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From Gaps to Action:

Advancing GBS Screening in Pregnant Women in Saudi Arabia



Expert
Consensus

Foreword



Dr. Fatimah S. Alhamlan

The next step for GBS prevention in Saudi Arabia is to establish the national guidelines: ensuring a standardized screening pathway, reliable identification of maternal GBS status, and timely clinical action wherever a woman gives birth.

Deputy Chief Research & Innovation Officer, King Faisal Specialist Hospital and Research Centre and Founder & Vice President, Rofaida Women's Health Organization

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Group B Streptococcus (GBS) remains an important and potentially preventable cause of invasive infection in newborns. Across Saudi Arabia, many healthcare institutions already have established approaches to GBS screening and prevention. Yet, variation in how women are screened, tested, and managed can make it difficult to ensure a consistent standard of care.

This paper brings together the available Saudi evidence and the perspectives of experts working across the maternal and newborn healthcare pathway. Through this work, we aim to support a more consistent approach to GBS screening and management in Saudi Arabia and identify practical steps to strengthen clinical pathways and inform future policy development.



Dr. Ahmed Al-Ayoubi

In my clinical experience, the challenge is not simply whether screening is available, but whether a woman's GBS status is known when it matters and whether clinicians have a clear pathway to act when it is not. Strengthening these areas is an important priority in efforts to support timely clinical decision making and newborn safety.

Head of Obstetrics and Gynecology, Al Yamama Hospital and Chairman, Maternal & Perinatal Safety Committee, Saudi Patient Safety Center

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Preventing Group B Streptococcus disease is ultimately about making sure we identify women at risk and have the right tools and processes in place when they present for delivery.

I am pleased to have contributed to this work, which brings together the available evidence and expert perspectives to look at how GBS screening and management can be strengthened across Saudi Arabia. I hope the recommendations provide a practical basis for improving consistency across healthcare settings while keeping the focus firmly on timely, safe, and effective care for mothers and their babies.

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We are grateful to the multidisciplinary experts who contributed their time and experience to the GBS Expert Roundtable

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Executive Summary

This position paper reviews the current evidence on the epidemiology & burden of GBS in Saudi Arabia, outlines the existing standard of care, & identifies key opportunities to strengthen prevention and management of GBS disease.

Group B Streptococcus (GBS) is a leading cause of invasive neonatal bacterial infections worldwide and remains an important contributor to maternal and newborn morbidity. Although maternal colonization is usually asymptomatic, vertical transmission during labour can result in neonatal sepsis, pneumonia and meningitis, with potentially lifelong consequences for affected infants. Timely identification of maternal GBS colonization can inform clinical decision-making, including the use of appropriate intrapartum antibiotic prophylaxis, which has been shown to reduce the risk of early-onset disease. Screening and appropriate follow-up management therefore form important components of GBS transmission to neonates.

Evidence from Saudi Arabia demonstrates that maternal GBS colonization is common across the Kingdom and that invasive neonatal GBS disease continues to occur despite advances in obstetric and neonatal care. However, the true national burden remains difficult to quantify due to the absence of coordinated surveillance and the reliance on individual hospital-based studies, which report considerable regional variation in prevalence. Saudi Arabia does not currently endorse a single, nationally standardized GBS prevention pathway, although many institutions follow international or locally developed guidance. These variations present opportunities to strengthen the consistency and delivery of GBS prevention across the maternal care pathway.

To develop this position paper, Rofaida Women's Health Organization conducted a literature review of the published evidence on the epidemiology and burden of GBS in Saudi Arabia and the current standard of care.

This was followed by the development of a cross-sectional survey to gather insights into current clinical practices and challenges. Rofaida has sent the survey to their expert network, and 60 healthcare professionals responded. Finally, Rofaida hosted a multidisciplinary Expert Consensus Roundtable on GBS, involving specialists from obstetrics and gynecology, maternal-fetal medicine, neonatology, pediatrics, clinical microbiology and point-of-care diagnostics to discuss the literature review findings, survey results and align on priorities for strengthening GBS management and preventing neonatal GBS disease, and to develop practical recommendations that support more consistent, evidence-based maternal and neonatal care.

Drawing on the literature review, survey findings, and expert discussions, the panel reached consensus on seven priority recommendations to improve GBS management in Saudi Arabia. These include establishing unified national GBS screening and prevention guidelines, standardizing the management of women with unknown GBS status, maintaining culture-based screening while incorporating rapid molecular testing in selected clinically appropriate scenarios, improving reimbursement and access to testing, strengthening national surveillance, supporting healthcare professional education, and empowering pregnant women through education and awareness. Collectively, these recommendations provide a practical framework for strengthening the consistency of GBS screening and management, supporting clinical decision-making, and informing future improvements in maternal and neonatal care across the Kingdom.

