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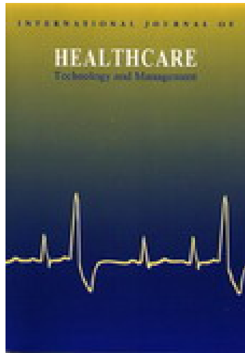

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Abstract: Full paying patient service (FPP) in the Ministry of Health Malaysia (MOH) hospitals was established as one of the specialist retention initiatives in 2007. FPP hospitals experience significant challenges in managing their resources while serving the public as their utmost priority. A semi-structured guide was used in 17 focus group discussions and 12 in-depth interviews with specialists, hospital directors, and supporting staff exploring issues and challenges in managing hospitals' resources. Four sub-themes were identified (ward/facility, medical equipment, drugs/consumable, workforce). Some of the issues include no dedicated FPP ward/equivalent ward, sharing of medical equipment and specialists' medication quota between public and FPP patients, inability to charge unlisted drug/consumables in the Fee Act. Limited human resources, especially among the support group to run FPP, lead to an increase in workload and dissatisfaction. Proper planning and close monitoring by MOH and individual hospitals are crucial to overcome these issues and improve the service.

Keywords: management; ministry of health; qualitative; resources; specialist retention.

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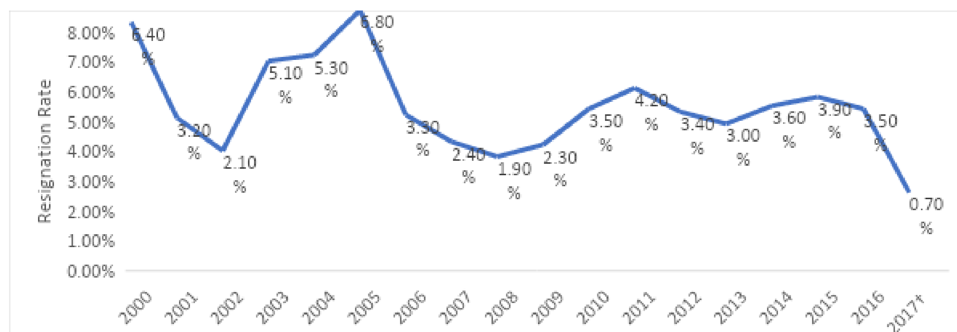
1 Introduction

Healthcare professionals, mostly doctors, are highly demanded in a global labour market. Most countries, including Malaysia and its neighbouring countries, are battling a common issue of losing these professionals more than the recruitment. This is a ‘brain drain’ phenomenon experienced by many developing countries where the healthcare professionals in various economic sectors are emigrating to developed countries (The World Bank, 2011). Some developed countries face the same problem whereby a study in UK found that more than 50% of newly registered doctors wanted to leave the country due to a lifestyle and working environment (Moss et al., 2004). Therefore, additional efforts are necessary to address this unfortunate circumstance and formulate an effective mechanism for retaining healthcare professionals. This ensures sustainability and ultimately improves the healthcare system’s quality of Universal Health Coverage (Wraight, 2016).

Malaysian healthcare systems and the public sector, in particular, are constrained by the lack of health professionals with only 0.9 medical specialists per 1000 populations compared to 2.2 in upper-middle-income countries (Henderson and Tulloch, 2008; Jaafar

et al., 2013; Kanchanachitra et al., 2011; Taylor et al., 2011). A more worrying trend is observed whereby the number of resignations among MOH specialists has been consistently high at 4–6%, with the highest resignation recorded in 2005 with a percentage as high as 6.8% (Figure 1). There are various reasons for this issue, such as brain drain (Aidalina and Aniza, 2015).

Figure 1 The trend of Specialists Resignation from Ministry of Health (MOH) Malaysia by year (2000–2017†) (see online version for colours)



†Data until 31st March 2017.

Source: Human Resource Division, Ministry of Health (MOH) Malaysia

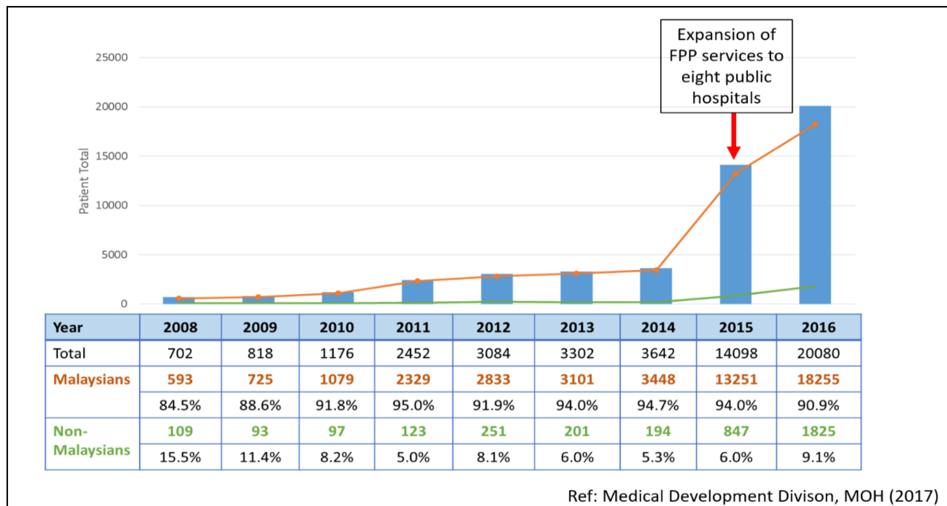
Several strategies have been taken by MOH to address the high resignation rate of medical specialists, including compulsory services in the government sector for a minimum of 3 years before doctors can work in the private sectors and increasing the retirement age for government servants from 55 to 60 years old (Nor Filzatun et al., 2014).

