

Note: Charts below are illustrative placeholders and should be replaced with official series before publication.

CHAPTER 16

Childhood Diseases and Malnutrition (Ethiopia + global lens)

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CONTENT

- **16.1 IMCI/iCCM Foundations** — Standardize assess–classify–treat–counsel; track danger signs; on-site mentorship.
- **16.2 ARI/Pneumonia** — Accurate respiratory counts; correct antibiotics; oxygen and referral readiness.
- **16.3 Fever Differential** — Test-before-treat for malaria; evaluate non-malarial causes (pneumonia/UTI/others).
- **16.4 Neonatal Conditions** — Early PNC; sepsis recognition; KMC; clear referral pathways.
- **16.5 Diarrhea & Dehydration** — ORS + zinc; Plans A/B/C; WASH linkages; ORT corners and stock reliability.
- **16.6 Malaria U5 (X-ref)** — Universal testing; ACT for positives; pre-referral artesunate; ITN/IRS continuity.
- **16.7 VPDs & Zero-Dose** — Find zero-dose; reduce dropout (Penta1→3, MCV1→2); cold-chain reliability; AEFI monitoring.
- **16.8 Acute Malnutrition (CMAM)** — Early MUAC screening; OTP/SC quality; RUTF pipeline; surge during seasonal peaks.
- **16.9 Growth, Anemia & Micros** — ANC IFA≥90 or MMS; IYCF; Vit A & iodized salt; industrial fortification; equity dashboards.
- **16.10 Injury Prevention** — Speed control near schools; drowning barriers/day-care; safer cookstoves; first-aid readiness.
- **16.11 ECD & Integrated Packages** — Nurturing Care; O-class access; parenting groups; developmental screening and referral.
- **16.12 Cross-Cutting Systems** — Supply/logistics (FEFO, buffer); data quality (DQR); workforce; shock readiness.

ABBREVIATIONS

- **IMCI** — Facility-based algorithm for common pediatric syndromes.
- **iCCM** — Community-level management of malaria, pneumonia, and diarrhea.
- **ORS** — Glucose-electrolyte solution for dehydration.
- **Zinc** — Adjunct therapy for diarrhea that shortens duration and reduces recurrence.
- **Plan A/B/C** — IMCI dehydration management: A=home therapy; B=facility ORS; C=IV fluids.
- **RDT** — Rapid Diagnostic Test (e.g., malaria).
- **ACT** — Artemisinin-based Combination Therapy for confirmed malaria.
- **LLIN / IRS** — Long-lasting insecticidal nets / Indoor residual spraying.
- **AEFI** — Adverse Event Following Immunization.
- **Zero-dose child** — Child with no DTP1 — proxy for unreached.
- **Dropout** — Loss between first and subsequent vaccine doses.
- **CMAM** — Community-based Management of Acute Malnutrition — OTP/SC/TSFP.
- **OTP / SC / TSFP** — Outpatient Therapeutic; Stabilization Center; Targeted Supplementary Feeding.
- **RUTF** — Ready-to-Use Therapeutic Food.
- **MUAC** — Mid-Upper Arm Circumference — screening for acute malnutrition.
- **GAM / SAM / MAM** — Global/Severe/Moderate Acute Malnutrition.
- **IYCF** — Infant and Young Child Feeding.
- **MDD-C / MDD-W** — Minimum dietary diversity — children/women.
- **GMP** — Growth Monitoring and Promotion.
- **HEW** — Health Extension Worker — Ethiopia.
- **DHIS2 / HMIS / LMIS** — Routine service/data systems and logistics management system.

- **FEFO** — First-Expire, First-Out stock rotation.
- **DQR** — Data Quality Review.
- **ECD / ECDI** — Early Childhood Development; ECD Index.
- **KMC** — Kangaroo Mother Care.
- **SBCC** — Social and Behavior Change Communication.
- **IDP** — Internally Displaced People.
- **QOC** — Quality of Care.

16.1) Concepts, Burden & Data Sources

Core child-health and nutrition indicators, Ethiopia's burden patterns, and the main data sources used in this chapter. Figures are schematic placeholders to be replaced with official DHS/Mini-DHS, MICS/SMART, UN IGME, and HMIS values before publication.

Figure . U5MR trend — Ethiopia (schematic)

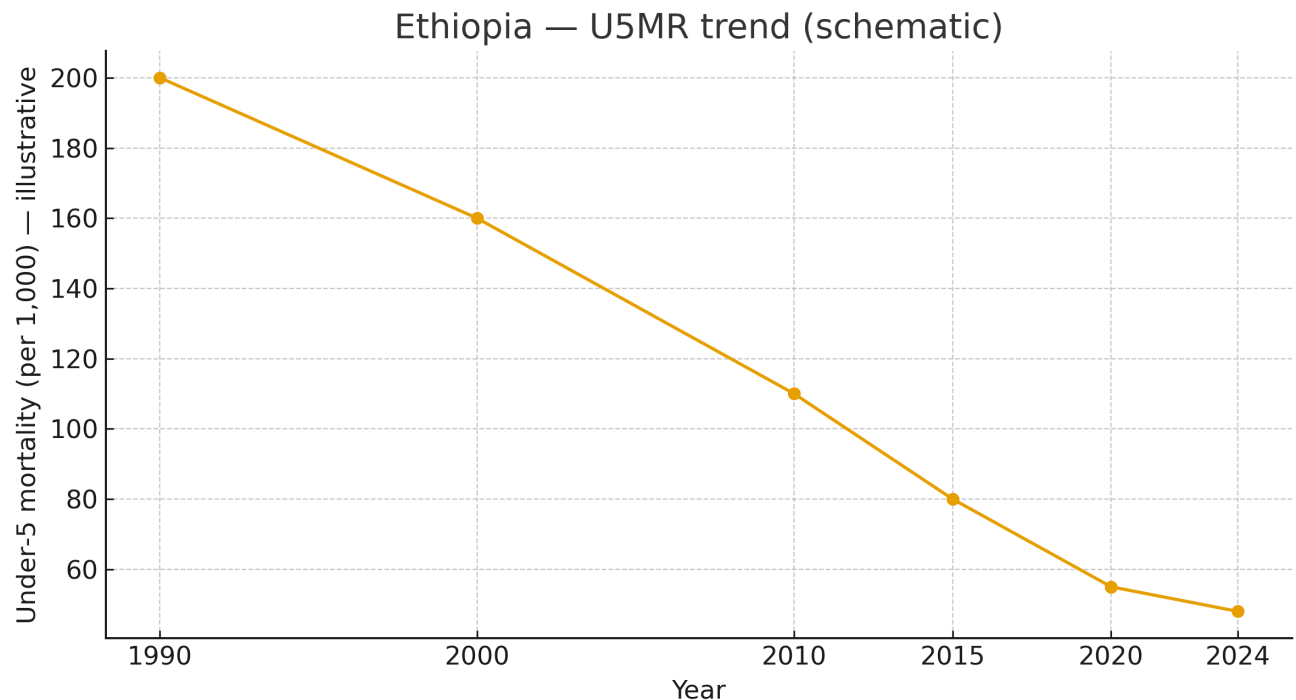


Figure . Stunting & wasting trends (schematic)

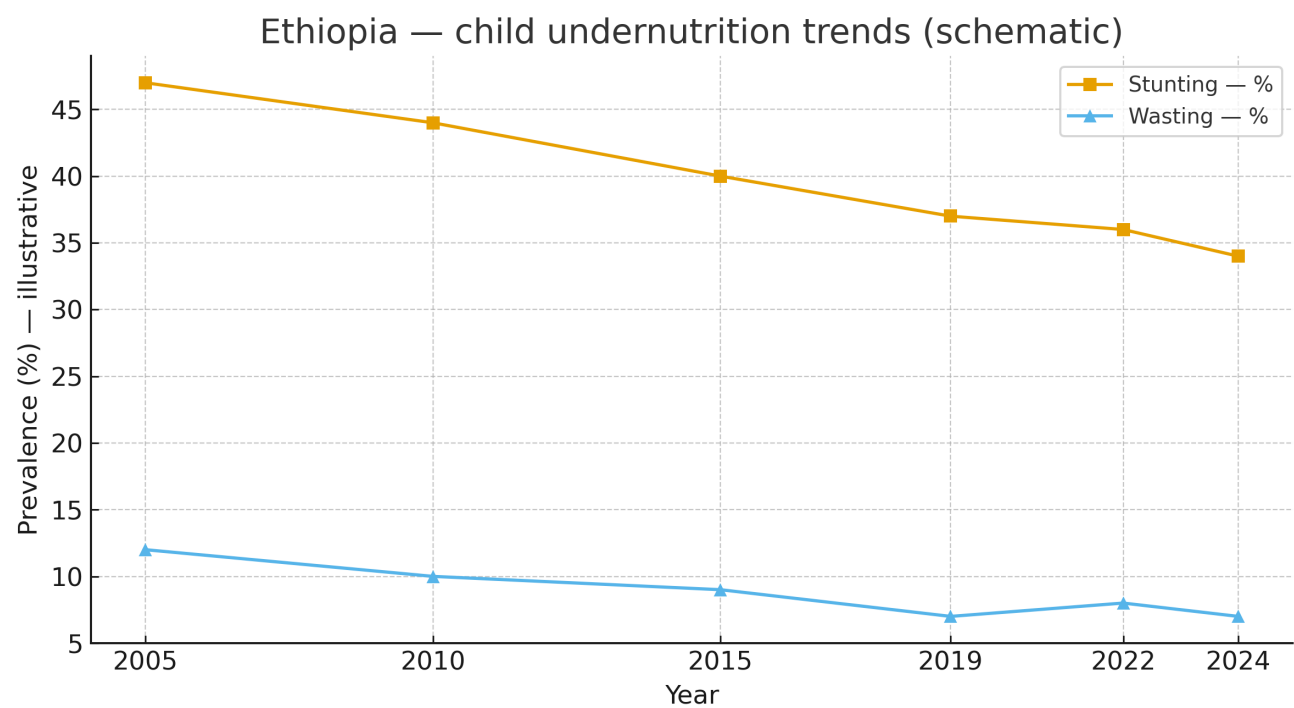


Figure . Under-5 cause composition (schematic)

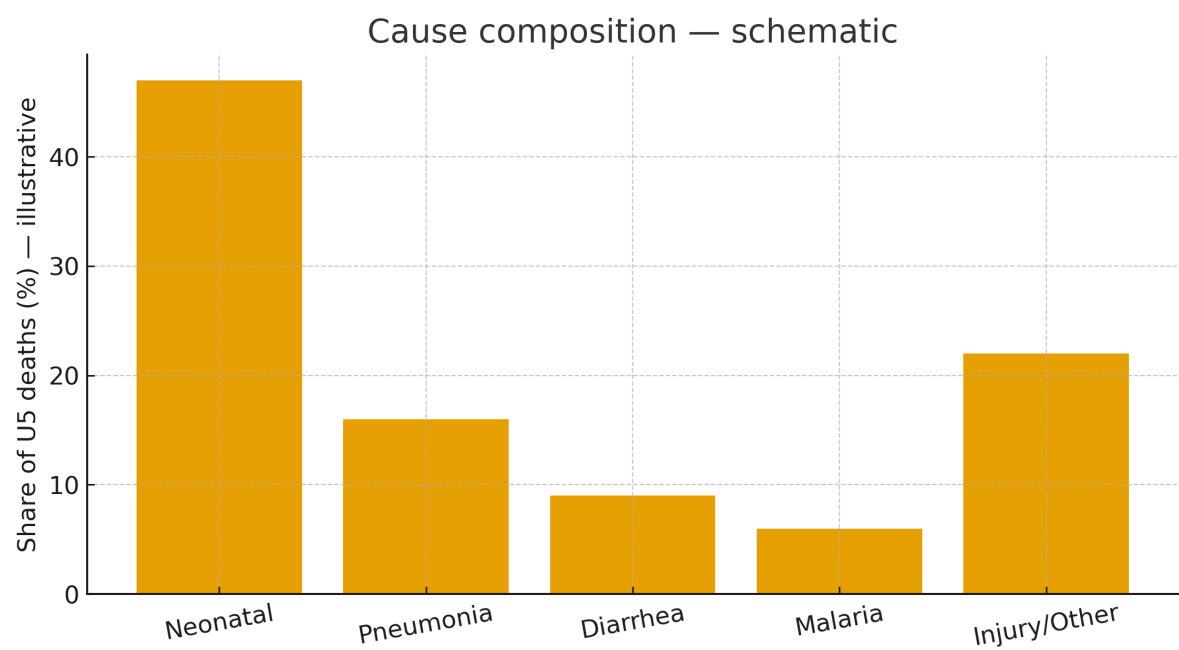


Table 16.1-A. Indicators & formulas

Indicator	Definition / formula
NMR	Deaths in first 28 days / live births × 1,000
IMR	Deaths before age 1 / live births × 1,000
U5MR	Deaths before age 5 / live births × 1,000
Stunting (HAZ < -2)	% of under-fives with height-for-age z-score < -2
Severe stunting (HAZ < -3)	% of under-fives with HAZ < -3
Wasting (WHZ < -2)	% with weight-for-height z-score < -2 (or MUAC <125 mm)
Severe wasting (WHZ < -3)	% with WHZ < -3 (or MUAC <115 mm)
Underweight (WAZ < -2)	% with weight-for-age z-score < -2
Anemia (6–59 mo)	% with Hb below adjusted threshold

Table 16.1-B. Data sources for Ethiopia

Source	What it provides
DHS / Mini-DHS	Mortality, nutrition, IYCF, care-seeking; biomarker modules.
MICS / SMART	Child nutrition & mortality estimates; rapid anthropometry.
HMIS / DHIS2	IMCI/iCCM, ORS+zinc, pneumonia treatment, CMAM admissions; timeliness/completeness matter.
CRVS	Birth/death registration (coverage improving).
Special studies	Verbal autopsy, quality-of-care, oxygen readiness, supply-chain audits.

Table 16.1-C. Measurement caveats

Topic	Practical note
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Denominators	Use census-based projections; check drift.
Case definitions	Follow national IMCI/iCCM revisions consistently.
Anthropometry quality	Age/length accuracy; WHO flags; digit preference.
Seasonality/shocks	Drought/conflict bias snapshots; interpret with context.
Triangulation	Cross-check DHS/MICS/SMART vs HMIS; investigate discordance.

Narrative summary (plain language)

Under-five deaths have dropped a lot in Ethiopia, but newborns still face the highest risk. Stunting is falling slowly and wasting fluctuates. Household surveys show trends every few years; routine facility data show progress every month. Because each source has limits, we compare them and double-check surprises. Accurate measurements and on-time reporting help us focus on what saves lives.

References — Section 16.1 (URLs)

- **UN IGME — Child mortality estimates** — <https://childmortality.un.org/>
- **UNICEF/WHO — Child health & nutrition** — <https://www.unicef.org/health>
- **The DHS Program — Ethiopia** — <https://www.dhsprogram.com/>
- **SMART Methodology — Guidance** — <https://smartmethodology.org/>
- **Ethiopia FMoH/EPHI — HMIS/DHIS2** — <https://www.ephi.gov.et/>

16.2) Integrated Management of Childhood Illness (IMCI/iCCM) in Ethiopia

IMCI (facility) and iCCM (community) address leading childhood killers through standardized assessment, classification, and treatment. In Ethiopia, Health Extension Workers (HEWs) deliver iCCM through the Health Extension Program (HEP), linked to IMCI services at primary facilities and referral hospitals.

Figure . iCCM-trained HEWs — scale-up (schematic)

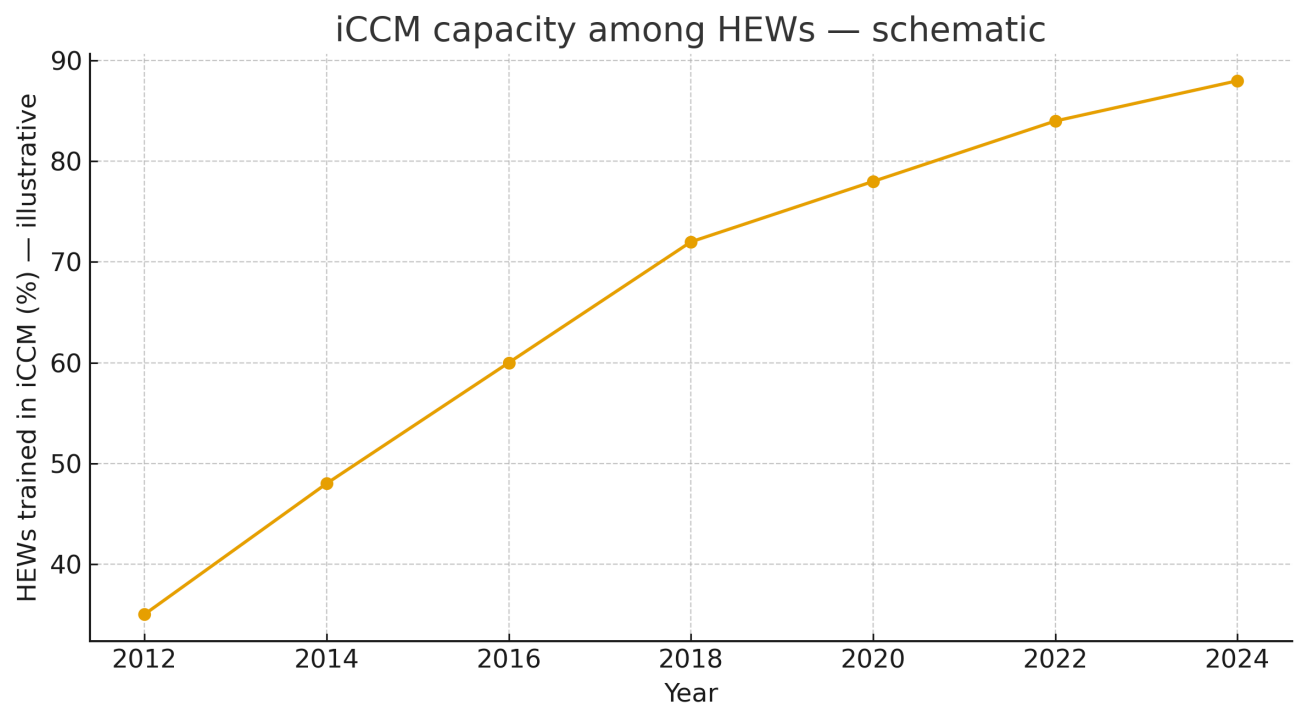


Figure . Treatment coverage — pneumonia & diarrhea (schematic)

