

# Trend Of OPD, Emergency, Diagnostic & Operative Statistics 2020 Of Holy Family Hospital Rawalpindi Pakistan In Relation To COVID-19

Rizwana Shahid<sup>1</sup>, Muhammad Umar<sup>2</sup>, Shazia Zeb<sup>3</sup>, Tabassum Mahmood<sup>4</sup>, Farzana Fatima<sup>5</sup>

<sup>1</sup>Assistant Professor Community Medicine, Rawalpindi Medical University

<sup>2</sup>Vice Chancellor, Rawalpindi Medical University

<sup>3</sup>Medical Superintendent, Holy Family Hospital Rawalpindi

<sup>4</sup>AMS, Holy Family Hospital Rawalpindi

<sup>5</sup>WMO, Holy Family Hospital Rawalpindi

## ABSTRACT

**Objectives:** To delineate the trend of OPD, emergency, diagnostic and procedural statistics 2020 of Holy Family Hospital Rawalpindi

**Materials & Methods:** A cross-sectional hospital record based descriptive study was planned to outline the trend of patients visiting OPD, emergency and undergoing various investigative and therapeutic procedures during 2020 at Holy Family Hospital Rawalpindi. The data was gathered from hospital administrators through informed consent. Data analysis was done by using Microsoft Excel 2010.

**Results:** Trend of visit to Outpatient and emergency departments abruptly fell during April – May 2020. The highest propensity of the patients was managed by doctors working in Medicine, Pediatrics and Gynecology & Obstetrics OPD. The maximum number of pathological testing was done during September 2020 and the greatest X-ray reporting was done during August – October 2020. The trend of regular ultrasonography in wards was at the peak during January, February and October 2020 and in OPD during August and October 2020. Elective surgeries pertinent to General Surgery and Plastic Surgery were reported to be with highest numeral and with lowest propensity at Neurosurgery and Ophthalmology department.

**Conclusion:** Medicine, Pediatrics and Gynecology & Obstetrics OPD of Holy Family Hospital managed the greatest magnitude of healthcare issues during 2020. Diverse diagnostic testing and elective procedures also continued throughout the year.

**Keywords:** diagnostic, operative, emergency, OPD, General Surgery, Medicine, Gynecology & Obstetrics, Pediatrics, Neurosurgery.

## INTRODUCTION

Tertiary healthcare facilities across the globe are equipped with all essential infrastructure, appliances and instruments imperative to provide specialized healthcare to the population<sup>1</sup>. Despite getting treated at tertiary care centers, the primary care physician

should always be in liaison with tertiary care specialist for apt management of certain chronic ailments<sup>2</sup>. Outpatient departments of tertiary level healthcare facilities are one of the indispensable sections of hospitals as they are meant to provide diagnostic as well as on spot curative services to the non-admitted patients<sup>3</sup>.

Being the third tier of healthcare, importance of our tertiary hospitals for teaching and training of doctors, nurses and paramedics in addition to provision of quality healthcare to the public cannot be neglected<sup>4</sup>. Patients' satisfaction in our teaching hospitals is remarkably correlated with hospitals' administrative services<sup>5</sup>. Minimum Service Delivery Standards (MSDS) indicated by Punjab Healthcare Commission (PHC) are mandated to ensure provision of sufficient diagnostic services and interpretation of investigations by qualified personnel. Adherence to these standards and consideration of the patients' rights is of utmost importance for quality assurance<sup>6</sup>.

Accident and Emergency departments of healthcare settings are inevitable to meet the healthcare needs of the patients suffering from acute sickness and urgencies<sup>7</sup>. Demand for emergency care services is multi-faceted<sup>8</sup>. They seemed to be prominently influenced by the severity of illness followed by standard of healthcare, current symptoms and discernment of comfort and satisfaction<sup>9</sup>. The mortality statistics are profoundly important not only to monitor the quality of healthcare of a region but also to systematically measure the health status of the population<sup>10</sup>.

