Care Groups significantly reduce child mortality in Mozambique

Thomas P. Davis Jr., MPH
Director of Health Programs
Food for the Hungry

Anbrasi Edward, PhD, MPH
International Health, Johns Hopkins University

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Food for the Hungry Background

- Non-profit, faith-based private voluntary organization
- Headquarters in Phoenix, AZ; WDC office
- FH works in 26 of the poorest countries since 1971
- Currently managing four USAID Title II projects with health components in Mozambique, Kenya, DRC, and Bolivia; PEPFAR ABY and privately-funded AIDS prevention work; & a USAID funded expanded impact child survival project in Mozambique.
- Proven record of dramatic reductions in child malnutrition and deaths

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Program Background

Food for the Hungry
Meeting physical and spiritual needs worldwide

- **USAID Title II**: FY98-FY01 (first DAP), FY02-FY07 (second DAP w/extension). Mortality study examined communities involved in both DAPs: 1999/2000 to 2003/2004.
- **Area**: Nhamatanda, Marromeu, Gorongosa and Caia districts of Sofala Province, Mozambique. (Now scaling up to 10 districts through the USAID CSH grants program.)
- **Prime objective**: Decrease chronic malnutrition in children 6-59 months of age + other behavior objectives (e.g., ↑EBF/PBF, ORT/feeding during diarrhea, DPT3).
- **Interventions**: Child survival -- Nutrition, CDD, ARI, malaria, safe motherhood, HIV
- Outpaced other Title II PVOs in Mozambique in terms of reductions in child malnutrition and speed of behavioral change

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Characteristics of Care Groups

- **Groups of 10 households (HH) are established with women with children 0-59m of age through an initial census.**
- **One Leader Mother is elected to represent each group of 10 HH.**
- **Ten Leader Mothers meet in a Care Group, receiving 104 hours of training each year. Beneficiary mothers receive 13+ hours of training each year.**
- **Each paid Promoter meets with about ten Care Groups every two weeks.**
- **Turnover of Care Group *Leader Mothers* is generally *low***
- **Most training of CG members can be done *at the community level (at low cost)*.**

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Food for the Hungry
Meeting physical and spiritual needs worldwide

What happens during Care Group meetings?

- Reporting of vital events and illnesses
- Reporting on progress in health promotion, troubleshooting
- Demonstration with flipchart/ posters of this week's 2-3 health messages
- Group reflection on the messages then practice
- Other social activities (e.g,. songs, dramas, games)
- Meetings generally last two hours

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Food for the Hungry
Meeting physical and spiritual needs worldwide

What happens after Care Group Meetings?

- Each woman visits “her” 10 households in the following two weeks
- Each woman educates her mothers on the key health and nutrition messages for the week using a small B&W flipchart.
- “Key messages of the week” are almost always discussed, but CG members can work on mothers’ current concern
- Sometimes CG members pair up
- The Promoter supervises these home visits by CG members

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

What services are provided through the Care Group structure (aside from health promotion)?

- Project staff members do other direct services through CGs:
  - Deworming
  - Vitamin A supplementation
  - (Sometimes Community IMCI consultations – not this project.)
- Project staff members coordinate with MOH for provision of other PHC services:
  - Immunization
  - Clinical management of childhood illnesses

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Mortality & Behavior Change Study Methods: Instruments

- Baseline, Mini-KPC, and final KPC were described earlier (2004 APHA meeting).
- Funding for the mortality study was made available from USAID via the CORE Group through their Diffusion of Innovations program.
- Pregnancy history questionnaire: Modified from the 2003 Mozambique DHS birth history questionnaire.
- Verbal Autopsy data was collected but has not been analyzed.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Sampling

- 1997 KPC: 300 mothers (cluster sampling); Mini-KPCs, 1,430 mothers (stratified random sampling); 2001 KPC, 435 mothers (cluster sampling).
- Pregnancy History Questionnaire: 1,000 households assuming one women of reproductive age per HH

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Training, Data Collection, & Analysis

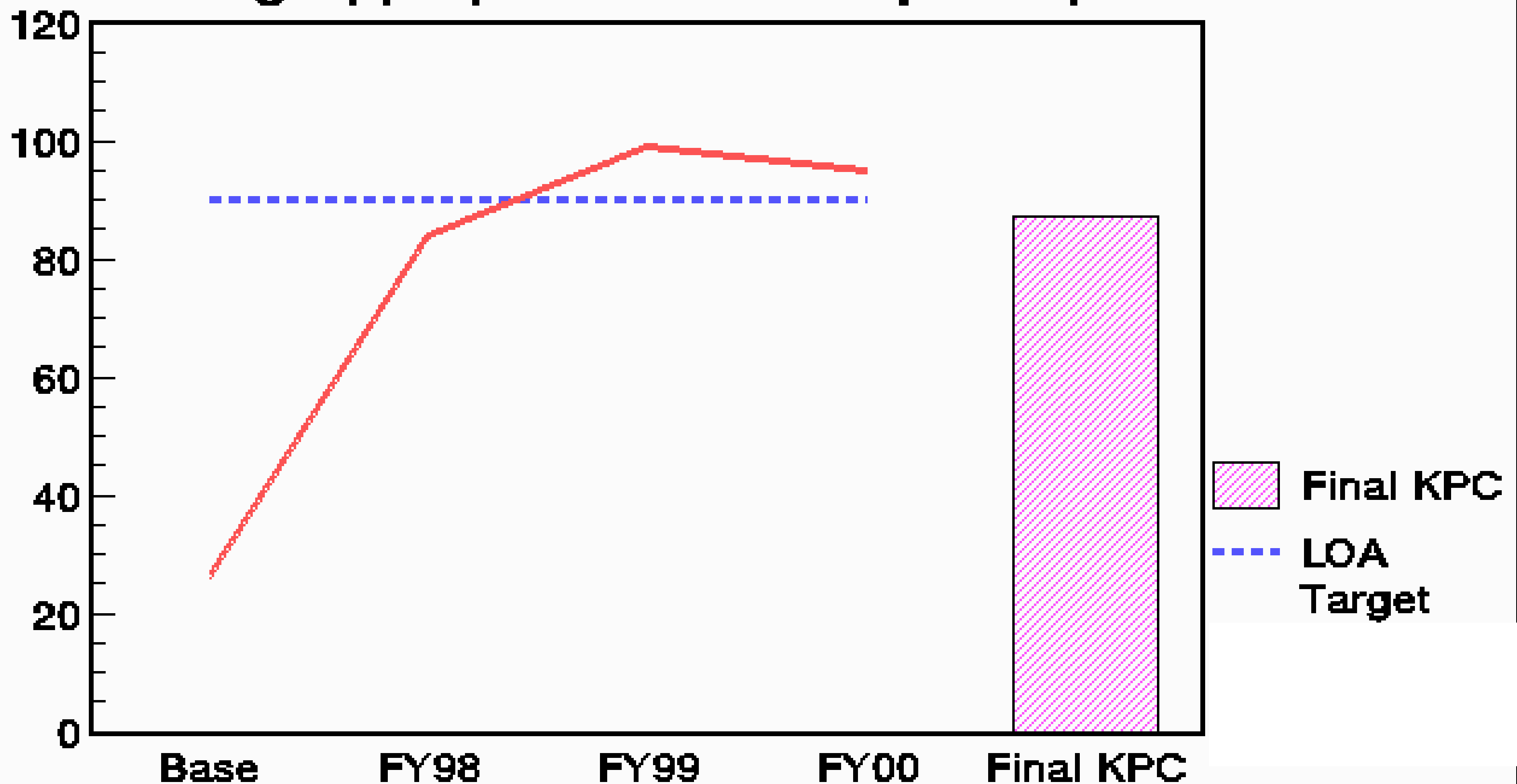
- Pregnancy history survey conducted jointly by the district MoH, the National Institute of Statistics, and the CS project staff.
- Six-person Interview teams: Four interviewers, one Supervisor, and one driver (similar to DHS design). Data collected over 10-day period in May 2004.
- Data entry and analysis by the National Institute of Statistics following standard procedures (double data entry and consistency checks) using CSPro 2.6 and SPSS ver. 6.
- Very high response rates since volunteers assisted survey team in locating the selected women.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Results:
KPC and Anthropometry (review)

