

Importance of Nutritional Monitoring with Data

CDC Symposium
Paediatric Best Practices
Pretoria 2017

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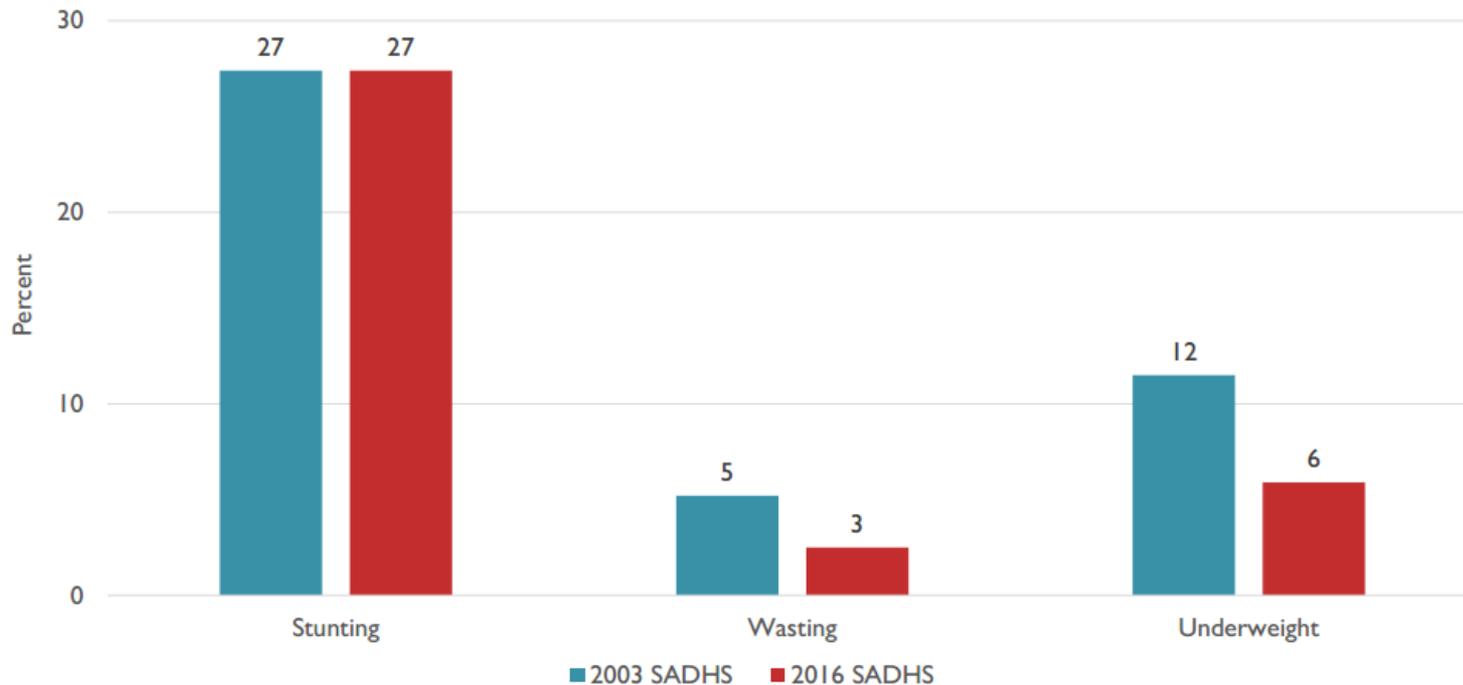
Epidemiologic context

- Antenatal HIV prevalence among pregnant women 30%
- Stunting U5 27%
- Wasting U5 3-5%
- Low birth weight rate 15%
- Exclusive breastfeeding rate among infants U6mo 32% (from 8%)
- U5MR 56 per 1000
- U1MR 40 per 1000
- NMR 12 per 1000
- Institutional maternal mortality ratio 120 per 100,000
- PMTCT <2% at 6-10 weeks (?18 months)



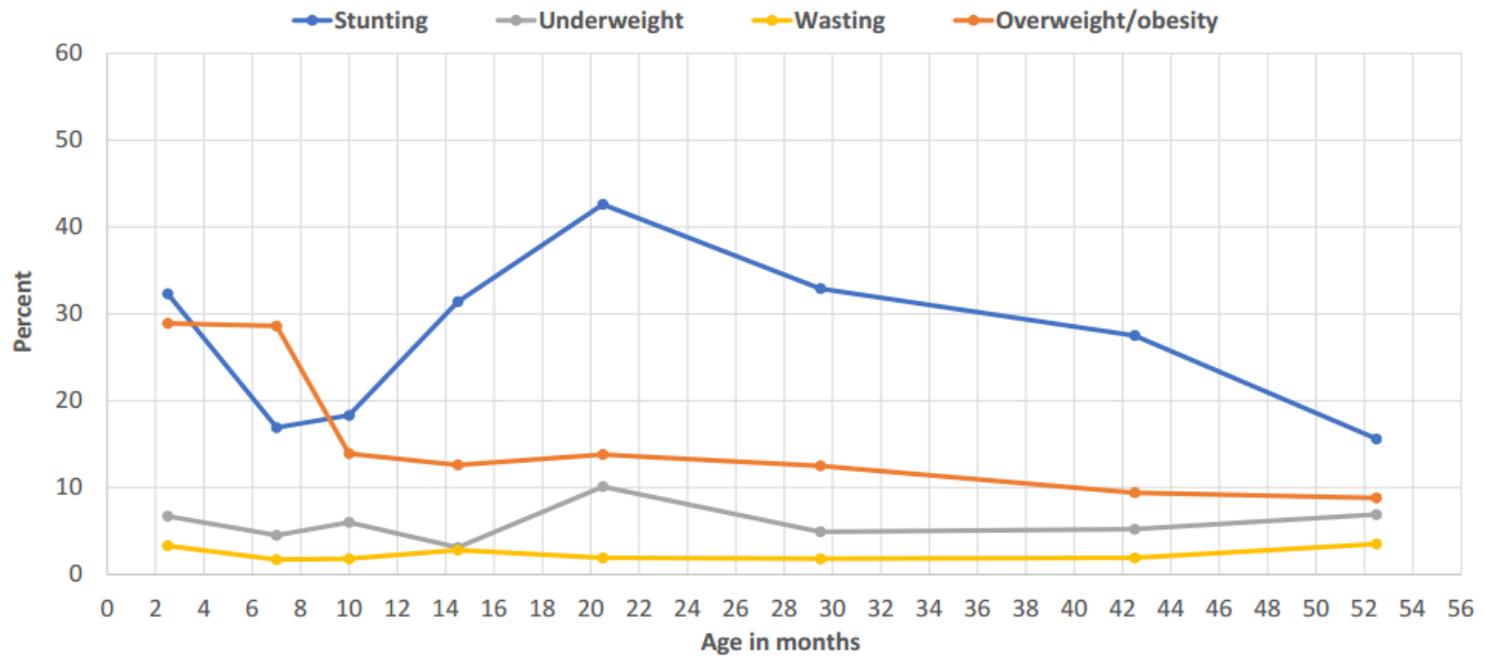
What is the size of problem: wasting and stunting

