



**Interprofessional Collaboration in Childbirth with Hepatitis B: A Case Study at
RSU Imelda At Imelda Hospital, Indonesian Workers Medan**

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ABSTRACT

Mother-to-child transmission of Hepatitis B carries a risk exceeding 90% that neonates will develop chronic Hepatitis B. Interprofessional collaborative practice is crucial for mitigating transmission risks and enhancing patient safety. This study intended to conduct a comprehensive analysis of the interprofessional collaborative practices employed for mothers delivering with Hepatitis B at Imelda Workers General Hospital, Indonesia. This qualitative study utilized an embedded single-case study design with ten participants: one obstetrics and gynecology specialist, one medical laboratory technologist, one pharmacist, and six midwives. In-depth interviews were carried out to gather detailed information, and the data were analyzed utilizing NVivo 12 Plus. The study employed data triangulation incorporating physicians, midwives, laboratory technologists, pharmacists, and mothers affected by Hepatitis B. The analysis was performed using thematic analysis, matrix analysis, and pattern matching analysis. The findings indicated that the coordinated management of childbirth among mothers with Hepatitis B involved a hierarchical system, starting at the Obstetric Emergency Unit, then involving the pharmacy, labor ward, and postpartum ward, and ultimately leading to the administration of Hepatitis B immunoglobulin to newborns in the neonatal unit. The study also emphasized the critical role of robust institutional support, encompassing sufficient access to personal protective equipment, fully equipped healthcare facilities, and a well-established culture of adherence to infection prevention and control protocols, thereby enabling the timely administration of Hepatitis B immunoglobulin. Nonetheless, multiple challenges were identified, such as inadequate training for midwives and the lack of specific standard operating procedures for managing labor in mothers with Hepatitis B.

Keywords: interprofessional, collaboration, practice, delivery, hepatitis b

ABSTRAK

Mother-to-fetus transmission of hepatitis B can lead to the development of chronic hepatitis B in over 90% of affected offspring. Kolaborasi antarprofesional dalam praktik dapat mencegah dan mengurangi risiko penularan serta meningkatkan keselamatan pasien. Tujuan: untuk memperkuat praktik kolaborasi interprofesional dalam penanganan ibu bersalin yang mengidap Hepatitis B di RSUD Imelda Buruh Indonesia. Penelitian kualitatif ini mengadopsi desain studi kasus tunggal yang melibatkan sepuluh informan, terdiri dari satu dokter spesialis obstetri dan ginekologi, satu teknolog laboratorium medik (ATLM), satu apoteker, serta enam bidan. Wawancara mendalam dilaksanakan untuk mengumpulkan data, yang kemudian dianalisis menggunakan perangkat lunak NVivo 12 Plus. Penelitian ini menerapkan triangulasi data dari dokter, bidan, ATLM, apoteker, dan ibu bersalin dengan Hepatitis, yang dianalisis melalui pendekatan analisis tematik, analisis matriks, serta analisis pencocokan pola. Hasil penelitian menunjukkan bahwa proses kolaboratif dalam penanganan ibu bersalin yang mengidap Hepatitis B melibatkan koordinasi berjenjang mulai dari Instalasi Gawat Darurat Obstetri, apotek, ruang bersalin, ruang nifas, hingga pemberian imunoglobulin Hepatitis B kepada bayi di ruang neonatus. Research also confirms the existence of institutional support through adequate provision of PPE, comprehensive healthcare facilities, and a work culture aligned with PPI that ensures timely administration of serum. Meskipun demikian, terdapat beberapa hambatan utama, yaitu kurangnya pelatihan bagi bidan dan tidak adanya SOP khusus untuk penanganan persalinan pada ibu yang mengidap Hepatitis B.

Kata kunci: interprofesional, kolaborasi, praktik, pengiriman, hepatitis B

INTRODUCTION

Hepatitis B continues to be a major public health issue worldwide, especially because of the increased risk of mother-to-child transmission (MTCT). The World Health Organization has conveyed optimism regarding the attainment of the goal to eliminate mother-to-child transmission of Hepatitis B by 2030 and has highlighted the importance of enhancing primary healthcare services to guarantee that pregnant women with chronic Hepatitis B receive suitable treatment and that newborns are vaccinated promptly as vital components of the prevention strategy (WHO, 2023). Globally, an estimated 6.4 million children under the age of five are living with chronic HBV infection (Paul-Emile et al., 2020). Numerous nations continue to report significant incidences of maternal infection. In China, for instance, 7.89 percent of over 15,000 expectant women tested positive for HBsAg in 2020, whereas in the United Kingdom, 0.4 percent of pregnant women required interventions to

prevent vertical transmission (Jensen et al., 2022). Evidence further indicates that planned deliveries outside the hospital increase the likelihood that newborns will not receive the HBV birth dose, placing them at greater risk of infection.

