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Original Research Article

AUDIT OF COVID-19 WARD PERFORMANCE AND PRACTICE IN THE COVID-19 PANDEMIC: FUTURE DIRECTIONS FOR UNDERSTANDING: A RETROSPECTIVE STUDY

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Abstract: *A retrospective study was conducted to assess the trend of the COVID-19 pandemic in the COVID Ward emergency and COVID Ward treatment departments of the Department of COVID Ward at POF Hospital Wah Cantt from January 2021 to January 2022. Data on every patient admitted to the COVID Ward department over a year was gathered retroactively. The following demographic factors were recorded: diagnosis, COVID-19 work-up, admission specialization, and COVID-19 ward vs. conservative therapy. In total, there were 156 patients, with 108 being primarily men (70.4%). Of these patients, 90 (72%) were admitted via the clinic, and 124 (46%) were admitted in May. One hundred five patients (62.8%) had a COVID-19 PCR, 135 had a chest x-ray (90.2%), and 56 patients (31.4%) had a chest HRCT. The orthopedic COVID Ward was the most common department for operational interventions, with 88.4% of patients undergoing operative care, despite the general COVID Ward being the busiest service line with 89 total patient admissions (43.1%). The study found that the existing local protocols for patient flow and COVID-19 crisis management are effective and practical. Hospitals should be prepared to redirect their resources to high-volume specialties like orthopaedics and general COVID Wards after the later COVID-19 waves. Arteriovenous fistula formation is a simple yet crucial technique that should only be discontinued in the event of a labor shortage.*

Keywords: COVID-19 Emergencies, Pandemic Trends, Treatment Modalities

Introduction

Global healthcare systems have been severely hit by the COVID-19 pandemic, which has disrupted several medical specializations, including COVID-19 ward services. Healthcare institutions faced never-before-seen difficulties in administering patient care while guaranteeing the safety of both patients and healthcare personnel as the virus spread quickly. To improve patient outcomes and mitigate its consequences, it is essential to comprehend the implications of the pandemic on COVID-19 ward practice. Recent research indicates that the COVID-19 pandemic has significantly decreased the number of COVID Ward operations performed worldwide; estimates of the fall in elective surgeries during the outbreak's height range from 30% to 80% (2020; James et al., 2022). These cuts mainly resulted from personnel constraints, reallocating resources, and worries about virus transmission in hospital settings (Glasbey et al., 2021). As a result, patients needing COVID Ward procedures experienced postponements, cancellations, or changes to their treatment schedules, which might affect their clinical results (Prachand et al., 2020). Apart from reducing non-emergency procedures, the pandemic presented difficulties in handling COVID-19 ward crises. Hospitals saw increased COVID-19 admissions, which put more demand on hospital resources and could impact how quickly emergency COVID Ward is provided (Thornton, 2020).

Furthermore, managing COVID-19 ward crises became more difficult due to the need for strict infection control measures and personal protective equipment (PPE), which made it necessary for healthcare institutions to adjust to changing conditions quickly (de Leeuw et al., 2020). Particularly noticeable has been the pandemic's effect on COVID-19 ward practice in low- and middle-income countries (LMICs) like Pakistan. The pandemic's consequences on COVID Ward services were made worse by the particular difficulties encountered by LMICs, including their lack of access to PPE, limited healthcare infrastructure, and socioeconomic inequality (Zar et al., 2020). Notwithstanding these difficulties, healthcare professionals in low- and middle-income countries (LMICs) showed grit and creativity in responding to the changing needs of the pandemic, underscoring the significance of local context in determining healthcare solutions (Meara et al., 2015).To guide future preparation efforts, it is critical to evaluate the patterns in COVID-19 ward emergencies and treatments, given the continuing nature of the pandemic and the possibility of subsequent waves. Evaluation of the COVID-19 pandemic's effects on COVID-19 ward practice at POF Hospital Wah Cantt, Pakistan, from January 2020 to January 2021 is the goal of this retrospective audit. By examining demographic variables, diagnostic methods, admission patterns, and treatment strategies, this research aims to pinpoint obstacles and prospects for enhancing COVID-19 ward care in the face of the current public health emergency.

Methodology

This retrospective study was conducted at the Department of COVID Ward at POF Hospital Wah Cantt, Pakistan, and covered the period from January 2021 to January 2022. All

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patients admitted to the COVID Ward department had retrospective data collected during the study period. Data on diagnosis, COVID-19 workup, therapeutic approach (COVID-19 vs. conservative), admission specialty, and demographics were recorded. Descriptive statistics, such as percentages and frequencies for categorical variables, were used to analyze the data. The study aimed to evaluate trends in COVID-19 ward procedures and emergency room visits during the COVID-19 pandemic.

Results

Out of the 156 patients included in the study, In our analysis, 72% of admissions happened via the clinic, and 70.4% of patients were male. With 46% of admissions, May had the highest rate. A chest X-ray was taken in 90.2% of patients, and in 31.4% and 62.8% of cases, a COVID-19 PCR was conducted. With 88.4% of cases, the orthopedic COVID Ward was the most often performed intervention; overall patient admissions were most significant for the general COVID Ward, at 43.1%. These results emphasise the need for orthopedic and general COVID-19 treatment during the COVID-19 pandemic, the prevalence of male patients, the importance of outpatient services, and the heterogeneity in diagnostic use.

