

# Impact of COVID-19 Pandemic On the Utilization of Health Services At A Private Health Center In Bangladesh: A Case Study

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*A preliminary analysis on the impact of the COVID-19 pandemic on the utilization of non-COVID health services by patients with diagnosed chronic illnesses at a private health center in Bangladesh.*

## BACKGROUND

In Bangladesh, lack of awareness of the threat of SARS-CoV-2,<sup>1</sup> health misinformation,<sup>2</sup> inadequate health facilities, and general distrust towards the government<sup>3</sup> have exacerbated the COVID-19 pandemic nationally and heightened fear and anxiety amongst the public. Consequently, people's healthcare seeking behaviors have also changed, particularly at the primary care level where the utilization of essential healthcare services have fluctuated greatly during the health crisis.<sup>4</sup> Prior studies have identified determinants of healthcare seeking behaviors by people with chronic non-communicable diseases in Bangladesh.<sup>5</sup> However, the change in their behavior as a result of the COVID-19 health crisis has not yet been investigated.

## DESCRIPTION OF ORGANIZATION

Praava Health is a private health center based in Dhaka, Bangladesh that was founded in 2018 with the mission to deliver convenient, affordable, and high-quality healthcare to the people of Bangladesh.

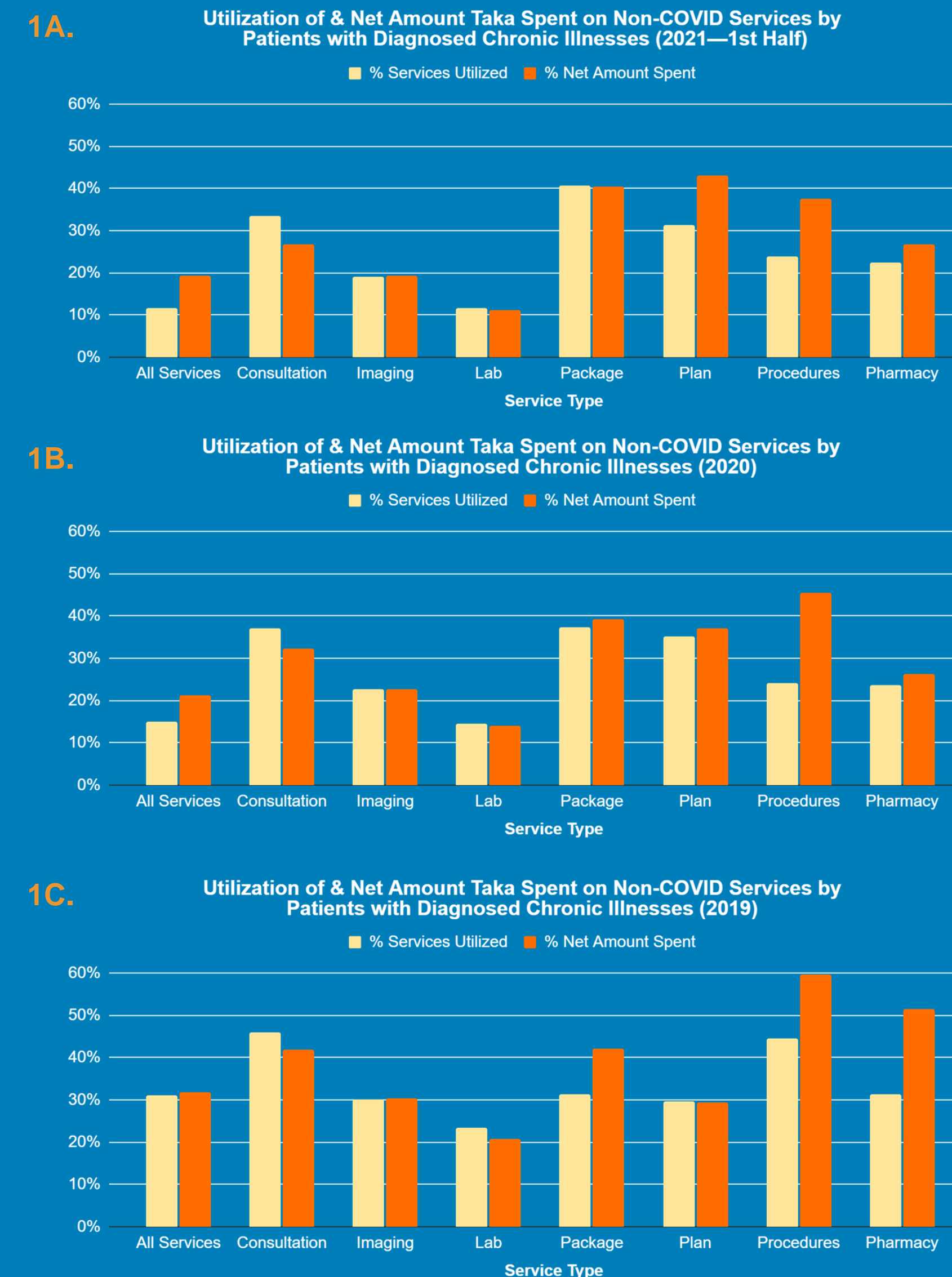
Praava Health offers a variety of health services including doctor consultations, pharmaceutical services, dentistry, physiotherapy, and laboratory testing. They also offer Annual Membership Plans (AMP) and Health Check Packages (HCP) that include a variety of benefits and access to their services at a lowered price. Notably, the AMPs offer unlimited doctors consultations and other benefits throughout the year, while the HCPs offer one-time imaging and chemistry panels for targeted health screens.

