



## Cost-effective health promotion: Community health clubs

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THE NEW STRATEGY of using Community Health Clubs as a vehicle for rural health promotion was first used in Zimbabwe, in 1994 in Makoni District, in a field trial initiated by the author. As the demand for expansion increased, an NGO, Zimbabwe A.H.E.A.D. (Applied Health Education and Development) was founded in 1997 to support Ministry of Health implement this new approach, in the three districts of Makoni, Gutu and Tsholotsho. (Table 1. below).

	Makoni	Gutu	Tsholo
No. of Clubs	265	85	32
No. of Members	11,450	4,489	2,105
No. of Beneficiaries*	68,700	26,934	12,630
No. of EHTs supported	15	5	3
No. of Health Sessions	1,244	857	182
Members full attendance**	6,234	2,823	2,100

\*Number of members x 6 per family  
\*\* More than 20 health sessions

### Selection of study area

Although the smallest of the three project areas Tsholotsho excelled in terms of outputs, with relatively high levels of behaviour change (Waterkeyn 2000) and almost complete attendance by all members at the health sessions. (See Table.1) Makoni District had 54% full attendance and Gutu had 62% and both had a reasonable level of uptake of recommended behaviour by the club members (See Fig 2 & 3). However, Makoni has been selected for this study of cost-effectiveness because it was the biggest project, spread throughout 20 districts with 15 Environmental Health Technicians (EHTs) running 265 clubs with 11,450 members. As it was monitored directly by the NGO, project records tended to be more reliable than either in Gutu or Tsholotsho, which were both administered through the Rural District Council.

Makoni District, in Manicaland Province, lies in the east of the country, near the border with Mozambique and stretches between Macheke and Mutare. The administrative centre, Rusape is two hours drive from the capital Harare. The population in 2003 is estimated at 358,733 (1992 census). 15 EHTs stationed at rural clinics, cover 36 wards (population: approx 10,000 per ward) of which 20 are included in this project. With 24% sanitation coverage, Makoni is higher than the national average of 21%. It also has the second highest water coverage in the country with 1,710 communal water points, 839 family wells. As there is good coverage there was no water provision in this

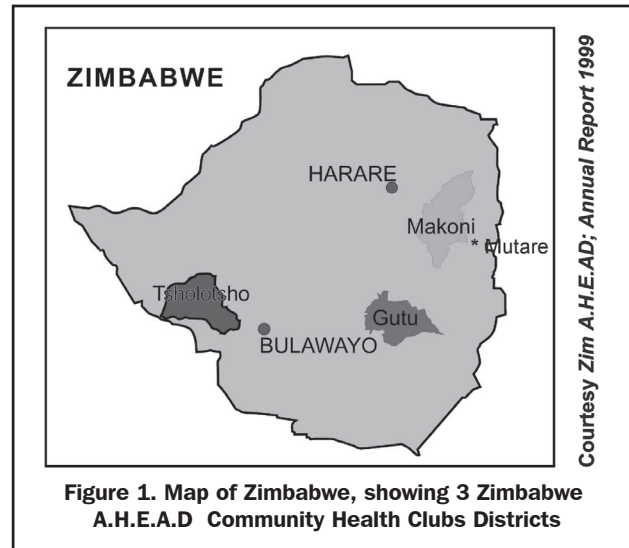


Figure 1. Map of Zimbabwe, showing 3 Zimbabwe A.H.E.A.D. Community Health Clubs Districts

project, and implementation focused only on the construction of VIP (Blair) Latrines.

### The A.H.E.A.D. methodology

This is a theory that regards Health Promotion as the *ideal* entry point for development. It maintains that if this is used as a *process* to develop a real 'common community' of understanding and a 'culture of health' within a community, subsequent W & S programmes will be effective, easier to implement, and sustainable. It is also a 'Livelihoods' strategy (DFID 2000) that recommends a stage-by-stage approach over at least 4 years. People form into 'health clubs' which progress from the 1<sup>st</sup> year of health promotion, to managing water and sanitation programmes in the 2<sup>nd</sup> year, onto income generating projects in the 3<sup>rd</sup> year and finally in the 4<sup>th</sup> year to other social development initiatives such as Adult Literacy, Play Groups and Aids Carers in each club. Makoni District is the only project that has achieved the *full* 4 year process in 10 wards involving 87 of the 265 Health Clubs.

