Increasing coverage of acute malnutrition treatment with Community Health Workers using a modified protocol in a humanitarian context

Reserach fro Nutriton Conference
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CONTEXT / PROBLEM

- In 2020, 45.4 million Children under 5 were affected by acute malnutrition, of which 13.6 million were SAM (UNICEF, WHO and the World Bank);
- The impact of COVID-19 has likely exacerbated these figures, and could mean that 15% more children were affected by acute malnutrition in the coming year;
- One of the main problems regarding malnutrition, is the coverage of SAM treatment
- The iCCM+ intervention, one of the simplified approaches defined by UNICEF, aims to overcome this problem

Levels and trends in child malnutrition UNICEF / WHO / World Bank Group Joint Child Malnutrition Estimates Key findings of the 2021 edition. file:///C:/Users/pcharle/Downloads/JME-2021-UN-regions-web-v2.pdf
Rogers E *et al.* Coverage of community-based management of severe acute malnutrition programmes in twenty-one countries, 2012-2013. PLoS ONE. 2015;10(6) https://doi.org/10.1371/journal.pone.0128666
López-Ejeda N *et al.* Can community health workers manage uncomplicated severe acute malnutrition? A review of operational experiences in delivering severe acute malnutrition treatment through community health platforms. Maternal & Child Nutrition. 2019; 15(2):e12719. https://doi.org/10.1111/mcn.12719
Bliss J *et al* . Use of Mid-Upper Arm Circumference by Novel Community Platforms to Detect, Diagnose, and Treat Severe Acute Malnutrition in Children: A Systematic Review. Glob Health Sci Pract. 2018 Oct 4;6(3):552-564. https://pubmed.ncbi.nlm.nih.gov/30185435/

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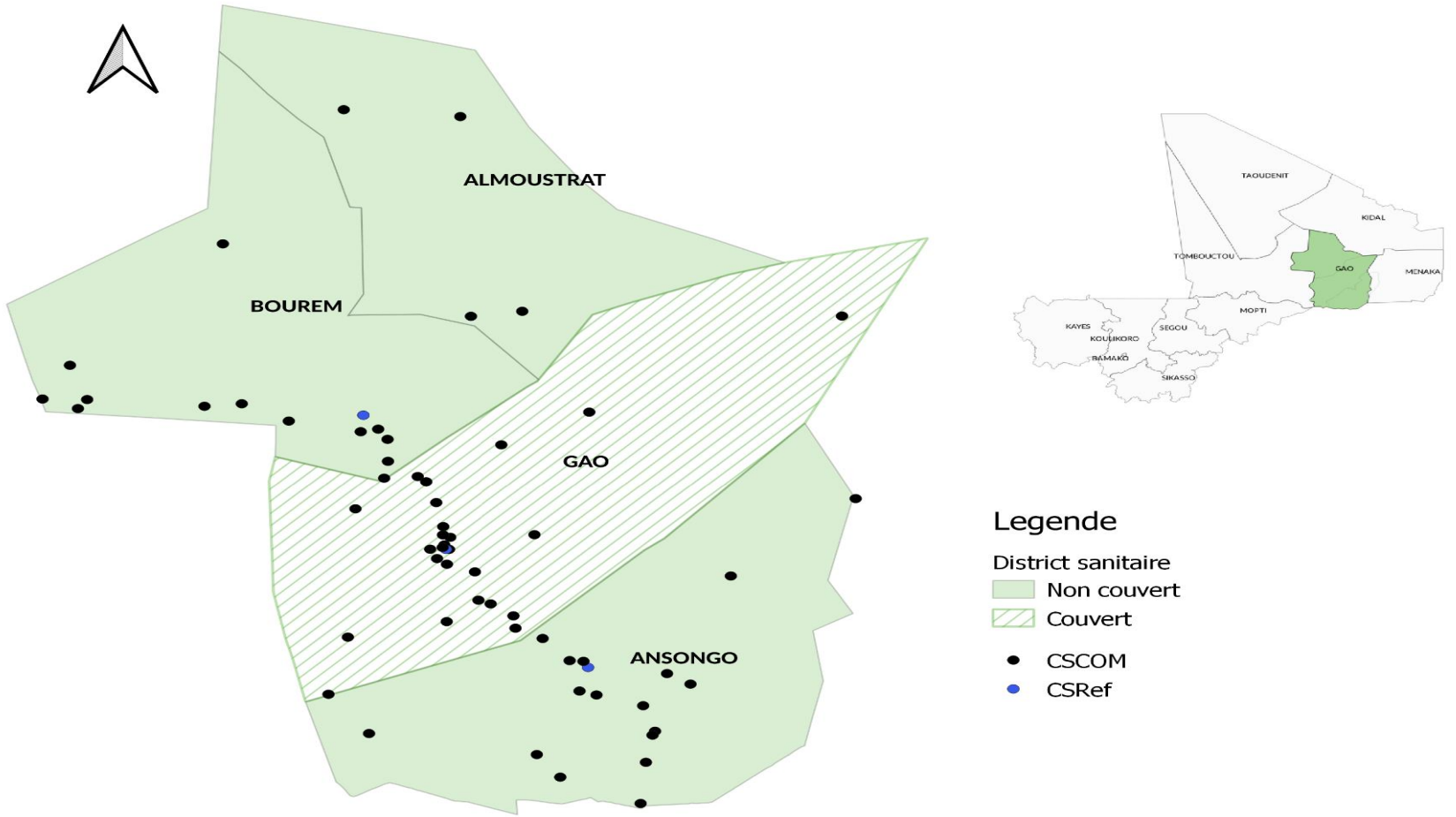
CONTEXT / PROBLEM

