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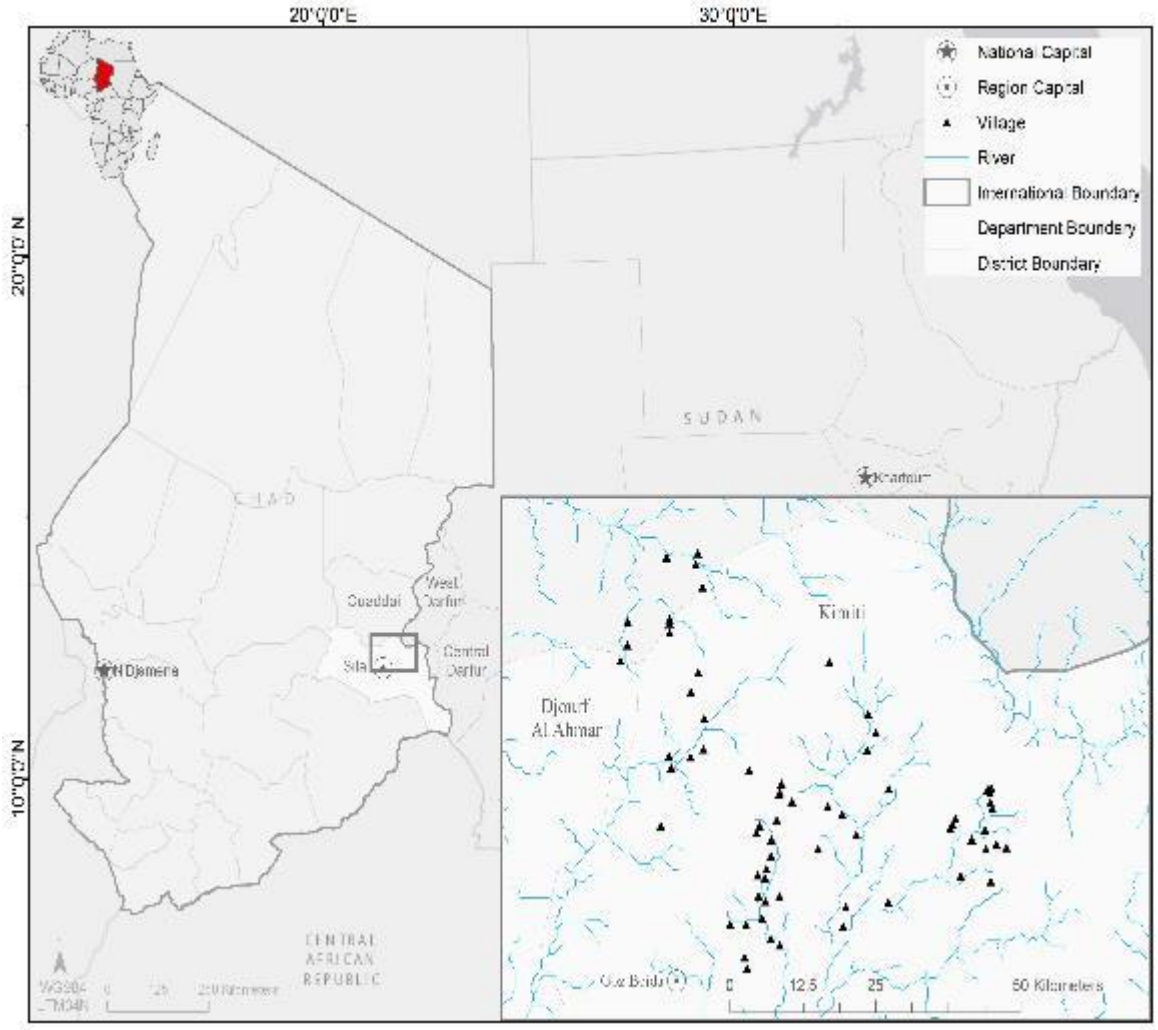
Community Resilience to Acute
Malnutrition (CRAM)