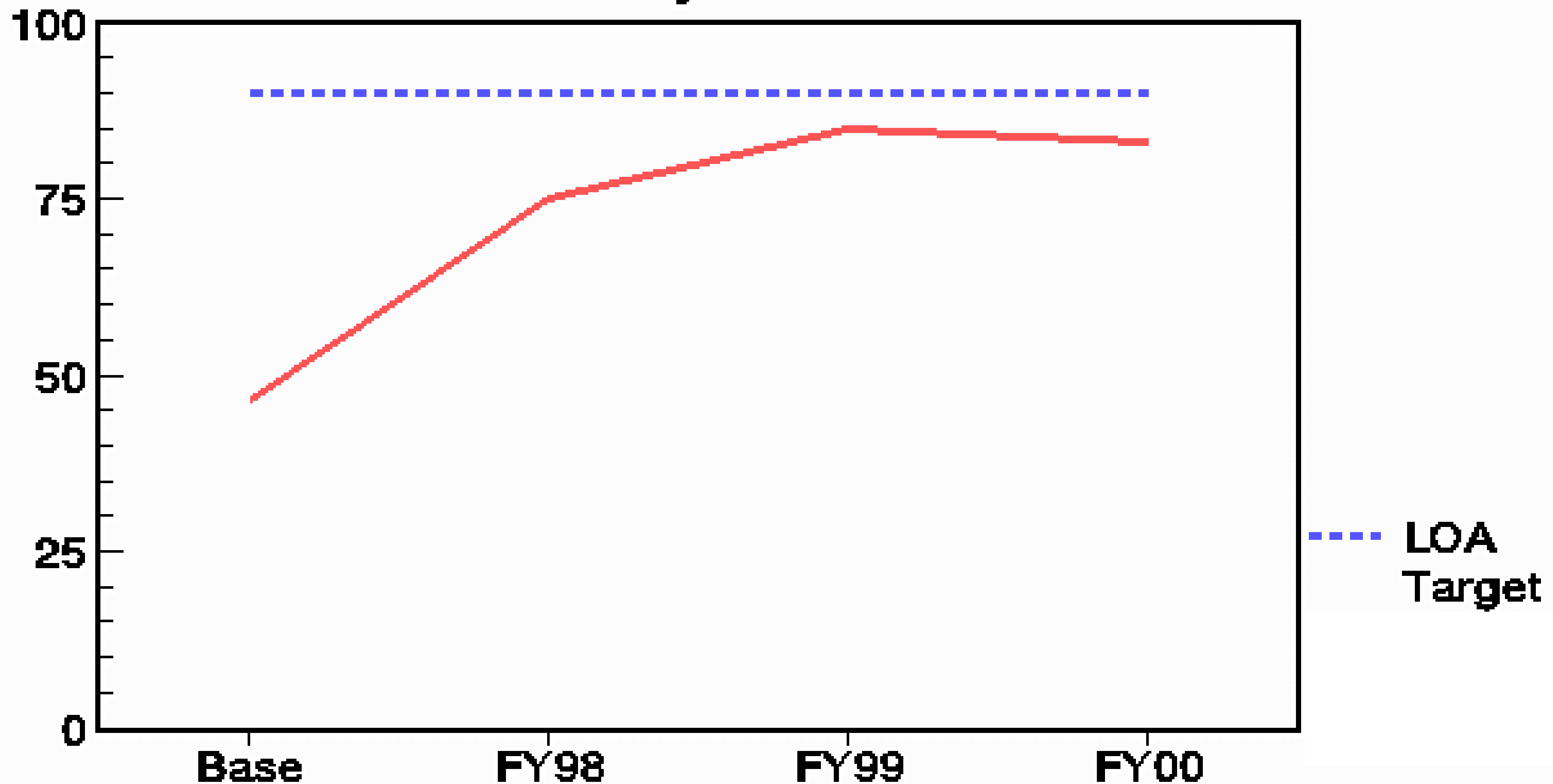
- Presented at 2004 meeting.
- In general, large and rapid changes in key child survival behaviors.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org



