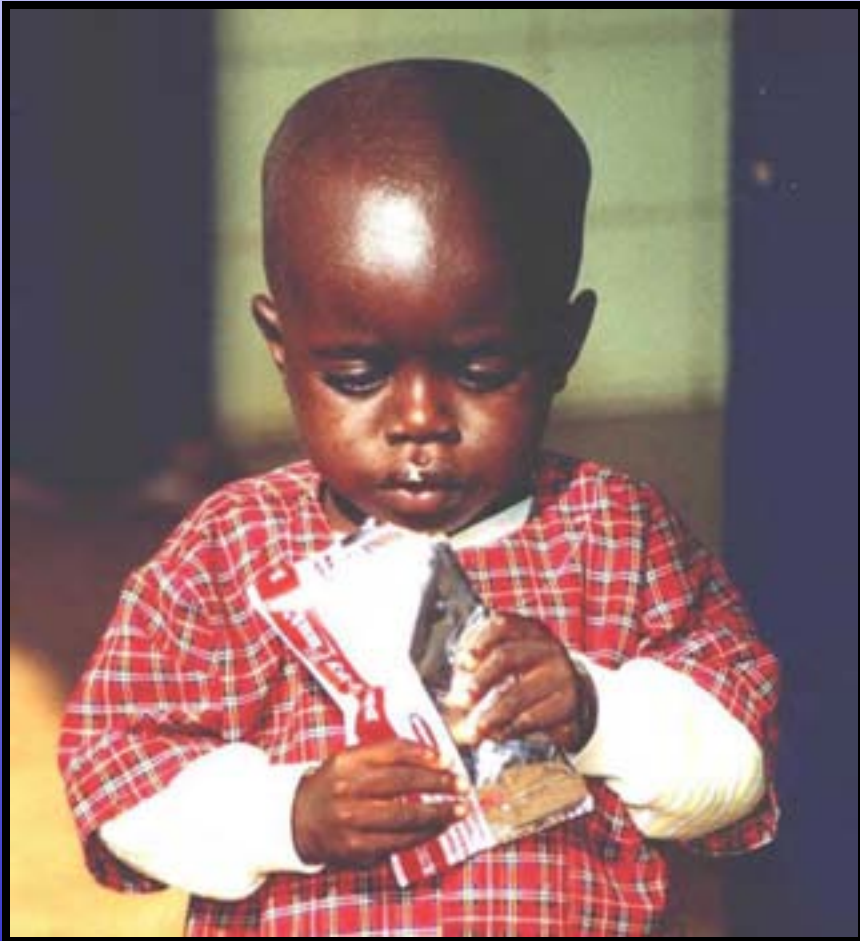


Malnutrition A neglected disease

RUF The nutritional equivalent of an essential medicine



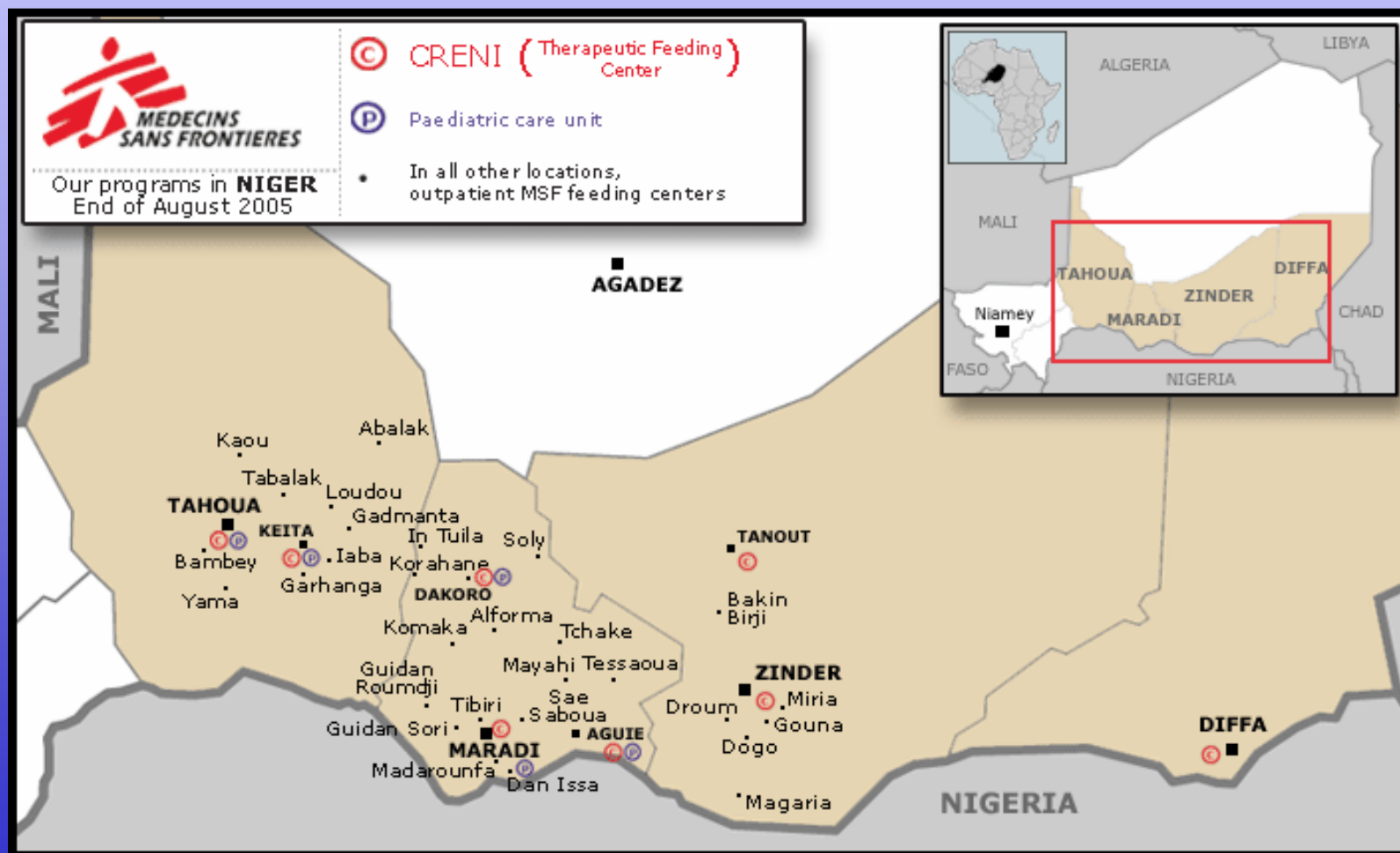
Médecins sans Frontières
Cambridge, Mass Oct 2007