### Project description

The Pilot Project using Community Health Clubs started in three wards in Makoni District in 1994, expanded to 7 in 1996 (53 clubs), and then went to scale in 20 wards in 1999. Fourteen EHTs were trained in the participatory A.H.E.A.D. Methodology, and supplied with extensive training visual aids for 6 months of weekly sessions, targeting mainly women in each village.

The aim of the Makoni project was to develop a demand for sanitation through health promotion, with a target of constructing 2,000 latrines in two years. In each of the 20

project wards a minimum of 5 Health Clubs (with at least 50 members) were set up per year. (Table. 1). Weekly health sessions were held in all clubs to cover all 20 topics relating to good hygiene and preventable diseases. Health songs and dramas were produced in all areas with competitions held. Positive behaviour change was the main objective with members encouraged to adhere to over fifty hygiene recommendations (See Box.1). Only those dedicated members who completed the health sessions, and had dug and lined their pits at their own expense could qualify for the (3 bag cement) sanitation subsidy.

**Table 2. Cost of Health Promotion in Makoni District: March 1999–March 2001**

	1999	2000
Wards	20	20
EHTs	14	15
Health Clubs	72	265
Club Members	3,856	11,450
Beneficiaries	23,136	68,700
Health Sessions	1,448	2,283
Total EHT costs	US\$ 7,990	US\$ 21,811
Training costs	US\$ 4,065	US\$ 2,179
M/Bike purchase	US\$ 9,210	nil
CHC costs	nil	US\$ 405
<b>TOTAL COST</b>	<b>21,265</b>	<b>24,395 (20%)</b>
Health Ed. Cost per member	US\$5.51	US\$2.13
Cost per beneficiary	US\$ 0.91	US\$ 0.35
Cost per Trainer	US\$1,518	US\$1,626

### Hidden costs

The figures above represent only the cost to the provider (NGO/donor) and do not take into account:

- Cost to the Ministry of Health which supports the salaries of 14 EHT's and approximately 100 VCW's.
- Voluntary time given by Health Club Committees, Members, Councillors
- Costs accrued by each household in buying new items recommended
- Saved time and the cost of developing necessary visual aids which had already been funded by other donors and were thus brought from A.H.E.A.D at cost price.

### Proxy indicators

For this analysis, the *cost* of the programme should be gauged against its *effectiveness* in achieving health knowledge as well as its ability to change hygiene practices. Past research has established that improved hygiene does decrease the incidence of diarrhoea, (Feachem,1984). Based on this finding, a household survey was conducted which used only *observable indicators of good practice* that can be taken as *proxy indicators* of improved family health. Some of the spot observations done during the household survey are highlighted below\*.(Box.1)

### Results: Project achievements

By the end of the project in March 2001, each of the 15 EHTs, with the help of VCWs, (Village Community Workers) were responsible for around 17 clubs each (5+ per year for 3 years), with an average of 763 members, and

4,580 beneficiaries (6 per family). Within a year each EHT had held an average of 152 sessions, (12 sessions per month).

Project and clinic staff soon noticed higher levels of health knowledge, and more importantly there was empirical evidence of improvements within homes of many of the recommended hygiene practices. With 1,402 latrines having been constructed in 1999, and 1,726 in 2000, the ambitious target had been surpassed and it was evident that the A.H.E.A.D Methodology was substantiating its claim to be able to engender demand driven sanitation. It should be mentioned that the income generation was so successful that 87 clubs raised an income of US\$ 63,984, almost doubling the investment in them in one year. The full 4-stage A.H.E.A.D Methodology through Community Health Clubs not only achieves behaviour change, demand for sanitation in a cost effective manner, but also if taken to its fullest potential is a strategy for achieving genuine Sustainable Livelihoods.

