

Family screening of malnutrition by MUAC



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Cranaplus Conference Cairns, 2018

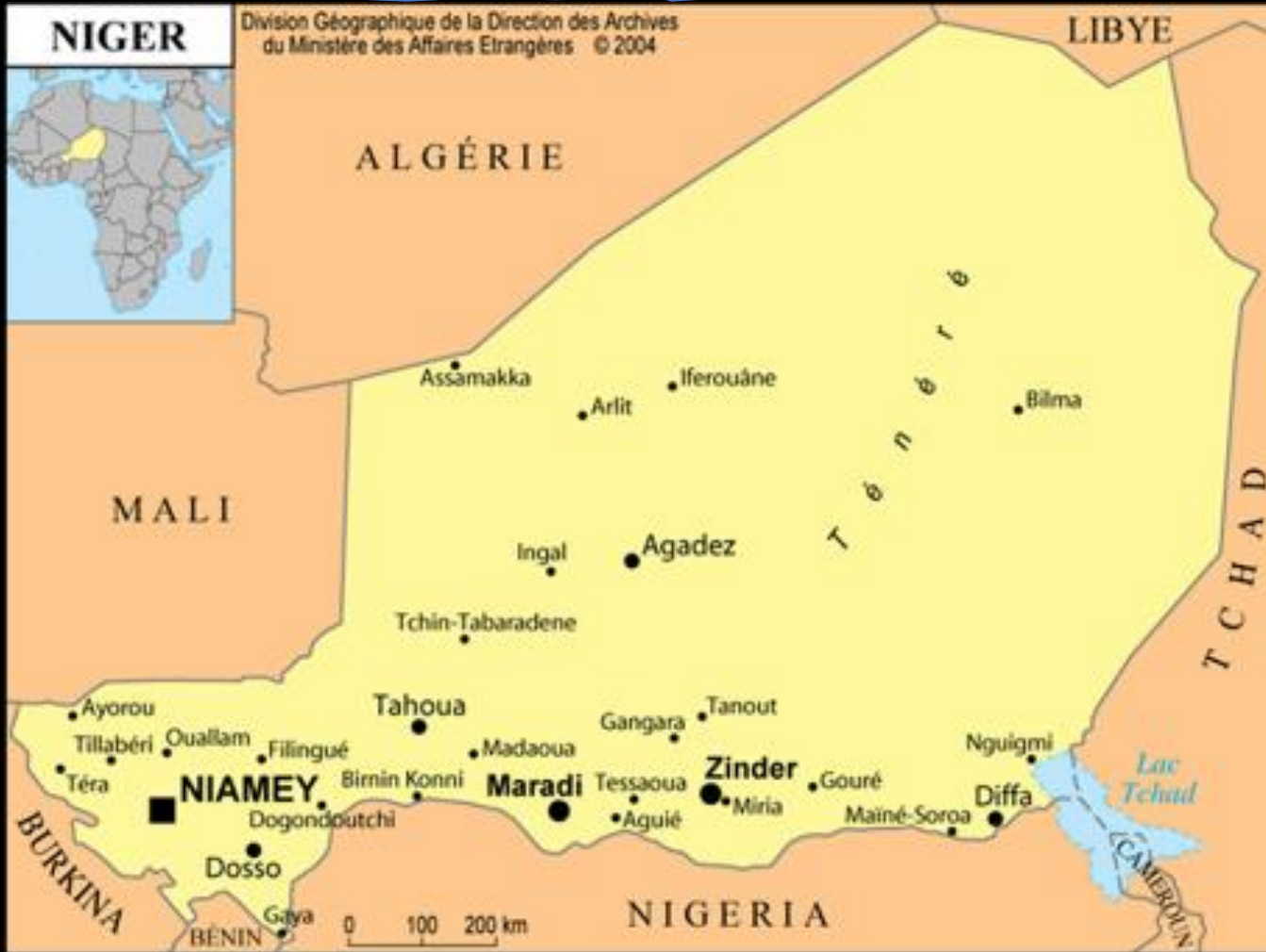


ALIMA- background

- Created in 2009 in Paris
- **Medical Care** - 56 programs in 13 countries
Treated 2 600 000 patients.
- **Innovation and research** - 10 research projects
- **A unique alliance** –with a network of local and national medical organisations.
- **ALIMA Australia**



Niger



ALIMA and BEFEN



Well Being of Mothers and babies

MUAC (Mid Upper Arm Circumference)



- Severe Acute Malnutrition (SAM) 0- 116mm
- Moderate Acute Malnutrition (MAM) 115-125 mm
- Normal 125-265mm



MUAC: Mother's Understand And Can do it

- In 2011, ALIMA had the idea of training mothers to measure their own children's MUAC.
- ALIMA was responding to recurring medical and operational problems of:
 1. Late admissions (leading to complications)
 2. Poor program coverage (often <50%)





MUAC I

**Mother's Understand And Can do it
MUAC : Pilot study, proof of concept**

[Arch Public Health.](#)

10.1186/s13690-015-0074-z. eCollection 2015.