Nutritional status of children 0-59 months



What is the size of problem: wasting and stunting

Age pattern of nutritional status of children (Anthropometry)



SADHS 2016

Facts

- Malnutrition happens!
 - Special populations
 - infants of HIV infected mothers
 - Young mothers (teenagers, scholars, and unplanned pregnancies)
- Growth faltering occurs during the most vulnerable period of life
 - From conception to birth (intrauterine)
 - Birth to 1 year
 - 1 year to 2 years
 - Beyond 2 years

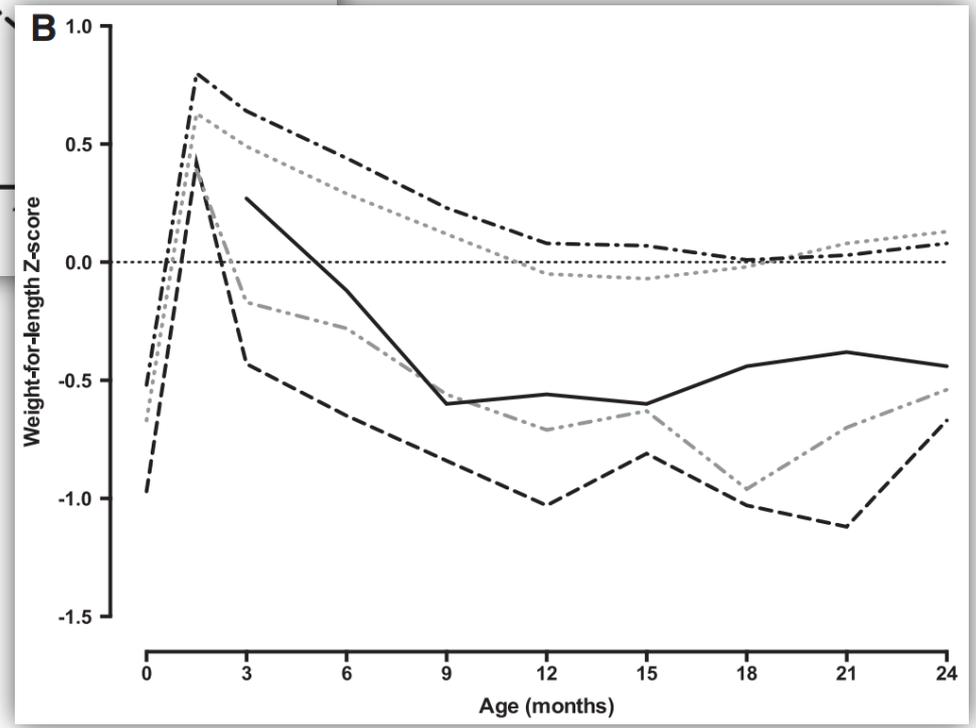
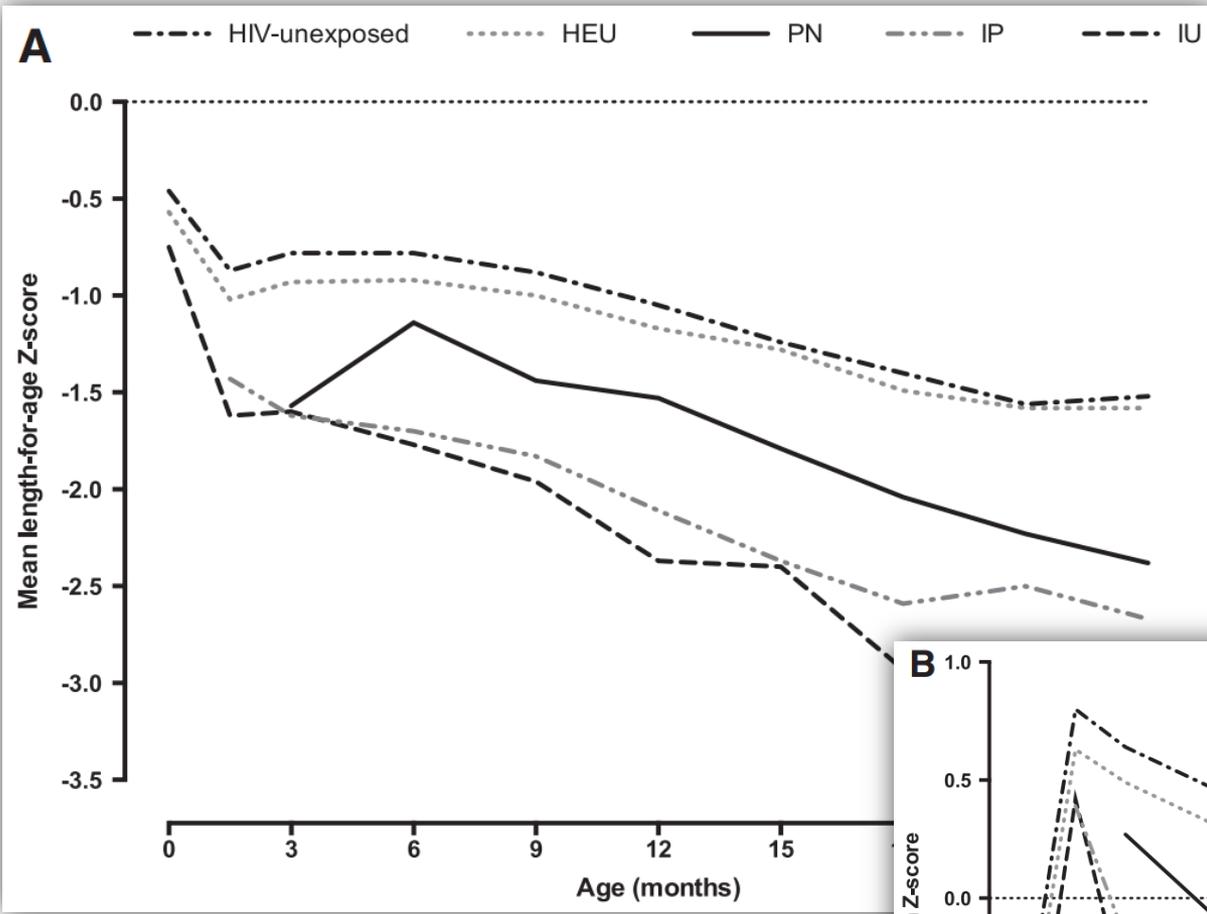


