

OVERVIEW OF PUBLIC PRIVATE PARTNERSHIP IN PRIMARY HEALTH CARE IN MALAYSIA: A SCOPING REVIEW

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ABSTRACT (250 words)

Background: Public Private Partnership (PPP) in Malaysia has been established since 1980's especially when federal agency under the Ministry of Finance called Public and Private Partnership Unit (UKAS) was formed. Several other ministries have also adopting and implementing PPP such as Ministry of Health and Ministry of Women, Family and Community Development, including in the area of primary health care (PHC). The PPP in primary health care in Malaysia and its examples will be explored further in this article.

Materials and Methods: A scoping review was conducted based on the original studies and reports on PPP initiatives in PHC in Malaysia. 3 online databases (Science direct, Scopus and Google Scholar) were searched from year 1991 to 2019 using the type of initiatives as the keywords.

Result: 11 original articles and 2 national reports were reviewed on the successes of PPP in PHC in Malaysia. Among them are: 3 articles and 1 national report on Dialysis Funding Program, 3 articles on Methadone Maintenance Therapy, 1 article on Fight HIV and 1 national report on HIV, 3 articles on Mammogram Test Subsidy Program and 1 article on Malaysia Quit program.

Conclusion: The review showed an overview of PPP stories and their successes that have been conducted at the PHC settings in Malaysia. PPP is one of the ways forward in the healthcare industry.

Keywords: public private partnership, primary health care, Malaysia, health

1.0 Introduction

1.1 Background

Public and private partnership (PPP) in Malaysia is not new. In the early 80's, Malaysia has seen a significant transformation in its economy and reputation especially when federal agency called Public and Private Partnership Unit (UKAS) was formed in 1981. In the beginning of the UKAS formation, the main objective of the establishment was to generate cooperation between public and private sectors where both of these entities were expected to be operated as a local brand known as 'Malaysian Company' (UKAS, 2019). Later on through a comprehensive revamp, its objective has transformed and extended more towards coordinating privatisation of government projects and direct investment which yield tremendous impacts in term of economy via facilitation fund as UKAS is a subdivision agency in the Ministry of Finance (UKAS, 2019).

Since the first privatisation program was introduced in 1983, a total of more than 500 privatisation projects (such as Projek Lebuh raya Utara Selatan (PLUS), rail based transportation system, Kuala Lumpur International Airport (KLIA) and Port of Tanjung Pelepas (PTP) in Johor) have been implemented nationwide. The government has benefited in the form of more than RM 161 billion in capital expenditure and the government's annual operating (operating) expenditure of RM 7.79 billion. The expenditure on government administration has been reduced following the privatisation of 58 government agencies which involved the transfer of public servants to the private sector of 113440. This will enable the government to redistribute limited resources to development sectors to the needy sectors such as education, health and poverty eradication programmes. In relation to health, various projects have been implemented through UKAS initiatives such as privatisation of Foreign Workers' Health Inspection and Supervision Services in Malaysia (FWMES) FOMEMA, agreement for the supply of pharmaceutical products, acquisition and maintenance of medical equipment at all government health clinics under Medical Equipment Enhancement Tenure (MEET) and privatisation of public hospital support services (UKAS, 2019).

1.2 Public Sector

Today, public sector reform continues to evolve with emphasising on better services. According to Sikhungo Dube and Daniela Danescu (2011) in their report "Supplemental Guidance: Public Sector Definition", public sector can be defined as sector comprises of governments or non-profit publicly funded agencies, enterprises or other entities that deliver public programmes, goods or services. Public sector organisations may exist at any of four levels which are international level (multistate entities or partnerships), national level (an independent state), regional level (a province/state within a national state) or local level (a municipal-level body such as a city or county) (Dube & Daniela, 2011). The Public Sector Commission of Government of Western Australia refers the word Public Sector generally applies to established agencies and publicly employed individuals. The public sector serves

all three branches of government; the executive arm (the day's administration), the legislature (Parliament) and the judiciary (court judges) (Public Sector Commission of Government of Western Australia, 2019). Malaysia's Public Service Department defines public sector as a general terms which refer to any activities funded by the government which consist of public service and also specific or special institutions expensed by the public (Jabatan Perkhidmatan Awam Malaysia, 2018).

1.3 Private Sector

The private sector is part of the private enterprise-based national economy. This comprises the individual sector (households) and the corporate sector (companies) and is thus responsible for allocating most of the economic resources (Business Dictionary, 2019). According to K. Ramanathan in his book "Konsep Asas Pentadbiran Awam" published by Dewan Bahasa dan Pustaka Malaysia (DBP) in 2002, the private sector is defined as a profit-oriented organisation which its management are outside the direct control of the government. The concept of private management should be in accordance with government guidelines or policies but in conducting operations, it is more in accordance with decisions made by the board or the shareholders of the organisation (Ramanathan, 2002).

1.4 Public Private Partnership

Public private partnership (PPP) is widely defined by many organisations. According to World Bank Group, PPP is defined as "a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and remuneration is linked to performance" (World Bank, 2016). Sandesh Adhikari (2019) in Public Health Notes defined PPP as cooperation programmes between private and public sectors sharing on partnership structures and common objectives for on-time delivery of the health services through innovation and successful financing concept (Adhikari, 2019). In terms of such collaborations in the field of health services in Malaysia's perspective, the Ministry of Health (MOH) does not use the word "public-private partnership" rather, it uses the term "public-private integration" to mean collaboration between the public and private sectors and the use of assets from the private sector to provide services more equitably (Phua et al., 2014).

