

Epidemiological Overview

Between 25 August 2022 and 5th of August 2023 (epi-week 31), **173,345 suspected cases** have been reported from all 14 governorates of Syria, with 105 associated deaths at a case fatality rate of 0.06%. Since the last SITREP was issued on the 24th of July, reporting as of epiweek 27, **16,149 new suspected cases** were detected, **with 1 new death** reported.

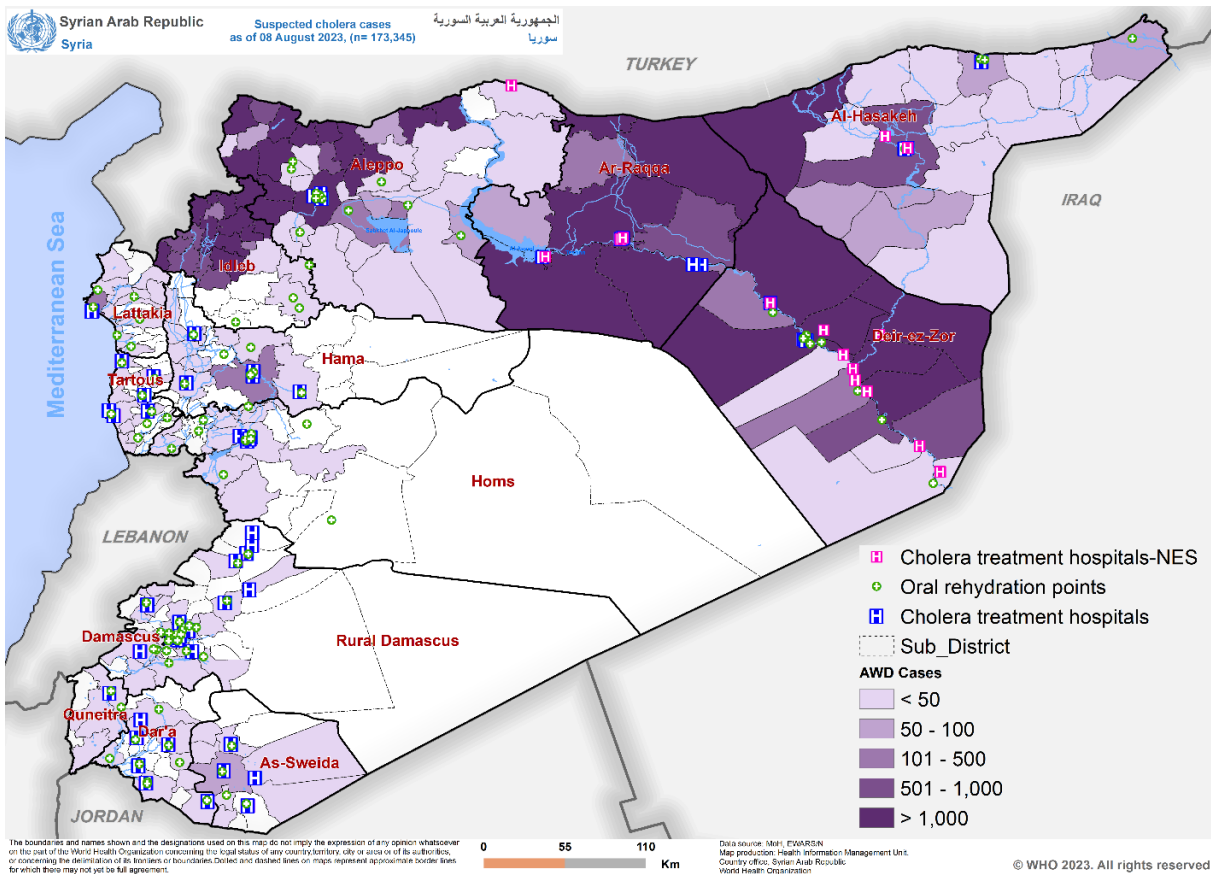
The most affected governorates to date are **Idleb 38.9%** (67,373 suspected cases), **Aleppo 32.7%** (56,694 suspected cases), **Ar-Raqqa 13%** (22,533 suspected cases), and **Deir Ez-Zor 12%** (20,787 suspected cases).

Since the beginning of the outbreak, 23,797 suspected cases and 10 AWD-related deaths were reported from internally displaced camps across Syria.

