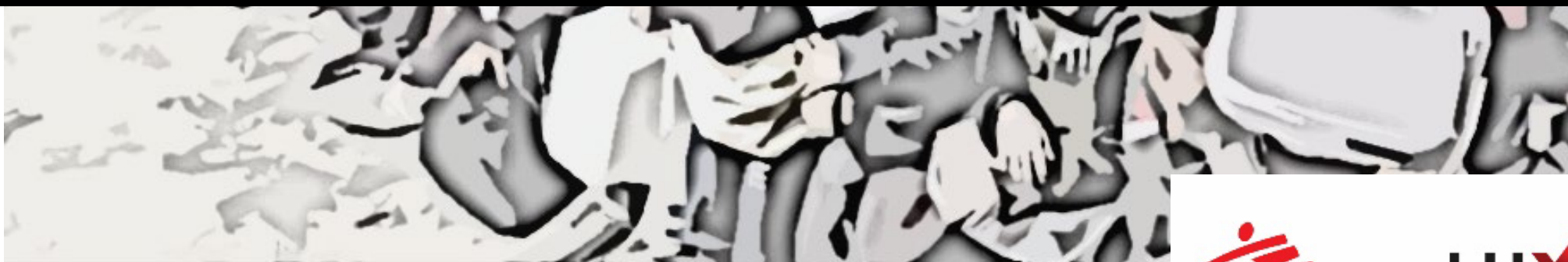


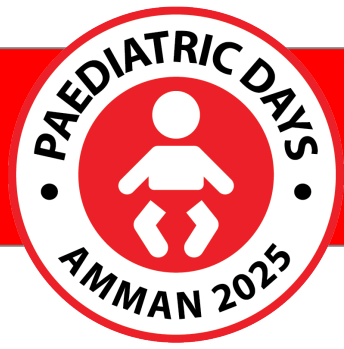
Bridging Practice and Evidence: **Operational Research in MSF**



Dr Amrish Baidjoe and Dr Temmy Sunyoto



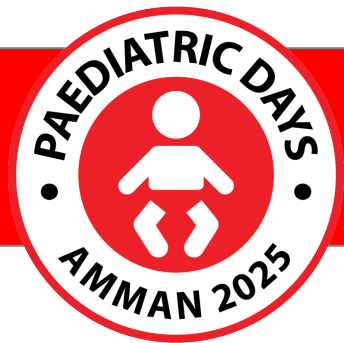
LUXOR



What is Operational Research?

- Systematic inquiry to solve humanitarian operational problems with appropriate methodologies
- Embedded in programs to improve care delivery
- Uses pragmatic designs and real-world data

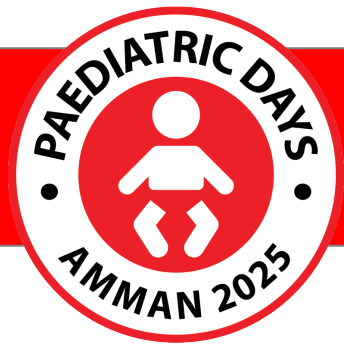




Why we do Operational Research?



- Ensure and improve **quality of our patient care**
- **Influence policy and practice** and improve **programme outcomes**
- **Assess feasibility** of new strategies or interventions in specific settings or populations
- **Advocate for policy change**
- **Systematic documentation of events**



Why we do Operational Research?

‘Sharing knowledge is documenting the story of the crisis and the people’

*Operational Research is a
Fundamental Responsibility
using and generating data
to tell human stories and to
push to action*





OR is central to MSF's learning culture

It helps adapt, evaluate, and improve medical action in humanitarian settings.

Institutional support:

