



## Perceptions of childhood immunisations in rural Transkei — a qualitative study

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**Objectives.** To examine perceptions of childhood illnesses, and the role of immunisation in preventing them, among caretakers of young children in Mhlakulo, a rural community in Transkei, Eastern Cape, and to suggest reasons for the low uptake of immunisations in that area.

**Design.** In-depth qualitative research using semi-structured questionnaires, focus groups, and free listing.

**Methods.** Detailed interviews were conducted using standardised semi-structured questionnaires. Interviews involved 60 caretakers of children aged under 5 years brought to a community health centre. Interviews were followed by two focus groups and free listing interviews to validate results of these questionnaires.

**Results.** There was widespread acceptance of the value of

immunisations in preventing childhood illnesses, but only vague knowledge of why they are given, and for what illnesses. The most common knowledge was of measles and polio, but there was only limited knowledge of BCG, DPT and other immunisations. Childhood illnesses were seen as multi-causal in origin, but there was a marked absence of germ theory in explaining them. Attitudes to the use of traditional medicines in childhood were generally negative.

**Conclusions.** Despite positive perception of immunisations, there is widespread ignorance of what they are for, and how they work. This suggests the need for increased health education, more community participation, and organisational changes in primary care clinics to make them more user-friendly to caretakers of infants and young children.

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In 1974, the World Health Organisation (WHO) established its Expanded Programme on Immunisation (EPI) to increase childhood immunisation cover, especially in developing countries. As a result, global coverage of infants for the 6 major vaccine-preventable diseases rose from 5% in 1974 to 80% in 1998, including nearly 90% for BCG, but only 80% for DPT3, measles and polio.<sup>1</sup>

In sub-Saharan Africa coverage for infants below 1 year is generally lower; by 2000 the average coverage was only 46% for DPT3, and 50% for polio.<sup>2</sup> In South Africa the situation is better — for in 1998 full immunisation coverage of children aged 12 - 23 months was 63% nationally, with 67% coverage in urban areas and 60% in rural areas.<sup>3</sup> However, in the Eastern Cape in 2000, the overall percentage of children in the same age range who were fully immunised remained at 53%, although there was considerable local variation. This ranged from the more urban, affluent Health Region A (64.6%) to the poorer, more rural Region E (36.5%), while in Region D, which includes the community studied here, only 58% of 1-year-olds had been fully immunised.<sup>4</sup>

Attempts to explain the reasons for low immunisation uptake in different countries have focused on a combination of cultural, social, economic, educational and logistical factors. Heggenhougen and Clements<sup>5</sup> associated low levels of uptake with low-income status, large families, low educational level of mothers, social isolation, migrant status, and certain cultural beliefs. Other studies identified organisational or vaccine supply problems at immunisation clinics as reasons for low uptake.<sup>6,7</sup> Maternal perception and knowledge of immunisations is considered to be an especially important factor. Nichter,<sup>6,8</sup> for example, reported a marked confusion among mothers in rural communities in southern India and Sri Lanka regarding why immunisations were given, and whether these could prevent all, or only some, childhood diseases. Only a few studies, namely from India,<sup>6,8</sup> Sri Lanka,<sup>6,8</sup> Mozambique,<sup>9</sup> Burkina Faso,<sup>10</sup> Gambia<sup>11</sup> and Italy,<sup>12</sup> have included maternal and community perceptions of childhood immunisations.

Medical anthropologists have stressed the importance of understanding these local perceptions and of ensuring that immunisation programmes 'make sense' to communities in terms of their level of knowledge and their indigenous belief systems and practices.<sup>5,6,8</sup> Motivating mothers and other caretakers, educational programmes, community participation, and improving vaccine supply, are the major strategies recommended for increasing immunisation coverage within communities.<sup>5-13</sup>

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## Objectives

The aim of this study was to examine perceptions of childhood illnesses and the role of immunisations in a rural community in Transkei, Eastern Cape, and to suggest reasons for the low uptake of immunisation in that area.

