

MenMap Quarterly Epidemiological Bulletin – 3rd Quarter, Year 2

2025

About This Bulletin

The Meningitis and Septicemia Mapping Network (MenMap) continues to strengthen regional surveillance of invasive bacterial diseases in Jordan, Egypt, and Iraq. This sixth issue presents findings from the third quarter of Year 2 (June–August 2025), reflecting MenMap's ongoing efforts to advance data quality, harmonize laboratory practices, and promote evidence-based decision-making across the Eastern Mediterranean Region (EMR).

This quarter's bulletin highlights key operational and analytical developments across all three countries. Despite continued operational constraints in Iraq, Jordan and Egypt maintained steady surveillance activities, with notable performance improvements in specimen collection and diagnostic accuracy.

1. Overview of Meningitis Case Counts and Trends

1.1 Total Cases Overview

Between June and August 2025, the MenMap network recorded the following key surveillance outputs:



567

suspected meningitis cases were reported across Jordan, Egypt, and Iraq



20

cases (3.5%) were laboratory-confirmed via PCR testing



13 out of 20

confirmed cases (65%) were attributed to *Streptococcus pneumoniae*



June 2025

saw the highest number of suspected cases (n=205)



July 2025

produced the highest number of confirmed cases (n=10)



Iraq

reported the largest number of suspected cases (n=239)



Egypt

contributed relatively higher proportions of confirmed cases (40%)



All confirmed cases (n=20)

were hospitalized



1 –5 years

was the most affected age group, comprising 55% of all confirmed cases



Two deaths

were reported in Jordan and Egypt; all cases were laboratory-confirmed *S. pneumoniae*, but the cause of death remains unverified

As of the end of August 2025, MenMap has documented a cumulative total of **3,513 suspected** and **275 confirmed** bacterial meningitis cases since surveillance began in December 2023.

1.2 Case Counts by Country ([Jordan](#), [Egypt](#), [Iraq](#))

Jordan

During the third quarter of Year 2, MenMap surveillance activities in Jordan continued across the four established sentinel hospitals (Al-Basheer, Al-Karak, Zarqa, and Princess Rahma). A total of **145** suspected meningitis cases were enrolled. Among these, **6** cases (4.1%) were laboratory-confirmed via PCR, including **5** *S. pneumoniae* and **1** *Haemophilus influenzae* type b. None of the *S. pneumoniae* cases this quarter had received the pneumococcal vaccine. However, with the recent rollout of the vaccine in Jordan, future bulletins may report more vaccinated cases, and potentially fewer infections

One death was reported: A confirmed *S. pneumonia* case in a patient under one year of age at Zarqa Hospital.

Key Statistics

Total Suspected Cases: 145 ([Figure 1](#))

Gender Distribution: Female: **60** cases (41.4%), Male: **85** cases (58.6%) ([Figure 2](#))

Top Age Group: <1 year (69% of enrolled cases) ([Figure 3](#))

Positive Cases Across Sentinel Hospitals: **6** (4.1%) confirmed cases, **1** *H. influenzae* (a vaccinated male in the 1–5 age group), and **5** *S. pneumoniae*, distributed across Al-Karak, Zarqa, and Princess Rahma Hospitals (n=2 each) ([Figure 4](#))

Year-over-year comparison:

In Q3 of Year 1 (June–August 2024), Jordan reported **184** suspected cases with **2** confirmed. In Q3 of Year 2 (June–August 2025), suspected cases declined modestly to **145**, but confirmed cases increased threefold to **6**.

This reflects a 21.2% decline in suspected cases, consistent with improved case-definition adherence, while confirmed infections rose by 200%. As a result, the positivity rate more than tripled (4.1% vs 1.1%), suggesting that surveillance efforts in Jordan are becoming more effective at identifying true bacterial meningitis cases.

Figure 1: Suspected vs Confirmed Meningitis Cases by Hospital Name in Jordan (June-August 2025)

