World Health Organization
South Sudan

Knowledge Management Series for Health

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Maternal and Neonatal Tetanus Elimination in South Sudan
Pre-Validation Assessment: Key Findings and Strategic Priorities

South Sudan remains among the ten countries globally yet to achieve Maternal and Neonatal Tetanus Elimination (MNTE). Between 2012 and 2023, the Ministry of Health conducted three rounds of Tetanus-Diphtheria (Td) Supplementary Immunization Activities (SIAs) targeting high-risk areas. In July 2025, a joint WHO-UNICEF-MoH assessment was conducted in five counties to verify readiness for MNTE validation.

Assessment Objectives?

- To confirm that all counties in South Sudan are at low risk for MNT, compatible with elimination and if the country is ready for the lot quality assurance – cluster sampling (LQA-CS) validation survey for MNTE.
- To verify that all counties are at low risk for MNT based on core and surrogate MNTE indicators.
- To assess readiness for the MNTE LQA-CS validation survey.

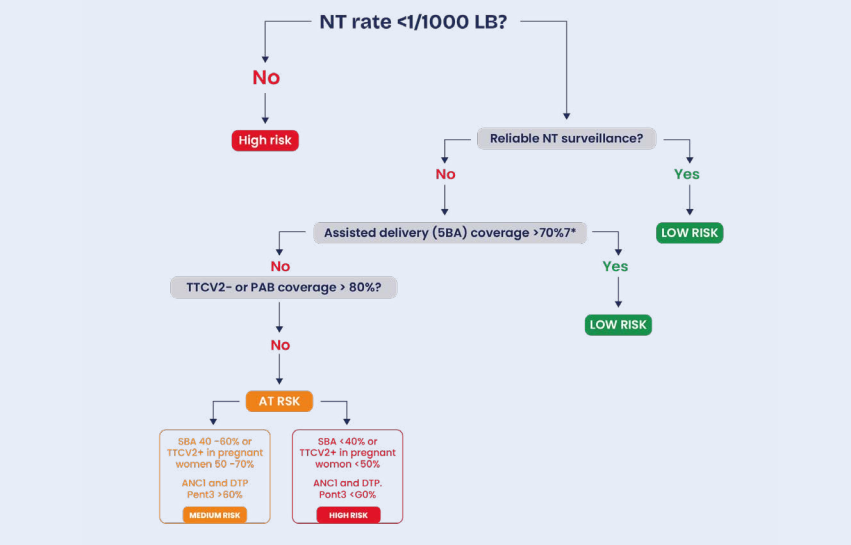
Why the Assessment?

South Sudan completed the mandatory three rounds of tetanus toxoid-containing vaccine (TTCV) supplementary immunization activities (SIAs) that targeted women of reproductive age (WRAs) in neonatal tetanus (NT) high risk counties between 2012 and 2013 (first wave) and 2018 – 2021 (second wave). Despite years of targeted immunization campaigns and maternal health interventions, gaps in coverage and surveillance persisted.

To assess if the rounds of SIAs coupled with doses provided to pregnant women and WRAs have led to the achievement of maternal and neonatal tetanus elimination (MNTE) in the country, the Ministry of Health, South Sudan sent an official request to WHO South Sudan for technical support to conduct a pre-validation assessment. The pre-validation assessment aimed to determine whether all counties were at low risk for maternal and neonatal tetanus based on core surrogate MNTE indicators. The neonatal tetanus (NT) risk analysis conducted by WHO, UNICEF and other technical partners identified five poorest performing counties (Kajo- Keji, Yei, Magwi, Duk, Abyei) and were selected for the pre-validation assessment with low-performing counties selected based on immunization and maternal health indicators.

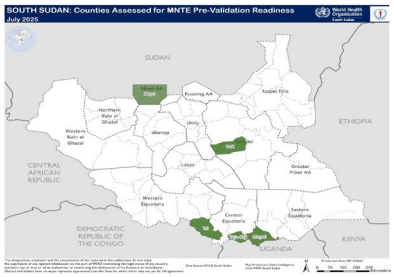
NT risk analysis – A scheme recommended by WHO/UNICEF for standardized approach

- Core and surrogate MNTE performance indicators are used and included: Td2+, SBA, NT rates
- Surrogate indicators include: DTP3, DTP1-DTP3 dropout, MCV1, ANC1,
- Scheme allows for the adequate and correct selection of NT high risk counties for SIAs and for MNTE assessments

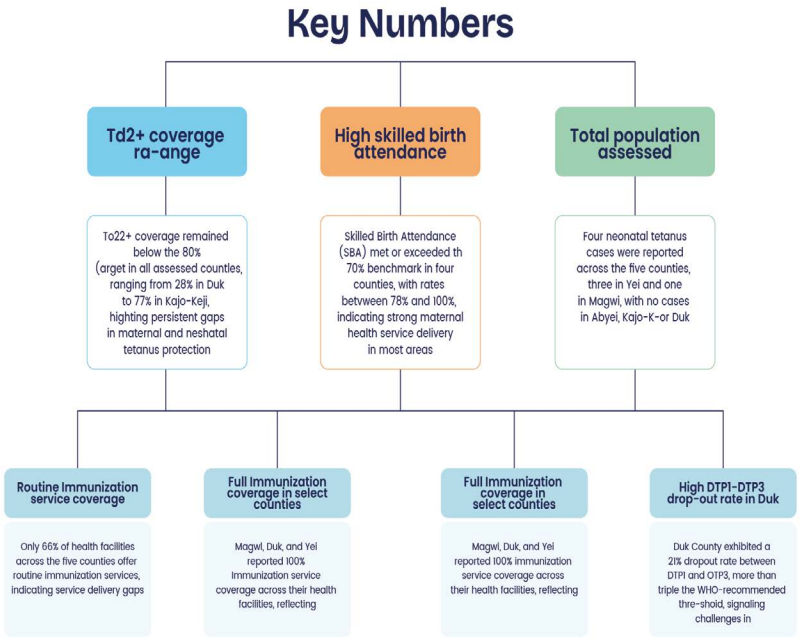


Counties Assessed

- Abyei (Abyei Administrative Area)
- Kajo-Keji and Yei (Central Equatoria)
- Magwi (Eastern Equatoria)
- Duk (Jonglei)