Disclaimer:
This initiative was carried out by Rofaida Women's Health Organization with funding support from Cepheid. Becoya was engaged by Cepheid to provide strategic expertise and to develop the supporting materials for this initiative.

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Introduction:

What is Group B Streptococcus?

Group B Streptococcus (GBS), or Streptococcus agalactiae, is a bacterium that is commonly found in the gastrointestinal and genital tracts of healthy adults. In most people, GBS exists harmlessly without causing symptoms or illness. However, during pregnancy, maternal colonization becomes clinically significant because the bacterium can be transmitted from mother to baby before or during childbirth, making it one of the leading causes of invasive bacterial infections in newborns worldwide.[1]

GBS is estimated to colonize approximately one in every four pregnant women globally, although prevalence varies across populations and geographical regions.[2] Colonization with GBS is not a disease in itself, nor does it usually require treatment during pregnancy. Rather, its importance lies in the risk of vertical transmission during labour and delivery. While most babies born to mothers carrying GBS remain healthy, maternal colonization remains the single greatest risk factor for neonatal GBS disease.[3]



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Pregnant Women
are colonized with GBS worldwide

Unlike many infections, GBS colonization is dynamic and may change throughout pregnancy. Some women who test positive during the antenatal period may no longer carry the bacterium at delivery, while others who initially test negative may become colonized later in pregnancy. This changing colonization status presents an important challenge for clinicians, as the presence of GBS at the time of labour, rather than earlier in pregnancy, is what determines the risk of transmission to the newborn.[4]

In addition to maternal colonization, several obstetric factors further increase the likelihood of neonatal GBS transmission. These include prolonged rupture of membranes (ROM) (≥18 hours), maternal intrapartum fever (≥38°C), preterm labour, documented GBS bacteriuria during pregnancy, and a previous infant with invasive GBS disease. These factors are widely recognized in clinical practice and are used to identify women who may require intrapartum antibiotic prophylaxis when antenatal GBS status is unknown or unavailable.[5,6]

Transmission most commonly occurs during vaginal delivery when the baby is exposed to GBS present within the maternal genital tract. Less frequently, transmission may occur before birth through ascending infection following rupture of membranes. Although only a small proportion of exposed infants develop invasive disease, those who do can deteriorate rapidly, highlighting the importance of timely identification and appropriate preventive interventions. Without intrapartum antibiotic prophylaxis, approximately 1-2% of infants born to colonized mothers develop early-onset GBS disease, a risk that can be reduced substantially through evidence-based prevention strategies.[7]

Factors Increasing the Likelihood of Neonatal GBS Transmission

- Prolonged rupture of membranes (≥18h)
- Maternal fever (≥38°C)
- Preterm labour
- GBS bacteriuria in pregnancy
- Previous infant with GBS

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Introduction:

Clinical Impact of GBS Disease

GBS disease in newborns is broadly classified into early-onset disease (EOD) and late-onset disease (LOD), based on the timing of presentation. While current prevention strategies have been highly effective in reducing early-onset disease, preventing late-onset infection remains a significant clinical challenge.[8]

The clinical presentation of neonatal GBS infection is often subtle during its early stages. Newborns may initially present with poor feeding, lethargy, respiratory distress, temperature instability, or irritability, symptoms that can easily mimic other neonatal conditions. However, disease progression may be rapid, with GBS causing invasive infections such as sepsis, pneumonia, and meningitis. Prompt recognition and treatment are therefore essential to improving survival and reducing long-term complications.[7]

For many affected infants, the consequences extend far beyond the immediate infection. Although advances in neonatal care have improved survival, invasive GBS disease remains associated with significant mortality, particularly among preterm infants. Survivors of GBS meningitis face increased risk of long-term neurological complications, including hearing loss, epilepsy, cerebral palsy, and developmental disabilities, placing considerable burdens on families and healthcare systems.[1,9]

The impact of GBS is also increasingly recognized as extending beyond neonatal infection alone. Evidence suggests that maternal GBS colonization may contribute to adverse pregnancy outcomes, including urinary tract infections, chorioamnionitis, postpartum endometritis, preterm birth, and stillbirth. Globally, GBS represents a major maternal and newborn health priority:[7]

Recognizing this growing public health burden, the World Health Organization published its first recommendation on GBS screening in 2024, acknowledging that countries should adopt evidence-based prevention strategies appropriate to their healthcare systems and available resources. Whether through universal antenatal screening or a risk-based approach, the common objective remains the same: to identify women at risk of transmitting GBS during labour and ensure timely interventions that protect both mothers and newborns.[10]

