ISPOR Europe 2023
12 - 15 November

EE149

Surge capacity for preserving accessibility to primary healthcare during the COVID-19 pandemic in a middle-income county

Noppcha Singweratham1, Tuangrat Phodha2, Onwipa Rochanathimoke3, Win Techakehakij4, Aumpol Bunpean5, Sontanuek Chotchoungchatchai6, Vuthiphan Vongmongkol6

1 Faculty of Public Health, Chiang Mai University, Chiang Mai, Thailand
2Drug Informationa and Consumer Protection Center, Center of Excellence in Pharmacy Practice and Management Research, Faculty of Pharmacy, Thammasat University, Rangsit Campus, Pathum Thani, Thailand
3 Faculty of Medicine, Bangkok Thonburi University, Bangkok, Thailand
4 Lampang Hospital, Lampang, Thailand
5 Kanchanabhishek Institute of Medical and Public Health Technology, Faculty of Public Health and Allied Health Sciences, Praboromrajchanok Institute
6 International Health Policy Programm (IHPP), Ministry of Public Health, Nonthaburi, Thailand

Introduction

The number of confirmed COVID-19 cases in Thailand were almost 4 million, with 128 deaths from the disease and rising continuously. Tambon Health Promoting Hospitals (THPH), a primary care unit focusing on proactive problem solving at the individual and community levels continuously, were also affected by the COVID-19 pandemic. To date, there is a gap of knowledge of preserving accessibility to primary healthcare services at THPHs during the COVID-19 pandemic in Thailand.

Objectives

This study is to assess the impact of the COVID-19 pandemic on primary healthcare service unit costs at THPHs from the provider's perspective in Thailand and to investigate the surge capacity management at THPHs during the COVID-19 pandemic.

Methods

Design: This study is mixed methods including the quantitative part of costing analysis and the qualitative part of in-depth interviewing the healthcare personnel at the THPHs.
Setting: Thirty-six THPHs included in this study were varied by size (S, M, and L) and location across 6 regions in Thailand.

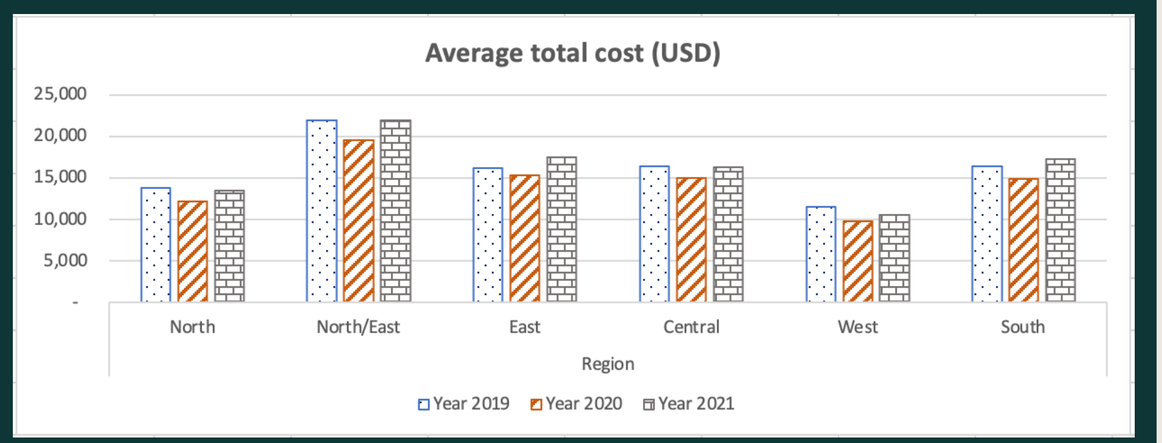
Interventions: The surge capacity preserved the accessibility to primary healthcare services during the COVID-19 pandemic.

Main outcome measures: The average unit costs (total costs/ No. of utilization) of primary healthcare services were estimated by the activity-based costing technique using standard costing approach and discussed by the context of THPHs.
Statistical analysis: Multivariate log-linear regressions were employed to investigate the impact of the COVID-19 pandemic on the average unit costs of primary healthcare services. Content analysis was used to understand the relevant reasons between the changes in costing and the surge capacity at the THPHs.

Results

Comparison of total costs distribution between normal situation and COVID-19 pandemic situation

Cost center	S		M		L	
	2562	2564	2562	2564	2562	2564
Treatment	42.19	35.87	41.29	31.25	45.10	41.03
Laboratory	6.69	5.47	6.06	5.00	4.20	3.60
Dental	6.23	3.98	6.76	4.19	7.19	3.33
Rehabilitation	0.01	0.00	0.66	0.57	1.52	1.33
Traditional medicine	5.68	4.95	7.92	5.97	4.76	4.70
Health promotion	15.30	11.75	13.41	10.35	14.23	10.63
Home visit	7.68	5.30	7.03	5.07	8.04	5.72
Other projects	6.81	3.08	9.95	6.28	8.34	4.25
Disease control	9.41	5.00	6.92	4.44	6.62	4.85
COVID-19	0.00	24.60	0.00	26.87	0.00	20.55
Total	100	100	100	100	100	100



Multivariate log-linear regressions analysis

Switching from a normal situation (in the year 2019) to the COVID-19 pandemic (in the year 2020 and 2021), this resulted in decrease in expected average unit costs of primary healthcare services at 53.98% (35%-132%) and 13.67% (39%-123%), respectively. Improving the knowledge of the COVID-19 pandemic in the year 2021 could impact on increasing the number of primary healthcare services utilization.

Discussions

This first study of activity-based costing of healthcare services related to COVID-19 pandemic at THPH from provider's perspective. There are 7 healthcare service activities on COVID-19 management: community surveillance, COVID-19 investigation, home quarantine, home isolation, vaccination, cooperation with hospital and local government and people education. The unit costs are ranged from 14 -160 USD. Policy decision makers should aware of the variety of context of THPH.

Conclusion

Surge capacity of the THPHs needs the efficient networking between the healthcare team and the local government in the province to preserve accessibility to primary healthcare services during the COVID-19 pandemic.

References

1. Statistics and Research: Coronavirus (COVID-19) Vaccinations [Internet]. World Health Organization. 2021 [cited 24 October 2021]. Available from: https://ourworldindata.org/covid-vaccinations.
2. Drummond MF, Sculpher MJ, Torrance GW, O'Brien BJ, Stoddart GL. Methods for the economic evaluation of health care programmes third edition. Oxford: Oxford University Press; 2005.
3. Shepard DS, Hodgkin D, Anthony YE. Analysis of hospital costs: a manual for managers. Geneva: The World Health Organization; 2000.