Context: Sila Region in eastern Chad



Background:
Sila Region, Eastern Chad

- Largely subsistence agro-pastoralists;

  some nomadic pastoralists
- One main harvest in Oct/ Nov
- Mainly millet, sorghum, groundnuts
- Malnutrition high: stunting (35%) & wasting (15%)
- Gender inequality; polygamy
- Migration levels
- Health system very weak
- A history of displacement due conflict/ drought
- French, Arabic and several local languages spoken

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The CRAM programme

- Goal: to improve health, nutrition and livelihood security as well as resilience to shocks for the rural population in Sila, Chad
- Integrated set of interventions:
  - Agriculture
  - WASH
  - Support to local health systems
  - Social and behavior change
  - Gender equality
- Early warning
- Emergency support (food aid/seeds) in bad years

Mixed methods

- Quantitative
- Qualitative

Randomized control trial:

- 35 treatment villages and 34 control villages
- 1420 households
- Baseline (2012), midline (2014), endline (2015)
  - November/December

Focus groups and key stakeholder interviews:

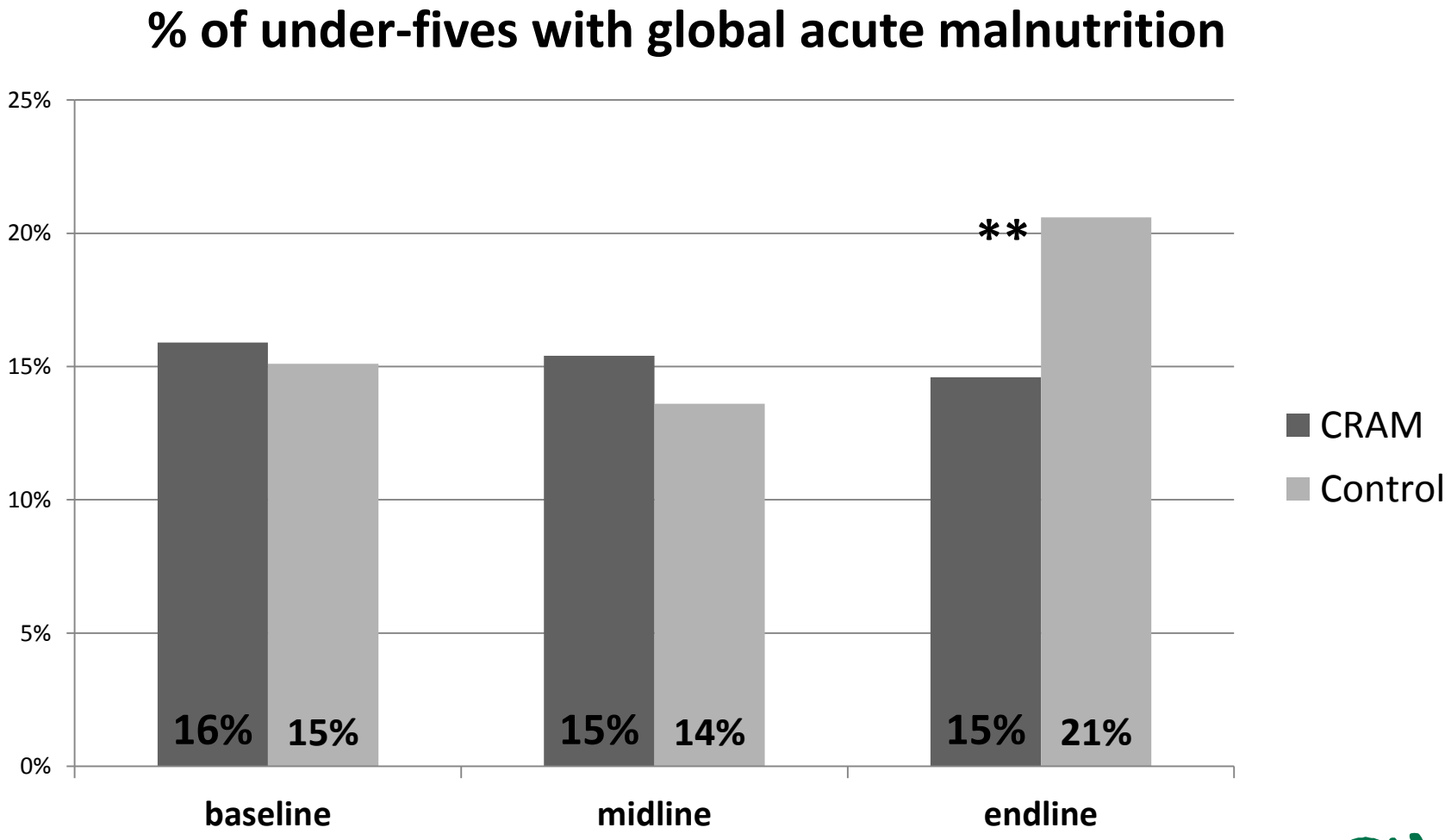
- February, 2013
- November 2014
- November 2015
- May, 2016

