convenient for us." [Mdm M, general medicine, aged 42]

Financial Implications

Under CHI, NLH was upgraded to be equipped with the facilities and human expertise to provide specialist services. As a result, many patients could receive the necessary care in hospitals nearer to their homes.

Reduced Out-of-Pocket Expenditure.

Many participants reported financial savings in terms of out-of-pocket (OOP) expenditure because of the shorter distance. They spent less on transportation (fuel, highway toll) and overnight accommodation after CHI.

“The transportation expenses to the district hospital [NLH] was RM 5 (USD 1.20) as compared to RM 30 (USD 7.20) if going to the specialist hospital [LH].” [Mr. P, orthopaedic, aged 55]

“When I delivered my baby in Hospital A [LH], my family had to travel there and stay overnight. The car fuel was expensive. After the Caesarean section, I had to stay for another one to two days, total expenses were about RM 200 (USD 48) for food and accommodation.” [Mdm. R, obstetrics, aged 30]

“Some of the patients failed to turn up for their appointments because of financial difficulties. That’s why they did not come. If the services are provided at hospitals nearer to home, it is much more convenient for us.” [Mdm. N, orthopaedic, aged 38]

Reduced Productivity Loss. The participants also highlighted the additional benefit they derived from CHI in terms of reduced productivity loss when seeking treatment at NLH. A nearer distance to hospitals and shorter travelling and waiting

time translated into lower absenteeism and reduced time off from work, and subsequently less productivity loss for both the patients and family members. The caregivers, typically the children of the elderly patients or the parents of younger children, reported a lower likelihood of income loss, especially for those who were self-employed.

“He [patient’s son] is working. Last time if I have a check-up in the specialist hospital [that is] further away, he has to take leave from work with no pay for that day just to fetch me.” [Mdm. F, orthopaedic, aged 68]

“I don’t have to take leave to send my father to the hospital now.” [Mr. M, son of a general medical patient, aged 38]

“It is easy to come [to the NLH]. It’s convenient for my children to visit me, before and after work.” [Mdm. Q, orthopaedic, aged 49]

Discussion

CHI is a major effort by the Malaysia MOH to integrate the public healthcare service delivery in order to improve the quality of care and to safeguard the long-term sustainability of the healthcare system. Since the implementation of CHI in 2014, subjective outcomes such as the perception and experience of the CHI recipients have yet to be explored. This study filled the

gap by assessing patients' and caregivers' experiences at the three pilot sites of CHI in Malaysia. Overall, almost all the participants reported a positive experience and were satisfied with the various aspects of improvement brought on by its implementation. This echoed other studies in the United Kingdom, Hong Kong, and Singapore that reported increased patient satisfaction after integrated care between various healthcare facilities were introduced (Baxter et al., 2018; Lim, 2004; Wong et al., 2012). Malaysia shares similarities with these countries whereby the hospital services are mainly funded and provided by the government. On the contrary, a recent study in the United States reported that hospital mergers were associated with modest deterioration in patient experiences. However, unlike Malaysia, the country relies primarily on the private healthcare system, and hospital consolidation was said to weaken competitive pressures to provide high-quality care to patients (Beaulieu et al., 2020). Thus, the impact of hospital mergers on patients has to take into consideration the delivery model and financing mechanism of the healthcare system.

With the increasing healthcare demand, Malaysia MOH hopes that CHI can accelerate the progress towards achieving universal health coverage (UHC). World Health Organisation (WHO) defines UHC as the goal to provide all people with access to needed healthcare services of sufficient quality without being exposed to financial hardship (Evans & Etienne, 2010). One of the objectives of CHI is exactly to improve

access to care for the patients including specialist-level care, especially in rural areas. This was one of the aspects greatly appreciated by the participants in this study. Similarly, Baxter et al. (2018) reported that integrated care in the United Kingdom and internationally improved healthcare access for patients. Through CHI, the district hospitals are now able to offer primary healthcare, emergency obstetrical care, general surgery, orthopaedic surgery, and advanced medical specialty care in line with the WHO recommendation (Rajbhandari et al., 2020). Hospital merger allows sharing of resources and realignment of the healthcare services delivered between the hospitals to overcome the underutilisation of district hospitals which would otherwise risk being downsized or closed down (Guerin-Calvert & Maki, 2014). Hospital closure would negatively impact the health and wellbeing of the local community due to increased travelling time to access care, longer waiting time at the remaining hospitals, and ultimately higher mortality (Buchmueller et al., 2006).

Most participants reported a positive experience after CHI in terms of shorter waiting time for outpatient clinics, medical procedures, and surgeries. This is comparable to studies conducted in the United Kingdom (Baxter et al., 2018). With numerous surgical procedures such as arteriovenous fistula creation, cataract surgery, and internal fixation for fractures now being conducted at NLH, this opens up additional operating slots for all the patients within the same cluster. Thus, more patients

are able to undergo surgical procedures in a timely manner. Singapore documented similar improvement after the cluster reform with average waiting time for elective surgery reduced to a mere two weeks (Okma et al., 2010). A study conducted in Canada also showed that regional consolidation of orthopaedic surgery succeeded in providing patients with more timely hip-fracture surgery whereby there was a significant increase in the proportion of patients who received surgery within 48 hours. The shortened waiting time for surgery had also translated into reduced mortality (Kreindler et al., 2017). The reduction in waiting time is achieved as hospital merger allows better coordination of care and optimal resource utilisation across the hospitals (Guerin-Calvert & Maki, 2014).