Many countries, including neighbouring countries, have adopted dual practice (Multiple Job Holdings) due to job dissatisfaction (Gruen et al., 2002; Prakongsai, 2003). It is a phenomenon where workers need to work more than one job to meet their lives' basic needs (finance, career development, and others) (Ashmore and Gilson, 2015). In Malaysia, the MOH allows doctors to conduct locum work outside of their regular working hours (example of dual practice) as an option for doctors to get extra income and increase job satisfaction. Moreover, the introduction of the full paying patient (FPP) service in the selected public hospitals is intended to persuade healthcare professionals to continue serving the public services. Public sector salaries were raised in 2002 and 2007, but the proposal to create a more competitive salary scheme for health personnel in the public service was not accepted. This is contrast to other governments in some other countries where they offer high salaries to retain doctors in the public sector.

The FPP service was introduced in MOH hospitals to reduce attrition rates among government specialists to the private sectors (MOH, 2007). It started in two hospitals (Selayang and Putrajaya) in 2007 and subsequently expanded to eight hospitals in 2015. Under FPP service, patients will be charged fully for hospital services that they received. With that, they are entitled to treatment from a specialist of their choice and full access to the facilities and resources in the first-class wards (Figure 2). The revenue collected from FPP will be divided between government and specialist based on the Fee Act (Medical –

Full Paying Patient) or *Perintah Fi* (*Perubatan*) (*Pesakit Bayar Penuh*) 2007 and Guidelines for Implementation of Fee Act (Medical) or *Garis Panduan Pelaksanaan Perintah Fi* (*Perubatan*).

Figure 2 The trend of Full Paying Patients by year (2008–2016) (see online version for colours)



Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	702	818	1176	2452	3084	3302	3642	14098	20080
Malaysians	593	725	1079	2329	2833	3101	3448	13251	18255
	84.5%	88.6%	91.8%	95.0%	91.9%	94.0%	94.7%	94.0%	90.9%
Non-Malaysians	109	93	97	123	251	201	194	847	1825
	15.5%	11.4%	8.2%	5.0%	8.1%	6.0%	5.3%	6.0%	9.1%

Source: Medical Development Division, Ministry of Health (MOH) Malaysia

1.1 Resource management in Malaysia public hospitals

Although originally, FPP service was envisioned as a specialist retention scheme, the revenue-generating capacity would benefit the facilities to upgrade their resources though perhaps unintended segue in the direction of MOH organisational reform. Interestingly, the revenue collected on FPP service by the facility is given back to the government treasury's consolidated fund and not retained by the facility (Yap et al., 2019). There is a need for facilities to control or autonomously manage an appreciable portion of their revenues from FPP while maintaining the ideal provision of healthcare services to the public. However, if not carefully managed, it could distort the initial aim of the FPP service to address the loss of public healthcare professionals.

The Malaysian government, in all ministries, has taken various steps in finding possible ways of maximising the existing resources without prejudicing the quality of service to the people. For example, while the Ministry of Higher Education (MOHE) has introduced 'private wings' in certain hospitals, MOH has Full Paying Patient (FPP) Service. Public university hospitals under the MOHE isolate private and public services with different wards or floors. Conversely, given limited space and variations of wards among MOH hospitals, not all hospitals have dedicated wards or beds to regale FPP patients.

The corporatisation of the Malaysian public university hospitals has allowed some flexibility in managing resources while reducing the brain drain of the senior specialist to the private sector. For example, after the corporatisation, the University Malaya Medical Centre (UMMC), previously known as University Hospital, introduced the limited private practice in their hospital in June 2000, where staff with four years' experience were allowed to see private patients and keep the consultation fees charged. This was one of

the incentives to retain their senior specialists in the corporatised sector. The University Malaya Specialist Centre is currently part of an integrated healthcare hub with UMMC. It has its building with 100 in-patient beds and more than 250 consultants who practice in multi-disciplinary specialties.

Since its implementation, the FPP service had been audited multiple times in compliance with the guidelines and the Fee Act (2007), resulting in reviews and amendments to the FPP guidelines. However, there has been minimal evaluation or assessment emphasising the preparedness of current public facilities in terms of resources available to carry out the service. The drive towards the quality of patient care and social justice demands evidence from MOH on FPP service implications, especially towards patients, MOH staff, and the public. Hence, this study aims to explore the issues and challenges in managing resources for the FPP service.

