



## AUDIT OFFICE OF GUYANA


PROMOTING GOOD GOVERNANCE, TRANSPARENCY  
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### REPORT OF THE AUDITOR GENERAL

### ON THE MANAGEMENT OF MATERNAL HEALTH CARE SERVICES AT THE GEORGETOWN PUBLIC HOSPITAL CORPORATION


### A PERFORMANCE AUDIT



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23 September 2024

Hon. Manzoor Nadir, M.P.  
Speaker of the National Assembly  
Parliament Office  
Public Buildings  
Brickdam  
Georgetown.

Dear Mr. Speaker,

### RE: PERFORMANCE AUDIT REPORT

In accordance with Part V Section 24 and Section 28 of the Audit Act 2004, I am pleased to submit a Performance Audit Report on the Management of Maternal Health Care Services at the Georgetown Public Hospital Corporation.

This report is required to be laid before the National Assembly, and I would very much appreciate it if this could be done at the earliest opportunity.

With best regards.

Yours sincerely,

  
DEODAT SHARMA  
AUDITOR GENERAL





The Auditor General is the external auditor of the public accounts of Guyana, and is responsible for conducting Financial and Compliance, Performance and Value-for-Money and Forensic Audits with respect to the Consolidated Financial Statements, the accounts of all budget agencies, local government bodies, all bodies and entities in which the State has controlling interest, and the accounts of all projects funded by way of loans or grants by any foreign State or organisation.

In conducting Performance and Value-for-Money Audits, the Auditor General examines the extent to which a public entity is applying its resources and carrying out its activities economically, efficiently and effectively with due regard to ensuring effective internal management control.

This report has been prepared in accordance with Part V Section 24 (1) (b) of the Audit Act 2004. In conducting this Performance Audit, we followed the Code of Ethics and Standards and Guidelines for Performance Auditing of the International Organization of Supreme Audit Institutions (INTOSAI), of which the Audit Office of Guyana is a member.

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# A PERFORMANCE AUDIT REPORT

## MANAGEMENT OF MATERNAL HEALTH CARE SERVICES AT THE GEORGETOWN PUBLIC HOSPITAL CORPORATION



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## EXECUTIVE SUMMARY

### Why we did this audit

During the years 2016 to 2020, the Georgetown Public Hospital Corporation recorded approximately 6,000 births per year, which is more than 40% of the national average of 15,000. However, the GPHC's Maternity Unit faced challenges such as overcrowding and staff shortages, which caused Parliament, the media and the general public to express concerns. In this regard, the Audit Office conducted a performance audit covering the period 1 January 2019 to 30 June 2020.

### Key messages

The GPHC's Maternity Unit was faced with the problem of overcrowding due to inadequate beds. However, the situation has improved tremendously, and the hospital is now able to effectively manage fluctuations in demand and maintain a smooth patient flow throughout the health care system.

Nevertheless, a shortage of health care personnel, particularly nurses and mid-wives, remains a key issue. This situation was compounded by a lack of ongoing staff training and comprehensive standard operating procedures to properly guide them as they carried out their duties. It can also put the health and safety of both maternal patients and staff at risk and also reflects poor management of the Maternity Unit by the GPHC's administration.

### What we found

**Adequate bed capacity.** The average bed occupancy rate was 76% for the period of audit. This reflected an improvement over prior years, when the average bed capacity was 121%, indicating an overcrowding problem. Providing additional bed capacity is essential to effectively manage fluctuations in demand and maintain a smooth patient flow throughout the health care system.

**No assessment to determine the resources needed.** Management did not conduct a needs assessment to determine the personnel and equipment required to properly care for patients. As such, patients may not have been provided with the treatment they needed.

**Continuous staff shortage.** The actual staff strength throughout the audited period was approximately 63% of the proposed level. Staff shortages can adversely affect the standard of care provided to patients, leading to negative patient experiences and outcomes, such as poor health and even death.

**A comprehensive manual of administrative procedures is not in place.** The GPHC did not have an approved, comprehensive manual of administrative procedures to guide staff in carrying out their duties. This could compromise the quality of care provided to patients as well as their health and safety.

### Way forward

The Audit Office made ten (10) recommendations to the GPHC's management for improvements. By fully implementing the recommendations, the Maternity Unit will be better managed, resulting in improved health care for maternal patients.

## **Introduction**

1. A performance audit was conducted on the Management of Maternal Health Care Services at the Georgetown Public Hospital Corporation (GPHC). The audit focused on whether standard operating procedures and other guidelines regarding patient flow through the Maternity Unit had been established, approved, and implemented. Also, the systems that were in place to monitor, assess, measure, and evaluate patient flow. The audit covered the period from 1 January 2019 to 30 June 2020.

2. Maternal health care is an important issue since it is vital in ensuring the health and overall well-being of both mother and child. It refers to the overall system responsible for providing quality health care to women during pregnancy, childbirth, and post-delivery and includes the provision of quality services, a hygienic environment and health facilities.

3. In Guyana, the annual national average of births was approximately 15,000 for the period of audit. Of this amount, 6,000 births were recorded annually by the GPHC's Maternity Unit. This means the GPHC was responsible for over 40% of the annual national average of births. However, the maternal mortality ratio (*i.e. the number of women who die from pregnancy-related causes while pregnant or within 42 days of pregnancy termination*) for 2019 and 2020 was estimated at 110 and 112 deaths, respectively, per 100,000 live births. Therefore, it is important that quality maternal health care is provided to women during all stages of pregnancy.

4. In understanding the nature and importance of the audit subject matter, we found that there is a risk that the GPHC was not effectively managing maternal health care. For many years, the Parliament, media and the general public have raised concerns regarding the challenges faced by the GPHC, with much emphasis on overcrowding and deaths at the Maternity Unit.

5. Also, the GPHC's management has acknowledged the historical challenges of overcrowding in the Maternity Unit and the low level of trust by the public. They highlighted that due to the high level of admissions and deliveries at the Maternity Unit, it is a constant challenge to find inpatient beds. Additionally, the ward was not equipped with its own laboratory, including ultrasound and electrocardiogram (ECG) machines.

## **Background**

6. The GPHC was established in March 1999 under the Public Corporations Act Chapter 19:05. It is also subject to the provisions of the Health Facilities Licensing Act, Chapter 33:03, which provides for the licensing of health facilities and regulates their operations.

7. The GPHC is the largest hospital in Guyana's public health system and serves as a regional and national referral hospital. Its mission is "*to provide a comprehensive range of quality health care services in an efficient, equitable and caring manner together with teaching and research activity designed to ensure excellence in patient care, education, and research*".



8. The services offered include maternity, pediatric, cardiology, audiology, physical therapy, emergency medicine and intensive care. Additionally, it provides laboratory services, x-rays, minor and major surgeries, and specialist services for in and out-patients. However, for this audit, the focus was on the Maternity Unit only.

9. The Maternity Unit has undergone several changes since the incorporation of the hospital. It moved from a few wards to a unit that now consists of several areas, as shown in Figure 1 below.

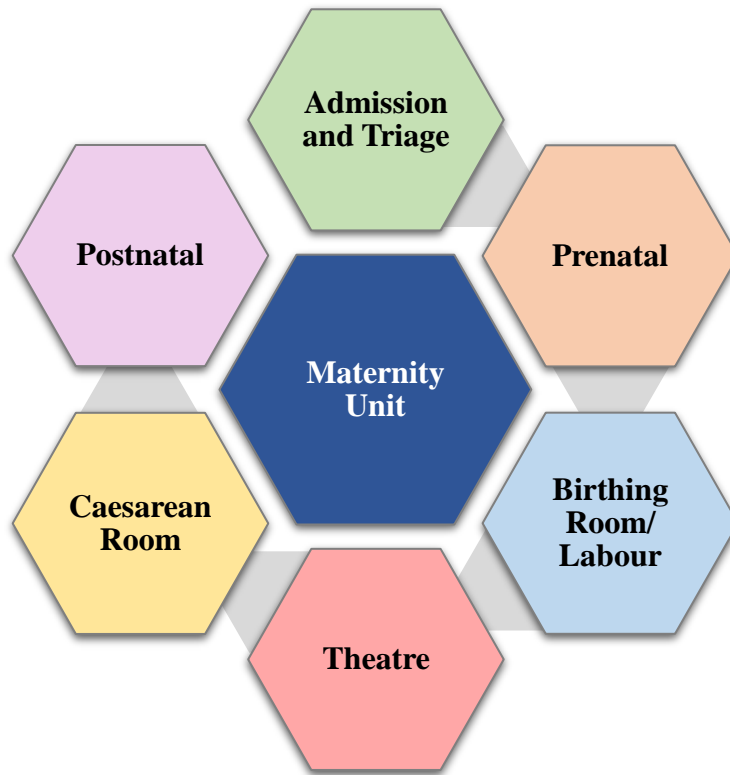


Figure 1. Maternity Unit  
Source: GPHC's Organisation Chart

10. For the years 2019 and 2020, the Maternity Unit recorded a total of 17,653 admissions. The yearly and daily average admission rate is shown in the table below.

Particulars	Number of Admissions			Average Admissions
	2019	2020	Total	
Yearly	9,253	8,400	17,653	8,827
Daily	25	23	48	24

Table 1 – Average Number of Admissions for the years 2019 and 2020  
Source: GPHC's Management Information Systems Report.

11. The process for a patient for receiving maternal health care is very simple. The patient flow process from admission to discharge through the Maternity Unit is illustrated in Figure 2.

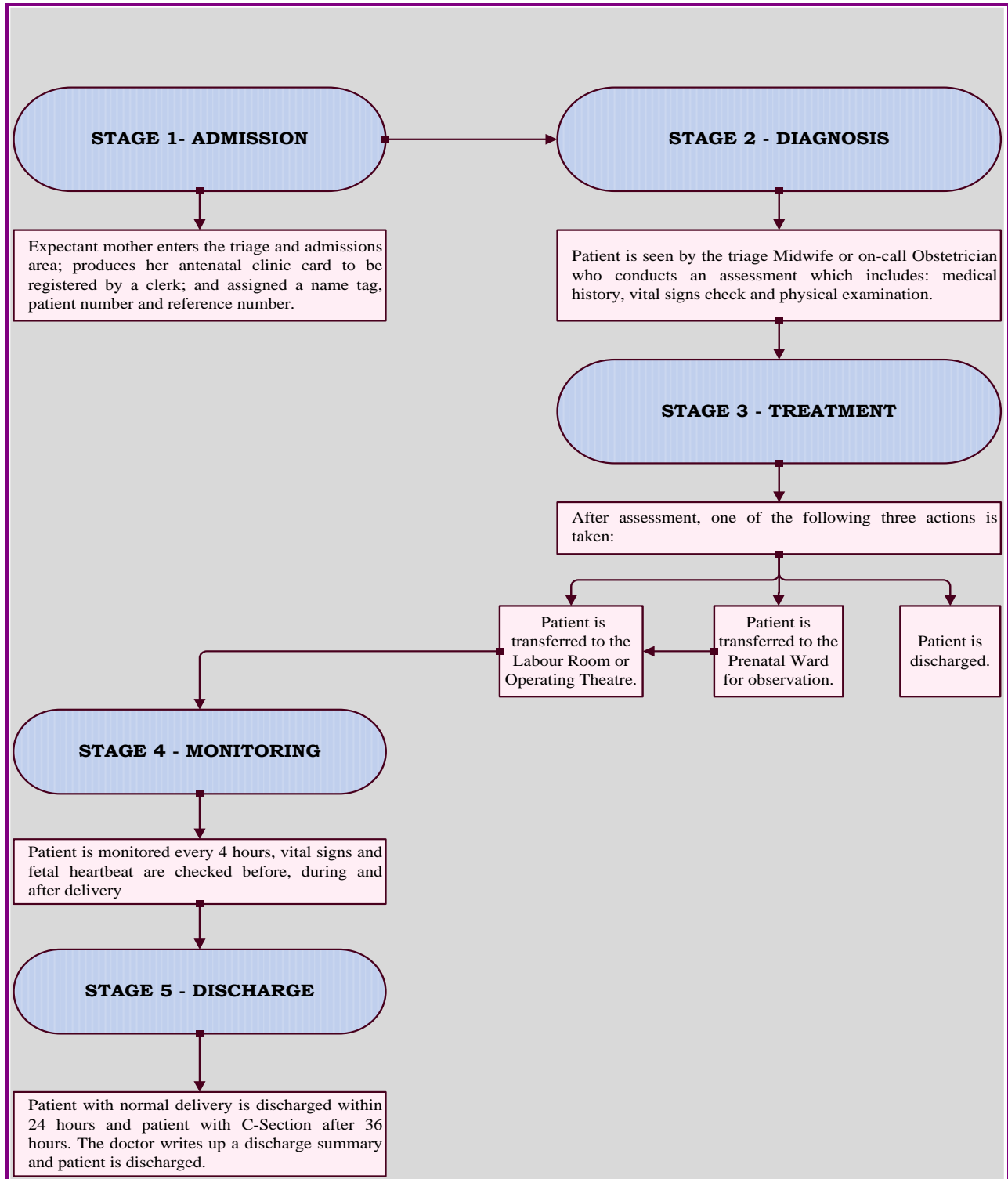


Figure 2. Patient flow process at GPHC  
Source: Audit Office of Guyana using Interview Analysis

## Roles and Responsibilities of Key Players

12. The GPHC falls under the purview of the Ministry of Health. The following flowchart shows the roles and responsibilities of the key players:

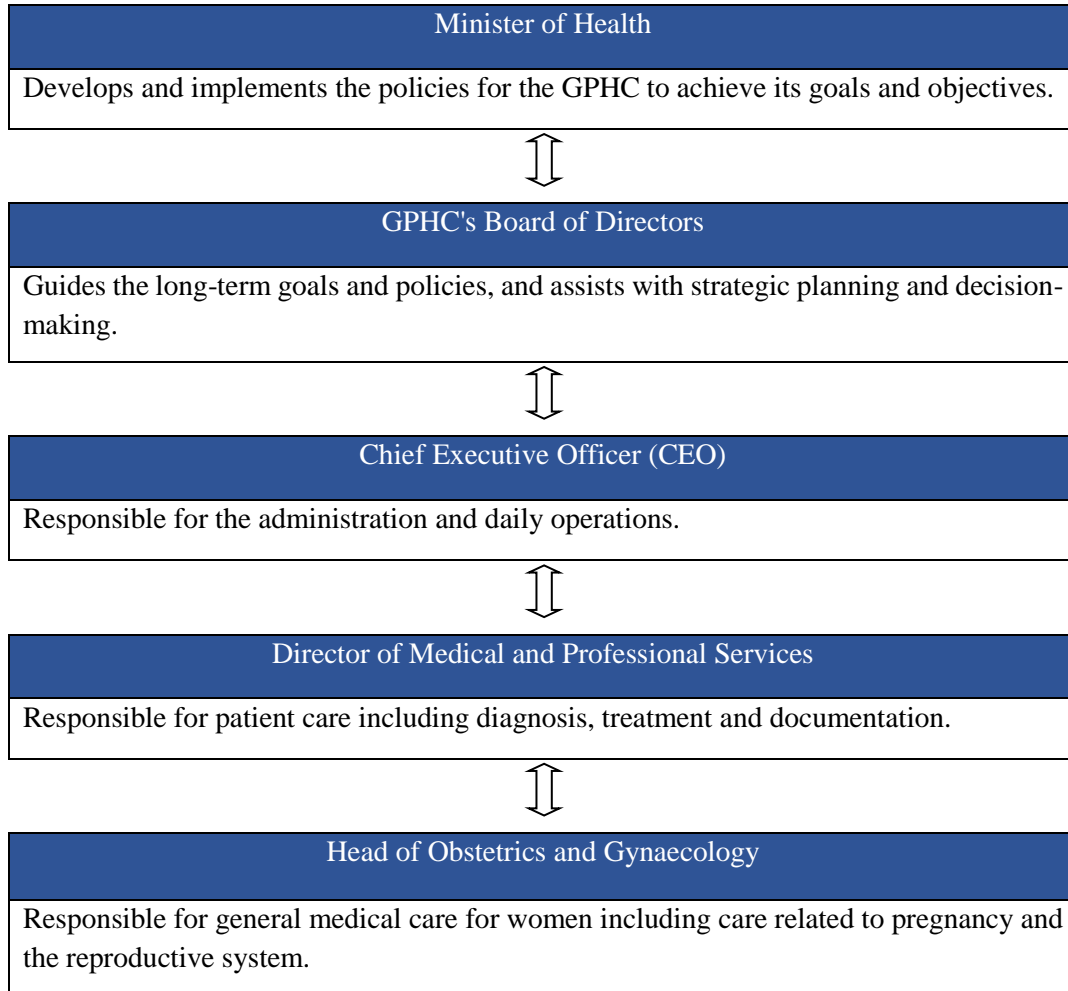


Figure 3. Roles and Responsibilities of Key Players  
Source: GPHC's Organisation Chart and Job Profiles

## Reason for Undertaking the Audit

13. Over the years, there have been concerns among stakeholders, especially the public about the quality of maternal health services provided by the GPHC. Despite having a low death rate, stakeholders needed to be reassured that the Unit is performing well and systems are in place to ensure effective patient flow management. Considering the above, the Audit Office conducted a performance audit of Maternal Health Services at the GPHC. The recommendations made in the audit report aim to improve the quality of care for patients when implemented.

### **Audit Objective**

14. The audit objective was to determine whether the Georgetown Public Hospital Corporation's Maternity Unit had suitable systems in place that included policies and procedures, adequate medical personnel, and equipment to ensure quality health care was provided to maternal patients.

### **Audit Criteria**

15. Audit criteria are reasonable standards against which management practices, controls and reporting systems can be assessed. The audit criteria and their sources are presented in the "**About the Audit**" section of the report.

### **Report Structure**

16. This report consists of the following two chapters, which cover the Lines of Enquiry considered by this audit:

- *Chapter 1* – Administration of the Maternity Unit
- *Chapter 2* – Performance Measurement and Reporting

# *Chapter 1*

## *Administration of the Maternity Unit*

### **Background**

17. GPHC's Management is responsible for ensuring that all women receive quality care and have the best experiences while in the Maternity Unit. To achieve this, comprehensive policies, procedures and other guidelines should be established to provide staff with the necessary guidance in executing their duties. In addition, the documents should comply with applicable laws and regulations as well as align with relevant policies, standards and best practices. Also, they should be periodically reviewed to ensure they are still relevant to the tasks at hand.

### **Criterion 1.1**

The GPHC should establish policies, procedures and other guidelines for providing quality health care that comply with governing laws and regulations, and align with international standards and best practices.

### **A comprehensive manual of administrative procedures was not in place**

18. Section 18 of the Health Facility Licensing Regulations 2008 requires each health facility or hospital to have written policies and procedures that will stipulate the scope and conduct of the care and services that are provided. The GPHC was expected to develop a comprehensive manual of administrative procedures to guide and direct staff in carrying out their duties. However, the hospital did not have an approved comprehensive manual of administrative procedures in place. The absence of such a manual could compromise the quality of services that the hospital is expected to provide to properly care for their patients and function effectively.

### **Ward protocols used were not reviewed and updated where necessary**

19. In the absence of a comprehensive manual of administrative procedures, ward protocols were used to guide the delivery of services, training, investigations, etc. within the Maternity Unit. The ward protocols provided staff with a detailed structure on how to effectively manage the patient and carry out procedures. Protocols for each area within the Maternity Unit were developed by Management and approved by the Medical Advisory Committee.

20. Management indicated that the protocols are required to be reviewed every three years; however, they are only updated when necessary. There was no evidence that Management reviewed any of the protocols to determine their relevance and update them where necessary to conform with existing standards and changing practices. A lack of updated protocols can affect the delivery of standardised and compliant services to ensure quality care is provided to patients.

**Recommendation:** *The Audit Office recommends that the GPHC's Management develop and implement a Manual of Administrative Procedures in keeping with the requirements of the Health Facility Licensing Regulations 2008. Also, ward protocols should be reviewed and where necessary, updated to ensure compliance with existing standards and best practices.*

**Management's Response:** The GPHC's Management team acknowledges the absence of the stated procedures and protocols as an evident deficiency in the management of patients and the delivery of standardised and quality care. While some of the protocols specified are not yet activated, many exist in draft or are currently under review including the: 1. Fall Prevention Policy, 2. Patient ID Policy, 3. Admission, Transfer and Discharge Policy, 4. 24-Hour Practice Policy, 5. Medication Errors Policy and 6. The Fire Safety Policy.

More recently, the GPHC has embarked on several initiatives to update and streamline its SOPs across the various departments within the institution. This process is also being engaged through the ongoing partnership with Mount Sinai. Management will seek to expedite the development and approval of the stated policies and procedures and will work with the relevant stakeholders to compile administrative and care manuals and provide training for all staff.

**Criterion 1.2**

The GPHC's management should ensure that established policies, procedures and other guidelines are properly communicated to staff and are adhered to.

21. The policies and procedures of an organisation contribute to its effective functioning. They provide staff with the relevant information and guidance to ensure they continue to perform their jobs competently. In this regard, it is essential that Management take appropriate action to properly communicate these policies and procedures to employees in order to keep them informed and clarify the standards expected of them in carrying out their duties.

**Policies and procedures were not communicated to all staff**

22. A review of patient monitoring and medication administration conducted by the GPHC's Management revealed that Physicians' instructions were not always followed. Also, interviews conducted by the Audit Office revealed that not all staff were aware of the established protocols. The staff who were unaware relied on their superiors for guidance when executing their duties. Those who knew they existed, rarely referred to them as they were not easily accessible or were in a deplorable condition. This caused staff to make some decisions based on their own knowledge.

23. Based on the findings highlighted above, it can be concluded that the GPHC's Management did not ensure that all staff of the Maternity Unit were properly informed of established policies and procedures that should be used to execute their duties. In addition, the documents were not properly maintained and made easily accessible to all staff. This could increase the risk of medical errors and decrease the quality of patient care.

**Recommendation:** *The Audit Office recommends that the GPHC's Management implement systems to ensure that policies and procedures are properly communicated and made easily accessible to all staff of the Maternity Unit.*

**Management's Response:** It should be noted that there are alternative measures in place to ensure that standard procedures are followed in the delivery of care to our patients. Some of these include the post-graduate training programmes that provide detailed training in standard delivery of care based on international practices and standards through the Institute for Health Science Education (IHSE). These programmes are available to nurses and doctors at the GPHC. The use of the SIP+ software has also allowed the department to closely monitor the management of its maternity patients against PAHO/WHO indicators. In conjunction with daily handovers which are done via email, WhatsApp, and Safety Huddles at the departmental and management levels.

**Criterion 1.3**

The GPHC's management should ensure that training needs are identified and addressed so that staff can acquire and maintain the relevant knowledge and skills to carry out their duties effectively.

24. A training needs analysis is used to identify specific knowledge or skill gaps in the competencies of individuals, teams, or departments within an organisation. It helps employers to make informed decisions when addressing gaps. It is also essential to create a strategy for implementing training programs and allocating resources since not all employees require the same type of training or need to be trained simultaneously. This will ensure that employees acquire the knowledge and skills they need to perform their jobs effectively.

**Staff needs for training not established**

25. The GPHC's Management was expected to have a system in place to identify staff training needs as well as develop and implement a strategy to address identified gaps. However, staff training needs were determined by the Ward Manager and other senior officials within the Maternity Unit. It was explained that this was based on observations made while staff were executing their duties, particularly during critical incidents. It was also noted that observations made were not documented.

26. The absence of a strategy and system to properly determine the training needs of maternal healthcare staff, including the allocation of required resources, could affect employees' performance and negatively impact patient care quality.

### **Staff not continuously trained**

27. For hospitals to achieve acceptable practices in providing proper health care, all staff must receive regular and comprehensive training. The Occupational Safety and Health Act 1997 states that "an employer shall provide to every worker, training on the safe and healthy manner of carrying out his work." This allows staff to keep up-to-date with medical information, new practices, and technologies, and develop a shared understanding of expectations and processes. As such, the GPHC's Management was expected to regularly train all staff within its Maternity Unit and assess the impact of the training based on the delivery of service provided.

28. Staff of the Maternity Unit were not provided with formal training to keep them acquainted with the skills and practices for properly executing their duties. The staff only had formal training while qualifying themselves for the positions they held. Management explained that training for nurses was conducted by the Clinical Instructor, who is a retired midwife. The training provided was based on recognised issues; however, it was not documented. As a result, staff responsible for caring for maternity patients may not have the proper knowledge and skills to create a safe and efficient work environment and deliver high-quality patient care.

**Recommendation:** *The Audit Office recommends that the GPHC's Management put systems in place to determine and provide the training needed by staff to keep them updated with relevant standards and best practices for the delivery of quality patient care.*

**Management's Response:** Management engages the Training Department through the Human Resources Department annually for the development of the department's budget. Through this process, management has mandated that training needs assessments be conducted to inform the training needs of the hospital's staff, including medical and administrative. Through the IHSE, GPHC's staff receive an exceptional calibre of post-graduate training which is delivered by experienced lectures and instructors in a structured manner.

In addition, Management will work with the Training Department to ensure that evidence-based approaches are used to develop a comprehensive training plan and that there is continuous monitoring being done to measure the impact of the training and ensure that it remains updated with global standards and best practices.

With regards to the allocation of adequate resources for all staff to receive training, Management continues to make representation for monetary and non-monetary resource mobilisation to meet the training needs of staff including leveraging the partnerships that currently exists with international partners such as Mt. Sinai and Northwell Health to meet some of the training needs within the department.



**Criterion 1.4**

The GPHC management should ensure that the Maternity Unit is provided with resources for the delivery of quality health care services to patients

29. Resource planning and management are critical to the success of any organisation in achieving goals and objectives. It allows organisations to optimise their resource utilisation, minimise waste, mitigate risks, improve management processes, and maintain employee morale. Resources required include facilities, equipment, supplies, and personnel.

**No assessment to determine the resources needed**

30. Needs assessment is a critical part of planning and is a process to identify and address gaps between current conditions and desired conditions. It also helps to prioritise the allocation of resources and inform an organisation's overall strategic plan to achieve its goals and objectives. The GPHC's management is expected to conduct a needs assessment to determine the resources needed to provide quality health care to patients. The assessment should include the number and type of equipment required for every section within the Maternity Unit, and the personnel needed to operate it.

31. A request was made for reports relating to needs assessments conducted for the Maternity Unit. However, at the time of the audit, the GPHC's Management failed to present the information requested. The lack of adequate resources can result in delayed treatment and ultimately affect the quality of care provided to patients.

**Recommendation:** *The Audit Office recommends that the GPHC's Management present for audit, the reports relating to the Maternity Unit's needs assessment that will allow patients to be provided with quality health care.*

**Management's Response:** Annually, the GPHC's management engages in a budgeting process to assess the departmental needs throughout the institution. This process includes consultations with the departments to assess what currently exists and what is needed to meet the growing needs of the patients that the department serves. There are also frequent asset verification exercises which allow management to assess the number and functionality of equipment within the department. Also, Management is embarking on an initiative with some of its strategic partners to develop standard work and train staff in the SOPs that exist.

**Adequate bed capacity**

32. Hospitals should have an adequate number of beds in place to accommodate current and future demands. Having a satisfactory number of beds within a hospital's Maternity Unit is driven by factors such as the type and location of the facility, the services offered, previous data on the number of childbirths over a period, the average length of stay for women with normal delivery and the potential for an increase.

33. We expected the GPHC’s Maternal Unit to have beds that correspond to the occupancy rate, and the rate of childbirth, with the ability to make timely adjustments as needed. We found that although the hospital had admitted over 8,000 women annually and had 102 inpatient beds for each year audited, its average bed occupancy rate was 76%. This did not cause overcrowding nor affected the Maternity Unit's ability to offer in-patient services since its in-patient bed capacity remained constant, and was more than the number of patients housed for the related period. The following table provides details.

