FARMERS' PERCEPTIONS OF THE LAY HEALTH WORKER ON FARMS IN THE WESTERN CAPE, SOUTH AFRICA

M Clarke[1], J Dick, H van Zyl[2] & E Johansson[3]

Abstract

This study is focussed on farms situated in the Boland health district of the Cape Winelands, South Africa. The aim was to explore, understand, and describe the perceptions of farmers of having a trained lay health worker (LHW) on the farm. A qualitative study design was applied. Data were collected during six in-depth interviews and two focus group discussions with participating farmers. The results show that farmers remained positive about the concept of having a trained LHW on the farm, but became frustrated with the lack of recognition of their and the LHWs' contribution by the public health service. Farmers who are willing to participate and remain active are key to introducing a farm community-based LHW intervention. Sustainable LHW interventions are dependent on public health sector support and recognition of all role players.

1. INTRODUCTION

A lay health worker (LHW)[4] intervention was implemented on farms in the Boland health district of the Western Cape during the last decade (Dick *et al*, 1997; Clarke *et al*, 2004). The purpose of the intervention was to improve the delivery of primary health care to farm dwellers that live and work on farms. The project was implemented by the public health sector of the Boland health district. The aim of this paper is to describe how farmers experienced having an LHW trained in primary health care on their farms. Farmers as employers play a pivotal role in the implementation of this type of intervention, and insight into their experiences of the intervention is useful to health planners.

[1] *Faculty of Applied Sciences, Cape Technikon, Cape Town, South Africa and Department of Public Health Sciences, Division of International Health (IHCAR), Karolinska Institutet, SE - 171 76 Stockholm, Sweden. Email: robclark@mweb.co.za.*
[2] *Health Systems Research Unit, Medical Research Council of South Africa.*
[3] *Department of Public Health Sciences, Division of International Health (IHCAR), Karolinska Institutet, SE - 171 76 Stockholm, Sweden.*
[4] *"Any health worker carrying out functions related to health care delivery, trained in some way in the context of the intervention, and having no formal professional or certified tertiary education" (Lewin* et al*, 2004).*

Ethical approval for the study was granted[5].

2. BACKGROUND TO THE STUDY

2.1 Farms and farm workers in the Western Cape

Farms in the Boland health district, situated in the Cape Winelands about 65 kilometres from Cape Town, are large, labour-intensive agricultural 'business units' focused on either fruit or wine products for export (Fast, 1997). In this paper 'farmers' refers to either owners or managers of these agricultural businesses. The health of employees becomes a concern to farmers in their attempt to optimise productivity in a competitive industry. There is increasing pressure on farmers, as exporters of agricultural products, to provide evidence of the health status of their workforce (Food and Drug Administration (USA), 2000). 'Farm workers' is a term used to describe permanent employees who reside on the farms with their families, and casual workers who live off the farm. Casual workers provide an additional labour source during the peak season (Clarke *et al*, 2003).

2.2 The health situation of farm workers

The Western Cape employs 22% of South Africa's farm workers (South African Government, 2000). Farm dwellers in the Western Cape are generally poor, with low levels of education and a lifestyle socially and economically dependent on farmers. Recent research has shown that the farm worker population is chronically malnourished despite a large proportion of their income being spent on food. The incidence of tuberculosis is exceptionally high (Fast, 1997) with the reported new smear-positive tuberculosis incidence rate 519/100,000 in 2001, compared with 359/100,000 at provincial and 188/100,000 at national level respectively (Boland District Municipality, 2003 and South African National Tuberculosis Control Programme, 2003). In 2001 the human immune deficiency virus (HIV) prevalence rate among pregnant women attending public health antenatal facilities in this district was 8.3% (Western Cape Department of Health, 2001).

Pivotal to tuberculosis control is patient adherence to anti-tuberculosis medication. An 18% treatment interruption rate is the main reason for the poor performance of the National Tuberculosis Control Programme in South Africa (Dick *et al*,

[5] *The Interim Research Ethics Committee of the Faculty of Applied Sciences of the Cape Technikon, Cape Town, South Africa and the Research Ethics Committee for the Division of International Health at the Karolinska Institute, Stockholm, Sweden, granted ethical approval.*

1999). South Africa adopted the 'Directly Observed Treatment Short Course' (DOTS) strategy in 1996. The DOTS strategy promotes the policy of 'directly observed therapy' (DOT), in that a second person supervises each dose that a tuberculosis patient takes in order to improve treatment adherence (South African Department of Health, 1996). Implementing DOT is labour-intensive and costly in populations of indigent farm dwellers living in rural areas.