1.5 Primary Health Care

Primary health care is a basic unit of health care system in most countries. The American Association of Family Physician defined primary health care as "the care provided by doctors specifically trained for and skilled in comprehensive first contact and continuing care for persons with any undiagnosed sign, symptom or health concern not limited by problem origin" (AAFP, 2019). Within developed countries' literatures, the term primary care is used more commonly than primary health care, which is preferred within developing countries. Primary care in some cases means facilities to family doctors, whereas primary health

coverage covers individual patient care or works of public health (Muldoon, Hogg, & Levitt, 2006; Tumin, Kana, & Zaki, 2016)

1.6 Malaysia's PPP in Recent Years

Public private partnership (PPP) is adopted by various ministries in Malaysia. Under the Ministry of Health efforts, several PPP related programmes have been introduced such as government partnership with NGO (Malaysia AIDS Council (MAC)) formalised through funding scheme to fight HIV since 2003 (MOH, 2018; MAC, 2019), Dialysis Funding Programme since 2004 (Ismail, Abdul Manaf, Abdul Gafor, Mohamad Zaher, & Ibrahim, 2019), Methadone Maintenance Therapy (MMT) for drug abusers since 2005 (Ali et al., 2018; Noor, 2014; Norsiah et al., 2010), smoking cessation programmes by Malaysia Quit (MQuit) since 2015 (Hassan et al., 2018; MOH, 2019) and the latest, health care scheme for B40 group (PeKa B40) since April 2019 (MOH, 2019). On the other hand, Malaysia's medical tourism through the establishment of Malaysia Healthcare Travel Council (MHTC) in 2009 is also on the rise. As the MHTC is an agency under the Ministry of Health, its main task is to facilitate medical tourism's overall development by coordinating industry collaborations and building public-private partnerships (MHTC, 2017; Medhekar, 2014)

Beside the Ministry of Health initiatives, the Ministry of Women, Family and Community Development (KPWKM) through the National Family and Population Development Board (LPPKN) has implemented the mammogram test subsidy programme since 2007. The programme is aimed to Malaysian women and permanent residents aged 40 to 70 years old who are eligible for mammogram screening at any private mammogram centres registered with the LPPKN (LPPKN, 2019; Mahmud & Mohamed Aljunid, 2018). The Ministry of Finance (MOF) has introduced a free takaful health coverage to 3.8 million B40 individuals aged 18 to 55 years old and their spouse since 2019 which has been called 'mySalam'. This takaful protection is part of the government's initiative to help and facilitate low-income groups to lead a normal life in the face of financial challenges as a result of critical illness (MOF, 2019).

To meet the needs which in up trending from the people, public health care services in the country seem to be insufficient to cater the demands. The budget expenditure for health care and services in 2018 was at RM 26.58 billion, imaging total percentage of Ministry of Health allocation to National Budget was at 9.42 per cent (9.42% of total Malaysia's GDP) (MOH, 2018). Up to date, according to 2018 Health Facts published by the Health Informatics Centre of Planning Division, there are 7146 registered private medical clinics in contrary to only 3240 clinics in the public sector comprising of health clinics, community clinics, 1Malaysia clinics, mobile health clinic (bus and boat) and flying doctor services. So, there is plenty of resources in the private sector and relative heavy burden of public sector with less resources but more workload (MOH, 2018). Hence, in March 2019, Ministry of Health announced the creation of a seven-member Health Advisory Council to explore public-private partnership (PPP) projects to meet the healthcare needs of Malaysia (Fong, 2019). Since Malaysia has

been experienced with implementing privatisation in various government sectors and later on adopting the PPP concept especially in primary health care, therefore its story could provide valuable lessons and able to share its experience to other countries (Phua, Ling, & Phua, 2014). This review aims to explore the PPP initiatives in Malaysia in the area of primary health care.

2.0 Materials and Methods

A scoping review was conducted on Public Private Partnership (PPP) initiatives in Primary Health Care in Malaysia. This scoping review serves to synthesize evidence and assess the scope of literature on the chosen topic. Besides that, the method helps determine whether systematic review on this selected topic is warranted. The PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) checklist was used.

This scoping review procedure comprised of 4 steps, in which they were taken to frame the enquiry and present the results, as summarized in Figure 2.1.

Step 1: Articles search

Database search was done using online international databases such as Science Direct, Scopus and Google Scholar, using Universiti Putra Malaysia's (UPM) online repository. This broad database searching was the key tool in this search process. We had limited the period for searching to 1991-2019. This period was chosen because of the reason in which privatization has been properly introduced by Malaysian Government since the year 1991 by producing a Master Plan explaining the policy and strategy for privatization (UKAS, 2019). The search covered all original articles in the databases including thesis, official/formal reports and abstracts while excluded editorial reports, newspaper and protocol reports. The focus of this review search was determining the types of initiatives, information content and their extent on Primary Health Care PPP's in Malaysia, especially focusing on the success with their contributing factors in regards to the arrangements. The MeSH (Medical Subject Heading) search terms used for in the title or abstract were (Public Private Partnership) or (PPP) or (FOMEMA) or (Medical Equipment Enhancement Tenure) or (Dialysis) or (Methadone Alternative Therapy Treatment) or (Malaysia Quit) or (PeKa B40) or (medical tourism) or (mammogram) or (mySalam) or (HIV) AND health OR Primary Health Care AND Malaysia. We decided to use health as one of the keywords because health will include all health care including the primary level. Some of the keywords applied were more specific to the types of initiatives to broaden the search findings. 64 initial references were found from the search process. We used the Mendeley as the reference management software package to electronically managed the articles selected.