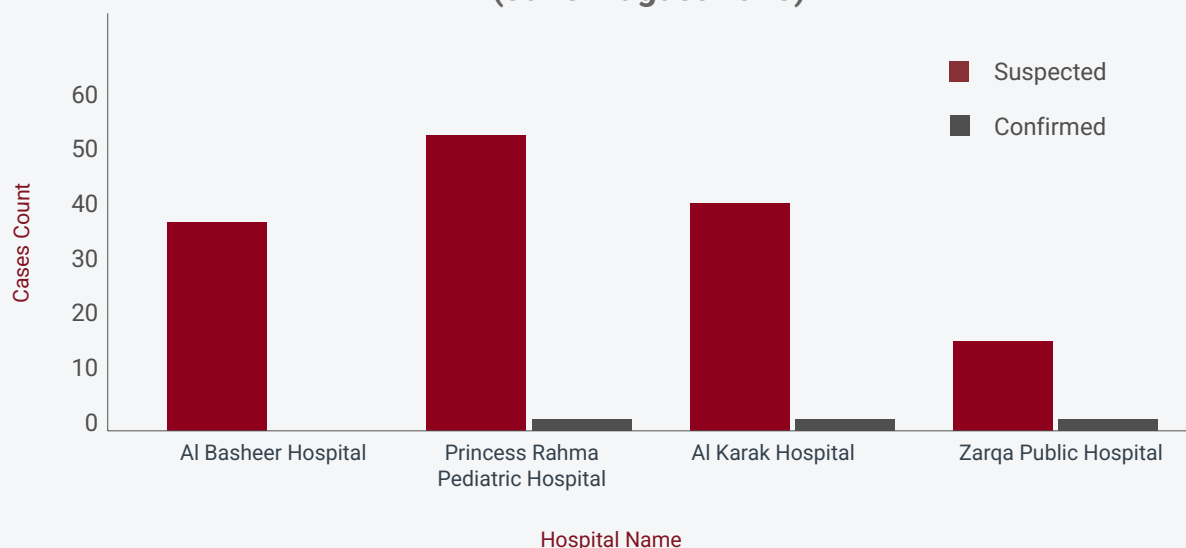


Figure 2: Gender Distribution of Enrolled Meningitis Cases in Jordan (June-August 2025)

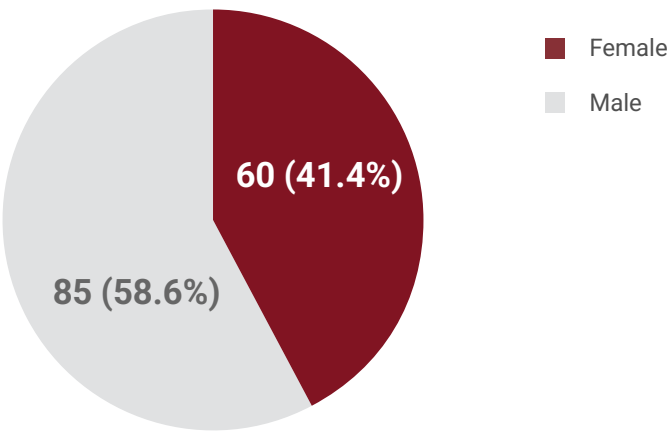


Figure 3: Percentage of Enrolled Meningitis Cases According to Age Group in Jordan (June-August 2025)

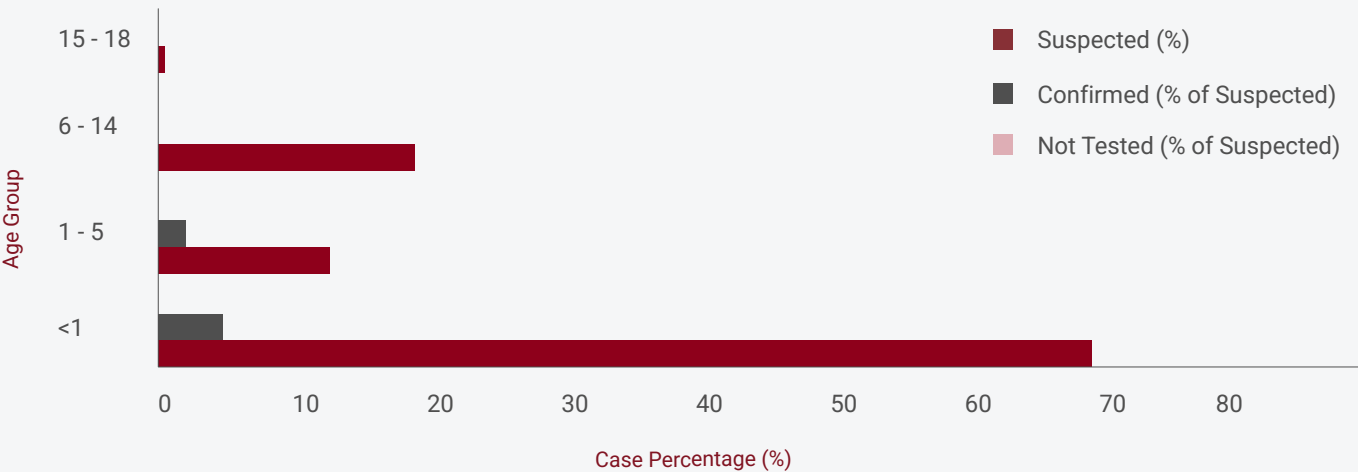
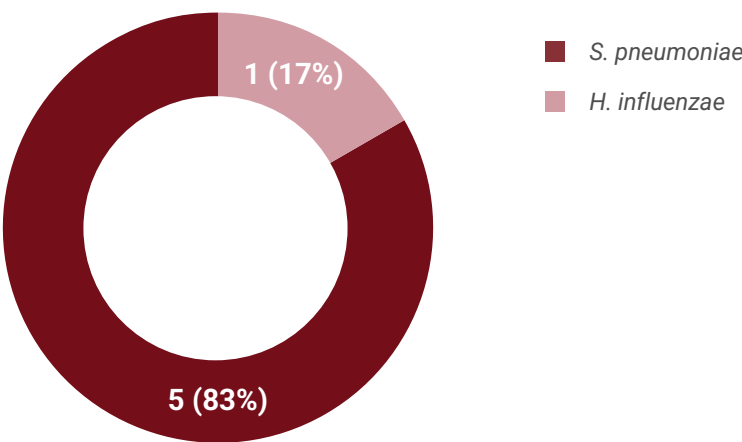


