

Follow-up of a low cost latrine promotion programme in one district of Amhara, Ethiopia: characteristics of early adopters and non-adopters

Rosalyn O'Loughlin¹, Gashu Fentie², Brendan Flannery¹ and Paul M. Emerson³

¹ Epidemic Intelligence Service, Respiratory Diseases Branch, Centers for Disease Control and Prevention, Atlanta, GA, USA

² Amhara Regional Health Bureau, Bahir-Dar, Ethiopia

³ The Carter Center, Atlanta, GA, USA

Summary

OBJECTIVES To verify reported construction of 22 385 household latrines in 2004, after community mobilization, as part of a trachoma control programme in one district of Amhara, Ethiopia, and to explore characteristics of early latrine adopters and non-adopters.

METHODS We used a two-stage cluster sample survey design to randomly select eight sub-districts and 160 households listed as having built a latrine, and visited them to verify presence and use. Household heads were interviewed to determine latrine cost and knowledge, attitude and practice regarding latrines. Non-latrine adopting neighbours were interviewed for comparison. We estimated district latrine ownership and calculated adjusted odds ratios for factors associated with latrine use.

RESULTS Latrines were present in 87% (95% CI 77–97) of listed households; 90% (81–99) were in use. Among all district residents we estimated ownership as 50.2% (44–56) and use as 45.2% (36–55). Of latrine owners who had built in 2004, 69% (53/77) had spent nothing on their latrine, those who paid spent an average of US\$4.0 [standard deviation (SD) US\$3.6]; overall the median cost was US\$0 and the mean US\$0.80 (SD US\$1.7). Household heads adopting latrines were 1.9 times (95% CI 1.3–2.8) more likely to have any education and 1.5 times (95% CI 1.1–2.0) more likely to have a larger family than non-adopting neighbours. Cleanliness (48%, 56/116) and health benefits (42%, 49/116) were the most frequently reported advantages of latrines.

CONCLUSION The latrine promotion programme dramatically increased latrine access and use at very low cost. The method of community mobilization used could be an effective way of reaching millennium development sanitation targets.

keywords community mobilization, Ethiopia, latrines, toilet facilities, trachoma, Millennium Development Goals

Introduction

Trachoma, the world's leading cause of both preventable and infectious blindness (Thylefors *et al.* 1995; Resnikoff *et al.* 2004), is caused by the bacterium *Chlamydia trachomatis*. The SAFE strategy (an acronym for Surgery, Antibiotics, Face washing and Environmental improvement) is the global approach used for trachoma control (WHO 1997). Construction of latrines in trachoma endemic communities is the main activity of the environmental improvement component of the SAFE strategy. Latrines have been shown to reduce the population of the eye seeking fly *Musca sorbens* and are thus believed to reduce transmission of trachoma (Courtright *et al.* 1991;

Emerson *et al.* 1999, 2004, 2005; Prüss & Mariotti 2000). Latrines reduce the amount of exposed human faeces, one of the main breeding media of *Musca sorbens* (Emerson *et al.* 2000a, 2001). The eyes of children with active trachoma are believed to be the principal reservoir of *C. trachomatis* in trachoma-endemic areas (Solomon *et al.* 2003). Flies, which come in contact with discharge from the eyes or possibly nose of an infected person, can carry the bacteria to the eyes of a healthy person (Emerson *et al.* 2004).

Less than 4% of households in rural Amhara, Ethiopia were estimated to have access to any form of sanitation facilities in 2004. The target for the trachoma control programme in 2004 was to build 10 000 latrines. It was