2 Methodology

In this study, a qualitative approach was used to explore healthcare personnel's issues and challenges in providing the FPP service. In this study, the FPP specialist is defined as a specialist who has been appointed under General Order Chapter F and registered or given permission (Item 5) to deliver the FPP service in the selected healthcare facility.

Purposive sampling was adopted to identify the relevant stakeholders in the FPP hospitals. Sultanah Aminah Hospital and Serdang Hospital were excluded due to the unavailability of complete data. Focus group discussions (FGD) and in-depth interviews (IDI) were conducted in eight public hospitals that have initiated the FPP service for at least a year. The eight hospitals include two pioneered hospitals in FPP service since 2007 (Selayang Hospital and Putrajaya Hospital) and the other six hospitals, namely Sarawak General Hospital, Ampang Hospital, Queen Elizabeth Hospital, Penang General Hospital, Sultan Ismail Hospital, and Sungai Buloh Hospital) that started the service in 2015. The respondents identified earlier by the person-in-charge (PIC) of FPP service in each hospital include FPP specialists, non-FPP specialists, support staff (nurses, laboratory technicians, radiographers, and assistant medical officers) as well as Hospital Directors or Deputy Hospital Directors.

A semi-structured guide was developed and used by the research team upon discussion as well as inputs from the stakeholders and comprehensive literature review. The sessions were conducted in meeting rooms at respective hospitals in both Malay and English language and were recorded using an audio recorder to be verbatim transcribed later. Each session took about 45 min to an hour and was carried out once the respondents gave consent. The recorded interviews were transcribed verbatim and verified again by three researchers. The transcripts were analysed independently by three researchers using a content analysis approach. Subsequently, the analysis was done inductively via open coding, creating categories, and abstraction. Each researcher summarised the transcription using headings that describe the content. Later they came in with a common consensus of the headers. Similar titles were grouped into higher categories (Elo and Kyngäs, 2008). Each subcategory and category represent the themes and subthemes of resource challenges in the FPP service. Ethical approval was granted by the Medical and Research Ethics Committee (MREC) Malaysia (Reference: NMRR 17-536-35290), and MOH-NIH Research Grant fully funded this study.

3 Results

A total number of 12 IDIs and 17 FGDs were conducted at the FPP hospitals from April till July 2017, which involved 104 respondents (Table 1) from eight hospitals participating until the saturation point was reached. There were no more new themes that emerged throughout the discussions. They represented specialists from surgical as well as non-surgical departments (FPP and Non-FPP), hospital top administrative, and support groups. There are about the same number of male ($n = 50$) and female ($n = 54$) respondents. Most of them are in the same age group (41–50 years old) and have 11–30 years in service, as shown in Table 1.

Table 1 Demographics of respondents took part in the focus group discussions (FGDs) and in-depth interviews (IDIs) from full paying patient (FPP) hospitals

	FGD (N = 91)			*IDI (N = 13)*		
Respondents	*FPP Specialists (n = 44)*	*Non FPP Specialists (n = 39)*	*Support Staff† (n = 8)*	*Hospital Directors (n = 8)*	*Others‡ (n = 5)*	*Total*
Gender						
Male	27	14	4	3	2	50
Female	17	25	4	5	3	54
Age Group						
30–40	5	18	4	0	0	27
41–50	32	13	1	0	1	47
51–60	7	8	3	8	4	30
Years of service						
<10	0	4	3	0	0	7
11–20	23	25	1	0	0	49
21–30	21	8	1	0	0	30
>30	0	2	3	8	5	18

†consisted of Nurses, Medical Assistants, Laboratory Technicians, Radiographers and Physiotherapists in the FPP hospitals.

‡consisted of Deputy Hospital Directors and Matrons.

3.1 Thematic analysis

Four major themes emerged from the IDIs and FGDs, as summarised in Table 2. One of the common issues raised was resource management within the hospitals' FPP guidelines and FPP service requirements. Themes were identified as facility/ward issues as well as equipment, workforces, drugs, and consumables. The themes were then divided into sub-themes to ensure all matters were captured (Table 2).

Table 2 Subthemes were identified from themes discussed during focus group discussions (FGDs) and in-depth interviews (IDIs).

Themes	*Subthemes*
Facility and ward	Inadequate bed or ward for Full Paying Patients
	Inadequate of necessary amenities
Equipment	A limited quantity of equipment
	Conditions of the equipment
Drugs and Consumables	Insufficiency of drugs and consumables
Workforces	Understaffing
	Mechanisms of incentives/remunerations

3.2 Inadequate bed or ward for FPP patients

The respondents' main issue was the insufficiency of the facility/ward in hospitals for FPP patients. Most of the hospitals do not have dedicated FPP wards that results in sharing wards with public patients. In view of eligibility FPP patients for first-class or executive ward as per FPP guideline, some hospitals converted their isolation rooms or single bedded rooms for FPP use. It became a challenge to the hospital administrator and manager in managing the available beds to fulfil public and FPP demand. This situation continued to escalate over the years with the increased demand for the FPP service. More demand than the supply of FFP beds has limited the hospital's capacity to offer more FPP services.