DHS 2006 (1998) Maradi Region

Wasting 11.6% (18.5%)
Stunting 62.2% (52.0%)
U5MR 231/1000 (374/1000)

Maradi, Niger



9,632 admissions (SEVERE)

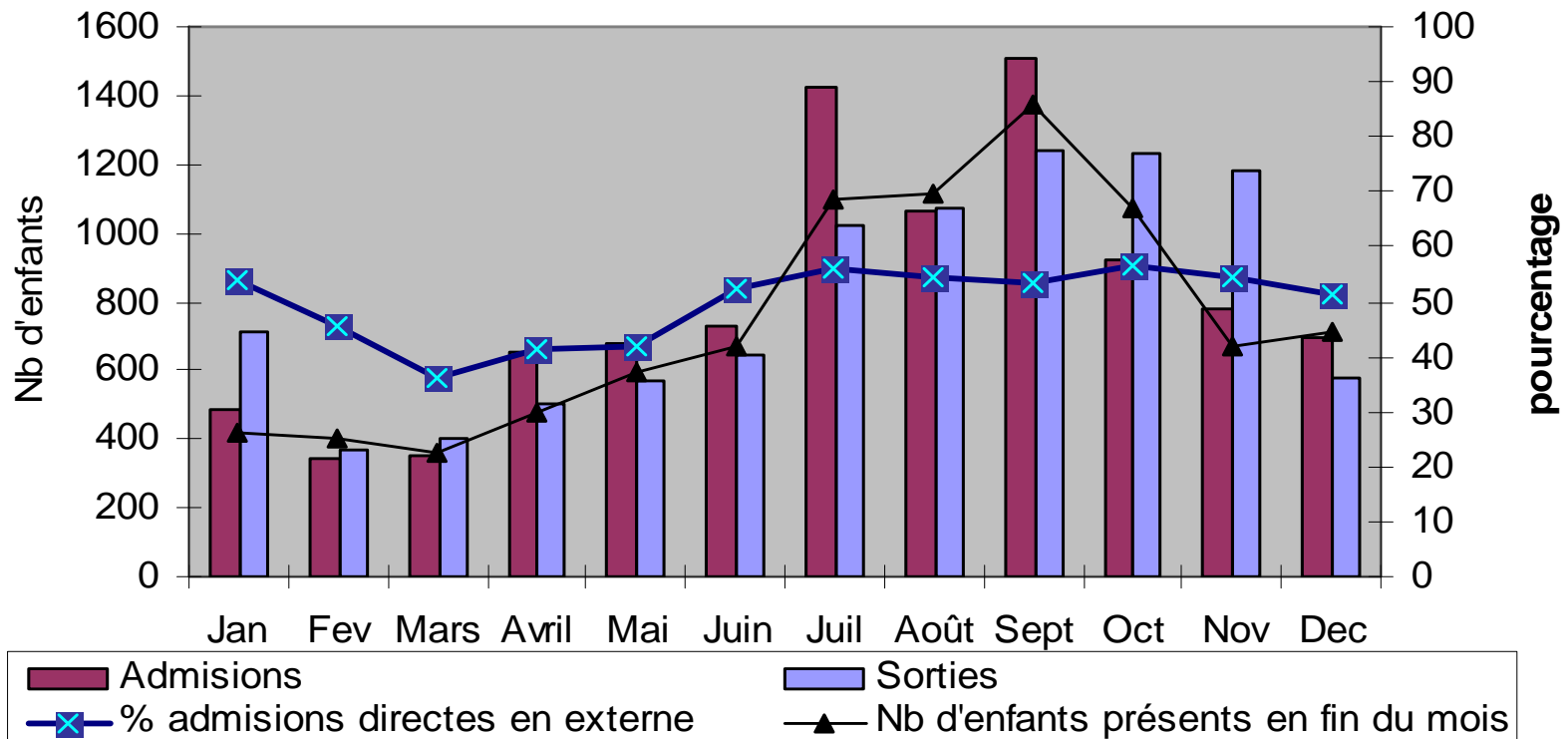
95% < 85 cm height

83.5% cure, 6.0% death, 10.3% default, 26 day length of stay

51.6% direct into outpatient care

Maradi 2004

Nb d'Admission (avec % d'externe), de sortie et enfants présents en fin de mois, 2004, Programme de Maradi, Niger



39,158 admissions (94% SEVERE)