It is a formidable task to provide primary health care to farm workers in South Africa. It is expensive for health providers to visit the farms at frequent intervals. Public transport is non-existent, so farm dwellers requiring health care are dependent on the farmer for transport.

2.3 Health care in the district

The local public health authority, the Boland District Municipality, provides health care to the farm dwellers in the study district. Most farms in the study district were previously visited fortnightly by nurse-staffed mobile clinics. Due to significant health budget cuts, the public health sector centralised their health care delivery to farm dwellers. Mobile clinic visits fell from 11,000 visits at 552 points in 1997 to 4,000 visits at 173 visiting points in 2000 − a 64% drop (Boland District Municipality, 2003). Farm dwellers now have to walk up to five kilometres or be transported by the farmer to attend either a mobile clinic on a centrally situated farm or a fixed clinic facility. Both these types of delivery sites operate on weekdays during office hours. The public regional hospital is situated in the study district. Private physicians' fees are too high for regular use by farm dwellers.

2.4 Local tuberculosis programme

The DOTS strategy was introduced to the health district in mid-1997. If the attending clinic nurse suspects a person of having tuberculosis, two direct sputum specimens are taken and sent to the central laboratory for tuberculosis microscopy. The patient is asked to return to the clinic within a week to be informed of the laboratory results. These laboratory results are usually available after 48 hours. If positive, the patient commences with anti-tuberculosis treatment. The patient is issued drugs sufficient for between 1 and 4 weeks, depending on where the person lives in relation to the clinic nurse supervising the treatment. The further that patients live from the clinic, the larger the supply of drugs provided so as to cover a longer period. The clinic nurse encourages the patient to select a second person to supervise each dose taken (DOT), preferably the LHW or otherwise a family member.

2.5 A description of the health intervention

The intervention team consisted of a registered nurse with years of experience with tuberculosis on the study district farms. Two LHW trainers fluent in the local language assisted her. Adult resident farm dwellers selected a suitable peer to be trained and to function as an LHW on their farm.

The LHW training maintained a focus on tuberculosis, within the ambit of primary health care and community development framework (Johnston & Rifkin, 1987). Trainees attended five one-week training modules. These modules were: (1) Becoming a community LHW; (2) Tuberculosis; (3) Family Health (including HIV/AIDS); (4) First Aid; and (5) Home-based care. Participants undertook small, manageable tasks as 'homework' in order to reinforce their grasp of a topic. These tasks were reviewed at the next training session. Adult Basic Education and Training principles were used to respond to the specific training needs of each learner (Favish & Plasket, 1997).

LHWs conducted monthly weighing and tuberculosis sign and symptom screening of all permanent farm workers and their families on the farms. Tuberculosis symptomatic individuals were referred to the clinic for further diagnostic investigations. Those diagnosed with tuberculosis were encouraged to accept DOT from the LHW.

2.6 Evaluation of the effectiveness of the LHW intervention on farms

An evaluation conducted by the Medical Research Council during 1996 indicated that the introduction of trained LHWs significantly improved tuberculosis control on farms (Dick *et al*, 1997). A subsequent cluster randomised control trial found that the successful treatment completion rate was 18.7% higher (P = 0.042, 95% CI: 0.9% - 36.4%) on farms with LHWs compared to farms without LHWs. Case finding for adult new-smear-positive tuberculosis cases was 8% higher (P = 0.2671) on farms with LHWs compared to farms without LHWs (Clarke *et al*, 2004). An economic evaluation found that this LHW intervention compared favourably to four other similar interventions, as it was second cheapest to implement (Rörich, 2002).

3. METHODS

3.1 Study aim

This study aimed to explore, understand and describe the perceptions farmers have about having a trained LHW on the farm.

