

**BURDEN OF OBSTETRICS AND GYNAECOLOGICAL REFERRALS TO TERTIARY HEALTH CARE SYSTEM**Sarwat Memon<sup>1</sup>, Amna Salman<sup>2</sup>, Afshan Mumtaz<sup>3</sup>, Mehnaz Memon<sup>4</sup>**Correspondence**

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**ABSTRACT****OBJECTIVES**

*This study aimed to assess the burden of obstetrics and gynaecological cases, causes and pattern of referral to tertiary care hospital.*

**METHODOLOGY**

*This descriptive cross-sectional study was carried out from May 2022-July 2022 using the data of patients who were referred to the Department of Obstetrics and Gynecology Unit 2 at Isra University Hospital from various primary, secondary, tertiary, and private hospitals for any obstetric or gynaecological emergency were the primary source of data. The confidentiality of each patient was carefully respected. This study evaluated the prevalence, reasons and pattern of referral of various obstetric and gynaecological conditions for which patients were referred to Isra University Hospital within the study duration and the management options provided to these patients.*

**RESULTS**

*The gynaecological cases accounted for the majority (71%) of referrals. Patients between 21-30 yrs of age comprised 51% of the total. Most patients (20%) were multipara in their third trimester (18%). High-risk patients (60%) were this study's most common reason for referral, whereas financial restrictions (4%) were the least common. Only 5% of patients were referred from other tertiary care facilities, whereas 49% of patients came from the primary sector (49%), secondary (33%), and private (13%).*

**CONCLUSION**

*There is an imperative need to upgrade health system infrastructure, mainly primary and secondary health care systems and especially in the field of maternal and childcare, to enable prompt and appropriate diagnosis and management of various conditions in all nearby hospitals.*

**KEYWORDS:** *Obstetrics, Gynaecology, Referrals, Pattern*

**INTRODUCTION**

In any healthcare delivery system, the referral system for obstetric and gynaecological cases is vital, primarily because it provides access to emergency obstetric care, prenatal, and delivery care in primary-level hospitals.<sup>1</sup> The term referral refers to a health care provider at one level of the health system who has limited resources (medications, equipment, skilled professionals) to manage a clinical condition recommending the assistance of a better-resourced facility at a similar or higher level to assist in or take over patient management.<sup>2</sup> The 3-tier health care delivery system for referrals, i-e, self, primary, secondary and tertiary, was conceived so that the patients needing a higher level of expertise and care could be referred accordingly.<sup>3</sup> Improving maternal health has been a top concern for the global health and development community for decades.<sup>4</sup> The fifth Millennium Development Goal during the 2000 Millennium Summit (MDG5) was lowering the Maternal Mortality Ratio (MMR) by 75% between

1990 and 2015. However, maternal mortality (MM) remained high, particularly in low and medium-income countries.<sup>5</sup> Referrals in pregnancy and childbirth services for the identification and referral of high-risk pregnancies are classified by their source (institutional or self-referral), timing (antenatal, labour, or postnatal), and urgency (elective or emergency referral). However, This part of the health system remains underdeveloped in most developing countries.<sup>6</sup> A three-delay paradigm for referrals in obstetric and gynaecological emergencies has been proposed by the Prevention of Maternal Mortality (PMM) network study. According to research, 92 % of maternal deaths are caused by delays in referral and case management, with the first delay being the decision to seek care, the second delay is the identification and arrival at a medical facility, and the third delay due to delay in receiving adequate and prompt treatment even after reaching a care institution.<sup>7,8</sup> Although most obstetric complications (defined as acute conditions such as postpartum haemorrhage, sepsis, eclampsia, and obstructed labour

that can cause maternal death cannot be predicted, the majority can be treated with the timely provision of a package of evidence-based interventions known as emergency obstetric care (EmOC).<sup>9,10</sup> To avoid risks and undesirable effects, referral services should be provided at the proper time and speed, resulting in positive effects.<sup>11</sup> With this background, this study aimed to assess the burden, reason, and pattern (i.e., a referral from the primary, secondary, or private sector) of tertiary care hospital referrals so that emergency care for both mother and child in terms of skilled personnel, equipment, and support services can be made available at various levels of health care centres. Furthermore, a system might be developed that allows high-risk elective patients to be referred to centres with appropriate capabilities before complications arise.

## METHODOLOGY

This descriptive cross-sectional study was carried out from May 2022 to July 2022 at Isra University Hospital. The data of patients who were referred to the Department of Obstetrics and Gynecology Unit 2 at Isra University Hospital during the study duration from various primary, secondary, tertiary, and private hospitals for any obstetric or gynaecological emergency were collected from records of the department using non-probability convenience sampling technique after getting approval from ethical review board of university purely for research purpose. The confidentiality of each patient was carefully respected. This study evaluated the prevalence of various obstetric and gynaecological conditions for which patients were usually referred to Isra University Hospital within the study duration, as well as the reasons and patterns of the referrals of these patients. Frequency was calculated for qualitative variables using SPSS version 17.