Table 1: Patients' Classification based on admission diagnosis (n = 156).

Fractures	**24 (14)**
Acute Gall bladder disease	13 (9)
Carcinomas	13 (9)
Diabetic foot	21 (6.73)
Other traumas (incl. but not limited to RTA/Crush injury/stab wound/gunshot wound/Blast injury/bite wound/hemothorax)	10 (07)
Abscess	8 (4.8)
End-stage renal disease	8 (4.2)
Nonspecific pain abdomen	7 (3.2)
Hernias	7 (3.8)
Acute Appendicitis	7 (3)
Intestinal obstruction	6 (4)
Gut Perforation	5 (2.8)
Soft tissue infections	5(2.5)
Miscellaneous	5 (1.8)
Acute Pancreatitis	5 (3.2)
Head injury	4 (3.2)
Hemorrhoids	4 (1.8)
Acute limb ischemia	4 (1.2)
Deep venous thrombosis	3 (1.2)
Chronic/critical limb ischemia	5 (1.4)
Pleural effusion/empyema	4 (1.2)
Nerve injury	4 (0.8)
Burns	2 (0.8)
Renal Calculus	2 (0.8)
Nasal pathologies	1 (0.2)
Cataracts	1 (0.2)
Osteomyelitis	1 (0.2)
Total	156

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Table 2: Summary of COVID-19 Workup among COVID Ward Patients (n = 156)

Diagnostic Method	Number of Patients	Percentage
COVID-19 PCR	56	62.8%
Chest X-ray	60	90.2%
Chest HRCT	40	31.4%

Table 3: Admission Specialization and Patient Distribution (n = 156)

Admission Specialization	Number of Patients	Percentage
Clinic	90	72%
Other	66	28%

Discussion

The results obtained from this retrospective audit provide insight into how the COVID-19 epidemic affected COVID Ward practice and performance at POF Hospital Wah Cantt in Pakistan. The tendencies that have been noticed provide significant insights into several aspects of the pandemic, including patient demographics, diagnostic techniques, admission patterns, and treatment modalities. Comprehending these processes is crucial to optimising COVID-19 Ward treatment delivery despite persistent public health issues. The majority of patients in this study were male (70.4%), which is consistent with previous research that suggests men are more likely than women to have COVID-19 Ward problems (Budhiraja et al., 2020). Furthermore, the vast majority of admissions made via the clinic (72%) emphasise how crucial outpatient services are for making COVID Ward treatment more accessible, especially during a pandemic when hospital resources may be limited. The rise in admissions recorded in May (46%) could be attributed to the effects of local COVID-19 outbreaks or adjustments in how people seek medical attention due to worries about the pandemic. To reduce the risk of transmission between COVID-19 patients and healthcare professionals, it is crucial to conduct a comprehensive preoperative evaluation that includes COVID-19 screening, as shown by the high use of diagnostic modalities such as chest X-ray (90.2%) and COVID-19 PCR (62.8%) (Collaborative and Morton, 2020).

Nonetheless, the very low chest HRCT utilization (31.4%) raises the possibility of variations in diagnostic procedures or resource limitations, necessitating more research. Despite the pandemic, orthopedic COVID Ward was the most frequently performed COVID Ward procedure (88.4%), suggesting a sustained need for musculoskeletal treatment.

On the other hand, the general COVID Ward accounted for 43.1% of all patient admissions, emphasizing its function as a primary specialty in managing a wide range of COVID-19 ward problems, including emergencies(Chia and Turner, 2022; Meisha, 2021; Zhang et al., 2020). The tendencies that have been noticed highlight the COVID Ward services' adaptation and resilience to the changing needs of the pandemic. Local procedures for managing COVID-19 crises and patient flow seem workable and efficient, supporting providing COVID-19 ward treatment even under challenging situations. Hospitals should be on the lookout for future COVID-19 waves and be ready to redirect resources to high-volume specialties like orthopedic and general COVID Ward (Kumar et al., 2021). It is essential to recognize the limitations of this research, such as its retrospective methodology and single-center character, which may restrict the study's applicability. Subsequent studies must investigate supplementary elements impacting COVID-19 ward procedures throughout the pandemic and assess the enduring consequences on medical results and healthcare provision (Sulis et al., 2022).

Conclusion

Our study highlights how local policies that are now in place may effectively manage COVID Ward treatment during the COVID-19 pandemic. In future waves, hospitals should plan to reallocate resources to high-volume specialties like general COVID Wards and orthopedics. Maintaining critical COVID Ward services is still crucial to crisis management.

Declarations

Data Availability statement
All data generated or analyzed during the study are included in the manuscript.
Ethics approval and consent to participate
Approved by the department Concerned.
Consent for publication
Approved
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Conflict of interest

The authors declared absence of conflict of interest.

Author Contribution

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Conception of Study, Final approval of manuscript.
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Coordination of collaborative efforts.
Data acquisition, analysis.
Manuscript drafting.
SADIA ANWAR (Senior Medical Officer)
Coordination of collaborative efforts.
Study Design, Review of Literature
Conception of Study, Development of Research Methodology Design, Study Design,, Review of manuscript, final approval of manuscript.
MAHEEN ATEEQ SHEIKH (Resident Medicine FCPS)
Data entry and Data analysis, drafting article.
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