Step 2: Duplicated articles deletion

After the search from those 3 databases carried out, we deleted any articles which were duplicated or similar by comparing the author names and study names. 22 were taken out from the sample.

Step 3: Abstracts reading

In the third step, two researchers read through all the article's abstract and the report's foreword. Followed by assessment of the relevancy of the articles independently based on some inclusion standards. The inclusion standards which contribute to the selection of articles were:

- Articles needed to be in English Language and have full text availability
- Articles/reports on Malaysian PPP's which elaborate on the type of initiatives in Primary Health Care

We excluded the ones which were only mentioning the name of PPP's initiatives. After this step, 25 articles were considered relevant to our aim.

Step 4: Full articles reading

The twenty-five remaining articles were read entirely. From there, we designed a template consist all the data extracted from the full readings of the articles following the applied inclusion criteria. The data extracted include the publication details, the design of the study, the type of initiatives, the outcome and the summary of findings. The template as shown in **Figure 2.1** provided a data summary of the scoping review as a quality control measure and helps in the analysis and synthesis. The final overall number of articles included in the scoping review was 13.

Cases selected for inclusion consist of the following:

- Methadone Maintenance Therapy (MMT)
- Dialysis Funding Program
- Mammogram Test Subsidy Program
- Fight HIV
- Malaysia Quit (MQuit)

Although there are several other initiatives between public and private clinics or public and private medical staff as reported in the Ministry of Health annual reports, this review had to exclude those initiatives because there were no independent reports or studies of their factors and outcomes. A major problem faced was that there was little quantitative evidence of local

studies, which could be due to the limitations of databases with wide scope. The Summary of Findings were assessed based on the accessibility, affordability, coverage, utilization and the successful stories of PPP in Primary Health Care in Malaysia.

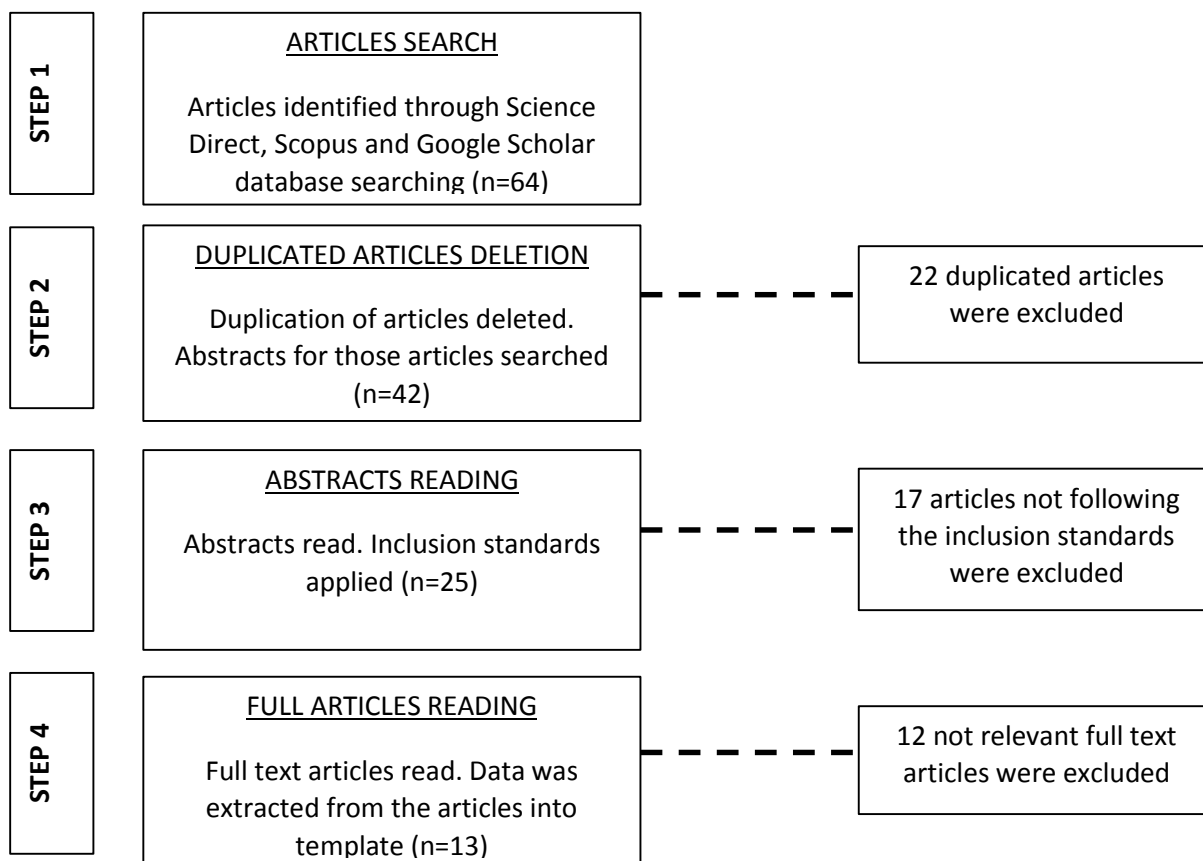


Figure 2.1: Flowchart of the scoping review process on Malaysia's Public-Private Partnerships in Primary Health Care.

***Source: Own intricacies.**

3.0 Result

The results of the findings are shown in **Table 3.1** below:

Table 3.1: Summary of scoping review on Malaysia's Public-Private Partnerships in Primary Health Care.