In Indonesia, the challenge posed by maternal Hepatitis B continues to be a significant issue of concern. Data from the Ministry of Health in 2022 revealed that 50,744 pregnant women tested positive for Hepatitis B. North Sumatra Province ranked among the regions with the lowest Hepatitis B screening coverage among pregnant women, with a screening rate of 81.8 percent, a referral rate for reactive HBsAg cases at 46.03 percent, and a total of 256 infants born to mothers with Hepatitis B in the same year. Medan City was identified as one of the districts with the lowest achievement of screening targets (Mursy & Mohamed, 2019a).

The repercussions of Hepatitis B infection for mothers and infants are significant. Mothers face potential risks of hepatic inflammation, hepatic carcinoma, placental abruption, and postpartum hemorrhage. Infants born to infected mothers have a 90 percent likelihood of developing chronic HBV infection, which may result in hepatocellular carcinoma and liver cancer within their first five years, along with heightened risks of preterm birth and low birth weight (Naranzul et al., 2023). Recognizing that approximately 95 percent of HBV infections in infants are acquired from infected mothers, the Indonesian government has prioritized the prevention of vertical transmission through the National Hepatitis B Prevention and Control Program.

Preventing MTCT requires health professionals to work collaboratively across disciplines. Interprofessional collaborative practice refers to a cooperative relationship among professionals who share responsibility for delivering effective, equitable, and integrated preventive, curative, rehabilitative, and palliative services (Mursy & Mohamed, 2019b). Evidence from the United States suggests that trust, respectful communication, and clear clinical guidelines are essential for strengthening teamwork and improving patient safety and clinical outcomes (Michalsen et al., 2019). Research from Sweden shows that midwives, who are responsible for normal childbirth care, must be trusted by obstetricians for their clinical expertise and ability to handle routine deliveries based on evidence and experience (Mumuni Atoko et al., 2024).

A preliminary study conducted at Imelda Workers General Hospital reported 27 Hepatitis B positive mothers in labor in 2023 and four cases in January 2024. Interviews with midwives working in the Obstetric Emergency Unit and the delivery room indicated that interprofessional collaboration in providing care for laboring mothers with Hepatitis B was still insufficient. Based on these findings, the aim of this study is to explore interprofessional collaborative practices in the care of mothers giving birth with Hepatitis B at Imelda Workers General Hospital in Indonesia.

METHOD

Research Design

This research utilized a qualitative methodology with a case study approach to meticulously collect and analyze data pertaining to a particular program, process, event, or group. The application of an embedded single-case study design allowed the researcher to concentrate on a single primary case as the core focus, thereby enhancing the understanding of the issue under investigation (Mengiste et al., 2021). This design was selected because the case under investigation involved several analytical sub-

units, including the Obstetrics Emergency Unit, delivery room, postpartum care unit, and neonatal room. Incorporating multiple sub-units provided broader analytical opportunities and allowed the researcher to explore interprofessional collaboration practices in a more comprehensive manner (Kuosmanen et al., 2021).

The embedded single case study approach is deemed suitable for this research due to its objective of thoroughly examining the practice of interprofessional collaboration in childbirth among hepatitis B patients. The study considers multiple perspectives, including those of health professionals involved in managing childbirth with hepatitis B—such as obstetricians, pediatricians, midwives, nurses, anesthesia nurses, ATLM, and pharmacists—as well as mothers giving birth with hepatitis B at the Imelda Buruh Indonesia Hospital.