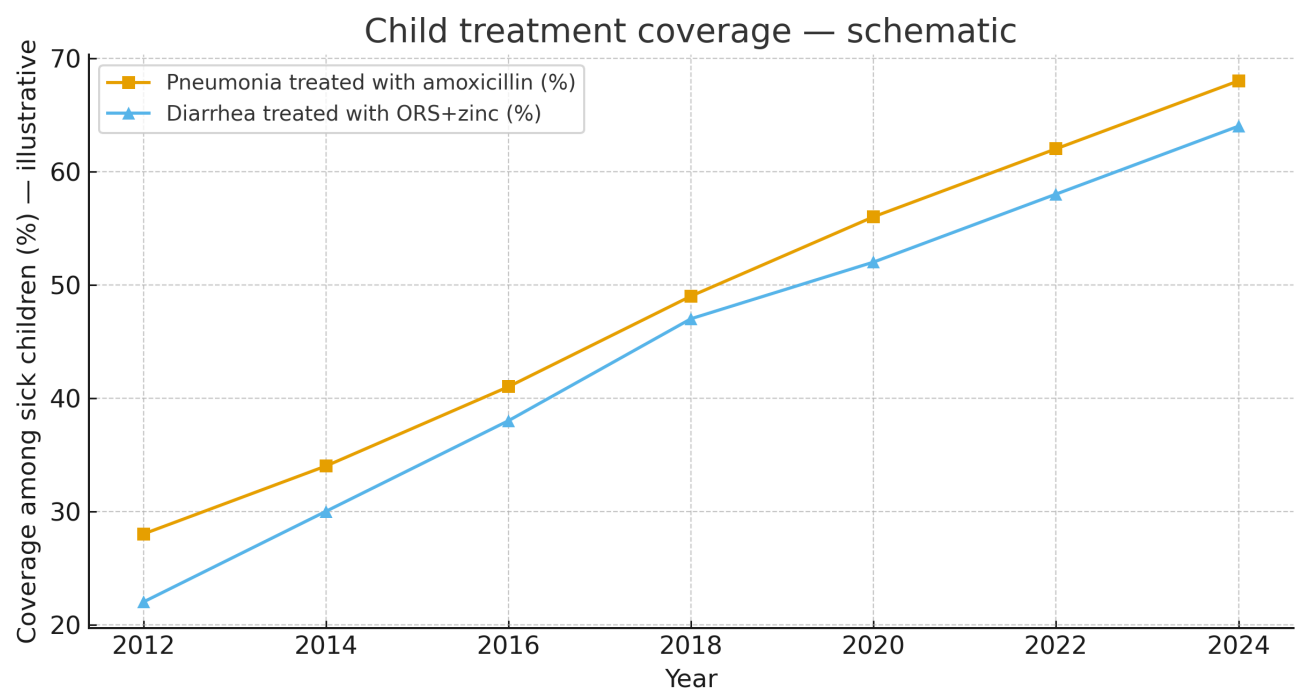


Figure . Hypoxemia readiness — oxygen + pulse-oximetry (schematic)

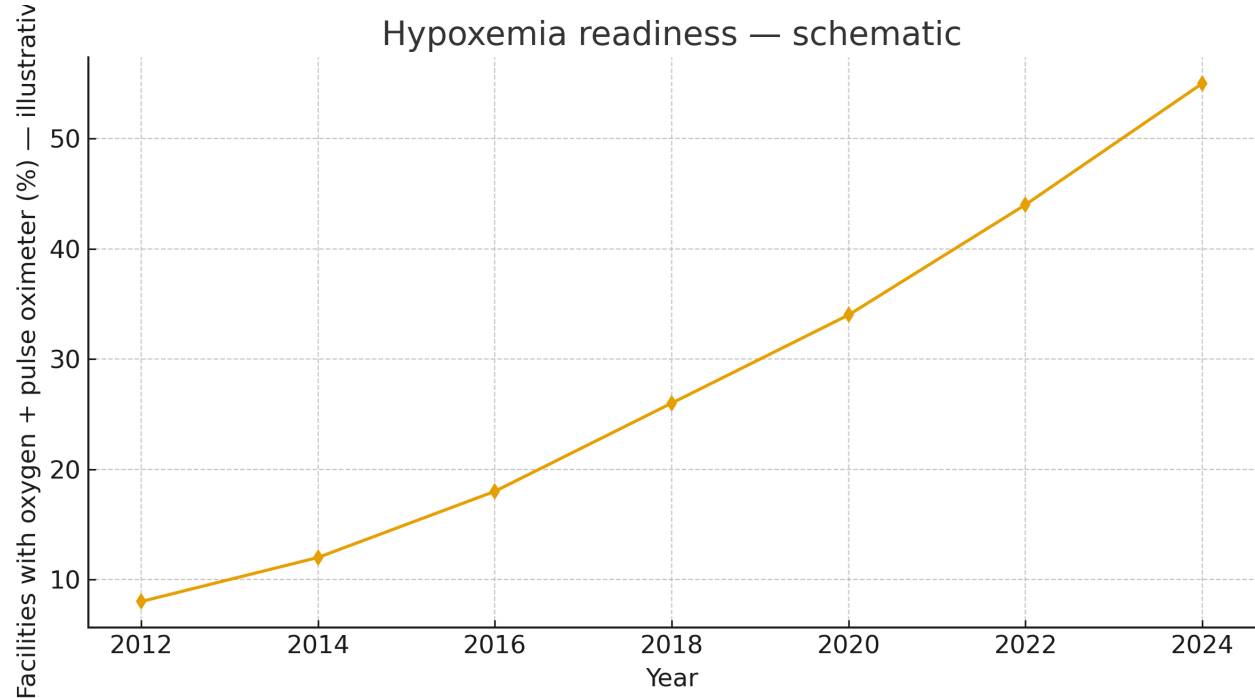


Figure . Referral completion — community to facility (schematic)

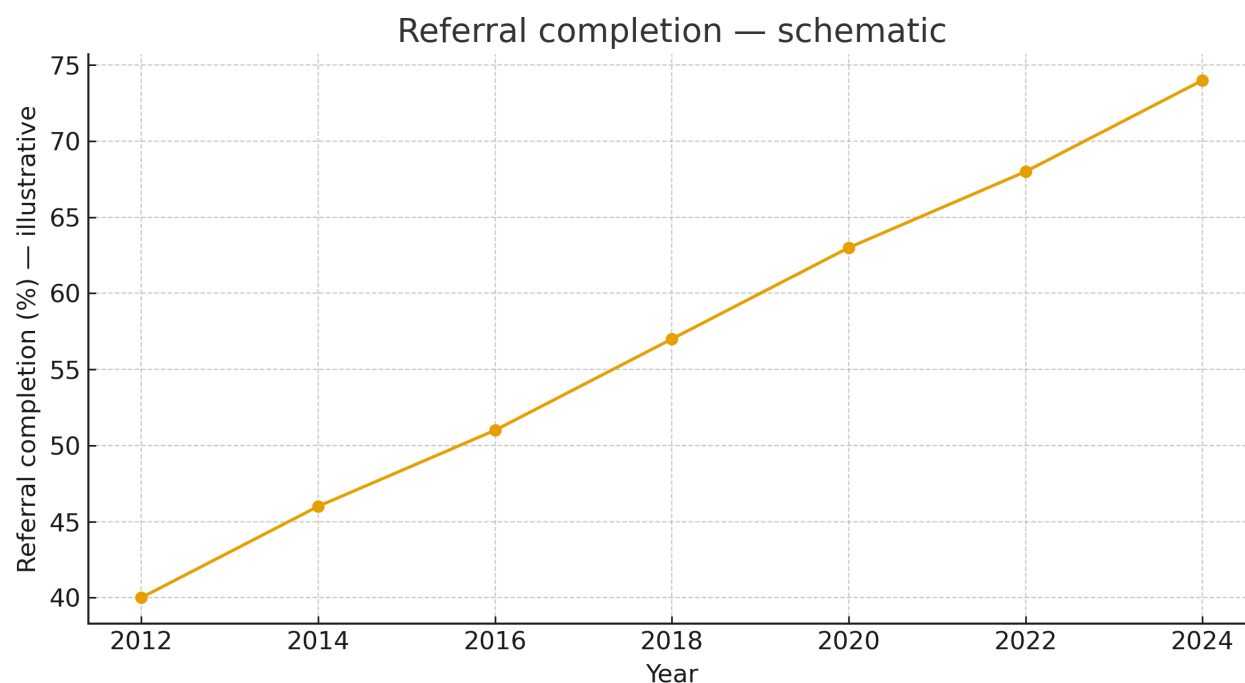


Table 16.2-A. IMCI/iCCM clinical components (simplified)

Component	Brief description (Ethiopia-adapted IMCI/iCCM)
General danger signs	Not able to drink/breastfeed; vomiting everything; convulsions; lethargic/unconscious; severe respiratory distress.
Pneumonia classification	Fast breathing and/or chest indrawing; assess hypoxemia with pulse oximetry where available.
Diarrhea classification	Some/severe dehydration; persistent diarrhea; dysentery.
Malaria (endemic)	Test all fever (RDT/microscopy); treat positives per guidelines.
Malnutrition	MUAC, edema, WFH/WHZ; classify SAM/MAM; check for complications.
Newborn assessment	Temperature, breathing, feeding, cord/skin infection; danger signs.

Referral criteria	Any danger sign; severe pneumonia/dehydration/SAM with complications; neonatal sepsis/asphyxia.
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Table 16.2-B. Essential medicines & commodities

Commodity	Program notes
Amoxicillin	First-line for pneumonia; ensure 5-day course.
ORS + Zinc	All diarrhea except severe dehydration needing IV; zinc 10–14 days.
Gentamicin + ampicillin	Serious bacterial infection in young infants (per protocol).
ACT	Treat confirmed malaria; dosing by weight.
RDTs & microscopy	Test fever in endemic areas; QA and stock monitoring.
Pulse oximeter & oxygen	Detect/treat hypoxemia; concentrators/cylinders with accessories.
Thermometer, MUAC tapes, timers	Routine assessment and classification tools.

Table 16.2-C. Platforms and roles

Platform	Roles in Ethiopia
Community (HEP/HEWs, iCCM)	Assess/treat uncomplicated pneumonia, diarrhea, malaria; first dose + referral as needed.
Primary health care units	IMCI; stabilize; oxygen/antibiotics/IV fluids; manage MAM/SAM without complications.
Hospitals	Manage severe/complicated cases (oxygen systems, neonatal care, SAM with complications).
Supply chain & data	LMIS/DHIS2; coverage surveys; supervision/mentorship.

Table 16.2-D. Indicators and formulas

Indicator	Definition / formula
HEWs trained in iCCM (%)	$100 \times (\text{HEWs certified for iCCM} / \text{Total HEWs})$
Pneumonia treated with amoxicillin (%)	$100 \times (\text{Children 2–59m with pneumonia receiving amoxicillin} / \text{Pneumonia cases})$
Diarrhea treated with ORS+zinc (%)	$100 \times (\text{Children 2–59m with diarrhea given ORS+zinc} / \text{Diarrhea cases})$
Facilities ready for hypoxemia (%)	$100 \times (\text{Facilities with oxygen + pulse oximeter} / \text{Facilities assessed})$
Referral completion (%)	$100 \times (\text{Referred cases that arrived at facility} / \text{Total referred cases})$

Table 16.2-E. Supervision, data quality, and safety

Domain	Operational practices
Clinical mentorship	Case observation/feedback; protocol adherence checks.
Data quality	Completeness/timeliness; register-DHIS2 concordance.
Supply reliability	Stockout <5%; FEFO; buffer stock.
Care-seeking & equity	Track gaps by sex/region/poverty/distance/displacement.
Safety	AEFI/ADR; oxygen safety; IPC.

Program narrative

Community iCCM brings care closer to households while facility IMCI ensures higher-level management and oxygen-supported care. Success depends on practical routines: trained staff, steady supplies (amoxicillin, ORS, zinc, ACTs), pulse oximetry and oxygen for hypoxemia, mentorship for quality, and data systems that track coverage and equity. Ethiopia can continue improving outcomes by validating routine trends with surveys and rapidly fixing bottlenecks revealed by supervision and data reviews.

References — Section 16.2 (URLs)

- **WHO — IMCI/iCCM** — <https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/child-health/imci>
- **UNICEF — Child health & oxygen systems** — <https://www.unicef.org/health/child-health>
- **Ethiopia FMoH/EPHI — HEP & IMCI/iCCM resources** — <https://www.ephi.gov.et/>
- **WHO — Oxygen therapy & pulse oximetry** — <https://www.who.int/teams/integrated-health-services/clinical-services-and-systems/oxygen-therapy>

16.3) Newborn Health: Prematurity, Birth Asphyxia & Sepsis

Nearly half of under-five deaths occur in the first 28 days of life, with prematurity, intrapartum complications (asphyxia), and sepsis as leading causes. This section summarizes the care package and system requirements to reduce neonatal deaths in Ethiopia, linking facility readiness with community-to-facility referral.

Figure . Neonatal mortality rate — Ethiopia trend (schematic)

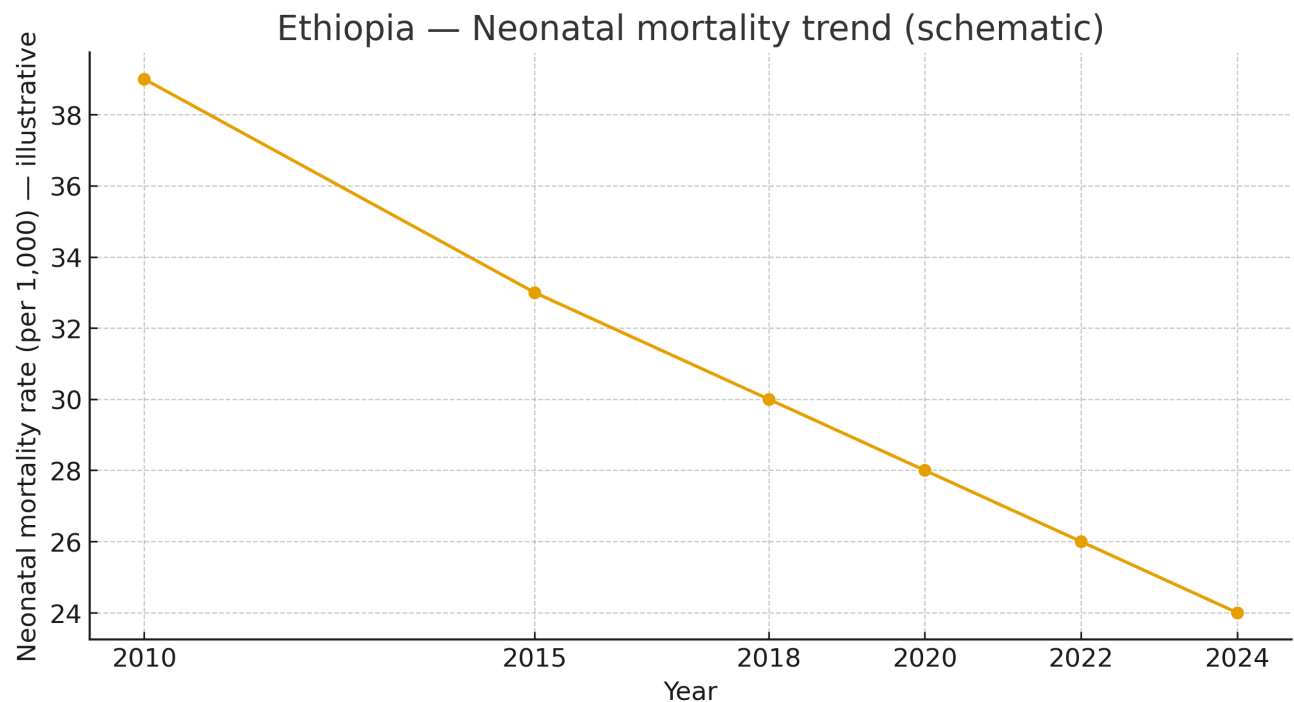


Figure . Coverage/readiness signals — EIBF, KMC availability, skilled birth attendance (schematic)

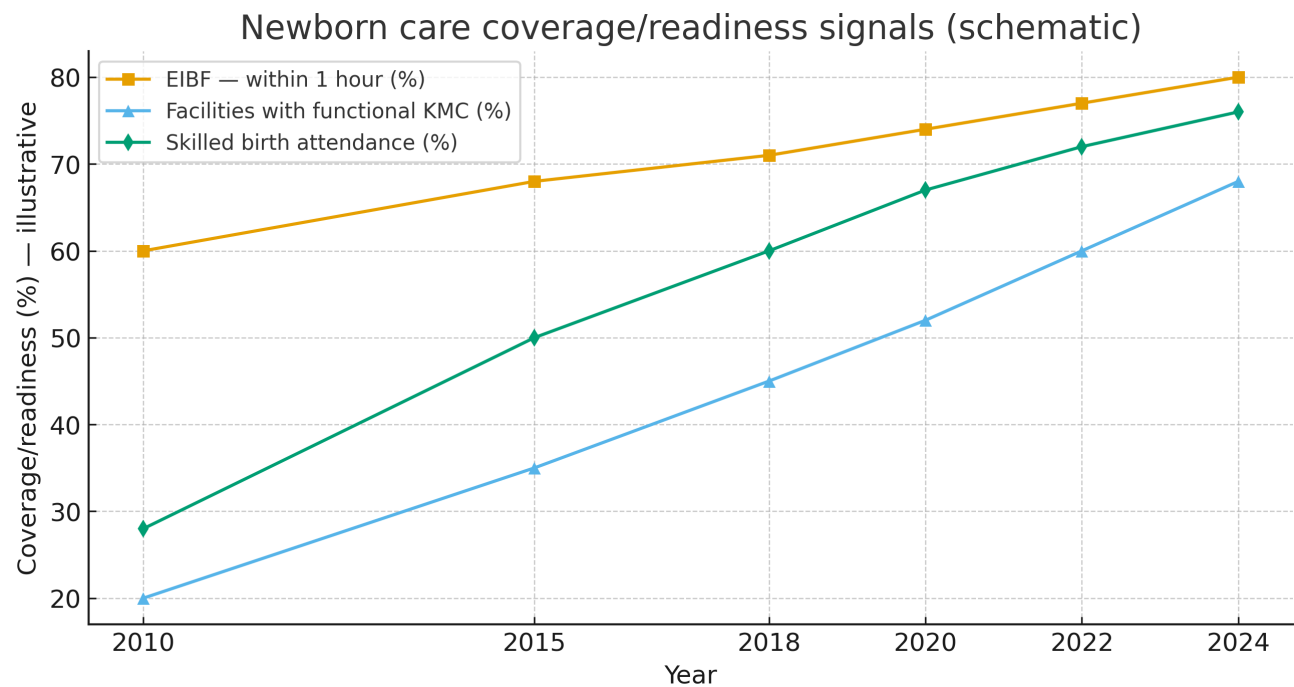


Figure . Neonatal sepsis case-fatality — sentinel facilities (schematic)

