

Implementation of Primary Healthcare Services in Community Health Stations in Highly Urbanized City

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ABSTRACT. Primary healthcare is integral to the Sustainable Development Goal (SDG) of ensuring healthy lives and promoting well-being. A descriptive study assessed the implementation of primary healthcare services in community health stations through a researcher-made questionnaire among healthcare providers and beneficiaries of 30 community health stations. The results revealed that, as a whole, the implementation of primary healthcare services in community health stations is great, with maternal and child healthcare implemented to a very great extent while the treatment of non-communicable diseases to a great extent only. The major challenges encountered are the lack of medical drugs, supplies and equipment, and medical professionals. Primary healthcare has made contributions to the community's health improvement; however, challenges imply that the quality and efficiency of the services need improvement. The study contributed to new knowledge on implementing healthcare at the lowest level of government, emphasizing patient-centeredness.

1.0. Introduction

Primary Health Care (PHC) is integral in attaining the Sustainable Development Goal (SDG) of ensuring healthy lives and promotion of well-being (Lobo et al., 2014). It is a whole of society approach centered on meeting the health and well-being needs of the people through comprehensive care, which integrates health promotive and preventive policies, responsive solutions to communities, and people-centered (World Health Organization [WHO], 2018).

Despite the SDGs' implementation, countries in the Southeast ASEAN region still face the growing burden of non-communicable diseases that require a well-functioning and responsive health system (Pettigrew et al., 2015). Countries in the ASEAN also have a high maternal mortality ratio (WHO, 2016) which means that the countries did not reduce maternal deaths (Paredes, 2016).

In the Philippines, primary healthcare is a mandated function of local government units provided under RA 7160, otherwise known as the Local Government Code of 1991. These services are immunization programs, maternal health, and tuberculosis (TB), and malaria eradication, among others (Dayrit et al., 2018). WHO (2018) highlights the need to strengthen primary healthcare as the foundation of the Philippine Health System Reform, the Universal Healthcare Act, as it is the most affordable path to universal health coverage under the government's Philippine Health Agenda of All for Health towards Health for All.

Studies were reviewed, which include that of Abrigo et al. (2017) on decentralization of primary healthcare to the province and municipalities; del Granado et al. (2018) on the relationship between decentralization and public expenditures on health; Ibama and Dennis (2016) on effects of primary healthcare to poverty reduction; Gilmore and McAuliffe (2013) on the effectiveness of barangay health workers, Wani et al. (2019) on family planning; Huntington et al. (2012) on the use of medical products and services; and Valdez et al. (2015) on health outcomes using demographic variables. In Negros Occidental, Philippines, Geroso and Caelian (2020) looked into the level of quality of the healthcare system, while Gerzon and Salugsugan (2020) assessed patient satisfaction and challenges of healthcare services. Of the studies reviewed, no study was found that focused on implementing primary healthcare services in community health stations of a highly urbanized city using variables, such as catchment area, health budget, and population, hence a gap in the literature.



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This study assessed the Implementation of healthcare services in the areas of maternal and child healthcare, health education, and treatment of communicable and non-communicable diseases in community health stations of a highly urbanized city when taken as a whole and when respondents are grouped as to designation and when health stations are grouped according to total annual health budget, catchment area, and population. Likewise, it identified the challenges encountered by the respondents. The findings were utilized as the basis of a strategic plan to enhance the implementation of primary healthcare services in community health stations.

2.0. Framework of the Study

The study theorized that the implementation of primary healthcare services ensures better health outcomes in preventive healthcare. Primary care services serve as the cornerstone for building a strong healthcare system that ensures positive health outcomes (Lawn et al., 2008). Health outcomes are manifested in life expectancy at birth, maternal mortality rate, infant mortality rate, under 5 mortality rate, and tuberculosis prevalence rate (Romualdez, 2011).