3.2 Study setting

The study was conducted in the Boland health district of the Western Cape, an area of 1661 km^2 with an estimated population of 73 510 in 2002 (Boland District Municipality, 2003). The number of permanent employees on each farm ranged from 2 to 200 (median 18). LHWs are employed farm workers, functioning in two capacities on the farm.

3.3 Sampling and participants

Purposive sampling (Ritchie & Lewis, 2003) was used to identify six key informants for the in-depth interviews. This sample was supplemented by a convenient sample (Ritchie & Lewis, 2003) to include farmers from the same study frame in two focus group discussions.

3.4 Data collection

3.4.1 Key informant interviews

Data were collected during in-depth face-to-face interviews (Ritchie & Lewis, 2003) conducted in June 2002. These interviews took place in either the home or offices of the key informants at a time suitable to them. The participants, who were aged 31-54 years, had all implemented the intervention on their farms with varying degrees of success. They were identified and approached by the project manager based according to their ability to communicate unambiguously, and their willingness to participate.

The researcher (MC), who grew up on a farm and has worked on farms, conducted all interviews in the participants' mother tongue to ensure that data collected would be consistent and that nuances and information would be understood within this context. The question used to start the interview was: 'Tell me about your experience in having a lay health worker on your farm.' Verbal and non-verbal probes were used to clarify and achieve breadth and depth of the content of the information shared (Ritchie & Lewis, 2003). Interviews were interactive in nature, encouraging participants to talk freely as they sought to answer the initial question.

3.4.2 Focus group discussions (FGDs)

Findings from the key informants' interviews were triangulated by two focus group discussions (FGDs) conducted during May and June 2004. The chairmen of two local agricultural groups granted the researchers access to the

group prior to the start of their monthly meeting. These FGDs were conducted at a time when the farmers were not in a buoyant mood, due to the adverse exchange rate and a period of severe drought.

Participant and non-participant farmers attended these meetings, but only participant farmers contributed during the discussions. Eighteen farmers, 5 having participated in the intervention, attended the first FGD, and 18 farmers, of whom 15 had participated in the intervention, attended the second. A second researcher (JD) attended both FGDs in order to observe the non-verbal group dynamics during the interaction. The question used to start each FGD was: 'How do you view the future of the lay health worker project, offered by the Boland District Municipality?'

Both the in-depth interviews and FGDs were audio-taped, transcribed and translated from Afrikaans into English.

3.5 Data analysis

The transcripts were analysed using cut and paste. A thematic framework was constructed after thorough familiarisation with the content of the transcripts. Each researcher analysed the data independently, and the indexed categories and key issues of each researcher were then discussed during group sessions, mapping and linking these categories (Pope *et al*, 2000).

3.6 Data management

Participant anonymity, confidentiality and verbal informed consent were confirmed and tape-recorded at the start of each interview and FGD. An experienced and approved secretary transcribed the recorded interviews and FGDs verbatim. MC stored these tapes in a safe place.

4. RESULTS

Participants' comments are presented here with some interpretation. Data are presented and grouped according to the way in which they were collected. Verbatim quotes are used for illustration.

One of the six key informants interviewed had the LHW working in the main homestead on the farm, surrounded by a security fence with huge dogs patrolling the area. This meant that the farm dwellers could not access the LHW during working hours. No infrastructure had been put in place to conduct tuberculosis screening on this farm; this farmer perceived no change

in terms of health care on the farm. A similar situation was reported during the first FGD, where a participant reported that he transported the person selected to function as an LHW to the training sessions, but experienced no health-related change on the farm. On this farm the farm dwellers continued to obtain health-related assistance directly from the farm management.

4.1 Acceptance of the intervention

The participants reported that they entered the project with high expectations because they were familiar with the concept of LHWs on farms, because it was offered via the Boland District Municipality, and because they knew and trusted the project leader. Some scepticism was noted, but the intervention made sense to them since it sought to address their workers' health holistically, especially in terms of tuberculosis:

'We knew of the idea of a farm lay health worker… it made a lot of sense to start with a project that would address the problem we all share, namely tuberculosis. This project started by addressing only tuberculosis but now it deals with other health issues as well. It is like a chain reaction.'