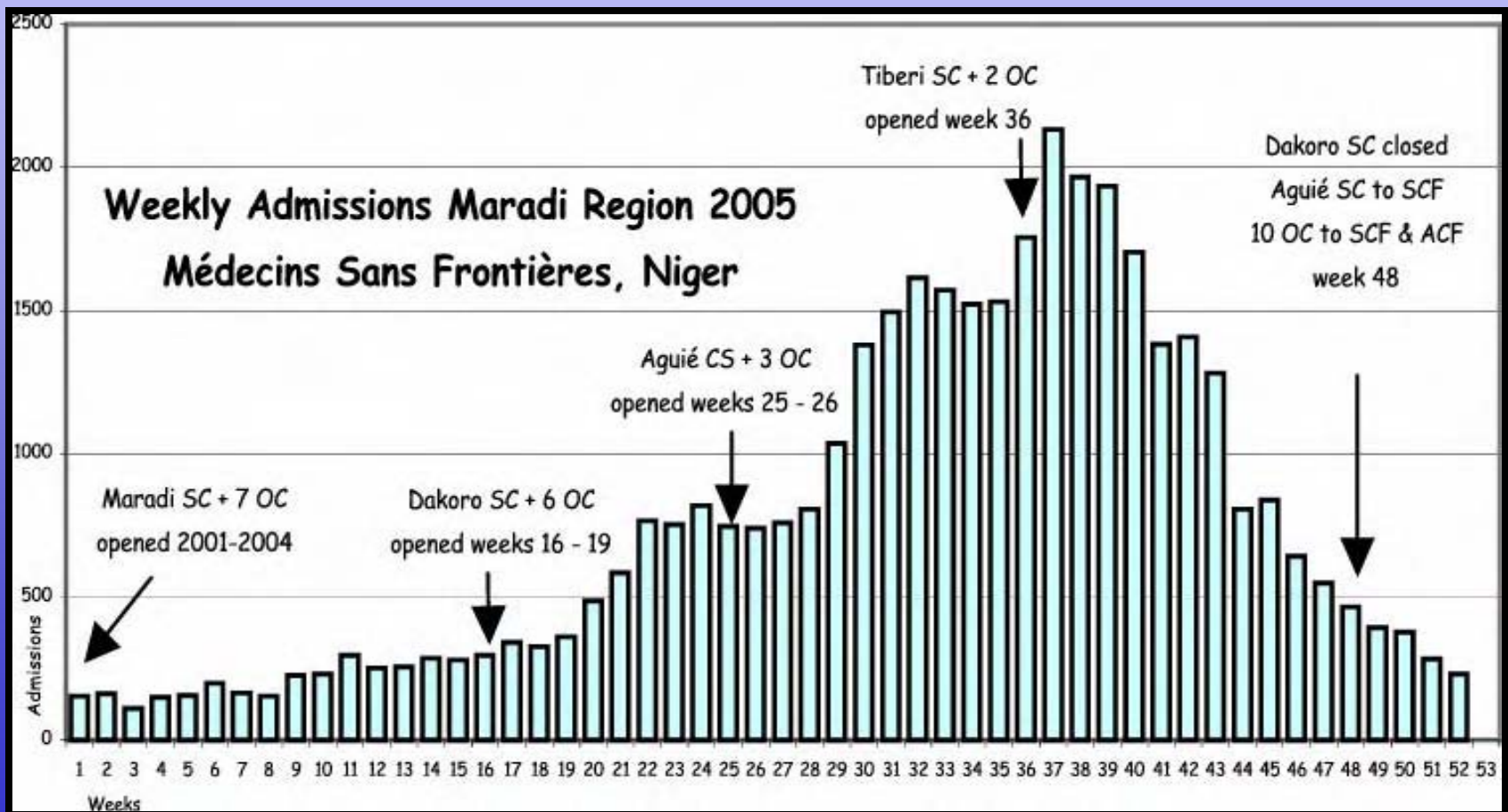
60% of admissions in 13 weeks

95% < 85 cm height

91.4% cure, 3.2% death, 4.7% default, 29 day length of stay

64.5% direct into outpatient care

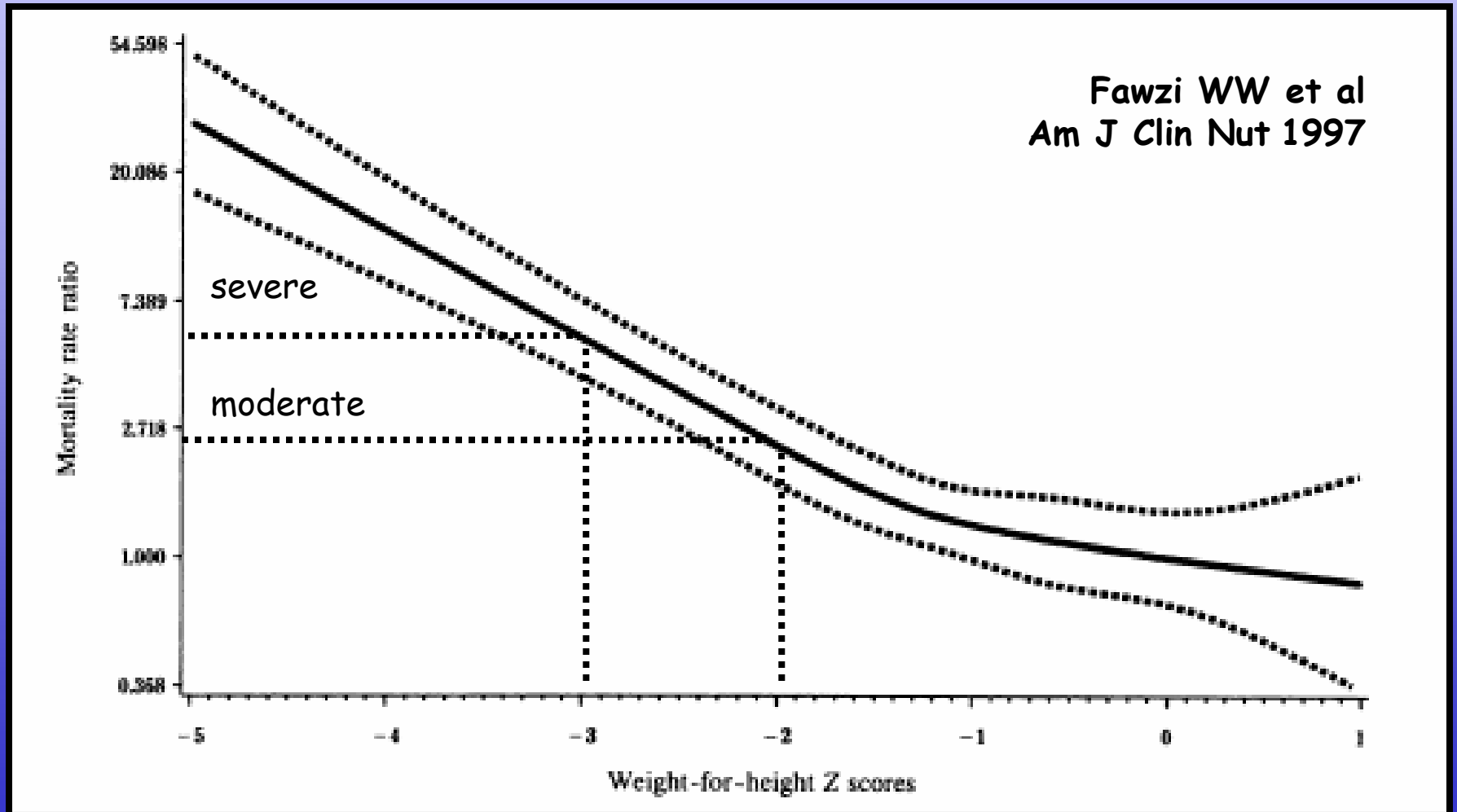
Maradi 2005



Malnutrition Wasting & mortality

"There is no question the most severely malnourished children suffer the most, but they may not be contributing to most of the suffering"