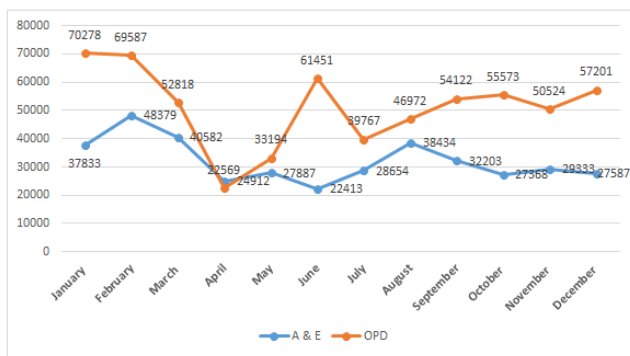
The current study is intended to oversee the trend of OPD, emergency in addition to diagnostic and operative statistics 2020 of Holy Family Hospital Rawalpindi. This enumeration will help us to perceive the patients' load of this hospital apart from utilization of its resources in provision of quality healthcare. The analyzed data would also serve as a cornerstone for our policy makers in decision making and hence facilitating in arrangement of relevant healthcare services accordingly.

**MATERIALS & METHODS**

A cross-sectional hospital record based descriptive study was planned to outline the trend of patients visiting the outpatient and emergency departments in addition to the trend of various investigative measures (pathological testing, X-ray, CT scanning, MRI, Regular and Doppler ultrasound) and elective surgeries carried out by various departments of Holy Family Hospital Rawalpindi during 2020. The data was gathered from hospital administrators through informed consent. Data analysis was done by using Microsoft Excel 2010.

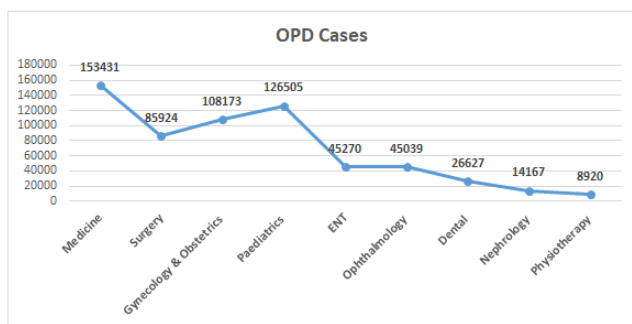
**RESULTS**

The greatest frequency of OPD cases was reported during January and February 2020 with drastic reduction in April 2020. Likewise the highest propensity of emergency cases was registered during February 2020 at Holy Family Hospital as illustrated below in Figure 1.



**Figure 1: Trend of OPD & Accident and Emergency cases reported at HFH during 2020**

The highest number of cases were examined and treated in Medicine OPD followed by Paediatrics, Gynecology & Obstetrics OPD during 2020 as depicted below in Figure 2.



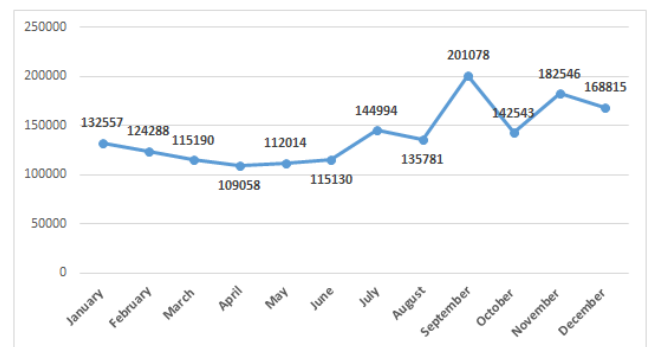
**Fig 2: OPD cases catered department-wise at Holy Family Hospital during 2020**

Holy Family Hospital being a tertiary level healthcare facility is well equipped with all essential diagnostic modalities for investigating the health problems as shown below in Figure 3.