Participants expressed their initial scepticism with specific reference to whether farm dwellers of different age groups would interact with the LHW. After a three-year period this scepticism has been replaced by acceptance since it became obvious that all farm dwellers, irrespective of age, communicated directly with the LHW. Farmers remained very positive about the farm LHW concept, although becoming disillusioned whether all the effort and time invested was worth it. They perceived the public health sector as unsupportive of the LHW and the farmer.

4.2 Perceived role of LHW

4.2.1 Enriching communication and understanding

The participants were enthusiastic about the concept of having a LHW on their farms, but found implementation difficult. They had expected just to delegate health functions to the LHW. In reality, communication with the LHW about interaction with farm workers improved the quality of communication between worker and employer, leading to early detection and resolution of problems. Said one:

'Before we had a lay health worker, we as farm management were responsible for all health care on the farms and we thought that we' d be able to hand over all the health issues to the farm LHW ... We found that the LHW knows her boundaries, and needs

us to be there as a sounding board for guidance on specific difficult issues, such as child abuse. …She communicates with my wife or me within the context of the problem at an early stage when it has a better chance of being responded to aptly and addressed successfully … The LHW brings management in touch with worker living.'

Participants commented that the quality of life of those living on farms with a LHW was noticeably better than those without a LHW.

Participants reported that their LHWs alerted them to health problems on the farm at an early stage, and in so doing they give farmers an opportunity to manage avert a crisis situation. Further to this, LHWs bridged a communication gap between the farmer and the workers as they inform the farmer of issues requiring attention:

'We receive first-hand information from the LHW *around what is happening on the ground. The people are a bit shy to speak to us directly.'*

In reference to HIV/AIDS: *'I see the use more in illnesses that stalk us'.*

4.3 Saving time and money

The participants recognised the benefits of having a trained LHW on site, available to attend to health needs, whether minor ailments or injuries requiring first aid. Employees remain at the workplace, so there is no lost income from downtime and no need for the farmer to provide transport to health services:

'Having a health worker on the farm saves money for me as the employer and for the employee, as the LHW addresses health issues on the farm at an early stage of the illness, which means that there is less or no transport required or payment of the doctor. I see a drastic change in productivity since having an LHW.'

Participants reported that all farm dwellers benefited from the LHW inasmuch as they were able to administer oral rehydration for children, deal with minor ailments on the farm and refer only those cases beyond their competencies. Furthermore, they suggested that more LHWs should be trained to prevent any one incumbent becoming *'overloaded'* as each of them dealt with at least fifty requests per month:

'Our workers must first see the LHW *before they can be referred to the doctor.'*

The participants felt that their investment of time, money and effort in getting LHWs to function is not necessarily being recognised by the public health sectors. Participants felt that the public health care sector ignored referrals

made by LHWs, e.g. they were not fast-tracking farm dwellers referred to the hospital by the LHWs:

'A lot of time is given up to train the LHW *and the farm workers, they are, there is not much desire to listen to the* LHW *– her advice, to accept her, or whatever... No time is saved through the* LHW *in terms of hospital procedure.'*

4.4 The other side of the coin: Costing time and money

Some participants reflected mixed feelings about what the project expects from them; others were concerned that the LHW had to attend meetings, taking them away from actual work on the farm, *'for which she's paid'*. Others commented that the sacrifice made to train the LHW during work time had '*proved to be worth it*.'

Concerns were expressed that the LHWs were overburdened, having to attend meetings as well as handling pressure and meeting work responsibilities. These concerns should be addressed, and the issue of recompense for extra responsibilities needs to be thrashed out.

Participants referred to the legislation prescribing that they remunerate farm workers who are absent from work attending public health care facilities. They felt that they are continuing to spend money to support and train LHWs without any benefit at health service level.

4.4.1 Dealing with emergencies

Farm work is associated with a variety of occupational health and safety hazards. Physical injuries and exposure to poisonous chemicals are risks the LHWs are trained to deal with. One farmer commented:

'*There was an incident on my farm of over-exposure to agricultural poisonous chemicals. The LHW identified and attended to the problem promptly and correctly and in so doing saved the lives of those affected. This action caused the farm dwellers and myself to trust her completely.*'

4.4.2 Acceptance over time

Participants claimed that although the farm workers largely accepted the intervention, a small proportion were initially hesitant. Trust developed as various health issues were addressed. One farmer commented:

'There is a group of workers (the minority) who didn't want to participate when we first started to implement the project. My own experience is that as the effects of the

project became noticeable after about a 1-year period, then others became eager to participate.'