The study was anchored on Donabedian's evaluation theory (1988) for measuring the implementation of healthcare services which emphasized the use of aspects of structure, process, and outcomes (Ghaffari Sardasht et al., 2014). Structure refers to the physical and organizational resources of the healthcare service. It includes the human components, such as the medical professionals, staff, and other resources such as medicines and drugs and the community health stations, which are the facilities including the equipment (Donabedian, 2002). Process refers to the procedures, activities, and techniques of delivering specific healthcare services such as health education, maternal and child healthcare programs, and prevention and treatment of communicable and non-communicable diseases. Meanwhile, outcomes are the results or changes in the beneficiaries' behavior and perception as manifested in the overall results of the implementation of primary healthcare services (Levine et al., 2019).

In this study, structure refers to the implementers (nurses, midwives, community health workers, nutrition scholars, and volunteers), the 30 community health stations with equipment and availability of drugs, medicines, and medical supplies. Meanwhile, process refers to the programs and activities such as family planning seminars, home visitation, mothers' classes, immunization programs, vaccination, the conduct of physical exercises, among others, and health education. The outcome of the study is the strategic plan that seeks to enhance the implementation and address the gaps identified. Linking this theory to the study, the researcher generated information that revealed the extent of the implementation of healthcare services at the community health stations.

Reinforcing this theory is using the Precede-Proceed Model by Green and Marshall (2005) and adopted by Raingruber (2014). This theory states that centrally packaged programs have to adapt to different settings because interventions and health promotion will be effective if they come from the community, are planned thoroughly, are based on data, are feasible, with multiple strategies for a cohesive program, and rely on feedback and program evaluation. This model considers the community's participation in the social assessment of its own health promotion needs and epidemiological assessment that uses surveys that identify the problems with the largest impact in the community. This model is very appropriate in determining the implementation of primary healthcare services since it showcases the manner and describes how healthcare services should be.

3.0. Methods

This study utilized a quantitative research design using the descriptive approach. The descriptive approach was used to describe the extent of the implementation of primary healthcare services in community health stations. Using the variables maternal and child healthcare, treatment of communicable and non-communicable diseases, and health education. Maternal and child healthcare includes pre-and post-natal check-ups, family planning commodities and services, expanded programs on immunization, nutrition programs, and integrated management of childhood illnesses. At the same time, treatment of communicable diseases focused on tuberculosis prevention, anti-rabies, vector-borne diseases, and HIV-AIDS prevention. Treatment of non-communicable diseases covered diabetes and kidney disease control, mental health, substance abuse control, and cancer and hypertension prevention and control. Health education centered on information dissemination of the above healthcare services, environmental health programs, healthy lifestyle, and first aid and home care management programs.

Also, the implementation of healthcare services in different areas were determined using the variables catchment area (urban and rural), population (big and small), and annual health budget (minimum and maximum). The descriptive approach was appropriate because the researcher observed a large mass of the target population and made a required conclusion about the variables (Ritchie et al., 2013).

Thirty (30) community health stations were selected for the study. The respondents of the study were 661 healthcare providers identified by total enumeration. In contrast, beneficiaries of 217 were identified using systematic random sampling where every even-numbered beneficiary who visited the station during the survey was given a chance to participate.

Primary data were gathered through a researcher-made survey questionnaire patterned from the Philippine Health System Review (WHO, 2011) was administered to respondents. Research questions were translated to the local dialect to gather data from the healthcare beneficiaries. The survey instrument was divided into three (3) parts. Part I elicited the respondents' designation and the profile of the community health stations. At the same time, Part II asked for information on the extent of the implementation of primary healthcare services. Part III focused on the challenges encountered by respondents; it utilized a checklist where respondents chose their most appropriate responses.

The survey instrument was subjected to validity and reliability tests. The validity test used the criteria of Good and Scates. Validators for the English questionnaire were a jury of five composed of provincial health medical doctors, health workers, and nurses; meanwhile, the translated questionnaire was validated by five teacher-experts in dialect. The suggestions of the jury were incorporated into the final survey questionnaire. The validity score generated was 4.62 for English and 4.60 for the dialect, which means that the survey questions were valid.