GBS In Newborns — Key Facts At A Glance

Early-onset (EOD)
Days **0–6** of life
Acquired during labour or delivery

Late-onset (LOD)
Day **7 to 3** months
Household or environmental

The Global Burden, Each Year

390,000
Neonatal Infections

500,000+
Preterm Births

150,000
Stillbirths & Infant Deaths

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The Burden Of Group B Streptococcus Infection In Saudi Arabia

GBS is increasingly recognized as an important contributor to maternal and neonatal morbidity in Saudi Arabia. While global evidence has established GBS as a leading cause of neonatal sepsis, pneumonia and meningitis, understanding its true burden within the Kingdom remains challenging. Unlike countries with established national surveillance programmes, Saudi Arabia relies primarily on evidence generated from individual hospital-based studies conducted across different regions, populations and healthcare settings. Consequently, published estimates vary considerably, making direct comparisons difficult and limiting the ability to accurately quantify the national burden of disease. Nevertheless, the available evidence consistently demonstrates that maternal GBS colonization is common across the Kingdom and that invasive neonatal GBS disease continues to occur despite advances in obstetric and neonatal care.[11]

The most comprehensive review of Saudi evidence to date identified 21 published studies evaluating maternal GBS colonization and neonatal GBS disease. The review concluded that although sufficient evidence exists to demonstrate that GBS is an important maternal and neonatal pathogen in Saudi Arabia, the absence of multicenter studies and standardized reporting prevents the generation of a reliable national prevalence estimate. The authors further emphasized that nationally coordinated surveillance is needed to accurately characterize disease burden and inform future screening policies.[12]

Maternal Colonization Of GBS Is Inconsistently Reported Across Saudi Arabia

Maternal rectovaginal colonization is the essential prerequisite for neonatal GBS transmission and therefore represents the most important indicator of disease burden. Published studies from Saudi Arabia show substantial regional variation, with reported maternal colonization ranging from 10.4% in Najran, 24% in Taif, to 44.5% in Jeddah, with several other regions showing distinct prevalence rates (please refer to Table 1). This wide range should, however, be interpreted in the context of differences in study populations and methods. Studies have used different sampling approaches, including vaginal swabs alone and combined vaginal and rectal/rectovaginal swabs, as well as different laboratory methods, including direct plating and selective enrichment broth before culture. Moreover, the studies' population differed in the gestational age at which women were screened, with some enrolling women during antenatal care and others performing sampling only after admission for labour. Finally, differences in healthcare settings and regional demographics further influence reported prevalence. These methodological differences can affect GBS detection and contribute to variation in reported prevalence between settings. Taken together, the available evidence points to a variable but potentially substantial maternal GBS burden across the Kingdom, while also highlighting the need for more consistent surveillance and screening methodologies to understand the national picture better.[12,5,13]

Table 1:
Region-wide reported prevalence of GBS colonization among pregnant women

Region	Hospital	Year	Reported Prevalence	Sampling Technique	Study Journal
Jeddah	King Abdulaziz University Hospital	2019–2020	**44.5%**[5]	Combined vaginal and rectal swabs collected during labour	Archives of Pharmacy Practice
Taif	Al-Hada Armed Forces Hospital	2014	**24%**[14]	Combined lower vaginal and anorectal swabs	Journal of Clinical Gynecology & Obstetrics
Al Khobar	King Fahd Hospital of the University	2011–2016	**19%**[13]	Combined vaginal & rectal swabs (urine also collected)	Saudi Journal of Medicine & Medical Sciences
Makkah	Maternity and Children Hospital	2013–2014	**13.4%**[15]	Single vaginal swab	Annals of Saudi Medicine
Najran	Najran Armed Forces Hospital	2022	**10.4%**[16]	High vaginal swab collected during antenatal care	Int'l Journal of Community Medicine & Public Health

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Regions Studied Across The Kingdom

10.4–44.5%
Reported GBS Prevalence Range

Neonatal GBS Disease Continues To Pose A Significant Clinical Burden

While only a minority of infants exposed to GBS develop invasive infection, those who do often require intensive medical care. Available evidence from Saudi Arabia confirms that both early-onset disease (EOD) and late-onset disease (LOD) continue to occur across the Kingdom and remain important causes of neonatal sepsis and meningitis.