Others let the people decide as things progressed:

'*Management decided that employees who chose not to get involved (about 2%) would be left outside the process. After 18 months they wanted to participate. We work with the willing, engage as many as possible, but continue irrespectively – the rest will come on board*.'

Acceptance is probably encouraged by the fact that most participants set up a process whereby people know that the first person to report their ailments to is the LHW. Management reiterated the referral procedures on the farm in support of the LHW. If workers went to the farmer first, they would be referred to the LHW, who might then refer them to the clinic or doctor. The LHW managed stock supplied by the farmer to address minor ailments.

On the whole participants felt that in time the LHWs gained credibility, and once this was gained farm dwellers started to take notice of their advice/guidance, albeit referring cases to the health services or reiterating other health-related training conducted on the farm (e.g. follow-up of HIV/AIDS training sessions).

4.5 Creating pride on the farm

The participants described a feeling of personal and communal pride on the farm associated with the project:

'*The people are proud. Sometimes the going is hard, but I think that they are proud when they know that their farm is involved with health, and that they have someone to go to. I'm proud when I see what we have achieved by having an LHW on the farm*.'

The participants believed that the LHWs know and feel they are important to the farm and to management.

4.6 Key issues for success

Certain critical issues stood out as vital for the success or otherwise of the project. These highlight how difficult the process is to implement for all concerned, not least for the LHWs themselves, who often seemed caught between their employers and fellow workers.

4.6.1 Continuous involvement and support

This process requires time, perseverance and integrated support from the farmer, trainer and clinic staff. Participants' approval and support of the

community's selection of LHW was essential:

'*Even though the community selected the person to become the farm LHW, they asked me to confirm their selection ... I regularly have to call employees together to reinforce the position of the LHW on the farm*.'

Since the farmer has more authority than the LHW, when a problem arises the farmer and/or his wife talk to the people to encourage support of the LHW's actions. The LHW requires this support from management, and the farmer and his wife must be equipped for this role.

Participants reported that it is vital that the local clinic, the farming community and the employer all support and motivate the LHW.

4.6.2 Management issues

Participants reported that the initial six months were crucial: during this time they had to give most input, guidance and support. The people had to know that the farmer trusted the LHW's judgement. Participants indicated that the LHW also needed encouragement from clinic staff on a regular basis. Some participants felt that training should be on a continuous basis to ensure LHW motivation. The participants indicated that they themselves need training and support in dealing with conflict around community acceptance of the LHW. They also need guidance on how to remunerate and acknowledge the LHW without causing conflict within the community.

It was also reported that the future sustainability of this project would depend on all role players supporting and recognising each other on an ongoing basis:

'*They kind of feel they do not always receive good support from the community and the clinic nurse*'.

4.6.3 Conflict between LHW and fellow workers

The participants felt that they had to be careful of being perceived as showing the LHW any favouritism, since this could lead to jealousy, which could result in communities' unwillingness to co-operate. Jealousy is founded on perceptions of the LHW benefiting from increased opportunities/an elevated relationship with the farmer, and can lead to social isolation:

'*The LHW is often accused of favouring some people above others … should you as farmer then side with the LHW then things get more difficult for the LHW, as the others would accuse her of being a* "witvoet" *(farmers' favourite) and then ostracise her*.'

One farmer's LHW had resigned because she had tried to influence lifestyle (alcohol and drug abuse) and had come up against opposition. The same farmer lost another LHW because she worked in the home of the manager and was seen as an informant. Care should be taken to establish a communication system between management and the LHW to exclude this possibility/ perception.

One farmer involved with the project for nine years pointed out how conflict often arose during weekends when people drink heavily, leading to

'*Arguments concerning alcohol abuse − the community then accuses the LHW of thinking herself to be "better" than them …when conflict is noticed you (the farmer) must avail yourself to address it.*'

The LHWs are in a vulnerable position between management and employees – and must be supported appropriately to be able to cope. They need to be dynamic and address all ages and diverse needs – no mean feat. These problems and demands exacerbate the difficulty in replacing LHWs.