Yip R, J Nutr 1994



64,733 children 92.5% MODERATE

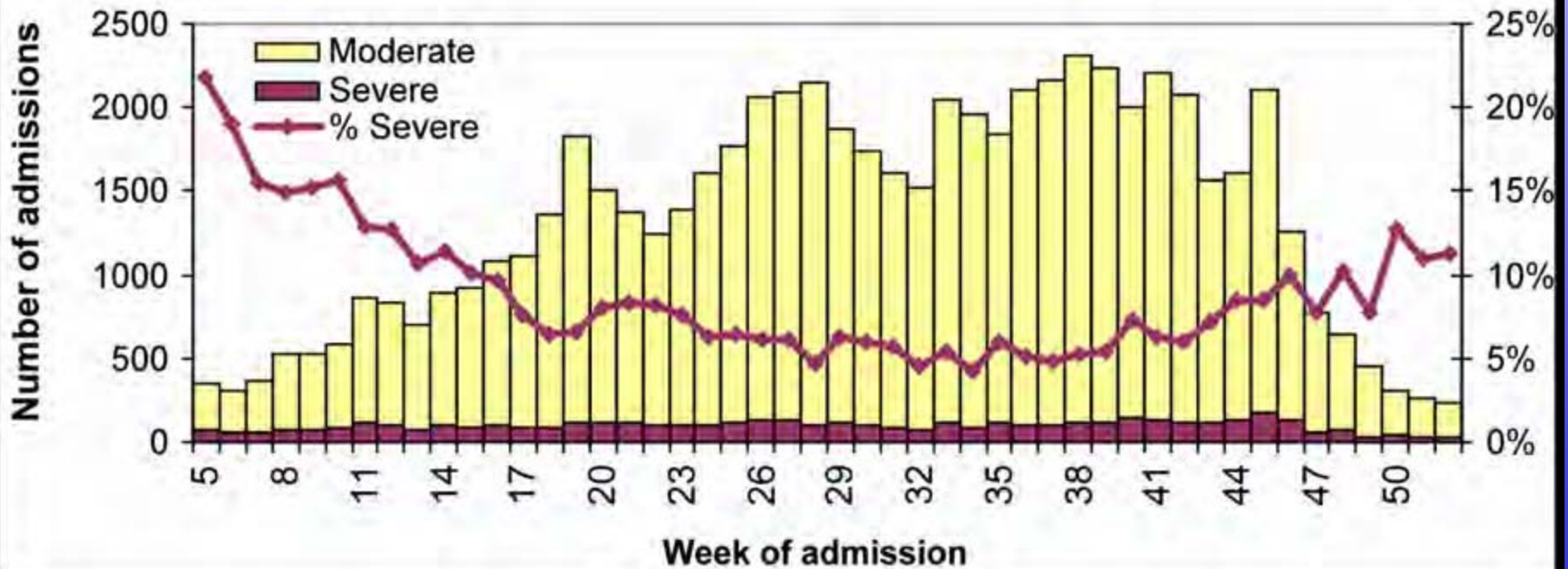
Maradi 2006

93.1% < 36 months

95.5% cure, 0.4% death, 3.4% default, 32 day length of stay

89.6% (moderate), 58.2% (severe) direct into outpatient care

Weekly Admissions in MSF-F Therapeutic Nutritionnal Program, Guidan Roundji & Madaroumfa Districts, Maradi Region, Niger, 2006