### Transport and subsistence inputs

Once training is done, training material supplied and the EHT's equipped with motorbikes, there are only two main expenses in supporting the trainer. Firstly, the purchase of the motor bike, and running costs for 1,200kms per EHT per month. Secondly, token incentives for EHT's running health clubs. As they are required to work far beyond customary civil servant levels they were initially given a small meal allowance for time spent away from their base. However, one of the surprises of this project has been that EHT's remained committed to their clubs, and continued without extra allowances once donor funding ceased. Although, the work load is demanding all 30 EHTs who have run Community Health Clubs were unanimous in support of this approach, as they claim it not only rationalises their work load but that they have great job satisfaction and enjoy the communities' respect.

### Estimate of savings

Further research is needed to gauge the cost saved in terms of *direct savings* (saved treatment costs), or *indirect saving* (lost caregiver days for nursing a sick child), or improvement of family health in terms of morbidity and mortality prevented by reduction of TB, HIV/Aids, Diarrhoea, Dysentery, Cholera, Malaria, Worms, Skin diseases and Shistosomiasis.

### Discussion

#### How much to expect

The recent tendency in health promotion supports the belief that semi-literate women can only be expected to focus on a *few* key high-risk practices (Loevinsohn,1990) This is borne out in some studies that show the success of targeting only two interventions such as hand washing and safe disposal of toddlers faeces (Curtis et al, 2001). Whilst this may be the case with Social Marketing strategies (where the loosely targeted urban population is less defined), the A.H.E.A.D strategy has successfully proved that in *rural* areas, targeting those *dedicated* members of Community Health Clubs the *opposite* is true.

**Box 1: 50 Recommended Practices reinforced during 25 sessions within Community Health Clubs**

- Prevention: Diarrhoea, Cholera, Dysentery, & TB**
1. Covered drinking water\*
  2. Boiling contaminated water
  3. Use of ladle for taking drinking water\*
  4. Hygienic handling of drinking water\*
  5. Hygienic handling of water/food containers\*
  6. Washing plates after meals\*
  7. Pot rack for storing clean plates/pots\*
  8. Safe storage of left over food\*
  9. Use of individual cups for each family member\*
  10. Use of individual plates when sharing a meal\*
  11. Clean containers for water storage\*
  12. Washing hands before touching food
  13. Washing hands after faecal exposure
  14. Safe disposal of toddler's faeces
  15. Keeping compound free from garbage/faeces
  16. Well managed rubbish pit for solid waste disposal\*
  17. Safe sanitation practices (cat, covered, VIP)\*
  18. Clean well maintained latrine\*
  19. Use of safe water source\*
  20. Use of Hand Washing Facility (HWF)\*
  21. Use of soap for hand washing\*

- Prevention: Trachoma, Scabies, Tape/Ringworm & HIV/Aids**
22. Washing children's faces regularly
  23. Washing children daily
  24. Pour-to-waste method of hand-washing used\*
  25. Avoid sharing clothes with infected people
  26. Avoid shaking hands with infected people
  27. Avoid sharing bedding with infected people
  28. Do not use communal towels for drying hands
  29. Wash clothes and bedding frequently
  30. Wash with soap before sleeping
  31. Keep compound well swept\*
  32. Wash uncooked fruit before eating
  33. Keep fingernails cut short
  34. Provide a well balanced diet for the family
  35. HIV/Aids: (ABC) Abstinence, Be faithful, or use a condom

- Prevention: Shistosomiasis, parasites, Hook worm**
36. Cover faeces/use a latrine/ cat sanitation
  37. Wash at home not in contaminated water sources
  38. Wash plates and clothes at home
  39. Do not swim or take water in contaminated sources
  40. Protection when taking water from unsafe source
  41. Test and take bilharzia cure

- Prevention : Malaria**
42. Empty all containers that catch rainwater
  43. Fill in ruts and pots holes to prevent standing water
  44. Use of mosquito net, specially for young children\*
  45. Cover up with long sleeves when exposed at night
  46. Cut grass and vegetation around homes
  47. Use mosquito repellents/coils/ make repellent
  48. Use Mosbar/citronella soap for washing every night
  49. Use mosquito netting on window
  50. Test & take malaria cure immediately when affected

\* Spot observations conducted during this household survey

**A raft of changes**

Within six months of weekly meetings, an entire raft of 50 practices can be targeted, and with constant reinforcement through peer pressure and group decisions, high levels of behaviour change can be achieved in all practises. A genuine improvement in family health requires a *consistent* effort with safe hygiene practices and it cannot be achieved if only a few high risk practices are targeted. Diarrhoea in particular, has multiple causes: it is not enough to target only hand washing, for example, if food and water usage remain

unsafe. A *raft* of small interventions are needed to eliminate *all* risk practices.