## Methods

The study was carried out in December 2002 in the paediatric section of Mhlakulo Community Health Centre, Transkei. The clinic is situated in a rural, low-income area of scattered homesteads and subsistence farms, about 30 km from Umtata. A random sample of 60 Xhosa-speaking women, each identified as the main caretaker and decision-maker of a child under 5 years who had been brought to the health centre, were interviewed using a standardised semi-structured questionnaire. Forty-four of the women were the child's mother, 11 the grandmother, 3 an aunt, 1 a great-grandmother, and 1 a sister. Their mean age was 31.2 years. Forty-four of them were married, 12 single, 3 cohabiting, and 1 a widow. Thirty-eight had secondary school education, 13 had primary schooling only, 6 had college education, and 3 were uneducated. The majority of the women (47) were unemployed. Forty-one of the children were male, and 19 female; 50 were aged less than

1 year, and the mean age of the sample was 7.5 months.

Interviews were conducted at the clinic by a trained, Xhosa-speaking research assistant. The questionnaires examined in detail the women's knowledge, attitudes and beliefs about childhood illnesses in their community, and the role of immunisations in preventing them. Answers to the questionnaires were transcribed, translated into English, and the content analysed by both researchers to reveal common themes.

A second stage was conducted in April 2003 to validate the findings of these 60 interviews. Two focus groups (8 and 9 participants, respectively) from another random sample of caretakers of children under 5 were carried out at the Mhlakulo Health Centre by one of the authors (PY) and a translator, to further explore caretaker perceptions of childhood immunisations. After that, a further sample of 18 caretakers were asked to do a free listing, i.e. to list all the childhood illnesses in their community, their degree of severity, and how they would recognise these diseases in their children. They were then asked to mark, on a printed outline of the human body, where these diseases were located. These answers were also transcribed, translated, and analysed, and then compared with answers to the questionnaires to identify themes common to them all.

## Results

### Knowledge of childhood illnesses

When asked 'What illnesses do children under 5 get?', the

caretakers most commonly mentioned measles (*imasisi*) ( $N = 35$ ) and polio (*ipolio*) ( $N = 26$ ), followed by cough (*ukhohlokhohlo*) ( $N = 16$ ), high temperature (*ubushushu*) ( $N = 14$ ), abdominal pain (*amahlaba*) ( $N = 14$ ), diarrhoea (*ukuhambisa*) ( $N = 13$ ), tuberculosis (TB) (*isifo sephepha*) ( $N = 9$ ), cramps ( $N = 8$ ), tetanus (*umqala omhlophe*) ( $N = 7$ ), rash ( $N = 6$ ), and vomiting ( $N = 4$ ). Conditions mentioned only 1 - 3 times included kwashiorkor, worms, loss of appetite, skin problems, 'tight chest', malnutrition, 'tonsils', body swelling, weakness, 'flu, HIV, abnormal lower limbs, boils, chest pains, eye problems, immunisation problems, and 'don't know'.

This disproportionate knowledge of measles and polio compared with knowledge of other childhood illnesses was later confirmed by free listing. Of 18 women asked to list 'all the illnesses that children under 5 suffer from', 16 listed polio and measles, while there were only 6 listings of TB and whooping cough (*unkonkonko*), 4 of tetanus and diarrhoea, and 2 each of cholera (*utyatyaza*), flu, 'malaria', and 'HIV'. Asked to rank them in order of seriousness, 13 of 18 listed polio and measles as the most serious. When asked to mark, on a standardised outline of the human body, where these two diseases were located, the most accurate degree of localisation was for polio, where limbs and joints were clearly marked, and measles, where the entire body was marked (several women described it as a 'blood problem', and hence a generalised condition). Our hypothesis from these findings is that the high recognition of polio and measles is because of the clear visual impact of their physical signs (paralysis or rash), compared with other diseases.

### Causes of childhood illnesses

In answering the question: 'What causes each of these illnesses?', 21 of the caretakers blamed the lack of immunisations, while other factors also mentioned included 'dirt' ( $N = 12$ ) — such as 'dirty food', 'dirty water', and 'dirty home environment'; inadequate food ( $N = 10$ ); bottle-feeding ( $N = 10$ ); cold or damp weather ( $N = 7$ ); 'don't know' ( $N = 7$ ); 'maternal factors' ( $N = 5$ ) — such as mother's 'lack of antenatal immunisations', 'mother unhappy during pregnancy', and 'mother's bad nutrition during pregnancy'; and heredity ( $N = 1$ ). With only 1 exception ('illness is due to flies which leave germs') there was no mention of bacteria or other micro-organisms as a cause of childhood infections. Such multi-causal explanations for illness are characteristic of lay health beliefs, and have been reported from many different countries.<sup>14</sup>

### Prevention of childhood illnesses

Forty-five of the caretakers (75%) believed that these common childhood illnesses could only be prevented by immunisations, given at the clinic 'at the right time'. However, other preventive factors mentioned include proper feeding ( $N = 7$ ), proper maternal care ( $N = 4$ ), and the child being looked after by its own mother (and not by another caretaker) ( $N = 1$ ). Only 3 women thought these illnesses could not be prevented.