		Control	Treatment	Total
household	baseline	719	701	1420
	midline	638	609	1247
	endline	632	627	1259
children with anthropometric data	baseline	647	614	1,261
	midline	572	555	1,127
	endline	543	487	1,030

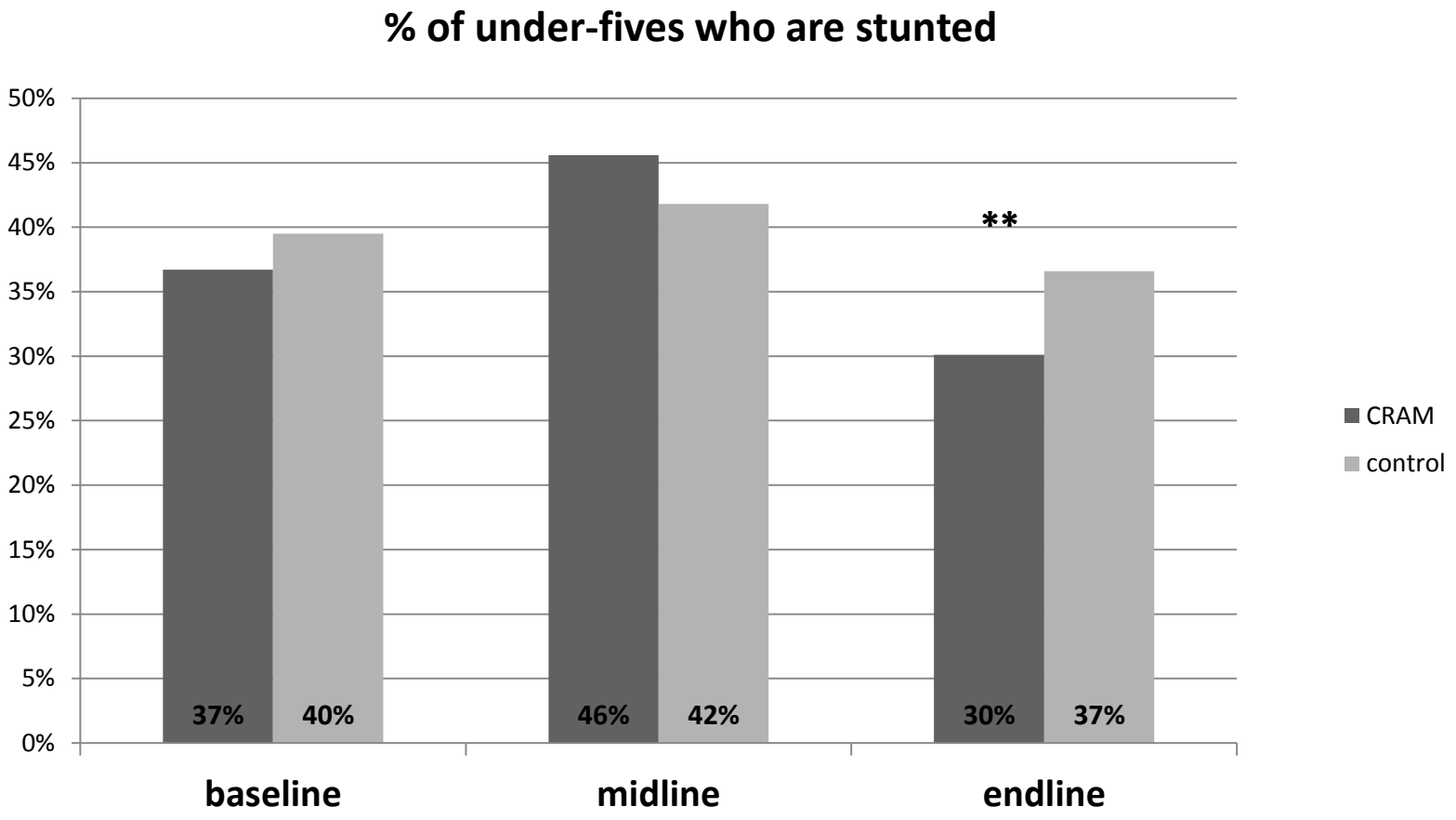
Main results

- Our 3-year integrated programme in Chad had a preventative effect on acute malnutrition and stunting.
- Programme components included: WASH, support to health and nutrition services, behaviour change communication, agriculture support and a fledgling early warning/ early response mechanism.
- An evaluation brief and longer Tufts report available here

