

## Revisiting the Utilization of Hospitals Resource Upgraded For Covid-19 Pandemic Western Province, Sri Lanka

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### Abstract:

*The epidemic of covid 19 infections has made Sri Lanka to meet unexpected health, economic and social problems. It faced three waves of covid infection within the first year of infection, but third waves created significant chaos compared to the former. Government of Sri Lanka adopted many measures with the support of local and foreign donors. The Provincial director of Health, western province of Sri Lanka as the head of the most populated province of the country was the authority to manage the situation in the capital city. It resulted in quick burst of upgrading infrastructure and equipment in primary care institutions. With the control of the epidemic those institutions have no capacity to optimally use the infrastructure and equipment. There was an urgent need to address it by the authority and to devise a plan to redistribute the resources. The initial step of it was describing the prevailing status of the resources in immediate post pandemic period. Underutilization of equipment and abandoned high dependency patient care units and piling up of consumables were identified in the study. The need of preparing inventories, swift need of relocating the high cost equipment in needy institutions was suggested in the study.*

**Key words:** Post pandemic, Covid 19, Upgraded, Hospital Resources, Western province of Sri Lanka

### Introduction

The first case of the current pandemic of Corona virus in Sri Lanka was reported on January 27<sup>th</sup> 2020. Sri Lanka faced three waves of pandemic at the outset. First wave was successfully controlled by using closing down of entire country with many economic and social back lashes. During the second and third waves, Government health sector of Sri Lankan faced immense problems due to the lack of equipment and other structural resources. Amidst tight financial controls Ministry of Health of Sri Lanka managed to mobilize a large amount of funds to provide necessary facilities to hospitals to face the covid situation (Amaratunga et al., 2020).

Provincial directorate of the western province disbursed funds received from the Ministry of Health and facilitated institutions under its purview. In addition, certain hospitals received donations from various sources (Provincial Directorate of Health Services Western Province Sri Lanka, 2021). Hence, most hospitals in the western province have many facilities which those institutions didn't enjoy earlier. With the control of the pandemic, most hospitals faced problem of using the resources effectively.

### Objective

To find out the prevailing status of structural developments and resources in the hospitals under the Provincial Directorate during the Covid 19 post pandemic period. To make recommendations for the optimization of resources developed during the pandemic

### Methodology

Desk review of records on distribution of financial allocation for development of hospitals in the western province of Sri Lanka during financial year 2020/21.

Key informant interviews with the staff of the Provincial Directorate of Health Services Western Province, Consultant Community Physician (Planning) Medical, Officers and Development Officers (planning unit),

Medical Officers (Planning) in three districts under the western province, Directors, Medical Superintendents, Heads of the hospitals that received resources during the pandemic.

### Situation Analysis

Due to the rapid spread of Covid 19 infection, most of the hospitals in the western province found it unable to cope with the situation. The resources were not sufficient to meet the needs of the large number of patients seeking treatment almost instantaneously. Especially patients coming with severe breathing difficulty couldn't be treated with the available equipment and resources. Ministry of Health arranged counter measures to provide facilities with the help of international and local donors to meet the escalating needs. World Health Organization (WHO) assisted in many ways while playing the role of main technical adviser. Ministry of Health directed provincial directorates to distribute resources to institutions under each directorate. Directorate of the Western Province (DWP) was able to distribute the funds allocated to the institutions in Gampaha, Colombo and Kaluthara districts. It was further augmented by the resources from local and foreign donors (Provincial Directorate of Health Services Western Province Sri Lanka, 2021).

DWP distributed resources worth of Sri Lanka Rupees (SLR) 33.6 million (mn) ( 1 USD = 206 SLR) for the institutions of the three districts for the year 2020 and SLR 41.2mn for the following year.

Regional Directorate, Gampaha (RDG) which administers the health institutions in the Gampaha district received SLR 15.2mn for the year 2020 and SLR 11.9 Mn for the year 2021. From this amount almost 26% was used for the construction of buildings and other infrastructure. The major developments were done at Divisional Hospital (DH) Divulapitiya, DH Radawana and DH Dompe while improving the technical facilities in other institutions. In addition nutritional and other sanitary consumables were distributed among families who underwent home quarantine in certain areas of the district.