- LuxOR, SAMU
- Epicentre
- Manson Unit
- Medical Departments
-

RESEARCH FOR HUMANITARIAN ACTION

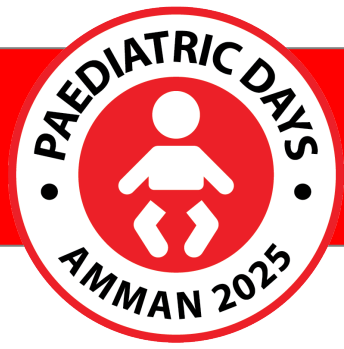


THE SCIENCE OF
DOING BETTER

RESEARCH SUPPORT
ON THE GROUND

OPEN ACCESS TO
INVALUABLE EVIDENCE

TRANSLATING
FINDINGS INTO ACTION



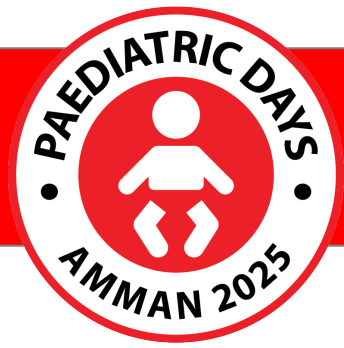
Mapping research gaps and priorities: through an OR Workshop

- Joint initiative: LuxOR + Paediatric Platform (Paris, 2025)
- 100+ ideas from MSF teams
- Prioritised using CHNRI (**relevance, answerability, feasibility**)
- Output: medium term research agenda tailored to MSF operations

MSF's research niche:

- Addresses questions few can – in conflict, displacement, and fragile systems
- Research priorities must remain dynamic, refined, and context-driven based on needs





Paediatrics OR Workshop 2025

Sepsis / AMR

- Empiric antibiotics in SAM
- Criteria to stop antibiotics early
- RSV & Typhoid burden
- IPC implementation



Maternal & Neonatal Health

- Zero separation
- Breastfeeding barriers & enablers
- Neonatal asphyxia
- Seizure management (Levetiracetam)

Malnutrition

- MAM care package
- Infants <6 months (MAMI)
- Kwashiorkor wound care
- Chronic conditions in SAM

Mental Health & Psychosocial Support

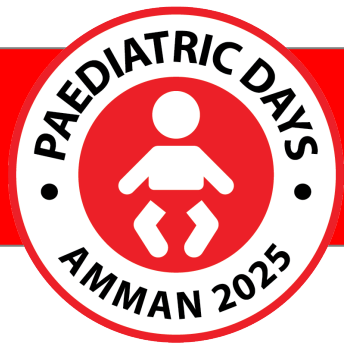
- Impact of trauma/conflict
- Hypothermia outcomes
- Psychostimulation & play
- Staff wellbeing



Cross-cutting themes:

- Use of routine programme data for research questions
 - Feasibility and ethical conduct in fragile settings
 - Collaboration across ODs and disciplines
 - Translating findings into operational change

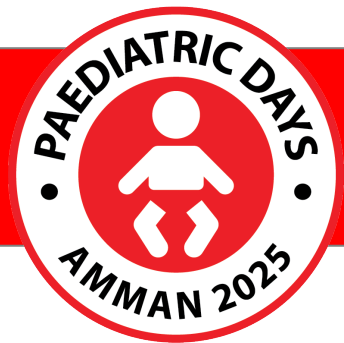
Non – exhaustive



Showcase: Acute trauma description in Gaza

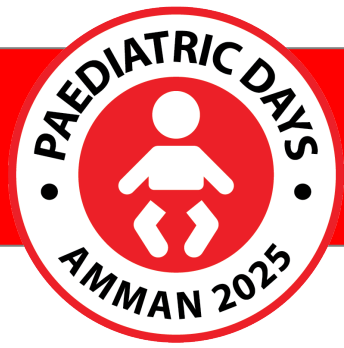


- **Collapse of healthcare in Gaza:** hospitals destroyed or crippled, with severely limited medical and public health capacity. A general changing humanitarian landscape
- **MSF field hospital:** among the few facilities still providing complex trauma care.
- **Critical evidence gap:** strong testimonies but ‘globally’ little systematic data on injury patterns or trauma related outcomes to assess scale and impact.
- **Evolving warfare:** growing use of drone strikes and bombing with poorly documented injury patterns.
- **Duty to act:** MSF has a medical, humanitarian, and legal responsibility and is uniquely suited to document and preserve evidence using medical data (IGA2025)