A study conducted at King Abdullah Specialist Children's Hospital in Riyadh over 13 years identified that amongst all the recorded GBS cases in live births, nearly seven in ten cases presented as early-onset disease, highlighting that the majority of cases in this cohort presented during the early-onset period, when identification of maternal GBS colonization can inform timely intrapartum antibiotic prophylaxis, an established intervention for reducing the risk of early-onset GBS disease. With a reported case-fatality rate of 3.6%, invasive GBS infection continued to impose a considerable clinical burden through significant neonatal morbidity and prolonged hospitalization.[17]

More recent evidence from Al-Madinah Al-Munawarah demonstrates that neonatal GBS disease remains an ongoing challenge. Over five years, investigators identified 64 laboratory-confirmed neonatal infections, with 53.1% presenting as early-onset disease and 46.9% as late-onset disease. Although early-onset disease remained the most common presentation, late-onset infections were significantly more likely to involve the central nervous system, with meningitis representing an important clinical manifestation. Mortality within this cohort reached 10.9%, underscoring the consequences of invasive GBS infection even in modern neonatal care settings.[6]

Table 2:
Distribution of Early-Onset and Late-Onset GBS among neonatal sepsis cases

Region	Hospital	Year	Early-Onset Disease	Late-Onset Disease	Study Journal
Riyadh[17]	King Abdullah Specialist Children's Hospital	2004-2016	**69%**	**31%**	Pediatric Infectious Disease Journal
Al-Madinah[6]	Maternity & Child Hospital	2017-2022	**53%**	**47%**	Saudi Medical Journal

Implications For Maternal & Newborn Health Policy

Taken together, the available evidence indicates that GBS is neither an isolated nor an uncommon clinical problem in Saudi Arabia. Maternal colonization has been consistently documented across all major regions that have been studied, and invasive neonatal disease continues to be reported from tertiary centers throughout the Kingdom. However, the evidence base remains fragmented, with substantial differences in study methodologies, regional representation, and screening practices that limit direct comparisons between studies. This fragmented landscape makes it difficult to accurately estimate the national burden of disease or evaluate regional variation in outcomes.

As Saudi Arabia continues to strengthen maternal and newborn healthcare under Vision 2030, establishing coordinated national surveillance and generating robust epidemiological data will be essential to better understand the burden of GBS and inform future screening and prevention strategies. The existing evidence provides a strong foundation for this work and consistently points towards the need for greater standardization in both surveillance and clinical practice.



Current GBS Practices In Saudi Arabia

Current Screening Practices

Universal antenatal screening using microbiological testing is commonly used in participating tertiary centers across Saudi Arabia. The cross-sectional survey with healthcare professionals in Saudi Arabia conducted by Rofaida in the Kingdom found that individual hospitals and healthcare systems determine their own screening protocols, drawing primarily on recommendations from international organizations such as the American College of Obstetricians and Gynecologists (ACOG), the Centers for Disease Control and Prevention (CDC), and locally developed institutional protocols. Consistent with the ACOG and CDC recommendations, the survey highlighted that screening is generally performed between 36 and 37 weeks of gestation, mainly using vaginal swabs only (58.3%) and combined rectovaginal swabs (38.3%). Specimens are processed using selective enrichment culture methods, which remain the internationally accepted reference standard for identifying maternal GBS colonization.

Although culture remains the cornerstone of current practice, implementation varies considerably between institutions. While many hospitals routinely perform antenatal GBS screening, differences exist in the timing of testing, specimen collection methods, laboratory workflows, and clinical decision-making processes.

Despite widespread adoption of culture-based screening, several operational challenges remain. Culture requires laboratory processing and typically produces results after **24-72 hours,** and is generally compatible with planned antenatal screening.[18] However, this turnaround time becomes particularly relevant for women who present unexpectedly in labour, deliver preterm, or have not undergone antenatal screening. Furthermore, because maternal GBS colonization is dynamic, a negative culture obtained several weeks before delivery may not always reflect colonization status at the time of labour. GBS can be cleared or newly acquired between screening and delivery, meaning that women may test positive or negative at different points during pregnancy.[4,19] For example, Virranniemi et al. (2019) found that 3.2% of women who tested negative during antenatal screening were tested positive at labour, while 2.5% of those who initially tested positive were negative at labour.[4] Collectively, these factors contribute to a significant proportion of women arriving for delivery with unknown or outdated GBS status, making timely decisions regarding intrapartum prophylaxis more challenging.

The cross-sectional survey was conducted online by Rofaida, using Google Forms. Rofaida selected 60 healthcare professionals based on their relevant knowledge and expertise in maternal and neonatal care, including obstetrician-gynecologists, neonatology and neonatal intensive care specialists, microbiologists and pediatricians from Ministry of Health, military and private hospitals across Saudi Arabia. The 30-question structured survey assessed GBS awareness and explored current screening and management practices, including sampling techniques, testing locations, diagnostic turnaround times, and operational challenges across different healthcare settings. The responses provided insights into current clinical practices and variations in GBS screening and management across different healthcare settings in Saudi Arabia.

