

Experience with ready to use therapeutic food in Senegal

Diop EI¹, Dossou NI¹, Ndour MM¹, Briend A², Wade S¹

¹Equipe de Nutrition, Faculté des Sciences et Techniques UCAD, Dakar, Sénégal and ²Institut de recherche pour le développement

Outline of the presentation:

Study 1:

- ✓ **Efficacy study comparing RTUF with F100 in children treated in a therapeutic feeding centre (published in Am J Clin Nutr 2003)**

Study 2:

- ✓ **Comparison of the efficacy of home based nutritional rehabilitation with locally produced or imported RTUF (unpublished results)**

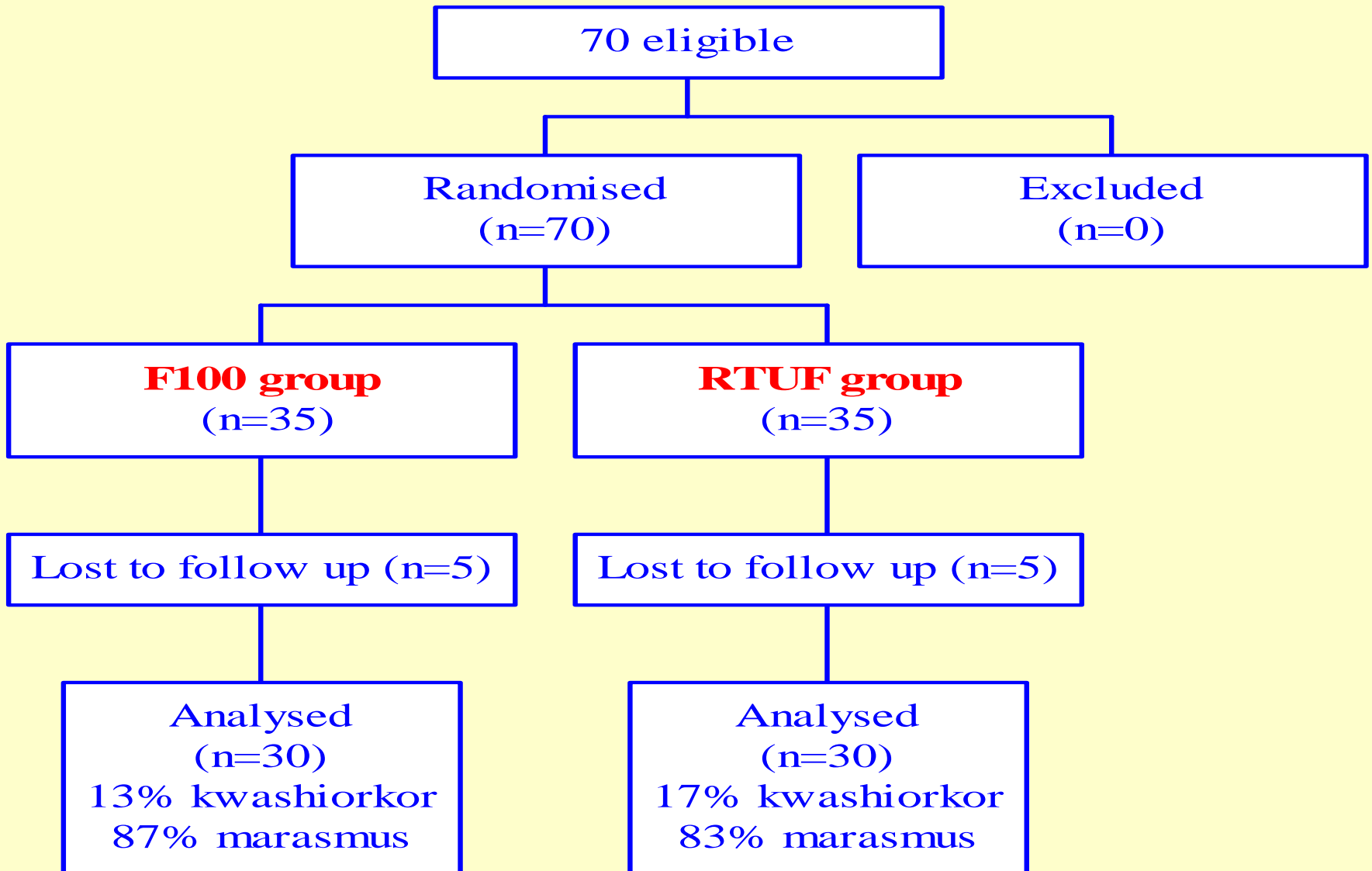
Study 1: Comparison of the efficacy of a solid ready-to-use food and a liquid, milk-based diet for the rehabilitation of severely malnourished children: a randomized trial

Am J Clin Nutr 2003;78:302-7

The objective of our study was to compare the efficacy of RTUF and F100 in promoting weight gain in 2 groups of randomly selected 30 severely malnourished children.