Maternity Statistic	2019	2020
Admissions	9,253	8,400
In-patient Beds	102	102
Bed Occupancy Rate %	77%	75%

Table 2 – Statistics on the Maternity Unit for the years 2019 & 2020  
 Source: Health Management Information System

34. In addition, it was noted that there has been a gradual increase in the average length of stay for inpatient women over the years. However, this did not negatively affect the unit's ability to avoid overcrowding. The actual average length of stay in the Maternal Unit was between 3.2 days (76.8 hours) and 4 days (96 hours) when compared with the projected time of 24 and 72 hours for regular delivery and caesarian, respectively. The following figure provides details.

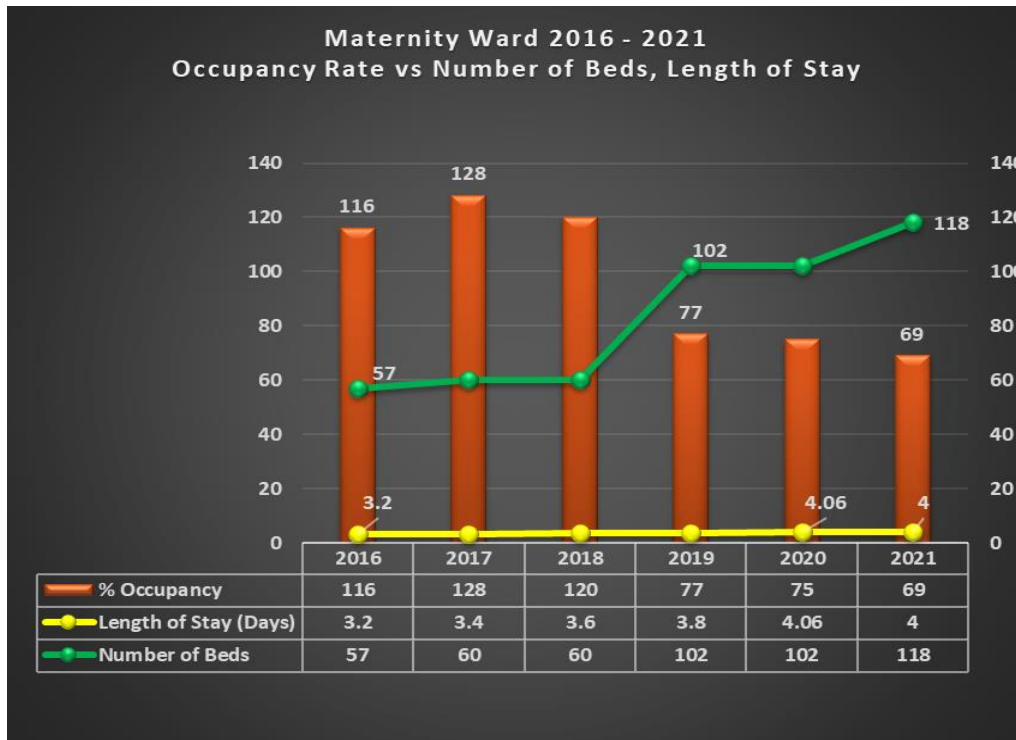


Figure 4 – Comparison between Occupancy, Number of Beds, and Length of Stay  
 Source: GPHC Health Management Information System

**Management's Response:** Since the Maternity expansion in 2021, the department has not exceeded 100% occupancy, and work has been ongoing to ensure that the necessary facilities are in place to ensure that patient care needs are adequately met, including the provision of an HDU within the department. These interventions have all been in response to the needs reflected in the statistics of the department.

Currently, the department's management is utilising data on occupancy and length of stay to plan patients' treatment and discharges, as well as monitor the flow of patients throughout the department. One of the pressing capacity constraints of the department continues to be the lengthy stays of 'lodgers' in the department, i.e., patients who have been discharged and have babies who are still receiving care e.g., in the NICU but do not have accommodation in Georgetown. This also applies to patients who are from outside of the region. In the interim, plans have been activated to accommodate these mothers without depriving expectant mothers of bed space.

### **The adequacy of medical equipment in the Maternity Unit is unknown**

35. In order to deliver quality healthcare services to patients, it is important to establish and make available the appropriate level of medical equipment to aid in the delivery of safe and effective services. In this regard, it was expected that the Maternity Unit had in place, appropriate types and quantities of equipment to ensure women received the best possible care in a safe environment.

36. During interviews with Management, it was noted that there was an insufficient number of oxygen flow meters, cardiac monitors, and non-stress test machines within the Maternal Unit. A comparison of the equipment on hand with the quantity that was required according to best practices, was done. The type and quantity of equipment on hand in the different departments within the Maternity Unit as at December 2022 was documented and is shown in the following table. However, it could not be determined whether the current stock of equipment was adequate to meet the needs of patients based on the services offered since information to support the required levels of equipment required to be on hand was not available. This reflects poor management of the Maternity Unit which could have affected the delivery of efficient and effective care to women and their new borns.

Description	Cesarean Section Room	Birthing Room & Labour Ward	Pre Natal, Triage, and Admissions	Post- Natal	Total
Bed Side Locker	-	8	-	-	8
BP Apparatus	3	4	6	4	17
Cardiac Monitor	-	1	1	-	2
Cots	6	-	-	3	9
Crash Cart	1	1	1	1	4
Crash Cart Infant	-	1	-	-	1
Delivery Bed	-	4	-	-	4
Delivery Buckets	-	3	-	-	3
Delivery Trolley	-	6	-	-	6
Defibrillator	-	1	-	-	1
Doppler	-	-	2	-	2
Infant Warmer	-	2	-	-	2
Inferno Thermometer	2	-	1	1	4
IV Pole	9	4	50	32	95
Lamp Examination	-	-	-	1	1
Lamp Goose Neck	-	5	2	-	7
Medication Trolley	-	1	-	1	2
NST Machine (Fetal Monitor)	-	8	2	-	10
Oxygen Cylinder	-	1	8	-	9
Oxygen Gauge Double	-	2	2	-	4
Oxygen Gauge Single	-	1	2	-	3
Phototherapy	2	-	-	4	6
Portable Suction	1	-	1	-	2
Post Delivery Bed	-	6	-	-	6
Pulse Oximeter	-	-	1	-	1
RBS Machine	1	1	1	2	5
Stethoscope	1	-	2	2	5
Suction Machine	-	1	-	1	2
Thermometer	1	-	3	1	5
Wheelchair	-	-	2	-	2

Table 3 - Medical equipment at the Maternity Unit as of December 2022  
 Source: Nurses' hand-over book and Fixed Assets Register

**Recommendation:** *The Audit Office recommends that the GPHC's Management determine the appropriate level of equipment that is required for the Maternity Unit in keeping with best practices.*

**Management's Response:** Annually, the GPHC’s management engages in a budgeting process to assess the departmental needs throughout the institution. This process includes consultations with the departments to assess what currently exists and what is needed to meet the growing needs of the patients that the department serves. There are also frequent asset verification exercises which allows management to assess the number and functionality of equipment within the department.

**Continuous staff shortage**

37. Best practice states that hospitals should have a safe staffing ratio to allow patients to receive proper and timely care. Hence, the hospital's Maternity Unit should be staffed with the appropriate level of personnel for every position employed for this unit. It was reported that the Maternity Unit of the hospital has had high levels of absenteeism and unpunctuality over the years. This has led to an increase in hours worked and a decrease in the number of personnel available to tend to patients. Also, a typical twelve-hour shift (7 am - 7 pm) for the six areas within the Maternity Unit consisted of a total of 24 staff as detailed in Table 3 below.

Operations Area	List of staff that are usually on duty
Triage	2 Qualified Midwives
Prenatal	1 Ward Manager 1 Staff Nurse Midwife 1 Patient Care Assistant
Labor room	2 Qualified Midwives
Birth room and Post-delivery	1 Ward Manager 1 Staff Nurse Midwife 3 Qualified Midwives 1 Patient Care Assistant
Operating Theatre - Recovery Room	1 Ward Manager 2 Staff Nurses/ 1 Staff Nurse and 1 Nursing Assistant
Operating Theatre	1 Ward Manager 2 Qualified Midwives or 1 Midwife 1 Nursing Assistant (scrub nurse) 1 Operating Room Technician 1 Patient Care Assistant

Table 4 – Staff on duty during the twelve hours shift at the Maternity Unit  
Source: Interview Analysis by Audit Office

38. Additionally, in response to the issue, the Nursing Services Department drafted a Clinical Guide and Improvement Proposal in 2020 to define the personnel needed in each Department over a six-year period. However, at the time of the audit, it had not been finalised and implemented.

39. A review of the draft guide and proposal and the Sister's Annual Report revealed that there were shortages in medical personnel within the Maternity Unit during the audited period, as shown in the table below. It should be noted that the shortage continued to increase in four of the most critical positions.

Designation	Staff Strength		Under Staff Strength	Staff Strength		Under Staff Strength
	Year 2019			Year 2020		
	Proposed	Actual		Proposed	Actual	
Senior Departmental Supervisor	1	1	0	1	0	1
Junior Departmental Supervisor	3	1	2	3	3	0
Ward Managers	13	5	8	13	3	10
Staff Midwife	40	25	15	40	22	18
Staff Nurse	50	40	10	50	39	11
Qualified Midwife	100	52	48	100	51	49
Nursing Assistant	23	22	1	23	23	0
Patient Care Advocate	50	30	20	50	36	14
Total	280	176	104	280	177	103

Table 5 – Actual Versus Proposed Staff Strength  
Source: Sister's Annual Report for 2019 and 2020

40. Further, we noted that from the current Nurse-to-Patient Ratio within the Maternity Unit, only one department was adequately staffed to deal with the flow of patients through that department as seen in following table.

Area	Nurse-to-Patient Ratio	
	Proposed	Current
Triage	Not stated	2:20
Operating Theatre	1:4	1:4
Labour Ward	1:2	1:8
Delivery Room	1:1	1:3
Post Natal	1:6	1:15

Table 6 – Nurse-to-patient ratios  
Source: Nursing Services Department Summary 2022, and Interviews

41. As a result of the findings noted above, the Maternity Unit was understaffed which caused severe shortages in the number of nurses available at the hospital to efficiently and effectively deal with patients. This could increase the risk of errors and affect the quality of care given to women and their infants.

**Recommendation:** *The Audit Office recommends that the GPHC's Management seek alternative ways to employ new and retain existing nursing staff to correct the shortage that is affecting the hospital and its Maternity Unit.*

**Management's Response:** The GPHC continues to engage the Government of Guyana through the Ministry of Health to mobilize and train additional nurses as the institution grapples with significant shortages due to the global demand for qualified nurses post COVID-19. The institution has also made numerous proposals over the past months for monetary and non-monetary incentives for nurses. To date, the institution has received some nurses from the MoH, the regions and Cuba, and is currently awaiting some additional registered nurses.

Independently, the Corporation has embarked on numerous initiatives for the recognition of its nurses including rewards and recognition programmes such as the Daisy Awards, celebration of International Nurses' Week and the provision of specialised training programmes. GPHC's management continues to explore additional incentive programmes and opportunities to attract and retain nursing personnel.

#### **Unsatisfactory physical condition at the Maternity Unit**

42. The Maternity Unit of the hospital has significantly expanded to include other services in response to growing demands. This move has caused the Unit to now occupy three floors within the Hospital's southern wing. The layout is as follows:

- Ground Floor - Triage/admission area and Consulting Physician Office.
- First Floor - Prenatal, Labour, Isolation, Neonatal Intensive Care Unit (NICU), Nurses' Quarters.
- Second Floor - Operating Theatre, Cesarean Section Room, Postnatal, Recovery, High-density Unit (HDU), and Matron's Office.

43. The movement of patients between floors is done using two elevators and the stairs when the elevators are out of service. It was reported that when the stairs had to be used, there were delays in transporting patients. This also increased the risk of health and safety hazards for both the staff and patients.

44. We physically inspected the various sections of the Unit to determine whether the operating environment was suitable for the services being offered. We observed that there were occasional leakages within the triage area, which was evident from stains on the wall in one area as shown in the following figure.



Figure 5 – Water stains from leaks in the Triage area of the Maternity Unit at GPHC

Source: Audit Office of Guyana — Dated Taken: 2022/6/23

45. Further, there were unserviceable equipment along the corridors of three sections within the Unit, as shown in the figures below. This situation posed a health and safety risk for staff, patients, and visitors who utilised these corridors.