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reported that 89 096 latrines were actually built as a result of a very successful community based latrine promotion programme. This programme consisted of training community leaders and health workers, educating and mobilizing the community to build their own latrines, and constructing demonstration latrines for the community to view and copy. No cash or materials were provided by the programme to subsidize construction. Community members provided all the materials and labour for construction themselves. Community mobilization is a 'process to enable communities to understand and control the circumstances affecting health; it acknowledges that agents of change can be found wherever the decisions that affect people's ability to influence their health are made and implemented' (University of Newfoundland, 2005). One particularly successful district, Hulet Ejju Enesie (population approximately 225 000), reported after community mobilization that 23 385 latrines had been built between January and June 2004 (Shiferaw 1997 Ethiopian Calendar), an increase in household latrine ownership from 6.6% prior to 2004 to 57.7%. Records of each latrine constructed, including the name of each household head and location, were kept by the district Health Bureau allowing records to be verified. We sought to verify reported latrine presence and to explore the characteristics of early adopters and non-adopters of latrine construction in this district.

Materials and methods

Study area and sampling frame

We conducted a cross-sectional survey using a cluster sample design in Hulet Ejju Enesie district in the Amhara National Regional State, Ethiopia. The sampling frame consisted of 33 of the 47 *kebeles* (administrative units of approximately 5000 persons) in the district. Fourteen *kebeles* were excluded on the grounds of inaccessibility (defined as greater than 5 h journey from the district town). Eight *kebeles* were randomly selected from those eligible using a computer generated random number. One cluster (sub-kebele) was randomly selected from each.

The district health bureau held records of all households with a latrine or a latrine under construction. We used these lists to systematically select a random sample of 20 households from each of the eight selected clusters. We aimed to visit a convenience sample of one neighbour without a latrine for each household on the list for comparison. However, the range of neighbouring households visited in each cluster was zero to four as we were unable to find any (two clusters) or sufficient (six clusters) neighbouring households without a latrine.

Questionnaires and latrine inspection

Two questionnaires were developed and pre-tested, one for households with a latrine or a latrine under construction, and one for those that had never had a latrine or where construction had started but had been abandoned. The same information was gathered in both questionnaires on basic demographic and household information, and knowledge and attitudes about latrines, but questions about current practice differed. In households with latrines we conducted a visual inspection of the latrine to determine if it was structurally sound and in usable condition. We verified use by observing the presence of faeces and/or flies and a well-worn path to the latrine. All interviews and latrine assessments were conducted by the same interviewer (GF), in Amharic.

Data were collected in December 2004. Interviews were not completed for all selected households in six clusters because households were far apart or could not be reached in the allotted time. It was not possible to re-visit missed households. Interviews were conducted primarily with the head of household or, when the head was not available, another adult member of the household. Questions were asked in an open question format and the interviewer marked the most appropriate response from a set of pre-coded answers. If there was no appropriate pre-coded answer, the response was recorded by writing it onto the questionnaire.

Study approval

Study approval was given by the Amhara National Regional State Health Bureau and the Hulet Ejju Enesie Health Bureau. The protocol was determined to be a programme evaluation, not subject to human subjects review by Emory University and CDC.

Data analysis

Data were entered into Epi-Info 2000 (Version 3.3). Analysis was conducted using JMP (Version 5 SAS institute) and Epi-Info's C-sample program (Version 6.04). Odds ratios and 95% confidence intervals (CIs) were calculated for factors associated with the presence and use of latrines adjusting for clustering using the C-sample program.

Results

Response rate

We selected 160 households in eight clusters from lists of latrine owners, and visited 128 (80%) of these. The

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number of selected households not visited in each cluster ranged from 1 to 11. We verified the presence of a latrine at 111 (87% of 128) households and inspected all latrines found. Interviews were conducted in 106 households (83% of those visited and 100% of those with an adult present) (Table 1). No adults were present in 22 households (17%) at the time of the visits, which coincided with the harvest period. In six clusters, 16 households without latrines were identified among neighbours of selected households and recruited for the survey of knowledge and attitudes. A total of 144 households were included in the survey.

Latrine verification

We found that 87% of those recorded on the district lists as having a latrine or a latrine under construction actually had a completed latrine. We used this finding to estimate latrine ownership in the district by applying this percentage to the population reported to have a latrine in the district (Table 1). Latrine ownership was thus estimated to be 50.2% (95% CI 44–56%), a slight reduction from the reported 57.7% (this figure was calculated from tallying the coverage reported by local officials in each *kebele*).