To date, 7,764 samples have been tested with rapid diagnostic tests (RDTs), with 2,075 testing positive; the overall proportion of RDT-positive cases is **26.7%**. Additionally, **8054** cases have been tested by culture, out of which 1,289 tested positive for Vibrio Cholera; the cumulative positivity rate by culture is **16%**.

- Suspected Cases**
173,345
- RDT Positive Cases**
2,075
- Culture Positive Cases**
1,289
- Cholera Sus. Deaths**
105
- Case Fatality (CFR)**
0.06%
- Overall Attack Rate**
0.82%
- Affected Governorates**
14
- Grade**
2

Figure 1: Distribution of suspected cholera cases by date of onset as of 8th of August 2023



Epidemiological Data

Table 1 provides a breakdown of reported suspected cholera cases and deaths, as well as the number and type of tests performed in Syria. Governorates with highest attack rates to date are Ar-Raqqa with an AR of 2.93%, Deir-ez-Zor - 2.67%, Idleb - 2.38%, Aleppo - 1.36%, and Al-Hasakeh - 0.44%.

Table 1: Epidemiological data, as of 5th August 2023

Governorate	Suspected Cases (AWD)	Population	Attack Rate (%)	RDTs	Positive RDTs	Culture + Tests	Attributed Deaths	CFR%
Aleppo	56,694	4,170,826	1.36	3,102	1,116	504	49	0.09%
Al-Hasakeh	5,114	1,160,335	0.44	706	116	25	4	0.08%
Ar-Raqqa	22,533	767,956	2.93	355	74	101	10	0.04%
As-Sweida	81	380,118	0.02	81	26	2	0	0.00%
Damascus	43	1,829,796	0.00	40	20	10	1	2.33%
Dar'a	25	1,037,690	0.00	22	5	0	0	0.00%
Deir-ez-Zor	20,787	779,283	2.67	774	423	100	24	0.12%
Hama	260	1,344,853	0.02	188	52	55	1	0.38%
Homs	72	1,520,283	0.00	59	31	25	1	1.39%
Idleb	67,373	2,826,874	2.38	2,121	83	430	15	0.02%
Lattakia	184	1,274,118	0.01	161	98	31	0	0.00%
Quneitra	30	113,254	0.03	17	4	1	0	0.00%
Rural Damascus	114	3,032,345	0.00	111	17	3	0	0.00%
Tartous	35	943,399	0.00	27	10	2	0	0.00%
Total	173,345	21,181,130	0.82	7,764	2,075	1,289	105	0.06%

Figure 2: Distribution of suspected cholera cases by date of onset, as of 5th August 2023