In response to the COVID-19 pandemic, Praava opened COVID-19 testing sites, established telehealth services, and launched Home Health Check services that bring laboratory diagnostics and other health services directly to their patients.

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## RESULTS



**Fig 1A-C:** Utilization of and net amount of Bangladeshi Taka spent on various non-COVID healthcare services by patients with diagnosed chronic illnesses from 2019 to the first half of 2021 at Praava Health.

## METHODS

- In this study, chronic illness is defined as any persistent illness that requires ongoing medical attention and/or impacts a person's quality of life. Psychiatric disorders and COVID-19 'long-haulers' are excluded from this analysis. Determination of chronic versus non-chronic illnesses were manually categorized to the best of the author's knowledge and discretion.
- The Medical Record Numbers (PHBL) of all patients with diagnosed chronic illnesses were identified and their annual utilization of services and net amount of Bangladeshi Taka spent were obtained through billing data (Fig 1A-C).

- While patients with diagnosed chronic illnesses (PwDCIs) utilized a decreasing proportion of all non-COVID services after the pandemic began in 2020, they continued to spend more on these services than other patients.
- PwDCIs also purchased an increasing proportion of Health Check Packages (i.e. one-time health screens and bundled diagnostic services targeted towards specific health conditions and populations) after the pandemic began.
- Though the proportion of Annual Membership Plans purchased by PwDCIs decreased, they purchased higher and more expensive membership tiers with more benefits.
- The utilization of non-COVID Procedures and Pharmacy services by PwDCIs decreased after the beginning of the pandemic, but they continued to spend more on these services than other patients.

## DISCUSSION

Results from this preliminary analysis show that the healthcare seeking behaviors of patients with diagnosed chronic illnesses (PwDCI) have been impacted by the COVID-19 health crisis. Specifically, PwDCIs purchased more Health Check Packages and bought higher tiered Annual Membership Plans at Praava Health, likely as a response to mitigate anxiety related to their risk for COVID-19 due to their underlying chronic conditions. Their lower expenditure compared to the utilization of Consultation services can be attributed to the fact that many PwDCIs possess Annual Membership Plans that offer unlimited consultations at no additional cost. Based on actual numbers, utilization of Lab and Imaging services are expected to return to pre-COVID numbers for PwDCIs in 2021 after a dip in 2020. Whereas Pharmacy and Procedure services (i.e. ECGs, dental, and dermatology services) are projected to stay at 2020 utilization levels, which are 30% to 50% lower than pre-COVID utilization numbers in 2019.

Though this study is limited in scope, it illustrates the change in healthcare seeking behaviors of PwDCIs as a result of the COVID-19 pandemic and, in turn, may provide guidance on which services these patients may be underutilizing so that appropriate resources may be reallocated to ensure and extend the life expectancies of PwDCIs

## REFERENCES

- Anwar, S. et al. (2020). *Frontiers in Public Health*, 8.
- Al-Zaman, Md. S. (2021). *Journal of Health Research*, 35(4), 364–368.
- Al-Zaman, Md. S. (2020). *The American Journal of Tropical Medicine and Hygiene*.
- Wangmo, S., et al. (2021). *WHO South-East Asia Journal of Public Health*, 10(3), 93.
- Rasul, F. B. et al. (2019). *Journal of Health, Population and Nutrition*, 38(1).

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