No	Author/ Year	Type of Documents	Type of Initiatives	Source	Objective	Summary of Findings
1.	Abdul Manaf, Mohd Rizal et al. (2017)	Original article – a systematic Review	Dialysis Funding Program	The 22nd Malaysian Dialysis and Transplant Registry report and other published articles	To review on dialysis provision, issues and implications of health economics on PD utilization from a Malaysian perspective	PPP has increased the accessibility for dialysis
2.	Ismail, Hirman et al. (2019)	Original article - a retrospective review	Dialysis Funding Program	Primary and secondary data from Malaysia Dialysis and Transplant Registry	To estimate the total expenditure of ESRD treatment in Malaysia	PPP has increased the accessibility for dialysis
3.	Lim et al. (2010)	Original article - a retrospective review	Dialysis Funding Program	Data from Malaysian Government and the Malaysian Dialysis and Transplant Registry	To discuss on success story of dialysis in subsidizing needy patients and ensuring level playing field	PPP has increased the utilization of dialysis
4.	Ghazali A et al. (2016)	Report - The National Renal Registry	Dialysis Funding Program	Male or female patients with ESRD to be recruited (voluntary) from participating sites in Malaysia	To collect information on patients with end stage renal disease (ESRD) on dialysis and renal replacement therapy (RRT) in Malaysia	PPP has increased the accessibility, coverage and utilization of dialysis treatment .
5.	Manan, Mohamed Mansur et	Original article - a survey	Methadone Maintenance Therapy	40 adult patients of urban government methadone clinic in	To evaluate the characteristic and commitment of Methadone	PPP has increased the affordability and the accessibility of the therapy

No	Author/ Year	Type of Documents	Type of Initiatives	Source	Objective	Summary of Findings
	al. (2015)			Klang from year 2009-2011	Maintenance therapy (MMT) patient's whom attending the Methadone Maintenance Therapy Clinic (MMTC)	
6.	Norsiah Ali et al (2010)	Original article - a retrospective chart review	Methadone Maintenance Therapy	143 patients from Tampin Health Clinic from November 2006 until March 2009.	To evaluate the MMT service conducted in Tampin Health Clinic and to determine the success of the service.	PPP has increased the accessibility and the utilization of the therapy
7.	Norsiah Ali et al (2017)	Original article - a cross sectional study	Methadone Maintenance Therapy	3254 respondents from 103 treatment centres between October and December 2014	To evaluate the effectiveness of MMT – findings from the Methadone Treatment Outcome Study (MyTOS)	PPP has increased availability and utilization of MMT
8.	Tham Jen Sern et al. (2016)	Original article journal - Exploratory investigation based on a cross sectional survey	Fight HIV	384 of general population in Klang Valley	To examine public knowledge of HIV/AIDS, public perception of people living with HIV/AIDS (PLHIV) and public awareness of public initiatives	PPP has increased availability of numbers of policies and Fight HIV programs.
9.	Suleiman, Anita et al. (2018)	Report - Country Progress Report on HIV/ AIDS	Fight HIV	Male or female patients with ESRD to be recruited (voluntary) from participating sites in Malaysia	To report on Malaysia's progress on HIV/ AIDS	PPP shown successful results in reducing HIV infections.
10.	Viji Nair et al. (2018)	Original article	Mammogram Test Subsidy Program	5,000 underprivileged women from different geographic localities	To assess the impact of a targeted free Mammography Screening Program for	PPP was successful at increasing access to breast cancer screening for underprivileged Malaysian women.

No	Author/ Year	Type of Documents	Type of Initiatives	Source	Objective	Summary of Findings
				and ethnicities	underprivileged women in Malaysia	
11.	Aidalina Mahmud and S.M. Aljunid (2018)	Original article - a systematic review	Mammogram Screening Program	13 original articles (2006 and 2015), involving studies among the Malaysian women aged 40 years and above	To summarise the trend of mammogram screening uptake and identify the associated factors and barriers.	PPP has increased accessibility of mammogram screening.
12.	Aidalina Mahmud and S.M. Aljunid (2017)	Original article - a cross sectional study	Mammogram Screening Program	344 breast cancer patients who received treatment at 4 referral hospitals between 2015 and 2016	To determine the availability and spatial accessibility of subsidised mam- mogram screening in Peninsular Malaysia.	PPP has increased availability and accessibility of mammogram screening in certain areas.
13.	Hassan, Noraryana et al. (2018)	Original article	Malaysia Quit (MQuit) program	Data on the Malaysian National Health Morbidity Survey in 2011	To discuss on implementation of MQuit program	PPP has increased accessibility to smoking cessation services in Malaysia through MQuit

4.0 Discussion

The partnership between public and private in healthcare in Malaysia have shown positive impacts and it has been discussed in multiple journals globally and locally. The main area of discussions is mainly on the cost effectiveness, cost efficiency and the outcome of this partnership to the stakeholders as well as to the customers. Most of the papers were highlighting the issues that occur at the administrative level and the health care partnership at the tertiary level (Fischer, Jungbecker, & Alfen, 2006; Holmes, Capper, & Hudson, 2006; Manaf, Surendra, Gafor, Hooi, & Bavanandan, 2017; Ramesh & Wu, 2008; Rasiah et al., 2009; Torchia, Calabrò, & Morner, 2015). Several initiatives of PPP in PHC in Malaysia namely, haemodialysis service, Methadone Maintenance Therapy and Needle Syringe Exchange Program, Fight HIV, mammogram screening and MQuit have been identified.