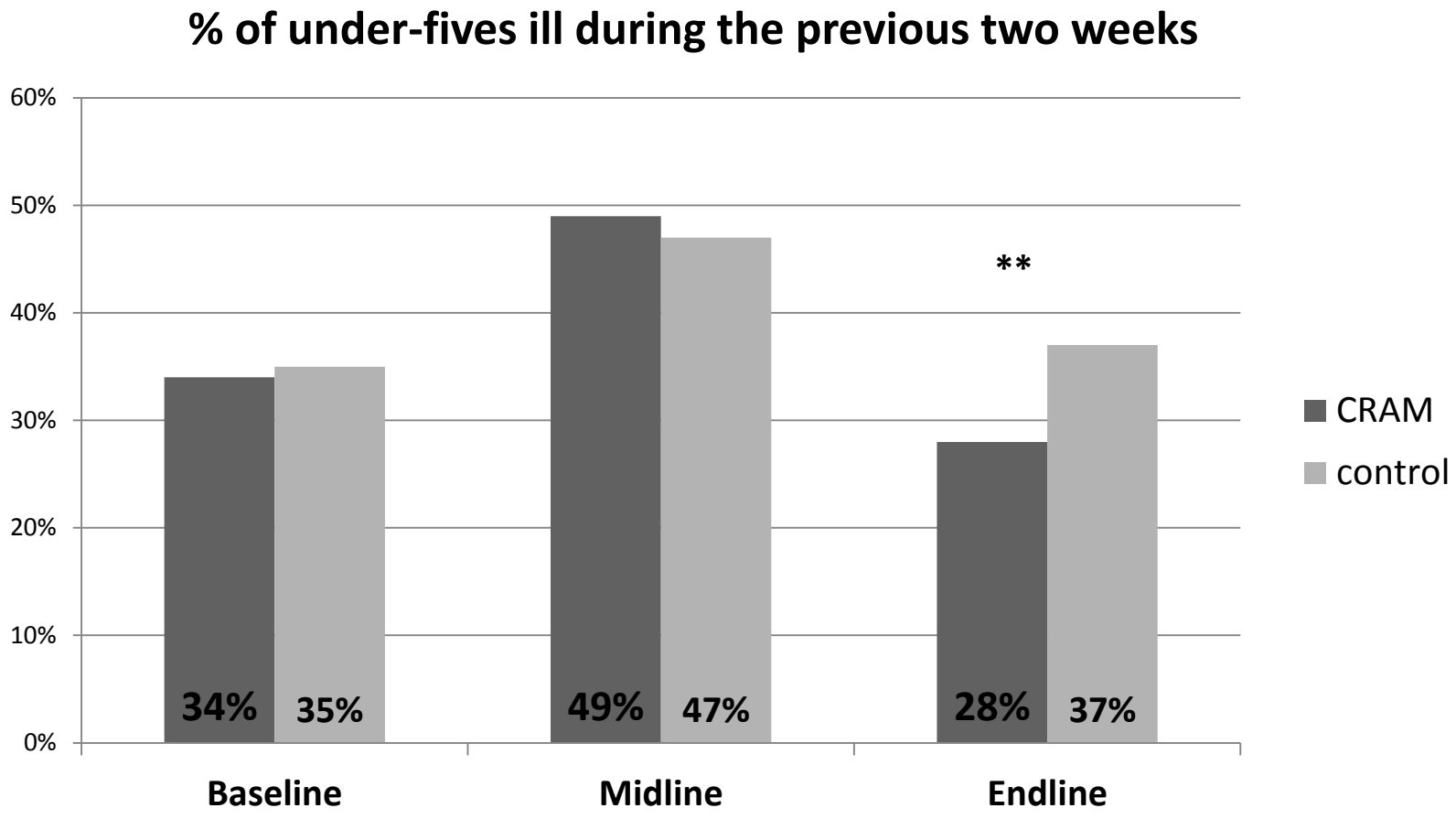
CRAM impact on acute malnutrition



CRAM impact on stunting



CRAM impact on child illness