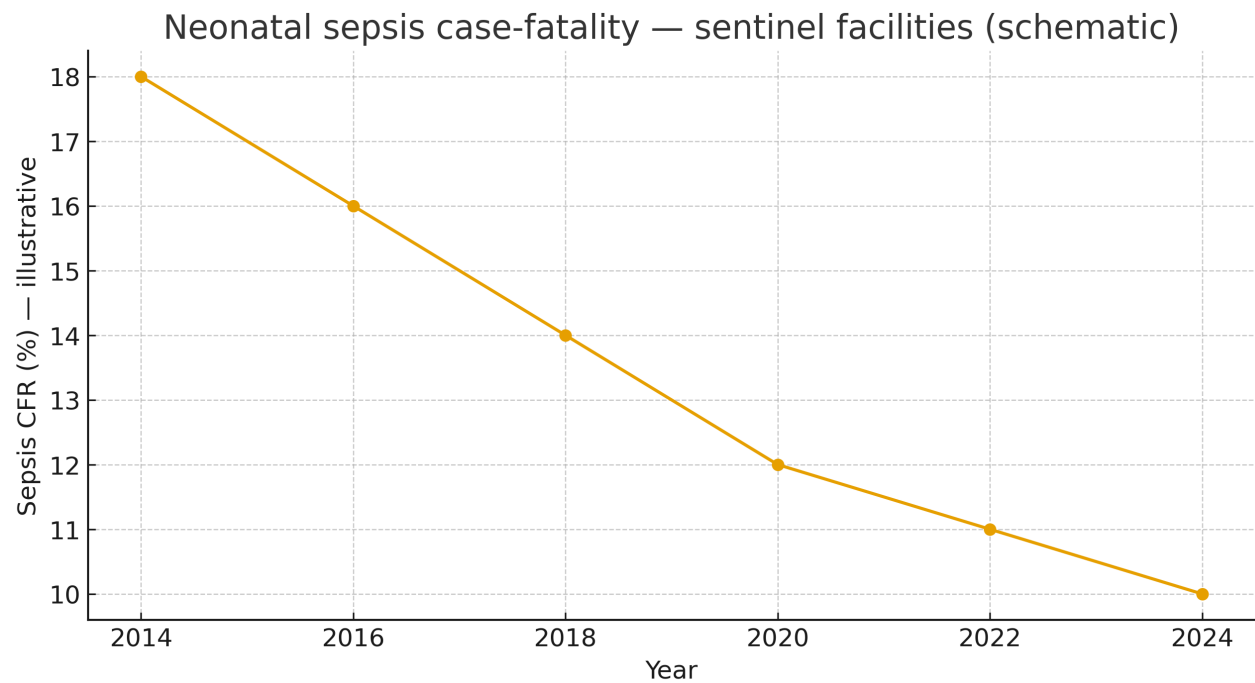


Table 16.3-A. Essential Newborn Care (ENC) package

Component	Key actions (Ethiopia-adapted)
Immediate care at birth	Warmth/drying, skin-to-skin, delayed cord clamping, no routine suction, early breastfeeding.
Essential prophylaxis	Vitamin K, eye care per national protocol; clean cord care.
Postnatal care (PNC) checks	Temperature, breathing, feeding, danger signs before discharge and in first week.

Table 16.3-B. Birth asphyxia — readiness and resuscitation (HBB/HBS)

Topic	Protocol notes
Readiness	Functional bag-and-mask device at delivery area; suction bulb; radiant warmer or equivalent.
Initial steps	Stimulate, position airway, clear secretions if obstructed, start ventilation within 1 minute.
Ventilation	Bag-and-mask ventilation 40–60/min; monitor chest rise; escalate per HBB/HBS protocol.
Referral	Stabilize and refer if persistent respiratory distress or need for advanced care.

Table 16.3-C. Small & preterm newborn care (incl. KMC)

Domain	Good practice
Kangaroo Mother Care (KMC)	Continuous skin-to-skin for stable preterm/LBW; exclusive breastfeeding; early discharge with follow-up.
Thermal care	Prevent hypothermia; skin-to-skin, warm environment; monitor temperature.
Feeding support	Breastfeeding support; alternative feeding if needed; lactation counseling.

Respiratory support	Oxygen therapy; bubble CPAP where indicated; pulse-ox monitoring.
Infection prevention	Hand hygiene; clean delivery; early recognition of sepsis/danger signs.

Table 16.3-D. Neonatal sepsis — recognition and treatment

Element	Clinical notes
Recognition	Poor feeding, fever/hypothermia, fast breathing, grunting, lethargy, convulsions, severe chest indrawing.
First-line treatment	Ampicillin + gentamicin (dose by weight/age) per national protocol.
Second-line/complicated	Cefotaxime/ceftazidime per culture/susceptibility and national guidance.
Supportive care	Thermal care, oxygen for hypoxemia, fluids carefully, glucose monitoring, early referral if no response.

Table 16.3-E. Indicators and formulas

Indicator	Definition / formula
NMR (per 1,000)	Neonatal deaths (<28d) / live births × 1,000
Early initiation of breastfeeding (%)	$100 \times (\text{Newborns put to breast within 1 hour} / \text{Live births})$
KMC coverage (%)	$100 \times (\text{Stable preterm/LBW newborns receiving KMC} / \text{Eligible preterm/LBW})$
Facility readiness bundle (%)	$100 \times (\text{Facilities with oxygen} + \text{oximeter} + \text{CPAP} + \text{first-line antibiotics} / \text{Facilities assessed})$
Neonatal sepsis CFR (%)	$100 \times (\text{Neonatal sepsis deaths} / \text{Neonatal sepsis admissions})$

Table 16.3-F. Quality-of-care & system practices

Domain	Operational practices
Competency & drills	Regular HBB/HBS drills; resuscitation competency checks; simulation practice.
Oxygen & CPAP	Functioning concentrators/cylinders; CPAP kits; maintenance and power solutions.
Medicines & supplies	Vitamin K; antibiotics; thermometers; warmers; feeding supplies; dose charts.
Data & audit	Partograph use; labor/delivery registers; perinatal death audit (MPDSR) with feedback.
Referral & follow-up	Stabilization protocols; referral transport; KMC follow-up after discharge.

Program narrative

Reducing neonatal deaths requires consistent practice at birth and during the first week of life. Facilities need the basics ready at all times: bag-and-mask resuscitation, oxygen with oximetry, antibiotics for sepsis, thermal care, and KMC for stable preterm/LBW. Competency-based training and drills keep teams prepared for rare but critical events. Data systems should feed into perinatal death reviews so that gaps in readiness, referral, or timeliness are identified and fixed. Community platforms (HEWs) help with early postnatal checks and quick referrals, while antenatal counseling supports birth preparedness and early breastfeeding.

References — Section 16.3 (URLs)

- **WHO — Standards for improving quality of care for small and sick newborns —**
<https://www.who.int/publications/i/item/9789240010765>
- **WHO/UNICEF — Every Newborn Action Plan (ENAP) —**
<https://www.healthynewbornnetwork.org/issue/enap/>
- **Helping Babies Breathe / Survive (HBB/HBS) resources —**
<https://www.aap.org/en/advocacy/global-child-health/helping-babies-survive/>
- **Ethiopia FMoH/EPI — Newborn & child health guidelines —**
<https://www.ephi.gov.et/>

16.4) Acute Respiratory Illnesses (Pneumonia) & Hypoxemia

Pneumonia remains a leading cause of child death in Ethiopia. Priorities: rapid assessment, antibiotic access, and oxygen systems that reduce mortality. Figures are schematic placeholders; replace with official survey, routine, and facility data for publication.

Figure 16.4-1. Care-seeking for ARI symptoms — schematic

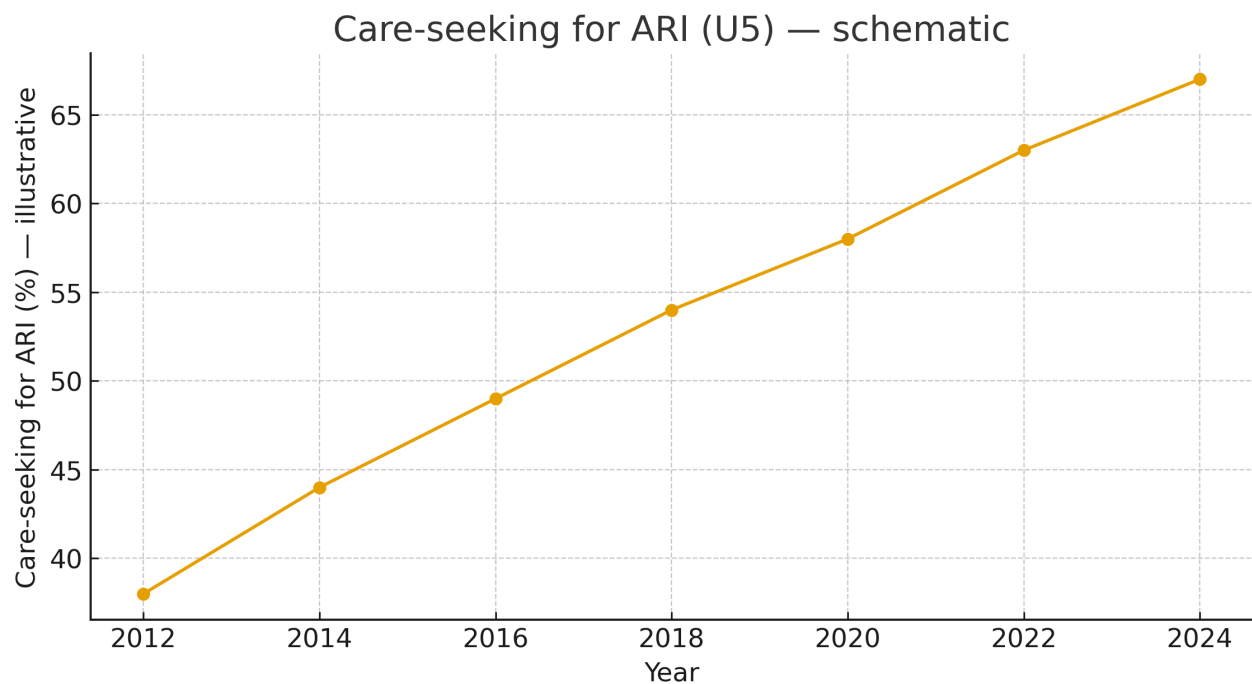


Figure 16.4-2. Treatment & assessment — amoxicillin and pulse oximetry (schematic)

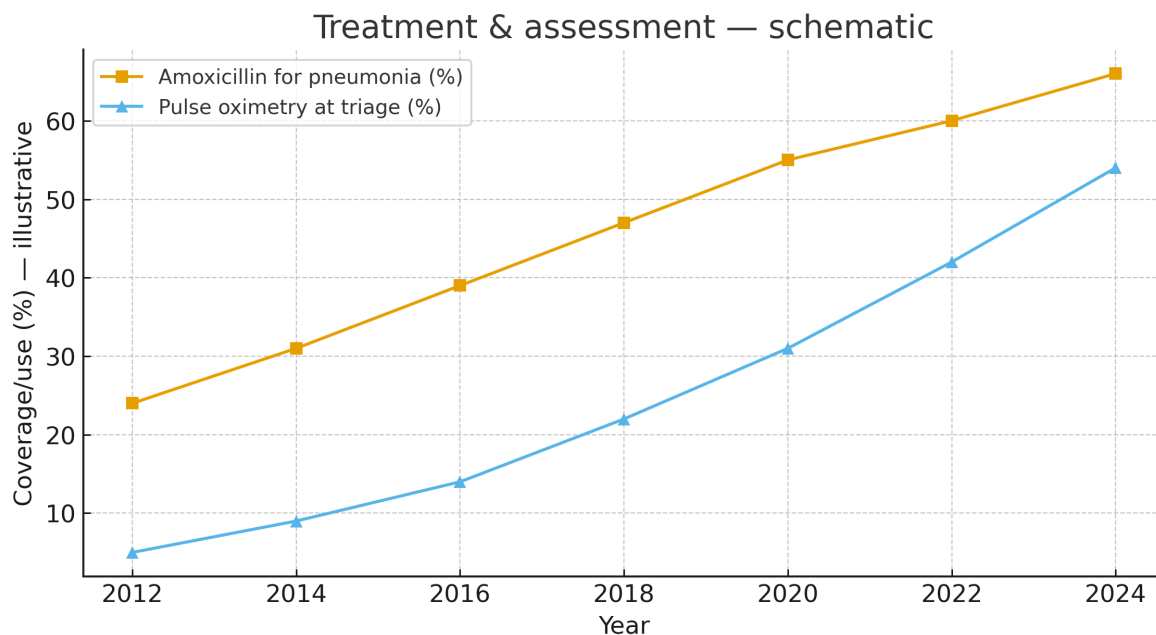


Figure 16.4-3. Oxygen system components — readiness snapshot

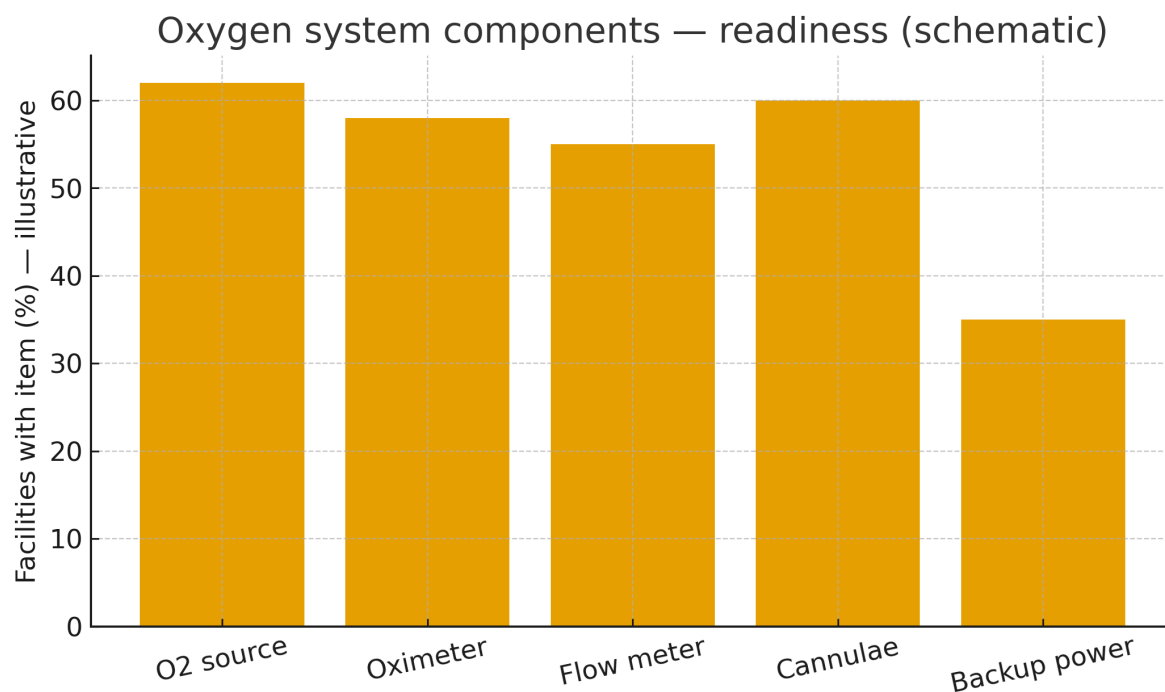


Figure 16.4-4. Inpatient pneumonia CFR — sentinel hospitals (schematic)
Under-5 pneumonia CFR — sentinel (schematic)

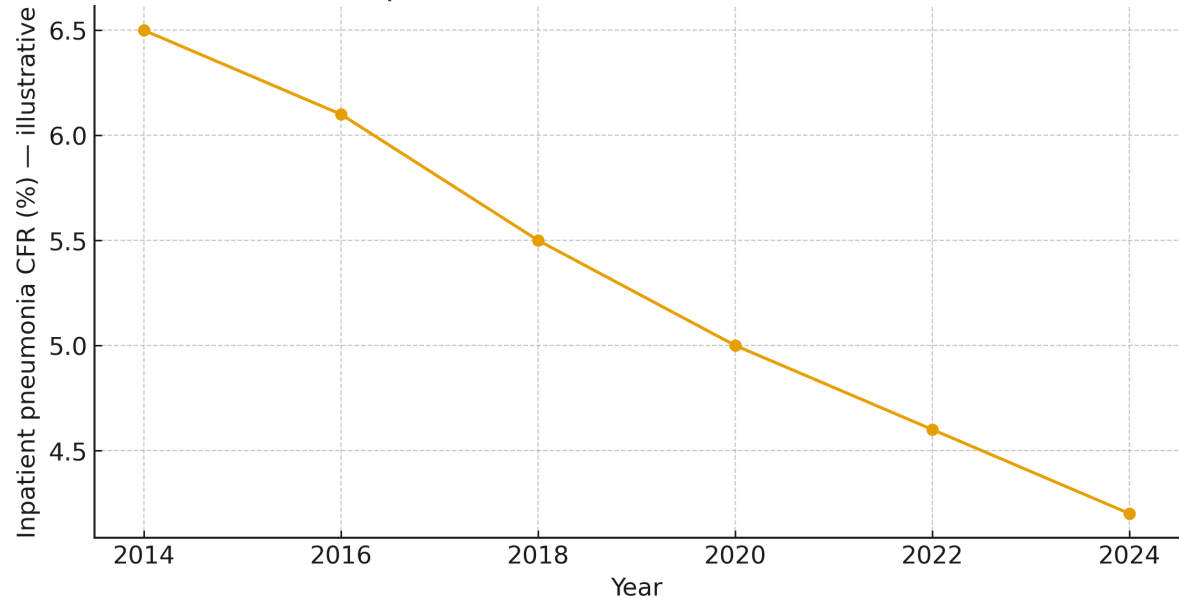


Figure 16.4-5. Seasonality of ARI outpatient visits — schematic
Seasonality of ARI (OPD) — schematic

