DIRECT COSTS FOR COVID-19 PERSON UNDER SURVEILLANCE TO A DISTRICT HEALTH OFFICE - A PROVIDER'S PERSPECTIVE

Intan Syafinaz Saimy¹, Noraziani Khamis¹, Nor Hayati Ibrahim², Nur Khairah Badaruddin¹, Faridah Kusnin³, Nor Zam Azihan Mohd Hassan⁴, Sukhvinder Singh Sandhu³

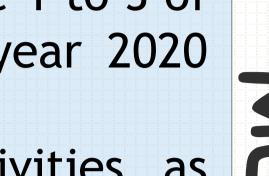
> ¹Institute for Health Management, National Institutes of Health, Ministry of Health Malaysia ²Medical Development Division, Ministry of Health Malaysia ³Selangor State Health Department, Ministry of Health Malaysia ⁴Institute for Health Systems Research, National Institutes of Health, Ministry of Health Malaysia

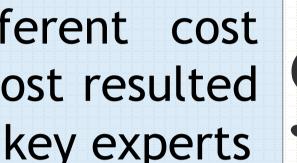
Sufficient public funding at organizational levels that reaches the ground is a major factor towards comprehensive response to a pandemic and this was made evident globally especially during the recent COVID-19 pandemic. Hence knowing the costs incurred to any facility while managing a disease outbreak is quite pertinent for good outbreak management preparedness [1]. Thus, this presentation estimated the costs of public health measures incurred by a district health office (DHO) under the Ministry of Health Malaysia specifically for the COVID-19 Person Under Surveillance (PUS) cases, a provider's perspective. Part of a larger study, this presentation focuses only on PUS which is defined as asymptomatic individuals who are at risk such as travelers arriving in Malaysia from overseas who are subjected to the mandatory quarantine requirement within an allocated time frame [2].

- @ Cross sectional study design analyzing data from Phase 1 to 3 of Malaysia's first Movement Control Order Phases in year 2020 from Klang DHO
- Detailed work process of the public health activities as documented in an earlier study [3] resulting in the development of the data collection sheets
- Activities and expenses related to COVID-19 patients were collected
- All identified PUSs were listed and mapped based on activities. Then cost of the resources needed to conduct the activity was estimated
- Cost data was grouped according to the different cost categories; Human Resource (HR) and Others. HR cost resulted in a range due to time estimation of activities from key experts
- Micro costing approach adopted. Each of the resources for each activity was quantified based on price in 2020 in Malaysian Ringgit (RM)