In 2021 DWP spent Rs11.9 Mn to expand the services for covid treatment in Gampaha district. From this amount 67.2% were spent to improve the buildings and other infrastructure of DH Akaragama, DH Meerigama, DH Dompe, DH Kiribathgoda and District General Hospitals (DGH) Gampaha. Rest was spent to improve the facilities of the intermediate care center (ICC) at Yakkala which was commissioned to look after the asymptomatic test positive individuals and contacts. Major facilities that improved were furniture, electrical and air conditioning equipment, electric fans, waste bins. The buildings were temporary provided by a private organization.

The costs of aids in means of construction supports and equipment undertaken by the foreign and local donors were not calculated up to date. It is estimated to be several times higher than the expenses undertaken by the GOSL. One exceptional example was the development of a twenty eight bedded High Dependency Unit at Base Hospital (BH) Kiribathgoda by a foreign donor.

In Colombo district SLR 6mn was spent for the development of facilities. Almost 50% of this amount was spent to develop BH Homagama. It was the major treatment center for the district. DGH Awissawella received SLR 2.7mn for the development of infrastructure. The ICC at Meethotamulla was also improved with facilities with the expenditure of 0.8 mn.

Kaluthra district was allocated SLR Rs23mn. The hospitals benefited were DH Pimbura, DH Mathugama, DH Bandaragama, DH Ittapana and DH Ingiriya. Development activities were carried out for BH Panadura and BH Horana costing SLR 1.5 Mn and SLR 3.3 Mn respectively. In addition, equipment costing SLR 7.2mn were provided

During the year 2021 DWP spent SLR 6mn for the health institutions located in Colombo district. SLR 2.5mn of it was spent on the improvements of BH Homagama as it was the main Covid treatment hospital in Colombo. DGH Awissawella also allocated SLR 2.6mn. Both of those expenses were to meet the recurrent expenditure. ICC Meethotamulla was also provided with facilities worth Rs 0.8 Mn.

Further to these financial commitments, Sri Lanka Army, Air Force and Sri Lanka Navy played major roles in developing buildings and other infrastructure for the health institutions under DWP.

### Identified Problems

1. Resources provided to hospitals remained underutilized or unused
2. Partitions that were done using aluminum and other materials are lying unused
3. High Dependency Units were underutilized following the low case load
4. Equipment such as oxygen concentrators, CPAP machines, cardiac monitors, multipara monitors not used in most hospitals except in DGH and BH.
5. Stocks of new patient beds with mattresses and lockers lying idle
6. Some of the hospitals developed with oxygen tanks and wall oxygen facilities are underutilized
7. No proper redistribution mechanism in place for underutilized and unused equipment
8. Personal Protective Equipment (PPE) were stagnated and not redistributed
9. Specialist medical officers for main specialties couldn't be increased even to the hospitals that were developed for the pandemic.

Above listed problem was prioritized by three trainees of medical administration by giving marks on selected criteria. The criteria used were the magnitude of the problem, availability of intervention, feasibility, and financial impact. The prioritized problem was the Resources provided to hospitals remain underutilized or unused (Appendix)

### Discussion

The gravity of the covid 19 pandemic was an unprecedented experience to the Health care system of Sri Lanka. With the large number of patients seeking treatment for the infection the workload of the hospitals increased to an unexpected level. The assurance of the safety of the staff was questioned which led to a panic situations among the hospital staff. Unavailability of most required resources such as patient beds, oxygen concentrators, CPAP machines, multipara monitors, PPEs etc.were pre3ssing concerns.

Most hospitals required separation of staff from the infected patients using structural changes such as aluminum partitions. It was undertaken in quick succession by building cubicles in the wards. Since the epidemic situation was controlled, these structural changes were no more necessary and those have become a burden for the staff. In most hospitals these partitions were removed in an unplanned manner and the materials were left in the premises in a disorganized way. Some of the hospitals maintain certain parts of partitions until proper instructions from the authorities.

Patient beds, lockers, mattresses, medical equipment, PPEs have left unattended and proper safeguarding has not implemented to protect the valuable equipment. HDUs, Oxygen tanks, Jumbo and ordinary oxygen cylinders, wall oxygen facilities were also idling due to lack of patients requiring such services.Ministry of Health, Sri Lanka is not capable of increasing the number of consultant units and anesthetist units in hospitals which were developed by providing HDU/ICU medical equipment.DH Dompe in Gampaha, BH Homagama in Colombo, BH Pibura in Kaluthara district have been benefited and it has led to upgrade their patient care facilities.

### Conclusion and Recommendations

The findings and observations on the provision of increased facilities for the hospitals in the western province have helped to develop patient care activities during the pandemic. Following recommendations could be made to improve the utilization of the available resources.

1. Each head of the institution should prepare a list of underused material or equipment that has been received during the pandemic.