Nevertheless, several patients lamented the long waiting time at the emergency department especially at LH even after CHI. Overcrowding at the emergency department is a significant worldwide public health problem and Malaysia is not spared (Di Somma et al., 2015). Under the concept of CHI, NLH is tasked to improve on their scope of services and competency at the emergency department in order to manage cases with higher severity of illness and reduce unnecessary referrals to LH (IHM, 2017). However, Trzeciak and Rivers (2003) found that inpatient capacity was the most important factor for emergency department overcrowding. With the average BOR at LH in the three clusters is already above 80%, the hospitals are ill-equipped to handle fluctuations in demand resulting

in inpatient bed shortage and emergency department overcrowding. The merging of more specialty departments and ultimately the whole hospitals in the future is hoped to allow better resource utilisation between LH and NLH to alleviate the inpatient bed shortage. While the literature assessing the effect of hospital merger towards waiting time at the emergency department is limited (Baxter et al., 2018), a patient satisfaction survey conducted in Hong Kong found that a significant number of patients at the emergency department reported long waits for ward admissions despite having implemented hospital merger although the reasons were not determined (Wong et al., 2012).

Providing healthcare services of sufficient quality is also a key target of UHC. Many participants perceived higher quality of care after CHI, for instance, better staff-patient interaction. A study by Veghel et al. (2019) found comparable findings whereby patients were satisfied with the improved personal contact between patients and physicians after integration between the hospitals due to better planning and less work pressure. CHI allows the deployment of medical staff across the hospitals within the cluster according to the needs and for better workload distribution (IHM, 2017). Besides that, hospital merger improves patient care by enabling the sharing of best practices and clinical protocols between specialist hospitals and district hospitals. Several hospital leaders in the United States reported substantial reductions in the average length of stay when uniform care

protocols are adopted across the hospitals after merging (Noether & May, 2017).

In this study, the participants complimented the Malaysia MOH for the upgraded infrastructures and facilities especially at NLH after CHI. While the initial capital for these upgrades was funded by the government, the cost savings resulted from hospital mergers are expected to help fund part of the future investment in new or improved healthcare services. Hospital merger has been shown to improve efficiency through economies of scale and consolidation of duplicative administrative and supporting services (Bazzoli, 2015). Hospital merger also enables optimal utilisation of excess capacity at one hospital and alleviate capacity constraints at another, thus avoiding capital expenditure for building new facilities (Kraus, 2018). These potential savings can then be passed on to the patients through the expansion of services, purchase of better equipment, and building renovations which are some of the expectations raised by the participants for CHI.

UHC emphasises that financial barriers should not prevent people from using the services they need (Evans & Etienne, 2010). In many healthcare systems, the cost spent on accessing, travelling to, and waiting for treatment by the patients are often poorly explored compared to the direct cost of healthcare. Although public healthcare services in Malaysia is highly subsidised with patients only need to pay a nominal fee, often there are OOP expenditure for transport and accommodation and loss

of income especially if patients need to travel to out-of-town hospitals. Hence, CHI which brings specialist-level care including outpatient specialist clinics and surgeries to NLH has resulted in significant savings for the participants in this study. In the United States, the Mayo Clinic Care Network enables network physicians to work collaboratively. This network allows many patients to receive care from their local providers close to home even for complex medical issues who may otherwise have travelled to Mayo Clinic (Wald et al., 2018). Even though not exactly a hospital merger concept, this network has helped lower healthcare expenses for the patients besides ensuring integrated experience and seamless care. McGrath (2015) also mentioned that regional, rural, and remote patients greatly appreciated the opportunity for specialist consultation at regional centres rather than travelling to metropolitan centres, stating advantages such as avoiding lengthy travel, stress due to separation from family if admission is required, and disorientation due to unfamiliarity with the metropolitan centre besides incurring lower OOP expenses.

Strengths and Limitations

While there are many literature on hospital merger globally, most studies focus on its impact towards hospital efficiency (Chu & Chiang, 2013; Kristensen et al., 2010), price and cost changes (Baxter et al., 2018; Schmitt, 2017), clinical outcomes (Kreindler et al., 2017; van Veghel et al., 2019), and quality of care (Baxter et al.,

2018; van Veghel et al., 2019). This is one of the first qualitative studies in exploring patients' and caregivers' experience after a hospital merger exercise (Baxter et al., 2018). There are several limitations to this study. Firstly, a direct comparison of the findings with other published literature may not be completely feasible due to the heterogeneity of the healthcare system and the implementation of the merger system. Secondly, CHI in the three pilot sites was not standardised in terms of the departments or services that were integrated. Furthermore, due to the short duration of implementation, many participants were unaware that the changes they experienced at both LH and NLH could be attributed to CHI. Most responses gathered in this study were also on the more notable changes observed at NLH compared to LH. Thus, future research is indicated, especially when CHI has matured and garnered more awareness among the patients. Prior to nationwide expansion, the Malaysia MOH should also consider further evaluation studies on other aspects of CHI implementation, for example, exploratory study about healthcare personnel's experience as the implementer, as well as cost analysis and efficiency evaluation.

CONCLUSIONS

CHI sets out to enhance the overall user experience of public hospital services in Malaysia. The strategic implementation of CHI appeared to be well-received by the patients and caregivers. Despite a large majority of the participants not being aware

of the actual implementation of CHI, they experienced positive changes expected from a hospital merger, especially in terms of better access to specialist care, shorter waiting time, reduced travelling time and costs, and improved quality of care. Nevertheless, policymakers must take into consideration the areas of concern arising from this study, including the need to further expand the specialist services and upgrade important equipment and facilities in the hospitals. By implementing the necessary improvement strategies, the nationwide expansion of CHI will be more successful and seamless. A comprehensive hospital merger system will pave the way towards universal access to quality hospital care for the whole population.

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