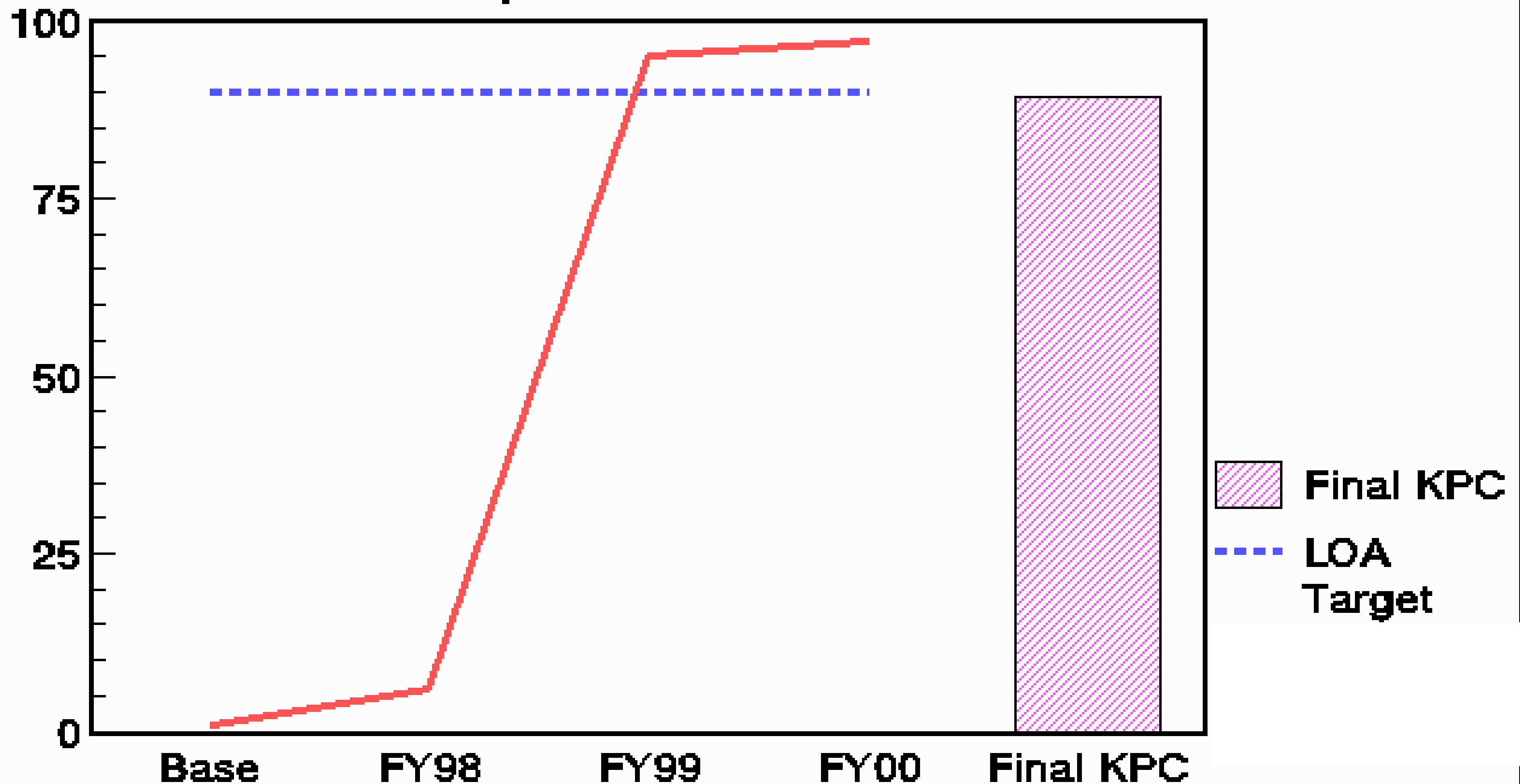
Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Indicator Performance Tracking
FHI/Mozambique Title II, Nham/Marr
% of Children <4m Exclusively Breastfed