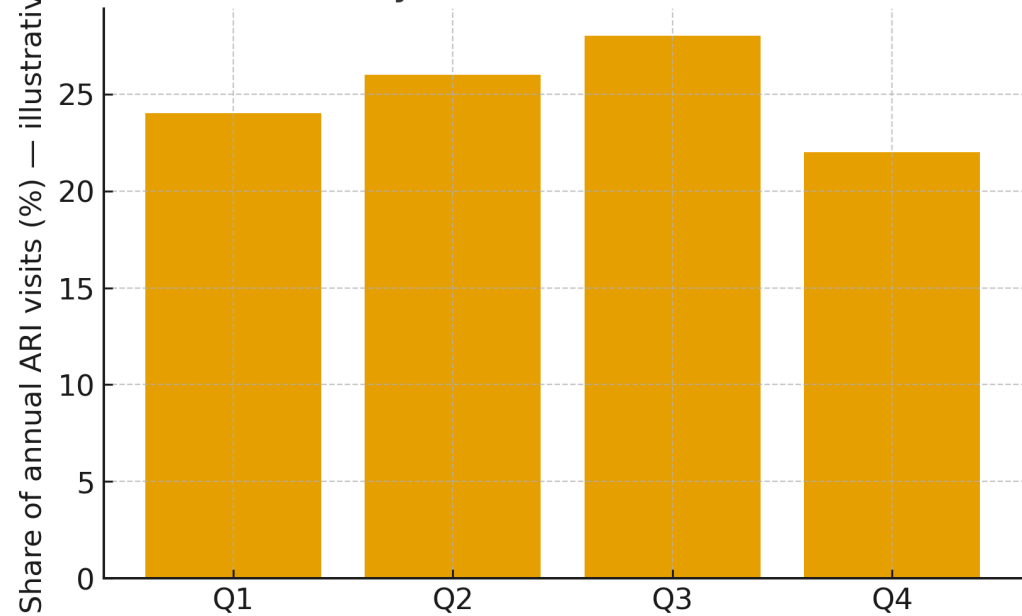


Table 16.4-A. Case definition & assessment (IMCI)

Domain	Summary
Cough/difficult breathing	Screen; check duration/feeding/danger signs.

Pneumonia (IMCI)	Fast breathing by age; chest indrawing; assess SpO2 if available.
Severe/danger sign	Any danger sign or SpO2<90% — urgent referral + oxygen.

Table 16.4-B. Diagnostics and differentials

Diagnostic element	Notes
Pulse oximetry	Measure SpO2 at triage and before discharge; repeat as status changes.
Chest X-ray	Not routine; use for non-responders/complications in higher-level facilities.
Microbiology	Blood culture for severe cases in hospitals; avoid pre-antibiotic contamination.
Differentials	Bronchiolitis, asthma, malaria, TB, pertussis — manage per protocol.

Table 16.4-C. Treatment and hypoxemia management

Treatment area	Protocol notes
Outpatient pneumonia	Amoxicillin 5 days; counsel danger signs; schedule follow-up.
Severe pneumonia	Oxygen + parenteral antibiotics; warmth/fluids; referral as needed.
Hypoxemia	Target SpO2≥90% (≥92% severe); nasal cannulae preferred; monitor SpO2.
Supportive care	Antipyretics; nutrition/hydration; treat comorbidities.

Table 16.4-D. Oxygen system components & readiness

Component	Readiness checklist
Oxygen source	Concentrator/cylinder; filter care; spare parts.

Distribution	Flow meters, tubing, humidifiers when indicated.
Monitoring	Pulse oximeters with pediatric probes; batteries/chargers.
Power & safety	Stabilizers; backup power; oxygen/fire safety.
Maintenance	Preventive schedule; trained technicians; spares.

Table 16.4-E. Indicators and formulas

Indicator	Definition / formula
Care-seeking for ARI (%)	$100 \times (\text{U5 with ARI taken for care} / \text{U5 with ARI})$
Amoxicillin coverage (%)	$100 \times (\text{U5 pneumonia receiving amoxicillin} / \text{U5 pneumonia})$
Pulse-oximetry at triage (%)	$100 \times (\text{Children assessed with SpO}_2 / \text{ARI facility visits})$
Oxygen bundle (%)	$100 \times (\text{Facilities with source+oximeter+delivery+power} / \text{Facilities assessed})$
Inpatient pneumonia CFR (%)	$100 \times (\text{Pneumonia deaths} / \text{Pneumonia admissions})$

Table 16.4-F. Quality-of-care & systems practices

Domain	Operational practices
Clinical mentorship	Direct observation; feedback; protocol adherence.
Data quality	Register–DHIS2 concordance; completeness/timeliness.
Supply reliability	Amoxicillin, oximeters, oxygen; stockout<5%.
Oxygen systems	Maintenance; power plan; user training; safety checks.

Equity & access	Gaps by region/wealth/distance/pastoralist/IDP; transport barriers.
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Program narrative

Most child pneumonia deaths are preventable with timely care: recognize danger signs, measure SpO₂, give amoxicillin when indicated, and provide oxygen for hypoxemia. Gains hinge on steady availability of antibiotics and oximeters, functional oxygen systems at primary facilities, and mentorship that reinforces IMCI protocols. Validate routine trends with coverage surveys and sentinel audits, and plan surge capacity for seasonal peaks and for hard-to-reach settings.

References — Section 16.4 (URLs)

- **WHO — Childhood pneumonia & oxygen therapy** — <https://www.who.int/health-topics/pneumonia>
- **UNICEF — Oxygen systems and child health** — <https://www.unicef.org/health/child-health>
- **The DHS Program — Ethiopia** — <https://www.dhsprogram.com/>
- **Ethiopia FMoH/EPHI — IMCI/Oxygen resources** — <https://www.ephi.gov.et/>

16.5) Diarrhea & Dehydration

Diarrhea remains a leading cause of clinic visits for Ethiopian children. The fastest way to save lives is to recognize dehydration early and replace fluids with ORS (and IV fluids for severe cases), while giving zinc and keeping feeding going. Figures here are schematic placeholders; replace with official DHS/Mini-DHS, HMIS/DHIS2, and facility assessment values before publication.

Figure . ORS + zinc coverage — schematic

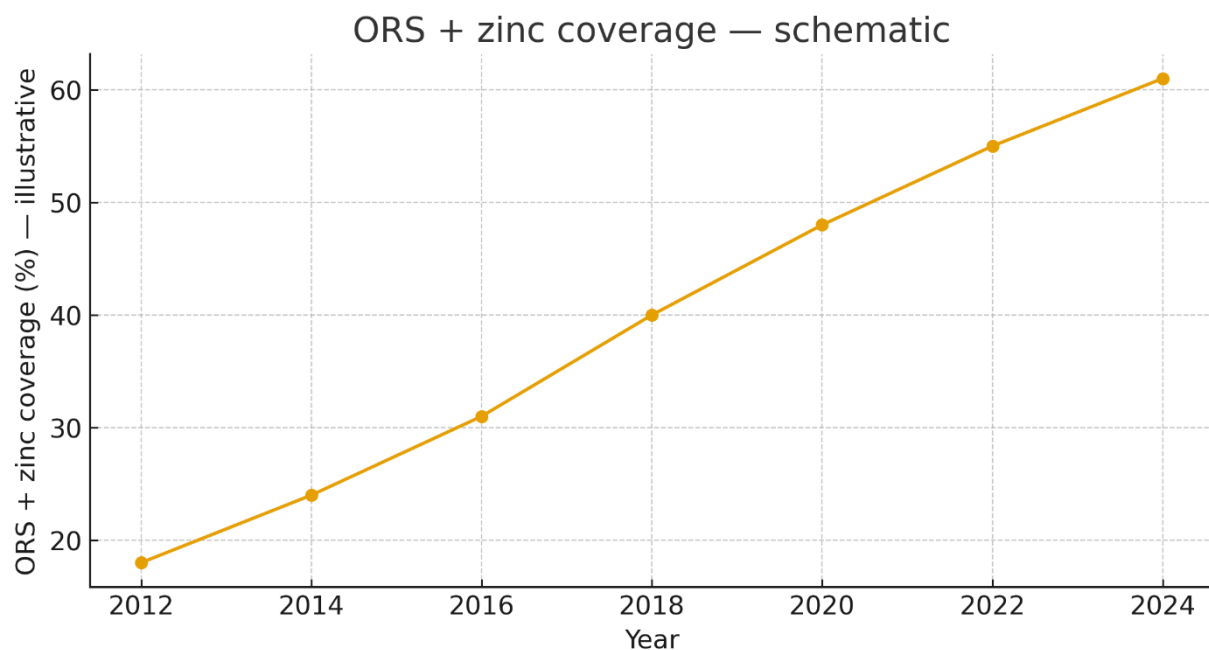


Figure . Care-seeking for diarrhea — schematic

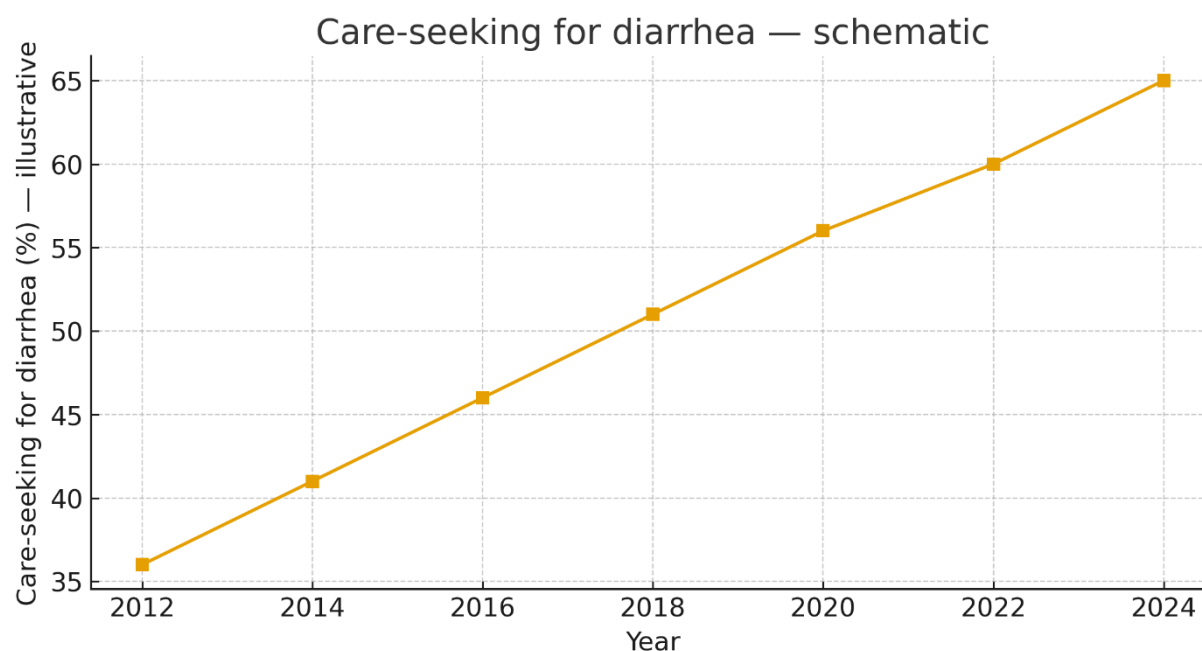


Table 16.5-A. IMCI diarrhea classification

Classification	Key signs
No dehydration	Alert, normal thirst; no sunken eyes; skin pinch returns quickly.
Some dehydration	Restless/irritable; sunken eyes; drinks eagerly; skin pinch returns slowly.
Severe dehydration	Lethargic/unconscious; very sunken eyes; unable to drink; skin pinch returns very slowly.
Persistent diarrhea	≥14 days; assess dehydration and nutrition; manage per protocol.
Dysentery	Visible blood in stool; treat per national guideline.

Table 16.5-B. Treatment plans A/B/C and special situations

Plan	Protocol summary
Plan A	Home care: ORS after each stool; continue feeding/breastfeeding; zinc 10–14 days; counsel danger signs.
Plan B	ORS ~75 ml/kg over 4h at facility; reassess; start feeding when able.
Plan C	Immediate IV Ringer's lactate/NS 100 ml/kg in 3–6h (age-dependent); monitor; urgent referral if needed.
Dysentery	Antibiotic per protocol (e.g., ciprofloxacin) + zinc + fluids; hygiene advice.
Cholera	Aggressive ORS/IV rehydration; refer to CTU if indicated.

Table 16.5-C. Dosing quick notes (zinc, ORS, IV fluids)

Item	Dose/usage
Zinc 6–59m	10 mg/day if <6m; 20 mg/day if ≥6m for 10–14 days.
ORS after each stool	<2y: 50–100 ml; 2–10y: 100–200 ml; older: as desired.
IV fluids (Plan C)	Ringer's lactate preferred; adjust if SAM/severe anemia; monitor closely.
Feeding	Continue breastfeeding; age-appropriate diet; early refeeding.

Table 16.5-D. Household water treatment, sanitation & hygiene

Domain	Interventions
Water	Boiling, chlorination, filtration; safe storage.
Sanitation	Latrine use/maintenance; fecal-sludge management; safe child-feces disposal.

Hygiene	Handwashing with soap at critical times; food hygiene.
Outbreaks	Point-of-use chlorine; rapid water testing; school/IDP hygiene promotion.

Table 16.5-E. Indicators and formulas

Indicator	Definition / formula
ORS + zinc coverage (%)	$100 \times (\text{U5 diarrhea episodes with ORS+zinc} / \text{U5 diarrhea episodes})$
Care-seeking (%)	$100 \times (\text{U5 with diarrhea taken for care} / \text{U5 with diarrhea})$
ORT corner functional (%)	$100 \times (\text{Facilities with functional ORT corner} / \text{Facilities assessed})$
Stockout: ORS/Zinc (%)	$100 \times (\text{Facilities with 30-day stockout} / \text{Facilities assessed})$
Diarrhea prevalence (%)	$100 \times (\text{Children 0–59m with diarrhea in last 2 weeks} / \text{All 0–59m})$

Table 16.5-F. Quality-of-care & systems practices

Domain	Operational practices
Mentorship	Correct dehydration classification; adherence to Plan A/B/C; caregiver counseling.
Data quality	Register–DHIS2 concordance; completeness/timeliness.
Commodity security	ORS, zinc, IV fluids; stockout <5%; FEFO; buffer.
Outbreak readiness	CTU/ORP triggers; cholera kits; risk communication.
Equity & access	Regional/wealth/distance/pastoralist/IDP gaps; seasonal timing.

Program narrative

Correct IMCI classification guides the plan: A for home therapy, B for facility-based ORS rehydration, and C for IV rehydration. Zinc shortens illness and helps prevent new episodes. ORT corners in facilities, reliable stocks of ORS and zinc, and clear caregiver counseling are essential. To keep children from getting sick again, programs must also address water quality, sanitation, and hygiene — especially in drought-affected, flood-prone, and crowded settings. Use DHIS2 to track treatment coverage and stockouts, and validate trends with household surveys. Target extra support to pastoralist, remote, and urban-poor communities where diarrhea remains common.

References — Section 16.5 (URLs)

- **WHO — Diarrhoeal diseases & IMCI** — <https://www.who.int/health-topics/diarrhoeal-diseases>
- **UNICEF — Diarrhoea, ORS & zinc; WASH** — <https://www.unicef.org/health/diarrhoea>
- **The DHS Program — Ethiopia** — <https://www.dhsprogram.com/>
- **Ethiopia FMoH/EPHI — Child health & WASH** — <https://www.ephi.gov.et/>
- **WHO/UNICEF JMP — WASH data** — <https://washdata.org/>

16.7) Vaccine-Preventable Diseases & Zero-Dose Children

This section summarizes Ethiopia's immunization priorities with emphasis on reaching zero-dose and under-immunized children, improving completion (dropout reduction), and maintaining safe, reliable cold-chain systems. Figures are schematic placeholders; replace with official DHS/MICS, DHIS2, and WHO/UNICEF WUENIC values for publication.