Figures 6 – Unserviceable equipment (theatre bed) on the corridor leading to the Operating theatre of the GPHC

Source: Audit Office of Guyana — Date taken: 2022/6/23





Figure 7 – Unserviceable equipment on the corridor which is a restricted zone leading to the Prenatal department of GPHC  
Source: Audit Office of Guyana — Date taken: 2022/6/23



Figure 8 – Clean Linen not properly stored  
Source: Audit Office of Guyana — Date taken: 2022/6/23



Figure 9 – Only stretcher used to transport maternal patients from triage  
Source: Audit Office of Guyana — Date taken: 2022/6/23



Figure 10 – Damaged door making it unable to be closed  
Source: Audit Office of Guyana — Date taken 2022/6/23

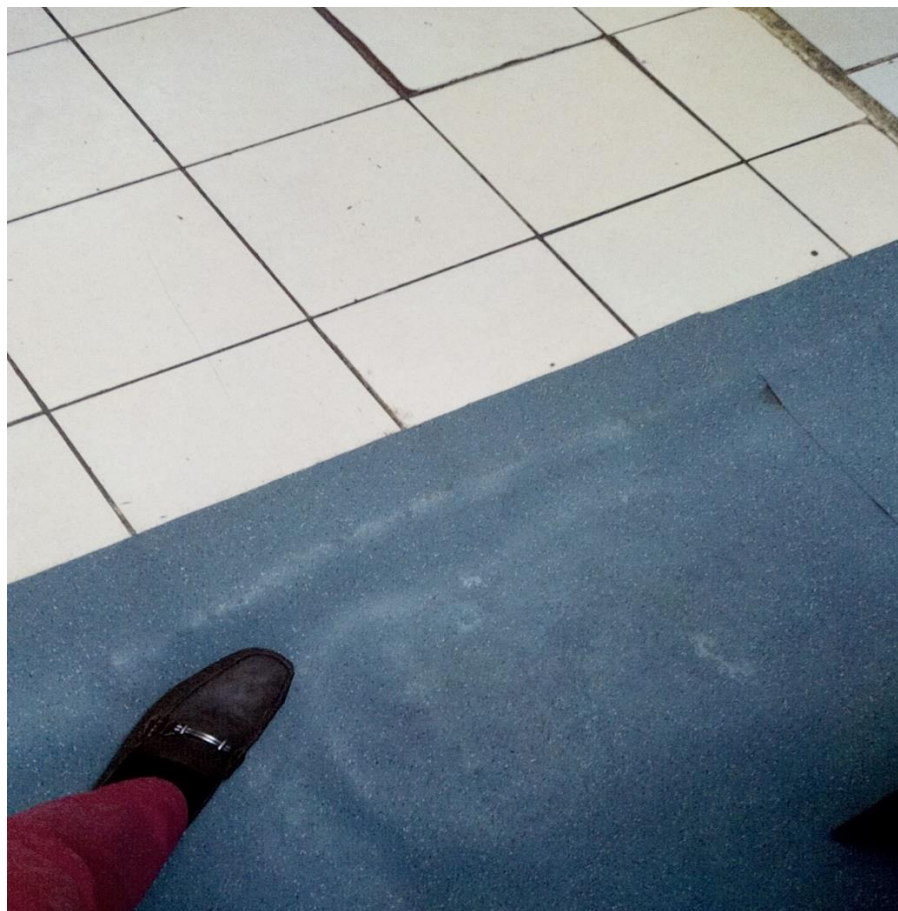


Figure 11 – Uneven floor to the entrance of patients' washrooms

Source: Audit Office of Guyana — Date taken 2022/6/23

**Recommendation:** *The Audit Office recommends that the GPHC's Management conduct regular checks of the facility and equipment to identify hazards and defects with a view to quickly rectifying any identified issues as quickly as possible. This will help to minimise health and safety risks of all individuals who use and visit the facility.*

**Management's Response:** Management continues to schedule preventative maintenance for elevators throughout the year and has also started discussions about purchasing new elevators in the next budget cycle. GPHC's management also continues to work to ensure that elevators are being properly utilised to prevent damages and downtime.

Through the Quality Improvement and Facilities departments, patient and staff safety concerns continue to be addressed through various interventions including training and infrastructural upgrades to improve patient safety and comfort.

**Patient medical history properly documented**

46. The Health Facilities Licensing Regulations require each health facility to maintain up-to-date medical records for each patient. As such, we expected the hospital to maintain proper and complete records of all patients who were treated at its Maternity Unit.

47. It was noted that women seeking and receiving medical attention at the GPHC Maternity Unit go through a three-phase process that includes admission, treatment, and discharge. At each phase, the patient's personal and medical information was recorded manually on standardised forms. This system ensured that patient flow was properly documented and provided for ease of reference when tracking progress and making decisions.

48. The medical records of a random sample of 60 women who were treated at the Hospital's Maternity Unit during the period audited were examined to determine if they consisted of all the required forms and were properly maintained. It was observed that admission and treatment information were recorded on a standardised booklet labelled "Guyana Health Facility, Maternity Department, Perinatal Record" also referred to as a "Patient Chart". The chart was maintained for every patient and consisted of nine sections which are explained in the following table.

Section №	Description of Information contained
1	Personal information
2	Summary (admission and discharge)
3	Other personal and clinical information
4	Present Pregnancy
5	Initial history and physical
6	Clinic visits
7	Medical information (during and after delivery)
8	Neonate (Infant information)
9	Puerperium (Six weeks period after childbirth of the mother)

Table 7 – Information required for the Maternity Department Perinatal Record  
Source: Maternity Unit of GPHC

49. The booklet, along with other pertinent records, which included a temperature chart, medication records, a diet sheet, a treatment chart, and the doctor's progress notes, formed the patient's medical record. It was also observed that the charts were completed with all the required information and were properly maintained.

50. In relation to the discharge of patients, the decision and other pertinent information were documented on an OB (Obstetrics) Discharge Summary Form. The information disclosed on the form included diagnosis on discharge, follow-up, and discharge medications for both the new mother and infant. Also, the forms were signed by the discharging Physician.

**Conclusion**

**51.** Although the issue of overcrowding was addressed, several challenges were identified that could negatively impact the smooth flow of patients and the delivery of quality health care. Management failed to develop and implement comprehensive policies and procedures to guide the effective functioning of the Maternity Unit. In addition, the ward protocols used were not reviewed and updated where necessary. In addition, personnel were not continuously trained, and staffing and other resources were deemed inadequate.

## ***Chapter 2***

### ***Performance Measurement and Reporting***

#### ***Background***

52. Performance measurement in a system of operation is essential since it creates an opportunity to focus on defining and using evidence-based practices. It can be used as a quality improvement tool to highlight practices used to achieve desired results and, to identify areas for improvement. It is an activity that is continuously evolving and should provide a basis for commencing organised efforts to identify and collect data for suitable measures of processes and outcomes, as the relation between health outcomes and processes becomes clearer.

53. Management, through the results of performance monitoring activities, can: i) make decisions based on accurate information available, ii) improve health resources, and (iii) provide accountability to stakeholders. Performance measurement entails the following:



Figure 12 – Components of a Performance Measurement  
Source: Audit Office of Guyana

54. Therefore, the GPHC's Management should periodically evaluate the performance monitoring system, including the performance measures and supporting information, to ensure goals are being met and decrease the likelihood of unintended, undesired effects. The findings of the performance monitoring activities should be promptly reported to the Board of Directors for action to correct deficiencies identified and maintain efficiency of services offered to patients.



**Criterion 2.1**

GPHC’s Management should monitor patient flow through the Maternity Unit to ensure compliance with established policies and procedures.

55. The Quality Improvement Department was established to oversee the GPHC's Quality Improvement Plan regarding governance and accountability, including performance measurement and reporting. As such, the Quality Improvement Department should have in place monitoring and reporting mechanisms to assess the progress made to achieve desired results. Management should utilise the results of the activities to promptly correct deficiencies identified.

56. Although there is no approved manual that guides the work of the Quality Improvement Department, the Unit operates in accordance with the Quality Improvement Manual (draft), Occupational Safety and Health Manual (draft), and Quality Improvement Framework.

***An approved performance monitoring system not in place***

57. In relation to patient flow, the Quality Improvement Department does not have in place, monitoring and reporting mechanisms, including approved key performance measures/ indicators, such as patient satisfaction, incidents, death rate, medication errors, admission/ discharge wait times and patient referrals. The lack of an effective monitoring system can result in missed opportunities to identify non-compliance or other deficiencies in its operations and to respond to critical incidents and complaints. Nevertheless, in 2020, the Quality Improvement Unit conducted a "maternity indicators data analysis" by randomly sampling 194 or 20% of all maternity patients. This included several key Maternity Indicators for patients with high-risk conditions.

58. The unit's findings revealed that more than half of the samples taken for patient monitoring and medication administration were not conducted according to the Physician's orders. The details are shown in the following table:

Activities undertaken	Done as required	None as required
Vital Signs monitoring	71 or 37%	123 or 63%
Medication Administration	56 or 29%	138 or 71%

Table 8. Findings of the Quality Improvement Department  
Source: Quality Improvement Department Report

**Recommendation:** *The Audit Office recommends that the GPHC’s Management implement a comprehensive system of monitoring and reporting to track the performance of the Maternity Unit in terms of patient flow, outcomes, safety, and compliance with a view of addressing areas identified for improvement.*

**Management's Response:** The maternity department is currently evaluated quarterly through the Service Level Agreement (SLA) by the Ministry of Health. This monitoring tool has a variety of indicators that monitor the department's performance against numerous performance indicators that assess patient flow, outcomes, safety, and compliance. Issues related to these are also reported on and monitored through the hospital's daily management huddles.

Data is collected throughout the year and reviewed and analysed quarterly for the SLA and annually for the Clinical Review and Annual Report, allowing for detailed analysis to assess trends that allows management to make evidence-based decisions concerning the department.

Through the hospital's strategic partnership with Mt. Sinai, a committee has been established to undertake frequent root cause analyses and performance status reports and identify appropriate courses of action and opportunities for intervention.

**Criterion 2.2:**

GPHC management should investigate deficiencies identified in patient flow monitoring activities undertaken and implement systems to promptly address them.

59. The GPHC's Management should investigate deficiencies identified during monitoring activities in areas of admission, bed management and discharge, and take appropriate actions to prevent future reoccurrences.

***GPHC did not properly evaluate its performance***

60. The GPHC's Management did not present documentary evidence to confirm whether the necessary evaluations were conducted and the related outcomes. Further, corrective actions implemented could not be determined. As a result, Management may be unable to identify existing deficiencies and potential issues that could lead to delays in the Unit providing quality care to patients.

**Recommendation:** *The Audit Office recommends that the GPHC's Management establish a system that periodically reviews the results of evaluations conducted thus allowing for timely interventions.*

**Management's Response:** Currently, the GPHC's Board of Directors receives monthly and quarterly reports on matters related to complaints, grievances, and quality improvement within the maternity department. The SLA, which is conducted quarterly allows for an independent assessment of the department's performance based on several indicators.



**Criterion 2.3:**

The GPHC's management should report to its Board, the results of monitoring activities into patient flow, and implement corrective actions accordingly.

***Management not reporting to the Board***

61. The GPHC's Management should document and analyse the results of investigations into deficiencies found in patient flow and report to the Board accordingly. The report will enable the Board to promptly implement corrective actions to avoid future reoccurrences and retain service efficiency. However, Management presented no documentary evidence to confirm that the results of monitoring activities were reported to the Board for prompt action. As a result, the Board would be unable to promptly implement corrective actions to minimise or eliminate deficiencies found in its maternity operations.

**Recommendations:** *The Audit Office recommends that the GPHC's Management implement controls to ensure reports on Performance Measurement are regularly submitted to the Board in order to ensure that necessary changes are identified and addressed in a timely manner.*

**Management's Response:** GPHC's management will action the recommendation to have its monitoring activities properly documented and available for the relevant stakeholders to access for more informed decision making.

As a practice, findings from monitoring activities, outcomes of investigations and reports and usually reported to the Board of Directors monthly. Similarly, all complaints and grievances are documented and tracked throughout the investigation process, then elevated to the relevant managers. Management often utilises these findings to inform changes that are necessary for better functionality of the department.

Management also acknowledges and will action the recommendation to have a periodic process in place to review the effectiveness of its procedures and make recommendations for changes and improvements where necessary and will seek to implement these soonest. While this is being done to some degree through various mechanisms such as the MAC, MMC, and daily huddles, there is scope for having a structured process in place to facilitate this.

**Conclusion**

62. The GPHC did not demonstrate that it has an approved system in place at its Quality Improvement Unit to monitor and evaluate the Maternity Unit's performance. This is evident from a lack of standardised documented tools to guide its work. Also, unapproved performance indicators to measure the unit performance were utilised. Further, it was not evident that issues detected during monitoring and evaluation exercises were communicated to the Board. These issues could affect the flow of information and the urgency and timeliness of corrective actions.

**Overall Conclusion**

63. The GPHC did not properly manage its Maternity Unit to ensure the smooth flow of patients and the provision of quality health care. This was evident from:

- Lack of administrative procedures to guide staff in the proper execution of their duties
- Inadequate resources, and staffing
- No proper system to continuously train staff to ensure they are up to date with current practices and procedures
- The absence of a system at the Quality Improvement Unit to efficiently monitor and evaluate the performance of the unit.

## **About the Audit**

This report on Maternal Health Care Services at the Georgetown Public Hospital Corporation was prepared by the Audit Office of Guyana. Our responsibility was to provide objective information and to conclude whether the Georgetown Public Hospital Corporation's Maternity Unit had suitable systems in place that included policies and procedures, adequate medical personnel, and equipment to ensure quality health care was provided to maternal patients.

## **Scope and Approach**

The audit covers the period 1 January 2019 to 30 June 2020. The audit focus was on the (1) Administration of the Maternity Unit, and (2) Performance Measurement and Reporting. Specifically, on the Management of the Maternity Unit to allow for the smooth flow of patients and minimise overcrowding.

In the execution of the audit, the following areas were excluded because they would have significantly increased the audit scope.

- Clinical decision-making, including the decisions of clinicians to refer individuals to and from different healthcare settings.
- Other departments with potential issues (e.g. emergency, in and out-patients, etc.)
- Current and capital expenditures.

## **Audit Methodology**

We conducted structured interviews with management personnel of the hospital and staff of the Maternity Unit. We also reviewed relevant documents and reports, conducted walk-throughs and observations, and analysed the information collected to arrive at our conclusion.