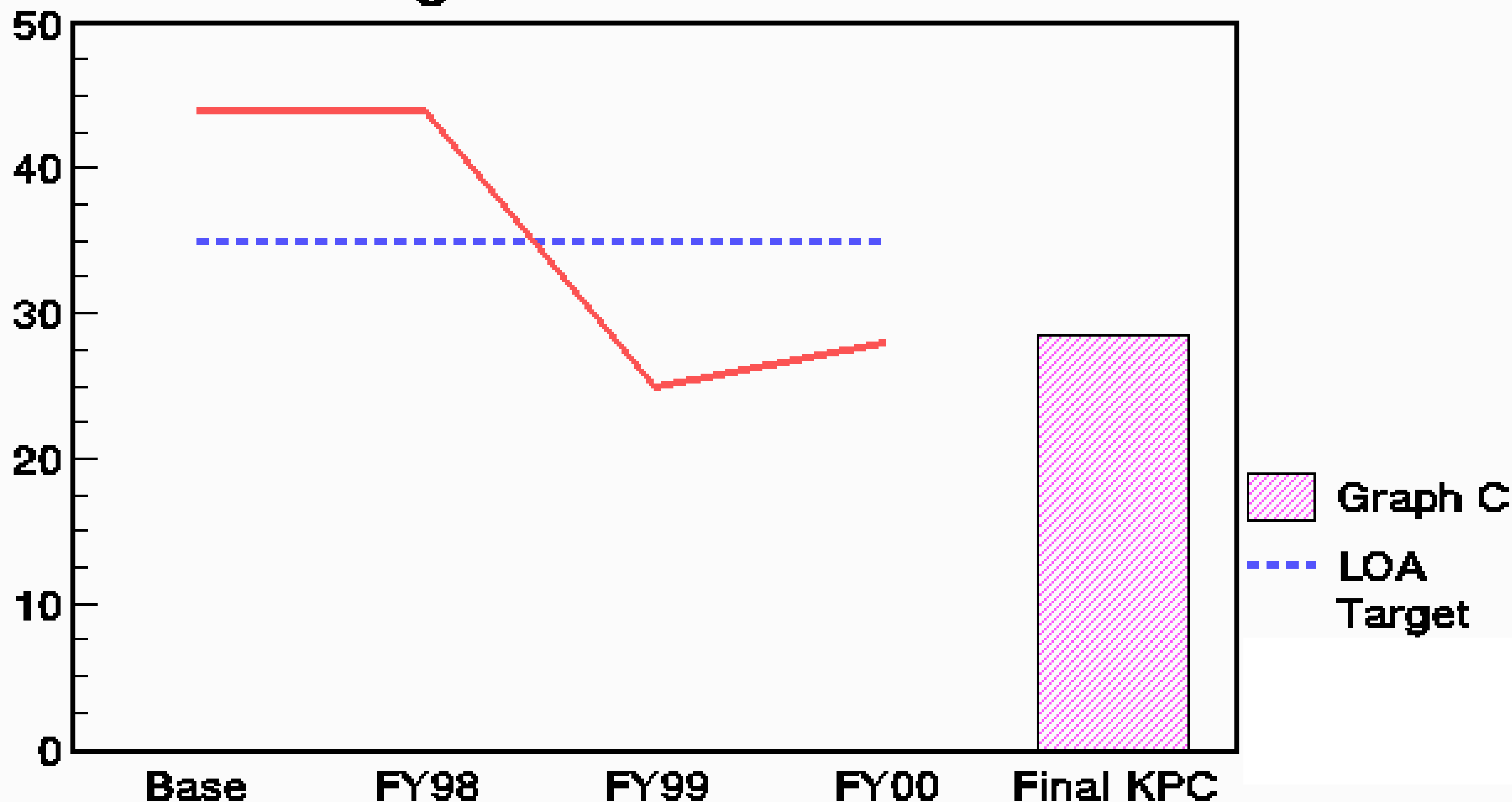


FFPIND01

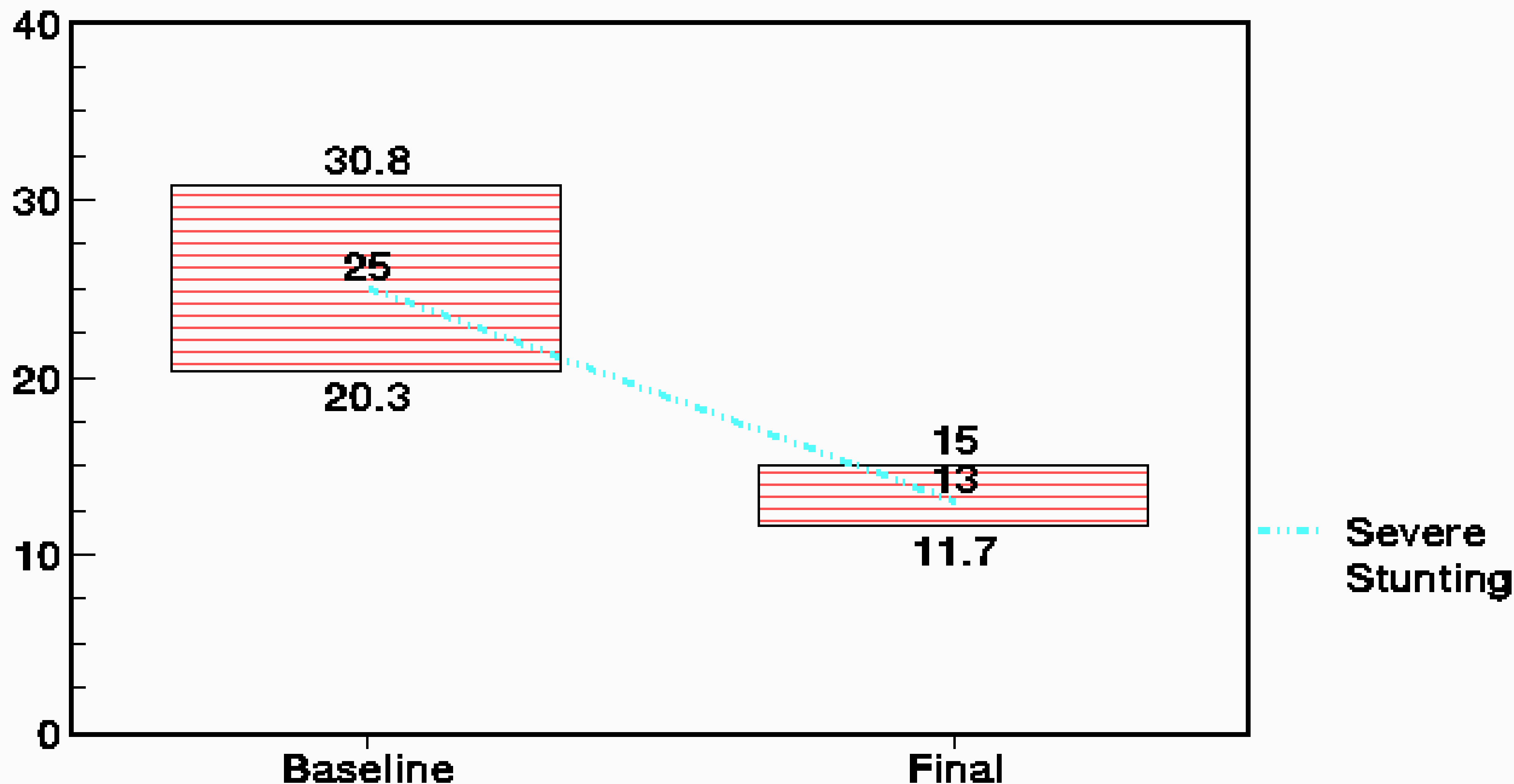
Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org



Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

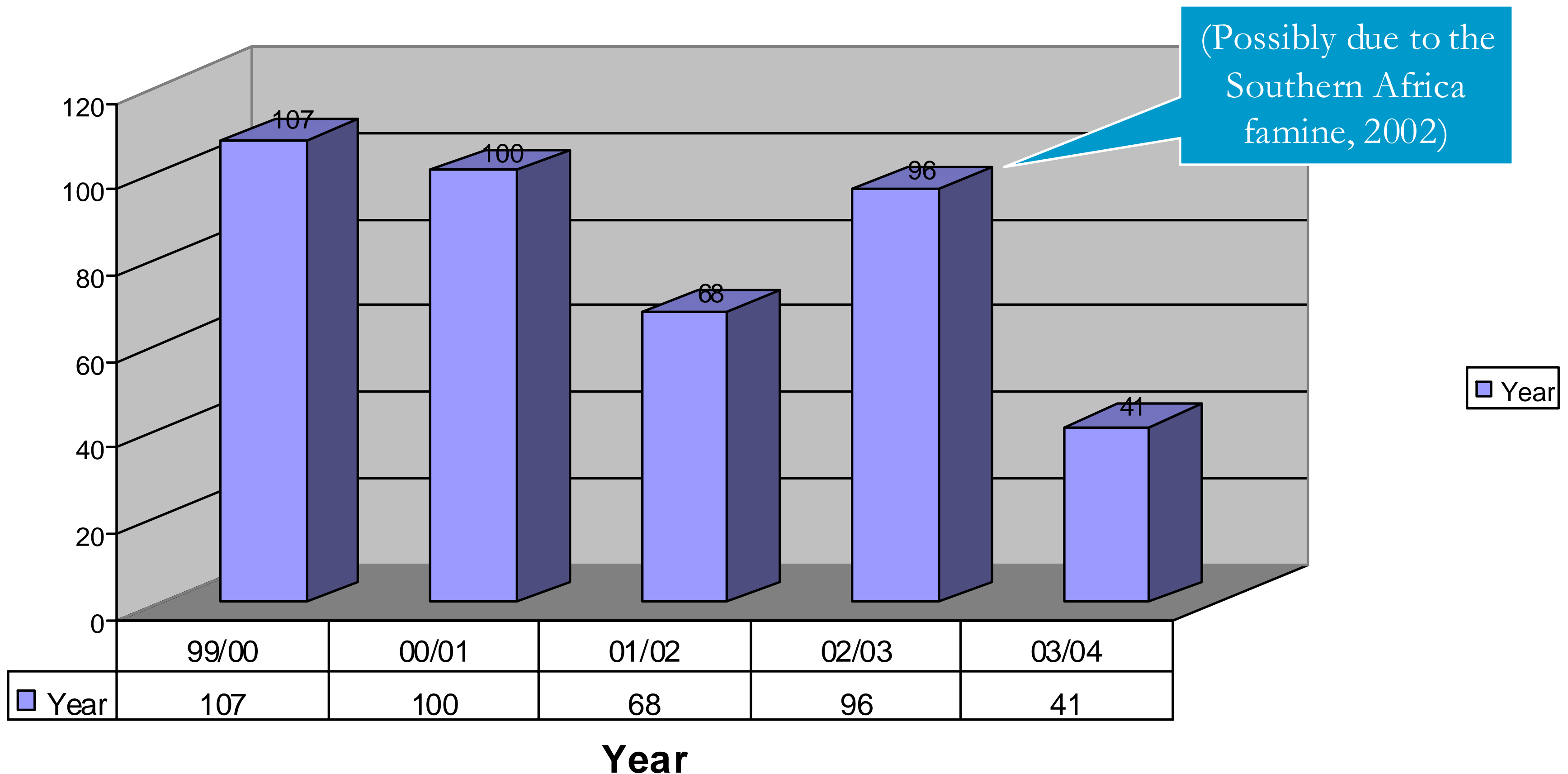


Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org



Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

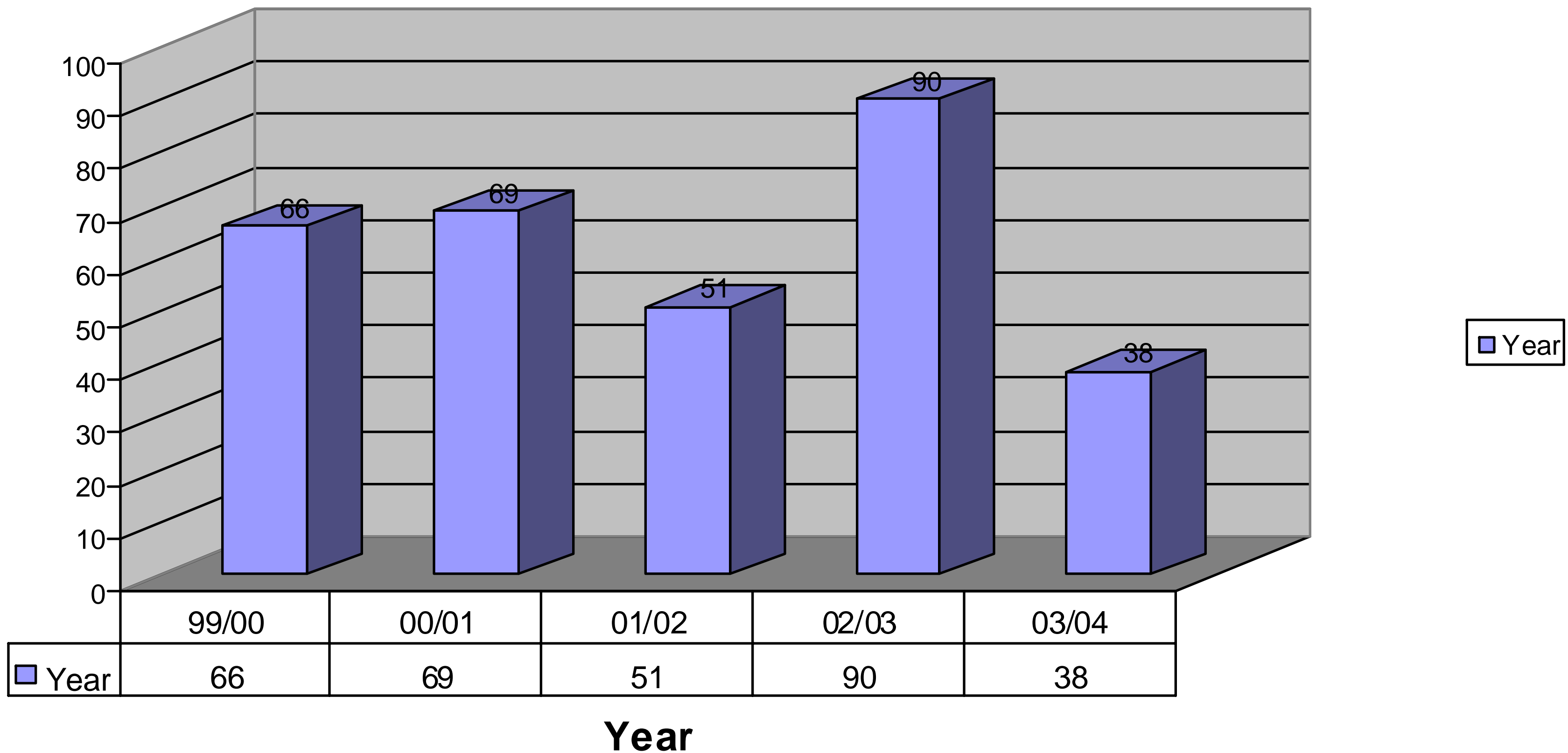
Results: Mortality Rate Changes (U5MR)