Conceptual Definition

The conceptual definition in this study is:

- a. Flow is a sequence or series of steps or events that occur in a process situation. It describes the sequence of events in interprofessional collaboration practice in hepatitis B childbirth, which involves a number of interrelated actions or activities between health workers in providing optimal care to patients.
- b. Values and ethics are a way of life that provide a basis for behavior such as respect, trust, cooperation, and responsibility for health workers in carrying out interprofessional collaboration practices in hepatitis B childbirth, according to the ethical standards of each health worker profession.
- c. Communication patterns are defined as a particular way or structure in conveying messages between health workers in interprofessional collaboration practices in childbirth with hepatitis B.
- d. Role and responsibility are two interrelated concepts. Each role played by a person has responsibilities, and fulfilling these responsibilities helps maintain the balance and integrity of health workers in carrying out interprofessional collaboration practices in hepatitis B childbirth.
- e. Work culture refers to the norms, values, beliefs, and behaviors that develop among health workers in the work environment. This includes how members interact, communicate, solve problems, make decisions, and carry out interprofessional collaboration practices in hepatitis B delivery to provide quality care to patients (Mahmoodi et al., 2019).
- f. Institutional support is a form of support provided by institutions to groups related to goals and success, involving policies, programs, and environments that support the growth and success of health care teams in carrying out interprofessional collaborative practices in hepatitis B delivery.
- g. Environmental support, namely various forms of assistance such as supporting facilities and infrastructure, human resources, education and training, and supportive policies to improve welfare and success in carrying out interprofessional collaborative practices in hepatitis B delivery.
- h. Barriers hinder progress, Action, or achievement of goals in interprofessional collaborative practices, arising from various physical, environmental, and social factors that hinder goals.
- i. Hope is an intense desire for interprofessional collaborative practices to improve the quality of health services, reduce complications and cases that occur in services, and help patients improve their health and dignity.

Research Subjects

The sampling method employed in this study utilized non-probability sampling combined with a purposive sampling approach (Hu et al., 2021). The purposive sampling technique utilized in this study is heterogeneous sampling, which is considered suitable since participants were chosen in accordance with the research questions and the specified inclusion and exclusion criteria. This method guarantees the acquisition of data aligned with the research aims and enables thorough insights into the phenomena under study by interrogating a diverse range of key informants, particularly those who meet the following criteria:

Key informants

Inclusion criteria

- a. Health professionals, including obstetricians, midwives, ATLM personnel, and pharmacists engaged in the management of Hepatitis B deliveries, with a minimum of one year of service at Imelda Buruh Indonesia Hospital.
- b. Mothers giving birth with Hepatitis who are willing to be research informants.
- c. Health workers who are willing to become informants

Core informant exclusion criteria

- a. Informants who cannot hear or speak
- b. Informants who do not complete the interview session and decide to leave while the research is in progress.

Research Instrument

In qualitative research, investigators serve as the primary instrument, responsible for planning, implementing, collecting data, analyzing and interpreting findings, and reporting the results. In this investigation, the researchers employed instruments, specifically:

Semi-structured interview guide

Interview guidelines (semi-structured interviews) are interview techniques in which researchers first ask structured questions to find problems more openly. Pilot interviews are conducted by testing interview guidelines on research participants, health workers, and pregnant women. The results of the pilot interview are interview guidelines that can be used well in data collection, marked by:

1. The informant understood the research information sheet and informed consent form and voluntarily agreed to be interviewed by signing the informed consent form.
2. The informant answered every question without any confusion.
3. The data obtained is data that can answer research questions.
4. The time used in the pilot is, by the researcher's estimate, around 40-60 minutes. Semi-structured interviews were conducted based on the competency domain of interprofessional collaborative practice. The interview guidelines are attached in Appendix 3.

Observation Guidelines

The observations made are the implementation of the interprofessional collaboration practice process and the results of the observations. Observation guidelines are attached in Appendix 7.

Audio Recorder

The recording device (audio recorder) used by researchers when conducting direct interviews is a cellphone as a recording device when researchers conduct the interview process.

Logbook

Logbooks serve as guidelines in carrying out activities or during research, so they become an important part of describing research activities in general. Logbooks are written immediately after the activity takes place to minimize human error. An example of a logbook is in Appendix 8.

Field notes

Field notes in qualitative research help the author as documentation to clarify when conducting analysis and discussion. They are attached in Appendix 10.

RESULTS AND DISCUSSION

Informant Characteristics

This investigation was carried out within the field of obstetrics, encompassing the Obstetrics Emergency Room, the delivery suite, the postpartum ward, and the neonatal unit. The informants in this study consisted of mothers diagnosed with Hepatitis B, midwives, ATLM personnel, laboratory staff, and obstetricians who had been employed at RSU Imelda Buruh Indonesia for a minimum of one year.