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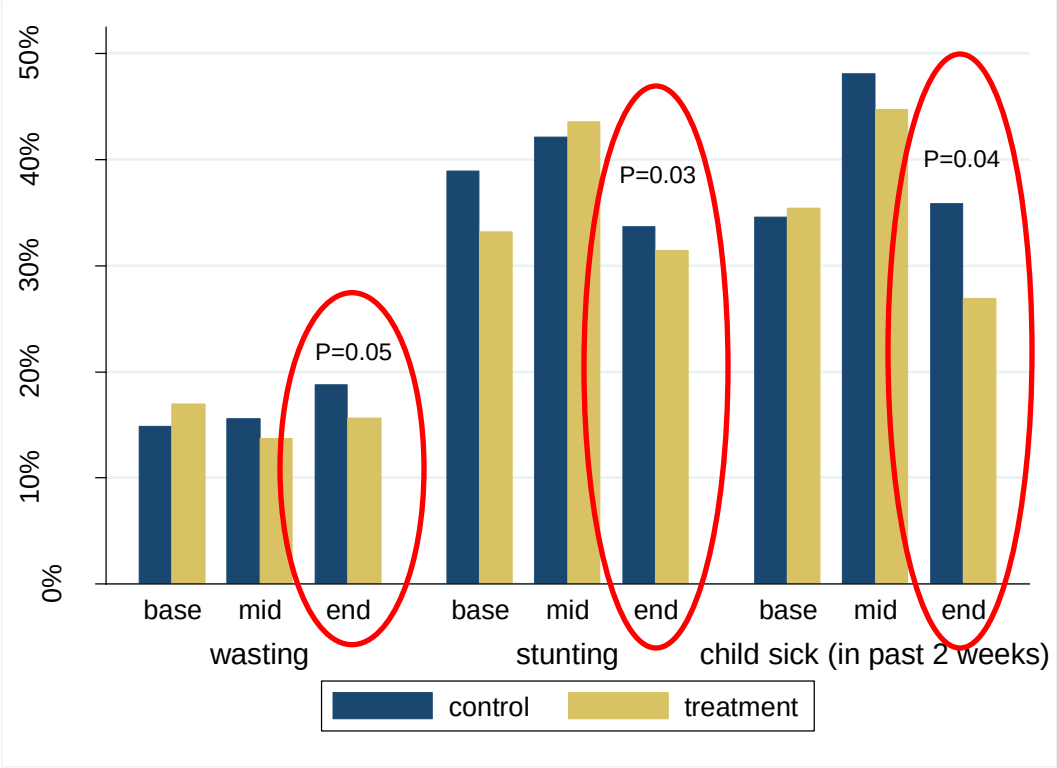
CRAM impact on chronic and acute malnutrition