Key Findings



Immunization and Maternal Health Indicators (2024)

County	% DTP3	% Dropout (DTP1-DTP3)	% Td2+	% ANC1	% SBA	% HFD	NT Cases Reported
Abyei	60	15	33	55	12	17	0
Kajo-Keji	85	9	73	20	98	98	0
Yei	54	11	29	52	99.6	99.6	3
Magwi	83	25	51	50	95	98	1
Duk	92	31	54	34	4	N/A	0

- **Td2+ Coverage:** All counties below 80% threshold; highest in Kajo-Keji (77%), lowest in Duk (28%).
- **Skilled Birth Attendance (SBA):** ≥90% in four counties; Abyei at 12%, Duk at 4%.
- **Cord Care Practices:** Unsafe practices persist in Yei, Magwi, and Duk.
- **Neonatal Tetanus Surveillance:** Four cases reported (3 in Yei, 1 in Magwi); none in Abyei, Kajo-Keji, or Duk.
- **Overall Risk:** Four counties likely meet MNTE criteria; Duk remains high-risk.

- DTP3 coverage was highest in Duk (92%) and lowest in Yei (54%), with high dropout rates in Duk and Magwi.
- Td2+ coverage was below the 80% target in all counties, ranging from 29% in Yei to 73% in Kajo-Keji.
- ANC1 coverage varied, with lows of 20% in Kajo-Keji and highs of 55% in Abyei.
- Skilled birth attendance and health facility delivery were above 70% in most counties except Duk and Abyei, where SBA was only 4% and 12%.

Analysis

Access

Access to maternal and immunization services is shaped by geography, infrastructure, and facility functionality. DTP3 coverage among the five assessed counties varied significantly. Duk (Jonglei) recorded the highest coverage at 92%, followed by Kajo-Keji (85%) and Magwi (83%). Lower coverage was observed in Abyei (60%) and Yei (54%). Notably, dropout rates between DTP1 and DTP3 were high in Duk (31%), and Magwi (25%), indicating potential issues with follow-up and continuity of immunization services. Duk County, despite high DTP3 coverage (92%), suffers from low Td2+ and ANC1 coverage, indicating missed opportunities for maternal protection. Flooding and poor road networks in Abyei and Duk further constrain outreach and mobile service delivery.

Community Demand

Demand for maternal and newborn services is influenced by awareness, cultural norms, and service reliability. Kajo-Keji demonstrates strong demand, reflected in high SBA and Td2+ uptake. In contrast, Duk and Abyei show low ANC attendance and Td2+ coverage, suggesting weak demand and possible misinformation. Harmful cord care practices—reported by 40–50% of women in Magwi and Duk—underscore the need for targeted SBCC interventions. In Abyei, although 32% reported applying substances to the cord, all used chlorhexidine, indicating positive shifts in behavior.

Quality of Services

Service quality varies widely. SBA coverage exceeded 90% in Kajo-Keji, Magwi, and Yei, but was critically low in Abyei (12%) and Duk (4%). Cord care practices remain suboptimal in Magwi, Yei, and Duk, where harmful substances are still applied. Cold chain functionality is inconsistent, with several counties reporting limited equipment and maintenance challenges. Surveillance systems are present but underutilized, with gaps in active case search and data review. In Duk, despite zero reported NT cases, low SBA and Td2+ coverage raise concerns about under-detection.

System Resilience

Counties affected by conflict, flooding, and displacement—such as magwi and Abyei—face chronic disruptions in service delivery. Insecurity and population movement hinder outreach, supervision, and vaccine distribution. Data systems are functional but fragmented, with outdated population estimates and poor integration between surveillance and HMIS. These weaknesses compromise the health system's ability to maintain essential services and respond to NT risks. The absence of NT case investigation and regular data review in some counties further limits responsiveness.

Call to Action

Boost Td2+ Coverage:
Integrate Td into ANC and outreach: scale up Td integration in campaigns and outreach.

Strengthen SBA & Cord Care:
Promote facility deliveries and clean cord practices.

Address Systemic Barriers:
Improve cold chain capacity, update microplans, and address access constraints.

Enhance SBC:
Engage traditional leaders and influencers; review MNCH/EPI data in other low-performing counties.

CALL TO ACTION

Reduce Dropout Rates
Strengthen defaulter tracing, follow-up, and community mobilization

Improve NT Surveillance:
Conduct LQA-CS survey in Duk; strengthen active case search, standard definitions, and real-time data use.

Lot Quality Assurance–Cluster Sampling (LQA-CS)
Verification assessment using the Lot Quality Assurance–Cluster Sampling (LQA-CS) survey is needed to confirm whether South Sudan has achieved MNT elimination.

This factsheet is based on the July 2025 MNTE Pre-Validation Assessment conducted by WHO, UNICEF, and the Ministry of Health, South Sudan.

The development of these knowledge series is coordinated by
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This is one of the South Sudan knowledge management series led by Strategic Health Information team and produced by Health Programs Cluster under the leadership of Dr. Mutale Senkwe together with Immunization, Vaccines and Biological program.