Figure . Immunization coverage trends — schematic

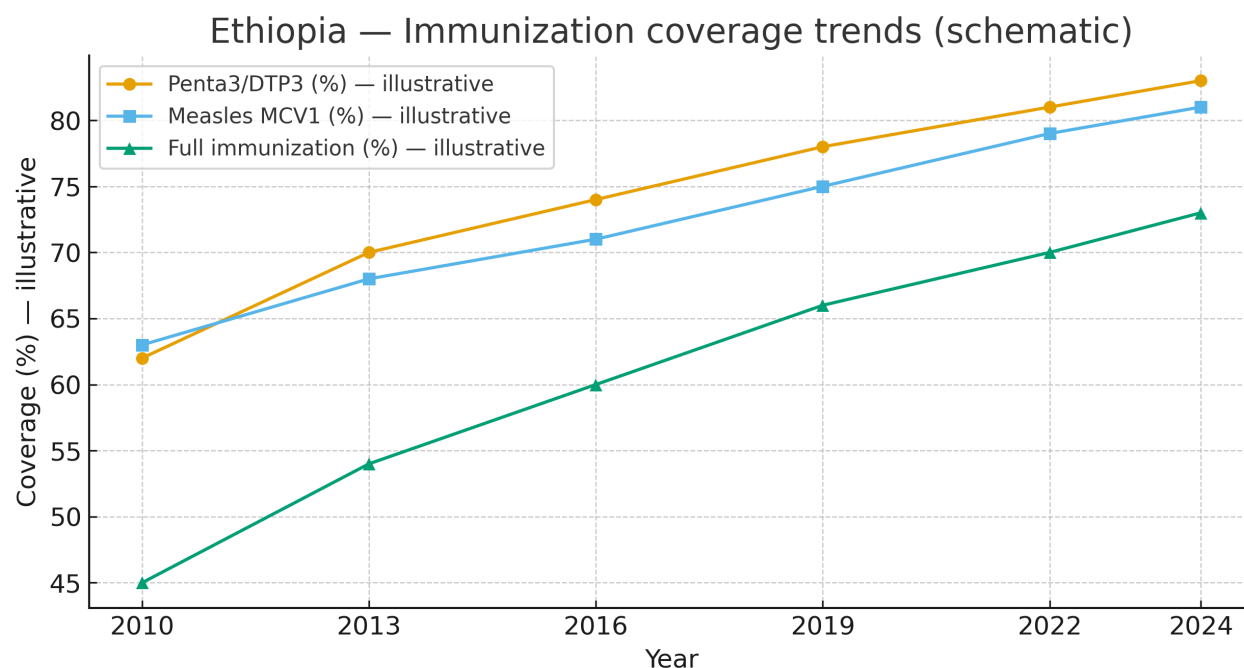


Figure . Zero-dose prevalence — schematic

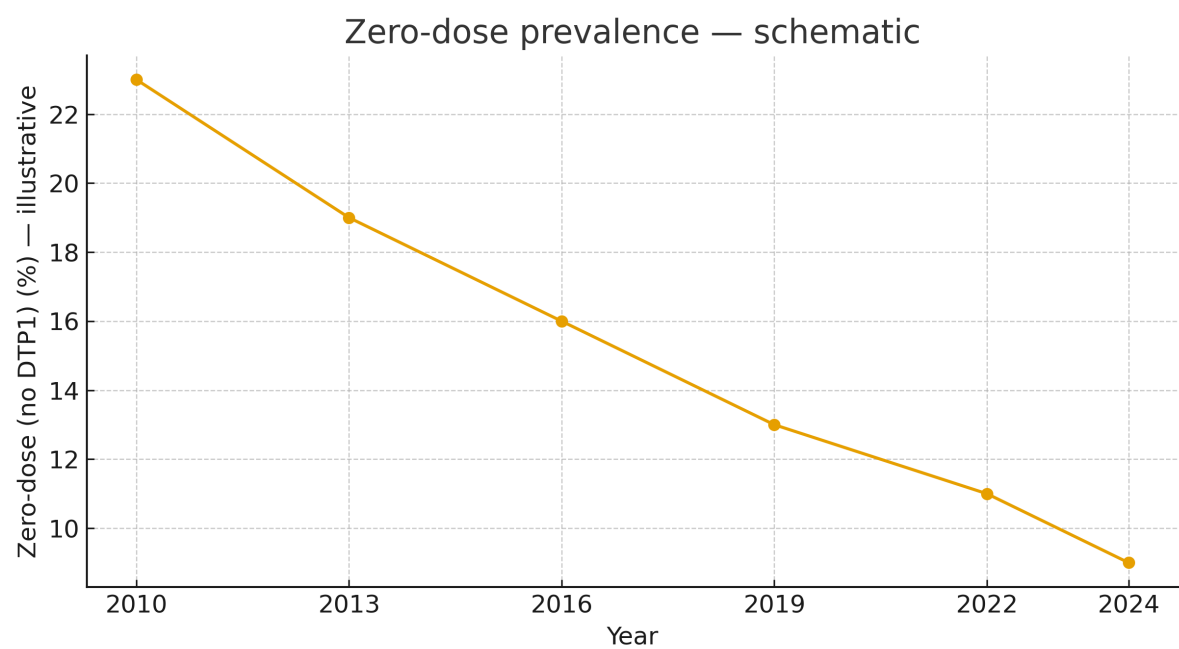


Figure . Vaccine dropout rates — schematic

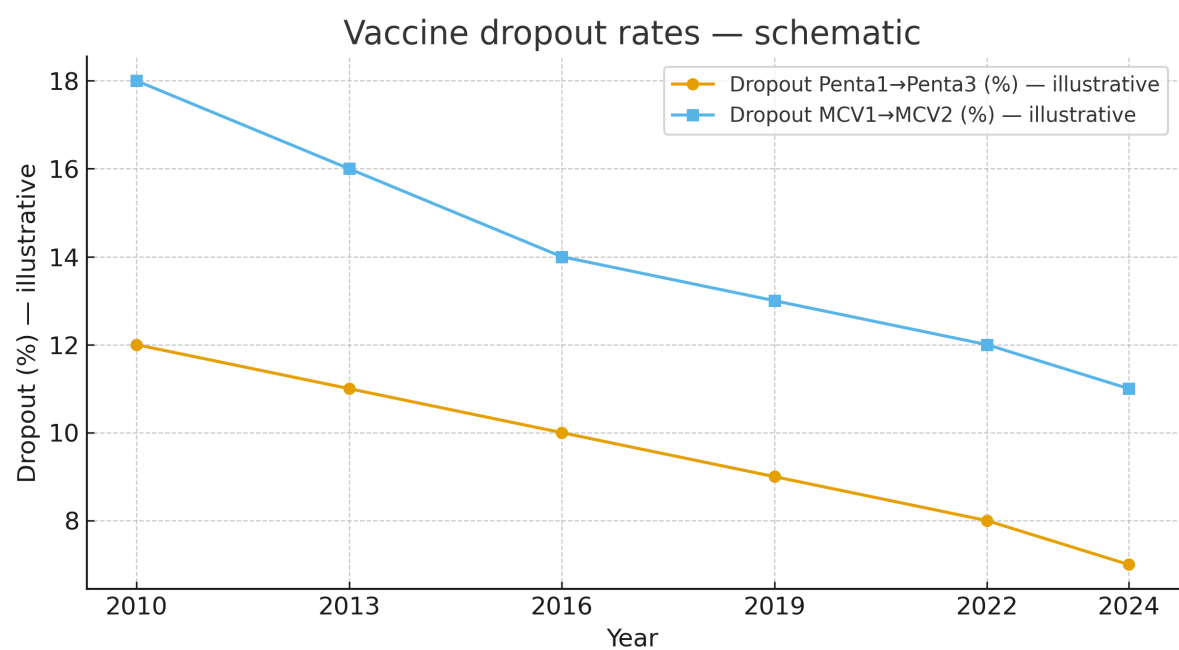


Figure . Defaulter tracing & outreach completion — schematic

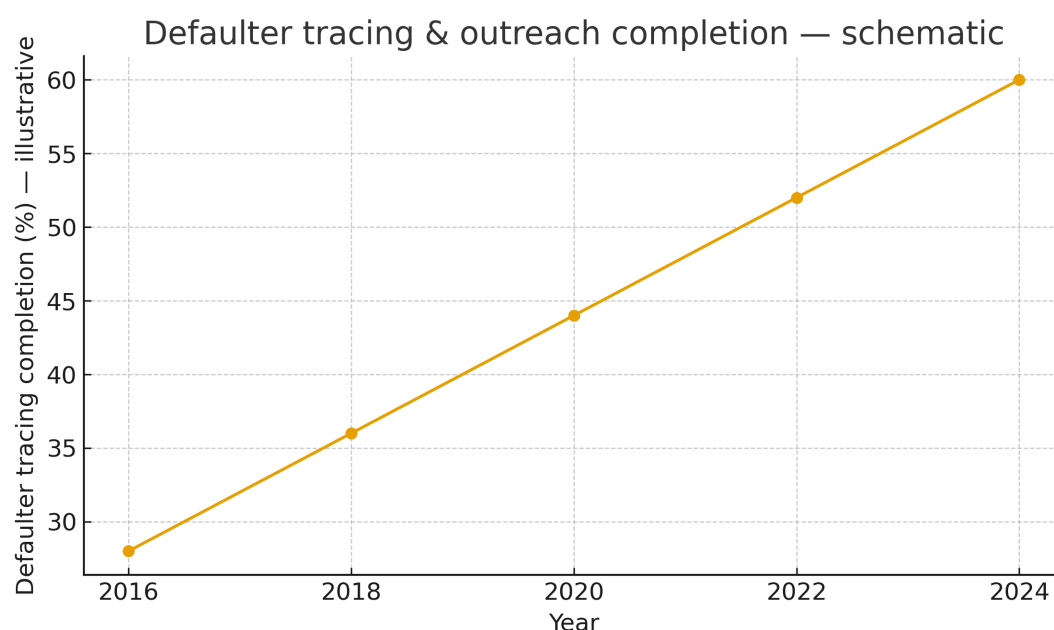


Table 16.7-A. Ethiopia EPI schedule (illustrative — verify against latest national policy)

Age/visit	Vaccines (illustrative; verify nationally)
At birth	BCG; OPV0 (as applicable)
6, 10, 14 weeks	Penta1-3; OPV1-3 (or IPV per schedule); PCV1-3; Rota1-2
9 months	Measles-Rubella (MCV1)
15–18 months	MCV2 (per national policy)
Other (as adopted)	HPV (girls 9–14 yrs); Td in pregnancy; meningococcal/pneumococcal campaigns; cholera in outbreaks

Table 16.7-B. Program components for reaching zero-dose & under-immunized

Component	Operational focus in Ethiopia
Micro-planning	Map catchments, hard-to-reach (pastoralist/IDP/urban slums), and session plans.
Outreach/mobile sessions	Regular outreach to remote kebeles; integrate with HEP/community platforms.

Defaulter tracing	Register audits; SMS/HEW visits; RED/REC approach.
Cold chain & logistics	Reliable power; temperature monitoring; spare parts; stock visibility.
Data use & review	Monthly DHIS2 reviews; triangulate with DHS/MICS; coverage & dropout dashboards.
Demand & confidence	Community engagement; tackle rumors; tailored social & behavior change.

Table 16.7-C. Indicators and formulas

Indicator	Definition / formula
Penta3/DTP3 coverage (%)	$100 \times (\text{Children receiving 3rd dose} / \text{Target under-1 population})$
MCV1 coverage (%)	$100 \times (\text{Children receiving MCV1} / \text{Target under-1 population})$
Full immunization (%)	% of children 12–23 months receiving all age-appropriate doses
Zero-dose (no DTP1) (%)	$100 \times (\text{Children 12–23 months with 0 doses of DTP-containing vaccine} / \text{Children 12–23 months})$
Dropout Penta1→Penta3 (%)	$100 \times (\text{Penta1} - \text{Penta3}) / \text{Penta1}$
Dropout MCV1→MCV2 (%)	$100 \times (\text{MCV1} - \text{MCV2}) / \text{MCV1}$
Cold-chain readiness (%)	$100 \times (\text{Facilities meeting fridge} + \text{temp monitoring} + \text{power} + \text{spares} / \text{Facilities assessed})$

Table 16.7-D. Quality, equity & safety practices

Domain	Operational practices
AEFI monitoring	Passive + stimulated reporting; causality assessment; rapid response.
Equity tracking	Disaggregate by region, wealth, sex, distance, pastoralist/IDP; map zero-dose clusters.
Session quality	Observation checklists; missed-opportunities audits; bundle syringes/safety boxes.
Supply reliability	Stockout <5%; FEFO; buffer stock; visibility for last mile.
Confidence & demand	Community dialogues; address misinformation; use trusted local leaders.

Table 16.7-E. Core data sources for immunization analytics

Source	What it provides
Administrative (DHIS2)	Monthly coverage, session counts, stock; requires denominator validation.
Household surveys (DHS/MICS)	Card/history-based coverage; equity; zero-dose mapping.
WHO/UNICEF (WUENIC/JRF)	Global estimates; triangulated with national data.
Special studies	Coverage surveys, data-quality reviews (DQR), cold-chain assessments, AEFI audits.

Program narrative

Ethiopia's most cost-effective child-survival gains come from immunization. The priorities are (1) find and vaccinate zero-dose children (no DTP1), (2) reduce dropout so that children complete Penta3 and receive MCV2, and (3) keep vaccines potent through reliable cold-chain systems. Micro-plans should map hard-to-reach kebeles and IDP/pastoralist routes; outreach sessions and defaulter tracing need to be routine. Dashboards should display coverage, zero-dose density, and dropout alongside stock and cold-chain metrics, and should flag areas for supportive supervision. Equity analysis is essential—children in remote, poor, or mobile communities are far more likely to be zero-dose. Triangulating DHIS2, DHS/MICS, and WHO/UNICEF estimates helps validate trends and target resources efficiently.

References — Section 16.7 (URLs)

- **WHO — Immunization Essentials & Position Papers —** <https://www.who.int/teams/immunization-vaccines-and-biologicals>
- **UNICEF — Reaching zero-dose children —** <https://www.unicef.org/immunization>
- **WHO/UNICEF WUENIC & JRF —** <https://immunizationdata.who.int/>
- **The DHS Program — Ethiopia —** <https://www.dhsprogram.com/>
- **Ethiopia FMoH/EPHI — EPI resources —** <https://www.ephi.gov.et/>

16.8) Acute Malnutrition (Wasting) & CMAM

Ethiopia's CMAM platform combines community screening, OTP for uncomplicated SAM, SC for complicated cases, and TSFP for MAM, with strong linkages to IYCF and WASH. Figures are schematic placeholders to be replaced with SMART/MICS/DHS, DHIS2/CMAM, and logistics data.

Figure . SAM admissions — schematic

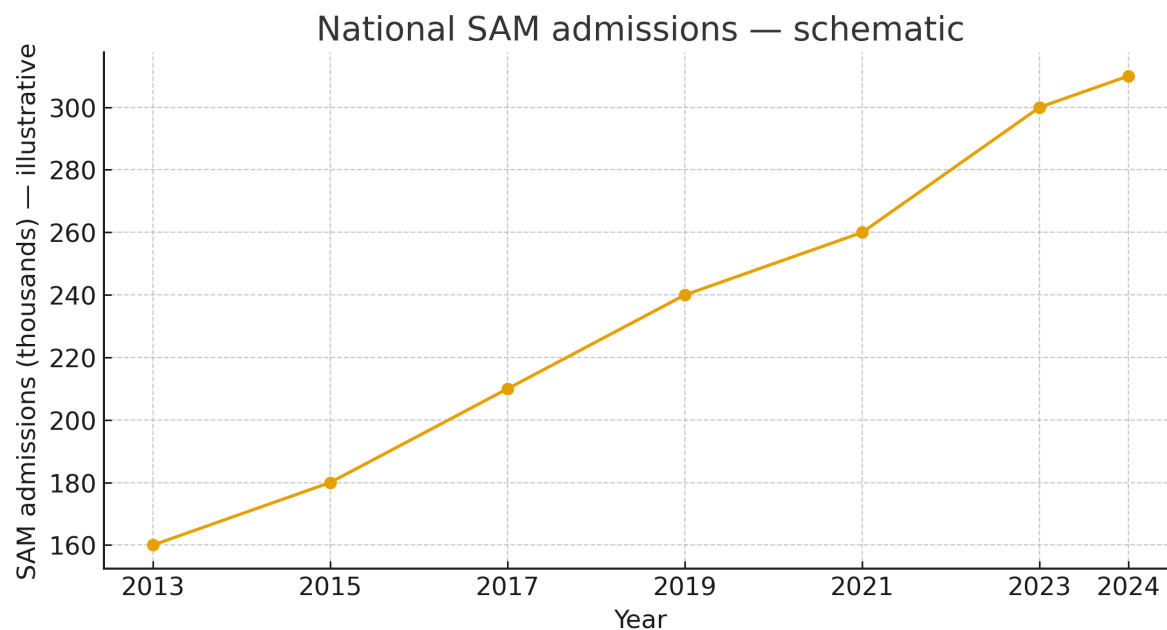


Figure . CMAM outcomes — cure, default, death (schematic)