2. A central register should be prepared by the provincial authority which will facilitate the provision of under used equipment to secondary care institutions
3. Materials that used for partitions could be used for other purposes such as to produce reception tables, cubicles for staff, separation of OPD and clinic areas, etc.
4. Medical equipment that are not used by the small institutions such as CPAP machines, Cardiac monitors should be provided to institutions with consultant medical officers
5. Items such as patient beds, lockers, mattresses, oxygen cylinders, PPEs should be distributed among other institutions. In addition the storage facilities of the districts should be improved as an urgent need.
6. The possibility of upgrading the divisional hospitals (DH Dompe, DH Lunawa, and DH Mathugama) to the level of BH has to be considered as a priority by the Ministry of Health, Sri Lanka.
7. The hospitals with new development and equipment could be used to enhance geriatrics care, or as rehabilitation centers to reduce the workload of the tertiary care hospitals

## References

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## Appendix:

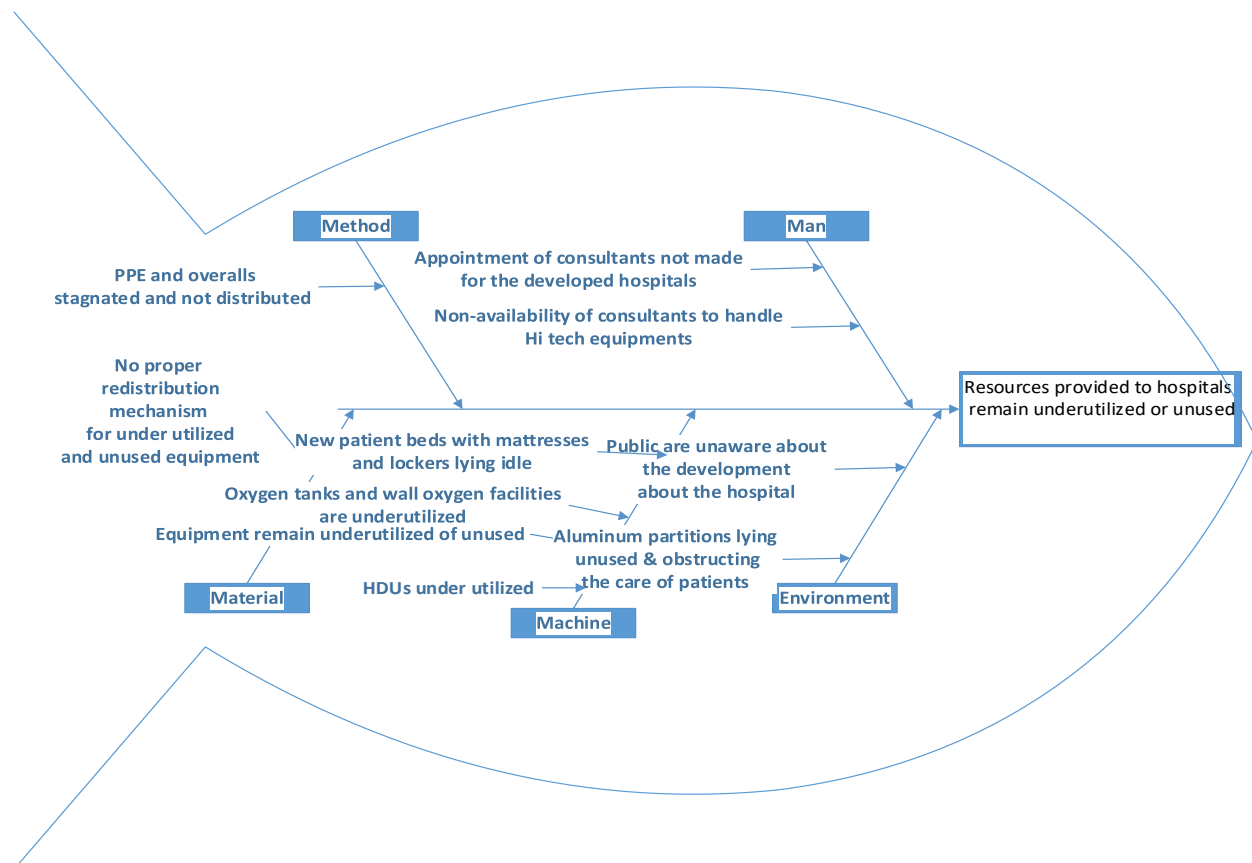


Figure 1: Fish Bone diagram