The study took place in a therapeutic feeding center attached to a clinic in Dakar.

Study design



- ✓ **On the recovery, children received 3 meals of F100 or RTUF daily according to the group allocation. In addition all of them received 3 meals prepared with locally available foods**
- ✓ **Total amount of food consumed with each meal was recorded, then average daily energy and macronutrient intakes were calculated**
- ✓ **Children's body weight was measured daily. Children were discharged from the unit once their WFH was over -1.5 score and weight gain calculated**

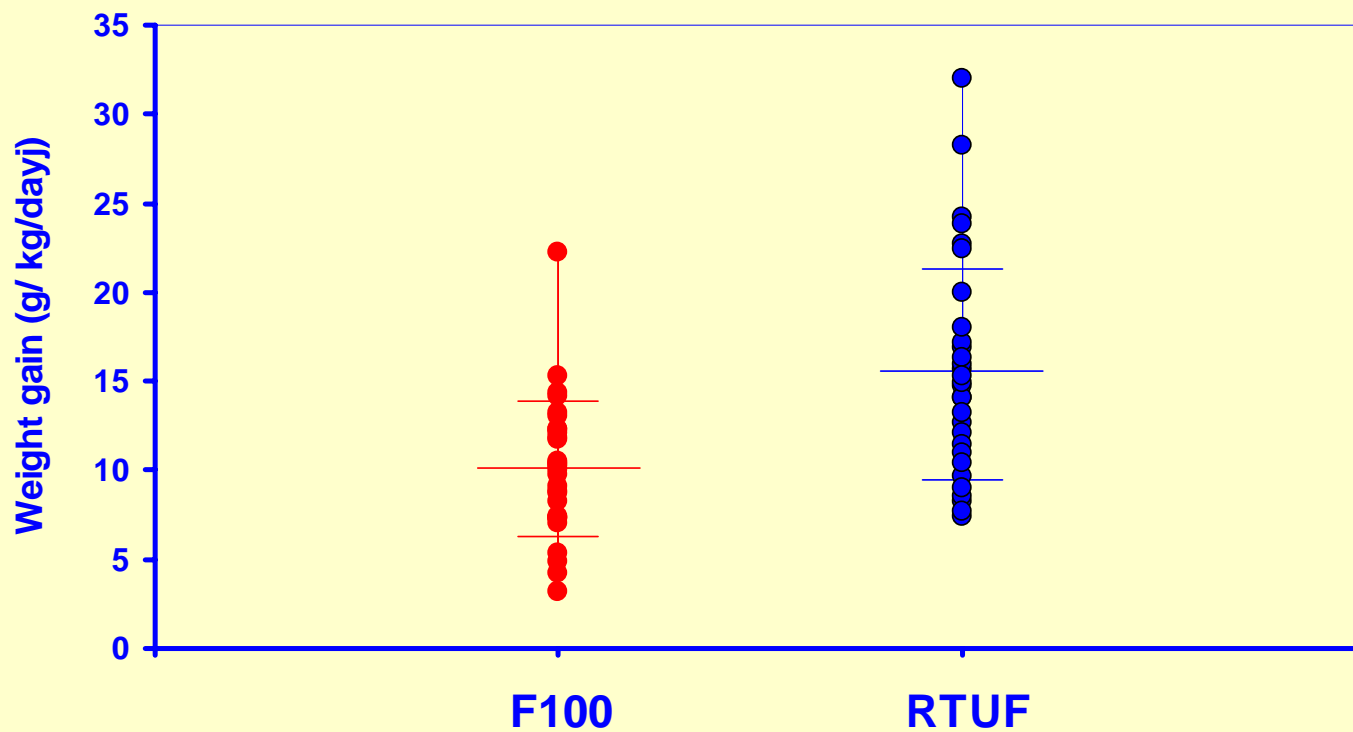
Characteristics of the children at the beginning of rehabilitation