Mothers Understand And Can do it (MUAC): a comparison of mothers and community health workers determining mid-upper arm circumference in 103 children aged from 6 months to 5 years.

[Blackwell N](#), [Myatt M](#), [Allafort-Duverger T](#), [Balogoun A](#), [Ibrahim A](#), [Briend A](#).

MUAC I: Mothers can classify MUAC

correctly
Result

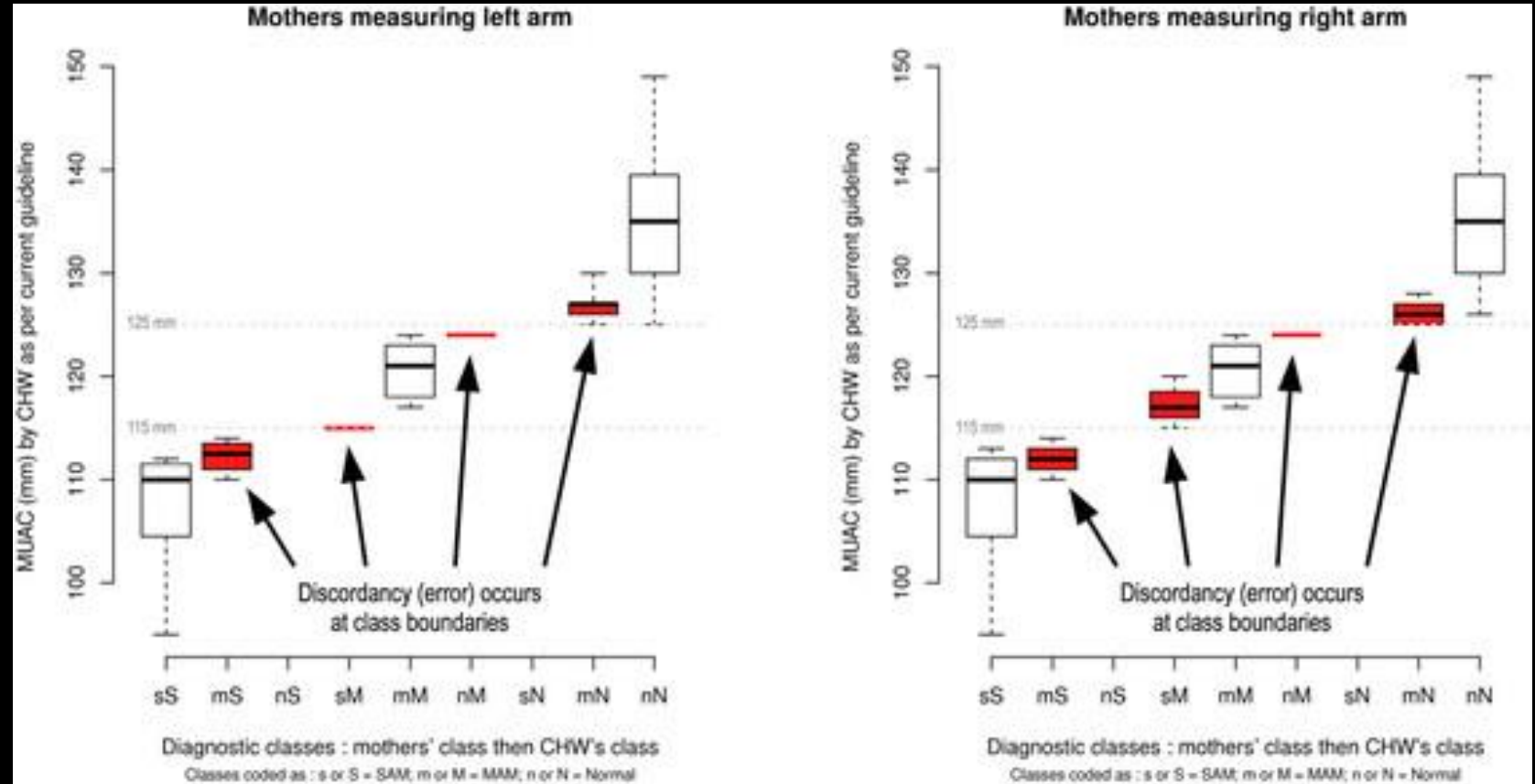
(n = 103 mother/infant couples)

→ Perfect agreement

→ Errors only at limits

→ No difference:

- Left or right arm measures
- Estimation vs measure of the mid-point of the arm



Source: Blackwell *et al.* *Archives of Public Health* 2015 **73**:26 doi:10.1186/s13690-015-0074-z



MUAC II: Study at scale (May 2013 – April 2014)



[Arch Public Health](#). 2016 September (74:38). doi: 10.1186/s13690-016-0149-5.