Table 1. Characteristics of Research Informants

No	Name Initials	Age	Status/Position	Length of work	Service Room	Last education
1	E.D	37 years old	Head of SKP and Implementing Midwife	11 years old	Obstetrics Emergency Department	D-III Midwifery
2	R.H	35 years old	Head of Room	12 years old	VK (Delivery Room)	S1-Midwifery
3	dr.EPS	62 years old	Obstetrics and Gynecology Specialist Doctor	20 years	Scope of midwifery	Obstetrics and Gynecology Specialist Doctor
4	F.S	35 years old	Head of Room	12 years old	Neonati	D-III Midwifery
5	R.G	27 years old	Executive Midwife	5 years	Obstetrics Emergency Department	D-III Midwifery
6	N.H	35 years old	Head of Room	12 years	Jasmine (Postpartum room)	D-III Midwifery
7	I.D	38 years old	Head of Room	17 years	Laboratory	S1 Chemistry
8	S.I	35 years old	Pharmacist	5 years	Pharmacy	Pharmacist Professional Education
9	T.P	32 years old	IRT (Hepatitis B positive patient)	-	-	Senior High School

Table 1 shows that nine research informants were obtained according to the inclusion criteria, namely 8 health workers (midwives, ATLM, pharmacists, and obstetricians) and one mother giving birth who was positive for Hepatitis B.

Case Description

This study examines the circumstances of labor in mothers who are positive for Hepatitis B. The patient was not referred from another clinic or hospital but independently presented to Imelda Buruh Indonesia Hospital with the primary complaint of expecting to deliver her third pregnancy. The

history of experiencing childbirth on two occasions at the maternity clinic (Kinfe, Sendo, and Gebremedhin 2021). The patient resides in close proximity to IPI Hospital, and upon experiencing amniotic fluid leakage one day prior, accompanied by mucus intermingled with blood, she opted to proceed directly to the Obstetrics Emergency Department at IPI Hospital. The patient experienced increased anxiety during this pregnancy due to the nature of her symptoms, which differed from those in previous pregnancies, leading her to believe that delivering at IPI Hospital was the most suitable option. The mother believed that IPI Hospital continuously monitored the health of both the mother and the infant, and she stated that many mothers at IPI Hospital had successfully delivered their babies naturally. The patient had also never undergone a Hepatitis B screening at a healthcare facility and was under the impression that the facilities and infrastructure at IPI Hospital were comprehensive. The mother and her family were informed of her Hepatitis B infection following her diagnosis at the Obstetrics Emergency Department of IPI Hospital (Jepkosgei et al., 2022).

Research Analysis Results

Based on the analysis of this study, six main themes and 12 subthemes were found. The following are the results of the research analysis with the help of NVivo 12 Plus software:

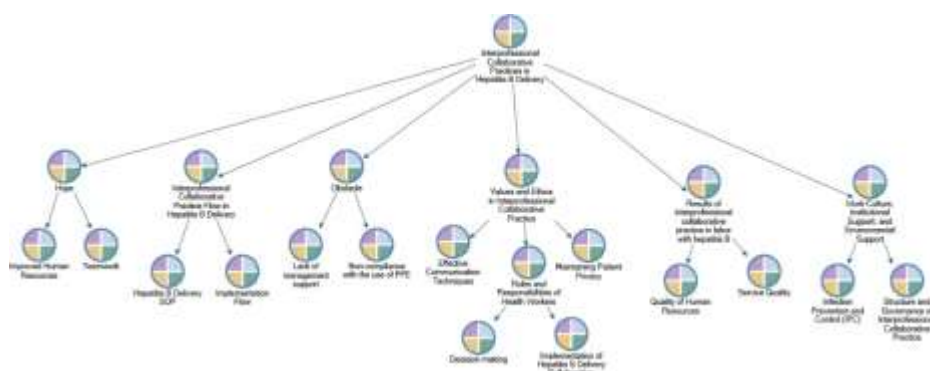


Figure 1. Project Map of Research Themes and Subthemes

Based on Figure 1, the research has six main themes: the flow of collaborative practice, the roles and responsibilities of health workers, values and ethics, work culture, obstacles, expectations, and results of interprofessional collaborative practice in handling Hepatitis B deliveries. The following are the results of the research analysis based on the results of observations, interviews, and patient medical records:

Table 2. Research result

Research result	Collaborative Practice Flow	Roles and Responsibilities	Work Culture, Institutional Support, and Environmental Support	Interprofessional Collaborative Practice Results
Observation	Midwife E reported the examination results to the DPJP doctor, Dr. P. Sp. OG, regarding the examination results and the DPJP's recommendation that the patient be observed in the Hospital for a planned	At 09.30 WIB, midwife F gave the baby Immunoglobulin Serum taken from the pharmacy and witnessed by the baby's father, and continued to provide IEC that the baby should not be given breast milk by its mother.	At 09.30 WIB, midwife F gave the baby Immunoglobulin Serum taken from the pharmacy and witnessed by the baby's father, and continued to provide IEC that the baby should not be given breast milk by his mother.	At 15.55 WIB, Midwife N called the patient's husband to hand over the discharge medication, namely mefenamic acid 3x1 and hufabion 1x1, and conducted counseling and provided education on home care without any difference from the education of other discharged patients, only it was emphasized that the baby should not be breastfed. The patient was not advised to re-check how the patient's

	expected delivery.		hepatitis B treatment was going.
Interview	<p>"So far, the first patient from the Midwife's Emergency Room, if the Hepatitis B result is positive, they immediately confirm the VK, and we have also made sure again that the doctor in charge already knows. Well, after the patient arrives in the VK room, it's just like usual; there's no difference (IF. 2. Head of the Delivery Room).</p> <p>"A patient with a mother positive for hepatitis B, an obstetrics ER staff reported to the baby room that there was a mother with Hepatitis B and then prepared serum for her baby. Health workers reminded each other, as did those in the VK" (IF.4. Head of the Neonatal Room)</p>	<p>"... from the Obstetrics Emergency Room, the role is to inform the doctor if the laboratory results are out immediately, then inform the family. Moreover, if transferred to the operating room, it is mandatory to inform the staff; the same goes for other rooms. Then, the pharmacy is also reported, and the files are immediately provided. That is all, the most important thing is that communication must be good" (IF.1. Head of Patient Safety Targets).</p>	<p>"For the ER, it is like usual, we have to use PPE, for the procedure it is the same as other patients, but with Hepatitis B, babies are not recommended to be breastfed..." (IF.1. Implementing Midwife and Head of SKP)</p> <p>There is no special structure for Hepatitis B assistance, as you explained earlier. The patient already knows the blood results from the Obstetrics ER, and the others have been informed directly from the ER. So the point is that once the blood results come out, if it is positive, it is mandatory to inform the obstetrician, but the pediatrician was never informed" (IF.2. Head of the Delivery Room)</p> <p>"From the ER, it was good. Although there was a nurse who was indifferent yesterday, maybe the Midwife was tired because there were also many patients at that time." IF.9. Mother Positive for Hepatitis B</p> <p>".. I just cannot accept why I am prohibited from breastfeeding my child, it is a shame..". IF.9. Mother Positive for Hepatitis B</p>
Documentation (Medical Records)	Implementation of DPJP reporting is documented in the patient's medical record and will be reviewed by the DPJP within 1 to 24 hours in accordance with the instructions provided by the DPJP.	<p>The infant's parents witness serum administration to infants and provide a signature of consent on the Action consent form that has been provided.</p> <p>Health workers also write every Action, education, and communication given to the patient or the patient's family in the patient's medical record on the KIE (Information and Education</p>	<p>All actions are carried out systematically according to the APN implementation flow applied at RSU.</p> <p>The Action of administering serum to hepatitis B babies. Providing education to hepatitis B mothers</p>
Patient Initials: Mrs. T.P Age: 32 years Occupation: Housewife Last Education: High School No. RM: 24.07.90 Status: BPJS			

DPJP: SpOG	dr.P,	Communication among healthcare personnel, including the IGD Midwife, ATM, and laboratory results, are documented within the patient's medical record. The submission of patient serum files is appended to the patient's medical record for transfer to the pharmacist.	Communication) sheet.	format	information, and actions.	education,
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Interprofessional Collaborative Practice Flow in Childbirth with Hepatitis B

Regarding interprofessional collaboration practices in childbirth involving Hepatitis B, it outlines the workflow for collaboration and Standard Operating Procedures (SOPs) for managing hepatitis B during delivery within the hospital.