A pilot test undertook reliability testing to 30 beneficiaries and 30 implementers who did not participate in the actual data gathering. These respondents came from the selected health stations, and results were computed using the Cronbach Alpha method. The reliability scores were 7.77 for the English version and 7.36 for the Hiligaynon questionnaire, which means that the questions were very reliable.

Data were analyzed using descriptive methods. The mean and standard deviation were used to determine the extent of the implementation of primary healthcare services and to determine the implementation when communities were grouped as to annual health budget, population, and catchment area. Meanwhile, for the challenges, the frequency count and percentage distribution were used.

The general ethical principles of respect for persons, beneficence, and justice to ensure the ethical soundness of the study were addressed by the researcher. Informed consent was obtained prior to respondents' participation. It was highlighted that their participation in the study was voluntary, and they had the right to withdraw if they felt uncomfortable responding to the questions. They were assured that their participation would not affect their availment of the healthcare services in the health stations. Respondents' anonymity was protected; hence, all information was strictly kept confidential, with only the researcher having access to it.

4.0. Results and Discussion

Extent of implementation of health care services

Tables 1A and 1B show that the extent of the implementation of primary healthcare services in community health stations, as a whole, is to a great extent ($M= 4.47$). Maternal and child healthcare was rated ($M=4.63$) very great extent, with the treatment of non-communicable diseases as the lowest ($M=4.19$), rated only great extent.

The findings indicate that not all programs on healthcare were implemented and availed by beneficiaries because of lack of funding, as implied in the challenges of inadequate medical/dental supplies and drugs, facilities, and equipment. This is attributed to the decentralization of healthcare services where community health stations in the case of cities shall take the lead in the implementation of preventive care (Abrigo et al., 2017). This implies the importance of financial and economic considerations when organizations determine priorities and make decisions (Levine et al., 2019). Although community health stations are key players in providing healthcare because they can

quickly provide services to those in need (Maluka et al., 2011), services were limited (Komasawa et al., 2020).

The results corroborated with Abrigo et al. (2017) and del Granado et al. (2018) that decentralization of healthcare services delegated to the communities the obligation to deliver primary care services with funding aid from the city government, resulting in a fragmented healthcare system. Meanwhile, Lobo et al. (2014) found that the delivery of healthcare services at the community level is great because it is a key concern of the government.

Moreover, the very great extent of implementation in maternal and child healthcare is manifested in the population growth rate of the city. As reported by the Philippine Statistics Authority (2017), the increase from 1.78% in 2000-2016 to 1.79% in 2010-2015 implies decreased child mortality. This is attributed to the conduct of family planning sessions, visitation to the residence of pregnant mothers, and conduct of mothers' classes by community midwives and volunteers. Meanwhile, treatment of non-communicable diseases was rated great extent only due to differences in lifestyles, socio-economic status, urbanization, and aging population.

The results affirmed the study of WHO (2016) that services of community health stations improved maternal and child health. The findings also affirmed that of Gilmore and McAuliffe (2013) that community health workers effectively provide preventive interventions for maternal and child health and that community health stations are the most popular place to learn family planning. Meanwhile, the findings of Uneke et al. (2017) that maternal and child healthcare remains poor and of Wani et al. (2019) that the level of knowledge and attitude towards family planning is low and utilization is also low are refuted by the findings of this study.

On the other hand, the great extent in the implementation of the treatment of non-communicable diseases confirmed the studies of Russell et al. (2019) and Pettigrew et al. (2015) that despite the SDGs implementation, countries in the ASEAN still face the growing burden of non-communicable diseases. WHO (2018) explained this, discovering that urbanization and aging led to increasing poor health conditions. Also, Gamage and Jayawardana (2018) and Maimela et al. (2018) affirmed by stating that knowledge of non-communicable diseases (NCDs) was poor.

When respondents were grouped as to designation, beneficiaries provided a slightly higher rating (M=4.49) than healthcare providers (M=4.46), but both were rated to a great extent.