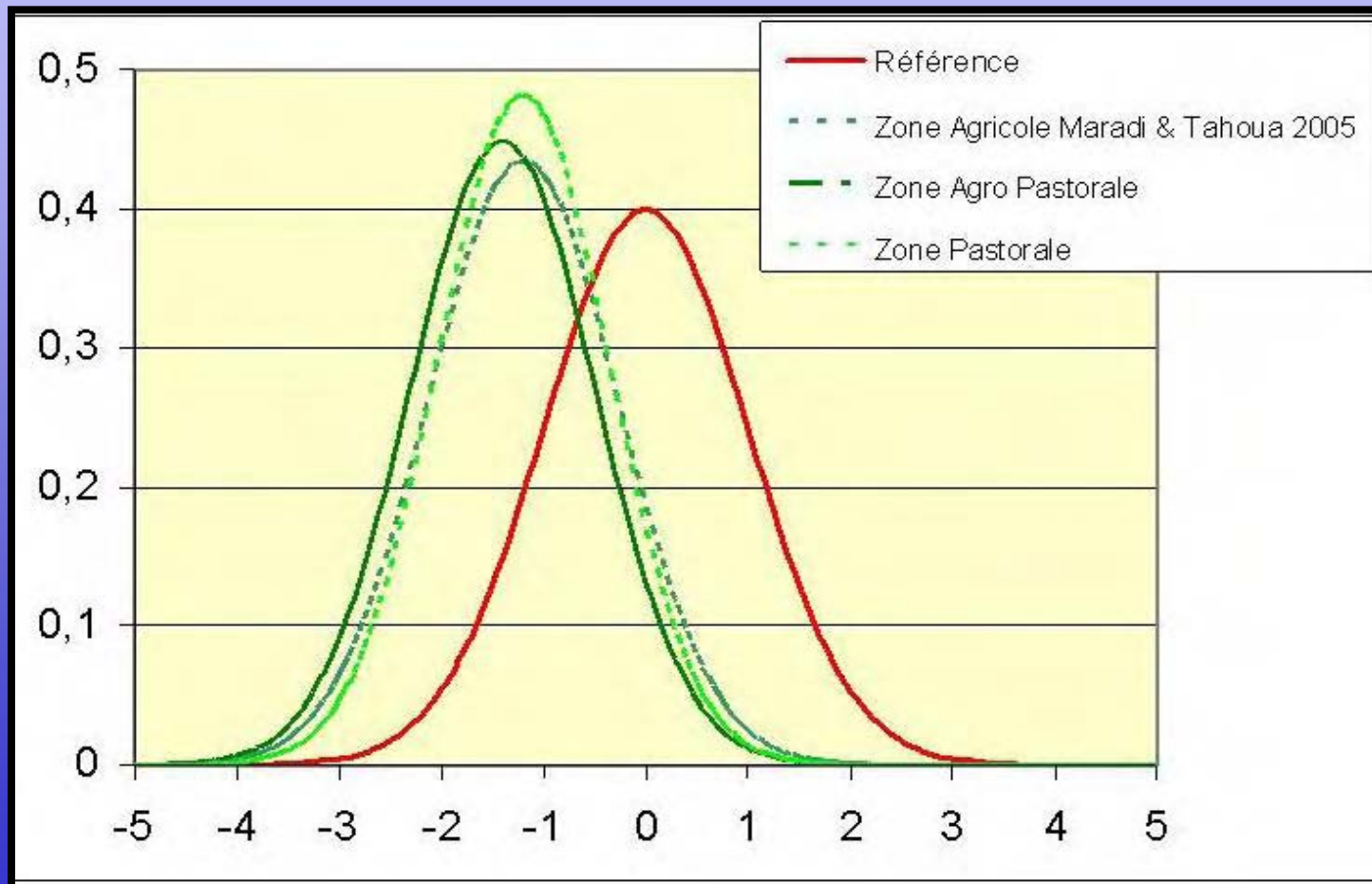


Malnutrition Maradi, Niger 2005-2006

Generalized seasonal shift in weight/height curve

Guidam Roundji 2005 - up to 50% incidence of severe malnutrition < 30 mo

Guidam Roundji 2006 - up to 50% incidence of acute malnutrition < 30 mo



ACF
Niger
2005

Malnutrition WHO Standard 2005/Maradi Data 2006

Generalized increase in severe cases (3,000 to 24,000)

Proportional increase of young children

Statut nutritionnel, standards NHCS et nouveaux standards OMS 2005 par âge à l'admission

	NCHS (% Médiane)	Malnutrition Modérée		Malnutrition sévère		Total	
		n	%	n	%	n	%
Age à l'admission (en mois)	<6	20	0,04%	3	0,10%	23	0,04%
	6-11	6 367	13,06%	315	10,38%	6 682	12,91%
	12- 23	24 750	50,79%	1 425	46,94%	26 175	50,56%
	24-35	14 376	29,50%	1 080	35,57%	15 456	29,86%
	36-47	2 213	4,54%	154	5,07%	2 367	4,57%
	48-59	788	1,62%	40	1,32%	828	1,60%
	>=60	220	0,45%	19	0,63%	239	0,46%
	Total	48 734	94,14%	3 036	5,86%	51 770	100,00%



	OMS 2005 (z-score)	Malnutrition Modérée		Malnutrition sévère		Total	
		n	%	n	%	n	%
Age à l'admission (en mois)	<6	12	0,04%	11	0,05%	23	0,04%
	6-11	1 475	5,33%	5 207	21,63%	6 682	12,91%
	12- 23	14 338	51,77%	11 837	49,17%	26 175	50,56%
	24-35	9 780	35,31%	5 676	23,58%	15 456	29,86%
	36-47	1 512	5,46%	855	3,55%	2 367	4,57%
	48-59	469	1,69%	359	1,49%	828	1,60%
	>=60	110	0,40%	129	0,54%	239	0,46%
	Total	27 696	53,50%	24 074	46,50%	51 770	100,00%

Malnutrition WHO Standard 2005/Maradi Data 2006

New standard more inclusive for mortality risk

DECES NIGER 2006

Rpartition des décès (N=342) selon le statut nutritionnel selon les standards NHCS et nouveaux standards OMS 2006

	NCHS (% médiane) N= 342			OMS 2006 (z-score) N= 342	
Malnutrition modérée	227	66,4%		61	17,8%
Malnutrition sévère	115	33,6%		281	82,2%