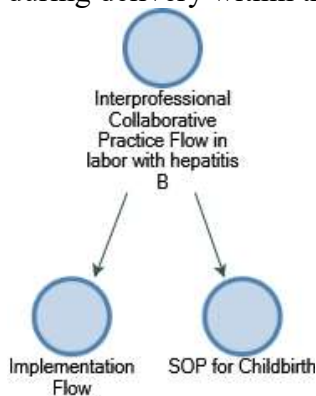


Figure 2. Project Map: Theme and Sub-Theme of Interprofessional Collaborative Practice Flow in Childbirth with Hepatitis B

Implementation Flow

The following outlines the implementation process for Hepatitis B delivery at Imelda Buruh Indonesia Hospital, based on the observations conducted during the research:

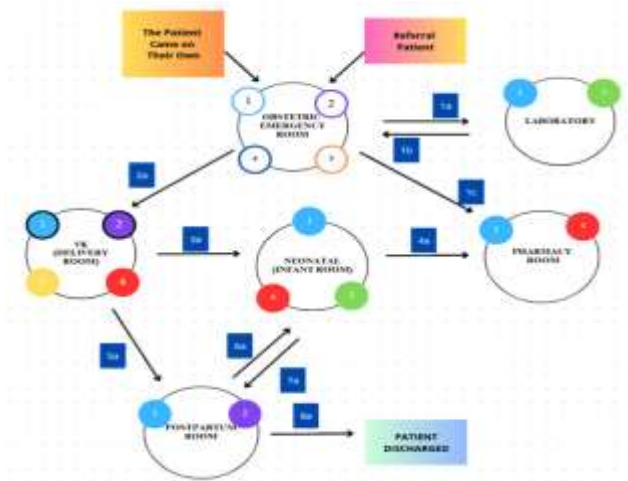


Figure 3. Interprofessional Collaborative Practice Flow for Childbirth With Hepatitis B at Imelda Hospital, Indonesian Workers Hospital

Values and Ethics in Interprofessional Collaborative Practice

The following are the results of the research analysis with the help of NVivo 12 plus software:

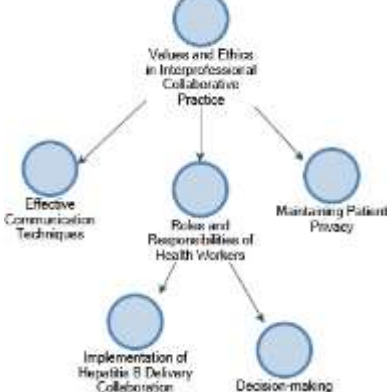


Figure 4. Project Map: Theme and Subtheme Values and Ethics

Work Culture, Institutional Support, and Environmental Support

The following are the results of the research analysis with the help of NVivo 12 plus software:

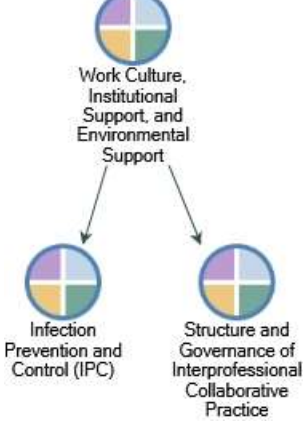


Figure 5. Project Map of Work Culture Themes and Subthemes, Institutional and Environmental Support

Infection Prevention and Control (IPC)

The implementation of IPC protocols during childbirth in mothers with Hepatitis B requires healthcare personnel to demonstrate proficiency in properly disposing of infectious refuse into designated yellow containers. Medical personnel, including midwives and physicians, utilize personal protective equipment such as masks, aprons, and mittens during examinations and the facilitation of routine deliveries. To prevent transmission to neonates born to mothers with Hepatitis B, immunoglobulin should be administered within 1 to 24 hours postpartum.

Structure and Governance of Interprofessional Collaborative Practice

The hospital's protocol for managing Hepatitis B cases is executed solely in accordance with the fundamental responsibilities assigned to each designated department, and no official policies have been established by the hospital. Regarding governance in Hepatitis B procedures, only the Hepatitis B Immunoglobulin serum and PPE supplies are supplied in accordance with the room's requisition. There is no distinction in the provision of facilities such as personal protective equipment for patients with Hepatitis B. In summary, the midwives currently present in the room lack a well-defined framework and governance for managing infectious deliveries such as Hepatitis B. Furthermore, regarding the PPI associated with the use of PPE and refuse management. Midwives routinely utilize personal protective equipment, including gloves, veils, and aprons. However, spectacles and footwear are not explicitly designated.

Theoretical Lens

This study employs the theoretical framework of the Sunnybrook Core Competencies for Interprofessional Team Collaboration, as this model aligns with the author's research findings. The Sunnybrook Framework of Core Competencies for Interprofessional Team Collaboration delineates essential skills systematically organized as collective abilities designed for application at the team level, accompanied by definitions for each competency and 19 corresponding behaviors. The framework is designed to primarily foster interprofessional collaboration. The competencies comprise four domains related to interprofessional collaboration: (1) clinical and professional practice and care, (2) education, (3) research and quality improvement, and (4) leadership strategies. As part of the competency framework, interprofessional service is defined as "collaborative efforts to deliver the highest standard of service." In contrast, interprofessional education is characterized as the process of acquiring knowledge about, from, and through collaborative engagement with one another (Ding et al., 2020).