62% decrease in U5MR

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

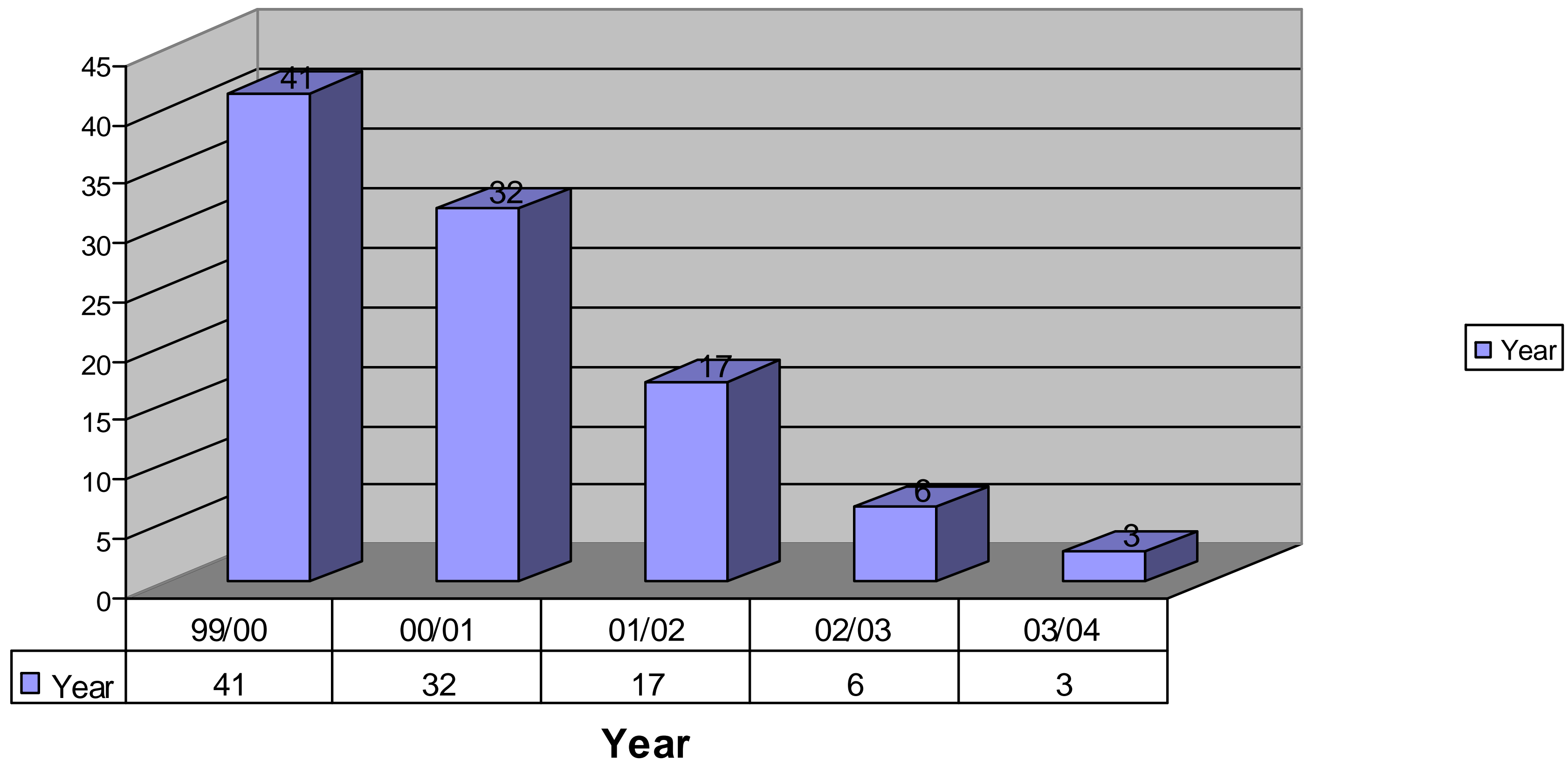
Results: Mortality Rate Changes (IMR)



42% decrease in IMR

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Results: Mortality Rate Changes (CMR)



94% decrease in CMR

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Project vs. Regional Changes in Mortality Rates

	Project Changes			Regional Changes			
Indicator	Mar 99 – Feb 00, FH Project	Mar 03 – Feb 04, FH Project	Four-yr Change	'87- '97 Sofala (DHS)	'93 – '03 Sofala (DHS)	Six-yr Change	Project vs. Regional
U5MR (FH) (DHS: $_5Q_0$)	107	41	-62%	242	205	-15.3%	3X better
IMR (FH) (DHS: $_1Q_0$)	66	38	-42%	173	149	-13.9%	2X better
CMR (FH) (DHS: $_4Q_1$)	41	3	-94%	83	66	-20.5%	3.6X better

Note: DHS data is for probability of death; FH project data are estimates of death.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

What about cost per beneficiary??

- The cost per beneficiary per year was $4.50 in this Care Group project. ($2,461,599/5/ 108,782).
- FH has made additional changes to the model in its Expanded Impact Child Survival Project in Sofala Province, dropping the CPB to $3.21.

Food for the Hungry
Meeting physical and spiritual needs worldwide

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Other Evidence of Success of the CG Model

- World Relief found a 49% reduction in the IMR and 42% reduction in the U5MR in their CG project between March 2000 and Feb 2003 in Gaza Province, Mozambique.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Who is using Care Groups?

- Food for the Hungry in Mozambique and Kenya (and similar multiplier model for HIV/AIDS prevention in Ethiopia, Mozambique, Haiti, and Nigeria).
- World Relief in Mozambique, Cambodia, Malawi, Burundi, Indonesia, and Rwanda.
- Plan International in Kenya
- Curamericas in Guatemala.
- Red Cross in Cambodia
- Africare in Angola
- Salvation Army in Zambia

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Food for the Hungry
Meeting physical and spiritual needs worldwide

What about sustainability??

- Of 1457 volunteers active at the end of WR's Care Group project in Mozambique, 1361 (93%) were still active twenty months after the project ended.
- Communities, on their own, replaced 40 of the 132 vacant volunteer positions.
- Remaining Leader Mothers trained new Leader Mothers and gave them educational materials
- Women in half of the households surveyed reported that their Leader Mother had visited their household within the last two weeks.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

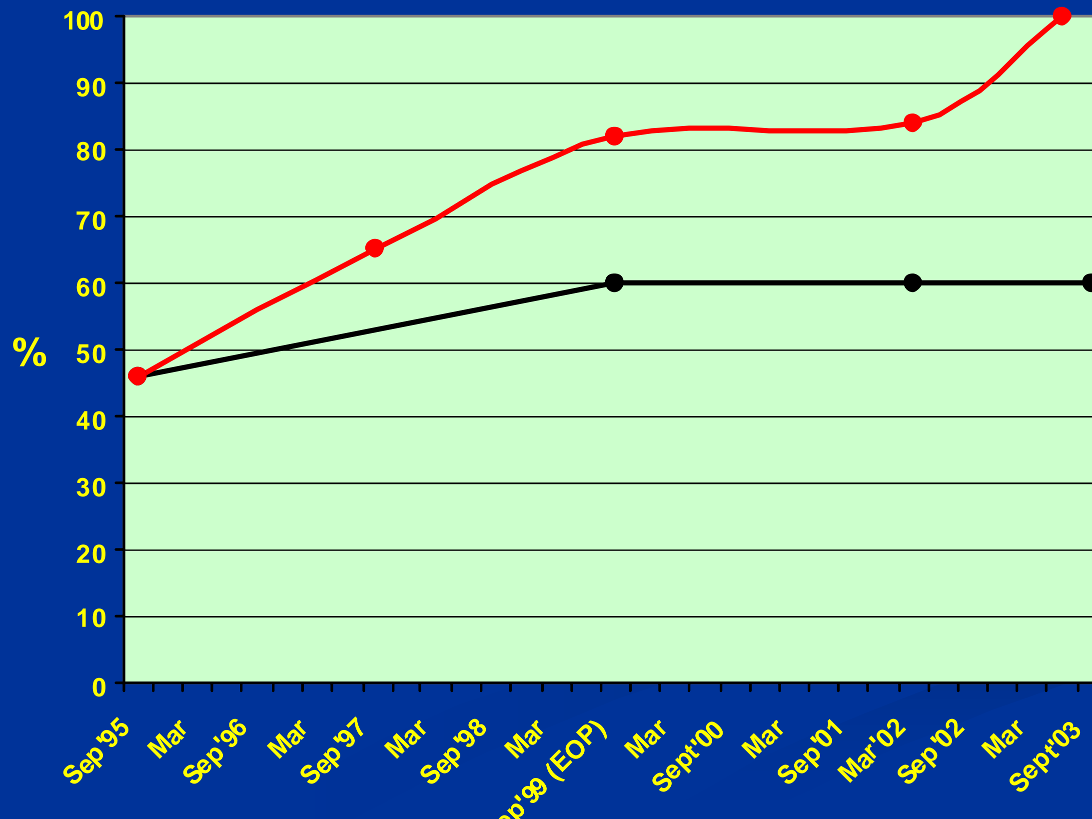
WORLD RELIEF
...Churches Helping Churches Help the Hurting