Based on the cross-sectional survey, culture-based testing remains the current standard of care in Saudi Arabia. However, several centers within Saudi Arabia have incorporated rapid molecular testing into their clinical workflows, enabling quicker and highly accurate results for GBS testing.

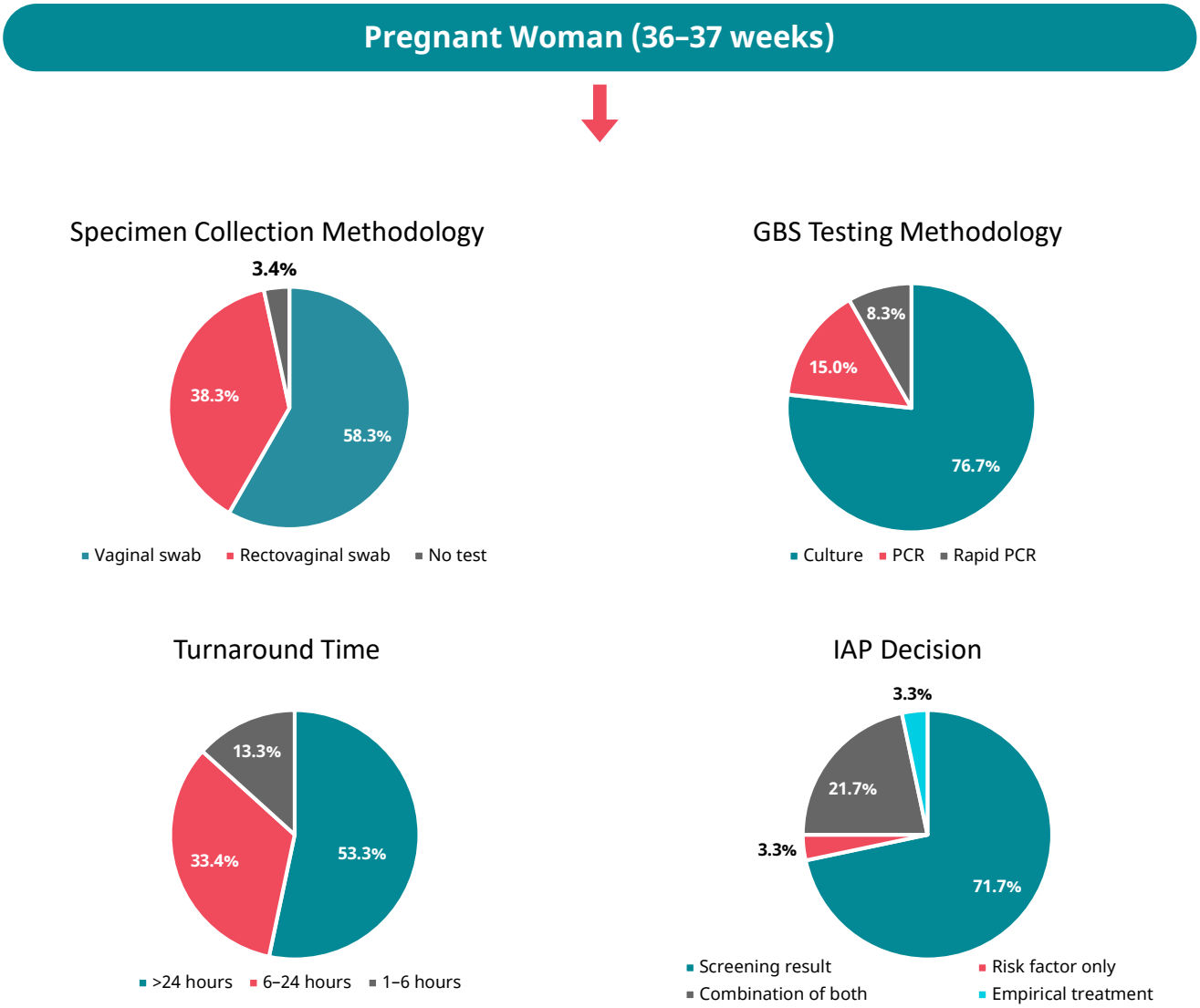


Figure 1:

Current GBS screening and management practices in Saudi Arabia (based on the results from the cross-sectional survey on GBS screening and management practices conducted with 60 healthcare professionals by Rofaida)