4.1 Dialysis Funding Program

In Malaysia, there are few successful partnerships between the public and private practices that can be taken as a good example in achieving PPP. One of the successful examples is the haemodialysis service. The partnership between public and private in providing haemodialysis in Malaysia has started since 2004 when the Malaysian Government started to give funds and grants about MYR 2.5 billion to the private sectors and NGO for the establishment of new haemodialysis centres due to high burden of End Stage Renal Disease in Malaysia (Manaf et al., 2017)

The prevalence of patients who suffer from Chronic Kidney Disease (CKD) in Malaysia is 9.1% as compared to the global prevalence, that is about 11% to 13%. Out of 9.1% of CKD patients in Malaysia, 0.36% were found to be diagnosed with End Stage Renal Disease (ESRD) (Ismail, Abdul Manaf, Abdul Gafor, Mohamad Zaher, & Ibrahim, 2019). Majority of ESRD patients are required for haemodialysis followed by peritoneal dialysis and renal transplant in 2016 (Total of 35781 patients, 3930 patients and 1814 patients respectively (Nephrology, 2016).

The total cost for dialysis in 2016 was reported to be MYR 1.12 billion and the trend of the cost expenditure for dialysis from 2010 to 2016 was seen to be increased with the average of MYR 823 millions and 11.89% of cost increment every year (Ismail et al., 2019). Thus, the partnership between the private dialysis centre, private clinics, NGO and the government in providing the haemodialysis in Malaysia was seen to be established in order to reduce the burden to the public health care service in providing haemodialysis and well as to distribute the service around the country for better access. This partnership was also an effort recommended by the WHO (Manaf et al., 2017).

The public and private partnership in providing haemodialysis has shown a positive outcomes when the majority of the haemodialysis service in Malaysia has been taken by the private sector and NGO (Manaf et al., 2017). The number of cases requiring haemodialysis was seen

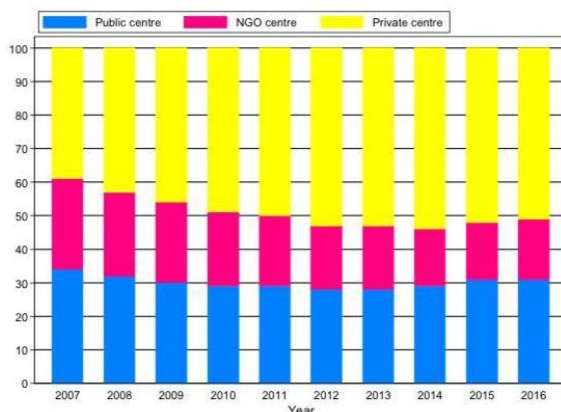
to be increased by two-fold for the past 10 years since 2007 to 2016 from 17097 to 39711 patients (Nephrology, 2016). The haemodialysis service distribution by sector reported by the National Registry are majority from the private sector by 48%, followed by public sector 31% and NGO 21% in 2016 (Ismail et al., 2019). While the new cases accepted by the private sector was seen to be increased every year and has been playing an important role by taking up 51% of the new case burden in Malaysia for the past 10 years (see **Table 4.1** and **Figure 4.1**) (Nephrology, 2016).

Table 4.1: Distribution of Dialysis Patients by Sector 2007-2016

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
New Dialysis patients	4104	4641	4954	5311	6074	6715	7036	7633	7967	7663
% Government centre	34	32	30	29	29	28	28	29	31	31
% NGO centre	27	25	24	22	21	19	19	17	17	18
% Private centre	39	43	46	49	50	53	53	54	52	51
Dialysing at 31 st December	17097	19403	21610	23740	26373	29309	32201	34953	37729	39711
% Government centre	37	35	34	33	32	31	30	30	31	31
% NGO centre	29	28	27	26	25	24	23	22	21	21
% Private centre	34	37	39	41	43	45	47	48	48	48

*Source : 24th Report of The Malaysian Dialysis and Transplant Registry 2016.

(i) New Dialysis Patients



(ii) Dialysing patients at 31st December

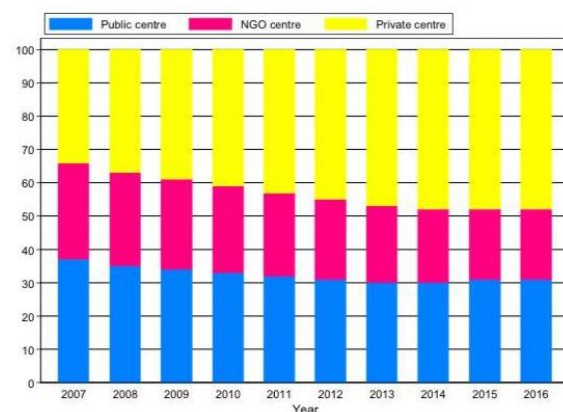


Figure 4.2: Distribution of Dialysis Patients by Sector 2007-2016

*Source : 24th Report of The Malaysian Dialysis and Transplant Registry 2016

Although the majority of the service distribution has been taken by the private and NGO, the majority of the treatment funds were mostly provided by the public sector. Manaf et al.,

(2017) reported that from year 2004 till 2014, the public sector has provided the majority of dialysis funding with the balance of 26% to 30% of the fund was from self-funding and the rest of 11% to 15% was funded by the NGO. Ismail et al., (2019) also reported that, according to the National Registry, the public sector has taken up to 67.1% from the total expenditure spent in providing dialysis service in Malaysia and the rest were provided by the charity, self-funded, insurance, private companies and others.

From the reports and findings that have been discussed, the partnership of public and private in providing the dialysis in Malaysia has helped to reduce the burden of the government by providing the majority of the haemodialysis service, giving better access to the population as well as reducing the burden of the cost that is increasing every year.