Most of the respondents felt uneasy when they have to provide the bed or other facility to the FFP, which is not at the par of the standard in the guideline. The respondents expressed their concern on how the providers may optimise the inadequacy of bed/ward and hoped that there would be long term solutions to solve the issue.

> "…Our infrastructure is not good enough to cater for this. They are still staying in the same ward in my department…"
>
> (Dr. A, FPP Specialist)

> "…In terms of facility, I think for our hospital, we lack in that. We do get complaints, you know, why do I have to pay extra but finally I get the second-class ward…"
>
> (Dr. A, Hospital Director)

> "… The system, our program is not going concurrent with the available facility. Our infrastructure is not that ideal, I supposed, to cater to the FPP patient. They are still staying in the same ward in my department…"
>
> (Dr. B, FPP specialist)

> "…usually no patient is placed in an isolation room, so whenever there is a vacancy, we will convert it for FPP use."
>
> (Dr. K, Director Hospital)

Amenities are the facility's physical appearance, cleanliness, comfort, privacy, and other essential aspects to customers or clients. The quality of amenities is strongly associated and indirectly impacts the patients' care (Goldman and Vaiana, 2010). Respondents

conveyed their concern on the adequacy of necessary amenities to meet FPP patients' perceptions of getting 'private healthcare services' in public hospitals.

> "… not really refurbished properly, and then they are shivering every time they take a shower because there is no hot water. So, the facility doesn't match a private hospital…"
>
> (Dr. C, FPP Specialist)

> "No first-class wards for obstetric. We will put our patients in a single room at the antenatal ward. Commonly, equipment, infrastructures, beds, chairs will not meet the FPP patients' expectations. They usually will ask, "why do I get this chair? Why is my bed, not like a private hospital?"
>
> (Dr. B, Non-FPP Specialist)

3.3 Deficiency of necessary equipment for optimum healthcare delivery

Most of the FPP services offered were the specialties required for the specific medical equipment to deliver their services. Regarding medical equipment in public hospitals, almost all respondents agreed that their hospitals' equipment is relatively new in the market and up-to-date, practically comparable to those used in private hospitals. On the other hand, there are still concerns, especially among the non-FPP specialists, on sharing equipment between the public and FPP patients.

> "No, we don't classify the equipment. Those who need the equipment then we give. Whether they are non-FPP or FPP."
>
> (Dr. H, FPP Specialist)

There are still departments that experienced broken down and long-term maintenance of old machines/equipment that disrupted patient care flow. In contrast, some other departments' deficiency of necessary equipment hindered them from providing FPP service altogether.

> "We have a machine that was bought in 2002. We are having problems in terms of that machine, always breaking down. When it breaks down, we have to call off patients."
>
> (Dr. F, Non-FPP Specialist)

> "…For Nuclear Medicine, without good resources in terms of camera, the facilities, nothing much we can offer…."
>
> (Dr. D, Non-FPP Specialist)

3.4 Insufficiency of drugs and consumables for FPP use

In public hospital settings, drugs/medications listed under category A in MOH Drug Formulary can only be prescribed by the treating consultants or clinical specialists. As there is a limited quota for every drug, the selection of patients to be given such drugs can be challenging for FPP patients or public patient usage.

> "…sometimes we want to prescribe better but pricier medications, and we think it is worth prescribing. We will ask patients to buy outside. For example, some diabetic drugs are good, but we have a limited quota which we cannot use freely."
>
> (Dr. B, Non-FPP Specialist)

Some public hospitals require patients to pay for the medication in advance before receiving the medications from pharmacists. This may cause inconvenience among FPP patients as they have to wait for everything to be settled first. Some of the FPP specialists need to prepare the charge sheet '*kepingan caj*' for drugs and consumables by themselves.

> "Here, we do it individually (kepingan caj). Every specialist does their claims."
>
> (Dr. C, FPP Specialist)

Fee Act is used as a guideline to charge the FPP service, including consultations, procedures, drugs, and consumables. One of the Fee Act's issues was the difficulty in capturing the medicines and consumables as there are limited numbers of these items listed in the act. There is a wide range of pricing for drugs and consumables across all hospitals. Some hospitals charge patients as a package that includes procedures, medicines, and consumables that come together with the treatment.

> "…lots of consumables are not charged because they are not in the act. We have a package with all the consumables in it. This is what the charge will come out."
>
> (Dr. A, FPP Specialist)

> "…I actually call a lot of hospitals, the pricing for FPP is not standardized. I think the government should come out with the standard price for all hospitals so that they don't compare…"
>
> (Dr. E, Non-FPP Specialist)

> "A lot of things cannot be charged because it is not in the book, especially medical. If that happens, we ask the patient to buy themselves from outside."
>
> (Dr. R, FPP Specialist)

> "…there are common drugs and consumables used in cardiac surgery that are not listed in the Fee Act. The value could come up to thousands of Ringgit."
>
> (Madam C, Matron)

3.5 Challenges in managing workforces involved in FPP service

Implementations of FPP in public hospitals require the hospital managers to utilise existing human resources to operate the service. The respondents' issues include understaffing in the hospitals, especially support staff, to assist FPP service after office hours.

