

miniDNA -minimal African Neonatal Dataset-

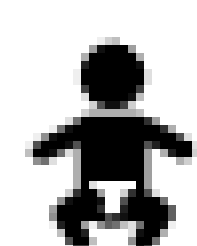
A standardised tool to record and follow neonatal mortality and morbidity in low- and middle-income countries (LMIC) and plan evidence-driven intervention strategies



Zala P^{1,2,3}, Pfister R^{1,2}

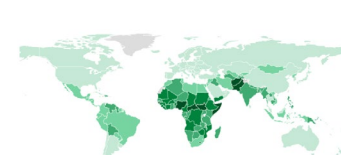
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Context



5mio children died in 2020¹

50% in the **first 28 days of life**¹



80% neonatal deaths occur in **LMIC**²



>10x higher than **high-inc. countries**²



Leading associations (\neq causes): **Prematurity, low birth weight, asphyxia, and infections**

Study justification

Few reliable data on neonatal mortality and morbidity in LMIC



Urgent need of reliable data!!

Methods

- 267 variables from existing databases (Vermont Oxford network, Swiss Neonatal Network)
- 71 available & relevant variables after **2 rounds Delphi with 40 experts**
- **Variables improvements** in definition and pertinence during **one-year pilot phase** in **Burkina Faso**

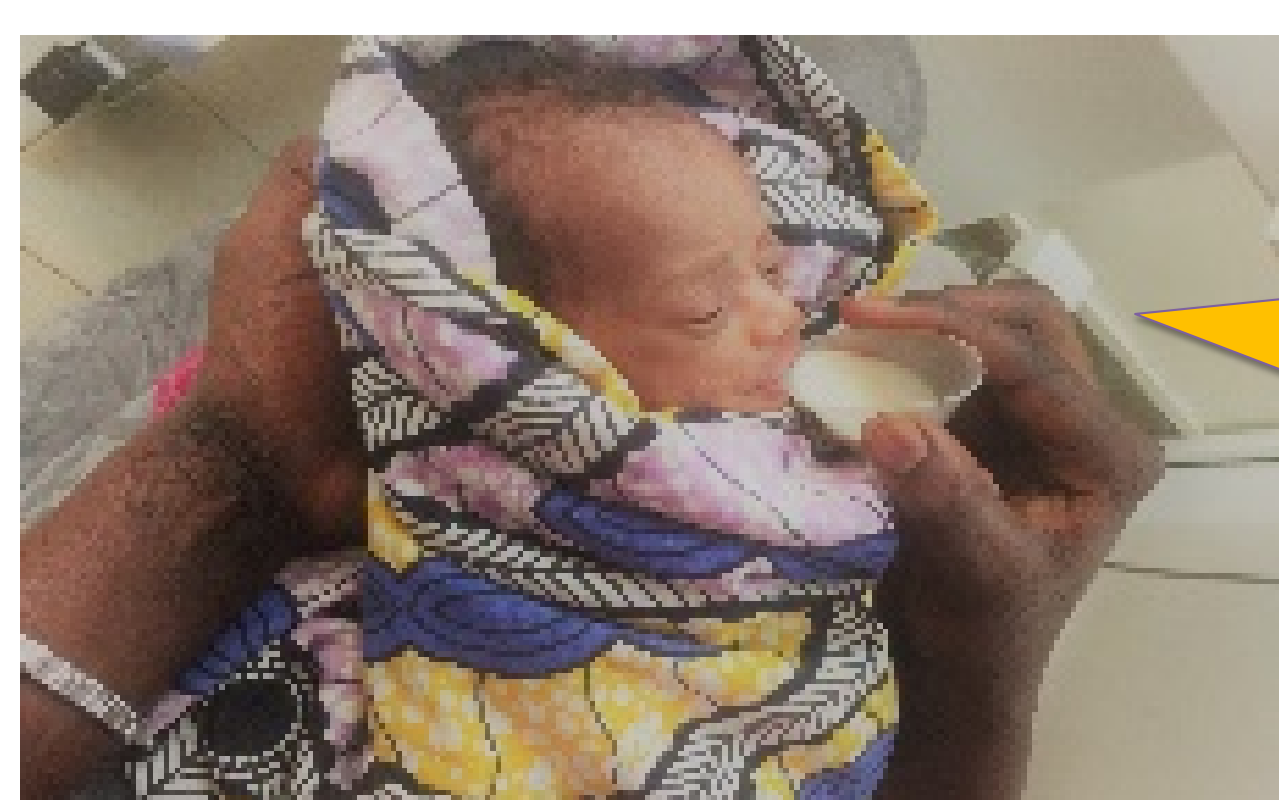
Results

- **miniDNA**: 100 variables (79 clinical and administrative, and 21 structural), equivalent for 60% with items of high-income neonatal databases.
- **3 hospitals, 2039 newborns included (Burkina Faso)**
- **Significant differences between centres**, anonymous inter-hospital **quality comparison**
- Workload of **25 minutes per case** with the present manual data entry

Top admissions	N	%	Top diagnoses	N	%	Top death causes	N	%
Prematurity	558	27.0	Hypothermia	964	47.3	Neurological	128	32.5
Infection	475	23.0	Infection	726	35.6	Respiratory	117	29.7
RDS	452	22.0	Hypoglycaemia	462	22.7	Infection	75	19.0
Asphyxia	177	9.0	Asphyxia	437	21.0	Bleeding	44	11.2
Other	377	18.0	Hyperbilirubinemia	425	20.8	Digestive	6	1.5
						Hypothermia	3	0.8
						Other	22	5.6

Conclusion

miniDNA is a standardize dataset specific for LMIC that allows south-south comparison and gives leverage for quality improvement



miniDNA is a tool for quality improvement of my healthcare!

Future goals

A Simplified and faster, root-structured IT-based data entry and increased data security for a broader use in additional African centres

¹Unicef Levels and Trends in child Mortality, Report 2021

²United Nations Inter-agency Group for Child Mortality Estimation (UN IGME), 2021