

A mass cleaning and chlorination of all water containers in order to break the contamination cycle was instituted. Eighty-eight percent of the estimated number of containers were cleaned and chlorinated.

**Results:** Diarrhea figures from the clinics showed a dramatic decrease in cases following the cleaning campaign. There were no other interventions or improvement of services at the time that could have been confounding factors of impact.

**Conclusions:** It is extremely difficult to obtain statistically rigorous data in an emergency setting, with the priority being for a rapid intervention to prevent further cases of diarrhea. However, the results do appear to prove an impact of the cleaning and chlorination program on bloody and watery diarrhea.

**Keywords:** contamination; Darfur; diarrhea; Sudan; water  
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### Nutritional Rehabilitation: Ambulatory vs. Center-Based Management

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**Background:** Since 1997, the region of Maradi, Niger has experienced serious food insecurity resulting from prolonged drought. Since 2000, an urban-based Medecins sans Frontières (MSF) Therapeutic Feeding Center (TFC) has been treating severely malnourished children inpatients. The low coverage and significant defaulting rates observed in this TFC program a need for alternative approaches. Since 2002, caretakers of malnourished children without serious co-morbidities have been offered a home-based treatment scheme relying on ready-to-use food distributed weekly from different sites.

**Methods:** The effectiveness of both the TFC and home-based approaches was measured prospectively by considering nutritional outcomes in three observational cohorts: children kept in the TFC during their entire treatment (Group A), children whose treatment was begun in the TFC and completed at home (Group B), and children who exclusively received home-based treatment with weekly medical visit (Group C). All children were severely malnourished at admission defined as  $-3$  z-score or bilateral edema. Each group was described in terms of weight gain, length of program stay, and exit outcomes of the program (cured, dead, defaulter, transferred).

**Results:** From October 2002 to October 2003, 2,209 children were entered into one of the three cohorts. Mean weight gain was 20.2, 10.1 and 9.8 g/kg/day in Groups A, B, and C respectively. Mean program stay was 14.7, 35.3, and 29.0 days.

**Discussion:** The home-based approach for treating severely malnourished children meets international standards for cure ( $>75\%$ ), case-fatality ( $<10\%$ ), and defaulting rate ( $<15\%$ ). Nutritional status at admission was different in the three groups, thus not allowing for comparisons of outcomes.

**Conclusion:** This observational, cohort study suggests that the home-based approach to treat uncomplicated severely malnourished children seems to be an acceptable complement to TFCs, giving a high cured rate and low default rate. Further analysis and research are needed to adjust outcomes for nutritional status at admission and identified the optimal admission criteria in home-based care.

	Group A (n = 794)	Group B (n = 1,061)	Group C (n = 354)	Total Cohort (n = 2,209)
<b>Outcome</b>	TFC only	TFC + home care	Home Care Only	
<b>Cured</b>	443 (55.%)	894 (84.3%)	328 (92.7%)	1,665 (75.4%)
<b>Dead</b>	139 (17.5%)	0 (0.0%)	6 (1.7%)	145 (6.5%)
<b>Defaulter</b>	210 (26.5%)	167 (15.7%)	20 (5.6%)	397 (18.0%)
<b>Transferred</b>	2 (0.2%)	0 (0.0%)	0 (0.0%)	2 (0.1%)

**Keywords:** children; cure; default rehabilitation fatality; malnutrition; nutritional support; outcomes; therapeutic feeding centers  
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### Theme 16: Rural and Remote Emergency Health Care

*Chairs: Mads Gilbert; James Ferguson*

#### Disaster Planning for Remote, Rural, and Regional Hospitals

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**Objectives:** The goals of this presentation are to: (1) outline the different circumstances that prevail in rural and regional areas for the treatment of casualties, and the legislation and planning required to ensure a high quality of care is available; (2) provide legislation for response and recovery actions and lay down role allocations for all agencies using an all-hazards, integrated approach to incidents; (3) ensure that medical command, control, and coordination systems are fully effective and compatible with ambulance services and related health and medical agencies participating at incident sites and centrally; (4) ensure that emergency management committees are formed in hospitals and at all levels within health regions, and that hospital external disaster plans are tested and revised regularly; (5) ensure that a communication network including all types of communication systems for field activities and hospitals in the pre-hospital phase of large incidents is integrated with other emergency services and health authorities; (6) plan for a network of agencies and hospitals supporting regional base hospitals with the ability to interface with large metropolitan cities for additional support if required; and (7) provide a system for alerting and mobilizing staff and resources including the use of local general practitioners for hospital support and to handle patients with minor wounds in treatment centers outside of the hospital emergency department.