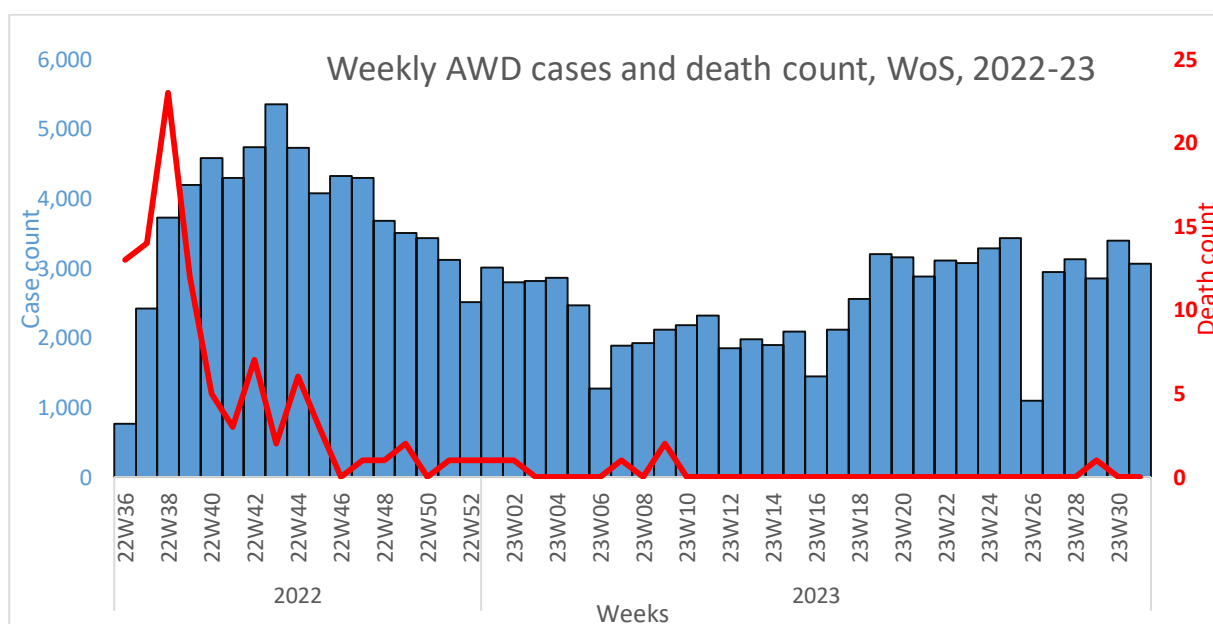
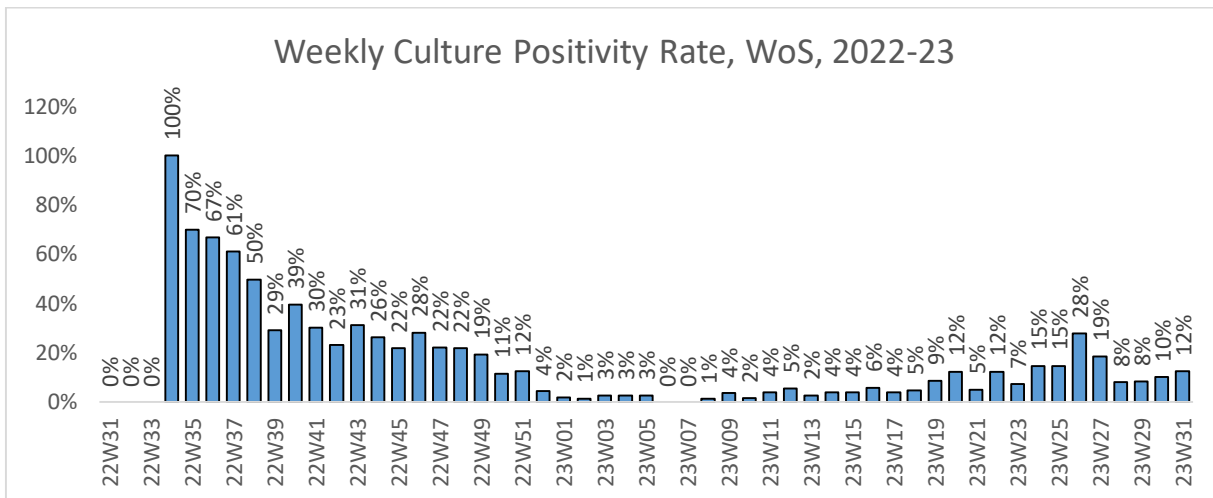


Figure 2 below shows WoS positivity rate by culture reflecting slight elevation that started by increasing from 5% to 9% in epiweek 18-19 at the end of Spring season 2023, reaching 12% on epiweek 31. The risk of an increase in all waterborne diseases (WBDs), including acute watery diarrhea (AWD)/cholera, remains extremely high due to recent heat wave, the ongoing water crisis, displacement/overcrowded settings, and extensive damage to water and sanitation infrastructure due to the ongoing conflict, as well as the recent earthquake. Additionally, the summer and autumn months and accompanying dry conditions have historically triggered seasonal increases in waterborne illness in Syria.

Figure 3: WoS Culture Positivity Rate as of epiweek 31, 5 August 2023.



Note: Positivity rate of the last 2 epi-weeks may vary from one report to the next due to addition of pending culture results.

Cholera Outbreak Response

Leadership and Coordination

- Joint WoS health and WASH coordination continues at the Whole of Syria (WoS) level while WHO and UNICEF continue to work together at field level to coordinate response efforts.
- An updated version of the WoS cholera response plan (September 2023 – February 2024) is being drafted jointly by WoS Health and WASH clusters and will be shared as soon as completed.
- In northwest Syria (NWS), an operational response plan was developed in July 2023 to be discussed at the joint Health and WASH Clusters' cholera Operational Review Workshop in August 2023.
- MOH Syria has submitted a proposal to GAVI for RDTs to support surveillance activities while a second proposal is under development for oral cholera vaccines in the coming 12-24 months, pending global supplies.
- In Northwest Syria, a planned cholera workshop (Health-WASH-RCCE) will take place in the last week of August 2023.