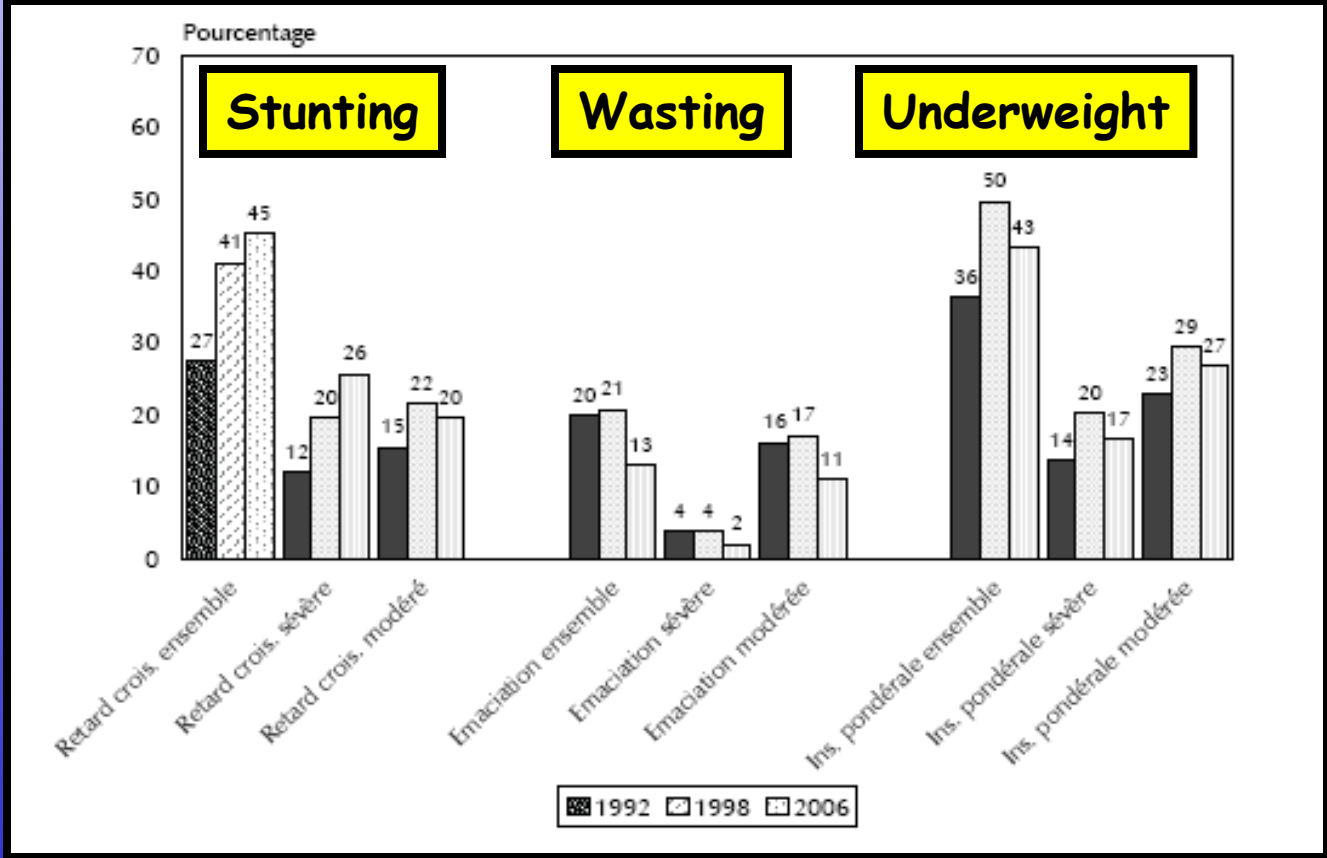
Malnutrition Stunting

Who is at risk of death ?