Fig. 1 lists answers to the question: 'What illnesses are children immunised against?' Again, the highest knowledge was of polio ( $N = 40$ ) and measles ( $N = 35$ ), followed by TB, tetanus, 'cough' (*ukhohlokhohlo*) (which may possibly overlap with pertussis or *unkonkonko*), 'BCG', 'DPT', and other conditions. None of the sample mentioned hepatitis B or haemophilus infections. Significantly, both BCG and DPT were listed as 'illnesses' that could be prevented by immunisation. None of the caretakers knew what 'DPT' or 'BCG' stood for. In particular, there was considerable confusion about BCG — in the focus groups, 1 woman thought that 'it prevents BCG disease', another that 'it immunised the child against all diseases', while others thought that it prevented TB, measles, polio, or chickenpox.

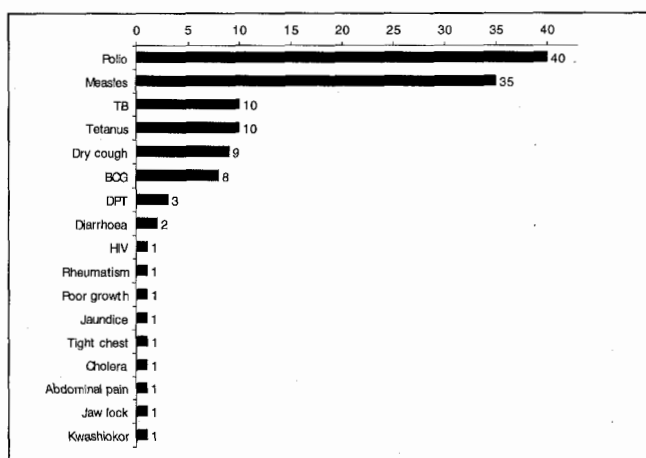


Fig. 1. Illnesses mothers thought that children are immunised against.

Caretaker perceptions of which childhood illnesses are preventable by immunisations therefore, matched, their perceptions of which childhood illnesses occurred most commonly in their community.

### Attitudes to immunisations

The overall attitude towards immunisations (*izitofu*) in the questionnaires was positive. Of 60 caretakers, 58 thought they were useful, although 13 thought they may sometimes be harmful, especially if the child is 'weak' ('If the child is a weak child, then she must not get immunisation'), or ill ('A child who is sick will become worse if immunised'). To some extent this contradicts their belief that some children can be 'strengthened' by immunisation. It would seem that immunisations are believed to help some 'weak' children, but to make others worse, although the reasons for this are not clear. When asked whether there were other ways to prevent the commonest illnesses (polio and measles), 55 said there were not.

No clear differentiation was made between immunisations

preventing and 'treating' childhood illnesses, for these were seen as overlapping processes ('they treat diseases. It's protection for the child'). Immunisations were said to act either by 'strengthening' a child ('he will grow up strong'), preventing him getting ill ('the child becomes less vulnerable to illness'), and even by 'treating' an already sickly child ('I notice that when I gave birth to him he was not so well, but after receiving immunisations there was a difference'). This confusion between treatment and prevention, reported from other countries,<sup>6,8</sup> may be related to the widespread belief in the developing world that injections are always a form of 'treatment', rather than of prevention.<sup>15</sup> Thus they are thought to be appropriate for a sick child, but not necessarily for a healthy one.

### Vulnerability to childhood illnesses

Answers to the question 'Do some children get ill more than others? If so, why?' indicated that explanations for vulnerability to childhood illness were multi-causal. Although 21 caretakers answered 'don't know', the others listed lack of immunisations ( $N = 27$ ); malnutrition ( $N = 27$ ); poor maternal care ( $N = 18$ ) — including mothers who were described as 'alcoholic', 'ignorant', 'over-protective', 'lazy', 'not breast-feeding', 'feeding the child from a dirty bottle', or 'not keeping the child warm'; bad feeding practices ( $N = 14$ ) — such as the use of tinned milk instead of breast-feeding ('you don't even know when this milk was produced or from whose cow this milk is taken. You don't even know if this milk is taken from a donkey'); a 'weak' or 'small' child, including those who were HIV-positive ( $N = 16$ ); bad weather ( $N = 6$ ); poverty, with the resultant lack of proper food ( $N = 2$ ); witchcraft ( $N = 1$ ); and disability ( $N = 1$ ).