Surveillance and Laboratory

- WHO Syria continues to provide support to 103 rapid response teams (RRTs) for sample collection and transportation to designated laboratories.
- WHO Syria facilitated two supervisory visits to microbiology laboratories in Tartous and Hama.
- The testing strategy of suspected cholera cases continues to be reinforced through official communication with Ministry of Health (MoH), training, and supervisory field visits.

Case Management

- With WHO Syria support, in coordination with Ministry of Health (MoH) hospital directorate and Centre for Health Studies and Training, WHO conducted 2 central training of trainers (ToT) workshops on Infection Prevention and Control (IPC) standards targeting 50 health workers from public hospitals of the Directorates of Health (DoH) in Rural Damascus, Tartous and Lattakia; targeted trainees were IPC, quality assurance and surveillance teams.
- WHO Syria also supported the finalization of the cholera treatment unit (CTU) assessment report conducted by MoH in affected areas. The results revealed strong adherence with hand hygiene but major gaps in regular facility cleaning as well as a need for infrastructure upgrades to support better isolation and containment as well as prevent potential community spread through pathways like laundry facilities. The report also highlighted that, despite the effort in case management and other pillars of the response, facilities face a near-total lack of treatment of solid waste, liquid waste and medical waste due, in part, to a lack of functional equipment such as shredders, incinerators, and autoclaves. In addition, the absence of water quality within health facilities was also noted.
- In NWS,
 - On July 20th, NWS Case Management TWG partners revised definitions of both cholera treatment centers (CTCs) and CTUs, criteria of classification, and number of beds. It was agreed that a CTC is a stand-alone facility and a CTU is unit linked to another health facility; the minimum number of beds for a CTC is 20, with the ability to extend to at least 30 whenever needed, while for the CTU, the minimum is 10, with the ability to extend to 25.
 - As of the end of Epi Week 29 (July 22, 2023), 8,118 cholera cases had been admitted to CTCs/CTUs in NWS, and 14,162 cases were reported from ORPs.
 - In addition, a cross-border field visit was conducted by the health cluster and cholera incident management team to A'zaz sub district in NWS to assess and evaluate CTCs capacity and community knowledge.
 - Health partners in NWS continue to support case management and referrals. Additional case management and referral information can be found in the cholera dashboard [Microsoft Power BI](#).

Oral Cholera Vaccine (OCV)

- The Syria MOH is in discussion with GAVI regarding a preventive campaign for cholera provisionally planned to take place in 2024.
- In NWS, communities that were not reached by the two previous OCV campaigns conducted by the Syrian Immunization Group (SIG) with WHO and UNICEF support are being analyzed to explore possibilities for carrying out a third OCV campaign. According to this exercise, the total uncovered population in NWS is 1,285,871, with 620,941 in Aleppo and 664,930 in Idlib. At the next cholera task force meeting, the need for a third OCV campaign will be discussed, and recommendations will be submitted to the SIG.

Water Sanitation and Hygiene (WASH)

WASH Coordination and Rapid Response

- WHO Syria has delivered 26 water quality testing kits and related supplies to the Ministry of Health, Ministry of Water Resources and Ministry of Local Administration and Environment.
- WHO conducted practical training on 17th of July for more than 80 members of rapid response teams to learn how to conduct field testing for drinking water quality, including free residual chlorine testing and bacteriological contamination.
- In NWS,
 - Monitoring activities in 81 reception centers (RCs) hosting 63,175 IDPs have been conducted and the data shows:
 - 7 RCs hosting 4,921 IDPs need water delivery.
 - 30 RCs hosting 26,052 IDPs need urgent emergency latrines.
 - 46 RCs hosting 39,347 IDPs need hygiene items and promotion.
 - 29 RCs hosting 19,438 IDPs need Solid Waste Management (SWM).
 - WASH actors are providing services to 80 RCs.