Showcase: Acute trauma description in Gaza

- **Aim:** Systematically describe trauma cases treated at the MSF-OCB Gaza surgical field hospital (Aug 2024 – Aug 2025)
- **Design:** Retrospective observational study of ~4,000 trauma patients using routine clinical records (admission notes, operative reports, discharge summaries)
- **Objectives:** Document injuries, surgeries, demographics, and outcomes; map injury mechanisms and patterns by relevant demographics such as age and sex
 - Develop a toolbox that could be deployed in similar contexts and provide guidance for routine data collection (near completed)
- **Analysis:** Description of injuries and outcomes over time
- **Output:**
 - A standardized trauma data collection and training toolbox for similar contexts
 - Descriptions of observed and treated physical trauma
- **Impact:** Advocacy, get systematic information in the public domain: documentation study
 - Ensuring everything is in compliance with legal standards



Showcase: GastroSAM – rethinking rehydration

GASTRO SAM



272 children

with Severe Acute Malnutrition (SAM)
aged 6 months -12 years old
In Niger, Nigeria, Uganda or Kenya

Children were randomised into one of 3 rehydration strategies:

Control



WHO-recommended standard of care based on oral rehydration (use of IV fluids only in cases of shock)

Rapid IV



Typically used for non-malnourished children

Slow IV

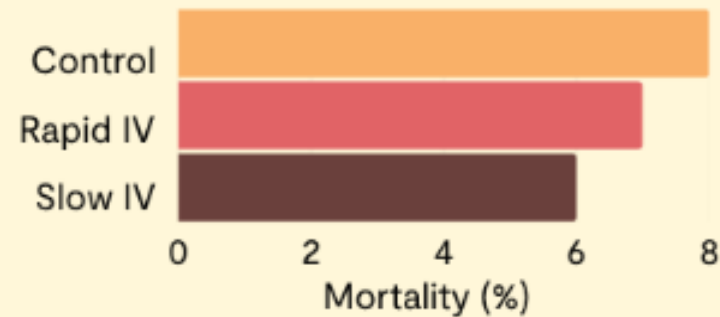


Same volume of fluid as rapid IV rehydration but administered slowly



Showcase: GastroSAM – rethinking rehydration

Mortality There was no difference in mortality between oral and IV rehydration strategies after 96 hours.



Mortality was lower than expected among all children, likely due to the close care and monitoring of all children

Safety



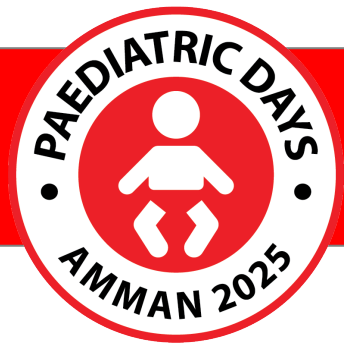
No heart failure events



No fluid overload events

Read the full study here:
<https://www.nejm.org/doi/pdf/10.1056/NEJMoa2505752>

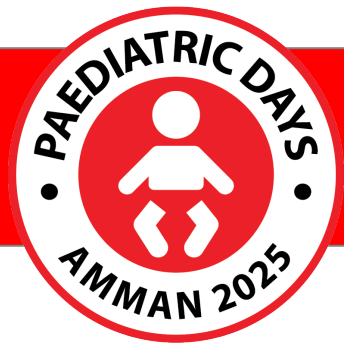




Showcase: revealing paediatric bacteremia - Nigeria

- **Background:** Paediatric sepsis causes over a million cases yearly; AMR-related mortality in NW Nigeria estimated at 35%.
- **Rationale:** Establish baseline microbiology and AMR data to guide treatment, prevention, and antibiotic policy.
- **Aim:** Identify causative pathogens and resistance profiles in paediatric bloodstream infections at MSF Maiduguri hospitals.
- **Methods:** Prospective study of children (1 mo–15 yrs) with suspected sepsis; blood cultures analysed in Mini-Lab with linked clinical data.
- **Impact:** Inform empiric antibiotic guidelines, strengthen stewardship, and build AMR evidence for humanitarian paediatric care.





Thank you! Shukran! Terima kasih! Merci!

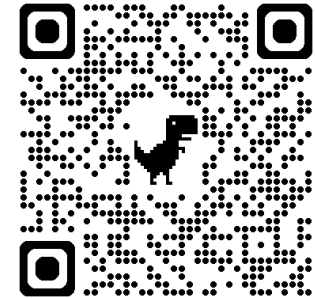
Ensuring our actions remain evidence-informed, ethical, and tailored to needs of people and populations we provide care for

From practice to evidence — and back again

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SCIENCE PORTAL



Research Management and Impact Tool (ReMIT)