	F100	RTUF
Age (months)	17.8	15.8
WFH (z score)	-2.77	-2.96

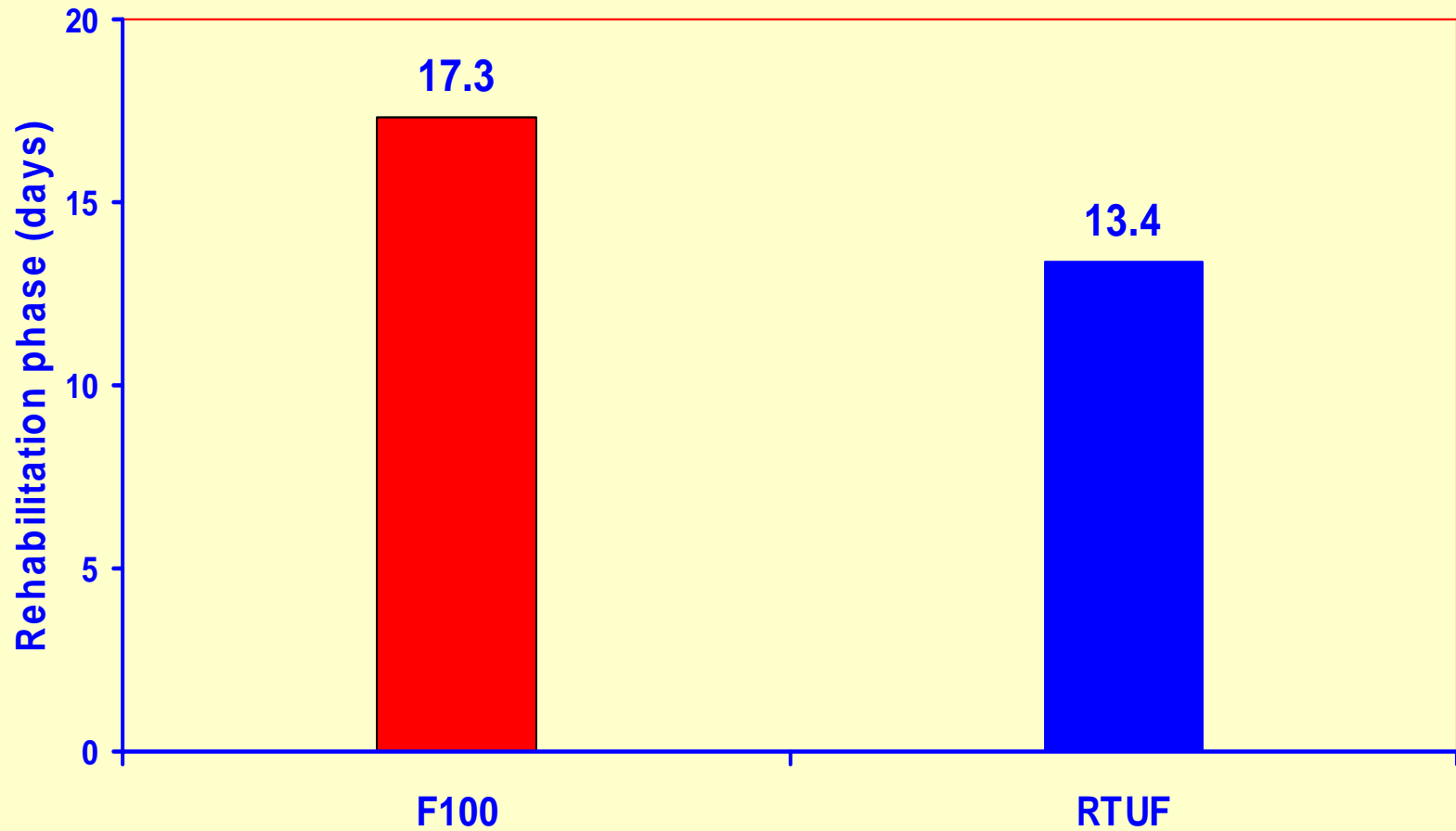
Daily energy and macronutrient intakes from the F100 and RTUF

	F100 Group			RTUF group		
	F100	Local recipe	Total	RTUF	Local recipe	Total
Energy (kJ/ kg body wt)	275*	298	573*	557*	251	808*
Proteins (g/ kg body wt)	2.0	3.9	5.9	3.3	3.1	6.5
Lipids (g/ kg body wt)	3.3*	1.6	4.9*	8.8*	1.4	10.2*
Carbohydrates (g/ kg body wt)	7.2	10.0	17.2	10.3	8.8	19.1