Figure 4: Pathogen Distribution in Laboratory-Confirmed Cases in Jordan (June-August 2025)



Egypt

During the third quarter of Year 2, MenMap surveillance activities in Egypt continued across the four sentinel hospitals (Abbasia Fever Hospital, Zagazig Fever Hospital, Alexandria Fever Hospital, and Minya Fever Hospital). A total of **183** suspected meningitis cases were enrolled. Among these, **8** cases (4.4%) were laboratory-confirmed via PCR, including five *S. pneumoniae*, two *Neisseria meningitidis*, and one *H. influenzae* type b.

One death was reported: A confirmed hospitalized *S. pneumoniae* case in a child under one year of age at Abbasia Fever Hospital.

Key Statistics

Total Cases Enrolled: 183 ([Figure 5](#))

Gender Distribution: Female: **67 cases (36.6%)** with **2** confirmed; Male: **116 cases (63.4%)** with **6** confirmed ([Figure 6](#))

Top Age Group: **6–14 years (36%** of suspected cases), with **3** confirmed (1 *S. pneumoniae*, 2 *N. meningitidis*) ([Figure 7](#))

Positive Cases Across Sentinel Hospitals: 8 (4.4%) confirmed cases, **5** *Streptococcus pneumoniae* (None vaccinated), **2** *N. meningitidis* (serogroups W and B), and **1** *H. influenzae* (a vaccinated male in the 1–5 age group). Abbasia Fever Hospital accounted for the highest number of confirmed cases (n=5) ([Figure 8](#))

Year-over-year comparison:

In **Q3** of Year 1 (June-August 2024), Egypt reported **99** suspected cases with **8** confirmed. This reflects an **84.8%** increase in suspected cases, while confirmed cases showed no change. As a result, the positivity rate declined from **8.1%** in the third quarter of the first year to **4.4%** in the same quarter of the second year.

Figure 5: Suspected vs Confirmed Meningitis Cases by Hospital Name in Egypt (June-August 2025)

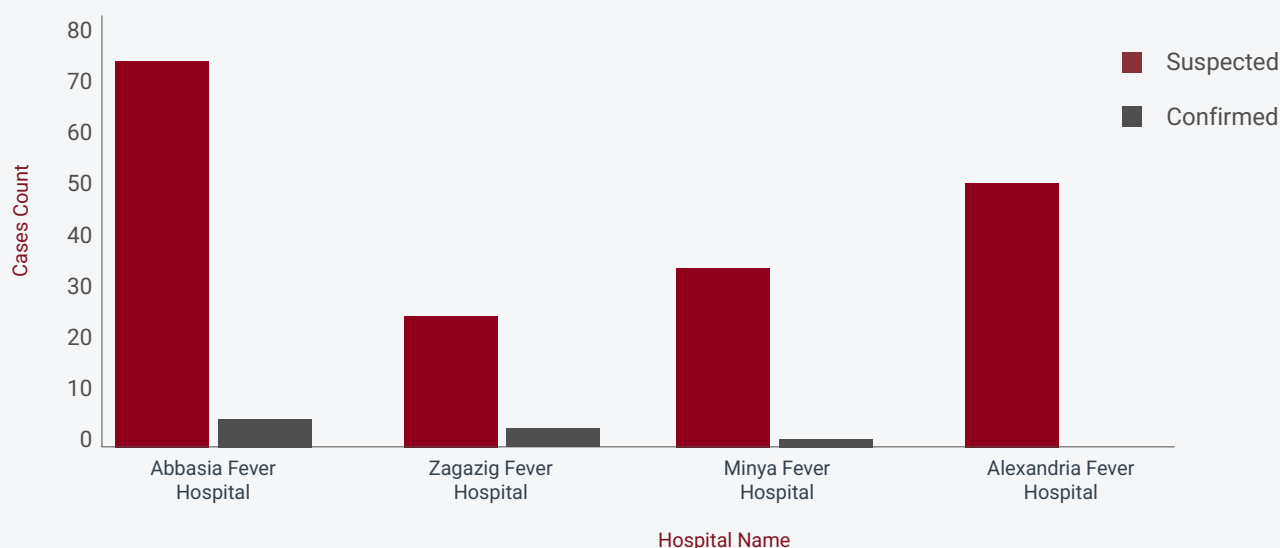


Figure 6: Gender Distribution of Enrolled Meningitis Cases in Egypt (June-August 2025)