Pathology	Radiology	Ultrasound
<ul style="list-style-type: none"> <li>• Lab Tests</li> </ul>	<ul style="list-style-type: none"> <li>• X-rays</li> <li>• CT scans</li> <li>• MRI</li> </ul>	<ul style="list-style-type: none"> <li>• Regular</li> <li>• Doppler</li> </ul>

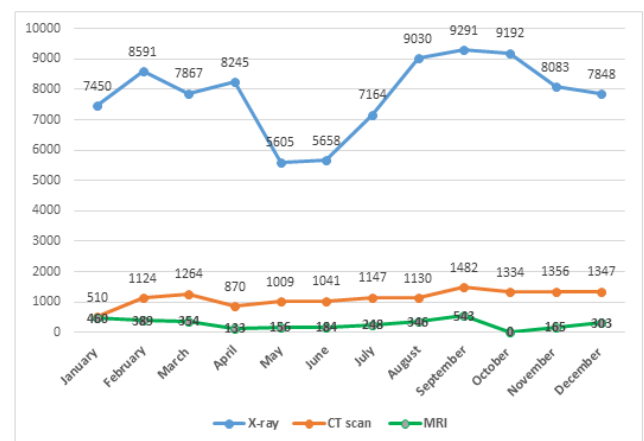
**Fig3 : Diagnostic modalities at Holy Family Hospital**

Pathology department of Holy Family Hospital is also having an established Pathology department with all advanced machinery, instruments and apparatus to facilitate the general public in their blood, sera and urine testing with highest number of testing carried out during September 2020 as revealed below in Figure 4.

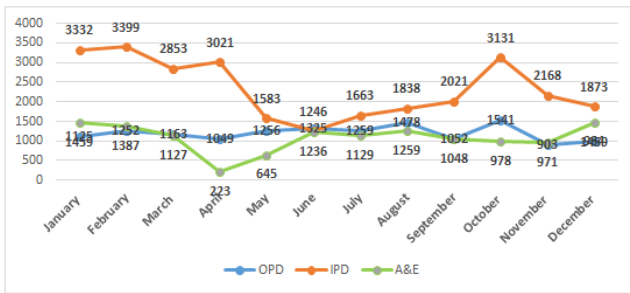


**Fig 4: Trend of Pathological tests done at HFH during 2020**

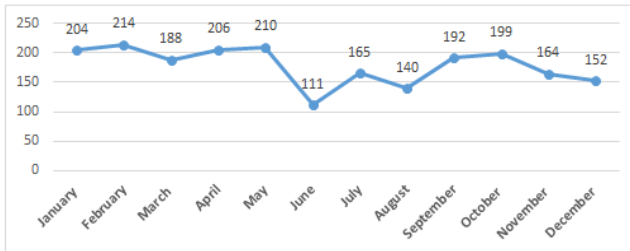
Trend of diverse radiographies accomplished during 2020 at HFH along with the trend of regular ultrasonographies and Doppler ultrasound for investigating the ailments are illustrated below in Fig 5a, 5b & 5c respectively.



**Fig 5a: Trend of Diagnostic Radiographies 2020 at HFH**

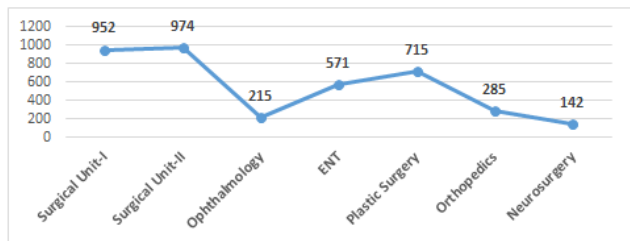


**Fig 5b: Trend of Regular Ultrasonographies at HFH during 2020**



**Fig 5c: Trend of Doppler Ultrasound at HFH during 2020**

About 3,854 elective surgeries were done. Of the total 52,476 emergency surgeries carried out at HFH during 2020, approximately 4,332 and 48,144 constituted major and minor operations respectively. The detailed statistics of elective surgeries is depicted below in Figure 6.