Current Management Of Maternal GBS Colonization

Women identified as GBS-positive during pregnancy are managed with intrapartum antibiotic prophylaxis (IAP) during labour to reduce vertical transmission to the newborn. Available evidence indicates that GBS management practices in Saudi Arabia generally align with international recommendations, although protocols and implementation may vary between healthcare institutions. Intravenous penicillin remains the preferred first-line agent because of its well-established efficacy and the continued high susceptibility of local GBS isolates to beta-lactam antibiotics. Ampicillin is commonly used as an alternative first-line option where appropriate.[14,20]

Management becomes more individualized for women reporting penicillin allergy. In women with a low risk of severe allergic reaction, cefazolin remains the preferred alternative. For those with a confirmed high-risk penicillin allergy, antibiotic selection depends on antimicrobial susceptibility testing, as resistance to clindamycin has been increasingly reported among Saudi GBS isolates.[14] Local data have reported clindamycin resistance rates of up to 28.5%, reinforcing the need for documented susceptibility before its use.[20,21] Clindamycin should therefore only be administered when laboratory testing confirms susceptibility, including a negative D-zone test where indicated to exclude inducible clindamycin resistance. Where clindamycin susceptibility is unconfirmed, weight-based vancomycin (20 mg/kg IV every 8 hours) should be used as the default agent for penicillin-allergic women at high risk of anaphylaxis. These principles are consistent with current international recommendations and support ongoing antimicrobial stewardship efforts.[14]

Current Management Of The Newborn

The management of newborns exposed to maternal GBS is guided by a combination of maternal screening status, whether intrapartum antibiotic prophylaxis (IAP) was administered before delivery, gestational age, the infant's clinical condition, and the Neonatal Early-Onset Sepsis Risk Calculator to avoid unnecessary NICU admissions and empiric antibiotic exposure. Symptomatic neonates require immediate evaluation for sepsis, including microbiological investigations, followed by prompt initiation of empirical antibiotic therapy. In contrast, asymptomatic infants born to mothers who received adequate IAP are generally managed with routine clinical observation.[22,23,24,25]



For infants born to mothers with unknown GBS status or who did not receive IAP, management is determined by the presence of additional risk factors such as prematurity or prolonged rupture of membranes. Depending on the clinical scenario, infants may undergo enhanced observation alone or receive laboratory investigations and empirical treatment if concerns for infection arise. This risk-stratified approach aims to balance early identification of neonatal sepsis while minimizing unnecessary antibiotic exposure.[24,25,26,27]

Table 3:

Management of infants exposed to GBS (analysis based on multiple published studies)[23,24,25,26]

Maternal GBS Status / Intrapartum Antibiotic Prophylaxis	Asymptomatic Infant	Symptomatic Infant
GBS positive + adequate IAP (≥4 h before delivery)	Routine clinical observation; no routine laboratory investigations	Prompt evaluation for neonatal sepsis & empirical IV antibiotics, guided by neonatal sepsis recommendations and the infant's clinical condition. Full neonatal sepsis evaluation and immediate empirical IV antibiotics
GBS positive + inadequate intrapartum antibiotic prophylaxis (<4 h before delivery)	Management depends on neonatal risk assessment, considering gestational age, duration of membrane rupture, maternal fever, and use of an EOS risk calculator or clinical examinations. Some infants require observation only, whereas others require blood culture ± empiric antibiotics	Prompt evaluation for neonatal sepsis and empirical IV antibiotics, guided by neonatal sepsis recommendations and the infant's clinical condition.
Unknown or undocumented GBS status	Management depends on maternal risk factors (preterm birth, intrapartum fever, prolonged rupture of membranes, etc.), IAP exposure, and infant's clinical condition. Management may range from serial clinical observation to laboratory evaluation and empirical antibiotics.	Prompt evaluation for neonatal sepsis and empirical IV antibiotics, guided by neonatal sepsis recommendations and the infant's clinical condition.
Maternal GBS bacteriuria during pregnancy or previous infant with invasive GBS disease	These mothers are automatically considered candidates for IAP. Neonatal management then follows the IAP status and infant's clinical status rather than maternal indications alone	Full diagnostic evaluation for neonatal sepsis and immediate empiric IV antibiotics

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Opportunities For Improving GBS Prevention & Management

Saudi Arabia has established some of the key components of an effective GBS prevention programme, with routine screening implemented across many tertiary hospitals and well-established approaches to intrapartum antibiotic prophylaxis. However, several opportunities exist to strengthen the consistency, efficiency and reach of current practice. These opportunities center on improving standardization across the care pathway, reducing variation in clinical practice, strengthening diagnostic pathways and generating the evidence needed to better inform future maternal and neonatal health policy.