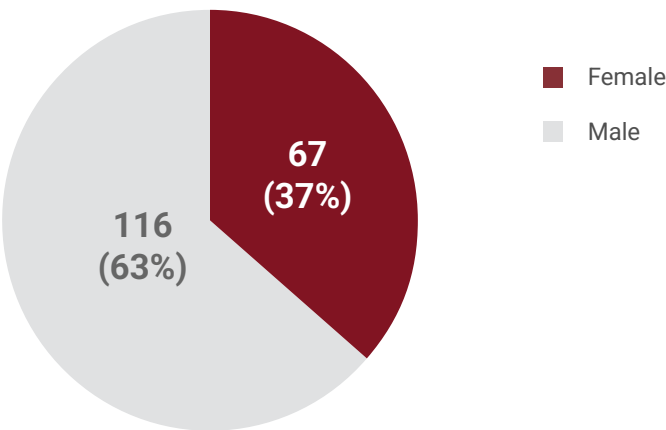


Figure 7: Percentage of Enrolled Meningitis Cases According to Age Group in Egypt (June-August 2025)

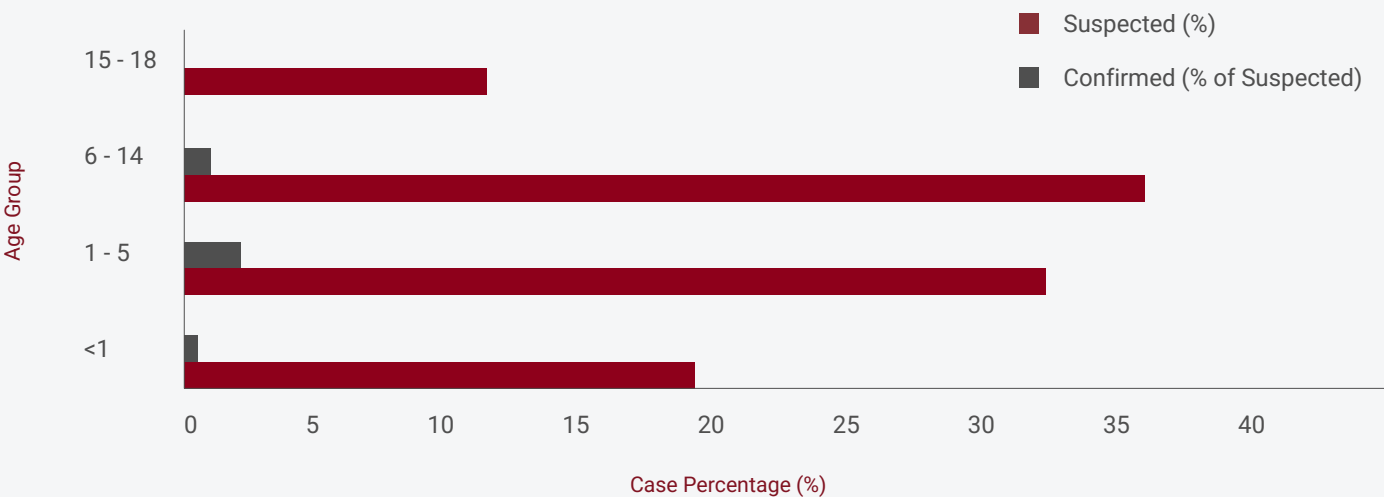
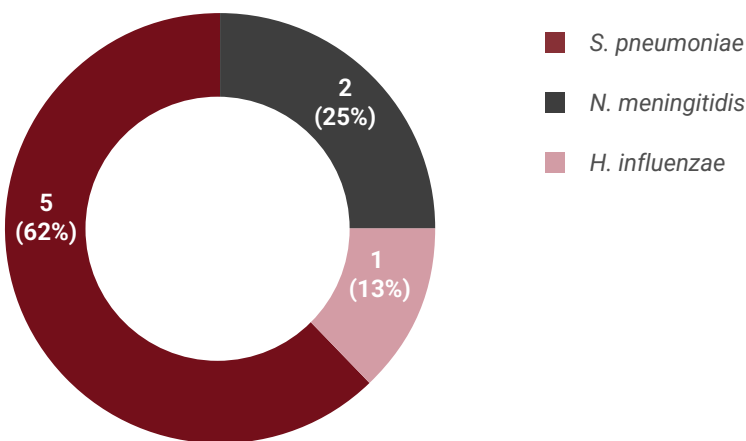


Figure 8: Pathogen Distribution in Laboratory-Confirmed Cases in Egypt (June-August 2025)



Iraq

During the third quarter of Year 2, MenMap surveillance activities in Iraq resumed following the pause in sentinel site operations during the previous quarter due to logistical challenges. Data collection restarted across the same seven sentinel hospitals: Central Pediatric Hospital, Al-Zahraa Pediatrics Teaching Hospital, Basra Pediatric Hospital, Elwia Pediatric Hospital, Ibn Al-Balady Pediatric Hospital, Karbala Pediatric Hospital, and Kirkuk Pediatric Hospital. A total of **239** suspected meningitis cases were enrolled. Among these, **6** cases (2.5%) were laboratory-confirmed via PCR, all identified as *S. pneumoniae*.