significant impact:

- Wasting ($p<0.05$)
- Weight for height z-score ($p<0.05$)
- Stunting ($p<0.05$)
- Height for age z-score ($p<0.1$)
- Having a child sick in the past two weeks ($p<0.05$)

	full sample		control		treatment	
	fixed effects	random effects	fixed effects	random effects	fixed effects	random effects
female child		0.155***		0.149*		0.140*
child age in months (centered)		0.021**		0.022*		0.019
child age in months squared (centered)	-0.000*	-0.000**	0	-0.000*	0	0
number of children(age<5) (centered)	-0.033	-0.145***	-0.128	-0.188***	0.067	-0.101*
age of household head (centered)	-0.001	0	0.005	0.003	-0.008	-0.002
female household head	0.081	0.105	-0.128	0.035	0.247	0.183
hh head has at least some formal edu.	0.412*	0.343**	0.068	0.361	0.661**	0.414**
household size (centered)	-0.023	-0.007	-0.008	-0.025	-0.034	0.015
Coping Strategies Index (centered)	0	0.001	0	0.002	0	0
prop. children (age<14) working (cent.)	0.145	0.171**	0.233	0.275***	0.067	0.092
Morris Score Index (centered)	0.098	0.05	-0.004	0.001	0.189*	0.134*
Weighted Livestock Index (centered)	0	0.000*	0	0	0.001*	0.001**
water access (reference: surface water)						
traditional well	0.181	0.201**	0.048	0.02	0.268	0.367**
Borehole	0.083	0.225***	-0.247	0.037	0.384**	0.408***
household was displaced during conflict	0	0.215***	0	0.291***	0	0.119
village with 150 hh or more	0	0.093	0	0.162	0	0.013
Damre	0	0.292**	0	0.399*	0	0.327**
cattle in the village (centered)	0.009	0.087**	0.128	-0.110*	-0.092	-0.079*
Intervention	0.193*	0.120*	0	0	0.077	0.071
Constant	-1.457***	-1.594***	-1.164***	-1.418***	-1.670***	-1.764***
Number of observations	1348	1348	689	689	659	659
R squared	0.05		0.054		0.117	
Degrees of freedom	570		285		270	

Main results

- Major factors associated with acute malnutrition:
  - Concentration of livestock in the village – presumably leading to contamination. Notable exception were pastoralists, whose livestock management practices may lead to lower risk of malnutrition.
  - Access to water ***plus*** hygiene along the water chain (one without the other not enough)