Nutritional specific interventions to end preventable deaths and improve growth and development among U5 children

- Breastfeeding
- Complementary feeding
- Supplementary feeding for severe growth faltering and MAM
- Therapeutic feeding for SAM

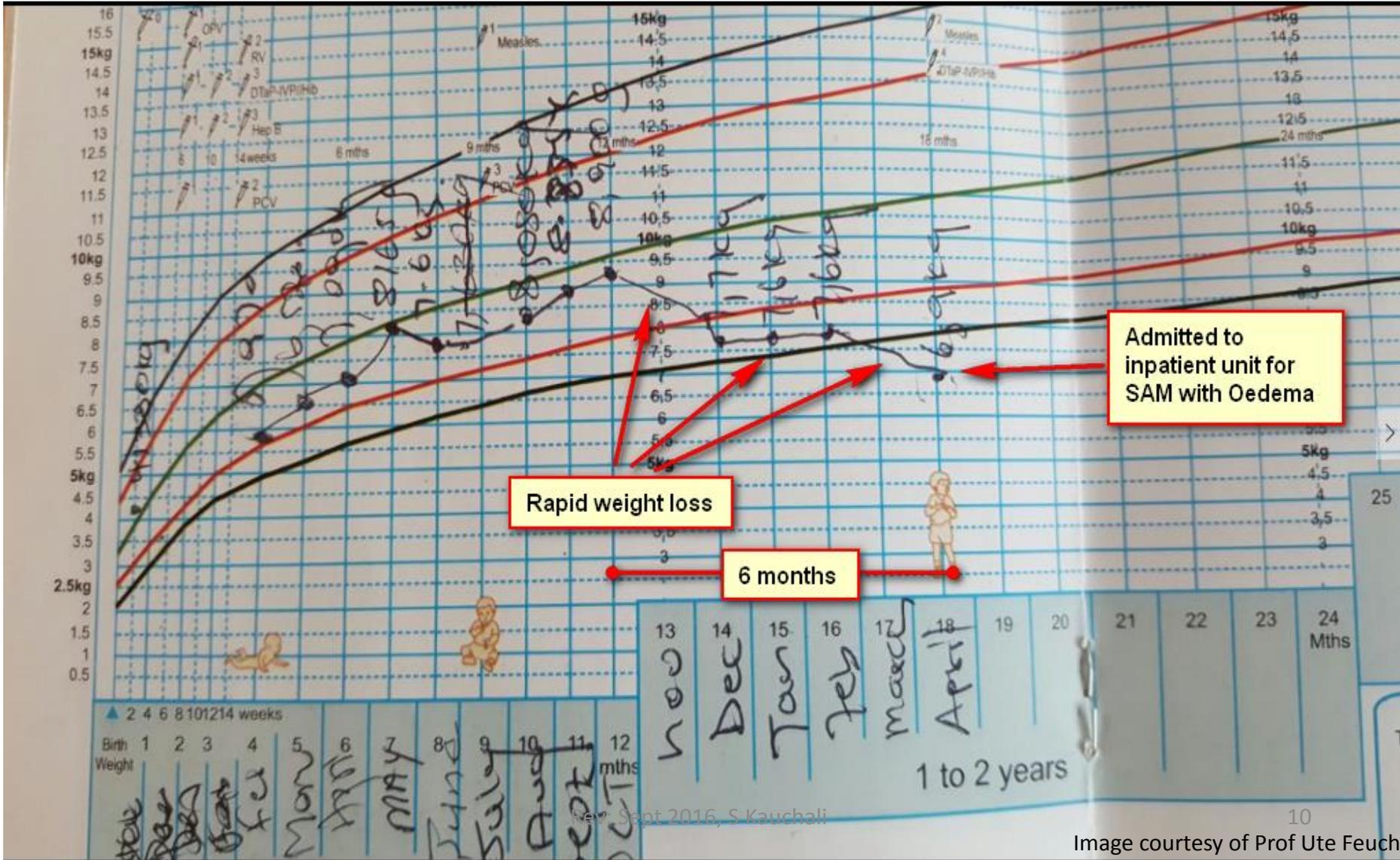
- WASH Prompt treatment of inter-current illnesses and infections
- EPI
- Stimulation and brain growth
- Micronutrient supplementation





Source: Omoni et al (ZVITAMBO study)
The Pediatric Infectious Disease Journal
 Volume 36, Number 9, September 2017

Weight faltering, rapid weight loss and acute malnutrition... "the journey"



Public health challenges

- Delayed active case detection
 - Acute malnutrition is a process and starts with growth (weight) faltering
 - Early case detection
 - Not growing well
 - Slow growth
 - Static growth
 - Losing weight
 - MAM
 - SAM
- Delayed entry into supplementary and therapeutic feeding plans alongside the medical treatment of the underlying cause