## RESULT

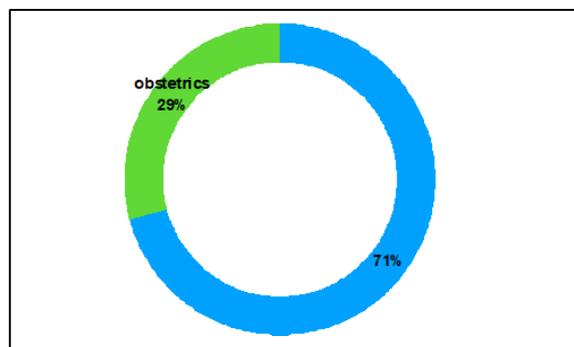


Figure 1: The Percentage of Obstetrics and Gynaecological Referrals

Table 1: It Indicates the Demographic Information of the Patients

Demographic Data		
Age	Up to 20 Year	(17) 31%
	21-30 Year	(28) 51%
	> 31	(10) 18%
Profession	Employed	(16) 29%
	Unemployed	(39) 71%
Residence	Urban	(12) 22%
	Rural	(43) 78%

Table 2: Shows the Obstetric Characteristics of the Referral Patients

Obstetric Characteristics		
Parity	multipara	(11) 20%
	primavera	(05) 09%
Gestational Age	1 <sup>st</sup> trimester	(02) 04%
	2 <sup>nd</sup> trimester	(04) 07%
	3 <sup>rd</sup> trimester	(10) 18%

Table 3: The Pattern of Referred Patients from Different Sectors

Pattern of Referred Patients	
Primary Sector	27 (49%)
Secondary Sector	18 (33%)
Tertiary Sector	03 (05%)
Private Sector	07 (13%)

Table 4: The Reasons for Referral of Patients to the Obstetrics and Gynaecological Department

Reason for Referral	
High-risk patient	33 (60%)
Unavailability of specialist	16 (29%)
Lack of hospital facilities	04 (07%)
Financial reasons	02 (04%)

## DISCUSSION

In the present study, Gynaecological cases 71% formed the bulk of cases compared to obstetrics 29% (CHART 1). In contrast to our study, Verma D and Kant S et al. reported the highest prevalence for referral of obstetric cases, i.e. 75.64% and 82.4%, respectively.<sup>11,12</sup> Most of the patients in our study were aged between 21-30 yrs (51%), similar to Fornier P, Goswami P and Pratibha P as it is considered the prime reproductive age with 71 % of them being unemployed similar to Pratibha P (96.8%) and belonged to rural areas, 78% (TABLE 1).<sup>2,3,13</sup> However, Devnani K did not find a significant difference between patients from urban and rural areas, whereas Latika et al. reported 67% of referrals from urban areas.<sup>14,15</sup> The reason for unemployment could be related to the low literacy rate, especially in rural areas, which is also evident from our results. In our study, most of the obstetric patients were multipara (20%) which is contradictory to the results of studies by Gupta PR (52.17%), Goswami P (47%) and Pratibha P (66.5%) who reported the majority of primigravida patients. 18% of our patients were in the

third trimester, similar to Pratibha P which could be one reason for referral as these patients were near to term and required proper management protocol (TABLE 2).<sup>2,3,16</sup> The most prevalent cause for referral was high-risk patients (60%), followed by unavailability of specialists (29%) and lack of hospital facilities (7%), with financial constraints in only 4% of patients (TABLE 3). Similar to our results, Sharma CP also reported unavailability of speciality services in 49% of cases. Where as Devnani K reported unavailability of the perinatal facility followed by unavailability of physicians as the most common cause of referral.<sup>14,17</sup> Verma D reported a lack of healthcare facilities, unavailability of blood banks and economic constraints as dominant factors for the referral.<sup>11,12</sup> Kant S reported financial reasons as the most common cause for referral. A majority of our peripheral health care systems are lacking in terms of specialists and proper availability of well-equipped hospitals, and usually, Dias are performing procedures like regular deliveries and c- sections for uncomplicated cases. It could be presumed that most high-risk patients were referred to tertiary care hospitals in big cities for proper management protocols due to a lack of expertise and considering the gravity of the condition of mother and child or both. Most of our patients were found to be referred from the primary sector (49%), followed by secondary (33%) and private sector (13%), while only 5% were referred from other tertiary care hospitals. Like our results, Da silva Also reported similar results, with 71.30% referrals from the primary sector, 21.70% from the secondary and only 7% from other tertiary care sectors. On the contrary, Verghese B et al. reported that 62% of patients were referred from the secondary sector, whereas only 26% were from the primary sector.<sup>18,19</sup>

## LIMITATIONS

This study accounted for patients referred because of an urgent medical necessity or the seriousness of their condition within three months. In light of this, conducting a more in-depth study is advised to determine the burden on our tertiary care system and the requirement for upgrading other health care facilities, particularly maternal and child care centres. Studies to be conducted in future should also include patients referred voluntarily and for elective operations.

## CONCLUSION

For three months, most patients referred to Isra Tertiary Care Hospital had either an urgent medical need or a severe condition that required a specialist's

expertise and proper resources. Most referrals came from primary and secondary care facilities due to the severity of the patient's condition, lack of a specialist, or inadequate hospital facilities.

**CONFLICT OF INTEREST:** None

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4. **Mehnaz Memon** – Data Analysis/Interpretation