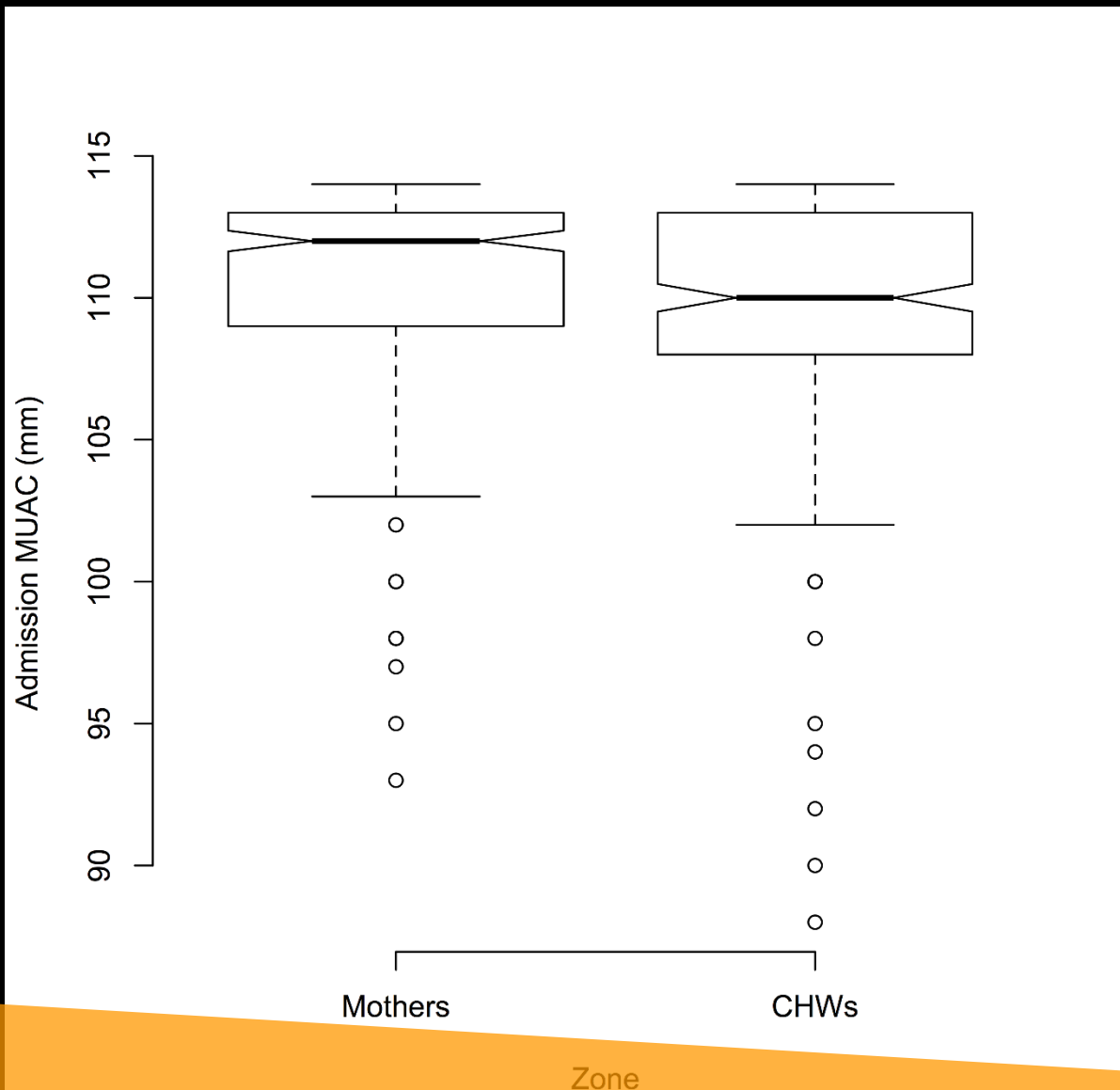
Mothers screening for malnutrition by mid-upper arm circumference is non-inferior to community health workers: results from a large-scale pragmatic trial in rural Niger.