This finding revealed that both implementers and beneficiaries consider that most of the programs on healthcare were implemented. It is clear that players in the healthcare system are aware and understand the benefit of preventive care for the beneficiaries and the larger healthcare system. This is supported by the study of Lee et al. (2015) that there is a great extent of delivery of clinical services in community health stations and of Gilmore and McAuliffe (2013) that community health workers (CHWs), being the first contact of the residents, can shape the healthcare system to suit the community's needs and are cost-effective extensions of the health system.

When the extent of the implementation of primary healthcare services was assessed using the variable catchment area, it was revealed that the implementation was to a great extent (M=4.44) for rural areas and also to a great extent (M=4.47) for urban areas, with urban areas rated slightly higher than rural areas. This indicates that beneficiaries of both rural and urban areas expressed the

Table 1A. Extent of Implementation of Primary Healthcare Services

Variable	Implementation			Maternal and Child Healthcare			Communicable		
	M	SD	Int	M	SD	Int	M	SD	Int
Respondent									
Healthcare Providers	4.46	0.44	GE	4.64	0.34	VGE	4.40	0.64	GE
Beneficiaries	4.49	0.33	GE	4.58	0.40	VGE	4.47	0.50	GE
Catchment Area									
Rural	4.44	0.40	GE	4.70	0.29	VGE	4.04	1.00	GE
Urban	4.47	0.42	GE	4.62	0.36	VGE	4.43	0.57	GE
Population									
Small	4.52	0.37	VGE	4.69	0.28	VGE	4.37	0.75	GE
Big	4.45	0.42	GE	4.61	0.37	VGE	4.42	0.57	GE
Annual Health Budget									
Minimum	4.50	0.39	VGE	4.63	0.36	VGE	4.45	0.57	GE
Maximum	4.39	0.46	GE	4.61	0.34	VGE	4.33	0.69	GE
As a Whole	4.47	0.42	GE	4.63	0.36	VGE	4.41	0.61	GE

Note: GE=Great Extent, VGE=Very Great Extent

Table 1B. Extent of Implementation of Primary Healthcare Services

Variable	Implementation			Non-communicable			Health Education		
	M	SD	Int	M	SD	Int	M	SD	Int
Respondent									
Healthcare Providers	4.46	0.44	GE	4.15	0.79	GE	4.49	0.62	GE
Beneficiaries	4.49	0.33	GE	4.29	0.54	GE	4.55	0.46	VGE
Catchment Area									
Rural	4.44	0.40	GE	4.10	0.79	GE	4.70	0.42	VGE
Urban	4.47	0.42	GE	4.19	0.74	GE	4.49	0.59	GE
Population									
Small	4.52	0.37	VGE	4.26	0.70	GE	4.63	0.49	VGE
Big	4.45	0.42	GE	4.17	0.75	GE	4.47	0.60	GE
Annual Health Budget									
Minimum	4.50	0.39	VGE	4.26	0.65	GE	4.54	0.50	VGE
Maximum	4.39	0.46	GE	4.02	0.90	GE	4.41	0.74	GE
As a Whole	4.47	0.42	GE	4.19	0.74	GE	4.50	0.58	VGE

Note: GE=Great Extent, VGE=Very Great Extent

same appreciation of the implementation of healthcare services because implementers follow the same guidelines and procedures in the implementation as prescribed by the City Health Office in conformity with the mandates of the Department of Health.

The great extent of implementation of primary healthcare services in urban and rural areas conform with Egbewale and Odu (2012), who found that most residents are aware of healthcare services. It also conforms with Strasser et al. (2016) on the availability of services in primary health centers. However, the findings significantly differ from Yuan et al. (2015) and Yaya et al. (2017) that rural residents have low awareness of services rendered by rural health stations. The findings also contradict with Kress et al. (2016) on the availability of primary health centers but corroborate with the findings that performance is hindered by financing and governance (Collado, 2019) that resulted from segmented supply chains, lack of infrastructure, drugs, equipment, and vaccines at the facility level and sometimes poor health worker performance.