**Fig 6: Trend of Elective surgeries 2020 at HFH**

## DISCUSSION

Healthcare facilities are imperative in universal health coverage and being an integral part of healthcare system play a pivotal role in meeting the Sustainable Development Goals (SDGs)<sup>11</sup>. Pakistan's SDG Global rank seems to be escalated by five ranks in 2021 (from 134 in 2020 to 129 in 2021). However our neighboring Asian countries like Bangladesh sustained their SDG rank to 109 both during 2020 and 2021; contrary to this India's rank declined from 117 to 120 in 2021<sup>12</sup>. Achievement of SDGs by 2030 specifically SDG 3 that is intended to guarantee adequate health and well-being for the people belonging to all age groups is primarily attributed to availability, affordability and accessibility to quality healthcare services<sup>13</sup>.

The current study reveals the continuity of OPD services amidst COVID pandemic in addition to provision of emergency care; Moreover, OPD healthcare surpassed the Emergency service throughout the year except during April 2020 with highest number of cases attended in Medicine OPD (Fig 1). A study by Makwana K et al was planned in order to upgrade the OPD services of rural based hospital of Gujrat by means of Queuing Network Analysis Methodology. This study was envisioned to study the waiting time of the patients before and during attainment of services at OPD<sup>14</sup>. Patient satisfaction is one of the indicators of the quality of delivered healthcare services. Although patient care is enormously being provided to ensure the adequacy of healthcare but certain standards need to be evaluated for verification that entails the need of further research in the context of patient satisfaction.

A new department of Radiology is recently established at HFH with installation of latest CT scan and MRI machines. This tertiary care health facility is also well-equipped with computerized Pathology lab facilities that operate round the clock for the benefit of general public<sup>15</sup>. Approximately 15 lacs of pathological lab testing was done during 2020 with highest number of testing carried out during September after lifting of lockdown followed by those conducted during November and December 2020. Diagnostic amenities like Radiological and Pathological facilities are imperative in smooth execution of healthcare facilities<sup>16</sup>. In our study, X-rays were the most frequently conducted radiological testing followed by CT scans and MRI. Apart from facilitating the healthcare providers in appropriate identification of healthcare problem, diverse diagnostic modalities also enable to streamline the apt healthcare management plan<sup>17</sup>. Accurate diagnosis assists in reaching the right conclusion about the treatment of patient and to save his life.

Trend of month-wise regular ultrasonographies carried out during 2020 in OPDs, wards and Emergency departments and trend of Doppler ultrasounds accomplished for diagnosing the ailments of patients is displayed in Fig 5b and 5c respectively. In addition to importance of ultrasound from obstetric point of view, its significance in diagnosing the causes of pain, swelling or infection to internal body viscera cannot be neglected<sup>18</sup>. This imaging technique has made possible the identification of various complicated healthcare issues early enough to confirm the good prognosis. Being easily accessible to the general public residing in the vicinity of HFH, these diagnostic techniques have made quite convenient the provision of healthcare to the population of Rawalpindi city. Operative facilities were also available here with surgical operation theatres dealing with maximum patient load followed by those of plastic surgery and ENT Operation theatres. Although during mid-March most of our operation theatres were subjected to almost complete closure in order to tackle with COVID-19 turmoil<sup>19</sup>; however,

reporting of relatively lessened cases enabled our healthcare professionals to deal with other health-related problems also to ensure appropriate functionality of our healthcare system and continuity of healthcare provision.

## CONCLUSION

Out Patient Departments of Medicine, Pediatrics and Gynecology & Obstetrics at Holy Family Hospital managed the enormous amount of healthcare issues during 2020. Varied diagnostic testing and elective surgeries were also performed round the year.