Strengthening The National Evidence Base

Although numerous studies have evaluated maternal GBS colonization in Saudi Arabia, reported prevalence continues to vary considerably across regions, ranging from approximately 10% to 45% depending on the study population and methodology. At present, there is no nationally representative estimate of maternal GBS colonization or neonatal GBS disease burden, limiting understanding of the true epidemiology of GBS across the Kingdom. This presents an opportunity to strengthen national surveillance and generate more comprehensive epidemiological evidence to better understand regional variation, monitor disease trends and inform future policy development.



Establishing A Nationally Standardized Intrapartum Pathway For Pregnant Women With Undocumented GBS Status

Culture-based testing remains the current standard of care for routine antenatal GBS screening and continues to provide the foundation for clinical decision-making. However, maternal GBS colonization is dynamic and may change between antenatal screening and delivery, meaning that the result available at the time of labour may not always reflect a woman's current colonization status. This is particularly relevant for women who present in labour without documented antenatal care, have missed routine antenatal screening, or have an unknown GBS status, where clinicians must make timely intrapartum decisions without a documented screening result. These considerations highlight an opportunity to develop clearer clinical decision pathways for women going into labour, regardless of their previous screening status, while maintaining appropriate use of intrapartum antibiotic prophylaxis.

Creating Greater Consistency Across The Screening Pathway

Current GBS screening practices are well established in many healthcare institutions; however, implementation continues to vary between hospitals. Differences in screening strategies, specimen collection techniques, laboratory workflows and clinical decision-making contribute to variability across the maternal care pathway. This creates an opportunity to achieve greater consistency in how GBS screening is delivered, while maintaining flexibility to accommodate different healthcare settings. Similarly, variation in specimen collection practices, including the use of vaginal swabs alone versus combined rectovaginal swabs, may influence detection rates and contribute to differences in reported prevalence between institutions. Harmonizing laboratory practices and specimen collection methods represents an important opportunity to improve the quality and consistency of GBS screening nationwide. Making GBS screening a routine part of antenatal care across all healthcare settings would help build a more consistent approach to screening and reduce variation in clinical practice.

Improving Awareness And Implementation Across The Maternal Care Pathway

Beyond screening itself, opportunities also exist to strengthen implementation across the broader maternal care pathway. Continued variation in adherence to screening pathways, laboratory processes and clinical practice suggests scope to improve consistency across different healthcare settings. Greater alignment of laboratory standards, clinical workflows and patient pathways could contribute to more reliable implementation of current GBS prevention strategies. There is also an opportunity to strengthen awareness and understanding of GBS among both healthcare professionals and pregnant women. Improving knowledge of GBS, the purpose of screening and the importance of timely testing may support greater participation in screening programmes and improve compliance with recommended care pathways. Continued education for multidisciplinary healthcare teams, including obstetricians, midwives, nurses, laboratory professionals and neonatal clinicians, also represents an important opportunity to promote more consistent implementation of current practice. More broadly, strengthening patient awareness and community engagement could help reduce the number of women presenting for delivery without documented GBS status, while reinforcing the role of GBS screening as an important component of safe maternity care.

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Expert Consensus Recommendations For Saudi Arabia

Building on the available evidence and the current landscape of GBS prevention and management in Saudi Arabia, Rofaida convened a multidisciplinary Expert Consensus Roundtable on GBS for Saudi Arabia on 27 June 2026.

The 12 participating experts were selected based on their expertise in GBS and maternal and neonatal care, representing obstetrics and gynecology, maternal-fetal medicine, neonatology, pediatrics, clinical microbiology, and point-of-care diagnostics. The roundtable provided a platform to review current GBS screening and management practices, discuss key challenges across the maternal and neonatal care pathway, and discuss priorities for strengthening GBS prevention and management in Saudi Arabia.

The panel identified a series of priority recommendations to strengthen GBS prevention across the maternal and neonatal care pathway. These recommendations reflect the collective views of the participating experts and are intended to support greater consistency in clinical practice, inform implementation priorities, and contribute to efforts to strengthen maternal and neonatal care across Saudi Arabia

Recommendations

01

Establish unified national GBS screening and prevention guidelines by the Saudi Health Council and the Public Health Authority (Weqaya)

A nationally standardized approach to GBS prevention by the Saudi Health Council and the Public Health Authority (Weqaya), in collaboration with relevant stakeholders, should be established across all healthcare settings to provide consistent guidance on antenatal screening, laboratory standards, specimen collection, intrapartum antibiotic prophylaxis, neonatal management, and follow-up. A unified framework would help reduce variation in current practice and promote equitable access to evidence-based care throughout the Kingdom.