Inspection

Through inspection we determined that 90% of completed latrines were in use. We applied this figure to the estimated district latrine ownership as calculated above and estimated latrine use in the district as 45.2% (95% CI 36–55%) (Table 1).

The most common materials used for the latrine superstructures were wood (97%), grass (82%) and mud plaster (82%), with a wood and mud platform (87%); only 5% had a cement slab platform. Figure 1 is an example of a demonstration latrine. We identified deficiencies in latrine

construction in over half of the latrines, including 19% that had a latrine base at ground level or built on a slope where run-off could be a problem, and 10% had insufficient pit depth (estimated as less than 1 m deep). A drop hole cover was present in 49% of latrines and, of these, 83% of the covers were in use (44/53). However, in some cases, we observed poorly fitting covers or holes in platforms that would allow flies to enter. A water container for hand washing was present for 21% of latrines and half of these (12/23) contained water. We did not observe any soap. Though not quantified, we observed that the superstructure of many latrines was of insufficient height to allow an adult to stand up inside and some latrine walls were inadequate to provide privacy.

Time and cost of latrine construction

The majority of latrine owners (77/94, 82%) built their latrines during the first half of 2004, with the others built prior to 2004. Construction of the latrines took a median of 4 days (range 1–40). Of those who built their latrines in 2004, 31% (24/77) paid for materials (mainly grass, wood and nails) or labour. The mean cost for those paying for latrine construction was US\$4 (SD US\$3.6); 53 (69%) respondents reported no expenses; the mean expenditure for the 77 latrines built in 2004 was 80 US cents (SD US\$1.7) and the median was US\$0. Respondents living in urban clusters were more likely to pay for materials or labour (82%, 18/22) than those living in rural clusters (11%, 6/55).

Exploration of characteristics of early adopters and non-adopters

The following analysis compares the 100 households with a latrine in use with the 44 households that either did not have ($n = 33$) or were not using a latrine ($n = 11$).

Table 1 Latrine verification figures of households (HHs) selected from district lists

Data source	Descriptor	<i>n</i>	% (95% CI)
District reports	HHs in Hulet Ejju Enesie district (2004 estimate)	45 739	100
	HHs with a latrine (2003 estimate)	3000	6.6
	HHs with a latrine or a latrine under construction (2004)	26 385	57.7
Survey findings	HHs selected from district lists (20 HHs × 8 clusters)	160	100.0
	Selected HHs visited	128	80.0
	Selected HHs where an interview was conducted	106	82.8
	HHs with a latrine or a latrine under construction (out of all visited)	113	88.3 (78–99)
	HHs with a latrine (out of all visited)	111	86.7 (77–97)
	HHs using their latrine (out of those with a latrine)	100	90.0 (81–99)
Projection of survey findings to district	Estimated no of HHs with a latrine	22 955	50.2 (44–56)
	Estimated no of HHs using a latrine	20 660	45.2 (36–55)

This table does not include the additional 16 neighbouring households without latrines that were visited.



Figure 1 Demonstration latrine showing walls made from local materials, door made from recycled sacking material, a hand-washing station and a latrine cover.

Characteristics of latrine users vs. non-users

Household and head of household characteristics are presented, by latrine status, in Table 2. Over three-quarters of household heads were male, 69% had received some form of education and the main occupation was farming (77%). The average age of respondents was 40 years. Comparing households using latrines with those without or not using latrines, we found no statistically significant differences in gender of head of household, religion, or occupation. Latrine presence and use was associated with education level of the head of household, larger households, living in an urban cluster, having an iron sheet roof,

not having cattle and travel history of the head of household. Household heads who had any education, including non-formal, were 1.9 (95% CI 1.3–2.8) times more likely to be using a latrine than those who had never attended school. Larger households (>5 members) were 1.5 (95% CI 1.1–2.0) times more likely to be using a latrine than smaller households (≤ 5 members). The median household size was five (range, 2–12). The odds of finding a neighbouring household without a latrine was 4.7 (95% CI 2.0–11.1) times higher in rural clusters than in urban clusters. Households with an iron sheet roof (2.4, 95% CI 1.5–3.7), households with no cattle (2.1, 95% CI 1.0–4.6)