**Audit Criteria and Source**

<b>Criterion</b>	<b>Source</b>
The GPHC should establish policies and procedures that are aligned with existing laws, International Standards, and Best practices for managing its operations.	Health Facilities Licensing Regulations of 2008 PART 18.  WHO-Standards for Improving Quality of Maternal and Newborn Care in Health Facilities Page 43 Quality statement 3.1, Page 41 - Quality statement 2.1, Page 50, 5.3 3. and Page 46 - 4.1
The GPHC’s Management ensures staff are aware of and adhering to the established policies and procedures.	Occupational Safety and Health Act of 1997 PART V 47. (4) (a)
The GPHC’s Management ensures the Maternity Unit is provided with resources for the proper delivery of services and to safeguard the health and safety of staff and patients.	Health Facilities Licensing Regulations 2008 PART II 12. (1), WHO-Standards for Improving Quality of Maternal and Newborn Care in Health Facilities Page 59 - Quality statement 8.2
Criteria 2.1: GPHC’s Management monitors how well patients are flowing in accordance with policies and procedures.	WHO-Standards for Improving Quality of Maternal and Newborn Care in Health Facilities: Page 41, Quality statement 2.2  Page 46 - 4.1. 3
Criteria 2.2: GPHC’s Management investigates if and when its monitoring identifies failures in patient flow in alignment with policies and procedures for Admission, Bed management, and Discharge.	ACOG-Guideline to perinatal care Page 92
Criteria 2.3: GPHC’s Management where necessary, updates its policies and procedures based on the results of investigations into failures in patient flow in compliance with policies and procedures. GPHC’s Management reports to its Board whether patient flow through maternity services is complying with policies and procedures.	WHO-Standards for Improving Quality of Maternal and Newborn Care in Health Facilities Page 53, Page 56 Section 8 and Page 66 - Quality statement 7.3

## Definition of Terms Used in the Report

Terms	Definition
Access block	The situation where patients in the emergency department who require inpatient care are unable to gain access to appropriate Maternity Unit beds within a reasonable timeframe
Acute illness	Serious but short-term medical problem with rapid onset and severe symptoms but brief duration.
Average length of stay	The total number of days for all admissions is divided by the number of admissions.
Corporate guidance	Ensuring strategic policy frameworks exist and are combined with effective oversight, regulation, and accountability.
Effectiveness	The achievement of the objectives or other intended effects of activities at a program or entity level
Effectiveness	The use of resources such that output is optimised for any given set of resource inputs or input is minimised for any given quantity and quality of output.
Inpatients	Patients who are admitted to a Maternity Unit ward or GPHC service facility for same-day or overnight treatment.
Maternity Unit staff	This includes medical officers, nurses, and administrative staff.
Multidisciplinary care	When professionals from different disciplines work together to deliver comprehensive care that addresses as many patients' needs as possible. Multidisciplinary care is an integrated team approach to healthcare.
Nurse Burnout	The state of mental, physical, and emotional exhaustion caused by sustained work-related stressors such as long hours, the pressure of quick decision-making, and the strain of caring for patients who may have poor outcomes.
Patient outcomes	The results of the nursing care that patients receive in the hospital include maintenance of patient functional status, maintenance of patient safety, and patient satisfaction.
Patient journey	the patient experience during clinical care. It begins from the pre-admission stage and continues through to post-acute care, as outlined in Figure 3A.
Patient flow	How a patient is moved through the Maternity Unit.
Quality Health Care	Care that is safe, effective, patient-centered, timely, efficient, and equitable.
Speculum	A vaginal speculum is used to open the vaginal walls. This allows a gynaecologist to examine the health of the vagina and cervix.



April 2, 2024

Mr. Deodat Sharma  
Auditor General  
Audit Office  
Kingston  
Georgetown

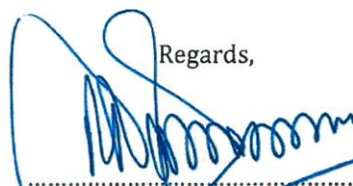
Dear Mr. Sharma,


**RE: PERFORMANCE AUDIT OF THE MANAGEMENT OF THE MATERNAL HEALTH CARE SERVICES AT THE GEORGETOWN PUBLIC HOSPITAL CORPORATION FOR THE PERIOD JANUARY 1, 2019, TO JUNE 30, 2020.**

With reference to the above, please be advised that the Georgetown Public Hospital Corporation (GPHC) on September 15, 2023 submitted its Management's response to the Audit Office's findings and recommendations following the Assessment of the Management of the Maternal Health Care Services at the Georgetown Public Hospital Corporation (GPHC) for the period January 1, 2019, to June 30, 2020.

Consequent upon a subsequent meeting with the GPHC, the Auditor General's Office adjusted its report. I wish to inform you that the GPHC's Management responses previous submitted, remain the same.

Regards,

  
Robbie Rambarran  
Chief Executive Officer (ag)



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## GPHC'S MANAGEMENT REPSONSE

### Chapter 1

#### Patients Flow through the Maternity Unit

##### Background

1) At the GPHC, patient flow in the maternity ward involves the processes, physical resources, and internal systems needed to get patients from the point of admission to the point of discharge while maintaining quality and patient/provider satisfaction. The diagram below depicts the movement of patients through the maternity unit. It shows how the resources and systems interact with the medical care provided, and how the patients move from one stage of their care to the next.

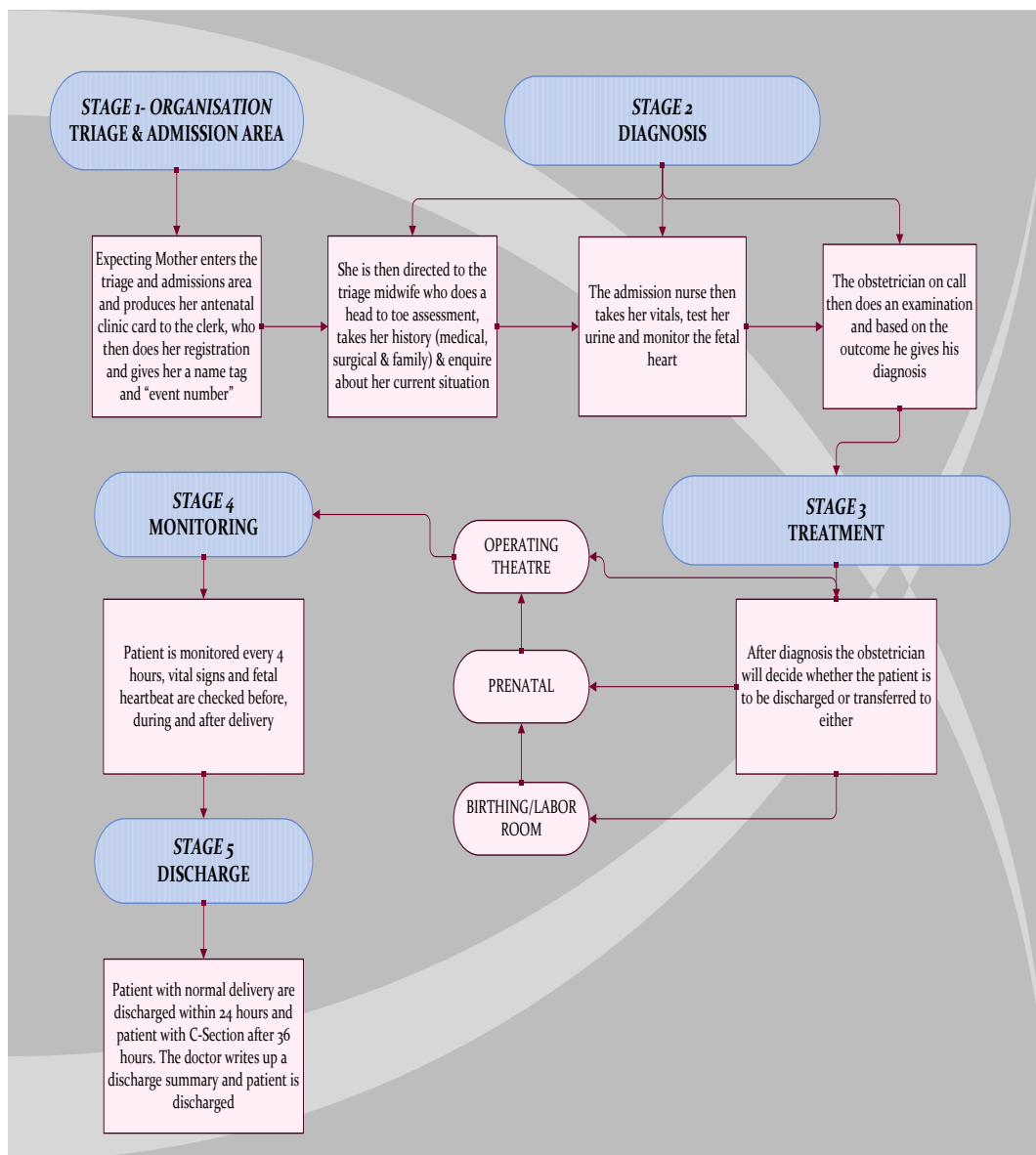


Figure 1. Flow Diagram showing the Patient flow process

### ***GPHC's maternal patient flow process***

- 2) Maternal patients seeking medical attention must visit the Maternity Triage & Admissions Department of the Guyana Public Hospital Corporation and present their clinic card to the admission clerk. The clerk creates a patient chart, registers her, and assigns an event number before referring her to the triage midwife. This midwife records the patient's history, conducts a "head-to-toe assessment," and takes vitals such as temperature, pulse, and blood pressure.
- 3) Abdominal palpation and fetal heartbeat monitoring may also be conducted, and in some cases, a vaginal examination and urine test may be done. If preterm labour is suspected, a speculum may be used. Based on the midwife's assessment, she will be referred to the admitting obstetrician to determine if she should be discharged, admitted to the Prenatal Ward, transferred to the Birthing Room for delivery, taken to the operating theatre for a cesarean section, or transferred to the High Dependency Unit. If the patient is in active labour with 8cm dilation or more, she bypasses the triage process and is taken to the birthing room or operating theatre immediately.

### ***Patient Flow***

- 4) A comprehensive patient flow system requires corporate guidance, coordination, and support along with efficient admission, bed management, and discharge procedures. Moreover, monitoring performance is also essential to ensure that patients keep moving through the system without any blockages. The corporate component of an efficient patient flow system should focus on providing guidelines and support to management in terms of establishing benchmarks and standards. Further, providing resources for staff training and effective communication between departments can increase efficiency and reduce time delays. Improved resource allocation and resource availability can further prevent overcrowding within the maternity unit.
- 5) The admission process is an important part of the patient flow system and should include relevant guidelines on admissions, data collection, and resource allocation. Additionally, a detailed investigation into the potential causes of overcrowding should be conducted and feedback and improvements made.
- 6) Bed management is another component of the patient flow system and should be done in consideration of clinical requirements, national standards, and patient safety. Protocols such as bed tracking, discharging planning, and other strategies should be established and applied in order to ensure timely movement of patients.
- 7) Finally, effective discharge planning and communication between departments and among healthcare professionals is essential for allowing patients to move through the system quickly and safely. Proper protocols should be developed and applied to ensure that the patient is ready for discharge prior to leaving the hospital.
- 8) In conclusion, an efficient patient flow system in the maternity unit requires a comprehensive plan of patient interaction, communication, and coordination between departments, structured processes, and staff with the appropriate skills and training. Achieving this requires the implementation of policies, procedures, and protocols that meet the needs of patients while maintaining patient safety and providing an optimal quality of care.



## Criterion 1.1

*GPHC established policies and procedures that are aligned with International Standards and Best practices for achieving effective patient flow.*

9) These policies and procedures are aimed at providing a safe, secure, and friendly environment for patient care. They also include implementation of the ongoing quality and safety measures to meet service standards and compliance with governing regulations. The policies and procedures are constantly checked, updated, and reviewed to make sure that services are of high quality and their outcomes are beneficial for the patients. The strict enforcement of the policies and procedures to ensure patient safety and quality improvements are also ensured by GPHC.

10) To be successful in implementing policies and procedures in a healthcare setting, staff members must be trained to understand and be able to adhere to the relevant standards. This could include appropriate training courses to ensure that staff have the skills and knowledge needed to deliver high-quality patient care.

11) It is expected that the GPHC management created a comprehensive Manual of Administrative Procedures that accurately and reliably outlines policies and procedures for human resource management, quality improvement, occupational safety, and health and relevant training regimes.

12) Furthermore, it is expected that the policies and procedures be regularly monitored and evaluated to ensure compliance with applicable laws, regulations, and standards and that they are adequately maintained and communicated to all healthcare providers so that all decisions are made with the knowledge of existing policies and procedures. Additionally, periodic reviews should be conducted to assess the effectiveness of the unit's practices and ensure that all procedures are being implemented effectively and efficiently.

### *No manual of Administrative Procedures*

13) The GPHC lacks a comprehensive approved Manual of Administrative Procedures that ensures up-to-date policies and procedures for human resource management, quality improvement, occupational safety, and health.

14) Furthermore, existing policies and procedures are not consistently monitored, and evaluated, resulting in a lack of compliance with applicable laws and regulations, standards, and industry best practices, leading to difficulty in assessing the effectiveness of the unit's practices.

15) Moreover, many healthcare staff are unaware of the policies and procedures that exist, compounded by the fact that these policies and procedures are not adequately maintained or communicated.

16) The GPHC management failed to formally communicate policies and procedures to all healthcare providers. Providers may be making decisions without complete knowledge of the policies and procedures in place, for example, the review of Patient Monitoring, and Medication Administration revealed a large proportion were not completed in accordance with Physician instructions. This could lead to an increased risk of medical errors, compromised patient safety, and an overall decrease in the quality of care provided.

**Recommendation:** *The Audit Office recommends that the GPHC Management:*

- a. *Develop a comprehensive Manual of Administrative Procedures (MAP) that is easily accessible, up to date, and regularly monitored. The MAP should cover human resource management, quality improvement, customer service, and occupational safety and health policies and procedures. The MAP should include detailed guidelines and responsibilities regarding the application of these policies and procedures.*
- b. *Facilitate the implementation of the MAP, the GPHC management should conduct regular training programs for healthcare staff. This should include training for all providers on the policies and procedures, as well as how to complete and maintain records on their compliance with these.*
- c. *Additionally, the GPHC should take steps to ensure that the changes in policies and procedures are communicated to healthcare providers and that they are monitored and evaluated in order to ensure compliance with applicable laws and regulations, and*
- d. *Finally, a comprehensive tracking system should be implemented, so that the management can identify any gaps in the adherence to policies and procedures, and then take corrective action if necessary.*

**Management's Response:**

*The use of the SIP+ software has also allowed the department to closely monitor the management of its maternity patients against PAHO/WHO indicators. In conjunction with daily handovers which are done via email, WhatsApp, and Safety Huddles at the departmental and management levels.*

*More recently, the Corporation has embarked on several initiatives to update and streamline its SOPs across the various departments within the institution. This process is also being engaged through the ongoing partnership with Mount Sinai. Management will seek to expedite the development and approval of the stated policies and procedures and will work with the relevant stakeholders to compile administrative and care manuals and provide training for all staff.*



Figure 2. Pictures of Ward Protocols

Source: Audit Office of Guyana

Date Taken: 23 June 2022

## ***Training***

17) Regular and comprehensive training allows staff to learn about new technologies, provide care with the most accurate and up-to-date medical information, and develop a shared understanding of expectations and processes. This knowledge in turn helps create a safe and efficient work environment that is conducive to providing high-quality care for mothers and newborn infants.