02

Standardize routine culture-based screening for GBS detection as the standard of care

Routine antenatal culture-based screening should remain the standard of care. A nationally standardized screening protocol should specify combined lower vaginal and anorectal swab collection at 36 0/7 to 37 6/7 weeks of gestation, using selective enrichment broth (such as Todd-Hewitt with selective antibiotics) before subculture, as the standard approach. Utilization of single vaginal or high-vaginal swabs should be restricted.

03 Establishing an intrapartum pathway for women presenting with unknown GBS status

A clear national clinical pathway and algorithm should be developed for women presenting in labour with unknown or undocumented GBS status, including those with missed antenatal screening, limited antenatal care, unbooked intrapartum admission, precipitous labour, unexpected preterm deliveries, or an unavailable result. Where a validated rapid molecular test can provide a result within the timeframe required for intrapartum management, testing may be used to support IAP decisions. Hospitals should establish standardised pathways to ensure rapid access to testing and timely communication of results to the clinical team, enabling decisions before delivery where feasible. When timely testing is unavailable, a risk-factor matrix (intrapartum fever ≥38.0 °C, prolonged ROM ≥18 hours, gestation under 37 weeks, or GBS bacteriuria) may guide intrapartum management, ensuring timely and consistent care across healthcare settings.

04 Improve access to clinically appropriate use of rapid molecular testing through effective reimbursement by the Council of Health Insurance (CHI) and integration into routine maternity care

Rapid GBS molecular testing should be covered through reimbursement policies established by the CHI and integrated into public and private hospitals' maternity care packages for use in clinically appropriate scenarios, ensuring equitable access for pregnant women across Saudi Arabia.

05 Strengthen national surveillance and data collection through creation of a national registry for GBS

A national GBS surveillance programme and centralized national registry should be established to monitor maternal colonization, neonatal disease burden, screening uptake, implementation of screening programmes, and maternal and neonatal outcomes. This framework should enable longitudinal monitoring of GBS serotypes and antimicrobial resistance patterns across all 13 administrative regions of Saudi Arabia. Strengthening the national evidence base will support future policy development and continuous evaluation of programme effectiveness.

06 Strengthen implementation through education and quality improvement

Consistent implementation of evidence-based neonatal GBS prevention and improvement of maternal GBS colonization should be supported through continued education for healthcare professionals, standardized laboratory practices, multidisciplinary training, and ongoing monitoring of adherence to nationally standardized screening and management pathways, once established. Effectiveness could be evaluated through institutional monitoring of antenatal screening coverage, appropriate administration of indicated intrapartum antibiotic prophylaxis, timely ascertainment of GBS status in women presenting with unknown status where rapid molecular testing is clinically appropriate, and trends in maternal GBS colonization and neonatal GBS disease. These indicators should inform ongoing adherence to guidelines (once established) and help identify gaps in implementation across healthcare settings.

07 Empower women through education and awareness

Pregnant women should be provided with clear, accessible information about GBS, the purpose of screening and available prevention strategies to support informed decision-making throughout pregnancy. Integrating GBS education into routine antenatal care and broader community engagement initiatives will help improve awareness, participation in screening and overall patient safety.

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About Rofaida

Rofaida Women's Health Organization is a Saudi non-profit organization dedicated to advancing women's health through education, research, professional development and policy engagement. Guided by its vision of enabling women to make informed health decisions through knowledge, supportive policies and access to reliable information, Rofaida works to improve health outcomes across the Kingdom by promoting evidence-based practice and fostering collaboration among healthcare professionals, policymakers and the wider community.

Rofaida's work spans four complementary areas: health education, professional training, research and policy advocacy. The organization develops educational programmes and awareness campaigns for women, delivers multidisciplinary training for healthcare professionals, supports research that informs women's health policy, and facilitates dialogue between clinicians, researchers and decision-makers to address emerging healthcare priorities. Through these activities, Rofaida aims to translate scientific evidence into practical improvements in women's healthcare and contribute to the development of policies that reflect the needs of women in Saudi Arabia.

As part of its commitment to advancing evidence-based maternal healthcare, Rofaida partnered with Cepheid to convene a multidisciplinary Expert Consensus Roundtable on GBS in Saudi Arabia. This position paper reflects Rofaida's commitment to supporting evidence-informed policy development and supporting maternal and neonatal health through multidisciplinary collaboration. By bringing together scientific evidence, clinical expertise, and stakeholder perspectives, the organization seeks to contribute to practical, sustainable solutions that strengthen women's health services and contribute to efforts to improve health outcomes across Saudi Arabia.[28]

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