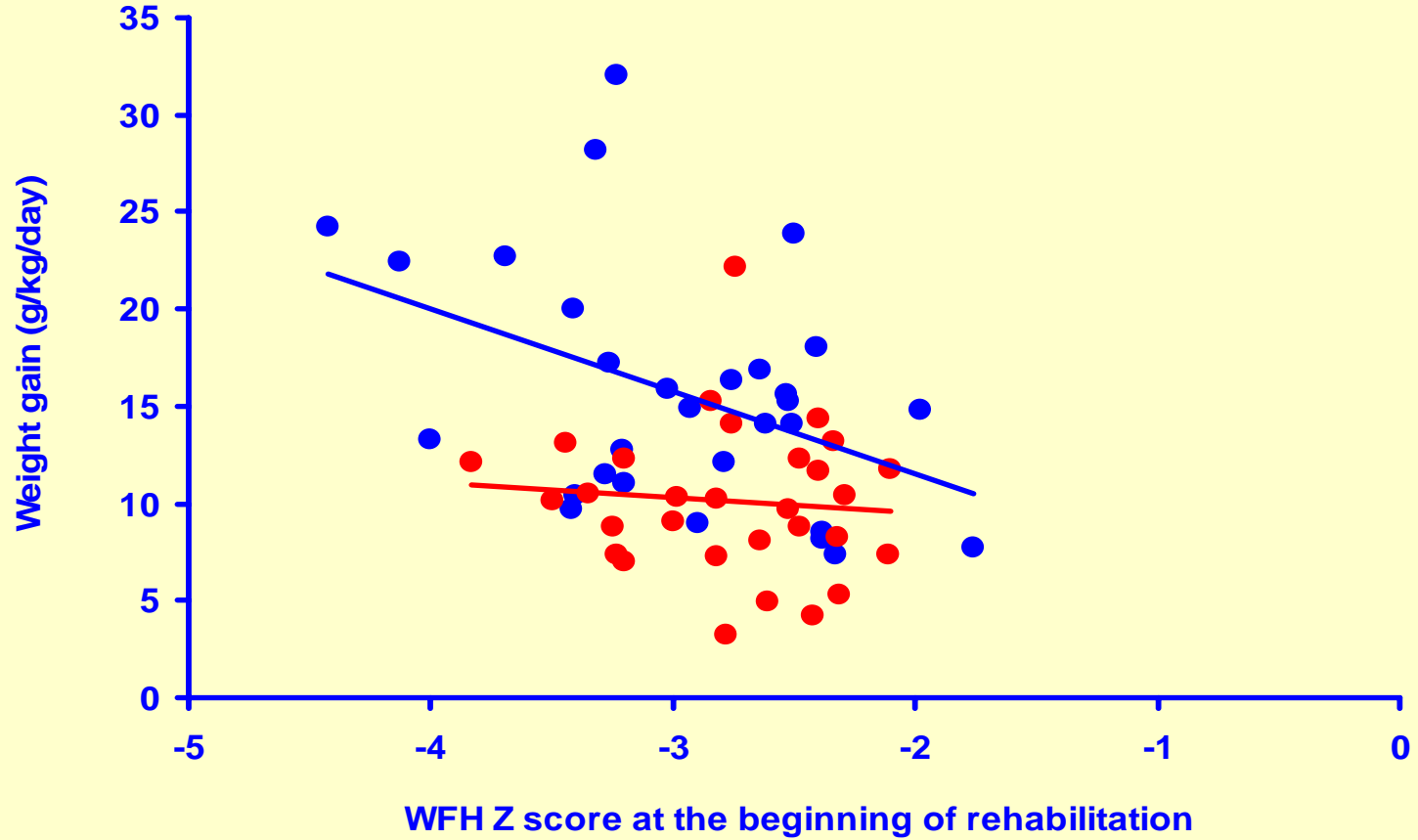
**Weight gain at the end of the rehabilitation phase:
children were discharge at WFH z score >-1.5**



Duration of rehabilitation



Comparison RTUF vs F100 (Sénégal)



Conclusion study 1

RTUF can be used efficiently during the rehabilitation phase. RTUF seems an attractive option compared to a liquid diet (F100) for feeding severely malnourished children. RTUF leads to higher weight gain.

Study 2 : Outpatient treatment of severe malnutrition using RTUF

- ✓ From January and August 2003, we conducted **a home based treatment** using both local and imported RTUFs after 1 week's inpatient care
- ✓ During the inpatient treatment and after rehydration with ReSoMal, malnourished children received F75, 6 times a day
- ✓ 66 children aged 6-59 months were randomised to receive either local RTUF (n=32) or imported RTUF (n=34).