CARTE SANITAIRE DE LA REGION DE GAO- MALI



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CONTEXTE / PROBLEM

Parameter	Control Arm	Arm 1	Arm 2
Type of malnutrition	**SAM and MAM**	**SAM and MAM**	**SAM and MAM**
Health pyramid level	Health Center	Health Center and CHWs site	Health Center and CHWs site
Product used	RUTF for SAM and RUSF for MAM	RUTF for SAM and RUSF for MAM	RUTF for SAM and MAM
Type of protocol	Standard protocol	Standard protocol	Modified protocol
Administration of the dosage	According to the child's weight	According to the child's weight	Fixed dosage and does not take into account the child's weight
Admission and discharge criteria	Admission WHZ <-3z score or MUAC<115mm Discharge WHZ >-1.5 z score and MUAC >125 mm	Admission WHZ <-3z score or MUAC<115mm Discharge WHZ >-1.5 z score and MUAC >125 mm	Admission MUAC <115mm Discharge MUAC >125 mm

PURPOSE OF THE MAIN STUDY

Cluster randomized controlled non-inferiority trial

Hypothesis: Decentralization of treatment through CHWs with a modified protocol will increase coverage, cost-effectiveness and maintaining quality standards in the outcomes.

Parameter	Control Arm	Arm 1	Arm 2
Malnutrition	**SAM and MAM**	**SAM and MAM**	**SAM and MAM**
Health level	Health Center	Health Center and CHWs	Health Center and CHWs
Type of protocol	Standard protocol	Standard protocol	Modified protocol
Product used	RUTF (SAM) , RUSF (MAM)	RUTF (SAM) , RUSF (MAM)	RUTF (SAM and MAM)
RUTF dosage	According to the weight	According to the weight	Fixed dosage
Admission and discharge criteria	Admission: WHZ <-3z score or MUAC<115mm Bilateral pitting oedema Discharge: WHZ >-1.5 z score, MUAC >125 mm	Admission :WHZ <-3z score or MUAC<115mm Bilateral pitting oedema Discharge : WHZ >-1.5 z score, MUAC >125 mm	Admission: MUAC <125mm Discharge: MUAC >125 mm

PURPOSE OF THE COVERAGE STUDY

The main objective is to evaluate the coverage of treatment achieved by extending community-based treatment of SAM with CHWs through the application of a modified protocol that facilitates the management of SAM in emergency situations.

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METHODOLOGY

A cross-sectional survey of a representative sample of households in the control arm, arm 1 and arm 2.

The survey involved households present at the time of the survey and living in the control arm, arm 1 and arm 2.

In the homes, all children aged 6 to 59 months were included in the survey.

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RESULTS

Coverage estimates for the DSS treatment program in the three study arms.

	Cas trouvés				Dénominateur	Numérateur	Estimation de couverture	Intervalles de confiance	
	Cin	Cout	Rin	Rout	Cin+Cout+Rin+Rout	Cin+Rin	Numerator / Denominator	Lower CI	Upper CI
Control Arm	17	84	4	6	111	21	18.9%	11.6%	26.2%
Arm 1	38	85	27	19	169	65	38.5%	31.1%	45.8%
Arm 2	17	20	3	1	41	20	48.8%	33.5%	64.1%