> "…this program uses existing resources which means before FPP, we already have a heavy workload, now you are adding some more workload with no additional resources such as new staff..."
>
> (Dr. R, Hospital Director)

> "…after office hours, you need to go and beg. Let's say today; I got one FPP after hours. We have to beg them to come, you know. Very difficult for us. The ward asked me, how are you going to pay the staff …"
>
> (Dr. A, Non-FPP Specialist)

> "…there are a lot of loopholes in the guideline. One of them is that it does not benefit or taking care of the welfare of subordinate staff nor support staff …"
>
> (Mr. I, Physiotherapist)

The fee collection from the FPP service is divided between the specialists and the government based on the Fee Act. According to their claim for the FPP patients' services, the payment of the FPP specialists is according to their claim. There is no proper remuneration or incentive to other healthcare personnel who indirectly help run the FPP Service.

> "…nothing was set up very clearly for us, facilities, the staff, the system, the charges…"
>
> (Dr. S, Non-FPP Specialist)

> "When we have meetings, discussions, there are grouses. We have to do that, we have to do this for full paying, but we don't get paid for that."
>
> (Dr. S, Hospital Director)

> "Yes, because I'm not sure about the proper rules regarding the payment, but I thought some of the surgeons contribute ten percent of their payment for them. But it's not a fixed rule. Some will not get anything also on FPP."
>
> (Dr. K, FFP Specialist)

> "It's unofficial (pay to support staff). So I think this one is just to let everybody be happy so that the system works.… the mechanism that has been devised in this hospital is something like ten percent out of your surgical fee is what we pay them…"
>
> (Dr. K, FPP Specialist)

> "…. we are part of FPP, but we don't get the FPP patients. Because I spend a lot of time, I do all the scanning. If you want to do FFP, the procedure is FPP, but the scanning is not. After we do all the urgent scans, then they become FPP patients…."
>
> (Dr. R, FPP Specialist)

4 Discussion

Healthcare practitioners shifting from a resource scarcity area to resource-abundant areas (more personal and financial benefit) is a phenomenon that transformed global health systems and has been happening for decades (Aluttis et al., 2014). The trend of physician migration from impoverished to wealthier countries began in the 1960s. The emergence of universal healthcare coverage in industrialised countries created a considerable undersupply of physicians (Karan et al., 2016). Healthcare professionals in Malaysia's public health sector are heavily affected by the transfer to private sectors. Annually, approximately 300 doctors leave the public sector, translating to 10% of the existing public sector doctors (Aidalina and Aniza, 2015). Some various ways and strategies had been used by different countries to overcome this worldwide concern. While some adopted dual practice (D.P.) for public workers, others offer services within the public sectors that are beneficial to patients and healthcare workers.

With the understanding that D.P. is durable for specialists working in public hospitals in Malaysia, the FPP service favoured them to gain more financial benefits while working in their practising hospital. The FPP service also served as an additional option for the specialists besides locum to remain in the public service and practice with an extra competitive salary. The private work can either be done physically within or outside

public facilities (Hipgrave and Hort, 2013). Few studies have documented D.P.'s existence in the world, whether in low-income, middle-income, or high-income countries. Some countries such as France, Italy, Austria, Germany, and Ireland encourage public specialists or consultants to do their private practice within public hospitals. The consultants are paid a fee-for-service, which is adjusted for the use of hospital equipment and facilities. The fees are collected separately from the public by the hospital administration (Saleem et al., 2015).

This study provides shreds of evidence of issues dealt with by those involved in delivering the FPP service through a qualitative approach. This includes the insufficiency of resources available to cater to increasing demand for FPP service in wards, equipment, drugs, consumables, and workforces. These exploratory findings are important as a platform for improvements and revision of concerned areas in FPP service implementation and to achieve the objective of retaining specialists through FPP service while maintaining a high quality of public care. All the issues are gathered extensively, comprising health personnel directly, or indirectly implementing FPP service at public hospitals. The majority of FPP hospitals have similar problems but are affected at different levels. The FPP service providers also practised different approaches and methods to overcome the challenges based on their capacities and capabilities. The outcome from the improvement was varied and may not apply to the other FPP hospitals.

Existing health facilities in public hospitals are generally sufficient to serve public patients. However, with the new service introduced, facilities, and amenities in the medical institution, should be upgraded without compromising patient care as one of the dimensions of quality. This includes the availability of a ward for FPP patients, adequate medical equipment, and an ample number of operating theatres. Nevertheless, FPP specialists should accept FPP patients based on resources available at their institution to avoid substandard care and maintain the gold standard of healthcare delivery.