Alé F, Phelan KP, Issa H, Defourny I, Le Duc G, Harczi G, Issaley K, Sayadi S, Ousmane N, Yahaya I, Myatt M, Briend A, Allafort-Duverger T, Shepherd S, Blackwell N

MUAC II



MUAC II: Results-MUAC distribution at admission



N Mothers = 12,893

N CHWs = 36

Median MUAC of mothers zone vs CHW zone was 1.6 mm higher (95% CI = 0.65; 1.87) ($p = 0.007$) for children admitted by MUAC

MUAC II: Results (Hospitalisation, Agreement, Cost)

	Zone Mères	Zone RECOs	Risk Ratio [95%CI]	p-value
Hospitalisations all admissions:				
At admission	2.33%	9.01%	0.26 [0.17;0.38]	<0.001
During treatment	7.22%	11.84%	0.61[0.47;0.79]	<0.001
For admissions with MUAC<115 mm:				
At admission	0.70%	7.75%	0.09 [0.03;0.25]	<0.001
During treatment	7.73%	13.32%	0.58 [0.40;0.85]	0.002
MUAC agreement at health centre	75.4%	40.1%	1.88 [1.69; 2.10]	<0.001
Cost total (en USD)	8 600	21 980	---	---
Cost per child <5 years	1.04	3.00	---	---

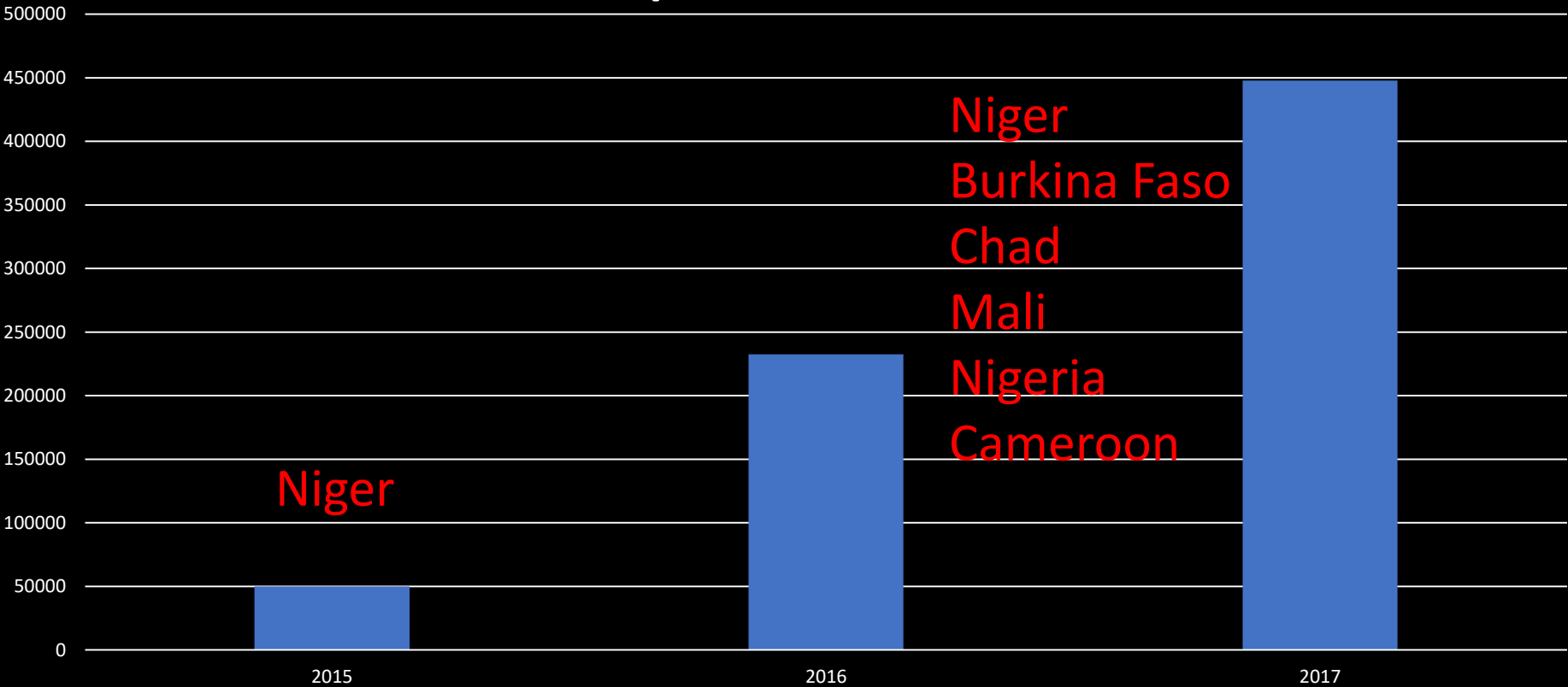
MUAC II: Conclusions

- Bringing Family MUAC to scale is feasible and should be incorporated in CMAM (community management of acute malnutrition) programming and training guidelines
- Family MUAC strategy will be most effective in programs that integrate SAM/MAM treatment (e.g. Maust et al in Sierra Leone)



Family MUAC: Changing ALIMA's policy/practice

Number of people trained in Family MUAC by ALIMA and its partners, 2015-2017



Family MUAC: Niger



→ Training Guidelines available at:

<http://alima-ngo.org/empowering-mothers-prevent-malnutrition/>



alima-ngo.org