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Key Statistics

Total Cases Enrolled: 239 ([Figure 9](#))

Gender Distribution: Female: **100** cases (**41.8%**) with **3** confirmed; Male: **139** cases (**58.2%**) with **3** confirmed ([Figure 10](#))

Top Age Group: <1 year (36% of suspected cases), though most confirmed cases were reported in the 1–5 year group ([Figure 11](#))

Positive Cases Across Sentinel Hospitals: **6** (**2.9%**) confirmed cases, all *S. pneumoniae* (*None vaccinated*) with Elwia Pediatric Hospital accounting for the highest number of confirmed cases (n=3) ([Figure 12](#))

Year-over-year comparison:

In Q3 of Year 1, the sentinel sites in Iraq reported **237** suspected cases with **19** confirmed. In the same quarter of Year 2, the number of suspected cases was almost unchanged at **239**, while confirmed cases declined sharply to **7**. This reflects a **63.2%** decrease in confirmed cases, leading to a significantly lower positivity rate in Year 2, Quarter 3 (**2.9%** vs **8.0%** in Year 1, Quarter 3).

Figure 9: Suspected vs Confirmed Meningitis Cases by Hospital Name in Iraq (June-August 2025)

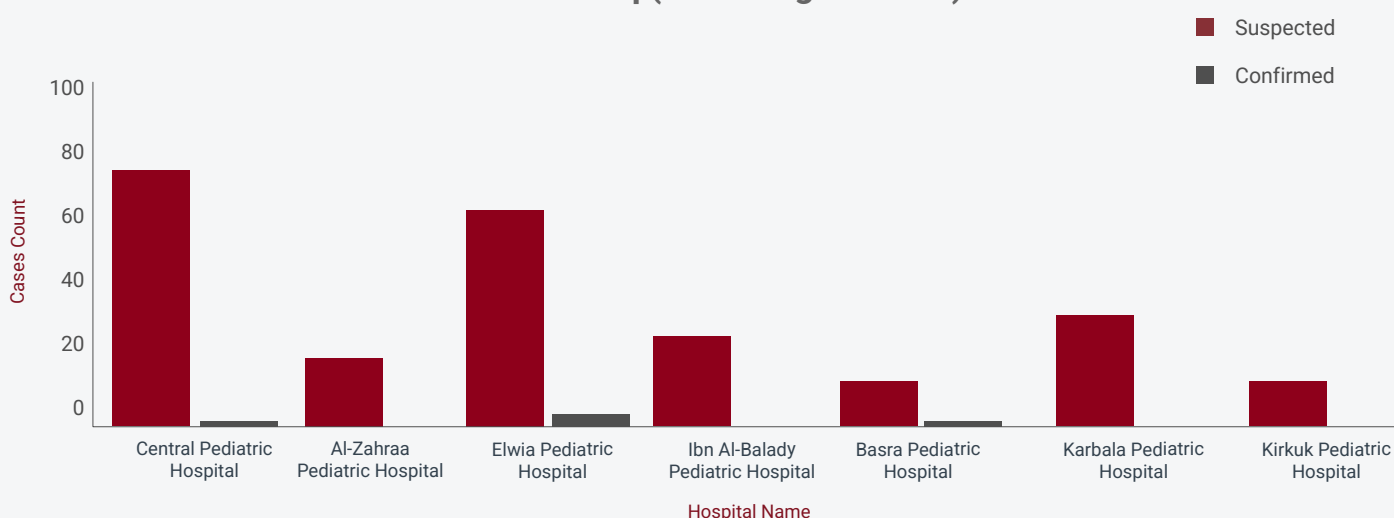


Figure 10: Gender Distribution of Enrolled Meningitis Cases in Iraq (June-August 2025)

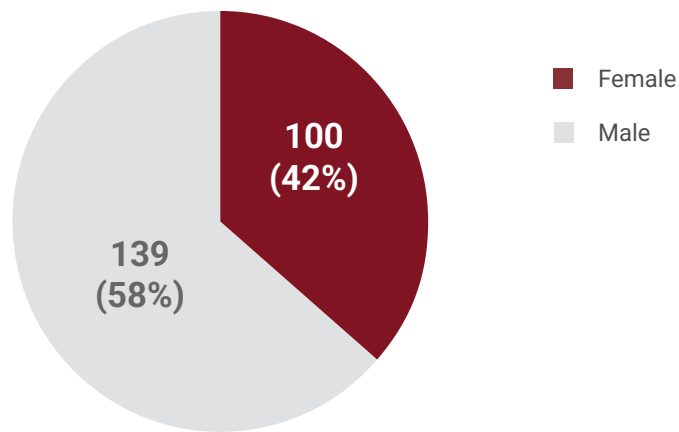


Figure 11: Percentage of Enrolled Meningitis Cases According to Age Group in Iraq (June-August 2025)