In terms of population, which was classified as small and big, the extent of the implementation is very great (M=4.51) for small population and great for big population (M=4.45). The variation in the extent of the implementation is that areas, where big registered populations are classified as urban areas, are commercial, where more choices are available to residents for healthcare services due to the accessibility of public hospitals, private hospitals, and private hospitals clinics.

The finding is supported by the study of Zhong et al. (2020), Ding et al. (2018), and Bradley et al. (2015) that the efficiency of primary healthcare services is affected by population and that a large population increase the burden of healthcare and make services inefficient. Aligned with the findings of this study is that of Zhang et al. (2017) that wealthy people are more likely to avail themselves services of clinics with adequate resources, while it is the poor people who use the community health stations for healthcare services.

Findings of the study demonstrated that smaller areas integrate community resources, find alternative treatment approaches, seek out additional expertise, and make efforts to safeguard patients' health than those in urban and larger communities. Likewise, it is supported by the findings of Mitropoulos et al. (2016) that location characteristics and population are drivers of the technical efficiency of community health stations.

In terms of the annual health budget, the implementation was to a very great extent in areas with a minimum annual health budget (M=4.50) and only a great extent in health stations with maximum health budget (M=4.39). It was found that community health stations with minimum annual health budgets are small populations and located in areas classified rural. It was revealed that most people residing in areas classified urban do not avail of healthcare services of the health stations because of nearby private health clinics and the hospital; hence, implementation was rated only great. An increase in budget coincides with improved performance in program and management coverage, with significant implications for healthcare because it could lead to a decrease in staff quality of work, working satisfaction, and poor healthcare provision for the community (Romualdez, 2011). This condition justifies why health stations with minimum budgets were rated higher than those with maximum annual health budgets.

Suranugraha et al. (2018) emphasized that increasing the budget increases public health programs' coverage, which requires more people to perform such activities. With the increase in

the number of activities, healthcare workers in community health stations with maximum budget become overwhelmed and cannot cope with the tasks assigned, thus resulting in lower performance and inefficiency resulting in most beneficiaries not availing of the healthcare services.

Challenges in implementation of primary healthcare services

Table 2 presents the challenges encountered by respondents in the implementation of primary healthcare services. The major challenge encountered by both groups of respondents is the inadequacy of medical/dental supplies and drugs (57.2%), supporting the study of Huntington et al. (2012) and Gerzon and Salugsugan (2020), who found that access to medicines remains a problem. Another most significant challenge is the inadequate medical/dental facilities and equipment (44.2%), which is recognized by WHO (2018) as it emphasized the need for medical equipment as an important component of a health system; shortage of such is a barrier to the delivery of quality health services. Dayrit et al. (2018) revealed that the lack of resources and uneven distribution of health infrastructures and human resources across and within regions is due to disorganized governance, fragmented health financing, and pluralistic health service delivery, which is complemented by the study of Segovia and Caelian (2017) on the issue of resources and funding in the implementation of the Philhealth’s No Balance Billing Policy. Leeth (2012) found that shortages of medical equipment compromised the ability to reduce maternal and neonatal mortality. Also, Kress et al. (2016) expressed that this is due to a lack of funds, all affirming the findings of this study.

Other challenges include rigid and confusing health instructions and a lack of emphasis on health promotion identified by the beneficiaries. Hahn and Truman (2015) state that education is a critical and multi-faceted component of health, a strong means to break the cycle of poverty and promote health equity. These challenges reflect the lack of policies specific to the implementation of primary healthcare services. These challenges also imply that government and policymakers have an enabling role. However, they cannot deliver all the advancement necessary to implement healthcare services (WHO, 2018).