**Developing a culture of health**

Whilst this sounds ambitious, it has been demonstrated in this project that this degree of change is achievable. It is vital to work with a consistent group who meet regularly and follow up their knowledge with changes in the home. In the health clubs, one topic is tackled per week for at least six months, until all preventable diseases have been covered in depth. This knowledge is reinforced by peer pressure exerted between members who compete with each other to be clean and progressive. Home visits between members, as well as the Hawthorne Effect (being under scrutiny) all contribute to some impressive shifts in practice. (See Fig 2 & Fig 3)

The sociological reasons for the success of the A.H.E.A.D Methodology are dealt with in more detail elsewhere. (Waterkeyn, 1999, 2000) This project shows that if communities can be persuaded to adopt a whole 'culture of health' which changes their fundamental norms and beliefs, they can also be expected to change their behaviour. Although this sounds time consuming and expensive, it only takes six months and costs a nominal amount compared to often extravagant expenditures on hardware. Unless hygiene accompanies improved water supply and sanitation, these investments can be a waste of time and energy.

**The study: A household survey**

After two years of health promotion activities a comprehensive household survey was carried out between August 2000 and August 2001, to record the knowledge and levels of behaviour change within the Community Health Clubs (CHCs) and this has been contrasted with that of *non* CHC areas. In Makoni, 25 clubs were randomly selected, and in each club a random sample of 15 members was individually surveyed, giving 375 respondents observed in total. A control group of 100 respondents were visited from similar communities adjacent to the project areas. The findings are summarised in the figures below (Figs.2 & 3 below), which highlight observable differences between health club members and the non-CHC control group.

**Box 2. Profile of 375 Community health club respondents: Makoni District: August 2002–2001**

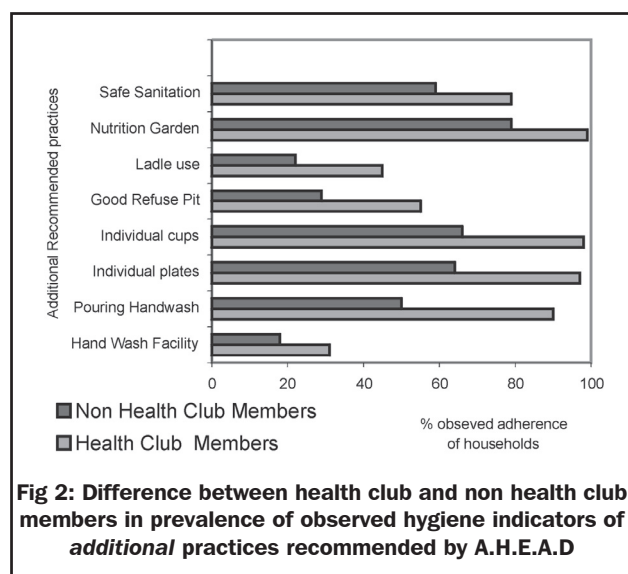
<b>Gender:</b>	86% women (n=322)
<b>Average Age:</b>	47.04 years old (S.D. 13.59)
<b>Married:</b>	98% men ; 72% women
<b>Widows:</b>	25% women (n=81) : 1 man
<b>Household heads:</b>	67% male headed, 33% female headed
<b>Household size:</b>	51% (4-6 children); 26% (7-16 children)
<b>Average Income:</b>	19 US\$ per month (Z\$53: US\$1)
<b>Breadwinners:</b>	70% joint breadwinners (man & wife)
<b>Religion:</b>	72% Christian; 26% Apostolic
<b>Education:</b>	31% 2-4 years Primary School only 33% women, 37%men Complete Primary 3.7% passed ZJC (3 <sup>rd</sup> yr Secondary) 2% passed O' levels
<b>Ave. Number of Health Promotion Sessions attended : 17</b>	