Patients that opted for FPP service are entitled to executive/first-class ward or any equivalent ward (Fee Act, 2007) but depending on resources, areas of expertise, and existing facilities. Hence, the demand for such privileges is inevitable. The ongoing improvement and development facilities in public hospitals should be aligned with the FPP service requirement. Public hospitals in Italy are required to allocate between 6 to 12% of their beds for private patients (Donantini et al., 2001; France et al., 2005). While in Austria, the allocation of beds to private patients must be less than 25% of hospitals' total beds (Sommersguter-Reichmann and Stepan, 2015).

In an effort to provide the highest quality possible healthcare services for the people, the Ministry of Health furnishes public hospitals with the latest technologies, which in return, the healthcare providers will be able to work efficiently with higher job satisfaction. Thus, benefiting the entire hospital ecosystem. However, it is notable that the newest technologies in the healthcare market come with a hefty price tag. With low public allocations to fund the health sector from total government expenditure (Ng, 2015), only a few or perhaps one hospital will benefit from these technologies. Due to its limited equipment, proper planning is necessary to reduce inequity issues arising from equipment sharing.

Drugs and medications listed in category A in MOH Drug Formulary are strictly monitored due to its exclusiveness in being pricier than other medicines and limited (Salmasi et al., 2015). The dispense of these drugs solely depends on the judgement of the treating clinical specialists/consultants. Therefore, the issue was raised on the selection criteria of patients made by the specialists as a patient treated in FPP hospitals

are a mixture of public as well as paid patients. The inadequacy of drugs and consumables is partly linked with the providers' inability to charge FPP patients as not all of these items are listed in the Fee Act. Hence, there is a need for a comprehensive revision of the Fee Act that includes a listing of new drugs and consumables that are related to the latest procedure. A revised and updated list in the Fee Act with well-documented usage of medications for FPP patients may become a guide for pharmacy departments in public hospitals to order an adequate supply of drugs, drugs, and consumables.

New policies or strategies in healthcare involving the human resources component may be key to the nation's healthcare system improvement. Any form of healthcare redesign that may combine with the public expectations will come with consequences if it is not in tandem with the expansion of human resources (Organization, 2014). Highly engaged employees or workforces positively lead to better outcomes and organisational success (Strömgren, 2017). Healthcare workforces' migration is associated with understaffing, which creates the quality of care and affects morale among the remaining staff (Chew et al., 2013). Effective human resource management is vital and needs to consider two critical factors: the organisation's human resource needs and the future's economic environment. Human resource planning includes planning for future needs by deciding how many people with what skill is needed (Henderson and Tulloch, 2008).

The types of services determine operation hours for the FPP service. The principle is that all FPP services can only be done after the FPP specialists have completed their public tasks, including ward rounds and public patient clinic appointments. For surgeries or any other procedures, the operation theatre can only be used after office hours. Every hospital with an FPP service must have an FPP Committee. The committee chairman can be the Hospital Director or any specialists appointed by the committee. The committee's primary role is to plan, develop, and implement the FPP service. This includes the mechanism to review the proper clinical management and revenue collection based on the Fee Act 2007 and Guidelines for Implementation of Fee Act (Medical). They should also advise healthcare providers on the safe environment with high-quality FPP service and FPP financial implication. In Malaysia, the FPP service offers/allows the specialists to get full payment for service delivery, such as consultation, investigations, treatment, and medical procedures and surgery in public hospitals.

Our findings are also consistent with other countries that allow dual practice among physicians-privately-funded care in public hospitals usually provided by physicians who work outside their public working hours. Therefore, the hospital management needs to clearly distinguish between the physician and support staff's regular working hours and the extra working hours. Other than workforce issues, there must also be concern about the diversion of supplies and equipment initially purchased for public patients to private patients. Regulation and clear protocol among the dual practice physicians are important to reduce care's detriment among the patients (Mueller and Socha-Dietrich, 2020). There are different schemes in regulating dual practice in the world from complete prohibition (Greece, India, Canada, China), incentives to those exclusively working in the public sector with a higher salary (Norway, Spain, Italy, Portugal, Thailand, India) and restriction in terms of earning (England) (Khim et al., 2020, Esmail and MacKinnon, 2013).

Implementation of a successful FPP service is a complex process that requires a strategic plan and strong policies guided by evidence-based data. Therefore, this research aims to assess the effectiveness of managing resources during FPP service

implementation in achieving one of its objectives (retention of the specialist in the public sector). The assessment will help gain a better understanding of the complexities involved and implications of FPP service towards patients, MOH staff, and the public. Findings from the assessment are able to recommend policymakers in the establishment of good governance and guidelines for effective implementation of the FPP service in MOH hospitals.

Human resources for health reform have transpired as a tremendously vital direction to overturn the global health workforce crisis in strengthening the local health system's universal health coverage goals. Health worker reinforcements are salient to realising the 2030 Global Workforce Strategy objectives incorporating availability, accessibility, distribution equity, compensation, competency, and human resources motivation. Civil service institutions such as public health facilities, especially in Malaysia, are under the influence of politics to uphold the law and implement government policies and strategies. Hence, it is essential for any attempt to reform the healthcare services to utilise management models considering resource potentials and capacity. Based on the multiple challenges tracked from the hospital provider's point-of-view and on-site evaluations, a reform with relevant strategic priorities may improve healthcare services' operation and enhance healthcare delivery.