THE WATER CHAIN

SOURCE & CATCHMENT

TRANSPORT

POINT OF USE

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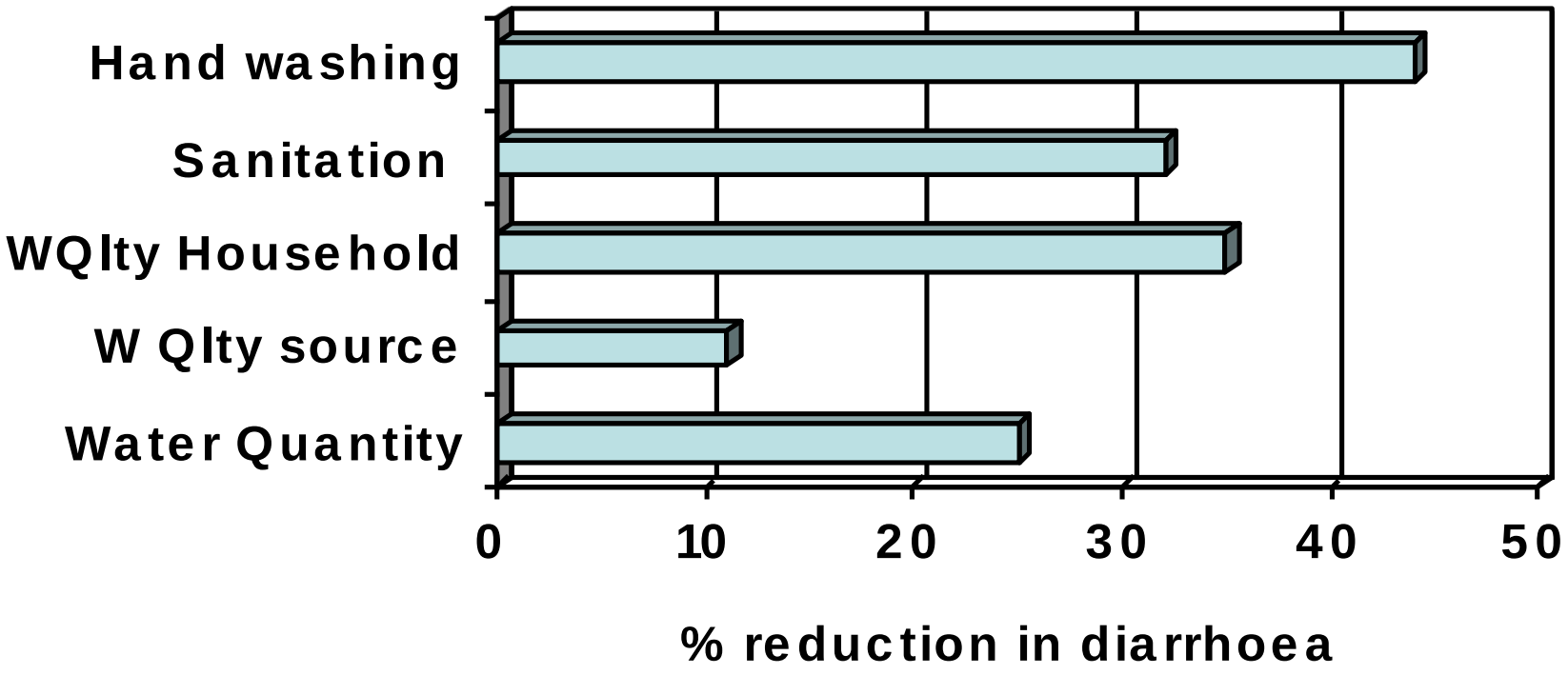
Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis, Fewtrell et al (2005)



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Intervention EAH

- Accès à l’eau: construction/réhabilitation de forages, travail sur les pratiques le long de la chaine de l’eau.
- Assainissement: ATPC pour mettre fin aux pratiques de défécation à l’air libre.
- Promotion de l‘hygiène: campagne chaine de l’eau

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Une approche innovante en termes de promotion de l'hygiène

- Actions novatrices basées sur deux principes tirés des approches SDA et BCD
- Mise en place : pas seulement réseau communautaire volontaire mais aussi troupe théâtre professionnelle, staff ONGs salariés
- Mise en place d'une aire de lavage des récipients de boisson
- Test de la qualité de l'eau tout au long de la chaine de l'eau.
- Utilisation des résultats des tests de l'eau dans les actions de sensibilisation.

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Discussion

- Partenariat ONG - Universitaires: challenges et opportunités

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