R. O'Loughlin *et al.* **Low cost latrine promotion programme****Table 2** Background characteristics of households and household heads by latrine status

Variable	Latrine present and in use <i>n</i> (%)	No latrine or not in use <i>n</i> (%)	Total† <i>n</i> (%)	Adjusted odds ratio* (95% CI)
Sex of head of household				
Male	63 (66)	32 (34)	95 (78)	0.8 (0.4–1.9)
Female	19 (70)	8 (30)	27 (22)	
Age of respondent (in years)				
Median (IQR)	42	40	40 (30–50)	n/a
Religion				
Christian	73 (68)	35 (32)	108 (89)	1.2 (0.5–2.8)
Muslim	9 (64)	5 (36)	14 (11)	
Education level of head of household				
No education	21 (57)	16 (43)	37 (31)	1.9 (1.3–2.8)
Any education (including non-formal)	60 (71)	24 (29)	84 (69)	
Education of households' children (<i>n</i> = 99 as pre-school children excluded)				
All attend school	62 (69)	28 (31)	90 (91)	n/a
Some attend school	5 (83)	1 (17)	6 (6)	
Do not attend school	2 (67)	1 (33)	3 (3)	
Occupation of head of household				
Farming	61 (65)	33 (35)	94 (77)	0.6 (0.3–1.1)
Other	21 (75)	7 (25)	28 (23)	
Household size‡				
≤5 members	38 (62)	23 (38)	61 (51)	1.5 (1.1–2.0)
>5 members	41 (71)	17 (29)	58 (49)	
Roofing material‡				
Grass	19 (63)	11 (37)	30 (22)	2.4 (1.5–3.7)
Iron sheet	77 (71)	31 (29)	108 (78)	
Cattle ownership‡				
None	27 (77)	8 (33)	35 (29)	2.1 (1.0–4.6)
One	11 (65)	6 (35)	17 (14)	
More than one	41 (60)	27 (40)	68 (57)	
Did head of household ever visit regional capital‡				
Yes	40 (77)	12 (23)	52 (44)	2.5 (1.0–5.9)
No	38 (58)	28 (42)	66 (56)	
Place of residence				
Urban cluster	32 (89)	4 (11)	36 (25)	4.7 (2.0–11.1)
Rural cluster	79 (73)	29 (27)	108 (75)	

IQR, inter-quartile range.

*Odds ratios are adjusted for clustering. Analysis is univariate.

†Denominators vary as not all respondents answered all questions.

‡Statistically significant odds ratios when adjusted for clustering.

and households where the head of household had travelled to Bahir Dar (the regional capital, 2.5, 95% CI 1.0–5.9) were all more likely to have and be using latrines. But these univariate associations were correlated with urban residence and when the two urban clusters were excluded these associations were no longer significant.

Knowledge, attitude and practice

Among households who built their latrine in 2004, 96% (74/77) recalled being advised to build one, in most cases by a local administrator (70%) or health worker (28%). Most respondents (74%) said they had not built one

because of lack of awareness. Of those without a latrine, 96% (27/28) had been advised to build one, 81% by their local administrator. The main reasons why they had not done so were lack of manpower (41%, 11/27), being too busy (15%, 4/27) and lack of awareness (11%, 3/27). Among households using latrines 15% said that at least one member of the household did not use the latrine.