The strategic priorities are as follows:

1 *Encourage a healthy and respectful workforce climate*

The working environment is directly linked with better work outcomes as well as work concentration and productivity (Hipgrave and Hort, 2013). A healthy workforce climate is influenced by sufficient pay and benefits, continuity of learning plan, management style, responsibilities, work environment, workload, moral satisfaction, and job security. This strategic priority can be achieved through the following way:

- *Suitable staffing*

Assigning a competent workforce that matches the workload could improve accountability and reduce the likelihood of exhaustion. The key interventions include clarification on the amount of personnel and their specific given responsibilities in ensuring lucid job descriptions for all personnel to understand and comply with; monitor staffing requirements with relevant skills and competencies; establish a sturdy workforce plan for a quality patient care; safeguard competent and passionate personnel for an excellent healthcare services provision; encourage a safe and supportive working environment for all personnel, free of harassment and discrimination, regardless of their political opinion, gender, race, age or any other element of difference.

- *A bona fide recognition*

Meaningful recognition is an approach to reward the workforce work and attitudes in achieving the organisation's goals. Appreciation of the personnel is a fundamental necessity for them to extend their determination. It shall be rendered in such a way as to apply to the personnel's real needs. Core interventions include monitor personnel service performance periodically and acknowledge those who bring innovative ideas and procedures; guide, develop and provide sufficient training for personnel to advance their professional development; motivate personnel in developing firm personal accountability

and empowerment to attain the organisation's goals; effective delegation of work to promote a sense of worth and respect among the personnel; expand the eligibility for personnel to take part in full paying patient service (FPP).

- *Professional development*

Recognising professional development opportunities for public hospital personnel is essential to retain a skilled and qualified public health workforce. The hospital management needs to find ways for personal and professional personnel development. Some of the core interventions include re-evaluating the abilities of the workforce regularly to recognise and address any skill gaps or training needs in order to utilise their full potential; avoid prejudice in training and career advancement among personnel; ensure proper training given to relevant personnel in line with the hospital's mission, vision values, and goals; and implement an organisational development plan to encourage accountability and ensure a clearly defined career path for the professional development of personnel.

- *Skilled communication*

Professional communication skills culture creates a shared comprehension of ideas, expectations, and observations between patients and service providers, including hospital management. Core interventions encompass providing performance feedback to the personnel; build an atmosphere in which people from different backgrounds feel included and valued, emphasising professional and personal diversity as a strategic competition that could foster core values and professional standards; develop a culture within the hospitals that invigorate creativity, collaboration and the free exchange of ideas; and provide a positive and welcoming surrounding that is full of respect without prejudice.

2 *Structured and liable leadership and governance*

Insufficient competence and commitment from top management can hinder the reform efforts. Critical governance gaps are seen in inter-departments, intra-departments, and hospital's top management. From decision-making to job-related training for personnel, the strategic priority can be delivered in the following way:

- *Cooperation in an organisation culture*

Hospital management should steer their workforce's values and attitudes to a system of common expectations. Core interventions include encouraging a system to monitor and respond to decision-making and communication for feedback in a timely manner; the decentralised role of management with as much delegation of responsibility and authority as possible; adopt an effective management framework and systems for a safe, fair, and stimulating working atmosphere; recruit and retain skilled hospital administrators who can establish examples of good management practices and employee engagement; seek on excellent governance via the capacity building of management teams.

3 *Augment innovations and the other use of health technologies*

Public hospitals usually will get the most recent equipment and advanced technologies, however deficient for the use of both public and FPP patients. This forces the hospitals to

share the resources among all patients across multiple departments. Core interventions in achieving the strategic priority involve maximising the given resources with collaboration inter-departments to improve patient care; and provide the necessary training for appropriate personnel on essential medical equipment for preventive and curative maintenance procedures.

The Malaysian government has initiated the reform based on our findings, especially on the fee and charges for the FPP service. It is an ongoing process within a network of established public health facilities to reform the hospitals' department structure. The availability of resources and workforce skills is necessary but not sufficient to ensure the optimal workforce efficiency in healthcare industries that need to undergo healthcare reform. Instead, attempts to reform the healthcare system shall start with the resource management at the institutional, organisational, and national level in view of the fact that it is critically dependent on involvement from all levels when it comes to the success of healthcare reform.

Healthcare is a team effort. Although the FPP service's objective is to retain the specialists, the redesign of the healthcare process requires engagement from all levels for these to be sustainable (Strömgren, 2017). There should be a mechanism of rewarding those involved in the FPP service as an essential recognition to keep the workforces motivated in serving the public (Henderson and Tulloch, 2008). Motivated healthcare workforces may contribute to the quality care delivery in any health initiatives, programs, and services. Nevertheless, further research is needed to obtain a better understanding of the factors that contribute to health worker retention in resource-constrained settings and the initiatives that have the potential to maintain a competent and motivated health workforce in Pacific and Asian countries (Karan et al., 2016).