Below is a theoretical overview of the Sunnybrook Framework Of The Core Competencies for Interprofessional Team Collaboration:



Figure 5. Sunnybrook Framework of Core Competencies for Interprofessional Team Collaboration

Core competency: Communication

Core competency: Communication pertains to the efforts of interprofessional teams to establish a shared understanding through effective dialogue across various roles and disciplines. The team diligently endeavors to proactively disseminate information and solicit input from team members and external groups to ensure a thorough understanding of the situation. The team develops procedures and tools, and selects various media and methods to improve the dissemination of information both internally and across teams. Establishes clear and efficient protocols for information exchange within and between teams, explicitly defining the members responsible for supplying and receiving specific information, and communicates using a shared language across roles and disciplines by avoiding jargon and acronyms, offering explanations, and ensuring understanding. Collaborative practices are incorporated into the workflow and Standard Operating Procedures for interprofessional collaboration in the management of hepatitis B at Imelda Hospital Medan.

The interprofessional collaboration involved in providing care to mothers with hepatitis B at Imelda Hospital Medan includes guiding expectant women upon arrival to the emergency department, where all initial assessments are conducted promptly. Concurrently, in the emergency room, such as during blood sampling performed by laboratory personnel, the laboratory department promptly informs the emergency department of the results. The emergency department subsequently coordinates with the delivery room or VK department to determine whether the delivery is expected or necessitates surgical intervention. Following the delivery of the newborn, the infant is moved to the neonatal ward, and the pharmacy department provides the hepatitis B vaccine while also preparing the complete documentation for submission to the Medan City Health Office. Infants receive the vaccine a single time, within 24 hours of birth. Last year, a case was documented involving a mother with an initially undetected positive hepatitis B status at the time of childbirth. This observation was noted because, upon arrival at the Emergency Room at Imelda Hospital Medan, the patient was already fully dilated. Consequently, before the laboratory results were available, the patient had already been managed in the delivery room. However, upon dissemination of the laboratory results confirming the patient's positive diagnosis for hepatitis B, all requisite measures were promptly implemented to provide appropriate treatment and avert any undue distress to the patient. The infant was also administered the hepatitis B vaccine without delay (Jaquet et al., 2017).

Interprofessional collaborative practices involving obstetricians, midwives, and family physicians in intrapartum care have shown improved clinical outcomes related to patient safety (Dove et al., 2019).

Support from hospital administration as a key factor influencing the patient safety culture within healthcare institutions (Corcorran et al., 2023). There is no established Standard Operating Procedure (SOP) for the delivery of mothers with hepatitis B at Imelda Hospital Medan. Nevertheless, the procedure remains in accordance with established maternity care standards, emphasizing the meticulous use of personal protective equipment, and neonates are promptly administered hepatitis B immunoglobulin serum (HBIG) and the monovalent hepatitis B vaccine immediately following birth. The Ministry of Health has implemented multiple initiatives to address hepatitis B, including administering the first dose of the hepatitis B vaccine to neonates within 24 hours of birth, followed by subsequent doses as part of the immunization schedule (Bierhoff et al., 2020).

Interprofessional teams develop a mutual understanding of each member's responsibilities, authority, and expertise. They analyze role relationships to optimize individual contributions and minimize duplication of tasks. Each member is able to clarify their role and scope of practice and strives to understand the roles of teammates. Members also recognize the limits of their competence and conduct appropriate consultations based on their respective knowledge, skills, roles, and scope of practice. The study findings demonstrate that the execution of collaborative Hepatitis-B delivery relies on the specific roles and responsibilities of each individual (Chao et al., 2019). Patient-centered care and patient engagement are two intricately connected concepts. Both approaches embody a profound reverence for patients, emphasizing care tailored to their preferences, responsibly acknowledging patients' wishes, and viewing patients as resourceful individuals (Catling et al., 2022).