Food for the Hungry
Meeting physical and spiritual needs worldwide

Sustainability of Final Indicator Levels 2.5 and Four-Years Post-Project in the WR-Mozambique Care Group Project: Home Care of Sick Children

(Note: End of Project was September 1999. Black line is project goal. Red line is actual indicator levels.)

Children with Diarrhea Treated with ORS

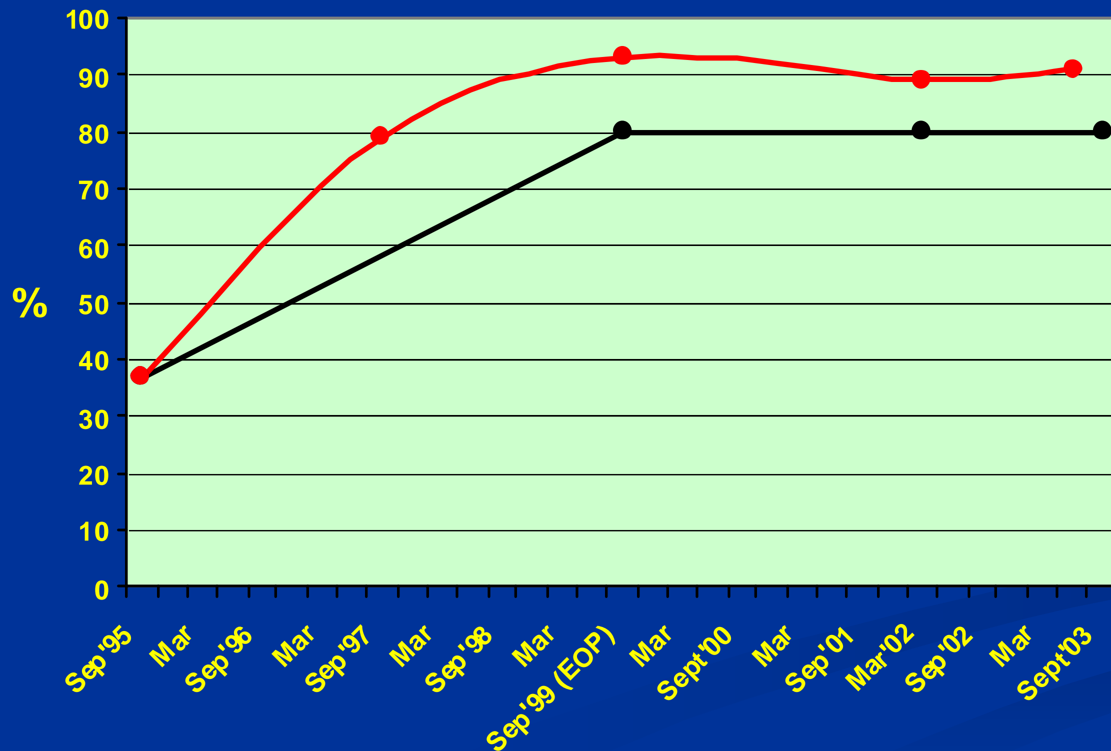


Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

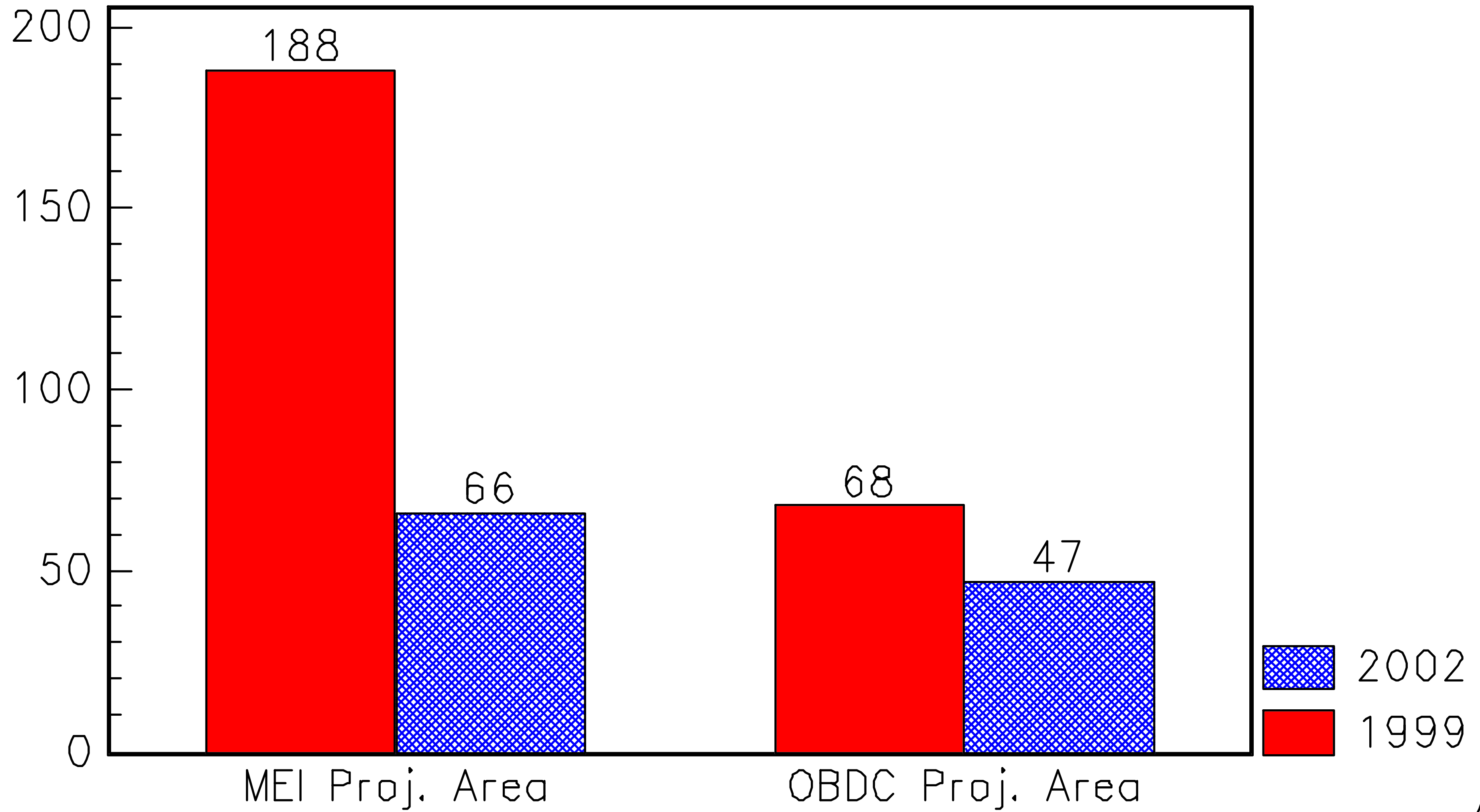
WORLD RELIEF ...Churches Helping Churches Help the Hurting