18) It is expected that the GPHC will develop and implement a documented system or process for assessing and addressing the training needs of the maternal health care staff. This system should include an evaluation process of the training needs, as well as a plan for how to address those needs. It should be designed to ensure that all staff have access to adequate training that is necessary to improve patient care, satisfaction, and outcomes. Additionally, the GPHC should provide feedback to staff members to ensure that the training received is having a positive impact.

### ***The absence of an effective training regime for all maternal healthcare staff***

19) The GPHC have no documented system or process for assessing and addressing the training needs of the maternal health care staff. The absence of an effective training regime for all maternal health care staff at the GPHC has a negative impact on multiple areas. It increases the risk of harm for both care providers and patients, reduces employee retention and morale, reduces patient satisfaction and outcomes, and ultimately hinders patient care.

20) Training for maternal health care providers is determined by the Head of the Department based on needs identified or critical incidents. Training is conducted by a Clinical Instructor, who is responsible for providing instruction to nurses in the maternal unit.

### **Recommendation:** *The Audit Office recommends that the GPHC management:*

- a. Establish a comprehensive needs assessment process to identify the training needs of the maternal healthcare staff.*
- b. Develop a systematic approach for designing and delivering evidence-based training interventions for staff based on identified needs.*
- c. Create a training plan to formalise the process by which training is delivered, and continually evaluate and revise it in line with changes in medical knowledge.*
- d. Ensure adequate resources are allocated to ensure that all staff receive appropriate training by qualified and experienced trainers.*

### **Management's Response:**

*Management engages the Training Department through the Human Resources department annually for the development of the department's budget. Through this process, management has mandated that training needs assessments be conducted to inform the training needs of the hospital's staff, including medical and administrative.*

*Through the IHSE, GPHC's staff receive an exceptional calibre of post-graduate training which is delivered by experienced lectures and instructors in a structured manner. However, the Corporation does heed to the recommendation that a comprehensive needs assessment needs to be done to identify the training needs of the maternal healthcare staff and will work with the Training department to ensure that evidence-based approaches are used to develop a comprehensive training plan and that there is continuous monitoring being done to measure the impact of the training and ensure that it remains updated with global standards and best practices.*

*With regards to the allocation of adequate resources for all staff to receive training, Management continues to make representation for monetary and non-monetary resource mobilisation to meet the training needs of staff including leveraging the partnerships that currently exists with international partners such as Mt. Sinai and Northwell Health to meet some of the training needs within the department.*

## ***Admission and Discharge***

### **Criterion 1.2**

***Health Care Providers are following the established policies and procedures on admission and discharge.***

21) Established practices for admissions to maternity wards ensure every patient admitted for inpatient care meets the criteria and ensures every patient receives the same level of care. Effective inpatient admission is essential for successful patient flow. Timeliness is important as delays in admitting patients to the Maternity Unit can reduce patient outcomes, increase the length of stay, and affect inpatient flow.

22) It is also important to commence discharge planning at the point of admission to support the continuity of care and streamline the patient journey. Discharge plans can help the movement of patients from the hospital to their home or other facility as safely as possible and prevent future readmissions. The discharge plan should include information about where you will be discharged, the types of care you need, and who will provide that care. It should be written in simple language and include a complete list of your medications with dosages and usage, and follow-ups for both mother and infant. In order to ensure successful patient flow and the best possible outcomes, established practices for admissions to Maternity Units should be adhered to in order to guarantee every patient admitted receives the same level of care.

23) The process of inpatient admission must be completed on time to prevent any delays that could affect the patient's health and their stay in the hospital, as well as disrupt the flow of inpatients. Furthermore, it is important to begin the discharge planning process at the moment of admission in order to ensure continuity of care and more efficient patient journeys. The discharge plan should be comprehensive and clear, detailing the location of discharge, the care provided, and who will be responsible for providing it, as well as listing all medications, dosages, and instructions for follow-up care for both the mother and the infant. Taking these steps will help safeguard the movement of patients from the hospital to their home or other facility, and prevent future readmissions.

24) Therefore, the expectation for all admissions to Maternity Units is that established practices are followed, beginning with a timely inpatient admission and follow-up discharge planning process with a complete and clear discharge plan. Doing so will ensure that all patients admitted receive the same level of care, and that the continuity of their care is safeguarded.

***Patients properly assessed and documented on admission***

25) Adequate patient information was recorded on admission; however, this was done using manual standardised forms. Manual records systems have several disadvantages such as delays in communication and patient flow.

26) Each patient and their infant have their own standardised Patient Chart which was properly maintained, with information recorded therein. These records typically consist of a patient chart, an infant chart, doctors' notes, nurses' notes, a treatment and diet sheet, a patient temperature chart, a medication record, a fluid intake chart, and lab reports.

27) On admission, patients were properly assessed by competent personnel such as admissions clerks, triage midwives, admitting obstetricians, and doctors on call in the labour ward. To ensure timely care, a dedicated area for triage was established and located on the ground floor of the maternity building. Patients are then transported to relevant departments on the upper floor with the assistance of two elevators. However, when the elevators are out of service, delays can occur, as well as occasional leakages within the triage area and a strong stench of sewerage from a service manhole, posing a health hazard to patients and employees.



Figure 3. Pictures of Triage Area

Source: Audit Office of Guyana

Date Taken: 23 June 2022

**Recommendation:** *The Audit Office recommends that the GPHC management:*

- a. *Implement a standardised electronic medical record system to replace its manual patient forms. Electronic medical records can speed up communication, and patient flow, as well as streamline paperwork.*
- b. *Periodic maintenance and repairs of the elevators should be conducted to ensure proper functioning and to minimize patient flow delays.*
- c. *Address any potential health hazards posed by a service manhole, such as leakages and strong odours of sewerage, to ensure patient and staff safety.*
- d. *Regularly inspect the triage area for any sanitation concerns.*
- e. *Conduct an assessment to further simplify patient transfer between the ground floor and upper floors.*

**Management's Response:**

*The GPHC is currently utilizing SIP+, a perinatal information system which allows timely decision making within the department. While this software is quite new to the department, Management is exploring the use of more comprehensive EMR which is currently being piloted in other departments. Management does acknowledge that the implementation of an EMR would greatly improve patient flow.*

*Management continues to schedule preventative maintenance for elevators throughout the year and has also started discussions about purchasing new elevators in the next budget cycle. GPHC's management also continues to work to ensure that elevators are being properly utilised to prevent damages and downtime.*

*Through the Quality Improvement and Facilities departments, patient and staff safety concerns continue to be addressed through various interventions including training and infrastructural upgrades to improve patient safety and comfort.*

**Bed Management**

**Criterion 1.3**

***GPHC has policies and procedures for bed management to ensure effective patient flow.***

28) Managing the flow of patients through a maternity unit mainly depends on efficient bed management systems to coordinate the appropriate placement of patients. Effective systems provide accurate and real-time data on the number of beds available, planned and unplanned admissions, predicted and actual discharges, and inter-maternity Unit transfers.

29) This data is necessary to predict and manage periods of increased demand. Systems should also have the ability to track patient movement through maternity unit wards at any given time and anticipate inward transfer requirements where possible.



30) It is expected that the GPHC will develop clear and concise bed management policies and procedures that address all aspects of bed management, including patient placement and decision-making related to bed allocation. These policies should include specific guidelines for allocating hospital beds, as well as best practices for monitoring and evaluating patient flow. This will provide healthcare workers with a clear direction when engaging in bed management and ensure that all bed management practices are followed consistently. Furthermore, this will help to ensure that all patients receive the same level of care, regardless of their location in the hospital.

***No documented bed management policy and procedures***

31) The GPHC does not have documented bed management policies and procedures. Current bed management practices rely on the knowledge and skills of individual staff members. Bed allocation was mainly done by ward managers with clinical knowledge who are familiar with maternity unit processes and are based on patient's clinical needs.

32) While capable and knowledgeable staff members are important, the absence of documented policies and procedures increases the risk of inefficient patient flow and prevents effective succession planning and inconsistent bed management practices.

**Recommendation:** *The Audit Office recommends that the GPHC management:*

- a. *Conduct an analysis of current bed management practices to identify areas for improvement or revision.*
- b. *Develop an organised plan for bed allocation, with policies to determine which patients receive priority and criteria used to measure bed occupancy.*
- c. *Formulate protocols to ensure consistent and equitable bed allocation across patient categories and timely delivery of care.*
- d. *Document the bed management protocol and communicate it to staff for consistent decision-making and an effective bed management approach.*
- e. *Create a program to track and analyse bed occupation and utilisation, identify trends, and potential areas for improvement, and take preventive or corrective measures*
- f. *Create a form of communication and reporting between GPHC management and staff, to inform them of new policies and procedures and help with bed management.*
- g. *Incorporate technology to help with bed management, for e.g., to predict bed demand.*

**Management's Response:**

*Under the new management of the Maternity department, the department continuously assesses its practices to ensure that patients are prioritised by urgency. The department also engages in frequent discussions concerning bed management during the daily handovers and safety huddles.*

*With the completion of the Patient's Admission and Discharge Policy and other standard operating procedures along with intense training of the staff, it is anticipated that these practices will be standardized across the department's staff and will allow management to collect more data for evidence-based decision making and patient management.*

### *Appropriate Level of Bed*

33) Maternal hospitals should have the appropriate number of beds to meet the needs of the patients in the facility. The number of beds allotted to a maternity hospital should be driven by the rate of childbirth in the area, the size and demographics of the population, the availability of resources, and the type of maternity services offered.

34) Ideally, the number of beds should provide adequate capacity to meet current and future needs while allowing for flexibility in moving patients around the hospital to maximize resources. Since maternity patients come in and out frequently, the hospital should be able to make timely adjustments to bed capacity. With the appropriate number of beds in place, maternal hospitals will be able to provide the highest level of care for expectant mothers and their babies.

35) We expect the GPHC Maternal unit to have a bed allocation that corresponds to the rate of childbirth, population size and demographics, resources available, and maternity services offered in the area, with the ability to make timely adjustments as needed. This should ensure that mothers and babies receive the highest level of care in a timely and efficient way.

### **Lack of effective planning and assessment led to overcrowding in the Maternity Unit**

36) The GPHC's lack of a documented policy to determine the necessary number of beds for its Maternity Unit, combined with a failure to do a bed needs assessment, led to the Maternity Unit frequently operating beyond capacity. This in turn caused post-natal patients and their babies to share beds.

37) However, the expansion of the Maternity Unit Building has seen the number of beds in the Maternity Unit rise from 57 in 2018 to 102 in 2019 and 118 in 2021. This has enabled a dramatic reduction in bed occupancy rate, from an average of 121% over the three years prior (2016-2018) to 76% in the period audited (2019-2020).

38) The table below details the Maternity Ward 2016 - 2021 Occupancy Rate vs Number of Beds, Length of Stay.

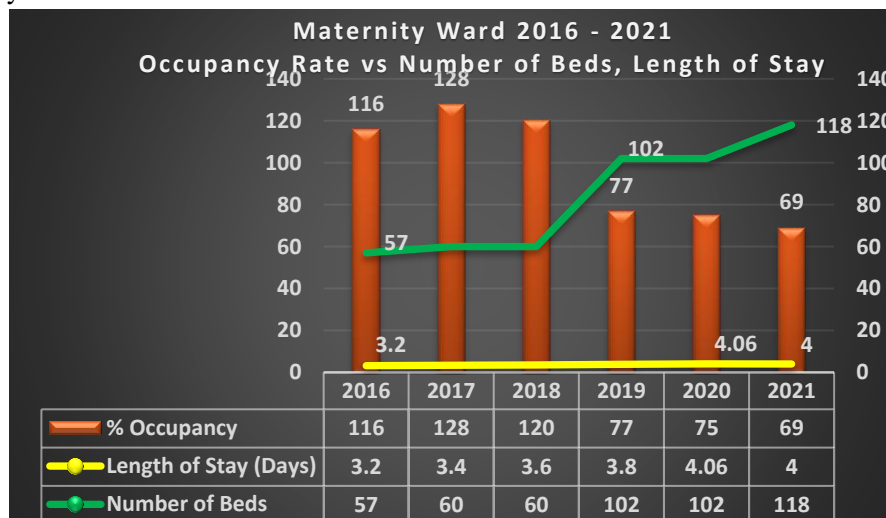


Figure 4. Chart showing Occupancy Rate  
Source; GPHC Health Management Information System Department.





Figure 5. Pictures of Post-Natal Ward

Source: Audit Office of Guyana

Date Taken: 23 June 2022

**Recommendation:** *The Audit Office recommends the GPHC Management:*

- a. *Conduct regular assessments of the number and type of beds needed in its Maternity Unit and develop a documented policy to ensure that the bed occupancy rate does not exceed capacity.*
- b. *Monitor the changes in the length of stay of its Maternity Unit patients over time, in order to ensure that the longer stays are not due to overcrowding or capacity constraints.*

**Management's Response:**

*Since the Maternity expansion in 2021, the department does not exceed 100% occupancy, and work has been ongoing to ensure that the necessary facilities are in place to ensure that patient care needs are adequately met including the provision of an HDU within the department. These interventions have all been in response to the needs reflected in the statistics of the department. Currently, the department's management is utilising data on occupancy and length of stay to plan patients' treatment and discharges, as well as monitor the flow of patients throughout the department.*

*One of the pressing capacity constraints of the department continues to be the lengthy stays of 'lodgers' in the department, i.e., patients who have been discharged and have babies who are still receiving care e.g., in the NICU but do not have accommodation in Georgetown. This also applies to patients who are from outside of the region. In the interim, plans have been activated to accommodate these mothers without depriving expectant mothers of bed space.*

### ***Appropriate Level of Medical Equipment***

39) Maternal hospitals have a critical role in the delivery of quality healthcare services to pregnant women and it is important that these hospitals establish the appropriate level of medical equipment in order to ensure safe and effective delivery of safe healthcare services.