Access to Safe Water

Safe water and NFI provision

- Water provision support from HCT WASH partners to the water establishment is ongoing.
- Water trucking continues to be provided by partners to rural communities in northern and eastern rural Deir Ez-Zor, Rural Damascus, Al-Hasakeh City, and IDP camps.
- The provision and distribution of 200 tons of sodium hypochlorite for water pumping stations in Damascus, Rural Damascus, Dar'a, Quneitra and As Sweida governorates.
- The provision of safe water through water trucking to 47 schools and communities including school students in Haran Al-Awameed and Al-Nasabieh in Rural Damascus for 60,000 people.
- Cholera response refresher training for partners in Aleppo area carried out by UNICEF.
- Partners in Aleppo have pre-positioned stocks of aqua tabs and cholera NFIs ready in case of an outbreak.
- Water trucking carried out in hard-to-reach areas (HTR) of Idleb and in northern camps in the Tell Rifat enclave, where there is a higher cholera risk.

Water Quality Monitoring

- WHO Syria supported,
 - The Ministry of Health (MOH) and the Ministry of Local Administration and Environment (MOLAE) and Water Resources (MOWR), to conduct water quality monitoring activities in six governorates of Aleppo, Lattakia, Homs, Hama, Deir ez-Zor and Rural Damascus, in addition to a WHO team operating in NES – both Al-Hasakeh and Ar-Raqqa.
 - The testing of 3284 samples from different sources. Overall, 7% (230 samples) were found to be contaminated as below:
 - In Homs, 63 of 115 samples tested (55%) were bacteriologically contaminated.
 - In Hama, 32 of 144 sample 22% were contaminated,
 - In Lattakia, water quality monitoring was conducted in 6 earthquake IDP shelters and 100% were safe for drinking, while in resident areas out of 144 samples tested 44 samples (31%) were found to be contaminated.

- Health facilities, 12 of 78 water samples (27%) tested from 26 health facilities in Homs (9 of 11 samples), Hama (2 of 10 samples), Lattakia (1 of 57 samples) were contaminated.
- In NWS,
 - Field facilitators conducted surveillance activities in 497 communities and 1,324 camps. In total 21,620 samples were collected, and the following are the key results:
 - In camps:
 - 22% of the samples were tested at 0 free residual chlorine (FRC).
 - 7% from the samples are identified with over-chlorination.
 - 6% declared that they are buying water from unidentified private vendors to cope with water shortage.
 - The WASH cluster field facilitators chlorinated 761 water storage tanks during their visits.
 - In communities:
 - 76% of the samples were tested at 0 FRC.
 - 30% declared that they are buying water from unidentified private vendors to cope with water shortage.
 - The WASH cluster field facilitators chlorinated 2,040 water storage tanks during their visits.
- In NES,
 - Three partners are monitoring water quality at 47 water stations at Euphrates River. Monitoring of water quality is one of key activities recommended for cholera response. Since no cases of cholera were reported to WASH partners therefore, they report the intervention as a response of decrease of water level.
 - WHO-supported teams tested 2886 water samples, of which 3% (91 samples) were bacteriologically contaminated mainly from water trucking, in Deir-ez-zor 21 samples out of (20%)103 were not safe for drinking.
 - Due to the change of water quality of the Euphrates River, a partner will cover water supply need for 16,851 individuals living in informal settlements in Al-Raqqah and Aleppo and they will supply water for three months starting from July. This support will help to protect beneficiaries from WBD including cholera pandemic.

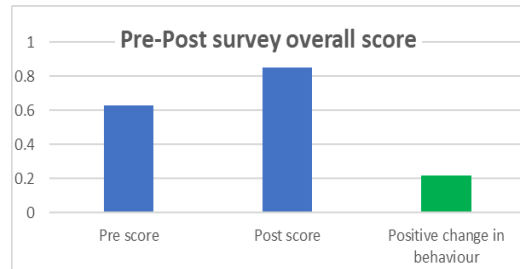
Sanitation

- WHO has completed the rehabilitation of WASH facilities at Al Assad Hospital in Deir ez-Zor, which serves 700,000 people.
- In NWS,
 - Two technical working groups on wastewater treatment and chlorination have been activated.
 - Open sewer mapping was conducted by the WASH cluster field facilitators. Report was drafted and shared with the cluster partners including the details of 3 open sewer streams as follows:
 - Ariha - Kafr Nouran Open Sewer Line
 - Meles – Kwaru Open Sewer Line
 - Ram Hamdan - Maarat Misrin Open Sewer Line