4.6.4 A process requiring perseverance

The participants recognised that this is a complex intervention needing time to show visible results, and required patience on their part. However, it was felt to be worthwhile, fostering a process of development as opposed to a 'quick-fix':

'I often thought of giving up but I'm glad we hung in there. Implementation led to an improved quality of life in 10 years' time – you have to maintain commitment ... which is more than mere support – it takes determination and believing in the goal over time.'

4.7 Empowerment of the LHW

The farmers reported being aware of personal growth in the LHW, such as increased self-confidence and self-esteem through gaining expertise in a new field. The LHW developed the ability to communicate accurate and appropriate health information at an early stage of an illness or issue, so that it could be attended to timeously.

The participants also indicated that the quality of life of the LHWs and their families '*improved noticeably*' - their homes and environs became cleaner and they started to establish food gardens, becoming role models in the community. The participants perceived that the training meant a tremendous amount to the LHWs, and that the LHWs felt important to the farm

community and management. Since the LHWs are first to be called by those in need, they need to maintain competency to cope with demands made on them:

'*The LHW training should include personal capacity development, equipping them to deal with issues of opposition and of jealousy and perhaps to deal with other problem cases*.'

4.8 Sustaining the LHW

Participants are not in a position to give the LHW all the support they needed:

'*They (LHW) need support from each other and regular meetings with each other to discuss common problems and develop their own solutions. The LHW training needs to be continuous, even during peak season. A close relationship should be fostered with the nursing sister at the local clinic by regular interaction, support and encouragement of the LHW by clinic staff on a regular basis, e.g. monthly meetings to discuss the referrals made by that particular farm*.'

The LHW requires support from the farmer and his wife, who must be adequately equipped for this. Assistance to correct poor support of the LHW on the farms could include regular team building sessions, possibly conducted by someone from outside the farm. Questions of compensation should be looked at – the LHWs put in a great deal of time and effort for little personal benefit.

4.9 How has health management changed on the farms?

Communication with the LHW increased participants' insight into health dynamics on their farms, while LHWs were able to use their increased insight to refer problems to local public health services.

One farmer said:

'*Each person on the farm receives individual attention, which has lead to a healthier workforce. Since this project was implemented two years ago alcohol and drug abuse has stopped – there has been a huge chain reaction, starting with health.*'

An area of great concern was that this intervention does not include temporary workers, the larger portion (65%) of the workforce on most farms.

All participants implementing the programme stated that their LHW had identified tuberculosis cases on the farm. Many believed that the LHW definitely identified tuberculosis earlier, including an instance where the LHW identified the two sons of the farmer as having tuberculosis. LHWs

ensured that treatment was taken as prescribed and reported cases of non-compliance to management immediately. Monthly weighing of people as a screening test for tuberculosis had often been a source of conflict though, with many not wanting to participate, especially older persons.

The real achievement would be to ensure that each person on the farms accepts responsibility for their own health − and some participants cautiously felt that this was starting to happen, thanks to the LHW intervention.

4.10 Expansion of the project

The participants felt quite strongly that the project should eventually be offered to all farms in the district:

'*Any farm with a labour force exceeding two families should implement this project. This project definitely works – and needs to be expanded to neighbouring farms.*'

The participants also realised that the:

'*LHW is going to play an increasingly important role on the farm.*'

With extensive impact:

'The project is much broader than tuberculosis only; it includes development aspects, e.g. vegetable gardening, which has changed alcohol practices. The project thus has spin-offs which result in benefits beyond the obvious, and which are only noticed later.'

The participants further argued that interaction between farms should be promoted, so that neighbouring farms unaware of the LHW intervention could be brought into the programme. The possibility of one LHW serving more than one farm should also be investigated, in view of problems in recruiting and replacing LHWs.

4.11 Specific areas of concern

The fact that temporary farm workers are excluded from this intervention was a great concern:

'*…Infectious diseases among these workers can affect the permanent staff - perhaps the labour broker (who hires the temporary workers) should employ an LHW for this purpose.*'

Another major issue is that of replacing LHWs. The sheer stress of their position and the conflict it brings caused some LHWs to leave the farms they

lived on. The available pool from which to identify a suitable LHW can be limited, especially on small farms. Two participants involved with the project for nine years said they would find replacement of the LHW difficult:

'*The LHW has developed such a level of competence that she can notice health problems from observation only*.' Participants suggested '*newly selected* LHWs, *i.e. replacements, should be able to join the training programme on an ongoing basis*.'