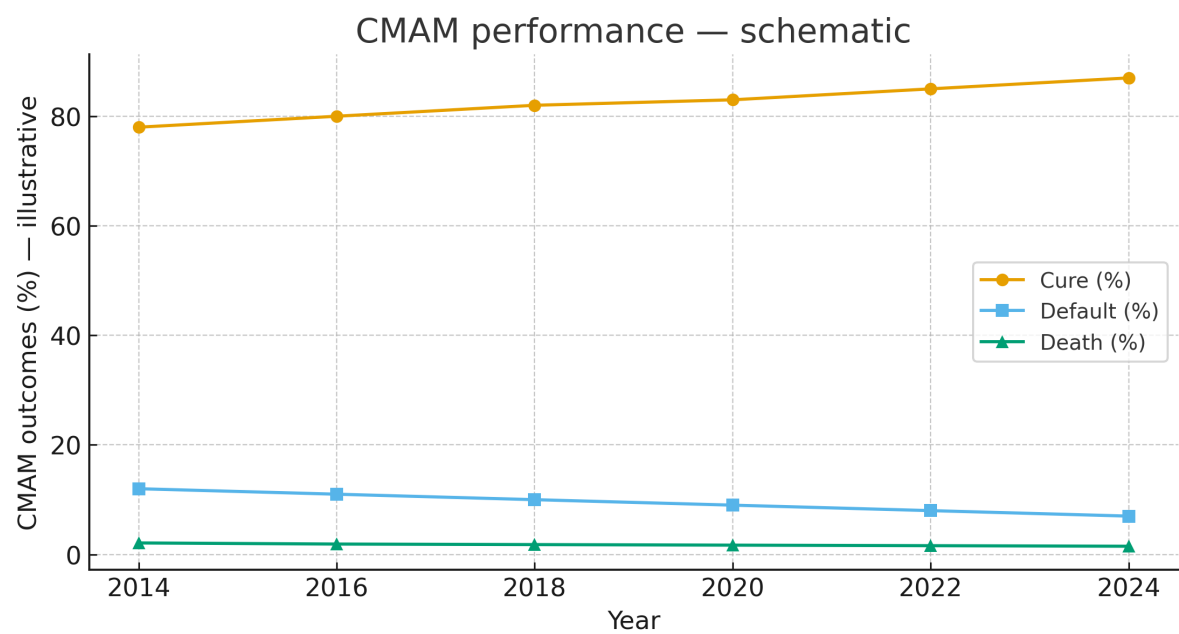


Figure . RUTF stockout rate — schematic

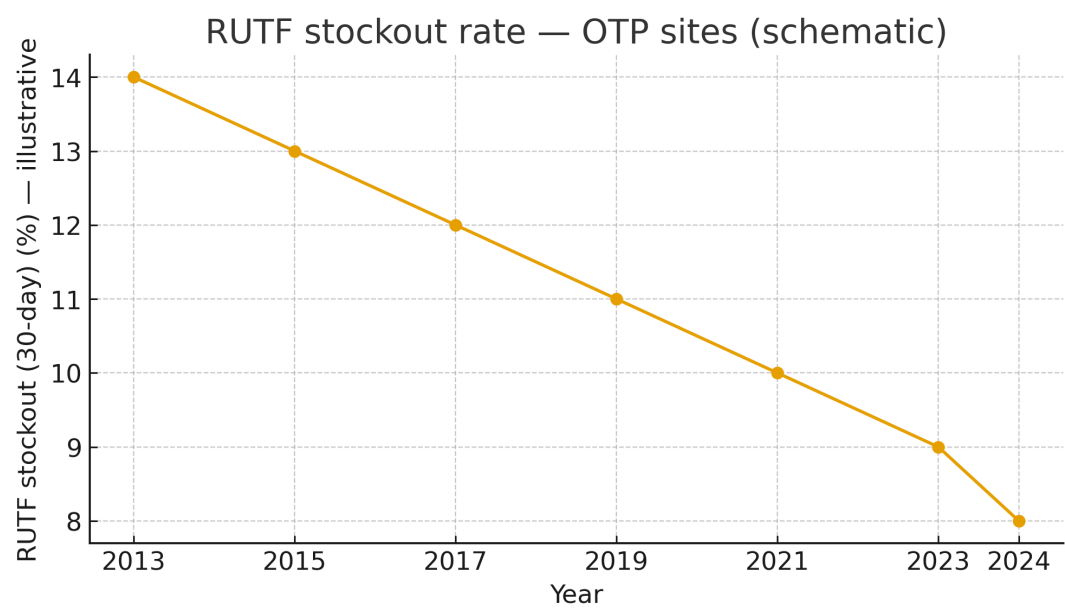


Figure . Screening coverage vs GAM prevalence — schematic

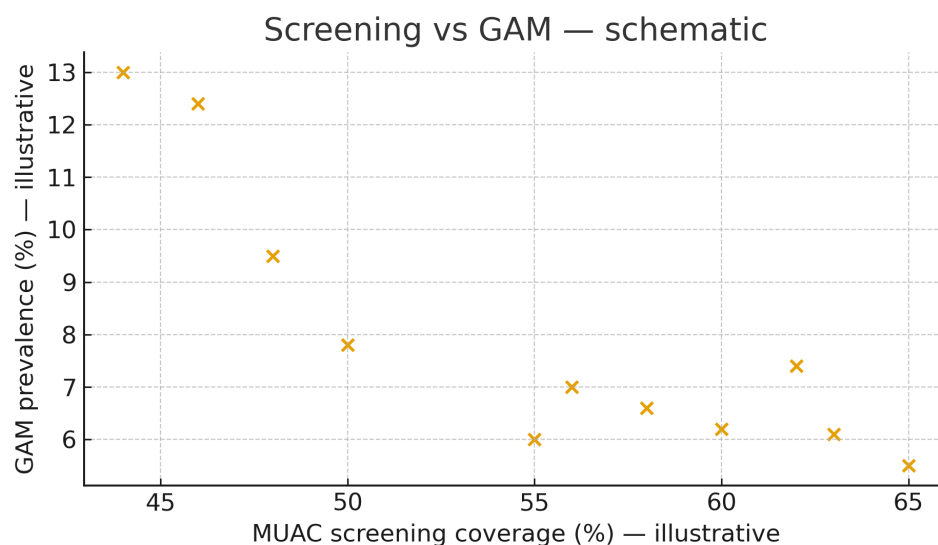


Table 16.8-A. Definitions & thresholds

Term	Definition
GAM	WHZ<-2 and/or MUAC<125 mm and/or edema (any).
SAM	WHZ<-3 and/or MUAC<115 mm and/or edema.
MAM	WHZ -3 to < -2 and/or MUAC 115–<125 mm; no edema.
Oedema grading	+ to +++; any edema = SAM.

Table 16.8-B. CMAM components

Component	Operational focus
Community screening	MUAC + edema check; referral; family MUAC.
OTP	Uncomplicated SAM; RUTF + routine meds; follow-up.
SC	SAM with complications; F-75→F-100; close monitoring.
TSFP	MAM treatment; specialised foods; counselling.

IYCF	EBF, complementary feeding, responsive feeding.
Linkages	WASH, malaria/diarrhea care, deworming, social protection.

Table 16.8-C. Admission & discharge criteria

Area	Criteria
OTP admission	MUAC<115 mm or WHZ<-3 or edema (+/++); appetite pass; no complications.
SC admission	Complications or appetite fail; infants <6m; edema +++.
Discharge (cure)	No edema 2 weeks and MUAC≥125 mm or WHZ≥-2; clinically well.
Non-response/transfer	Refer or evaluate per protocol.

Table 16.8-D. Logistics & pipeline

Element	Logistics notes
RUTF pipeline	Quantification→procurement→central→regional→woreda→facility.
Buffer stock	≥2 months at facility; LMIS; FEFO.
Visibility	Stock on hand, consumption, losses; link to DHIS2.
Risks	Transport, funding, expiry, diversion; mitigations.

Table 16.8-E. Indicators & formulas

Indicator	Definition / formula
GAM/SAM/MAM prevalence (%)	Survey-based; $100 \times (\text{Children meeting criteria} / \text{Children assessed})$.
SAM admissions	Total OTP+SC admissions (period).
Cure (%)	$100 \times (\text{Cured} / \text{Discharges})$.
Default (%)	$100 \times (\text{Defaulted} / \text{Discharges})$.
Death (%)	$100 \times (\text{Died} / \text{Discharges})$.
ALOS (days)	Mean days from admission to cure.

RUTF stockout (%)	100×(Facilities with 30-day stockout/Facilities assessed).
Screening coverage (%)	100×(Children 6–59m screened/Estimated 6–59m).

Table 16.8-F. Quality-of-care & systems

Domain	Operational practices
Clinical quality	Correct criteria; edema grading; appetite test; danger signs.
SC protocols	F-75 stabilization; cautious fluids; transition; infection care.
Mentorship	Charts/cohorts; weight-gain checks; fix bottlenecks.
Data quality	Register–DHIS2 concordance; timely, complete.
Equity & outreach	Mobile teams; IDP/pastoralist; surge during shocks.

Program narrative

Early case-finding, reliable RUTF, and adherence to SC/OTP protocols drive survival. Cohort reviews of cure, default, and mortality rates help identify problems, while stock dashboards prevent pipeline breaks. During droughts or displacement, surge screening and mobile OTPs keep coverage up. Sustained gains depend on WASH, food security, and IYCF support to prevent relapse.

References — Section 16.8 (URLs)

- **WHO/UNICEF — Management of wasting** — <https://www.who.int/teams/nutrition-and-food-safety/policies/management-of-wasting>
- **UNICEF — CMAM & RUTF supply** — <https://www.unicef.org/nutrition/child-wasting>
- **SMART Methodology** — <https://smartmethodology.org/>
- **The DHS Program — Ethiopia nutrition** — <https://www.dhsprogram.com/>
- **Ethiopia FMoH/EPHI — CMAM/IYCF resources** — <https://www.ephi.gov.et/>

16.9) Growth Faltering, Anemia & Micronutrient Deficiencies

Stunting and anemia remain widespread in Ethiopia and drive long-term human-capital losses. This section covers status/trends, core interventions from ANC through early childhood, fortification efforts, and indicators/data sources. Figures are schematic placeholders; replace with official survey and routine data before publication.

Figure . Stunting trend — schematic

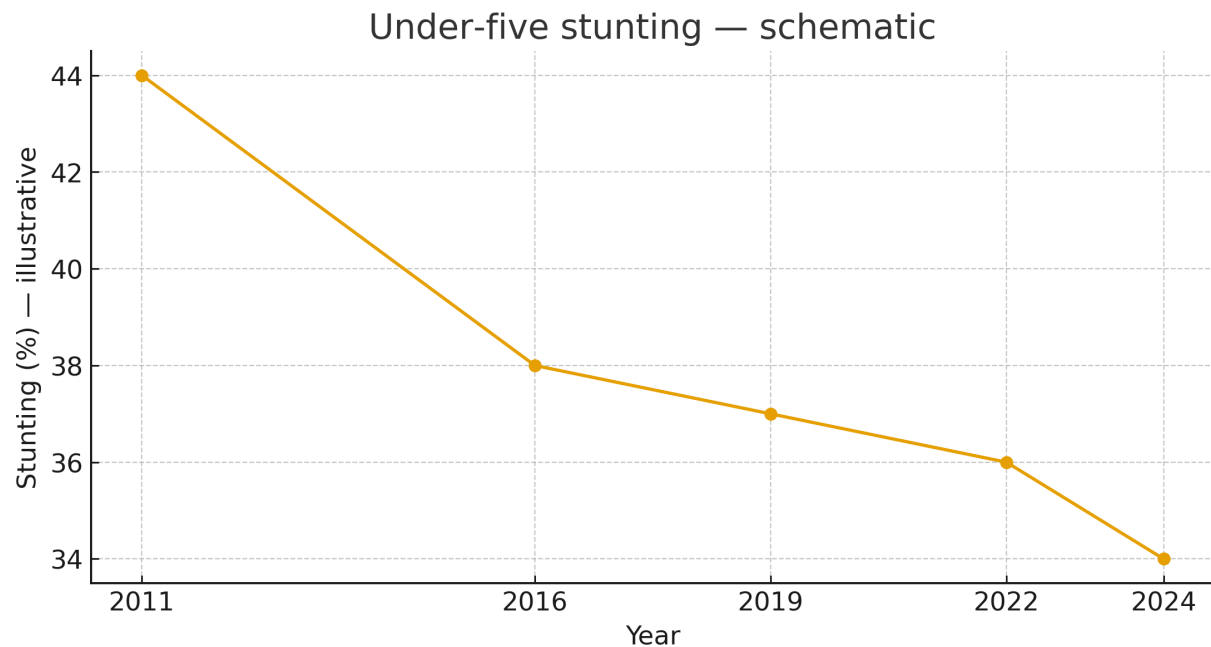


Figure . Anemia trends — schematic

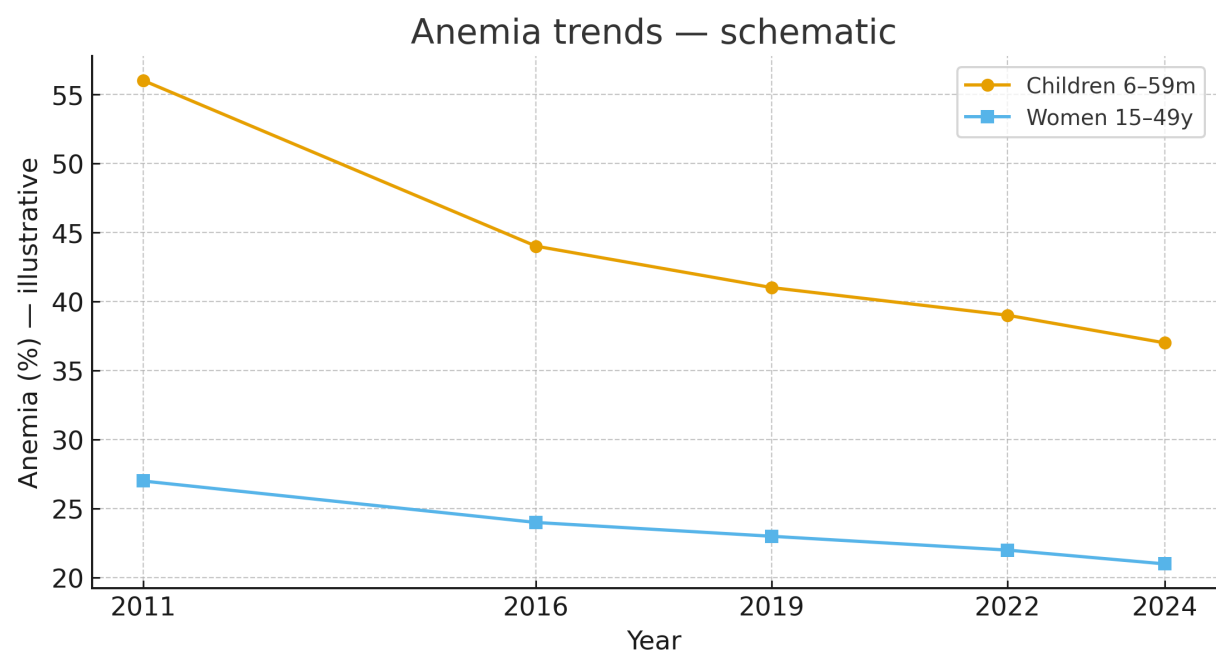


Figure . Micronutrient coverage — schematic

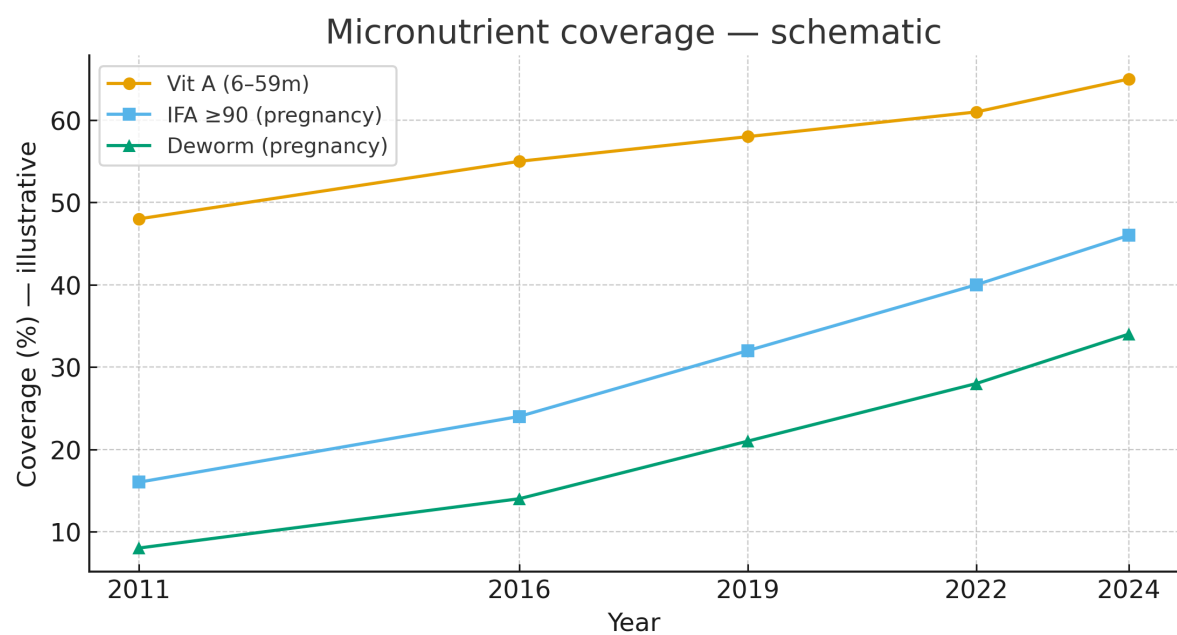
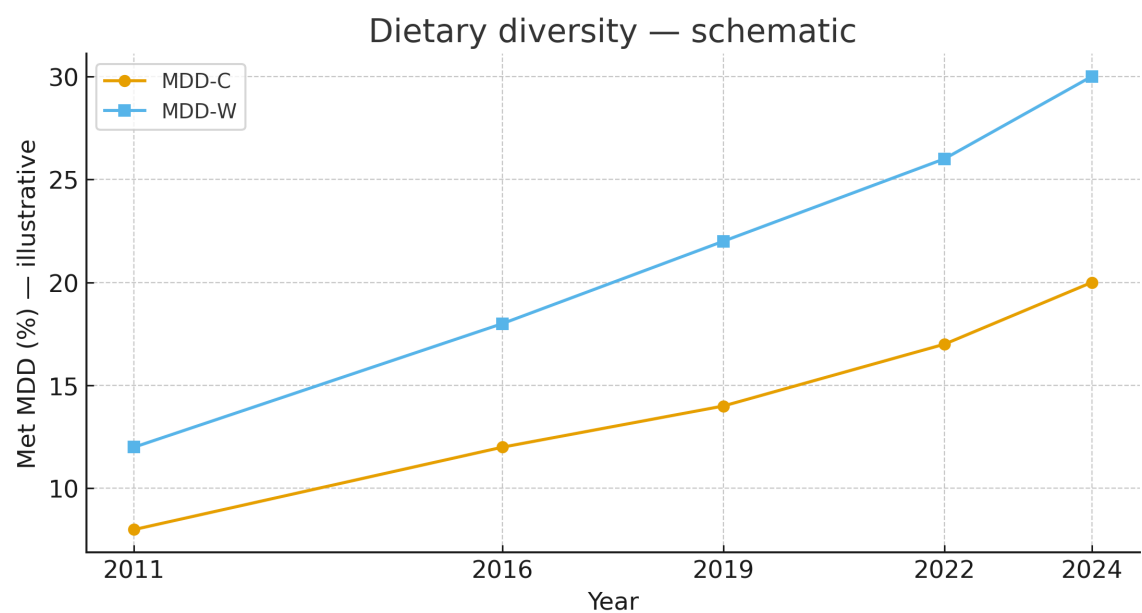
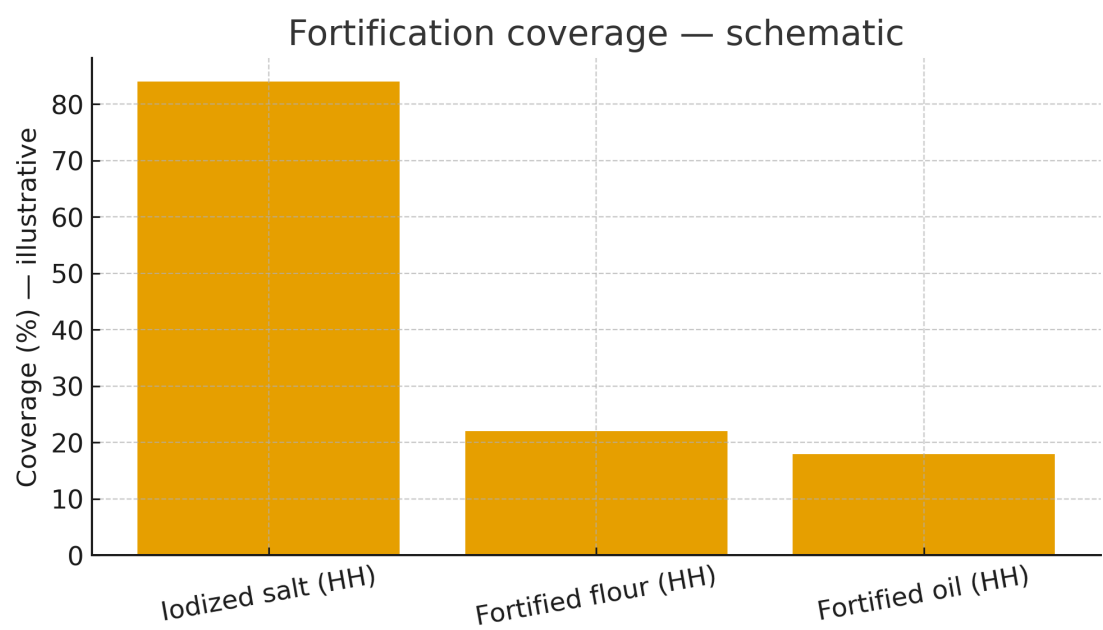


Figure . Dietary diversity — schematic

Figure 16.9-5



Fortification coverage — schematic



16.9-A. Definitions & thresholds

Term	Definition
Stunting	HAZ<-2; severe if HAZ<-3.
Wasting	WHZ<-2; severe if WHZ<-3.
Underweight	WAZ<-2.
Anemia (children)	Hb<11.0 g/dL; adjust for altitude.
Anemia (women)	Hb<12.0 g/dL; adjust for altitude.
MDD-C	≥5 of 8 food groups (24h).
MDD-W	≥5 of 10 food groups (24h).