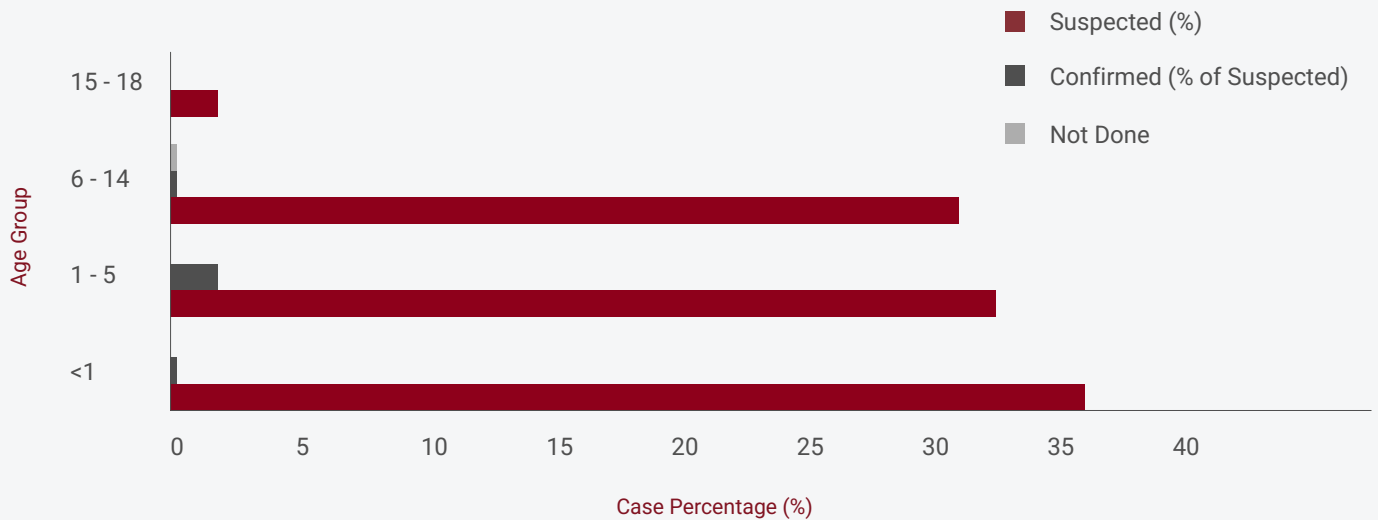
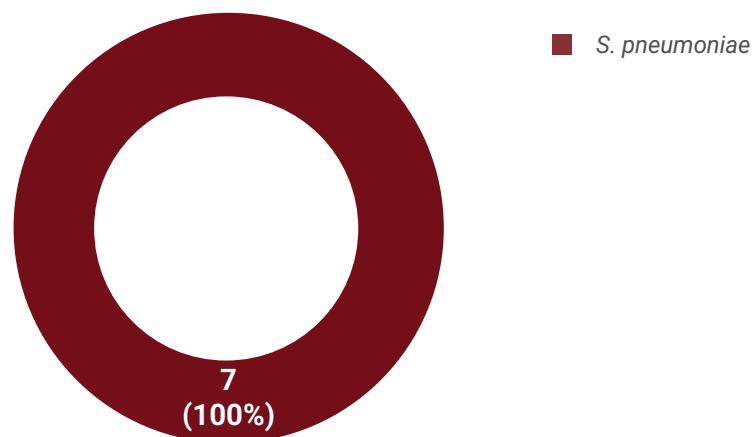
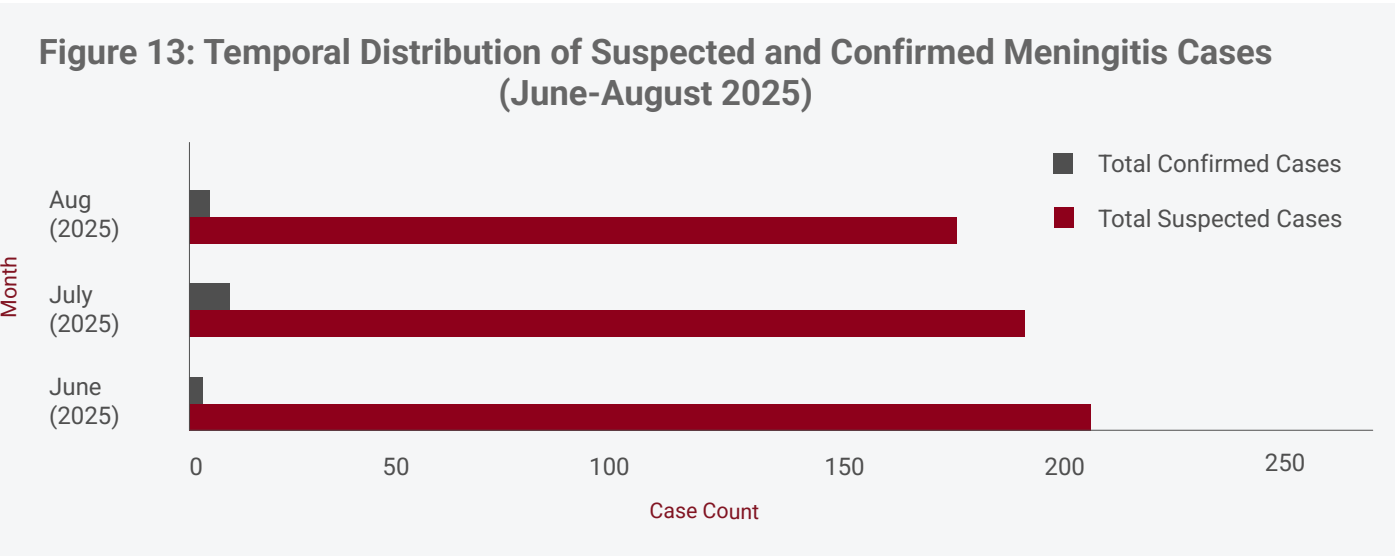