Stunting on increase
26% severely stunted



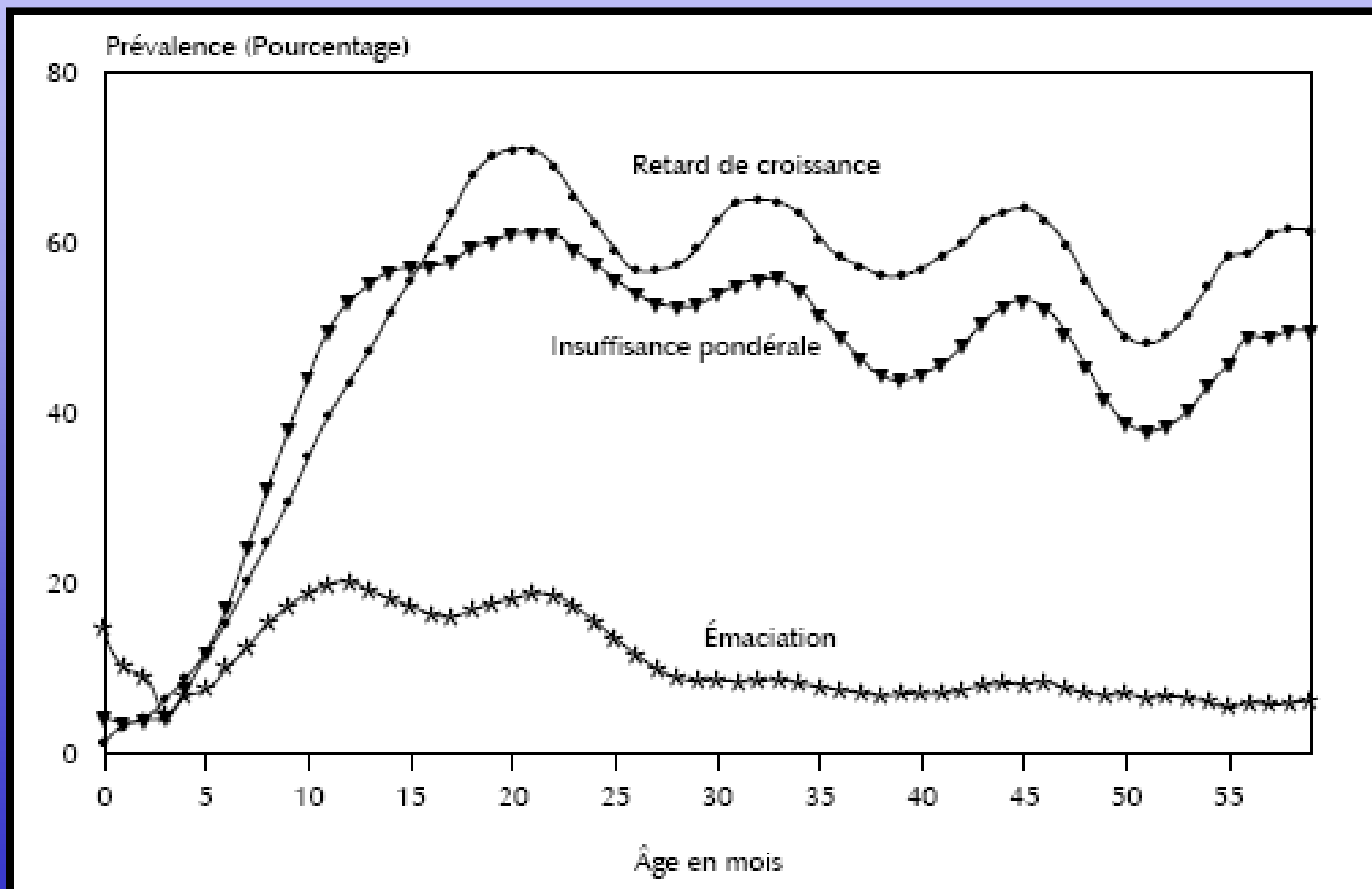
**Niger
DHS
1992
1998
2006**



Malnutrition Stunting

The window of opportunity ?

Wasting and stunting occurs between 6 and 24 mo of age



**Niger
DHS
2006**

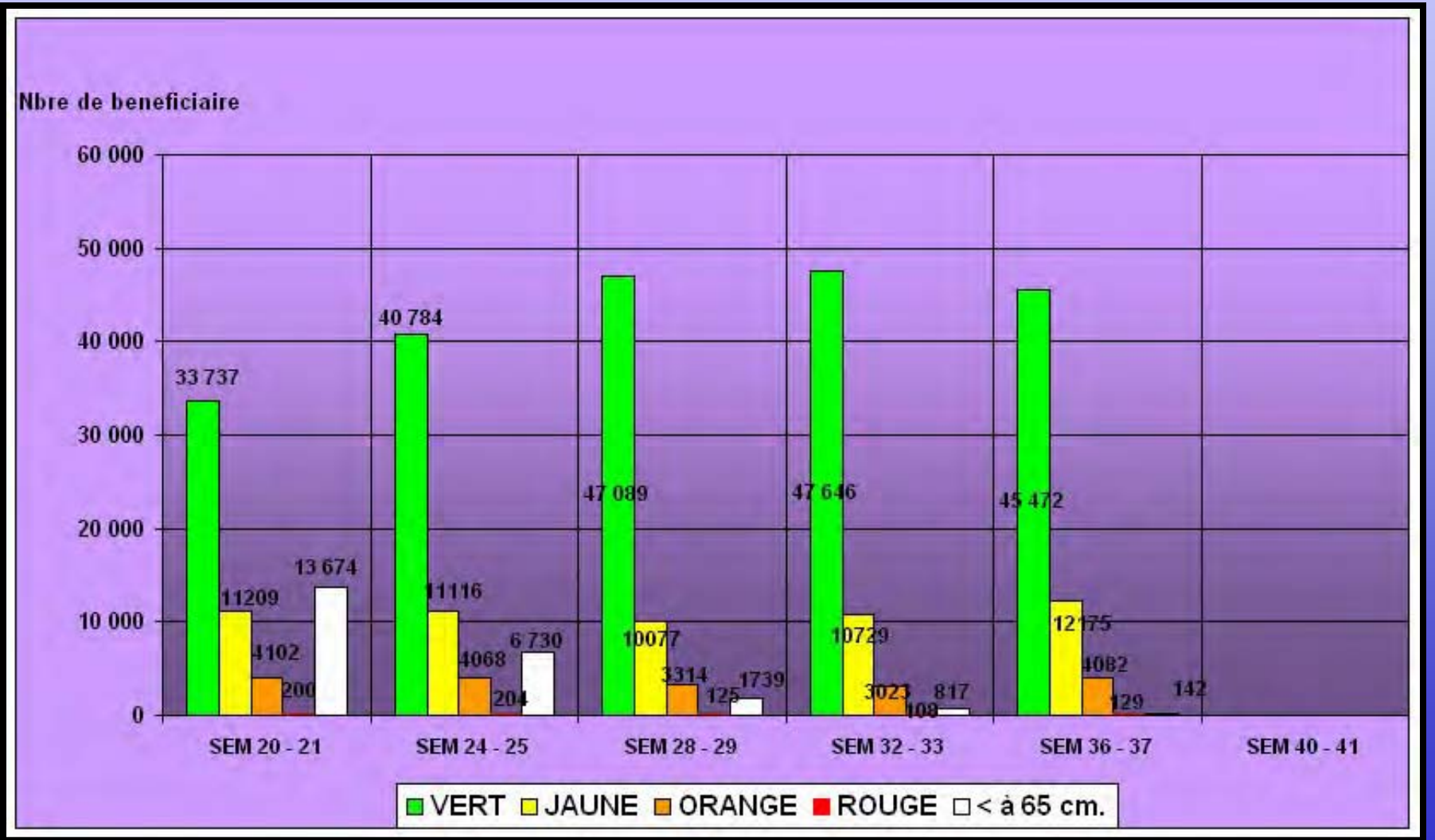
63,000 children in Guidam Roumdji < 3 yr