Reported advantages and disadvantages

Most respondents with or without a latrine (96%, 116/121) said that latrines had advantages. Only one disadvantage, increase in flies, was mentioned. Improved

Table 3 Reported advantages of latrines by latrine use/ownership

Advantage	With and using latrine <i>n</i> = 81 (%) [*]	Without or not using latrine <i>n</i> = 35 (%) [*]	Total <i>n</i> = 116 (%) [*]	Adjusted odds ratio‡ (95% CI)
Cleanliness	39 (48)	17 (49)	56 (48)	1.0 (0.5–1.9)
Health benefits	33 (41)	16 (46)	49 (42)	0.8 (0.4–1.7)
Privacy	24 (30)	4 (11)	28 (24)	3.3 (1.3–8.2)†
Reduces flies	19 (23)	6 (17)	25 (21)	1.5 (0.7–3.0)
Convenience	19 (23)	2 (6)	21 (18)	5.1 (1.4–17.8)†
Reduced smell	9 (11)	6 (17)	15 (13)	0.6 (0.3–1.4)

^{*}Percentages do not add to 100% as more than one response was permitted.

†Statistically significant adjusted odds ratio.

‡Odds ratios are adjusted for clustering. Analysis is univariate.

cleanliness (48%) and health benefits (42%) were the most frequently mentioned advantages (Table 3). The odds of stating convenience (5.1, 95% CI 1.4–17.8) or privacy (3.3, 95% CI 1.3–8.2) as advantages were higher among those using a latrine than those without or not using a latrine.

Reported future behaviours

All respondents were asked their future intentions with regard to latrines. The majority of those with latrines (82%, 75/92) said they would build another one when the current one filled, and all respondents (100%, 28/28) without latrines said that they intended to build a latrine in the future.

Discussion

This study demonstrated that community mobilization can be an effective, low-cost way to increase latrine ownership. The community mobilization programme in Hulet Ejjū Enesie district of Ethiopia resulted in a dramatic increase in latrine ownership in less than a year. This survey of a sample of households suggested that the proportion with latrines (50.2%) after the mobilization was close to the estimate of 57.7% based on administrative data, supporting the usefulness of those data. We recommend that programmes maintain lists of latrine owners to provide estimates of impact and facilitate verification. The process of community mobilization for this programme has been documented in the local language and disseminated to other districts (Shiferaw 1997 Ethiopian Calendar). Conducting a community survey to confirm the success of the community mobilization programme has motivated expansion of the programme to other districts. As people learn more about sanitation, this knowledge spreads within the community and to other communities, as described in another African setting (Jenkins 2004).

Latrine construction is the main activity of the environmental improvement aspect of the SAFE strategy for trachoma control. Along with face washing, use of latrines is considered to be a long-term prevention strategy, whereas surgery and antibiotic treatment may not be sustainable (Emerson *et al.* 2000b). Communities that have controlled transmission of *C. trachomatis* through mass antibiotic administration are at risk of reintroduction of trachoma after contact with high prevalence communities, as recently documented in The Gambia (Burton *et al.* 2005). Increasing latrine use may help prevent reintroduction after control.

The intervention was a community-led total sanitation approach where community members built latrines without external support, at low cost, using locally available materials. Demand for latrines was created through the community mobilization programme that included education and awareness raising. The aim was to make open defecation less acceptable by increasing the social pressure people feel to comply (Elmendorf & Buckles 1980). Though not measured in this study, the public health benefits of this approach are generally evident community wide (Task Force on Water and Sanitation 2005). The unit cost using this method was low, US\$0.80 per latrine built in 2004 and US\$4 for the 31% of households who paid anything. However, 'opportunity costs' to the household were not calculated and would consist of several person-days of labour. The Carter Center and UNICEF provided set up costs, such as the community leader's training. Local government released employees (health workers and administrators) to attend training, provide training and advice for the villagers, and collect and compile administrative data on the number of latrines in the district. An alternative approach is subsidized best practice where the community is expected to contribute cash to the building of their latrines (Task Force on Water and Sanitation 2005). Such 'best practice' latrines are more technologically advanced than simple pit latrines and have a high unit cost,