Knowledge-Skills-< Attitude >-Practice Gap



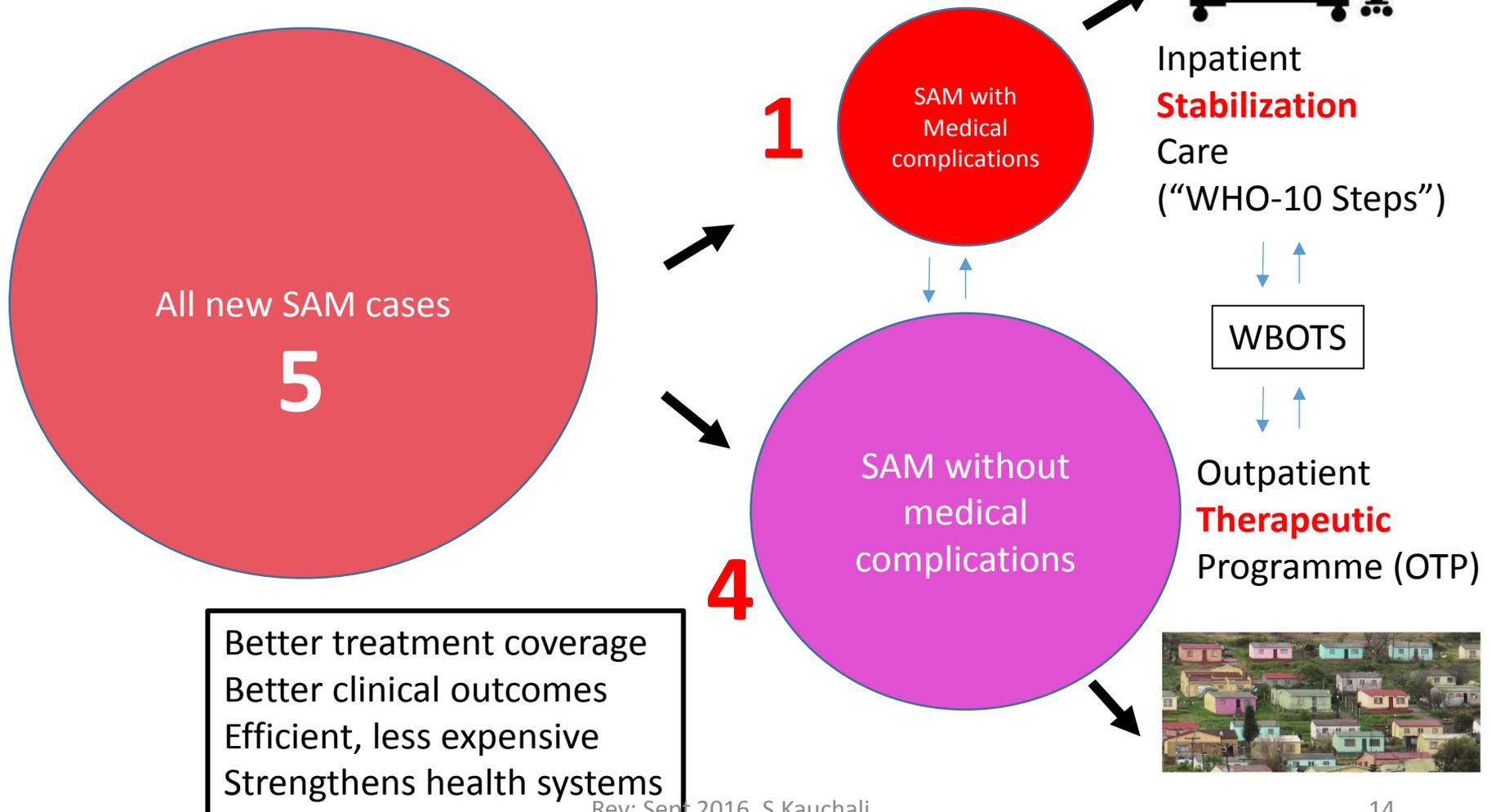
How big is this problem?

- Active case detection
 - SAM incidence rate (reported new SAM cases in the public health system) 21,000
 - Estimated incidence using UNICEF formula 145,000 new cases per annum*
 - Only 14.5% of U5 children in the PHC are detected and reported in the DHIS
 - 85.5% are not
 - So where are the rest?

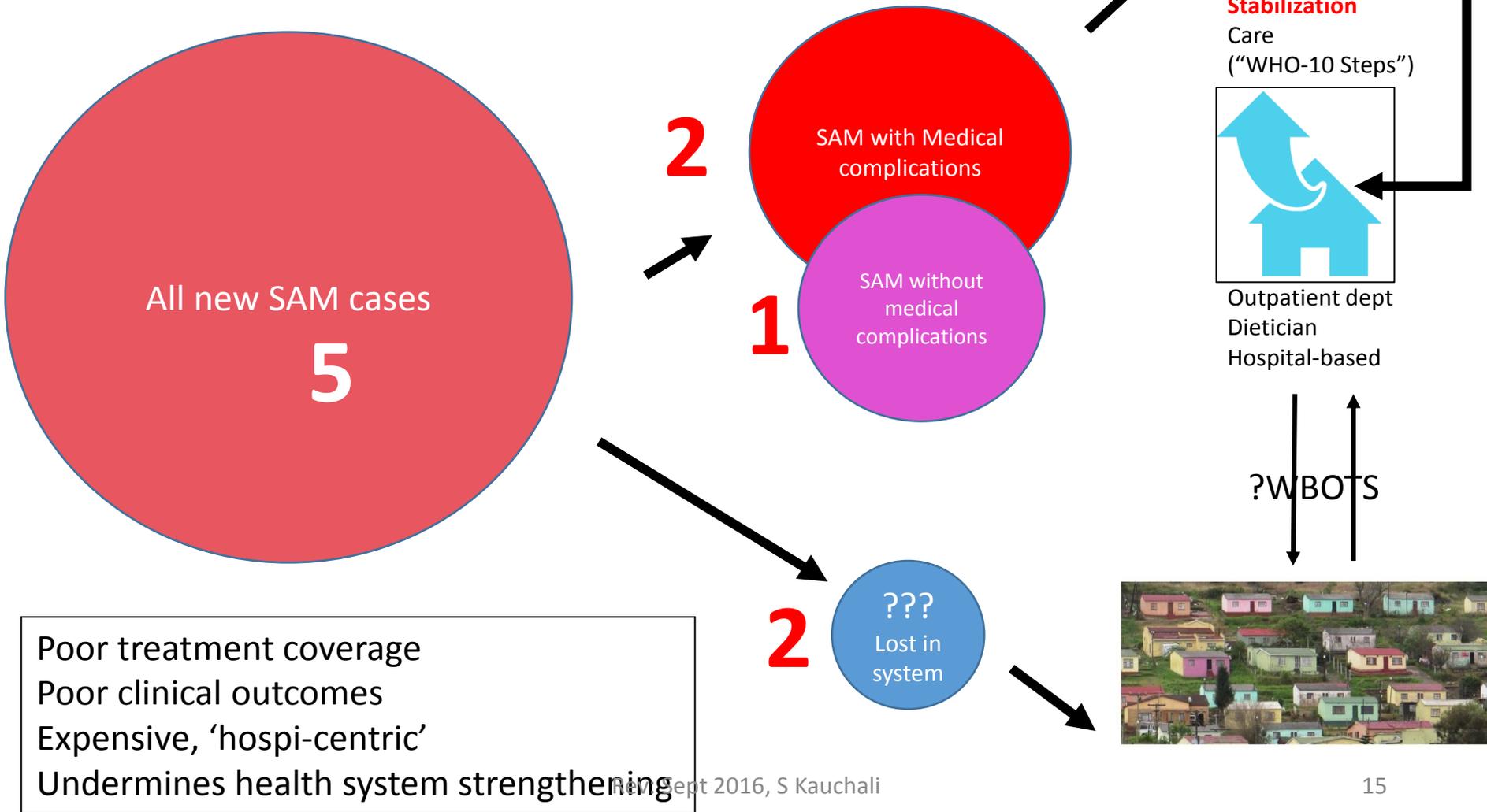
Number receiving inpatient care treatment