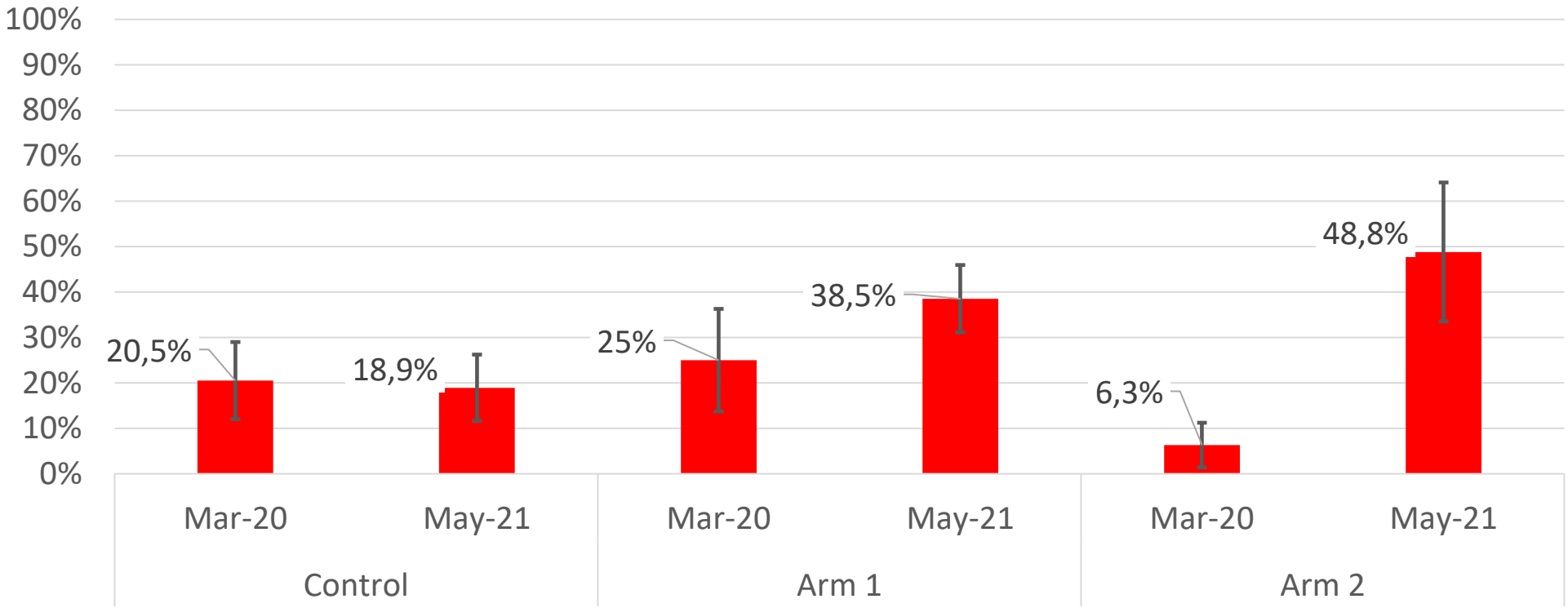
RESULTS

Coverage estimates for the SAM treatment program in the three study arms (Base VS End line)

	Bras contrôle				Bras 1				Bras 2			
	Mars-20		Mai-21		Mars-20		Mai-21		Mars-20		Mai-21	
	MAS	MAM	MAS	MAM	MAS	MAM	MAS	MAM	MAS	MAM	MAS	MAM
Couverture Unique	20,50%	9,80%	18.9%	16.1%	**25,00%**	13,90%	**38.5%**	23.4%	**6,30%**	12,10%	**48.8%**	25.9%
Intervalle	12,0%-28,9%	6,4%-13,2%	11.6% -26.2%	11.7%-20.5%	13,7%-36,3%	8,2%-19,5%	31.1%-45.8%	19% - 27.9%	1,4%-11,2%	6,8%-17,3%	33.5%-64.1%	17.9% - 33.8%