5 Conclusion

The Ministry of Health introduced the FPP service as one of the incentive packages designed to attract and retain health workers. Nevertheless, the benefits must be accompanied by continuous monitoring and assessment of its effectiveness and research on factors that motivate health workers to adapt and adjust the package to the changing needs and desires of the workforce. The challenges in introducing new services that meet a population's needs with social, demographic, epidemiological, and political transitions require a sustainable effort in addressing workforce planning, development, and financing.

FPP service requires substantial resource management that includes bed/ward rearrangement or upgrades, improved equipment conditions, reallocation of drugs as well as consumables and redistribution of supporting workforces. The increasing demand in the FPP service creates a necessary workload among the hospital staff that needs to have a form of compensation or remuneration for the treating specialists and other healthcare providers.

Hence, systematic and comprehensive governance is a way of ensuring that quality assurance is not disturbed other than addressing and solving all the issues in FPP to maintain the sustainability of the service as we are moving into a healthcare transformation. These findings may provide the essential evidence-based to guide policymakers in expanding the FPP service to other hospitals in the country.

6 Concluding remarks

Systematic and comprehensive governance is vital in making sure of continuous quality assurance towards patients' care. As in the existing evidence, the dual practice should be appropriately monitored, regulated, and governed to balance the public health services and private work (Jan et al., 2005; Brekke and Sørgard, 2007). The FPP committee at the ministry, state, and hospital level should exercise strict adherence to guidelines and protect the public care services. The possibility of the quality gap between the private and public service must be minimalised, and maintain universal health coverage (McPake et al., 2016). FPP specialists must provide equal quality of healthcare services for both FPP and public patients. In countries with sophisticated health systems, such as Portugal, Spain, and UK, strong independent regulatory capacity established private sector and empowered patient advocacy groups. The regulatory efforts focus on enhancing healthcare services' quality while retaining the healthcare providers in the public sector (Ferrinho et al., 2004; Humphrey and Russell, 2004; Dolado and Felgueroso, 2007). The FPP services also should be complemented with these components like regulation by professional bodies and establishment of patient advocacy groups to ensure the public patients receive a comprehensive package of health services at the same par as FPP patients.

It is also essential to address and solve FPP service issues to maintain its sustainability. The short-term and long-term plan of action must be well planned and formulated to tackle and solve the issues and challenges. The staggering measures and monitoring of the progress must be done in all FPP hospitals. The short-term plan may focus at the hospital level by increasing the integrity awareness among the FPP specialists, sensitising and informing FPP service staff, reducing the misconception or lack of information about FPP service, and lowering the specialists' administrative workload. The long-term plan may involve the ministry and state level. They must consider handling a more prominent role in strengthening, updating, and reviewing the FPP Guidelines and Fee Act timely and improving the hospitals' facilities to benefit the FPP and public services. The inappropriate or weak implementation of this program may hinder the process from achieving the program's main objective and lead to the specialists' unexpected transfer or skilled healthcare providers from public hospitals. Other areas that the governance body of FPP service should foresee and monitor include:

1. the possible negative impacts such as the predatory behaviour (self-gain is preferred to the interests of others)
2. the early existence of competition for time and limits to access
3. a possible conflict of interest in the example of lower quality in the public sector to advertise for the private sector
4. the outflow of resources and corruption for the illegal use of available resources for private patients
5. brain drain into other countries, the private sector, or urban areas (Ferrinho et al., 2004).

In general, FPP services are offering the alternative way of attracting as well as retaining the skilled healthcare professionals when the wages and salaries provided in the public sector are not as much in the private sector similar to the dual practice in other countries

(Berman and Cuizon, 2004; Rickman and McGuire, 1999). With this explorative study, the FPP services have been reviewed and revised systematically by other entities to produce unbiased findings. This study's findings proposed evidence-based and value-based strategies in designing a package to attract and retain specialists in resource-constrained settings. The policymakers and the governing body or committee of FPP will be able to impact the implementation positively. It generates additional income for the specialists, higher professional satisfaction, and reduces the attrition rate (Ferrinho et al., 2004).

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Declarations

Ethics approval and consent to participate

This study was approved by the Medical Research Ethics Committee (MREC) in 2017 (NMRR – 17 – 536 – 35290). All of the respondents gave written consents to participate voluntarily in this study after receiving written and verbal information.

Consent for publication

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Availability of data and materials

The data that support the findings of this study are available from the Ministry of Health Malaysia (Human Resource Division, Medical Development Division and individual hospitals). Still, restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of the Ministry of Health Malaysia.

Competing interests

The authors declare that they have no competing interests.

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Abbreviations

FPP	**Full Paying Patient**
MOH	Ministry of Health
FGD	Focus Group Discussion
IDI	In-Depth Interview
PIC	Person-In-Charge
MREC	Medical and Research Ethics Committee
NMRR	National Medical Research Register
MOH-NIH	Ministry of Health – National Institute of Health
O&G	Obstetrics and Gynaecology
DP	Dual Practice