- Number of new SAM cases reported in the PHC system: 21,000
- Number admitted to the inpatient units: 15,000
- 6000 SAM cases are not receiving care in the inpatient units
- Are there receiving care in the outpatient units (PHC, Hospital OPD, Dietician OPD, etc)???

SAM new cases: estimated sub-types (*good early detection system*)



SAM new cases: estimated sub-types (*poor* early detection system-current South African setup)



Poor treatment coverage
 Poor clinical outcomes
 Expensive, 'hospi-centric'
 Undermines health system strengthening

Outcome monitoring

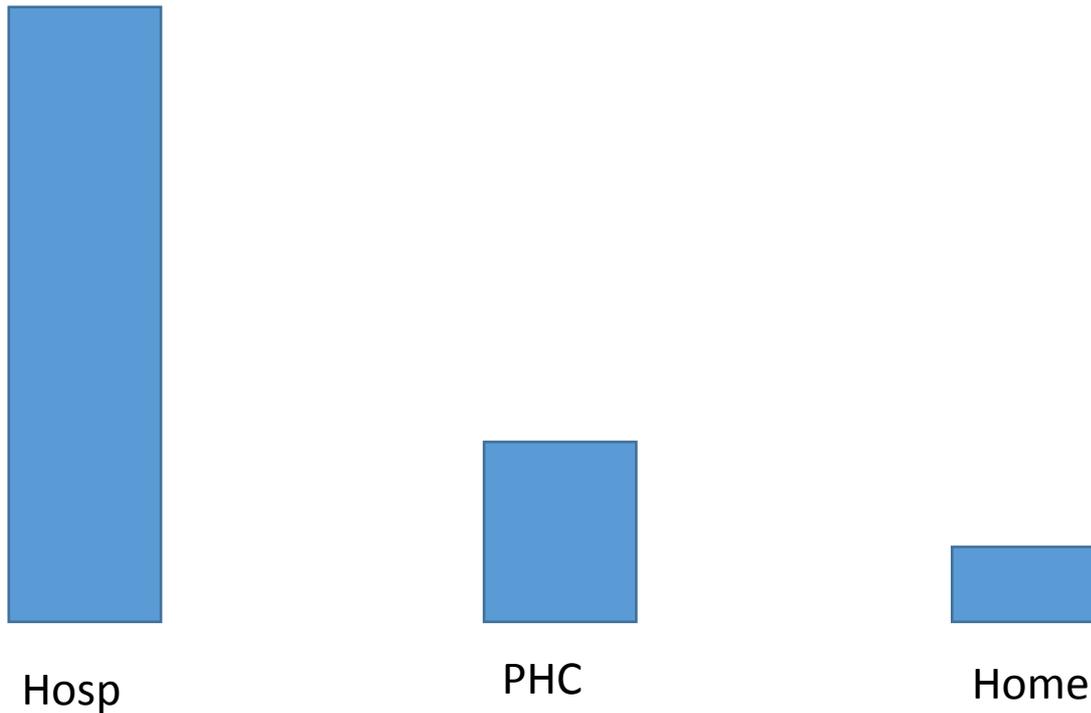
Number of cases that...

- **Died** in the public health system:
 - 1198 only inpatient units
 - ?? Outpatient units (home, etc)
- **Cured** from SAM: unknown
- **Defaulted**: unknown
- **Non-response**: unknown

It takes 4-5 months to rehabilitate a child with SAM

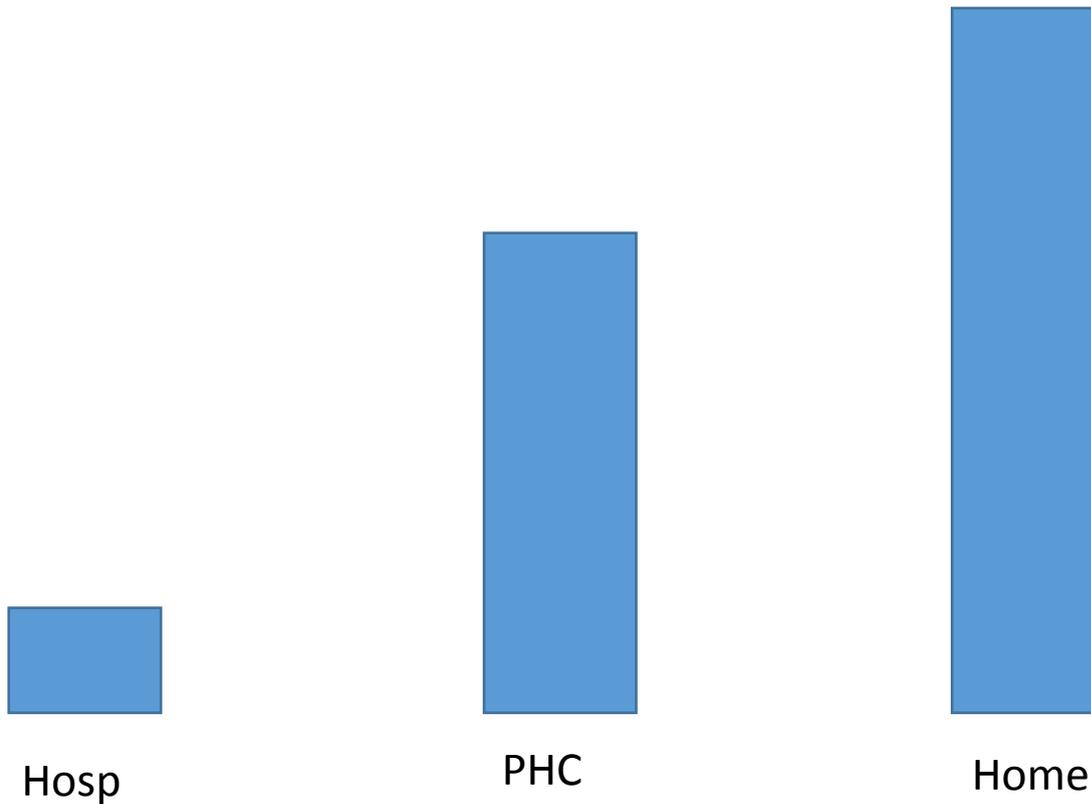
Evolution of programme: **early**

New cases detected at



Evolution of programme: **Matured**

New cases detected at



So how do we solve this problem?