Table 16.9-B. Intervention package

Component	Operational focus
ANC nutrition	IFA ≥90 or MMS; deworming where indicated; counselling.
IYCF	EBF; timely, diverse complementary feeding; responsive feeding.
Vitamin A	Semi-annual dosing (6–59m) per policy.
Deworming	Children and pregnant women (2nd/3rd trimester) per guideline.
Fortification	Iodized salt; industrial flour/oil fortification; QC.
Safety nets	Cash/food assistance; school feeding; livelihood links.
SBCC	Community dialogues; address taboos; male engagement.

Table 16.9-C. Indicators & formulas

Indicator	Definition / formula
Stunting (%)	100×(U5 HAZ<-2 / U5 measured).
Anemia U5 (%)	100×(6–59m Hb<11.0 / tested), altitude-adjusted.
Anemia women (%)	100×(15–49y Hb<12.0 / tested), altitude-adjusted.
Vit A (%)	100×(6–59m received in last 6m / eligible).
IFA ≥90 (%)	100×(Women with ≥90 IFA / women with live birth).
MDD-C/W (%)	Share meeting dietary diversity thresholds.
Iodized salt (%)	100×(HH with adequately iodized salt / tested).

Table 16.9-D. Data sources

Source	What it provides
Surveys	DHS/Mini-DHS, MICS, SMART — anthropometry, anemia, diet, salt.
Routine	DHIS2 for supplementation/ANC; LMIS for IFA/Vit A.
Fortification	Factory QA/QC, market checks, HH rapid tests.
Studies	Micronutrient biomarkers; diet cost analyses.

Table 16.9-E. Quality, equity & multisector practices

Domain	Operational practices
Data quality	Anthropometry standardization; altitude-adjusted Hb; DQRs.
Program quality	ANC session micro-plans; IFA consumption; supply reliability.

Equity	Disaggregate by region, wealth, rural/urban, distance, pastoralist/IDP.
Multi-sector	Coordinate with agriculture, WASH, education, social protection.

Program narrative

Linear growth faltering begins in utero and accelerates with infections and poor diets during the first two years. Ensuring ≥90 IFA tablets or MMS in pregnancy, early and exclusive breastfeeding, and diverse complementary foods from 6 months are foundational. Vitamin A supplementation, universal iodized salt, and industrial fortification add population-wide protection. Programs must track effective coverage and quality—IFA consumption (not just ANC visits), dietary diversity, and anemia trends—while safeguarding supplies. Equity dashboards should guide outreach to rural, poor, pastoralist, and displaced communities. Durable progress depends on coordinated action across health, WASH, food systems, and social protection.

References — Section 16.9 (URLs)

- **WHO — Nutrition guidance** — <https://www.who.int/health-topics/nutrition>
- **UNICEF — Nutrition & fortification** — <https://www.unicef.org/nutrition>
- **FAO/WHO — MDD-W and MDD-C** — <https://www.fao.org/nutrition/assessment/food-consumption/minimum-dietary-diversity/en/>
- **The DHS Program — Ethiopia** — <https://www.dhsprogram.com/>
- **Ethiopia FMoH/EPHI — Nutrition** — <https://www.ephi.gov.et/>

16.10) Child Injury Prevention & Safe Environments

Injuries remain a preventable cause of child morbidity and mortality in Ethiopia. This section organizes risks and interventions across drowning, road-traffic injuries, burns, falls, and poisoning; it also emphasizes school-zone safety, household design, and first-aid/emergency readiness. Figures are schematic placeholders; replace with official surveillance, hospital, police/transport, WASH, and education data prior to publication.

Figure . Under-five injury mortality — schematic

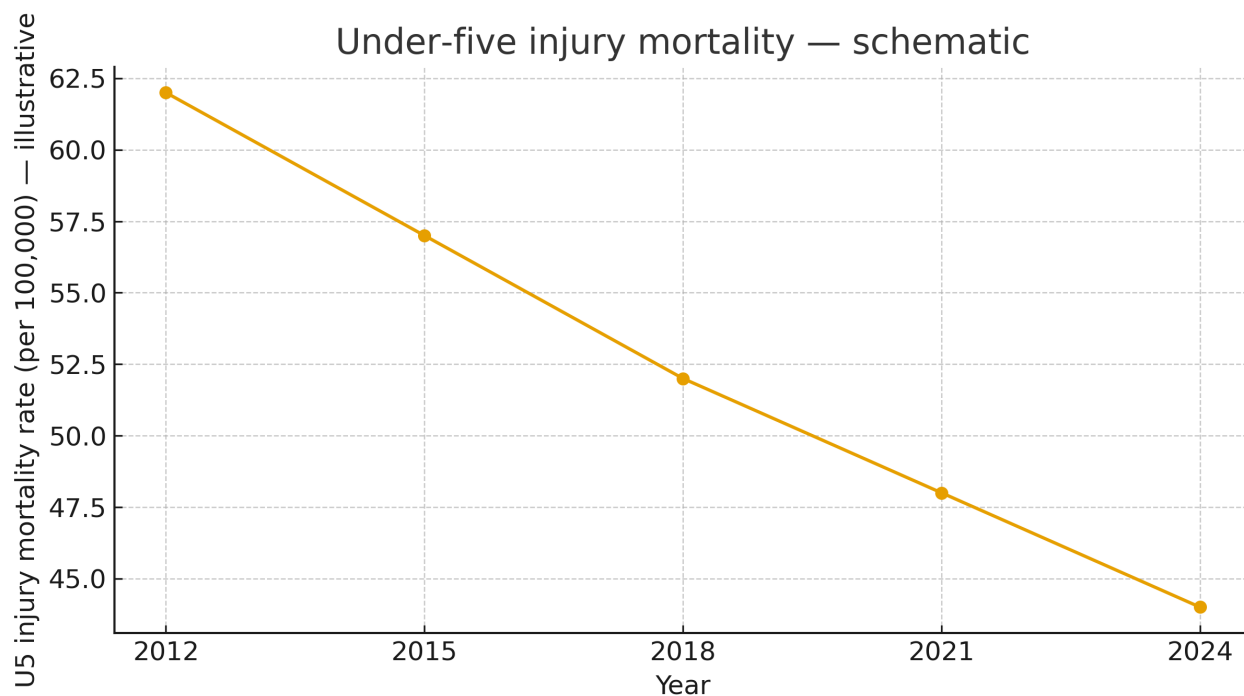


Figure . Distribution of child injury causes — schematic

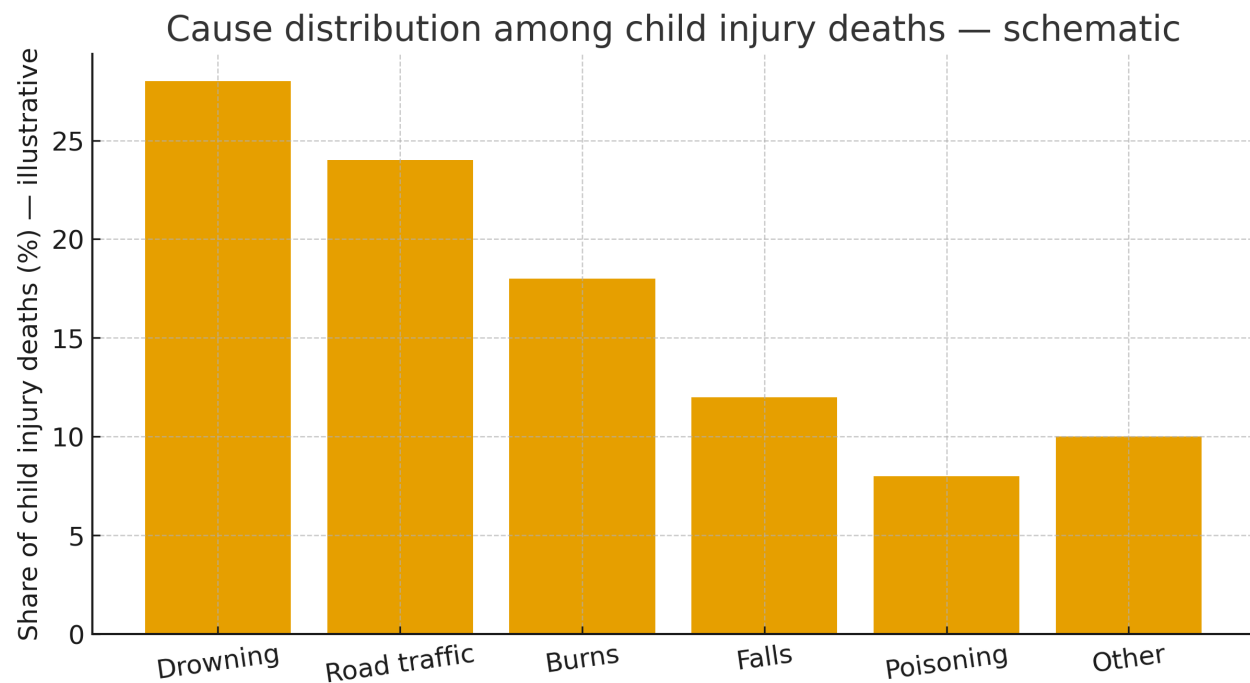


Figure . Road-traffic injuries in children (by sex) — schematic

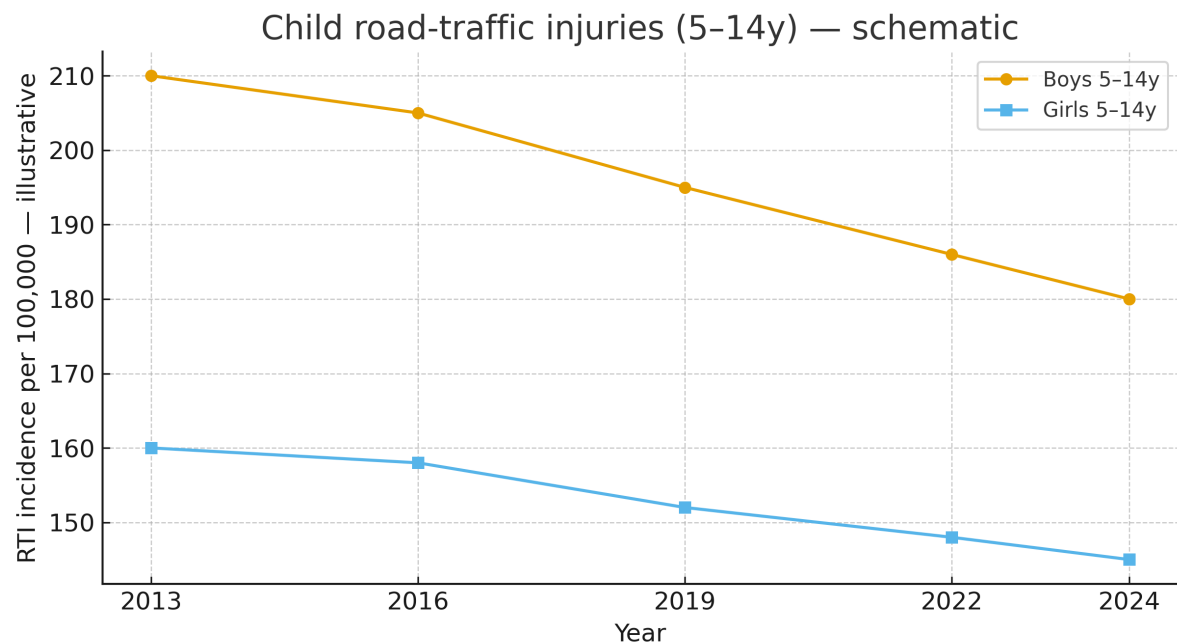


Table 16.10-A. Risk factors and contexts for child injuries

Risk domain	Ethiopia-relevant specifics
Water proximity & supervision	Open ponds/streams; irrigation canals; low adult supervision during farm tasks.
Household fire & fuels	Open fires; kerosene/biomass; unprotected stoves; scalds from hot water/food.
Road environment	High-speed roads near schools; mixed traffic; lack of crossings/sidewalks/reflectors.
Built environment	Unsafe stairways/roofs; poor railings; construction pits; unprotected wells.
Toxic substances	Unlabeled pesticides/kerosene; medicines within reach; lack of safe storage.
Emergency response	Limited first-aid knowledge; delayed transport; low availability of oxygen/resuscitation.

Table 16.10-B. Interventions and delivery platforms

Intervention	Delivery platform/notes
Drowning prevention	Community crèches/day-care during farm seasons; barriers around water; swimming/floatation skills; rescue training.
Road safety	School-area speed management; speed bumps/crosswalks; helmets for cyclists; reflective sashes; traffic education.
Burn prevention	Improved cookstoves; safe stove/house layout; pot guards; child-safe matches; kerosene safety.
Fall prevention	Railings/guards; safe ladders; cover construction pits/wells; play-area surfacing.
Poisoning prevention	Lockable storage; labeling; child-resistant containers; pesticide stewardship.

First aid & emergency care	Basic life support in schools/HEWs; community first-aid kits; referral and ambulance coordination.
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Table 16.10-C. Indicators and formulas

Indicator	Definition / formula
U5 injury mortality rate	$100,000 \times (\text{Injury deaths U5} / \text{U5 population})$
RTI incidence (5–14y)	$100,000 \times (\text{New RTI cases 5–14y} / \text{Children 5–14y})$
Drowning rate U5	$100,000 \times (\text{U5 drowning deaths} / \text{U5 population})$
Burn admissions U5	$100 \times (\text{U5 burn admissions} / \text{All U5 admissions})$
HH safety features (%)	$100 \times (\text{HH with target feature} / \text{HH surveyed})$
School speed-zone coverage (%)	$100 \times (\text{Schools with speed calming \& crossings} / \text{Schools on high-risk roads})$

Table 16.10-D. Core data sources

Source	What it provides
Mortality surveillance/verbal autopsy	Cause-of-death fractions; injury component.
Hospital & HMIS/DHIS2	Admissions by cause (burns, falls, RTI); case-fatality; oxygen/trauma readiness.
Police/transport authority	RTI crash and fatality data; location and time.
WASH/education audits	Barriers around water; safe school zones; first-aid readiness.
Household surveys (DHS/MICS)	Injury modules (where available); presence of safety features; care-seeking.

Table 16.10-E. Quality, equity & systems practices

Domain	Operational practices
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Equity focus	Map risks among pastoralist/IDP/urban informal settlements; time-use patterns for caregivers.
Design for safety	Safe school-zone standards; day-care during peak agricultural seasons; gender-sensitive approaches.
Systems readiness	Trauma/ER signal functions; oxygen availability; ambulance dispatch; first-aid in schools.
Data quality	Standardized injury coding; reconcile police/hospital data; seasonal dashboards.

Program narrative

Most child injuries follow predictable patterns: drowning peaks during rainy/irrigation seasons; burns cluster around cooking areas; and RTIs concentrate near roads without speed control. Effective prevention combines safer environments (barriers, speed calming, improved cookstoves), supervision and skills (day-care/crèches, rescue and first-aid), and system readiness (ambulance dispatch, oxygen/trauma support). District dashboards should reconcile hospital HMIS with police crash data and WASH/education audits, highlighting hotspots for rapid fixes. Equity lenses are essential: pastoralist and displaced children face unique hazards (open water points, tent cooking, roadside settlements), while urban slum children are exposed to traffic and unsafe housing. A realistic package adds school-zone standards, seasonal drowning prevention, household safety checks, and first-aid training for teachers and Health Extension Workers, backed by reliable oxygen and basic trauma supplies.

References — Section 16.10 (URLs)

- **WHO — Child injury prevention** — <https://www.who.int/health-topics/injuries/child-injuries>
- **UNICEF — Child protection & safe environments** — <https://www.unicef.org/protection>
- **Global Road Safety Facility — Speed management** — <https://www.worldbank.org/en/programs/global-road-safety-facility>
- **The DHS/MICS — Ethiopia** — <https://dhsprogram.com/>
- **Ethiopia FMoH — HMIS/DHIS2 resources** — <https://www.moh.gov.et/>

16.11) Early Childhood Development (ECD) & Integrated Packages

ECD weaves together health, nutrition, protection, responsive caregiving, and early learning. In Ethiopia, the Health Extension Program (HEP) and pre-primary (O-class) system, combined with community platforms, can deliver an affordable package that boosts cognitive, socio-emotional, and physical development. Figures are schematic placeholders; replace with DHS/MICS, EMIS, HMIS/DHIS2, and program monitoring data before publication.