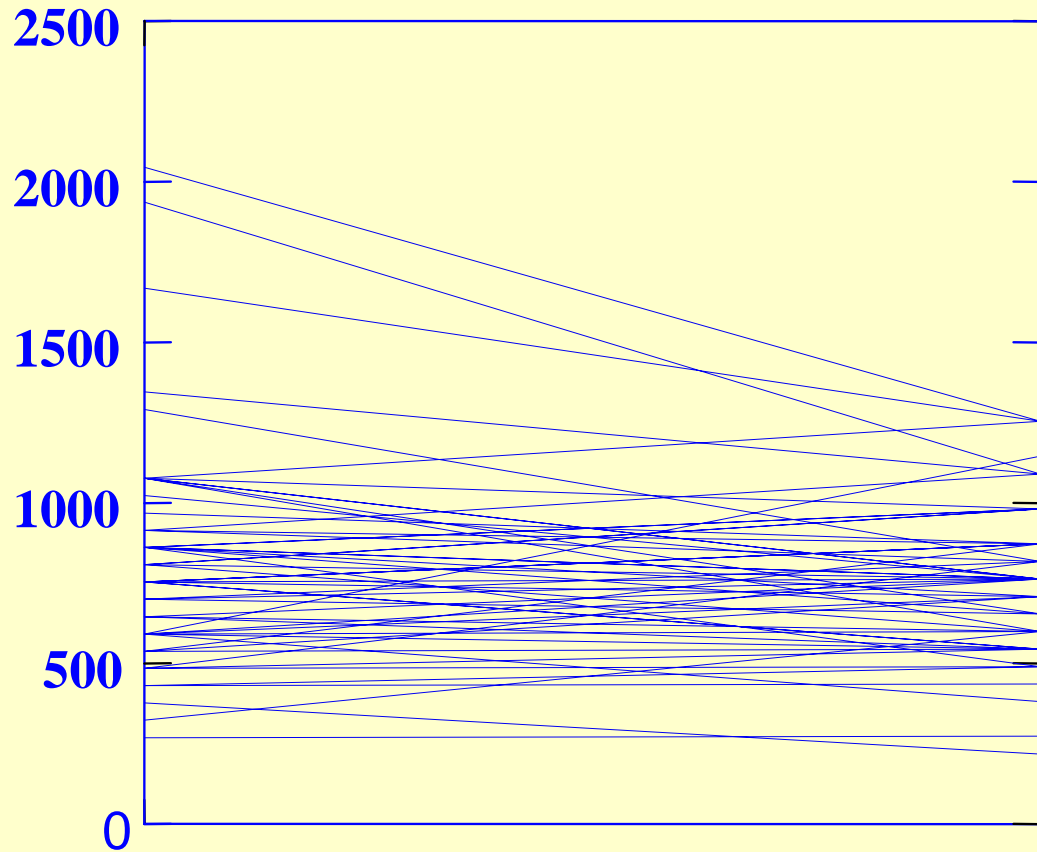
Study 2 : Outpatient treatment of severe malnutrition using RTUF

- ✓ **The main differences between the 2 RTUFs is that local RTUF does not contain whey powder nor maltodextrins, but sugar, and as a result is sweeter than imported RTUF**
- ✓ **At the recovery and after a 2 days acceptability test, they return at home with 15 days ration of RTUF equivalent to 175 kcal/ kg/ day**
- ✓ **A total of 61 children were available for the acceptability test, whereas only 47 were available for the weight gain analysis after excluding deaths (n=3) transferred (n=3) and dropped out (n=13)**

Outcome evaluations

	Local	Imported	Total %
	(n=32)	(n=34)	(n=66)
Recovered	23	24	71
Died	2	1	4.5
Transferred	0	3	4.5
Dropped out	7	6	20

Acceptability test: local vs. imported RTUF



Local (815 ±342 kcal)

Imported (755 ±230 kcal)

Results of the home based rehabilitation

	Local (n=23)	Imported (n=24)
Weight gain (g /kg/ day)	7.9 (0.7 – 17.5)	8.1 (1.1 – 20.1)
Duration of rehabilitation (days)	35 (14 – 92)	33 (15 – 80)

Conclusion study 2

Locally made RTUF is at least as well accepted as the imported version and leads to comparable weight gain in outpatient management of severe malnutrition.

General conclusion

- ✓ **RTUF gives good results compared to F100 for the rehabilitation phase**
- ✓ **RTUF can be used for home based nutritional rehabilitation**
- ✓ **Local RTUF seems a suitable option for promoting home based treatment**