40) Medical equipment such as specialized beds and examination tables, fetal monitors, ultrasound machines, suction devices, IV pumps, and phototherapy devices are needed to meet the needs of these patients. An array of laboratory and diagnostic equipment is needed to diagnose and monitor various healthcare conditions during pregnancy, and at the same time, surgery and delivery equipment need to be available and kept up to date. Advanced technology equipment needs to be available when needed, such as radiography and imaging equipment, for early detection and diagnosis of complications. Ultimately, having the right level of equipment ensures that pregnant women receive the best possible care in the safest possible environment.

41) It is expected that the GPHC develop and implement a detailed needs assessment that identifies the necessary level of resources needed to meet patient care expectations. This assessment should also provide an estimate of the number and type of equipment required and the amount of personnel needed to operate it. This should enable the GPHC to reliably estimate the number of resources needed and ensure that the appropriate level of resources is available.

### ***Did not determine the level of resources needed***

42) The GPHC lacked a documented policy to determine the necessary level of resources and failed to conduct a needs assessment to estimate the number and types of equipment required. This hindered its ability to ascertain whether it had the correct amount and type of equipment needed to carry out its duties efficiently and safely. The consequences of this situation include delayed treatments and an increased burden of work on providers.

43) Based on physical observation of assets and their surrounding environment, as well as interviews with healthcare providers, it was determined that there was an insufficient number of oxygen flow meters, cardiac monitors, and Non-Stress Test (NST) machines (fetal). Furthermore, there were several pieces of unserviceable equipment in the departments, hindering activities, and some equipment was kept in unhygienic conditions.

44) The table below details the types and amount of medical equipment located within the maternity unit:

Description	Cesarean Room	Birthing Room & Labour Ward	Pre Natal, Triage, and Admissions	Post-Natal	Total
Bed Side Locker	-	8	-	-	8
BP Apparatus	3	4	6	4	17
Cardiac Monitor	-	1	1	-	2
Cots	6	-	-	3	9
Crash Cart	1	1	1	1	4
Crash Cart Infant	-	1	-	-	1
Delivery Bed	-	4	-	-	4
Delivery Buckets	-	3	-	-	3
Delivery Trolley	-	6	-	-	6
Defibrillator	-	1	-	-	1
Doppler	-	-	2	-	2
Infant Warmer	-	2	-	-	2
Inferno Thermometer	2	-	1	1	4
IV Pole	9	4	50	32	95
Lamp Examination	-	-	-	1	1
Lamp Goose Neck	-	5	2	-	7
Medication Trolley	-	1	-	1	2
NST Machine (Fetal Monitor)	-	8	2	-	10
Oxygen Cylinder	-	1	8	-	9
Oxygen Gauge Double	-	2	2	-	4
Oxygen Gauge Single	-	1	2	-	3
Phototherapy	2	-	-	4	6
Portable Suction	1	-	1	-	2
Post Delivery Bed	-	6	-	-	6
Pulse Oximeter	-	-	1	-	1
RBS Machine	1	1	1	2	5
Stethoscope	1	-	2	2	5
Suction Machine	-	1	-	1	2
Thermometer	1	-	3	1	5
Wheelchair	-	-	2	-	2

Figure 6. Table showing Medical equipment within the Maternity Unit  
Source: Nurses' hand-over book, Fixed Assets Register



Figure 7. Pictures of Assets Within the Maternity Unit

Source: Audit Office of Guyana

Date Taken: 23 June 2022

**Recommendation:** *The Audit Office recommends that the GPHC Management:*

- a. *Develop a documented policy to determine the necessary level of resources needed, including the number and types of equipment required.*
- b. *Conduct a needs assessment to estimate the number and types of resources needed to meet the healthcare needs of their patients.*
- c. *Develop a plan to acquire the necessary resources to ensure that they have the correct amount and type of equipment needed to carry out treatments efficiently and safely.*
- d. *Monitor and review the inventory of resources regularly to establish whether they need to acquire more resources or increase the number of existing resources available.*
- e. *Train staff in the use of resources and ensure that they are using them appropriately.*
- f. *Implement strategies to reduce the time taken to acquire additional or new resources when needed.*

**Management's Response:**

*Annually, the GPHC's management engages in a budgeting process to assess the departmental needs throughout the institution. This process includes consultations with the departments to assess what currently exists and what is needed to meet the growing needs of the patients that the department serves. There are also frequent asset verification exercises which allows management to assess the number and functionality of equipment within the department.*

*Management does agree that a documented policy for the department would augur well for better resource mobilisation within the department and is committed to the development of same. GPHC's management is also embarking on an initiative with some of its strategic partners to develop standard work and train staff in the SOPs, policies and procedures that exists.*

*The institution wishes to note also, that the table presented is not an accurate reflection of what exists within the department and will share its Asset Register for the period.*

***Appropriate Level of Qualified Staff***

45) The success of maternal healthcare services is dependent on healthcare providers having adequate education, training, and experience as well as physical facilities that are capable of providing the necessary level of care to meet the individual needs of mothers and infants. To ensure the best possible outcomes, mothers and infants must receive care in facilities equal to their health needs.

46) When planning for maternal health services, mission, geographic location, patient population, facility design, scope of practice, and degree of nursing responsibilities should all be considered. Qualifications and experience of personnel, including medical and nursing directors, physicians, certified nurse-midwives, certified midwives, and patient care assistants, should also be considered to ensure that there are sufficient appropriately qualified registered nurses to meet the needs of each patient. This will help guarantee the delivery of safe and effective maternal health care.



47) A team-based approach to care that engages patients as full partners in their care while making full use of the skills of all healthcare providers is essential to optimise pregnancy outcomes. This team should consist of healthcare professionals who are well-versed in the particular clinical needs and conditions of the patient, and factors such as patient population, nursing skill mix, availability of support staff, and physical layout of the unit should be considered when deciding on the necessary number of nursing staff.

48) Patient variables that can affect acceptable nurse-patient ratios include several factors such as birth weight, gestational age, and diagnoses of patients; patient turnover; acuity of patients' conditions; a mixture of the staff; types of delivery; and use of anesthesia.

49) In addition, all newborns, including healthy newborns, require the care of a registered nurse, and this should be considered when making nursing staff decisions. It is expected that healthcare providers are adequately educated, trained, and experienced and that physical facilities are capable of providing the necessary level of care to meet the individual needs of mothers and infants. It is also expected that patient care teams employ a team-based approach that includes appropriate skill mixes and staffing levels to best meet the needs of patients and optimize outcomes. Finally, staff should be properly trained on policy and procedure implementation and communication.

***Severe staff shortages***

50) The GPHC's lack of policy or system to identify job needs and challenges in the Maternity Unit has resulted in a decrease in nurses and an increase in patient-to-nurse ratios. This has caused an inability to provide optimal care and an overall decline in patient satisfaction. Furthermore, repeated high levels of absenteeism and tardiness have led to an increase in hours worked and patient-to-nurse ratios.

51) As a response, the Nursing Services Department drafted a Clinical Guide/Framework and Improvement Proposal to define the personnel needed in each Department, however, it has not yet been formalised and implemented. This has caused staff to experience increased stress and workload, thereby leading to burnout and a potential retention issue.

52) The table below shows that there has been a worrying decrease in the number of nurses in the Maternity Unit over recent years, leaving it understaffed.

Designation	Proposed Staff Strength	Actual				Difference
		2019	2020	2021	2022	
Senior Departmental Supervisor	1	1	0	0	0	-1
Junior Departmental Supervisor	3	1	3	1	1	-2
Ward Managers	13	5	3	10	10	-3
Staff Midwife	40	25	22	17	15	-25
Staff Nurse	50	40	39	27	27	-23
Qualified Midwife	100	52	51	49	48	-52
Nursing Assistant	23	22	23	17	26	3
Patient Care Advocate	50	30	36	37	37	-13
Total	280	176	177	158	164	-116

Figure 8. Table Showing Actual Versus Proposed Staff Strength  
 Source of information: Nursing Services Department Summary 2022

- 53) A typical 12-hour shift system 7 am-7 pm shift consists of:
- Triage-2 qualified midwives
  - Prenatal- 1 ward manager, 1 staff nurse midwife, and 1 patient care assistant
  - Labor room-2 qualified midwives
  - Birthing room and Post-delivery -1 ward manager, 1 staff nurse midwife, 3 Qualified midwives, and 1 Patient Care Assistant
  - Operating Theatre -recovery room 1 ward manager, 2 staff nurses or 1 staff nurse and 1 nursing assistant
  - Operating Theatre 1 ward manager, 2 qualified midwives or 1 midwife and 1 nursing assistant scrub nurse, 1 operating room tech, and 1 patient care assistant.

Area	Current	Proposed
	Nurse-to-Patient Ratio	
Triage	2:20	Not stated
Operating Theatre	1:4	1:4
Labour Ward	1:8	1:2
Delivery Room	1:3	1:1
Post Natal	1:15	1:6
Prenatal	2:26	1:3

Figure 9. Table Showing Nurse-to-patient ratios

Source of information: Nursing Services Department Summary 2022, Staff Interviews

Year	2016	2017	2018	2019	2020	2021
No. of Admissions	9,216	9,250	9,153	9,253	8,400	8,404
Daily Average admission	25	25	25	25	23	23

Figure 10. Table Showing Yearly admissions

Source of information: MIS Report.

**Recommendation:** *The Audit Office recommends that the GPHC Management:*

- Formalize and implement the GPHC's Clinical Guide/Framework and Improvement Proposal to define the personnel needed in each Department.*
- Increase staff numbers in the Maternity Unit by hiring more nurses to meet the growing demands of the Department.*
- Encourage staff retention by providing induction training and educational courses, and offering incentives for long-term employment.*
- Establish an attendance monitoring process and clear guidelines for job performance.*
- Develop a policy to recognize staff performance and reward excellence.*
- Develop a system to more effectively identify job needs and challenges in the Maternity Unit in order to ensure optimal care and satisfaction of patients.*

**Management's Response:**

*The GPHC continues to engage the Government of Guyana through the Ministry of Health to mobilize and train additional nurses as the institution grapples with significant shortages due to the global demand for qualified nurses post COVID-19. The institution has also made numerous proposals over the past months for monetary and non-monetary incentives for nurses.*

*To date, the institution has received some nurses from the MoH, the regions and Cuba, and is currently awaiting some additional registered nurses.*

*Independently, the Corporation has embarked on numerous initiatives for the recognition of its nurses including rewards and recognition programmes such as the Daisy Awards, celebration of International Nurses' Week and the provision of specialised training programmes. GPHC's management continues to explore additional incentive programmes and opportunities to attract and retain nursing personnel.*

**Criterion 1.4:**

***Healthcare providers are following the bed management policies and procedures***

54) Bed Management Policies and Procedures are not present within the GPHC, leading to current bed management practices being based on the expertise and capabilities of individual workers. This lack of documentation carries a high risk of inpatient flow being inefficient and restricts the capability to plan ahead for upcoming patients.

***Discharge*****Criterion 1.5:**

***GPHC established discharge policies and procedures that are aligned with International Standards and Best practices for achieving effective patient flow, and Health Care Providers are following the established policies and procedures on discharge.***

55) Effective and timely discharge reduces patient delays and provides beds for new patients, improving patient flow. Effective discharge is achieved through:

- a) Every mother knows when and where postnatal care for herself and her newborn will be provided after discharge from the hospital
- b) Mother and newborns received a full clinical examination before discharge.
- c) Discharge planning ensures appropriate post-discharge support is available, and re-admissions are reduced and may involve consultation with allied services and external service providers.
- d) Recording and regularly updating the expected date of discharge focus both the patient and staff on the necessary action for efficient discharge.
- e) All women discharged postpartum had an accurately completed record of processes of care, treatments, outcomes, and diagnoses.

56) It is expected that GPHC's discharge policies and procedures are being carried out effectively by all Health Care Providers, with appropriate consideration given to the impact on patient flow. It also expects that providers adhere to International Standards and Best Practices for successful patient flow.



### ***No documented practices for patient discharge from the Maternity Unit***

57) Notwithstanding the lack of documented policies and procedures for discharge from the Maternity Unit, some common practices, and tools have been developed and implemented to improve patient discharge. These practices have not been documented or approved, but provided general guidance and followed best practices and international standards in the discharge process of Maternity Unit patients. These practices guided the decisions when it came to patients' discharge.

58) Nevertheless, the lack of documented practices can lead to inconsistencies in discharge planning, which can lead to inefficient and delayed patient discharge. Interestingly, between 2016 and 2021, the average length of stay in the maternal unit was between 3.2 days (76.8 hours) and 4 days (96 hours), in comparison to the projected time of 24 and 72 hours for vaginal and caesarian sections respectively.

#### **Recommendation:** *The audit Office recommends the GPHC Management:*

- a. Set standards for discharge criteria, develop clear and concise patient instructions and communication policies and procedures, and provide training in the proper implementation of discharge criteria and instructions to medical staff.*
- b. In addition, a discharge checklist should be developed that records the criteria for a successful and safe patient discharge.*
- c. Furthermore, a review of discharge processes should be conducted by a multidisciplinary team on a regular basis to provide insight into best practices for discharge planning.*
- d. A post-discharge assessment should be conducted to assess the healthcare experience and to collect feedback from the patient and their families.*

#### **Management's Response:**

*The Nursing Services and OBGYN departments have drafted a policy for Admission, Discharge and Transfer of patients. This policy is yet to be reviewed and approved, however, management notes and will action the recommendation to have a multidisciplinary team provide insight on discharge planning.*

*Since the audit was conducted, the department's management has developed a discharge checklist and discharge summaries are shared among the team and regularly discussed to improve patient management and care.*

### ***Clinical Records Management***

59) It is essential to maintain and manage patient records/notes in an effective way in order to provide safe and high-quality care in the Maternity Unit. The documentation and management of patient clinical records/notes must be of the highest importance to ensure efficient delivery of health care.

