Different use of medical terminology and culture-specific models of disease affecting communication between Xhosa-speaking patients and English-speaking doctors at a South African paediatric teaching hospital

M E Levin

Background. Language and cultural differences between patients and health care providers may have adverse health consequences. Red Cross War Memorial Children’s Hospital is a paediatric teaching hospital in Cape Town where staff communicate mainly in English or Afrikaans, while many patients speak Xhosa as their first language.

Objectives. To examine whether differences in the definitions of common respiratory medical terminology by patients and doctors cause miscommunication and to explore culture-specific models if used by parents in their definitions.

Design. In-depth, semi-structured interviews were conducted with three speech communities, viz. 8 English-speaking doctors and 33 Xhosa-speaking parents, educated to grade 12 level or less and recruited from two areas in the hospital, the short-stay ward (Xhosa s-s) and the allergy clinic (Xhosa allergy). The sum of both groups of Xhosa-speaking patients are referred to as ‘Xhosa all’. Definitions were elicited for common respiratory terminology in both Xhosa and English. Contrastive linguistic analysis was used to identify the semantic properties for each group in order to condense the groups’ definitions into representative ‘core definitions’. Differences in the definitions of terminology were identified and words were classified as concordant (used in the same way) or discordant (used in different ways) by the three speech communities.

Results. Patients experience difficulty in understanding terms used by doctors and words in common use were understood differently by these two groups. Most Xhosa words were not in the doctors’ vocabulary, and some common English words were not in the parents’ vocabulary. Where words were in the vocabulary of both groups, significant differences existed in the number and range of definitions, with many clinically significant discordances of definition being apparent. Some common examples relevant to paediatric respiratory problems are presented. Three culture-specific explanatory models of respiratory illness, ingqele, xakaza and idliso, are illustrated.

Methodology

Semi-structured interviews were conducted with subjects in three groups: 8 English-speaking doctors (Doctors), 17 Xhosa-speaking parents whose children were admitted to the short-stay ward for chest disease (Xhosa s-s) and 16 Xhosa-speaking parents of children attending the allergy clinic for asthma.
Results

Differences were found in the frequency with which the three groups attempted any definition of the words at all. Very low (significant) *p*-values (*p*-value of Doctors to Xhosa-all parents < 0.002) were found for the Xhosa words set out in Table I, showing that very few doctors are aware of any of these Xhosa words and were unable to attempt any definition as they are not in the doctors’ vocabulary.

Very low (significant) *p*-values were found between doctors and parents for the English words in Table II, which were not in the parents’ vocabulary.

The *p*-value for the word ‘wheeze’ comparing doctors and parents is very low, showing that very few parents compared with doctors attempted a definition of the word ‘wheeze’. There is no significant difference between the number of respondents attempting to define ‘wheeze’ when the two groups of Xhosa-speaking parents are compared (*p* = 0.39). This surprising result means that the word ‘wheeze’ is not recognised or understood by either group of Xhosa-speaking parents, even those with prior exposure to the word from their attendance at the allergy clinic.

The *p*-value for the words ‘tight chest’ is significant, and in addition the *p*-value of 0.016 comparing the two groups of Xhosa-speaking parents represents a significant difference. Parents from the short-stay ward were far more likely to be unable to define the words than parents from the allergy clinic (11 out of 14 compared with 3 out of 12). When the two groups are compared separately with the doctors, a significant *p*-value is only found with the short-stay ward group. This signifies that there is an important difference between the parents from the short-stay ward and the other two groups (doctors and parents from the allergy clinic), with parents from the short-stay ward being significantly less able to offer a definition of the words ‘tight chest’ when compared with the other two groups.

For the words in Table III there was no significant difference in the frequency with which groups were able to offer a definition.

Most of the words that all groups attempted to define were English words. Only two Xhosa words were attempted by most doctors. Even where words were in both groups’ vocabulary, significant differences existed in the range of definitions, with many clinically significant discordances of definition. Selected examples of discordant definitions are given below.