Figure 12: Pathogen Distribution in Laboratory-Confirmed Cases in Iraq (June-August 2025)



Temporal Trends within the Quarter

Across the network, temporal trends reveal monthly shifts in both suspected and confirmed cases. Between June and August 2025, surveillance across the three participating countries (Jordan, Egypt, and Iraq) revealed shifting monthly patterns in both suspected and confirmed meningitis cases.



June 2025 began the quarter with the highest case enrollment (205 suspected), though confirmations were limited to **4** cases (**3** *S. pneumoniae*, **1** *H. influenzae*). July 2025 saw a slight drop in suspected cases (**189**), yet this month produced the largest number of confirmed infections (**10** cases, all *S. pneumoniae*). August 2025 recorded the lowest enrollment (**174** suspected), alongside **6** confirmed cases (**3** *S. pneumoniae*, **1** *H. influenzae*, **2** *N. meningitidis*).

Overall, suspected cases decreased steadily over the quarter, while confirmed infections peaked in July. The appearance of *N. meningitidis* in August, after two months dominated by *S. pneumoniae*, indicates a potential shift in pathogen distribution that warrants continued monitoring.

Cross-Quarter Performance Snapshot

When compared to the third quarter of Year 1, the period of June to August 2025 presents a different picture of case detection performance across the MenMap network.

Table 1: Comparison of suspected and confirmed meningitis cases and positivity rate between the third quarters of Year 1 and Year 2

Metric	Third Quarter (Year 1)*	Third Quarter (Year 2)	Change (%)
Enrolled Cases	521	567	▲ 8.8
Confirmed Cases	29	20	▼ 31.0
Positivity Rate (%)	5.6	3.5	▼ 37.5

Although the total number of suspected cases increased modestly **(+8.8%)**, confirmed cases fell by nearly a third **(-31.0%)**. This decline lowered the overall positivity rate to **3.5%**, a **37.5%** decrease compared with Y1 Q3.

Several seasonal and contextual factors likely contributed to this pattern. The summer heat and low humidity create conditions that are less favorable for bacterial spread, while school closures reduce crowding among children. Increased outdoor activity and improved ventilation may further reduce transmission opportunities. In addition, vaccination campaigns linked to Hajj/Umrah and international travel in the previous quarters may have provided additional protection. Finally, the natural decline of respiratory infections during the summer months potentially reduces potential triggers for meningitis cases.

Overall, surveillance efficiency improved, even as case positivity declined, underscoring the seasonal and behavioral influences on meningitis transmission.

2. Key Events and Activities This Quarter

In addition to routine surveillance activities, the third quarter of Year 2 featured several strategic events and capacity-building initiatives that supported the MenMap network's continued development.

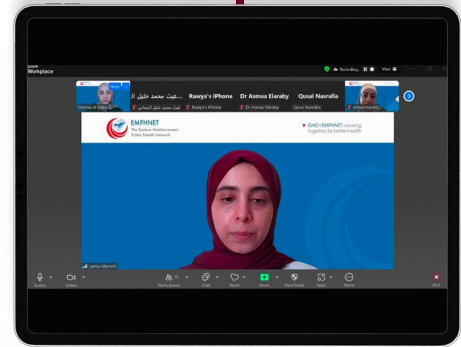
PCR Refresher Training at Institut Pasteur - Paris, France

In June 2025, laboratory specialists from Jordan and Egypt participated in a PCR refresher training held at Institut Pasteur in Paris. The training focused on strengthening technical skills in molecular diagnostics for meningitis and septicemia pathogens. Sessions emphasized standardized PCR protocols, assay troubleshooting and quality assurance practices. The refresher also facilitated peer learning through sharing of country-level experiences. Specialists from Iraq were originally scheduled to participate, logistical challenges prevented their attendance. EMPHNET provided full logistical and coordination support to ensure smooth participation. The training is expected to enhance diagnostic accuracy and improve comparability of lab results across the region.