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

How many case cohort management systems do you know are currently in place in public health system?

- TB
 - ART
 - PMTCT
 - EPI
- Cinderella*
- **How about Growth Monitoring and Promotion (RTHB) and Management of Acute Malnutrition?**

Whatever happened to “find, treat and cure” malnutrition

Find Malnutrition Treat Malnutrition Cure Malnutrition

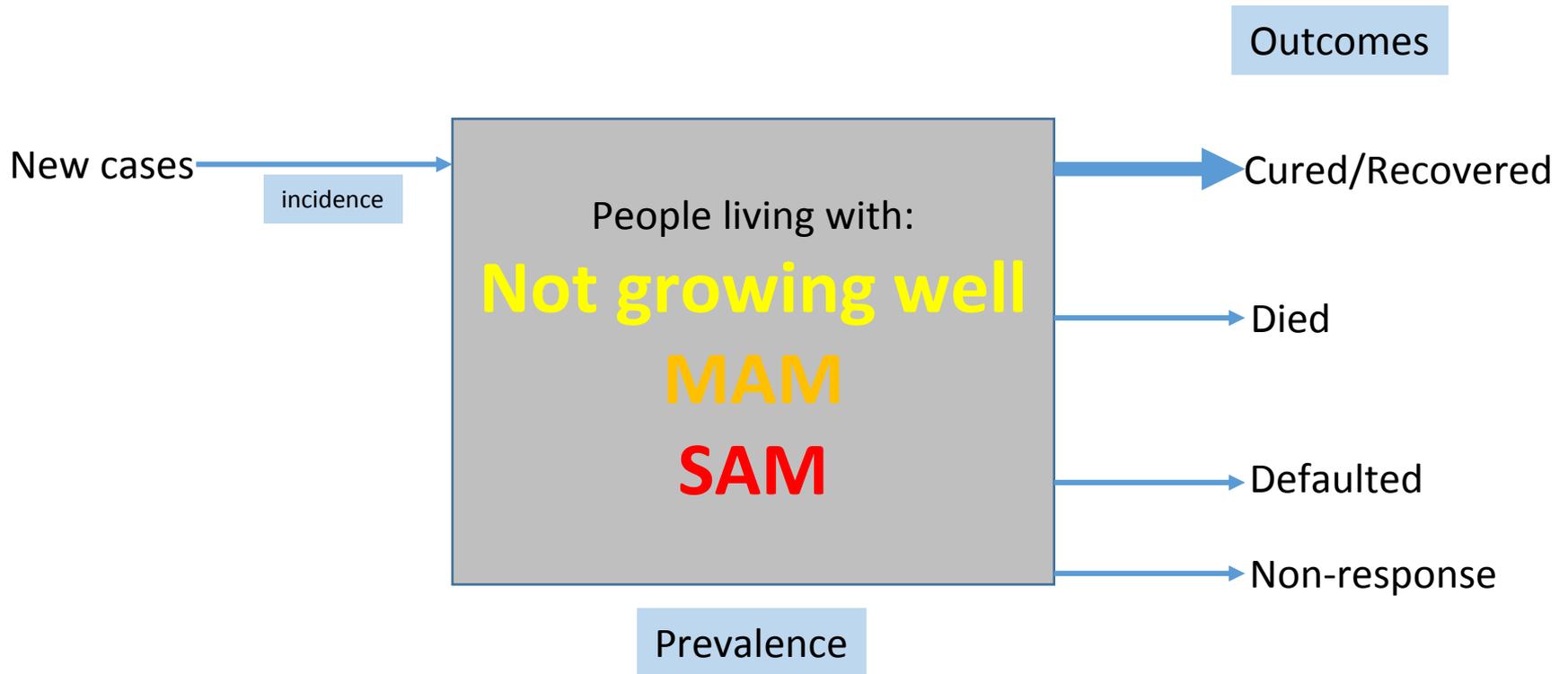


- Active case finding and community mobilization
- Active case management: prevention and treatment
- Active case follow-up and cure

Maximum Duration of treatment in programme settings (time to recovery)

- HIV → life-long
- TB → 6-12 months
- Not growing well (NAM at risk):
 - **Static weight or Losing weight**: 2 weeks for rapid catch up growth, plus additional 2 weeks to sustain weight trajectory
 - **Slow weight gain**: 1 week to regain trajectory weight gain, plus additional 1 week to sustain weight trajectory
- **MAM** → 42 days for rapid catch-up growth, plus additional 4 weeks to sustain weight trajectory
- **SAM** → 60 days for rapid catch-up growth, plus additional 4 weeks to sustain weight trajectory

Case Cohort Management System

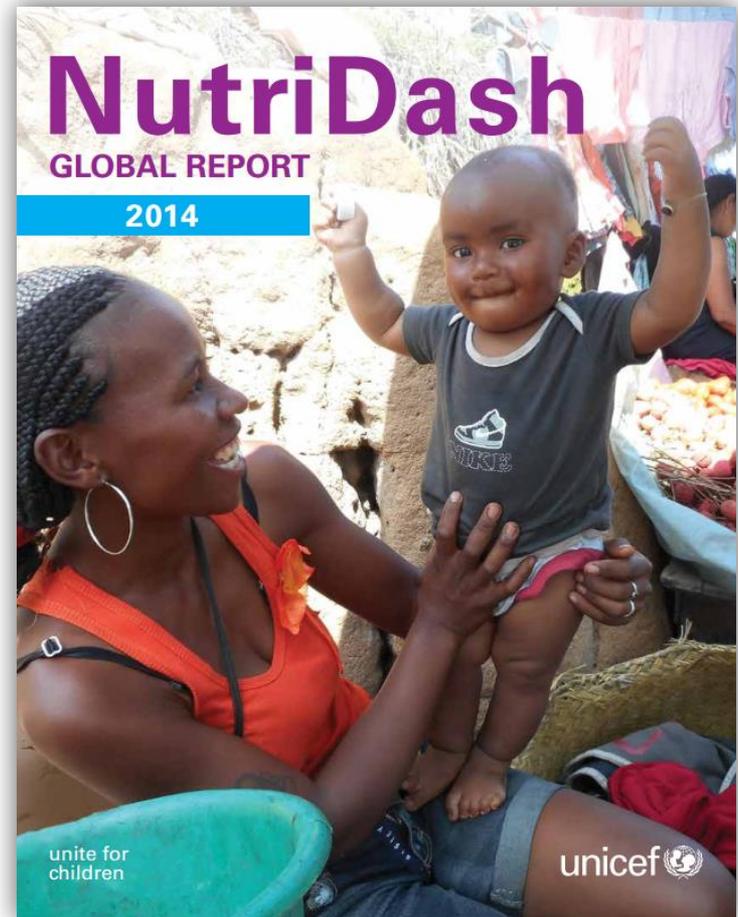
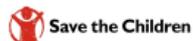