4.2 Methadone Maintenance Therapy and Needle Syringe Exchange Program

The Methadone Maintenance Therapy (MMT) in Malaysia was first introduced in 2005 and it was initially started at the tertiary level under psychiatry clinic in phase I as part of National Harm Reduction Program. The MMT was initiated together with the needle and syringe exchange program (NSEP) to reduce the risk of HIV transmission obtained from the infected shared needle among the drug abuser. This service was further expanded into phase II, that is the expansion of the service to the primary health care and with few private collaborations in providing MMT and NSEP. Phase III was later introduced among the prisoners in the prison to further reduce the HIV infection among drug abuser and reincarceration rates among prisoners (Wickersham, Marcus, Kamarulzaman, Zahari, & Altice, 2013). By 2013, 881 methadone therapy centres were available throughout Malaysia with the involvement of 466 of government health clinics and 365 private clinics providing MMT for free (Norsiah Ali, Salina Aziz, Salmah Nordin, Norliza Che Mi, Norni Abdullah, Maimunah Mahmud, V Paranthaman, 2018).

There are an estimated 205,000 of drug abuser reported in Malaysia and among them, 38.25% were diagnosed with HIV infection (Wickersham et al., 2013). Since the launch of this program, there was a significant reduction in HIV prevalence in year 2000 to 2014 from 74.7% to 19.3% among the drug abusers, hence, making Malaysia to have reached the MDG 2015 in reducing HIV rates way earlier than expected (Ali et al., 2018). Besides reducing the prevalence of HIV, the reduction of other blood borne diseases such as Hepatitis B and C was also achieved. This program also successfully reduced the usage of heroin drug as well as the alcohol use and the tendency to commit crime among drug abusers (Manan, Ali, Khan, & Jafarian, 2015). It also has been proven to improve overall quality of life by improving the physical and social functioning among the drug abusers (Ali et al., 2018).

This MMT program has not only helped to improve health, but it also contributes in reducing the cost spent by the government and NGO in providing social service support as well as contributing to the reduction of number of cases in criminal justice system due to the reduction of drug addict (Manan, Ali, Khan, & Jafarian, 2015).

Although the MMT program provided by Malaysia is free of charge, Manan et al.(2015) reported through his cross-sectional survey, the patient who came from low socio-economic level (income less than MYR 1000 per month) has higher probability to pay using own money for the methadone treatment compared to others. The average out of pocket payment for this program was reported to be RM391.30 per month consuming 35% of the monthly income. This showed that even the MMT treatment is free in Malaysia, the response of self-paying methadone among those who wanted to be better with the treatment was also good (Manan et al., 2015). Most of the authors have concluded that this program should be continued and should be further expanded in the future (Ali et al., 2018; Norsiah et al., 2010; Norsiah Ali, Salina Aziz, Salmah Nordin, Norliza Che Mi, Norni Abdullah, Maimunah Mahmud, V Paranthaman, 2018).

The partnership between the public and private in opening the accessibility to the drug users who wanted to be in the program cannot be denied. With the significant outcomes and the reduction of morbidity and mortality among drug abusers, this partnership should be further expanded to achieved more significant outcome.

4.3 Fight HIV

Malaysia has established its National AIDS Task Force since 1985 and the first case to be reported was a year after the force being established that was in 1986 (Ministry of Health Malaysia, 2014) . After the First Action Plan being implemented, a HIV Screening Program was started among the prisoners, female sex workers, rehabilitation centres for drug addicts, Tuberculosis and Sexual Transmitted Disease patients and among mothers during antenatal check-up (Sern et al., 2016) . This program was introduced in order to combat the spread of the disease (Norsiah et al., 2010). The Malaysia government also introduced safe-blood screening as an effort to ensure that all donors who donated blood is free from HIV infection (Ministry of Health Malaysia, 2014).

Due to poor uptake of HIV screening, a special council was established by the Ministry of Health (MOH) with few NGOs known as the Malaysian HIV/AIDS Council (Country Progress Report on HIV / AIDS, Malaysia 2018, 2018). This council was formed so that the MOH and NGOs can work hand in hand in combating HIV as well as to form a HIV/AIDS support group to the people living with the disease at the community level. Since the establishment of the councils, more policies were made, and a lot of initiatives were done through this partnership (Country Progress Report on HIV / AIDS, Malaysia 2018, 2018).

One of the primary initiatives that showed tremendous reduction in HIV prevalence are the MMT and NSEP as part of Malaysia's Harm Reduction Program as mentioned previously in this study (Sern et al., 2016). The collaboration and the impact of the program was so impressive that it contributes to almost 98% of reduction in annual HIV reported cases from drug abusers (from 5176 cases down to 115 cases from 2002 to 2017) (Norsiah et al., 2010). The trend however did not last long when the HIV cases increased through sexual transmission by 140% (Sern et al., 2016). In view of this alarming increment, the Malaysian

AIDS Council formed a special task of government-non-government collaboration (GONGO) to address the rising of HIV transmission through sex by focusing on awareness programs, Behaviour Change Communication (BCC), Case Management Program (CMP) and others (Country Progress Report on HIV / AIDS, Malaysia, 2018).

As an effort to increase the HIV and Sexual Transmitted Infection (STI) screening uptake, STI- friendly clinic was introduced at the selected primary health clinics and a program called Treatment Adherence Peer Support (TAPS) as part of psychosocial support was formed by 10 supporting partners in 2015 (Country Progress Report on HIV / AIDS, Malaysia, 2018) . Through TAPS, the total number of clients that involved in peer support has increased up to 5778 and 67% of them were started on ART in 2017 (Sern et al., 2016).