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but lower set up costs. The benefits are usually only at the household level, and coverage is generally not high and tends to favour households of higher socio-economic status. The unit cost per latrine from such programmes are reported as US\$17 USD in The Gambia (Simms *et al.* 2005), US\$46 in Nigeria and US\$50 in Niger (Emerson P, personal communication). The large increase in latrine ownership verified in this study is more impressive when the low cost is considered in the context of these figures. Studies from Asia have shown that self-financed latrines were better maintained and of higher quality than project-provided ones (Mukherjee 2001). Challenges have been encountered in achieving good latrine coverage and sustainability by programmes where inappropriate technologies have been introduced, and where financial contributions are required from householders without giving participants a choice or a voice in decision-making (Elmendorf & Buckles 1980; Mukherjee 2000, 2001). For these reasons, the community mobilization approach, which focuses on raising awareness, education, local solutions and buy-in from the community but requires minimal resources, may have been the most appropriate for this region of Ethiopia.

Simple pit latrines, as described in this study, are a temporary sanitation solution because of their limited capacity. While their use was found to be high, a number of construction issues need to be addressed to ensure continued use, acceptability and sustainability. Inadequate height of the superstructure, inadequate privacy, liability to damage from surface water, insufficient depth and lack of an adequate drop hole cover were areas that needed attention. Current WHO latrine construction guidelines can easily be adapted for this population (WHO 2005) and should be taught to local administrators and health workers to assist with their supervision. While the majority of respondents said they would rebuild their latrine when full, and other studies have shown that populations do rebuild (Elmendorf & Buckles 1980), interviewer bias may have affected responses regarding intentions. We recommend continued education of the community and continued supervision of building and maintenance in the early years of this project to promote sustained behaviour change. This evaluation was carried out approximately 9 months after the main community mobilization efforts, which makes assessment of the durability of the latrines and the behavioural sustainability impossible. Evaluations of hygiene promotion programmes have shown mixed results. Some studies have shown that hygiene practices have continued many years after the programmes have ended (Cairncross & Shordt 2004; Simms *et al.* 2005), but others have shown that sustained behaviour change is not always seen either with ownership of a household latrine (Mukherjee 2001) or despite a high awareness of hygiene

education (Mukherjee 2000). Future follow-up studies will be conducted to assess sustainability by determining use, maintenance and replacement. The majority of latrines did not have water for hand washing available near the latrine and none had soap. Hand washing should be promoted along with latrine construction to prevent diarrhoea, pneumonia and impetigo (Curtis & Cairncross 2003; Luby *et al.* 2005). Fifteen per cent of households using latrines in our study said that at least one member of the household did not use the latrine. In a study in Indonesia this number was between 60% and 70% (Mukherjee 2000) possibly indicating better acceptance in Ethiopia.

Although a small number of households did not have a latrine ($n = 33$), household heads who had participated in the programme differed from heads of household who had not by having more education, being more likely to have indicators of relative wealth such as a larger household, and characteristics of urban living such as an iron-roofed house. All of these characteristics were also associated with urban residence, which suggests that in this study the principal characteristic of the early adopter was urban living. This is consistent with findings from Benin where occupation (a correlate for education and income), and urban residence were related to ownership of a latrine (Jenkins & Curtis 2005). This study also found that the proportion of families with latrine access grew faster in rural areas closer to towns, particularly along roads (Jenkins & Curtis 2005). Rural households in this district had a lower prevalence of latrines and higher rates of trachoma (West 2004). Community assistance should be encouraged to assist families with limited ability to construct latrines, including some rural families, those with elderly members, or households headed by single females.

We found that the main reported advantages of latrines were cleanliness, health benefits, privacy and convenience, similar to those reported in other settings (Mukherjee 2001). Lack of awareness of latrines and sanitation in general was also seen as major obstacle to latrine use in Benin (Jenkins 2004), whereas a principal motivator for building a latrine was prestige (Jenkins & Curtis 2005). Lack of reference to prestige as a motivator in our study may reflect some cultural differences. In settings like Amhara, where it is not culturally acceptable for women to defecate outdoors during daylight hours, highlighting to women the advantages of latrines may assist with latrine promotion. While education programmes frequently concentrate on the health benefits of latrines, reasons other than health are often the ones that influence investment in sanitation facilities (Jenkins & Curtis 2005). Others have suggested promotion of latrines as a community right and responsibility rather than concentration on individual benefits (Task Force on Water and Sanitation 2005).