Food for the Hungry Meeting physical and spiritual needs worldwide

Sustainability of Final Indicator Levels 2.5 and Four-Years Post-Project (WR-Mozambique Care Group Project): Preventive Services



Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org



FOCA51

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Conclusions

- Implementation of this health program – focused on child survival outcomes in Sofala province – resulted in extensive behavior change and improved health service coverage and utilization.
- Dramatic declines in mortality rates as evidenced by the pregnancy history data. Attribution difficult to prove without rigorous field trials.
- Currently seeking funding for more rigorous and scaled-up trials of the Care Group model.
- NGO-led food security and CS health programs – using effective methods such as Care Groups – should be mobilized to help achieve MDG4.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Why are Care Groups so successful?

***Possibly*:**

1) The unit of work and analysis is a neighborhood or part of a neighborhood instead of an entire community.

2) Social support is increased so fewer incentives are needed, drop-out is lower, less retraining is necessary, and more happens outside of meetings.

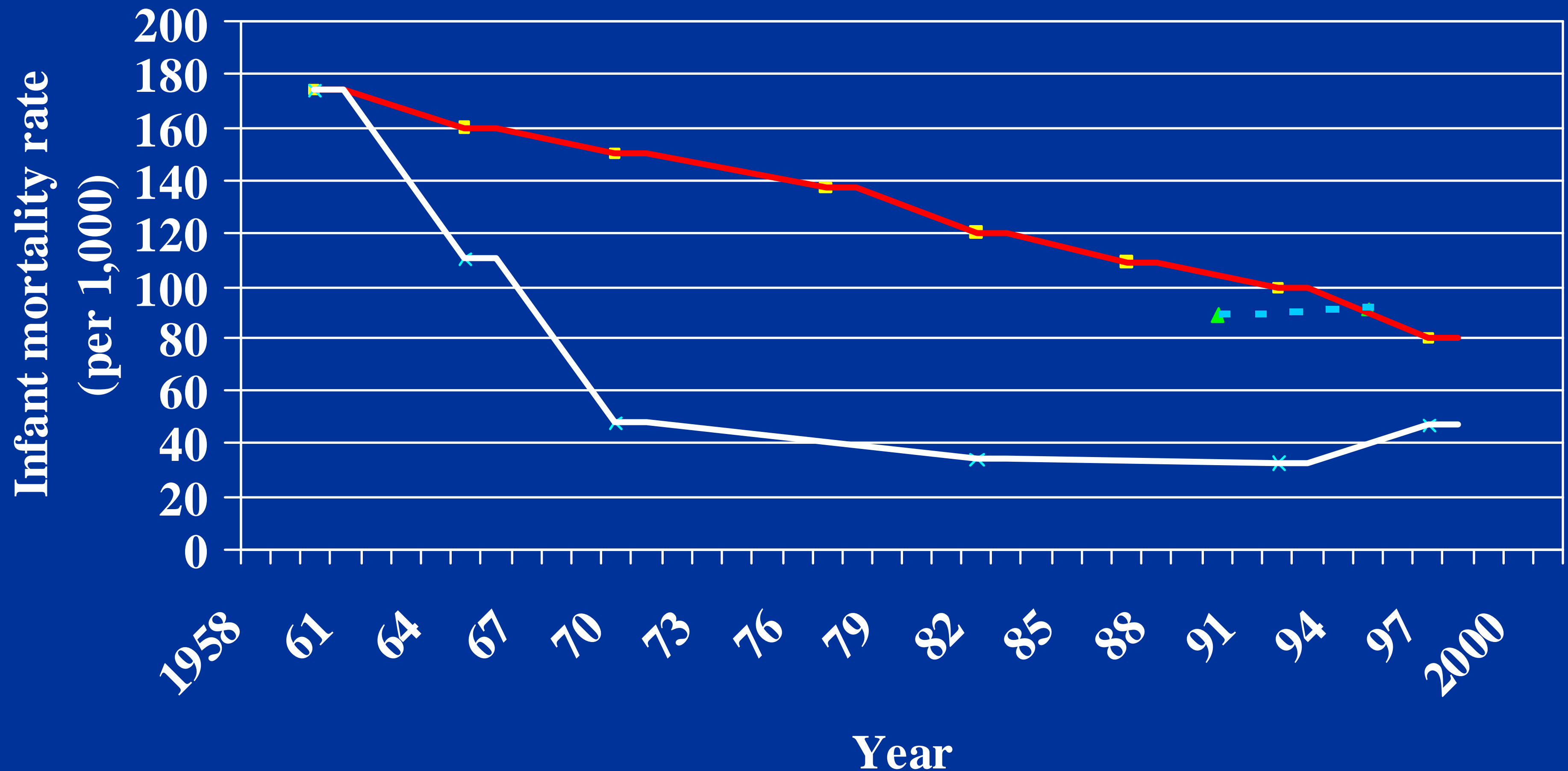
3) Tasks for community-level volunteers are light (i.e., one home visit per day on average).

4) Leader Mothers really know "their" households and are more invested in them.

5) More highly-trained health workers are used more efficiently in a multiplier model.

Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org

Long-Term Trends in Infant Mortality in Haiti and in the Primary Health Care Service Area of Hôpital Albert Schweitzer, 1958-1999



Copyright 2007, Thomas P. Davis Jr., tom.davis@fh.org