Another farmer shared concerns about the long-term viability of the project, in that remuneration of LHWs should be addressed. Also, if the incumbent LHW isn't in a permanent position, placing them in one should be considered in order to give the LHW the necessary status on the farm. It should also be seen to that the farmer lets the project take off and function.

One participant said that he is unable to find anyone on the farm willing to be trained and to function as an LHW since the first incumbent left three years ago. The discussion that followed confirmed that replacement of LHWs is needed. Whether it is always possible is another issue.

These participants, who had been involved in the intervention for 11 years, had no doubt that the intervention has merit. However, they emphasise that it can only be sustained if the local public health sector recognises and supports the work and commitment that farmers and LHWs put into it. The feasibility of the project also depends on the willingness of the farmers to participate. Said one:

'*The employer or owner must be completely willing to enter the programme.'*

Participants reported that only permanent farm workers benefit from the intervention in terms of ongoing health care and tuberculosis screening sessions; although LHWs do assist temporary workers when they are injured on duty.

5. DISCUSSION

In this paper we described a LHW intervention on farms that aims to deliver primary health care to farm dwellers. Qualitative research among LHWs indicated that this intervention, in which health training is provided, results in increased LHW capacity and self-esteem, but that the role of LHW is complex and requires adjustments in family and work-related relationships. As the intervention evolved, expectations of the LHWs became higher and causing them stress (Daniels *et al*, 2004). Our research has shown that this intervention is definitely effective in achieving specific objectives, i.e. tuberculosis control

on farms (Clarke *et al*, 2004 and Dick *et al*, 1997).

Farms are private property and therefore access to workers and farm dwellers by the public health sector is dependent on the consent and co-operation of the farmer.

Since 1994 farmers have to adhere to various additional export regulations, governing worker health and social well-being. By actively providing for basic health through the LHW intervention, farmers are effectively introducing a 'the triple bottom- line' in their operations. This approach represents three dynamic and interdependent lines, i.e. social, economic and environmental lines. (SustainAbility, 2004) The social concern is a requirement for farmers exporting to the European Union. The LHWs' participation in hygiene training of staff and monitoring for communicable illnesses among pack shed staff contributes to compliance with the Hazardous Analysis Critical Control (Food and Drug Administration (USA), 2000) expectations of foreign markets. The LHW programme becomes an essential component in the marketability of farm produce.

Farmers found that the LHW had become a facilitator, similar to the concept of "broker" recorded in Vietnam, where previous tuberculosis patients became "brokers", creating informal structures within their communities to advise on tuberculosis and its treatment. These "brokers" were accepted because community members felt they understood their position (Johansson & Winkvist, 2002). The LHW on the farm became first port of call for farm dwellers needing health care advice. Over time, farm dwellers began to seek health care advice at earlier stages of their illness.

LHWs enhanced communication between the farmer and farm dwellers, leading to the earlier identification and the appropriate referral of diseases and medical emergencies. Farmers have a supporting role toward their LHWs. There is an indication that the close relationship between the farmer and the LHW is sometimes perceived by the farm dwellers as favouritism, leading to jealousy among the LHW's peers.

Even though the intervention was developed and managed by the public health sector, the latter did not recognise the LHW as a member of the primary health team. This attitude results in public health staff not fast-tracking LHW referrals or requests for the replenishment of medication. Health systems failing to fast-track these practical issues undermine the effectiveness of such interventions and disillusioned the farmers.

The logical extension of a successful project like this, would be to expand the

LHWs, to include social and political advocacy in the commercial agricultural sector.

6. CONCLUSION

Farmers were positive about the concept of LHWs but indicated that initially such intervention placed an additional burden on them. For the successful implementation of an LHW intervention the farmers must be keen and committed to providing sustained support. A key issue identified by the farmers was the attitude of politicians and of public health sectors, who also need to sustain their involvement and support. The temptation to constantly change focus is not within the scope of the LHWs. Farmers recognised that this programme was financially mutually beneficial to both business and the workforce - both in a direct and indirect way.