The belief that bad mothering makes a child vulnerable to illness was confirmed by the focus groups, where responsibility was put on mothers who were 'careless', 'lazy' or 'illiterate'; who left their children with other caretakers; who were HIV-positive; 'who become deeply hurt during pregnancy with the troubles of the family'; or who became pregnant again too soon after childbirth, and then shifted their focus to the new child.

### Attitudes to traditional medicine

The questionnaires revealed that attitudes to traditional medicine (*amayeza esintu*) as an alternative to childhood immunisations were generally negative. The majority of caretakers ( $N = 43$ ) believed that traditional medicine cannot prevent childhood illnesses ('Traditional medicine is not clean enough, unlike the medicine from the clinic'), 12 caretakers thought that traditional medicine could prevent childhood illnesses, and 5 didn't know. In the focus groups, attitudes towards using traditional medicine for prevention and treatment of childhood illnesses were also negative, especially if the child was 'weak' ('if a child is weak, traditional medicine



will kill them, as the medicines are very strong').

### Reasons for not bringing a child for immunisations

This was explored in the two focus groups. The commonest reasons given for children not being brought to the clinic for immunisations included: (i) inability to afford transport to the clinic; (ii) no one available to bring the child; (iii) no one at home to look after the other children; (iv) clinics too far from home; (v) rude or unhelpful nurses or clinic staff; (vi) vaccines out of stock at the clinic; (vii) mother pregnant, and unable to walk to the clinic; and (viii) elderly caretakers, also unable to walk to the clinic. Several of these findings are similar to those of Van Turenout *et al.*<sup>7</sup> from KwaZulu-Natal.

The focus group participants also made specific suggestions for increasing immunisation uptake in the community by means of changes in clinic organisation. These suggestions (i) increased use of mobile clinics; (ii) being able to come for immunisations within a particular time frame (e.g. a week), rather than on a specific day or time; (iii) being able to get instant treatment at the clinic if the child is unwell; (iv) having the nurses attend to children brought for immunisations first, instead of their having to wait for hours in the general queue; (v) clinic staff to see the child, even if the caretaker cannot afford 50 cents (charged by some clinics); (vi) nurses to be less rude to caretakers and not shout at them ('If nurses could change their way of talking to us, be nicer and soft').

### Discussion

Although this qualitative study was based on a small and not necessarily representative sample, it does examine specific health beliefs in some detail. It reveals a widespread acceptance of the value of immunisations in preventing childhood illnesses, but only a vague knowledge of why vaccinations are given, and for what illnesses. The most common knowledge was of two diseases, measles and polio, both of which are more visually recognisable than other disorders, and of the key role of immunisations in preventing them. However, there was lack of knowledge about other childhood immunisations, especially BCG and DPT, as well as of Hib (*Haemophilus influenzae* type B) and hepatitis B. There was also limited knowledge of the causation of childhood illnesses, including a marked absence of germ theory, although a 'dirty' environment was often blamed. There was also confusion about the exact mechanisms whereby immunisations protect children from these illnesses — whether they 'strengthened' the child, making him or her less vulnerable to illnesses, or whether they were actually a form of 'treatment' for 'weak' children. However, all caregivers were well aware of other social, environmental, and economic factors that could protect their children against illnesses, including breast-

feeding, a good diet, a cleaner environment, better maternal care, and a higher income. Some caretakers believed that immunisation might be suitable for some children but not for others, especially those who were 'small' or 'weak' from birth.

The study revealed no evidence of any specific cultural barriers to immunisation uptake, and traditional medicine was rejected for both the prevention and treatment of childhood illnesses.

The findings of this qualitative study need to be tested on a much larger sample in the future.

### Conclusions

In this sample from a rural Transkei community there appears to be widespread acceptance of childhood immunisations, especially for polio and measles, but ignorance about what immunisations are for, how they work, and which illnesses they prevent. This suggests the need for increased health education, more community participation in vaccination programmes, as well as organisational changes in primary care clinics, making them more user-friendly by increasing accessibility, allowing adults accompanying young children to be seen more quickly, and by the use of mobile clinics in rural settlements, especially where the child's main caretaker is pregnant, elderly, or unable to come to the clinic.

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