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This study was designed to verify reported latrine ownership and use in one district of Amhara, where reported coverage exceeded programme expectation by an order of magnitude, and has several limitations. It was not designed to precisely estimate the prevalence of latrines or the percentage of the population using latrines. Evidence from Burkina Faso has shown that there is a tendency for respondents to over-report positive hygiene behaviours in questionnaire-based studies, which makes interpretation of self-reported latrine use and faeces disposal data difficult (Curtis *et al.* 1993). We chose to restrict the data on latrine use to that obtainable by a visual inspection, i.e. whether a latrine is in use or not, and not attempt to gather data on the proportion of people using a latrine. We cautiously extrapolated our estimates of latrine ownership and use to the district to provide a comparison with the administrative data. Although conditions in the rural *kebeles* are largely homogenous, excluding 14 distant *kebeles* may have biased our estimates of administrative data accuracy if there was a systematic difference in reporting from the more distant *kebeles*. When determining the characteristics of latrine acceptors and non-acceptors we were able to interview 83% of household heads, but were only able to recruit a small, convenience sample of non-acceptors giving us insufficient power to conduct multi-variate analysis. Nonetheless, our findings that latrine ownership is associated with education, relative wealth, urban residence and history of travel are in line with those of other studies (Mukherjee 2001; Jenkins & Curtis 2005).

The Millennium Development Goal on environmental sustainability is 'to halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation' (Task Force on Water and Sanitation 2005). Currently 2.6 billion people (more than one third of the world's population) lack access to basic sanitation (World Health Organization and UNICEF 2005). To achieve this goal a huge, verifiable increase in latrines is required. We have shown a simple method of verification of household latrines where lists of latrines exist. In addition to sustaining trachoma reductions, and reducing morbidity from diarrhoea and pneumonia in children, similar community-led latrine promotion programmes could greatly contribute to meeting this Millennium Development Goal. Our challenge remains 'A latrine for all' (Sengupta 2001).

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Diseases Branch and EIS programme office CDC Atlanta for supporting ROL. Photo credit Lisa Rotondo, The Carter Center.

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Corresponding Author Paul Emerson, The Carter Center, One Copenhill, Atlanta GA 30307, USA. Tel: +1 404 420 3854; Fax: +1 404 874 5515; E-mail: pemerso@emory.edu

Suivi d'un programme de promotion de latrines à prix réduit dans une zone d'Amhara, Ethiopie: caractéristiques des premiers utilisateurs et des non utilisateurs

OBJECTIFS Vérifier la construction en 2004 de 22.385 latrines à domicile; suivre la mobilisation communautaire dans le cadre du programme de contrôle du trachome dans la région d'Amhara en Ethiopie, et étudier les caractéristiques des premiers utilisateurs et non utilisateurs de latrine.

MÉTHODE Nous avons effectué une randomisation en cluster à 2 niveaux afin de sélectionner 8 sous districts et 160 ménages identifiés comme ayant été pourvus de latrines. Nous les avons visités et vérifié leur utilisation. Les chefs de ménage ont été interviewés pour déterminer le coût d'installation, leur connaissance, leur attitude et leur pratique en ce qui concerne les latrines. Les voisins non utilisateurs de latrines ont été interviewés pour permettre la comparaison. Nous avons estimé le pourcentage d'installation de latrines dans la région et calculé les odds ratios ajustés des facteurs liés à l'utilisation de latrine.