Risk Communication and Community Engagement (RCCE)

- WHO Syria,
 - Conducted four capacity-building workshops in July for health, community workers, and outreach volunteers in Latakia and Tartous to support the RCCE cholera response. More than 120 participants were guided on how to manage simple cases at home, conveyed precautionary messages, and informed on activities to attain positive behavior change. Figure 4 reflects the community health workers increased knowledge on communicating risks with vulnerable populations as a result of training.
 - In addition, 10,000 flyers with key messages on how to protect against food- and waterborne diseases, as well as 5,000 brochures on cholera prevention measures, have been distributed in Hama, Homs, Dar'aa, Latakia, and Tartous.
- HCT partners reached more than 5,500 beneficiaries with key messages on cholera preventive measures that promote protective practices in the governorates of Damascus, Rural Damascus, Dar'a, Homs, Hama, Latakia and Tartous.
- In NWS, the RCCE working group shared KAP survey report for the KAP Survey that was conducted with RCCE partners among areas affected by cholera to evaluate the knowledge, attitudes, and practices of the population with regards to cholera since the onset of the cholera outbreak. The study focused on five subdistricts: Dana, Salqin, Harim, Afrin, and Atareb, located in Idleb and northern Aleppo governorates. It targeted about 511,000 individuals comprising almost 85,176 HHs. The draft report and recommendations were shared with WHO and UNICEF and a final report will be published in August.

Figure 4: CHW training results



Challenges / Gaps

- Across Syria, partners are facing a severe reduction in funding to continue supporting ongoing response operations.
- In the summer season, the population's need for water increases and they tend to purchase water from unknown/unsafe sources. Furthermore, ice cubes were found to be a source of contamination, as ice cube factories persistently refuse to chlorinate their water sources.
- Numerous regions affected by cholera still depend on unregulated private water trucking and individual wells to meet their water needs.
- The absence of proper wastewater management systems, encompassing sludge handling and drainage, has raised substantial sanitation concerns. This deficiency significantly heightens the risk of water contamination, as both wastewater and drainage water are frequently employed for irrigation within the community.
- Poor support from WASH partners to cover the maintenance need of dosing pumps hinders the sustainability of treatment systems at stations.
- The extremely low water level on the Euphrates River and its linked dams drastically reduces the power supply, and drinking water stations that are not connected to the service line operate only infrequently.

- Furthermore, the Allouk Water Pumping Station has been inoperable since August 2022, leaving 460,000 people without a safe source of water and increasing vulnerability to waterborne diseases, especially given the limited funding available to maintain water trucking activities.
- Addressing public perception and stigma surrounding cholera and overcoming misconceptions remains a challenge and may discourage affected individuals to seek treatment and adopt preventive measures required targeted communication strategies.
- In NWS, some health partners have reported challenges when working with local health authorities to operate treatment centers, particularly in Afrin.
- In NES, currently, there is no referral CTC/CTU available for moderate-to-severe cholera cases occurring in camps and communities in areas of NES outside of HCT partners' access.

Key Priorities

- General:
 - Mobilize necessary resources to maintain preventive and response activities for cholera.
 - Finalize updated WoS joint health and WASH cholera response plan for September 2023-February 2024, with focus on identification of hotspot areas across WoS.
 - Strengthen community-level wastewater management to prevent water contamination, particularly in irrigation usage.
 - Distribute water purification tablets and hygiene kits in areas with low water levels and/or contamination.
 - Advocate for the expansion of sewage networks in both camps and community settings.
 - Preposition and monitor medical supplies in identified hotspot areas where the risk is still high, complemented by continued dissemination of IEC materials and key messages.
- In NWS,
 - Connect Community Outbreak Response Teams (CORT) teams with health partners who are managing health facilities in NWS.
- In NES,
 - Conduct stakeholder advocacy with local health authorities to establish a central lab for investigation of all communicable diseases, including cholera to have an effective, timely, and reliable source on the management of outbreaks and alerts in the NES.
 - Continue scale-up of surveillance, lab capacities, and case management across the most affected areas and hotspots
 - Strengthen community engagement in order to increase public awareness through targeted health education RCCE campaigns, developing culturally sensitive communication materials and disseminating them through various media channels to empower communities to act appropriately.

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