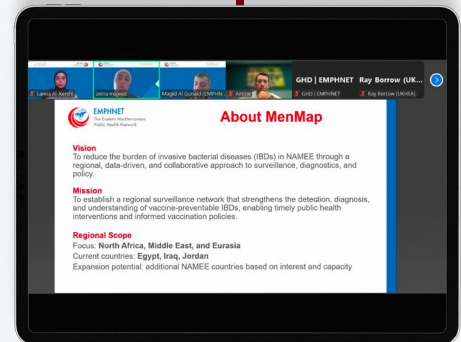
Mid-Year Review Workshop

A regional mid-year review workshop was conducted in June 2025 with participation from surveillance and laboratory representatives across all three countries. The workshop provided a platform to evaluate implementation progress, share country updates, and address common challenges. Emphasis was placed on improving coordination between epidemiological and laboratory teams, ensuring timely case detection, and reinforcing standardized reporting procedures.



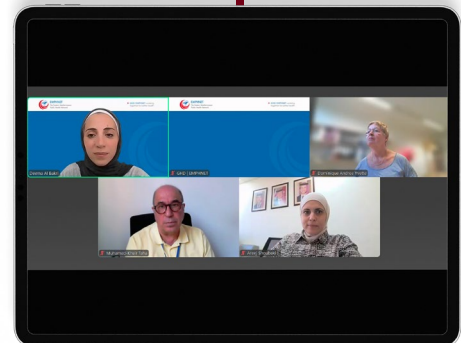
Scientific Committee Meeting

The second virtual Scientific Committee meeting was convened in July 2025 to align on strategic priorities for Year 3. Members and key partners discussed the expansion of MenMap's surveillance footprint, opportunities for broader country participation, and strategies to support vaccine policy in the NAMEE region. Deliberations highlighted the importance of strengthening data sharing, laboratory capacity, and policy engagement to translate surveillance findings into actionable public health outcomes.



Regional Webinar on Meningitis Surveillance

As part of the EMPHNET WEBi Series, a high-level webinar titled *“Advancing Meningitis Surveillance and the MenMap Experience in the Eastern Mediterranean Region”* was held in August 2025. The event featured experts from WHO, Sanofi, the Meningitis Research Foundation, and national stakeholders. Discussions focused on regional disease trends, diagnostic challenges, and leveraging MenMap data for vaccine decision-making. The webinar drew over 200 attendees and helped elevate regional awareness around evidence-based meningitis control strategies.



[Watch the Webinar here](#)

3. Other News



New Milestone:

Introduction of PCV13 Vaccine in Jordan's National Immunization Programme

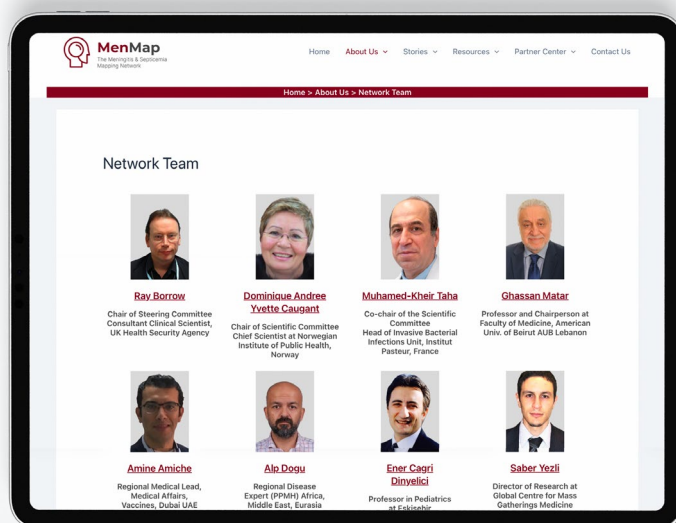
The Ministry of Health of Jordan has proudly announced the inclusion of the pneumococcal conjugate vaccine (PCV13) in the national Expanded Immunization Programme (EPI), starting from September 20, 2025. The EPI is mandatory, free of charge, and comprehensive in covering all children residing in the country.

This development marks a significant milestone for the MenMap project, which is built around a robust case-based surveillance design with real-time PCR for *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Neisseria meningitidis*. MenMap's standardized protocols, sentinel site network, and shared data platform position the Ministry of Health to measure the imminent impact of PCV13 introduction with precision.

Furthermore, the MenMap framework offers a flexible and adaptable model that can support the Ministry in expanding surveillance for other vaccine-preventable diseases. Insights gained during the first two years of MenMap implementation will play a critical role in assessing vaccine impact and guiding future immunization strategies.

This achievement also aligns with the WHO/EMRO “[Defeating Meningitis by 2030](#)” regional framework, reinforcing Jordan's leadership in regional disease prevention and control. The seamless integration of surveillance data, laboratory capacity, and immunization initiatives will strengthen national health security and contribute to the region's broader goal of defeating meningitis.

Network Team



Get to know the team