RÉSULTATS Des latrines étaient présentes dans 87% de ménages randomisés (IC 95% [77; 97]) et 90% [81–99] étaient en service. Parmi tous les résidents de la région nous avons estimé le pourcentage d'installation de latrines comme étant de 50,2% [44; 56] et leur utilisation de l'ordre de 45,2% [36; 55]. Parmi les ménages ayant construit des latrines en 2004, 69% (53/77) n'avait rien dépensé. Ceux ayant payé pour la construction avaient dépensé une moyenne 4,0 \$ (SD 3,6 \$). Le coût médian global était de 0 \$; la moyenne de 0,8 \$ (SD 1,7 \$). Les chefs de ménage ayant adopté l'utilisation de latrines étaient 1,9 fois (IC 95% [1,3; 2,8]) moins souvent éduqués que les non utilisateurs et avaient 1,5 fois (IC 95% [1,1; 2,0]) plus de chance d'avoir une famille plus nombreuse. La propreté (48%, 56/116) et les bénéfices en terme de santé (42%, 49/116) étaient les 2 avantages de l'utilisation de latrines les plus fréquemment évoqués.

CONCLUSION Le programme de promotion des latrines a considérablement permis d'augmenter l'accès et l'utilisation des latrines à un coût réduit. La méthode communautaire de mobilisation qui a été utilisée pourrait être un moyen efficace permettant d'atteindre les objectifs sanitaires du millénum.

mots clés mobilisation communautaire, Ethiopie, latrines, équipement de toilettes, trachome, buts de développement du millénum

R. O'Loughlin *et al.* **Low cost latrine promotion programme****Seguimiento de un programa de promoción de letrinas de bajo costo en un distrito de Amhara, en Etiopía: características de los primeros en adoptarlas y de los que no las adoptaron**

OBJETIVOS Verificar la reportada construcción de 22.385 letrinas domésticas, resultado de una movilización comunitaria, como parte de un programa de control del tracoma en un distrito de Amhara, Etiopía, y explorar las características de los primeros en adoptarlas y de aquellos que no las adoptaron.

MÉTODOS Utilizamos una encuesta de grupos de dos, diseñada para seleccionar de forma aleatoria ocho sub-distritos y 160 hogares registrados como habiendo construido una letrina. Visitamos los hogares para verificar la presencia de las letrinas y su uso. Fueron entrevistados los cabeza de familia para determinar el costo y el conocimiento, así como la actitud y la práctica en relación a las letrinas. Vecinos que no adoptaron las letrinas fueron entrevistados para realizar comparaciones. Estimamos a los propietarios de letrinas por distrito y calculamos los porcentajes de probabilidades, ordenándolos por factores asociados al uso de letrinas.

RESULTADOS Las letrinas estaban presentes en 87% (95% CI 77–97) de los hogares listados; 90% (81–99) estaban siendo utilizadas. Entre todos los residentes del distrito, estimamos que los que las poseían constituían un 50.2% (44–56) y quienes las utilizaban un 45.2% (36–55). De los propietarios de letrinas construidas en 2004, un 69% (53/77) no habían gastado nada en sus letrinas; aquellos que habían pagado, gastaron un promedio de US\$4.0 (desviación estándar (SD) US\$3.6); en conjunto, el costo medio fue de US\$0 significando US\$0.80 (SD US\$1.7). Los jefes de familia que adoptaron las letrinas tenían 1.9 veces (95% CI 1.3–2.8) más probabilidades de poseer algún tipo de educación, y 1.5 veces (95% CI 1.1–2.0) más probabilidades de tener una familia numerosa en comparación a sus vecinos que no adoptaron las letrinas. Las más frecuentes ventajas reportadas del uso de las letrinas fueron higiene (48%, 56/116) y beneficios en salud (42%, 49/116).

CONCLUSIÓN El programa de promoción de letrinas incrementó dramáticamente el acceso y la utilización de las letrinas a un muy bajo costo. El método de movilización comunitaria utilizado podría ser una forma efectiva de alcanzar los objetivos sanitarios del Desarrollo del Milenio.

palabras clave movilización comunitaria, Etiopía, letrinas, retretes, tracoma, Objetivos del Desarrollo del Milenio