RESULTS

SAM treatment coverage in the three study arms



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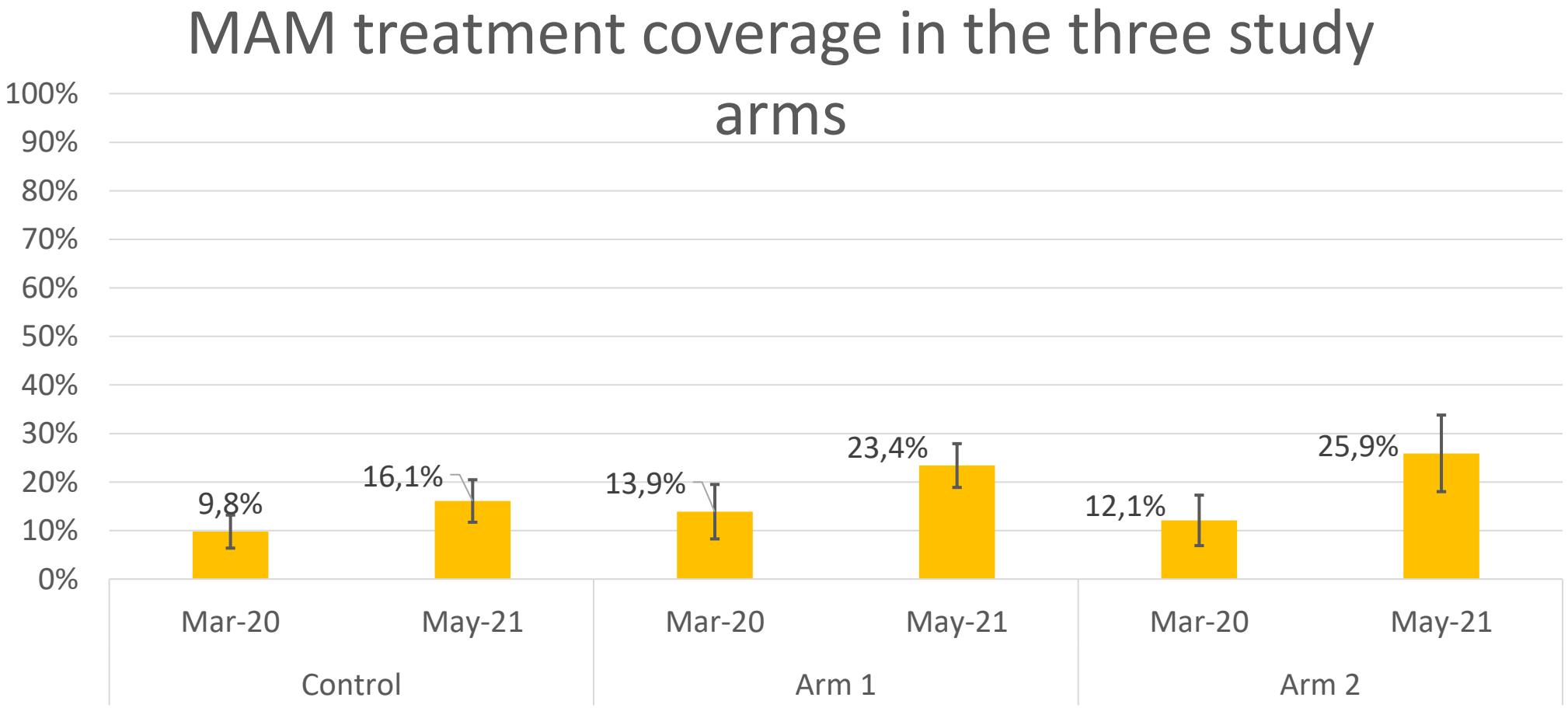
RESULTS



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DISCUSSION OF THE METHODS AND RESULTS

The goal of the ICCM+ project in all 3 arms is to integrate community-based SAM treatment (CHWs) into arm 1 and arm 2 using the standard and modified PCIMA protocol:

- ❑ The results of the survey show that treatment coverage of SAM and MAM were below 50% which is the threshold recommended by the sphere standards in rural areas.

- ❑ SAM coverage estimates indicate an increase in coverage in Arm 1 and Arm 2 compared to the March 2020 Baseline survey

- ❑Treatment coverage of SAM in the Control arm did not change during study implementation.

Discussion of the methods and results

- Treatment coverage was highest in Arms 1 and 2, with coverage estimates of 38.5% and 48.8% for SAM treatment, respectively.

- These results suggest that if treatment is administered by CHWs in the community, higher treatment coverage would be expected compared to treatment administered in health centers.

- The difference between the estimates in Arm 1 and Arm 2 also suggest that the simplified protocol conducted in Arm 2 would result in higher coverage compared to the standard protocol.

- It can be hypothesized that, for CHWs, the simplified protocol is easier to implement than the standard protocol

STRENGTHS , LIMITATIONS, KNOWLEDGE CONTRIBUTION

- Strengths:

- Limitations :Inaccuracy in the age of the children, limitation of the assessment, inaccuracy in the demographic database

- The results will allow the MoH in Mali to have evidence of the intervention in an humanitarian context

- The results will allow other stakeholders to scale the intervention in humanitarian context

CONCLUSSIONS

- The results contribute to **increase knowledge** regarding the CHWs service delivery model:

  - One of the simplified approaches suggested by **UNICEF** to scale during COVID 19 pandemic
  - An approach under review by **WHO** , to including in their the new **guidelines** of management of acute malnutrition

- **Decentralization service delivery model with CHWs** can increase coverage of acute malnutrition treatment in an **humanitarian/emergency context**

Conclusion and implications of the findings for operations and research

- Based on the results of the end line coverage survey in the Gao health district, we can see an increase in treatment coverage in both intervention arms, Arm 1 and 2.

- The greatest increase was observed in Arm 2, where a simplified protocol for the treatment of SAM and MAM was implemented;

- These results represent only part of the results of the RCT study. Treatment effectiveness and cost-effectiveness results will complement these treatment coverage results.

ICCM+

Integrated Community Case Management

Thank you

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