689

20%





Phase 1

Phase 2

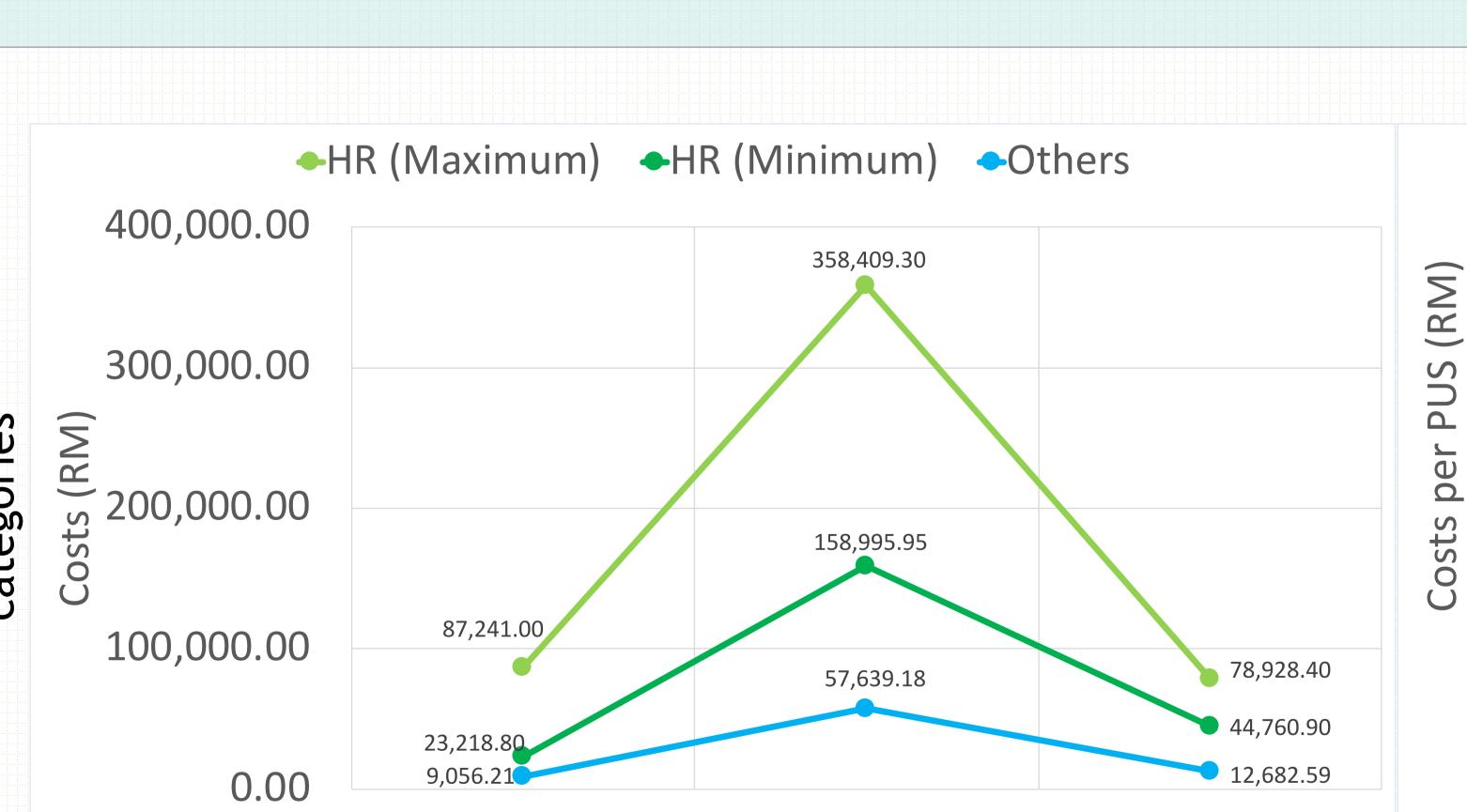
Phase 3

RESULTS



RM306,353.63 - RM603,956.68

71 - 91% are HR costs



Phase 2



MaximumMinimum

388

12%

N = 3376

2299

68%

DISCUSSION & CONCLUSION

Phase 1

and Others

Costs for

Figure 2:

The cost trend was consistent with number of cases managed by DHO (Figures 1 and 2). Costs per PUS showed down going trend and a smaller range in Phase 3 compared to prior phases (Figure 3) suggesting a better management of PUS. Total management cost for a DHO includes the costs of Patient Under Investigation and from other supporting activities. Direct cost for PUS incurred by a DHO as generated is useful for managers planning their resources for prevention and control of infectious disease outbreaks.

ACKNOWLEDGEMENT

We would like to thank the Director General of Health, Malaysia for the permission to present this poster. This is collaborative initiatives between Institute for Health Management, Institute for Health Systems Research and Klang District Health Office.

REFERENCES

Phase 3

- 1. World Health Organization (WHO), 2021. Looking back at a year that changed the world: WHO's response to COVID-19. Geneva: World Health Organization; 2021. License: CC BY-NC-SA 3.0 IGO
- 2. Ministry of Health Malaysia (MOH), 2020. COVID-19 Management Guidelines in Malaysia No. 5 / 2020. https://covid-19.moh.gov.my/garis-panduan/garis-panduan-kkm
- 3. Khamis, N., Saimy, I.S., Ibrahim, N.H., Badaruddin, N.K., Mohd Hassan, N.Z.A., Kusnin, F., Sandhu, S.S., Mohamed, M., 2021. Progression of the Pathway for Public Health Care during the COVID-19 Outbreak at District Health Office. International Journal of Environmental Research and Public Health 18, 10533. https://doi.org/10.3390/ijerph181910533
- Zakaria L, Nadiatul I, Haslinda N, Manaf R. The Concept of District Health Management in Malaysia. International Journal of Public Health and Clinical Sciences. 2016 Feb 1;3:2289-7577.