Figure . Pre-primary enrollment — schematic

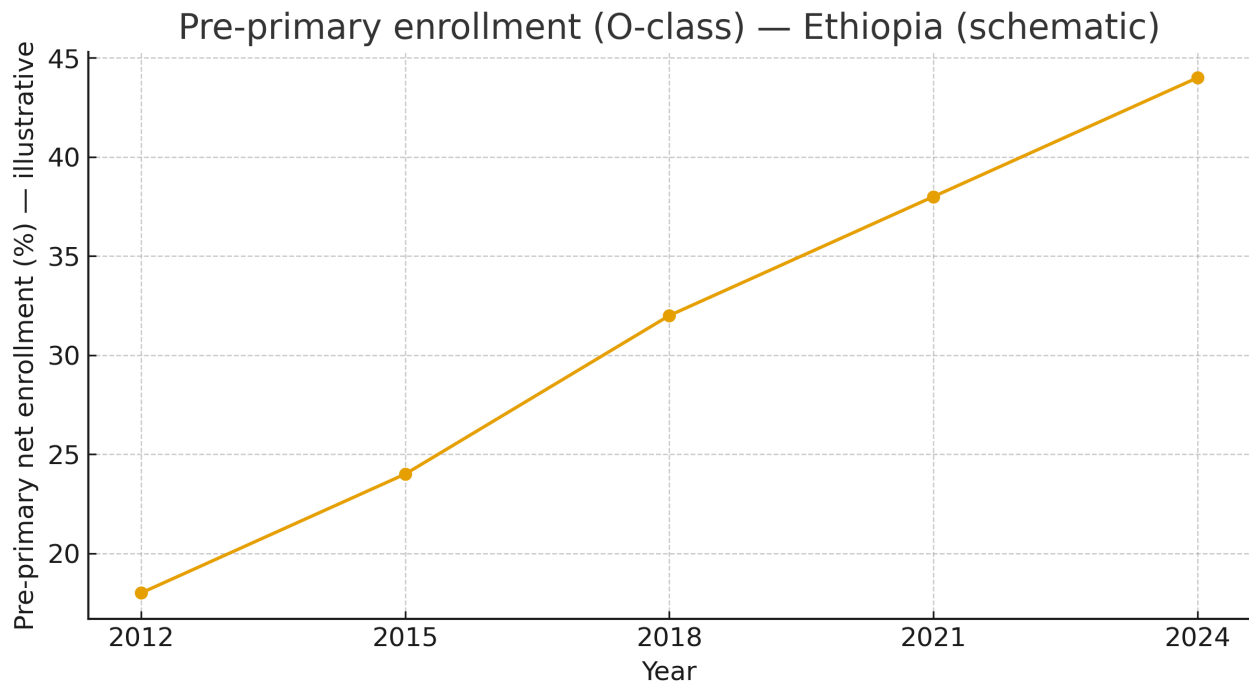


Figure . Caregiver-child stimulation — schematic

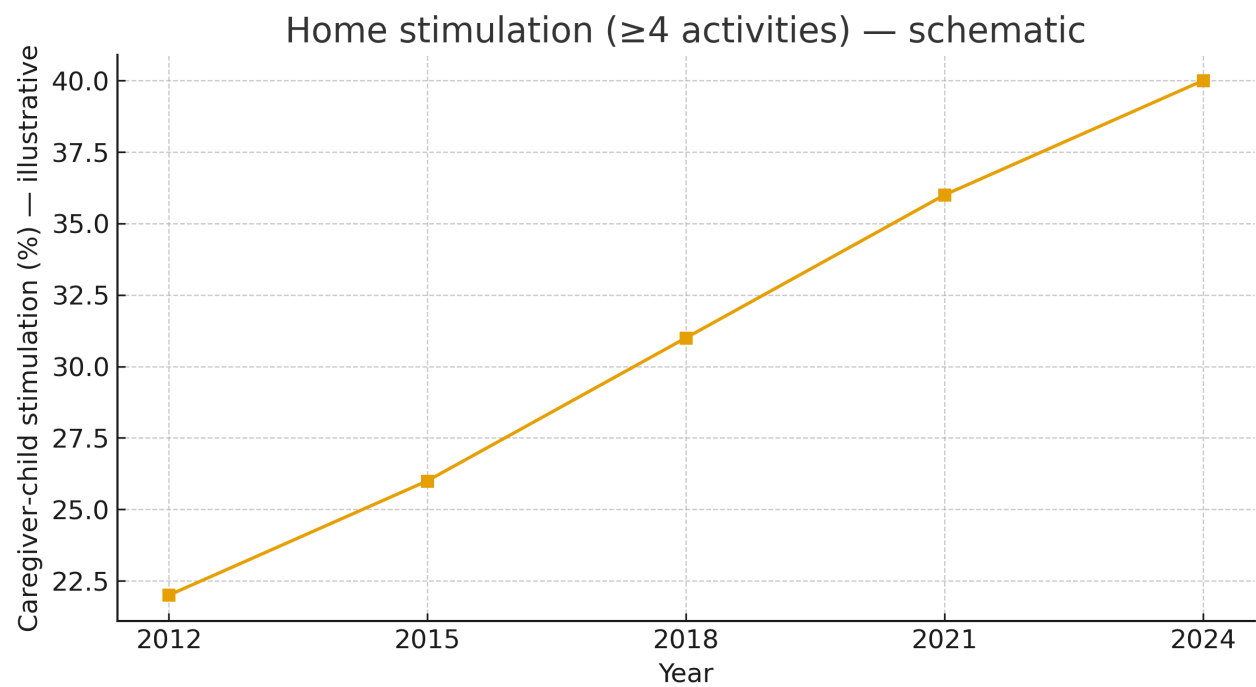


Figure . Developmental risk (36–59m) — schematic

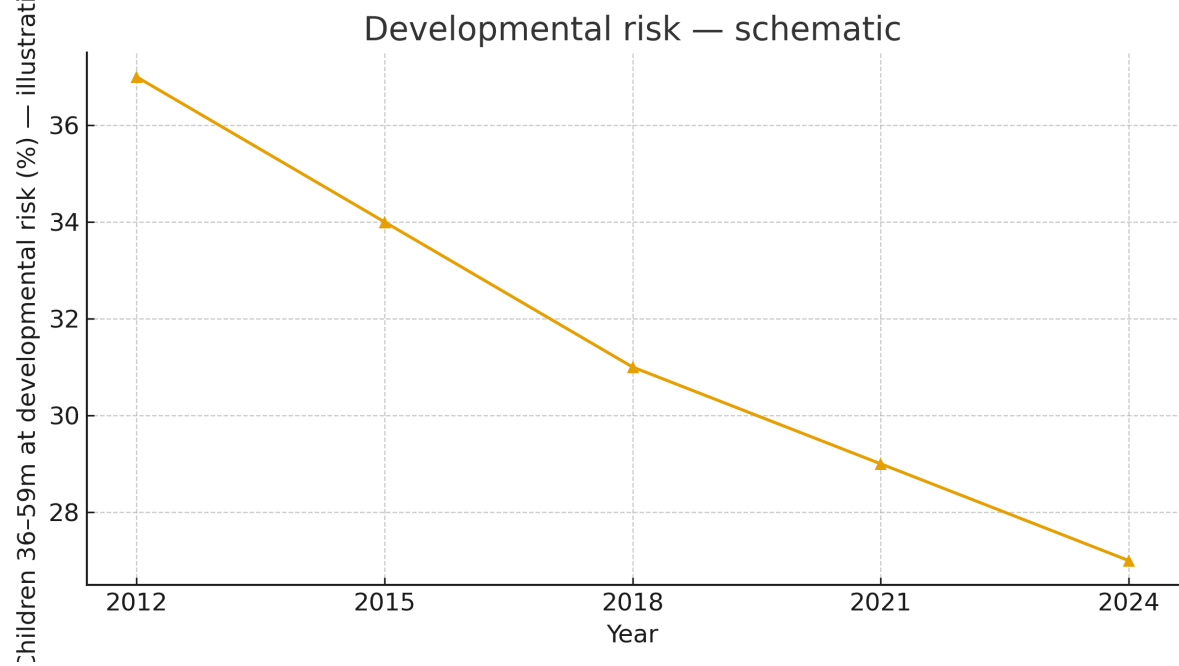


Figure . Integrated package reach (12–23m) — schematic

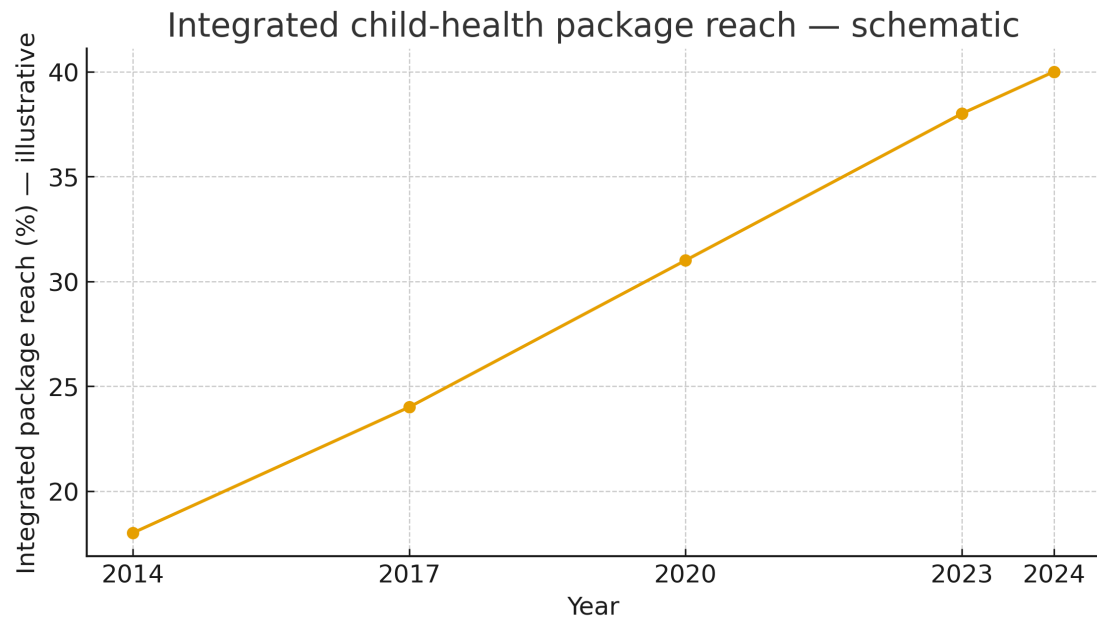


Figure . Parenting group participation — schematic

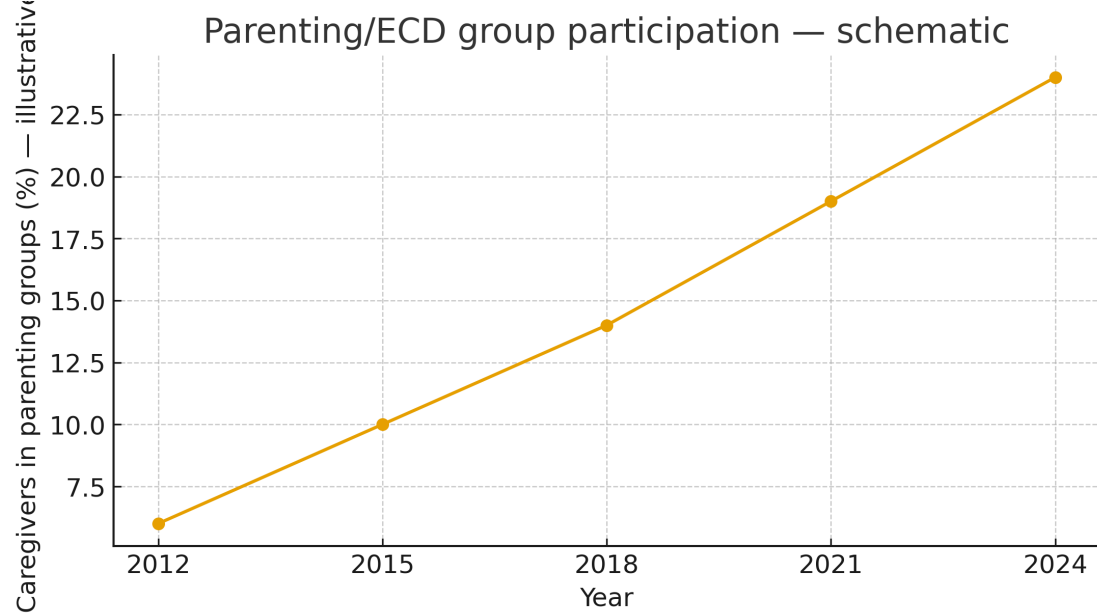


Table 16.11-A. Nurturing Care Framework domains (Ethiopia-adapted)

Domain	Examples (Ethiopia-adapted)
Good health	Immunization, child illness care (iCCM/IMCI), growth monitoring & promotion (GMP).
Adequate nutrition	EBF, complementary feeding, micronutrients, MAM/SAM care.
Responsive caregiving	Caregiver-child play, reading, talking; positive discipline; mental health support.
Security & safety	Safe home/school; injury prevention; violence-free environments.
Opportunities for early learning	Pre-primary (O-class), play materials, books; community ECD centers.

Table 16.11-B. ECD platforms and package content

Platform	ECD content
Health system	HEP/health posts; ANC/PNC; GMP; iCCM/IMCI; Vit A/deworming; counseling.
Education system	Pre-primary classes (O-class); school readiness; teacher training; inclusive education.
Community/social	Parenting groups; mother-to-mother clubs; social protection linkages; libraries/playgroups.
WASH & safety	Safe water/sanitation; handwashing; safe play spaces; injury prevention at home/school.
Cross-sector packages	Integrated ECD days; growth & development checks; referrals for delay/disability.

Table 16.11-C. Indicators and formulas

Indicator	Definition / formula
Pre-primary NER (%)	$100 \times (\text{Age-eligible children enrolled} / \text{Age-eligible children})$
Caregiver stimulation (%)	$100 \times (\text{Children 2–59m with } \geq 4 \text{ stimulation activities} / \text{Children 2–59m})$
Developmental risk (%)	$100 \times (\text{Children 36–59m at risk on ECDI domains} / \text{Children assessed})$
GMP attendance (%)	$100 \times (\text{Children 0–23m attending GMP this month} / \text{Children 0–23m})$
Integrated package reach (%)	$100 \times (\text{Children 12–23m receiving GMP + Vit A + deworming} / \text{Children 12–23m})$
Parenting group participation (%)	$100 \times (\text{Caregivers attending ECD sessions in last 3 months} / \text{Caregivers surveyed})$

Table 16.11-D. Quality & equity practices

Domain	Operational practices
Workforce quality	HEW and teacher training/mentorship; developmental screening; referral pathways.
Learning environment	Play-based pedagogy; inclusive practices; language-appropriate materials.
Family support	Home visits; parenting curricula; caregiver mental health and IPV screening/referrals.
Equity	Track reach among rural, pastoralist, IDP, urban poor; disability inclusion; gender equity.
Data quality	Harmonize HMIS/DHIS2, EMIS, and survey indicators; standard tools; periodic data quality reviews.

Table 16.11-E. Data sources for ECD analytics

Source	What it provides
DHS/MICS	Parent-reported stimulation, ECDI-like indexes, pre-primary attendance, GMP, Vit A, deworming.
EMIS (Education)	Pre-primary enrollment, teacher counts/training, school readiness, infrastructure.
HMIS/DHIS2	GMP attendance, Vit A/deworming sessions, iCCM/IMCI contacts.
Program monitoring	Parenting group registers, home-visiting records, ECD center audits.

Program narrative

The biggest returns come from coordinated delivery across sectors: HEWs reinforce responsive caregiving and nutrition during routine contacts and home visits; teachers use play-based approaches and early-grade language materials; and communities host parenting groups that build caregiver skills and social support. District teams should co-review HMIS (GMP, deworming, Vit A) with EMIS (O-class enrollment, teacher training) and survey data (ECDI, stimulation) on a single dashboard. Equity targeting is essential—pastoralist and displaced families need mobile O-class and flexible session schedules; urban poor need safe play spaces and childcare. Developmental screening with referral pathways can catch delays early, including hearing/vision problems and neurodevelopmental disorders, while safeguarding children through violence-prevention and household safety measures.

References — Section 16.11 (URLs)

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- **UNICEF — Early Childhood Development** — <https://www.unicef.org/early-childhood-development>
- **The DHS & MICS Programs — ECD modules** — <https://dhsprogram.com/>
- **Ethiopia EMIS — Ministry of Education** — <https://www.moe.gov.et/>
- **Ethiopia FMoH — HMIS/DHIS2 resources** — <https://www.moh.gov.et/>

Chapter 16 — Childhood Illnesses & Malnutrition: Landing Page

Chapter summary

This chapter synthesized prevention and management of leading childhood conditions in Ethiopia—respiratory infections, diarrhea, malaria, vaccine-preventable diseases, acute and chronic undernutrition, micronutrient deficiencies, injuries, and early developmental risks—anchored in primary health care and multisector collaboration. The IMCI/iCCM backbone (assess–classify–treat–counsel–follow-up) is supported by reliable commodities (antibiotics, ORS, zinc, ACTs, RDTs, vaccines, RUTF), strong data systems (DHIS2/HMIS/LMIS), and quality-improvement routines that track both coverage and correct care. Equity is explicit: pastoralist, remote, urban-poor, and displaced children need mobile services, flexible outreach, and community engagement. Nutrition is treated as both a condition and a risk amplifier via CMAM, IYCF, micronutrient programs, and fortification, while Early Childhood Development (ECD) integrates health, nutrition, protection, and early learning under the Nurturing Care Framework. Cross-cutting systems—supply chains, workforce competencies, data quality, and shock readiness—determine how quickly gains translate into survival and human-capital outcomes.

References

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- **UNICEF — Child Health & Nutrition** — <https://www.unicef.org/health>
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