WHO Updated Guidelines 2013 and tools developed

STANDARDISED INDICATORS AND CATEGORIES FOR BETTER CMAM REPORTING

APRIL 2015 EDITION

Adapted from MRP User guidelines *April 2012*
Complies with CMAM Report software *April 2015*



Reporting tools (example)

ANNEX 22 – MONTHLY REPORT IPF

IPF - MONTHLY STATISTICS REPORT - MANAGEMENT OF SEVERE ACUTE MALNUTRITION - IPF

Country National Logo	FACILITY CODE		Implementing agency		
	Name of the FACILITY			Report prepared by	
	Type of Facility			Report period from ddmmyy	
	REGION			report period to ddmmyy	
	District			Date of submission	
	OPENING DATE			List any OTPs outside the district using this IPF	

Age Group	Total beginning of the month (Beg)	New admissions			RE-ADMISSION after defaulting (<2mo) (Trad)	INTERNAL TRANSFER (from OTP or another IPF) (Tin)	Total Entry to facility (Cin)	Transfer SUCCESSFULLY TREATED/ internal transfer to OTP (Tout)	other EXIT from Facility				Total Exit (Cout)	Total end of the month (End)
		W/H<-3 z-score or MUAC<115mm or MUAC<180mm (Amar)	OEDEMA (Aoed)	RELAPSE (Arel)					DEAD (Dead)	DEFAULTER (DefN)	NON RESPONDER/ MEDICAL REFERRAL (Dmed)	CURED (Dcur)		
< 6 months														
6-23 months														
24-59 months														
>59 months														
Total														
								%	%	%	%	%		

Errors of admissions	No
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Products	In stock	In	Out	Balance
F75 (sachet)*				
F100 (sachet)*				
RUTF (box)				

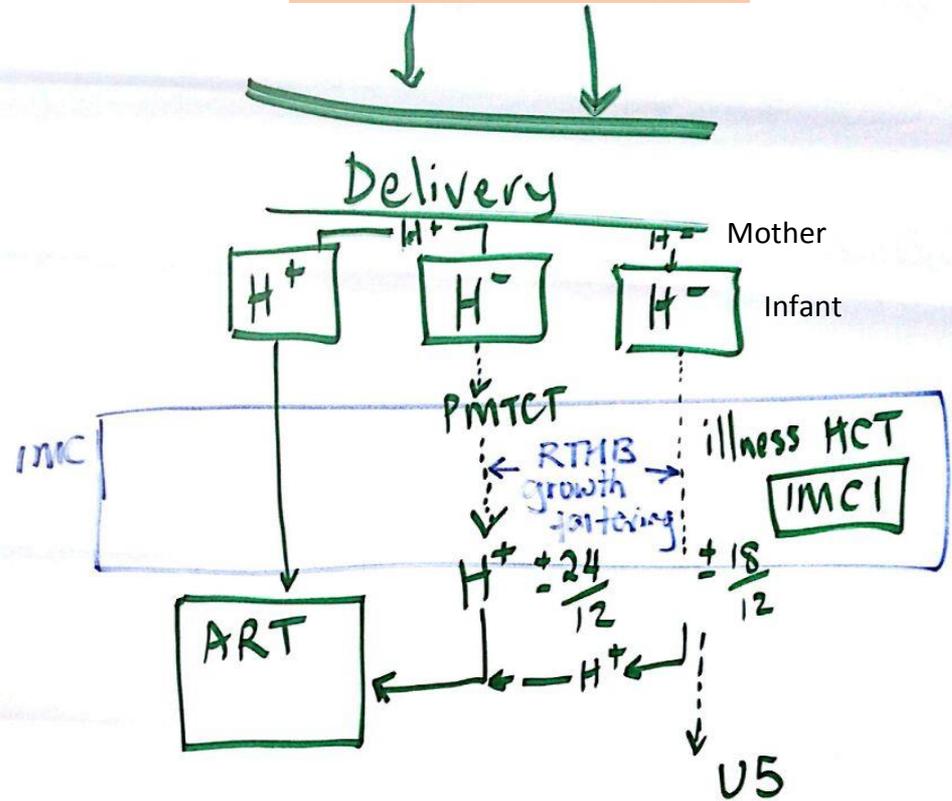
Process mapping-linking NACS with birth cohort:

HEI (H+/H+ dyad)

HEU (H+/H- dyad)

H-/H- dyad

ANC pregnant women H+ and H-



Criteria HCT in H-/H-

- Growth faltering
- H+ illness (repeated)
- Persist D
- Recurrent PA
- Thrush
- GL

Service stations to link NACS with HIV routines

- ANC services (pregnant and lactating women, outpatient)
- Labour and Delivery
- Post-natal services up to 6 weeks (inpatient, outpatient)
- Under 5 Clinics (IMCI and Well-baby) (outpatient)
- PMTCT follow-up screening and care (outpatient)
- ART services (outpatient)
- TB Treatment services (outpatient)
- Inpatient care units for sick malnourished cases
 - Neonatal units
 - Children units
 - Adults
 - Pregnant/Lactating women (maternity units)

Recording, Reporting, Reviewing and Responding



Recording

- Support facility client flow and care plans
- Use your ART registers to record case types and treatment plans
- Patient case records: C-A-D-F-B
 - Growth charts in the patient records
 - Rate of weight gain charts when on supplements
- Update the RTHB
- Setup the longitudinal cohort management and tracking systems for all ART cases, PMTCT cases and TB cases PLUS all cases who are malnourished (RTHB cases).