ACKNOWLEDGEMENTS

The Department for International Development (UK) and the Medical Research Council of South Africa funded this study. We would like to thank the participating farmers for generously sharing their time and insights. We are grateful to the Boland District Municipality for permission to conduct this study. Our thanks also to Karen Daniels for participating in the initial stage of data analysis, and to Leverne Gething for editing and Cicely van Straten for proofreading the manuscript.

REFERENCES

BOLAND DISTRICT MUNICIPALITY (2003). *Tuberculosis information: Areas 6-14*. 12 May 2003.

CLARKE M, DICK J, ZWARENSTEIN M & DIWAN V (2003). DOTS for temporary workers in the agricultural sector. An exploratory study in Tuberculosis case detection. *Curationis* 26(4):66-71.

CLARKE M, DICK J, ZWARENSTEIN M, LOMBARD C & DIWAN V (2004). *Lay health workers with patient choice of DOT superior to atndard TB care systems in a commercial farming area of South Africa amidst health service contraction:: A cluster randomised control trial*. In press: International Journal of Tuberculosis and Lung Disease.

DANIELS K, VAN ZYL H, CLARKE M, DICK J & JOHANSSON E (2004). *Ear to the ground: Listening to farm dwellers talk about the experience of becoming lay health workers.* In press: Health Policy Journal.

DICK J, CLARKE M, TIBBS J & SCHOEMAN JH (1997). Combating tuberculosis – Lessons learnt from a rural community project in the Klein Drakenstein area of the Western Cape. *South African Medical Journal* 87(8):1042-1047.

DICK J, MBEWU A & MATJI R (1999). What obstacles to tuberculosis control? *South African Medical Journal* 89(2):132-133.

FAST H (1997). *Farm workers in the Western Cape: Current conditions and opinions for change.* Unpublished: Surplus People Project: 13–18.

FAVISH J & PLASKET M (1997). P*ractitioner training course for Adult Basic Education and Training*. Module 4. Pretoria: UNISA.

FOOD AND DRUG ADMINISTRATION (USA) (2000). *President Clinton announces initiative to ensure the safety of imported and domestic fruits and vegetables.* Available online at: http://vm.cfsan.fda.gov/~dms/.

JOHANSSON E & WINKVIST A (2002). Trust and transparency in human encounters in tuberculosis control: Lessons learnt from Vietnam. *Qualitative Health Research* 12(4):473-491.

JOHNSTON MP & RIFKIN SB (eds) (1987). *Health care together: training exercises for health workers in community based programmes*. London: Macmillan.

LEWIN S, DICK J, POND P, ZWARENSTEIN M, AJA G, VAN WYK B, BOSCH-CAPBLANCH X & PATRICK M (2004). Lay health workers in primary care and community health: A systematic review. *Submitted to The Lancet for publication.*

POPE C, ZIEBLAND S & MAYS N (2000). Qualitative research in health care. Analysing qualitative data. British Medical Journal 320:114-116 (8 January).

RITCHIE J & LEWIS J (eds) 2003. *Qualitative research practice. A guide for social science students and researchers*. London, UK. Sage, pp 138–198.

RÖRICH EE (2002). *An economic evaluation of the Winelands Health Worker Programme.* Unpublished Masters Dissertation, University of Stellenbosch.

SOUTH AFRICAN DEPARTMENT OF HEALTH (1996). *The South African Tuberculosis Control Programme. Practical guidelines*. Pretoria: DOH, pp i-iii.

SOUTH AFRICAN GOVERNMENT (2000). *Stats in brief 2000*. Pretoria: Government Printers, p 40.

SOUTH AFRICAN NATIONAL TUBERCULOSIS CONTROL PROGRAMME (2003). *Tuberculosis report on tuberculosis recording and reporting*. Pretoria: Department of Health.

SUSTAINABILITY (2004). *The triple bottom line.* Available online at: http://www.sustainability.com/philosophy/triple-bottom/tbl-intro.asp.

WESTERN CAPE DEPARTMENT OF HEALTH (2001). *The provincial and district HIV antenatal survey.* Cape Town: Provincial Department of Health; pp 7, 18.