**CONFLICT OF INTEREST:** None

## REFERENCES

1. Torrey T. Differences between primary, secondary, tertiary and quaternary care. February 16, 2020. <https://www.verywellhealth.com/primary-secondary-tertiary-and-quaternary-care-2615354>.
2. Lo C, Ilic D, Teede H, Fulcher G, Gallagher M, Kerr PG, et al. Primary and tertiary health professionals' views on the health-care of patients with co-morbid diabetes and chronic kidney disease - a qualitative study. *BMC Nephrol* 2016; 17(1): 50. doi:10.1186/s12882-016-0262-2.
3. OPD services. <https://shraddhahospital.org/hospital-facility/opd-services/>.
4. Britannica. Tertiary healthcare. <https://www.britannica.com/science/tertiary-health-care>.
5. Webster TR, Mantopoulos J, Jackson E, Cole-Lewis H, Kidane L, Kebede S, et al. A brief questionnaire for assessing patient healthcare experiences in low-income settings. *International J Qual Health Care* 2011; 23(3): 258–268. doi:10.1093/intqhc/mzr019.
6. Punjab Healthcare Commission. Minimum Service Delivery Standards (MSDS) and Indicators for Hospitals. October 2012. [https://thqshorkot.punjab.gov.pk/system/files/MSDS%20for%20Hospitals%202012\\_0.pdf](https://thqshorkot.punjab.gov.pk/system/files/MSDS%20for%20Hospitals%202012_0.pdf).
7. He J, Hou X, Toloo S, Patrick JR, Gerald GF. Demand for hospital emergency departments: A conceptual understanding. *World J Emerg Med* 2011; 2(4): 253-261. <https://dx.doi.org/10.5847%2Fwjem.j.1920-8642.2011.04.002>.
8. Lee A, Lau FL, Hazlett CB, Kam CW, Wong P, Wong TW, et al. Factors associated with non-urgent utilization of Accident and Emergency services: a case-control study in Hong Kong. *Soc Sci Med* 2000; 51:1075–1085.
9. Ragin DF, Hwang U, Cydulka RK, Holson D, Haley LL, Jr, Richards CF, et al. Reasons for using the emergency department: results of the EMPATH study. *Acad Emerg Med*. 2005; 12: 1158–1166.
10. Department of Public Health. Mortality Statistics. December 22, 2021. <https://portal.ct.gov/dph/Health-Information-Systems--Reporting/Mortality/Mortality-Statistics#:~:text=The%20importance%20of%20mortality%20statistics,status%20of%20a%20whole%20community>.
11. World Health Organization. Hospitals. [https://www.who.int/health-topics/hospitals#tab=tab\\_1](https://www.who.int/health-topics/hospitals#tab=tab_1).
12. Dawn. Pakistan's progress on SGDs. Dr. Abdur Rehman Cheema. 13 December 2021. <https://www.dawn.com/news/1663373>.
13. Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development. New York: United Nations; 2018. [https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202019%20refinement\\_Eng](https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202019%20refinement_Eng).
14. Makwana K, Dave G. A study of improving hospital out patient department (OPD) using queuing network analysis methodology. *JOM* 2019; 6(3): 140-149. <https://ssrn.com/abstract=3525372>.
15. Holy Family Hospital. Rawalpindi Medical University. <https://rmur.edu.pk/holy-family-hospital/>.
16. Citron I, Sonderman K, Meara JG. Pathology and laboratory medicine in partnership with global surgery: working towards universal health coverage. *The Lancet* 2018; 391(10133): 1875-1877. [https://doi.org/10.1016/S0140-6736\(18\)30310-6](https://doi.org/10.1016/S0140-6736(18)30310-6).
17. Importance of preventive care and diagnostic services. <https://www.cdi.org.in/importance-of-preventive-care-and-diagnostic-services/#:~:text=It%20helps%20healthcare%20professionals%20in,treatment%20procedure%20for%20the%20patients.&text=With%20the%20help%20of%20ata,who%20have%20an%20incurable%20disease>.
18. General Ultrasound. [https://www.radiologyinfo.org/en/info/genus#:~:text=Ultrasound%20imaging%20uses%20sound%20waves,\(fetuses\)%20in%20pregnant%20women](https://www.radiologyinfo.org/en/info/genus#:~:text=Ultrasound%20imaging%20uses%20sound%20waves,(fetuses)%20in%20pregnant%20women).
19. Rana R, Ather MH, Enam SA. Change in surgical practice amidst COVID-19; Example from a tertiary care centre in Pakistan. *Ann Med Surg* (Lond) 2020; 54: 79-81. <https://doi.org/10.1016/j.amsu.2020.04.035>.