Table 2. Challenges in the Implementation of Primary Healthcare Services

Challenges	f	%
<i>Providers</i>		
Inadequate medical/dental supplies and drugs	378	57.2
No regular schedule of medical doctors/dentist	228	34.5
Rigid and confusing health instructions	48	7.3
No emphasis on health promotion	20	3.0
Lack of health education	12	1.8
<i>Beneficiaries</i>		
Inadequate medical/dental supplies and drugs	106	49.1
Inadequate medical-dental facilities and equipment	83	38.4
No regular schedule of doctors and dentist	81	37.5
Medical doctors/nurses are not always available	62	28.7
Lack of collaboration with the community	30	13.9
Unapproachable attitude of some healthcare providers	29	13.4
No emphasis on health promotion	13	6.00
Lack of system in the delivery of services	13	6.00
Rigid and confusing health instructions	10	4.60
Lack of health education	6	2.80
Incompetent healthcare providers	6	2.80

These challenges are associated with insufficient wages, lack of promotional advancement for healthcare workers, and the heavy workloads of community health workers (Dayrit et al., 2018). This challenge was identified to be due to inadequate training, insufficient logistical support, poorly sustained motivational schemes, and a lack of community support that is similar to the findings of Strachan et al. (2014).

Healthcare providers have acknowledged the other challenge of no regular schedule of medical doctors/dentists. This finding was disclosed in the studies of Darkwa et al. (2015), Alhammedi and Caelian (2019), Dayrit et al. (2018), and WHO (2018) that found the lack of medical professionals in the delivery of primary healthcare services in the community health stations.

Related to it, the findings of Geroso and Caelian (2020) indicated that the overwhelming number of patients seeking care in hospitals implies that the healthcare system in the communities and municipalities needs to be strengthened.

The challenge on incompetent, unapproachable medical health providers is attributed to these healthcare providers' alleged overwork and heavy workloads. Meanwhile, the lack of collaboration and system in the delivery of services was underlined in the study of Abrigo et al. (2017), where poor communities expressed disapproval of the delivery of healthcare services, alleging that these deteriorated when devolved to local levels.

Although rated very great implementation in community health stations, the lack of health education was identified as a challenge by both implementers and beneficiaries; this complements the finding of the lowest-rated treatment of non-communicable diseases. This is supported by the study of the WHO (2019) that urbanization and aging led to increasing poor health conditions, specifically the burden of non-communicable diseases. Future researchers are encouraged to look into implementing health education programs focused on the treatment of non-communicable diseases.

Overall, the theory advanced by the researcher that a great implementation of healthcare services ensures better health outcomes in preventive healthcare was validated as revealed in the findings of an increase in the population growth rate, which means that there is a reduction in infant mortality, maternal mortality, under-5 mortality, and increase in life expectancy of children as reported by the Philippine Statistics Authority (PSA) in 2017. Also, Donabedian's theory used as the framework generated the findings using structure, process, and outcome aspects of evaluation. Further, the use of the precede-proceed model was validated in the conduct of local needs assessment revealed through the challenges where both implementers and beneficiaries participated and expressed their views and opinion in the delivery of healthcare services at the community level. However, there was no inferential procedure conducted which should have revealed new knowledge.

5.0. Conclusion

The great extent of the implementation of primary healthcare services in community health stations implies the necessity of preventive healthcare, which indicates the dependence of residents on the government for healthcare support; however, the quality and efficiency of services need improvement.

The variation in the implementation when community health stations were grouped as to variables of the annual health budget and the population is significant as it deserves the attention of local officials, which may be attributed to a need for close monitoring of the implementation of healthcare services.

Challenges identified in the study showed a glimpse of the disabilities on the functionality of the primary healthcare programs and the outlook on the healthcare providers' capabilities. The inadequacy of medical/dental drugs and supplies and access by residents to these services are issues that need priority actions by the government. This calls for enhanced community involvement and participation between parties, the healthcare providers and the beneficiaries, validating the use of the precede-proceed theory adopted in the study. Hence, the government has to solve these challenges and attract collaboration among the various health systems. This is important to ensure the continuity of the implementation to benefit the community as a whole.

Further research is recommended using inferential methods and a qualitative study to discover stakeholders' experiences on the implementation of primary healthcare services on community health stations.

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