The effort between this partnership in combating HIV and AIDS were found to be successful in promoting the awareness and education by reaching the high-risk individual up to the community level as well as improving the accessibility to be screened and to get treatment.. Without the involvement of NGO and other private sectors in encouraging these high-risk individuals, the target of 95-95-95 in 2030 in fighting HIV will not be possible.

4.4 Mammogram Test Subsidy Program

According to the National Cancer Registry Report from 2007 to 2011, the number of breast cancer in Malaysia was seen to be increased from 3579 to 3766 number of patients from year 2007 to 2011. The Ministry of Women, Family and Community Development and the Social Security Organization has been promoting on breast cancer awareness among women in Malaysia by subsidizing screening programs since 2007 ((Mahmud & Aljunid, 2018) . This mammogram screening is open to all women aged between 40 – 75 years old and it can be conducted at public or private hospitals registered under the National Population and Family Development Board (LPPKN) (Nair et al., 2018).

In 2015, there were at least 6 major bodies contributed to the mammogram screening program by providing fund and outsourced it to the private facilities. The MOH and LPPKN were subsidizing the general population, National Cancer Council Malaysia (NCCM) catering for women living in the rural area, SOCSO for the formal employment sector and the States Government for women under the corresponding territory (Mahmud & Aljunid, 2018). A study done in Malaysia to study on the accessibility and the availability of mammogram screening reported that the availability of mammogram screening in the central region was good compared to the suburban and rural areas, however the ratio between the facilities and population was poor (1:20,000 to 1:80,000) as compared to the recommended ratio (1.2 : 10,000 women population age 40 or older). The accessibility however, was found to be not significant in this study, but it was reported that respondents who did not go for screening majority had travel distance of less than 48km compared to the respondents who did their screenings: mean 53.4km (SD 34.5)(Mahmud & Aljunid, 2018).

Although the number of breast cancer among women is increasing in trend, the uptake of this screening however, was poor. Mahmud et al, 2018 reported that the uptake of mammogram screening in Malaysia was ranged from 6.8% to 80.3% among the population. The highest uptake of 80.3% was only found within the health care personnel but it was only 7 – 30% within the target population and the reason of this poor uptake were due to lack of awareness, fear of knowing the diagnosis, fear of pain and embarrassment. The European Union Guidelines recommended the desirable rate to be 75% in mammogram screening however, since Malaysia's population-based screening is currently not available, thus screening rate in this case is not applicable (Mahmud & Mohamed Aljunid, 2018).

Another study done in Malaysia studying on the impact of free mammogram screening to the underprivileged women showed that among 5000 underprivileged women throughout Malaysia, 62% of the women has received their first mammogram screening and another 21% of the women, had their repeated mammogram within 3 years after the first screening (Nair et al., 2018). This study concluded that the partnership between the private insurance, NGO, NCCM with few incentives given to provide the awareness and screening programs to the underprivileged women was a success by increasing access to screening facilities.

The mammogram screening as an initiative of the government to provide the service by outsourcing to the private and NGO had increased the accessibility and the availability of the service from not having the service at all. Although the uptake of mammogram is still poor, the other factors like lack of awareness and knowledge, fear, embarrassment could be the cause of these results. The partnership itself might contribute to a better accessibility and availability to the population and it should be further expanded and more awareness programs should be conducted to the population.

4.6 Malaysian Quit (MQuit)

Malaysia Quit or MQuit is an initiative of the MOH in encouraging smokers to quit smoking through a free programs. Through the Malaysian National Health Morbidity Survey (MNHMS), 48.6% of smokers had attempted to quit smoking but only 32.4% went to the quit smoking clinic in 2011. Thus, this program was introduced in 2012 but it was further integrated into PPP in 2015 by involving the hospitals, public health clinics, and the private sector (Hassan et al., 2018). According to Hassan et al. (2018), the aimed of this partnership was to enhance the accessibility to the service due to the limitation from the public sector in providing the service. Since the launched of PPP MQuit, there are 764 public hospitals and health clinics and 160 private clinics involved in providing the service. The number of patients involved in this program was found to be increased from 7757 to 10791 from 2015 to 2016. Number of patients registered in the private also increased from 10 to 394 from January till June 2017. In a nutshell, the integration between public and private in making MQuit more accessible to the population was a success.

5.0 Conclusion and recommendation

The main aim in this review was to explore the Public Private Partnership in primary health care in Malaysia. There are five examples of PPP's initiatives in Malaysia which have shown promising results, which are Dialysis Funding Program, Methadone Maintenance Therapy and Needle Syringe Exchange Program, Fight HIV CONGO collaborations, Mammogram Screening Test Subsidy and Malaysian Quit. These examples of successful stories can be taken as a good example in expanding the PPP in the future that can benefit the government, private as well as to the population.

6.0 Issues and Challenges

Most of the PPP initiatives in Malaysia are being underreported and its progress of implementation has not properly evaluated and documented. Therefore, it is difficult to do further evaluation on the achievements of PPP either to continue implementing this partnership or not, or on how to improve this integration for better outcomes.

7.0 Lesson Learned

Government needs to have more initiatives on Public Private Partnership especially in primary health care level. Further evaluation on the outcomes on current PPP programs on mammogram screening, FOMEMA, MQuit programs, Peka B40, mySalam and others should be conducted to further analyse its effectiveness and efficiency. This is important as it should be formally reported for other parties to have a better picture on the feasibility of this partnership.

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Declaration

Author(s) declare that this manuscript has never been published in any other journal.