Interprofessional teams cultivate an environment characterized by transparency, candor, and a willingness to collaborate. The team maintains an inclusive philosophy, and the viewpoints of each member are highly esteemed. Members convey positive perceptions when referring to other roles and professions (Beyene Shashamo et al., 2023). Create a secure environment that fosters open communication, enabling all members to express their concerns and advocate as necessary. Consider the principles and ethical standards upheld by the organization, governing body, and individual members throughout team discussions. Values and ethics in interprofessional collaborative practice are essential for achieving optimal outcomes. Effective communication among healthcare professionals is essential for effective collaboration, and it is the duty of health workers to protect patient confidentiality by ensuring that patients' privacy is adequately safeguarded and that ethical standards are upheld (Banca et al., 2020).

Interprofessional teams collaboratively develop strategies. Team members work together to determine appropriate courses of action. If necessary, the team identifies the individual accountable for making the final decision and designates specific responsibilities for each task. Develop and implement an interprofessional care plan that emphasizes the needs and preferences of the patient and their family or client (Bailey et al., 2023). Collaboratively define learning objectives that are shared across roles and professional disciplines. Identify and assign accountability for all aspects of the task, especially in cases of role overlap. Based on the analysis of the informant interviews, it was concluded that the work culture is primarily evident during interactions with other health professionals. The work culture analyzed in this study relates to the attitudes toward infection prevention and control (Amir, McCarthy, and Tong 2021).

Governance in interprofessional collaboration practices within this study identified a single instance in which laboratory personnel delayed informing that the patient had Hepatitis B. This situation could potentially reduce patient satisfaction and hinder healthcare worker performance; however, no disciplinary measures were implemented as the midwife complied with PPE (Elshobake & Sakka, 2024). Healthcare professionals providing care should be multidisciplinary to improve job satisfaction and foster effective collaboration among the healthcare team members involved (Ahad et al., 2022). Institutional support for this study was provided through the supply of comprehensive personal protective equipment (PPE) available in each room and as required.

The findings of this study indicate that interprofessional collaboration in the management of mothers with Hepatitis B is effective in facilitating communication. Nevertheless, inaccuracies continue to be observed in the use of personal protective equipment during delivery assistance or the performance of medical procedures (Al Qaralleh, 2022). Meanwhile, in previous studies conducted in Vietnam, midwives consistently utilized mittens during injections and other medical procedures (Adeyemo, Morelli, and Kennedy 2022). Mothers who delivered also reported diminished contentment with the service owing to restrictions on breastfeeding. Meanwhile, previous studies have indicated that breastfeeding does not transmit the Hepatitis B virus to infants; however, it is essential to employ proper and cautious breastfeeding techniques (Sayang Bidul, 2024).

Based on research conducted in Beijing, it was determined that supplying colostrum from mothers infected with Hepatitis B does not increase the risk of Hepatitis B virus infection in neonates after immunoprophylaxis (Schauer & Schauer, 2010). Meanwhile, the findings of this study consistently demonstrated that many midwives and physicians had not provided comprehensive and accurate information; if this issue persists, it may hinder healthcare professionals' capacity to deliver effective care. Meanwhile, the objective of interprofessional collaboration in the management of delivery for hepatitis B is to strengthen human resources and foster cooperation.

The principal findings of the Sunnybrook Framework for Interprofessional Team Collaboration delineate fundamental standards for effective teamwork and establish a shared terminology that can be employed to describe interprofessional collaboration (Özcürümez, 2018). These competencies emphasize the development of high-performing teams and the promotion of collaboration across diverse teams and settings throughout the continuum of care. By defining specific behaviors among team members, these competencies prove advantageous not only during collaborative practice for recognizing and reinforcing achievements but also in identifying areas for development and outlining strategies to accomplish goals in their absence (Lehmann & Masterson, 2020). The framework can further support organizations seeking accreditation and adhering to standards that require the evaluation of collaboration effectiveness and team performance, as well as the identification of areas for enhancement. Furthermore, implementing the framework can facilitate healthcare organizations in surpassing these standards to deliver high-quality care that more effectively anticipates and responds to the needs of patients and their families (Potts, Kolli, and Fattal 2022).

CONCLUSIONS

Interprofessional collaboration in cases of Hepatitis B-positive childbirth involves coordinated efforts among emergency room midwives, obstetricians, laboratory personnel, pharmacists, and neonatal teams to enable prompt diagnosis, ensure safe delivery, and administer immunoglobulin to the neonate without delay. The main challenge is the limited availability of immunoglobulin serum, which cannot be retained within hospitals and is only obtainable during the operating hours of the Medan Health Office. Health professionals expect enhanced accessibility and inventory availability to facilitate more efficient emergency response operations.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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