60) All patient records/notes should be easily accessible and comprehensible for all care providers in order to avoid delays in patient flow. It is essential to create standardized, complete, and accurate medical records for every woman and newborn admitted to the Maternity Unit for perinatal and early postnatal care. Such records are important for documenting care, follow-up, hand-over, the detection of potential complications, and the overall health outcomes of the patient. Through regularly maintained and managed patient records/notes, the Maternity Unit can provide safe and high-quality care.

61) We expect that a digital system, such as an electronic records system, would be more efficient in terms of data collection and storage. Digital records should be easier to organise, faster to access and transfer, and more resistant to erasures and errors. Additionally, we expect this digital system to improve communication amongst staff and help reduce both paper wastage and transcription errors.

***Burdensome manual/paper base record system***

62) Manual clinical records are used in the GPHC, with all patient information being taken by hand during ward rounds, shift changes, and routine monitoring. This results in a great deal of paperwork and it can be hard to keep track of.

63) Additionally, there is a risk of human error, miscommunication, and records becoming lost or misplaced. Not only is the organisation and storage of manual records time-consuming, but errors can occur due to difficulties in reading handwriting or delays in retrieving and transferring records.

**Recommendations:** *The Audit Office recommends that the GPHC Management:*

- a. Develop a comprehensive electronic health record system that digitally records and stores patient data. This will help to reduce the time and effort expended manually entering and filing physical documents, as well as provide more accurate, timely, and comprehensive details of patient care.*
- b. Train and familiarise staff with software programs and tools used to help document patient care ensuring all staff are aware of and able to use software-based documentation tools is essential for a more efficient and accurate system to be implemented.*
- c. Introduce a protocol for disseminating patient records across departments. This should include procedures for securely sending, receiving and storing patient information. A system should also be in place to ensure that all mandatory documents related to patient care are tracked and easily accessible when required.*

**Management's Response:**

*The GPHC is currently utilizing SIP+, a perinatal information system which allows timely decision making within the department. While this software is quite new to the department, Management is exploring the use of more comprehensive EMR which is currently being piloted in other departments.*

*There is frequent training (as recent as August 2023) in the importance and use of the electronic medical record systems that are being utilised within the department. Management continues to engage its strategic partners, including the Government of Guyana for the implementation of an EMR and continued training for staff as a priority.*

*A policy for the documentation, use and dissemination of patient medical records is currently being drafted by the multiple stakeholders at the GPHC and will be implemented by the end of 2023.*

**Conclusion**

64) Then GPHC failed to develop and implement comprehensive policies and procedures to guide the effective functioning of its maternal unit. This resulted from a lack of administrative procedures, trained personnel, inadequate resources and staffing, and an inadequate medical record-keeping system. As such there could be difficulties in assessing the effectiveness of the unit practices, delayed treatment, increased risk of human error, miscommunication, and loss of patient records which can affect patient care.

## *Chapter 2*

### *Performance Measurement and Reporting*

#### *Background*

65) Performance monitoring and reporting systems must include cohesive measures and pathways that clearly demonstrate the linkages between all levels of the system. It is essential that management actively monitor all aspects of their patient flow performance within the Maternity Unit and promptly identify any areas requiring improvement.

66) The findings must then be reported to the board in order to address deficiencies as quickly as possible. Internal evaluation by the quality assurance unit should be conducted regularly, measuring progress against established Performance Indicators. Reports should emerge from this evaluation and be used for further supervision.

67) The use of Key Performance Indicators (KPIs) is essential in measuring the quality of health care services provided. The most common KPIs for health care/hospitals include patient satisfaction, incidents, death rate, medication errors, admission/discharge wait times, admission rates, readmission rates, and patient referrals. It is imperative for the management team to share their findings on patient flow with the board of directors, as this will enable them to take immediate, appropriate action to improve the quality of health care services.

#### **Criterion 2.1**

*GPHC management monitors how well patients are flowing in accordance with policies and procedures.*

68) It is expected that the Quality Improvement Department develop and implement a coordinated approach to monitoring and reporting the performance of the Maternity Unit by creating standardised monitoring documents and tools, as well as approved key performance indicators to measure patient flow.

69) We also expect management should utilised the outcomes of these monitoring activities to identify non-compliance and other deficiencies in its systems and act to rectify them. Additionally, management should ensure that necessary policies and procedures are implemented and followed, with service outcomes tracked and monitored accordingly.

#### *No approved performance measurement system*

70) The GPHC Quality Improvement Department does not have a coordinated and consistent approach to monitoring and reporting the performance of the Maternity Unit. There are no standardised monitoring documents and tools, nor approved key performance indicators to measure patient flow.

71) Additionally, there are no management analyses of the outcomes of the monitoring activities to ensure that policies and procedures are being followed and that service requirements and outcomes are being met. This lack of an effective monitoring system can result in missed opportunities to identify non-compliance or other deficiencies in its systems and to respond to critical incidents and complaints.

72) The Quality Improvement Division has been established to oversee the GPHC's Quality Improvement Plan regarding governance and accountability, including performance measurement and reporting. Although there is no approved manual that guides the work of the Quality Improvement Department, the Unit operates in accordance with the Quality Improvement Manual (draft), Occupational Safety and Health Manual (draft), and Quality Improvement Framework.

73) In 2020, the Quality Improvement Unit conducted "maternity indicators data analysis" by randomly sampling 20% of all Maternity patients. This included several key Maternity Indicators for Maternity patients with high-risk conditions.

74) The unit's findings revealed that a high percentage of the samples taken for Patient monitoring and medication administration were not conducted according to the Physician's orders, as shown in the table below.

Activities undertaken	Done as required	None as required
Vital Signs monitoring	71 or 37%	123 or 63%
Medication Administration	56 or 29%	138 or 71%
RBS Monitoring for Gestational Diabetes Mellitus Patients	3 or 5%	54 or 95%

Figure 11. Table showing Findings of the Quality Improvement Unit

Source: Quality Improvement Unit Report

**Recommendation:** *The Audit Office recommends that the GPHC management:*

- a. *Develop and implement a comprehensive system of monitoring and reporting that covers all aspects of the Maternity Unit, including key performance indicators (KPIs) that measure patient flow, patient outcomes, safety, and compliance.*
- b. *Develop data collection tools and document templates to record performance data related to the Maternity Unit on a regular basis, such as patient flow data, and other indicators related to patient care.*
- c. *Set up an electronic system to collect and store performance data related to the Maternity Unit.*
- d. *Establish processes for regularly analysing the data collected in order to identify any trends or areas for improvement.*
- e. *Develop regular reports based on the data collected and analysis performed, such as trend analyses, root cause analyses, need assessments, and performance status reports.*
- f. *Establish policies and procedures to ensure that any identified issues or trends are addressed and corrective action taken as necessary.*

**Management's Response:**

*The maternity department is currently evaluated quarterly through the Service Level Agreement (SLA) by the Ministry of Health. This monitoring tool has a variety of indicators that monitor the department's performance against numerous performance indicators that assess patient flow, outcomes, safety, and compliance. Issues related to these are also reported on and monitored through the hospital's daily management huddles.*

*Data is collected throughout the year and reviewed and analysed quarterly for the SLA and annually for the Clinical Review and Annual Report, allowing for detailed analysis to assess trends that allows management to make evidence-based decisions concerning the department.*

*Through the hospital's strategic partnership with Mt. Sinai, a committee has been established to undertake frequent root cause analyses and performance status reports and identify appropriate courses of action and opportunities for intervention.*

**Criterion 2.2:**

***GPHC management investigates if and when its monitoring identifies failures in patient flow in alignment with policies and procedures for Admission, Bed management, and Discharge.***

75) We expect the GPHC management should investigate any failures in patient flow and ensure that policies and procedures for admission, bed management, and discharge are followed. They should also make sure to take appropriate measures to prevent future violations.

***GPHC has not properly evaluated its performance***

76) No evidence was presented that management has analysed or evaluated areas where performance falls short of criteria in order to identify deficiencies and take corrective action. Consequently, the GPHC management's failure to investigate when its monitoring identifies deficiencies in patient flow as it pertains to policies and procedures for admission, bed management, and discharge is a major oversight.

77) This is problematic as it can lead to delays in care, overcrowding, and a decrease in the quality of care. It is essential that an investigation is done to determine the cause of the problem and implement solutions that will correct the shortcomings.

78) Putting in place systems that will proactively identify issues and alert the management team of any upcoming issues should be a priority as this can help prevent future problems. It is also prudent to ensure that all the procedures and policies related to patient flow are well understood by all the relevant stakeholders within the hospital. This will ensure that everyone is well informed and that there is a shared understanding and commitment to providing the best possible care and service to patients.

79) The GPHC is missing the chance to identify problems with the patient flow system and to efficiently handle any complaints or critical incidents regarding its monitoring. Furthermore, there have been no independent evaluations conducted in recent history to measure the performance of the maternity unit.

**Recommendation:** *The Audit Office recommends the GPHC Management:*

- a. *Establish a system that periodically performs independent quality assessments and evaluates the performance of the maternity unit. This system should provide feedback to the relevant departments and the GPHC Board of Directors as early as possible, thus allowing for timely interventions.*
- b. *It is also essential to develop a comprehensive patient flow monitoring program that includes:*
  - *Regular analysis of patient flow data to identify any issues or inefficiencies in the process.*
  - *Surveys, interviews, and/or focus groups to measure patient satisfaction with the services provided.*
  - *Outlining an effective process for the timely identification and resolution of any complaints or critical incidents.*
  - *Implementation of appropriate procedures and policies to ensure patient safety and a smooth patient flow.*
- c. *In addition, the GPHC should provide regular training and refresher courses for all staff involved, which should emphasise communication and collaboration.*
- d. *By combining these measures, the GPHC management can ensure that any problems faced by the maternity units and the healthcare facility as a whole, are properly addressed and solved.*

**Management's Response:**

*Currently, the GPHC's Board of Directors receives monthly and quarterly reports on matters related to complaints, grievances, and quality improvement within the maternity department. The SLA, which is conducted quarterly allows for an independent assessment of the department's performance based on several indicators.*

*Though not independent, the hospital's Mortality and Morbidity Committee (MMC) meetings also present an opportunity for multiple stakeholders to assess data and identify issues related to inefficiencies in the department's processes and procedures.*

*Through the Quality Improvement department, the hospital also undertakes frequent patient satisfaction surveys to gather feedback on patient's experiences at the maternity unit. Though anecdotal, management does note that the number of complaints from patients and their relatives at the maternity department has reduced significantly over the past two (2) years, which is reflective of the numerous improvements that have been made to the department's infrastructure, processes, and management.*

*The hospital's management has also implemented a 24-hour help desk to provide immediate assistance and recourse for patients and their relatives who need support.*

*Management does agree that more training and sensitization needs to be done on a continuous basis with staff to ensure that the hospital's procedures are being followed and patients are receiving consistent, quality care. Management has commenced an initiative through its Human Resources department to ensure that training needs are continuously assess and addressed in a timely manner.*



**Criterion 2.3:**

*(a)GPHC management where necessary, updates its policies and procedures based on the results of investigations into failures in patient flow in compliance with policies and procedures, and (b) GPHC management reports to its Board whether patient flow through maternity services is complying with policies and procedures.*

80) It is expected that GPHC management will periodically update policies and procedures on the basis of investigations into patient flow failures and that they will provide a regular report on the Board of whether patient flow through maternity services is compliant with policies and procedures.

***Management not reporting to its Board***

81) The Medical and Professional Services Department has confirmed that the GPHC does document and analyse results. Information obtained from those analyses leads to changes and amendments of policies. However, during the audit process, no documentation or evidence was found that management had reported to its Board about their monitoring activities. This renders the Board unable to verify and respond to any potential deficiencies with the patient flow policy in a timely fashion. As a result of the lack of action taken by the GPHC Board, the effectiveness of the internal monitoring process has been reduced, creating a risk of critical incidents or complaints going undetected and unresolved. This puts the GPHC's patients, staff, and other stakeholders at risk of harm or a breach of safety regulations.

**Recommendations:** *The Audit Office recommends the GPHC Management improve Performance Measurement and Reporting systems through:*

- a. Establish a procedure to document each monitoring activity, including the results of the analysis and any necessary changes to the policies and procedures motivated by those results.*
- b. Establish a policy requiring that management report the findings from the monitoring activities to the Board on a regular basis.*
- c. Establish a review process that allows the Board to assess the effectiveness of the policies and procedures, as well as review any necessary changes or amendments that management must report on a regular basis.*
- d. Create a system to track complaints and potential incidents arising from the monitoring activities, in order to ensure that necessary changes are identified and addressed in a timely manner.*
- e. Implement periodic evaluation processes to review the effectiveness of these procedures and ensure continuous improvement.*

**Management's Response:**

*GPHC's management will action the recommendation to have its monitoring activities properly documented and available for the relevant stakeholders to access for more informed decision making. As a practice, findings from monitoring activities, outcomes of investigations and reports are usually reported to the Board of Directors monthly. Similarly, all complaints and grievances are documented and tracked throughout the investigation process, then elevated to the relevant managers. Management often utilises these findings to inform changes that are necessary for better functionality of the department.*

*Management also acknowledges and will action the recommendation to have a periodic process in place to review the effectiveness of its procedures and make recommendations for changes and improvements where necessary and will seek to implement these soonest. While this is being done to some degree through various mechanisms such as the MAC, MMC, and daily huddles, there is scope for having a structured process in place to facilitate this.*

## **Conclusion**

82) The GPHC did not demonstrate that it has an approved system in place at its Quality Improvement Unit to monitor and evaluate the Maternity Unit performance. This is evident from a lack of standardised documented tools to guide its work. They also use unapproved performance indicators to measure the unit performance. Further, it was not evident that issues detected during monitoring and evaluation exercises were communicated to the Board. These issues could affect the flow of information and the urgency and timeliness of corrective actions.





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