Authors contribution

Author 1,2,3: Information gathering, preparation and editing of manuscript

Author 4: Initiation of idea, review and final editing

References

- Ali, N., Aziz, S. A., Nordin, S., Mi, N. C., Abdullah, N., Paranthaman, V., ... Danaee, M. (2018). Evaluation of Methadone Treatment in Malaysia: Findings from the Malaysian Methadone Treatment Outcome Study (MyTOS). *Substance Use and Misuse*, 53(2), 239–248. <https://doi.org/10.1080/10826084.2017.1385630>
- Country Progress Report on HIV / AIDS, Malaysia 2018. (2018).
- Fischer, K., Jungbecker, A., & Alfen, H. W. (2006). The emergence of PPP Task Forces and their influence on project delivery in Germany. *International Journal of Project Management*, 24(7), 539–547. <https://doi.org/10.1016/j.ijproman.2006.07.002>
- Hassan, N., Baharom, N., Dawam, N. D., Ismail, N., Festus, C. E., Mihat, O., & Chong, C. K. (2018). Strengthening quit smoking services in Malaysia through Malaysia Quit (mQuit) Program. *Tobacco Induced Diseases*, 16(1). <https://doi.org/10.18332/tid/84344>
- Holmes, J., Capper, G., & Hudson, G. (2006). Public Private Partnerships in the provision of health care premises in the UK. *International Journal of Project Management*, 24(7), 566–572. <https://doi.org/10.1016/j.ijproman.2006.07.004>
- Ismail, H., Abdul Manaf, M. R., Abdul Gafor, A. H., Mohamad Zaher, Z. M., & Ibrahim, A. I. N. (2019). Economic Burden of ESRD to the Malaysian Health Care System. *Kidney International Reports*, 4(9), 1261–1270. <https://doi.org/10.1016/j.ekir.2019.05.016>
- Mahmud, A., & Aljunid, S. M. (2018). Availability and accessibility of subsidized mammogram screening program in peninsular Malaysia: A preliminary study using travel impedance approach. *PLoS ONE*, 13(2), 1–15. <https://doi.org/10.1371/journal.pone.0191764>
- Mahmud, A., & Mohamed Aljunid, S. (2018). *The uptake of Mammogram screening in Malaysia and its associated factors: A systematic review*.
- Manaf, M. R. A., Surendra, N. K., Gafor, A. H. A., Hooi, L. S., & Bavanandan, S. (2017). Dialysis Provision and Implications of Health Economics on Peritoneal Dialysis Utilization: A Review from a Malaysian Perspective. *International Journal of Nephrology*, 2017. <https://doi.org/10.1155/2017/5819629>

- Manan, M. M., Ali, S. M., Khan, M. A. N., & Jafarian, S. (2015). Estimation of out-of-pocket costs of patients at the Methadone Maintenance therapy clinic in Malaysia. *Pakistan Journal of Pharmaceutical Sciences*, 28(5), 1705–1711.
- Ministry of Health Malaysia. (2014). Country Progress Report on the Hiv. *Policy*, 12.
- Nair, V., Nazri, V. D., Lau, A., Hashim, R., Ratnasingham, C., & Munisamy, M. (2018). Impact of a Targeted Free Mammography Screening Program for Underprivileged Women in Malaysia. *Journal of Global Oncology*, 4(Supplement 3), 28s-28s. <https://doi.org/10.1200/JGO.18.10320>
- Nephrology, M. S. of. (2016). 24th Report of The Malaysian Dialysis & Transplant Registry 2016. *The Ministry of Health Malaysia*.
- Norsiah, A., Dharmananda, S., Mohammad Nazri, M. D., Marzafuan, M. M., Lee, B. W. H., & Khalijah, M. Y. (2010). Can primary care clinic run MMT service well. *Malaysian Family Physician*, 5(1), 19–23.
- Norsiah Ali, Salina Aziz, Salmah Nordin, Norliza Che Mi, Norni Abdullah, Maimunah Mahmud, V Paranthaman, M. H. A. M. (2018). Malaysian Methadone Treatment Outcome Study (MyTOS): Review Malaysian Methadone Treatment Outcome Study (MyTOS): *Ministry of Health, Malaysia*, 16(March). <https://doi.org/10.13140/RG.2.2.33116.49289>
- Ramesh, M., & Wu, X. (2008). Realigning public and private health care in Southeast Asia. *Pacific Review*, 21(2), 171–187. <https://doi.org/10.1080/09512740801990238>
- Rasiah, R., Noh, A., & Tumin, M. (2009). Privatising healthcare in Malaysia: Power, policy and profits. *Journal of Contemporary Asia*, 39(1), 50–62. <https://doi.org/10.1080/00472330802506790>
- Sern, T. J., Firdaus, A. S., & Zanuddin, H. (2016). Government Initiatives and Public Awareness on HIV/AIDS in Malaysia: Where Are We After 30 Years? *Jurnal Komunikasi, Malaysian Journal of Communication*, 32(2), 545–565. <https://doi.org/10.17576/jkmjc-2016-3202-27>
- Torchia, M., Calabrò, A., & Morner, M. (2015). Public–Private Partnerships in the Health Care Sector: A systematic review of the literature. *Public Management Review*, 17(2), 236–261. <https://doi.org/10.1080/14719037.2013.792380>
- Wickersham, J. A., Marcus, R., Kamarulzaman, A., Zahari, M. M., & Altice, F. L. (2013). Implementing Methadone Maintenance Treatment in prisons in Malaysia. *Bulletin of the World Health Organization*, 91(2), 124–129. <https://doi.org/10.2471/BLT.12.109132>