### Costs of health promotion

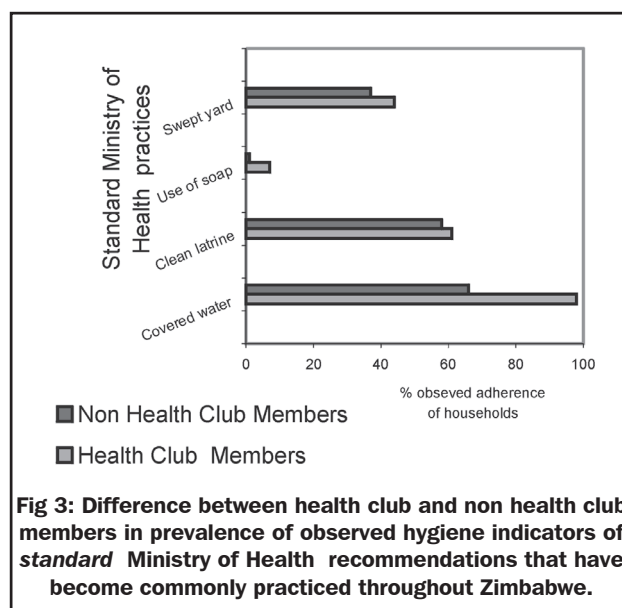
The objective of this paper is to demonstrate the *low* costs of *effective* health promotion to the *donor*, in an effort to encourage greater investment in this essential component of a Water and Sanitation programme. Thus only marginal costs for Health Promotion are calculated to give a cost per beneficiary. Additional Costs not included are US\$ 47,709 (40%) for Sanitation (3128 VIP latrines in two years); US\$ 36,878 (30%) for establishing over 500 income generating projects, as well as US\$ 10,242 (10%) on Administration. The Total Project cost for 2000 was US\$120,000, of which only 20% was spent on Health Promotion. *In the second year, cost per beneficiary dropped from 0.91 in Year 1, to only 0.35c.* This token amount can improve health knowledge of the mother, which can result in upgrading of family hygiene and the prevention of many diseases. When this budget is recalculated as a *cost per trainer*, (including training, equipment, motorbike and running costs), this amounts to only US\$3,144 for two years. (See:Table 2. below).

### Levels of behaviour change

In all 12 observations the difference of prevalence of positive indicators of good hygiene were in *all* cases higher in the health club group. This varied from 40% difference in the methods of washing hands between the two groups, to only 6% in the use of soap for hand-washing (due to economic constraints). However there is a confounding factor that should not be ignored. Many of the practices (Fig 3) have been recommended for over 20 years by the Min. of Health and so have become widely practiced throughout Zimbabwe, as in the case of the practice of covering drinking water (which is also traditional) and the construction and use of pot racks. The real impact of the project can really only be accurately understood by measuring the *new* practices that were introduced into this area by A.H.E.A.D, and it will be seen that in *all* cases there



**Fig 2: Difference between health club and non health club members in prevalence of observed hygiene indicators of additional practices recommended by A.H.E.A.D**



**Fig 3: Difference between health club and non health club members in prevalence of observed hygiene indicators of standard Ministry of Health recommendations that have become commonly practiced throughout Zimbabwe.**

is a substantially higher uptake in the health clubs with less in the control group. (See Fig. 2). For example ‘cat’ sanitation, (the burial of faeces) is a recommendation unique to the project and is now practised by all those who have no latrines, while open defecation is still common elsewhere. Similarly the use of individual cups and plates is a new idea and used exclusively in the health clubs, with an increase of 33%. Thus, not only can the health clubs prove themselves highly effective, but in addition the cost of this impact can be accurately measured. At an estimated 35c (US) per beneficiary the A.H.E.A.D method of health promotion is clearly cost effective.

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