Reporting

(Weekly → Monthly → Quarter → Annual)

- Number of <case type> in <age category> in the ART programme;
- Number of <case type> in <age category> in the ART programme who had a nutritional assessment done;
- Number of <case type> in <age category> in the ART programme who had a appropriate nutritional classification assigned;
- Number of <case type> in <age category> in the ART programme who were appropriately entered into an nutritional care plan;
- **Number of <case type> in <age category> in the ART programme appropriately entered into an nutritional care plan that**
 - cured/recovered;
 - Died
 - Lost to follow-up (defaulted)
 - Absconded
 - Non-response (referred for specialist care)

Integrate into the facility operational plans

Indicators and targets

90-90-90-90 Cascade of Nutrition and HIV

- 100% of ART cases <age category> and PMTCT cases are entered into a NACS programme
- >90% are assessed
- >90% are classified correctly
- >90% are entered into nutritional care and support plan
 - >90% cured/recovered within maximum treatment duration;
 - <10% died (inpatient plus during outpatient (home deaths));
 - <5% defaulted (lost-to-follow-up after 2 consecutive visits)
 - <1% non-response after maximum treatment duration;
- >90% of <case type> and <age category> virally suppressed (survived and well)

Reviewing

- Monthly review of throughput statistics
- Continuous quality improvement plans
 - Content of care (clinical audits, protocols, SOP, guidelines, clinical care and governance, clinical mentorship)
 - Process of care (referrals, supplements, WBOTS follow-up, tracking and adherence clubs, leadership and governance)
- Integrate into MNCWH&N Quarterly Meeting at district level and provincial level (HAST↔Nutrition)

Responding

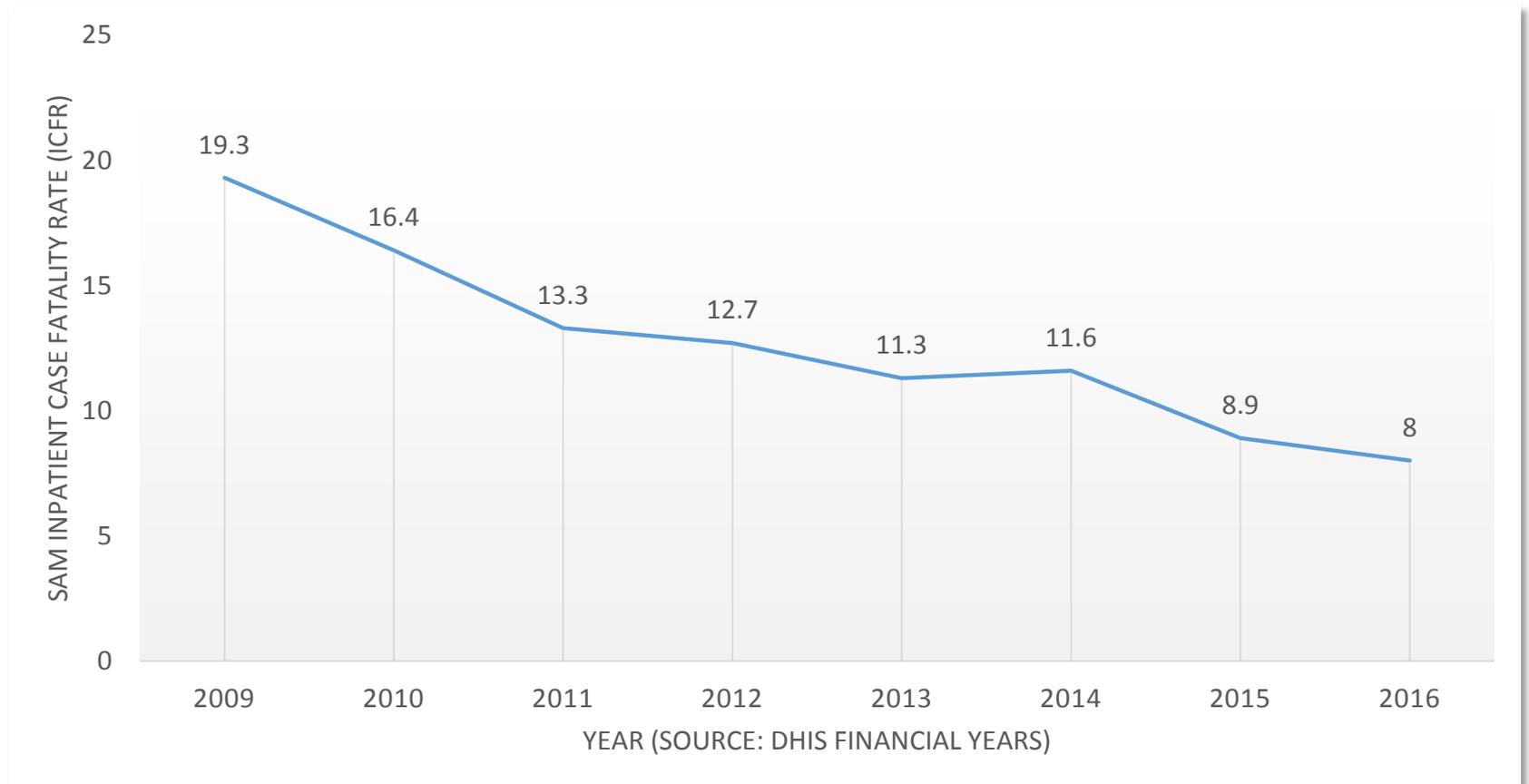
- Clinical mentoring to improve quality of care
 - Inpatient care
 - Outpatient care
- Improve the record keeping and reporting
 - Cohort management and tracking system
- Work together with HAST, Nutrition and MCH units at all levels
 - Strengthen the Food Security and Nutrition Inter-sector Plans

Remember: nutritional supplements are meant for the client not the entire household. To support household that are food insecure, refer the household to FNS inter-sectoral agencies in your area

Vehicle to achieve these steps...

- District Health Planning and Monitoring
- District Implementation Plans (DIP)
- District Operational Plans (DOP)
 - District Multi-disciplinary Teams (MDT)
 - Dieticians
 - MCH Managers
 - DCST
 - HAST

Trends in inpatient case fatality (iCFR) rates in South Africa



Source: DHIS National Department of Health