45 g RUF (plumpy-doz) daily

250 kcal + type I and II nutrients

MUAC monitoring each month during the hunger gap

Maradi 2007



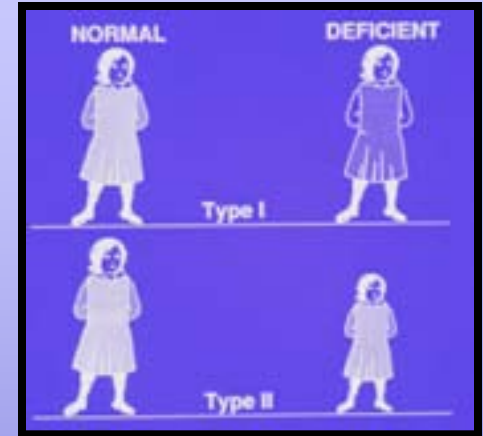
Malnutrition

Golden hypothesis

type I & II nutrient deficiencies

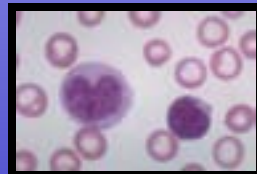


immunity & infection



type I nutrient
specific signs of deficiency

type II nutrient
growth failure & wasting



iron, copper, selenium, calcium, iodine,
vitamins A, B, D, E, K

nitrogen, essential amino acids
sodium, potassium, chloride,
phosphorus, sulfur, zinc, magnesium

**FOOD,
CARE &
HEALTH**

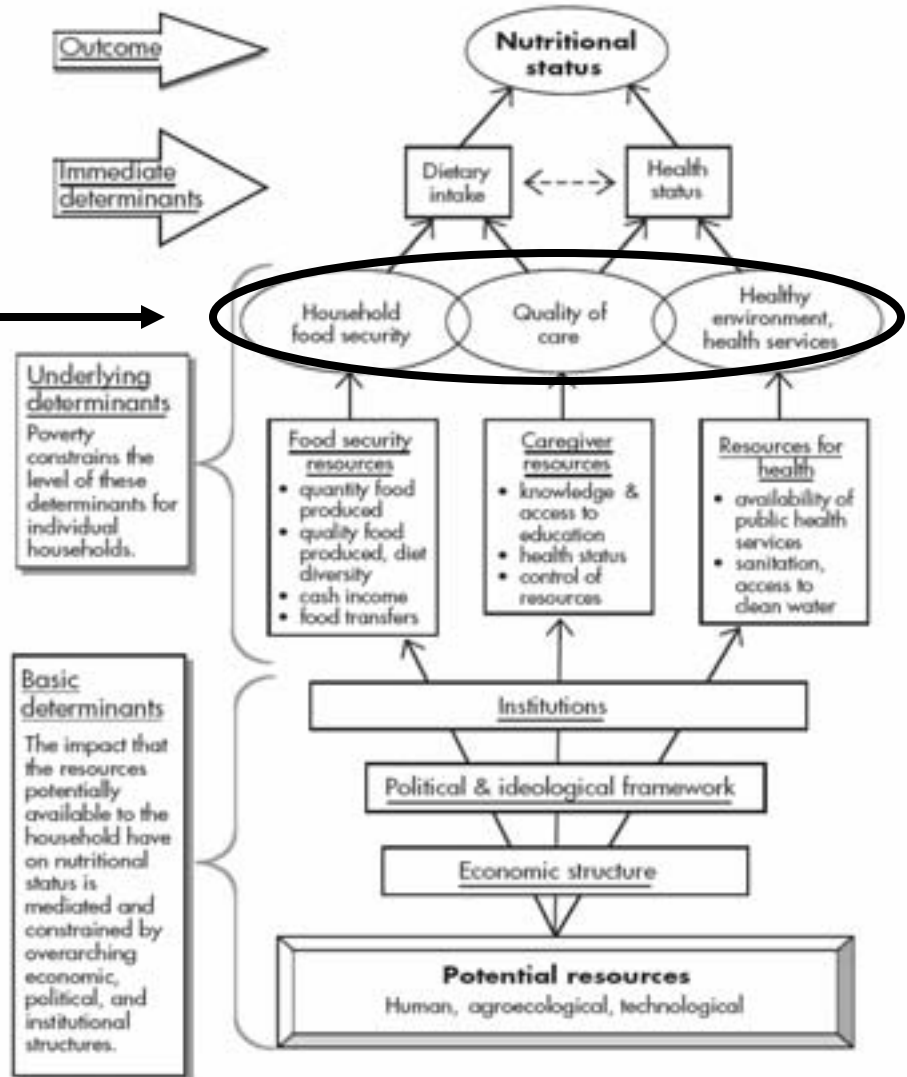
What care ?

What food ?

rice & beans ?
corn-soy blends ?
India mix ?

iron & zinc pills ?

Figure 2—The UNICEF conceptual framework of the determinants of nutritional status



The most common cause of PEM is parents' poor child feeding and caring practices, and the corresponding solution is growth monitoring and education about breastfeeding and weaning,...



Repositioning nutrition as central to development:
A strategy for large-scale action.
World Bank 2006.

...l'explication culturaliste s'impose toujours plus facilement que d'autres lorsqu'il s'agit de parler de sociétés différentes,...

...l'interprétation culturaliste conduit toujours à ne regarder que du côté des populations pour y rechercher les causes des difficultés rencontrer...

Les cultures politiques de la santé publique
Didier Fassin

What food ?

CSB → RUF

Table 12: 2006/2005 Global Food Aid Deliveries by Commodity Group

COMMODITY	2006		2005		Change 2005-2006	
	Tons (000)	%	Tons (000)	%	Tons (000)	%
Cereals	5,721	85.2	7,052	85.7	-1,331	-18.9
Wheat and wheat flour	2,925	43.5	3,518	42.8	-593	-16.9
Rice	631	9.4	1,328	16.1	-697	-52.5
Coarse grains	1,703	25.3	1,719	20.9	-16	-0.9
Blended/Fortified	462	6.9	487	5.9	-25	-5.1
Non-Cereals	997	14.8	1,176	14.3	-178	-15.2
Dairy products	15	0.2	14	0.2	1	3.9
Meat and fish	22	0.3	17	0.2	4	23.7
Oils and fats	325	4.8	418	5.1	-93	-22.2
Pulses	524	7.8	542	6.6	-18	-3.4
Other non-cereals	112	1.7	184	2.2	-72	-39.0



Malnutrition



RUTF



RUF

energy & nutrient-dense,
ready-to-use complementary foods
for regions where malnutrition &
child mortality is out of control