Overlapping sense relations or different senses in the word when used by doctors and patients

**Isifuba**

The word ‘isifuba’ had three different senses when used by parents. It describes the anatomical chest, and a constellation...
of signs and symptoms signifying chest disease, and is a specific disease name for a chest illness, which does not invariably correlate with a medical diagnosis of asthma. Doctors should not use the word isifuba as a disease name for parents as it does not comprise adequate explanation or counselling. In particular, isifuba should never be used as a synonym for a medical diagnosis of asthma. The word ‘asthma/isema’ was inconsistently defined by parents, with only a minority including the semantic properties that doctors would consider necessary for a diagnosis of medical asthma. Therefore Xhosa-speaking parents who say their children have ‘esma’ should be further interrogated to see if this is medical asthma or simply a sobriquet for a generic chest disease. Similarly, a medical diagnosis of asthma will need full explanation and counselling. Because some parents state that ‘isifa’ be should be further interrogated to see if this is medical asthma or simply a sobriquet for a generic chest disease.

**Table III. Words defined by both parents and doctors**

<table>
<thead>
<tr>
<th></th>
<th>Doctors/Xhosa all</th>
<th>Xhosa allergy/Xhosa s-s</th>
<th>Doctors/Xhosa allergy</th>
<th>Doctors/Xhosa s-s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheeze</td>
<td>0.0004</td>
<td>0.39</td>
<td>0.24</td>
<td>0.001</td>
</tr>
<tr>
<td>Tight chest</td>
<td>0.01</td>
<td>0.016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Different degrees of technological explanations of the ‘same’ word

The definitions of some words differed in that they represented the ‘same’ model of disease but with a different degree of technological explanation. For example, the word ‘infection’ was defined by doctors as ‘A disease caused by micro-organisms entering the body’ or ‘The foreign micro-organisms that enter the body to cause disease’. Parents defined ‘infection’ as ‘a disease contracted from someone else’. ‘Germs’ was defined as ‘An organism such as a virus or bacteria that enters the body from outside and causes disease’ by doctors, and as ‘Things obtained from dirty places or via food’ by parents. Counselling for infectious diseases therefore needs to be more thorough if physicians are to achieve a more complete explanatory model that persuades the patient to adhere to their treatment regimens. In the following quotations translated from interviews held in Xhosa, words that are not translated from the original are in bold type. They illustrate the explanatory model of infectious diseases held by a sample of Xhosa-speaking parents.

Q: **What about infection?**
A: I wouldn’t be able to explain it. If a child has isifuba and is X-rayed, the X-ray is going to tell one that the child has infection. They often say they see an infection someplace, so I want to know what is an infection and they say that they also can’t explain what it is but it’s something they see which is internal.

Q: **Do you know how it comes by?**
A: It depends. You get some from the water, it varies. **Cholera** is begotten from unclean water.
Q: **Germs.**
A: **It’s a virus.**
Q: **Infection?**
A: I think it’s the result of, I would say it’s the result of the particular virus one has.
Q: **So you are first entered by the virus and then what does the virus do?**
A: When it gets into your body it changes and becomes an infection.
Culture-specific models of disease

Discrepancies between parents’ and doctors’ explanatory models were exposed in the definitions of certain terminology. Three major explanatory models were raised, ingqele (the cold that enters the body to cause disease), xakaxa (mucus present at birth if not removed accumulates to cause childhood chest disease) and idliso (poisoning via food).

**Ingqele**

The parent’s models of pneumonia differed markedly from those of doctors, with focus on ingqele (‘cold’) as an aetiological factor for pneumonia. Ingqele enters the body and settles in the lungs through exposure to the cold environment or from drinking cold beverages. Ingqele may be acquired during pregnancy and passed on to one’s unborn child. For Xhosa-speaking parents, the two core senses of pneumonia are ‘The cold that enters a person to cause disease’ and ‘The disease that one acquires when one is entered by cold that enters a person to cause disease), xakaxa or body pain as a corrective procedure, and are used as an expectorant to relieve the chest by clearing the air passages. Even diseases like tuberculosis can be ‘caused by a poison inside’.

**Discussion**

Language and cultural barriers cause significant difficulties for Xhosa-speaking parents of children at Red Cross War Memorial Children’s Hospital. Most of the Xhosa words studied were not in the doctors’ vocabulary, and some common English words, such as ‘tight chest’, ‘wheeze’ and ‘shortness of breath’, were not in the parents’ vocabulary. These words should therefore be avoided, or explained in full with the aid of an interpreter. Where words were in both groups’ vocabulary, significant differences existed in the definitions, with many clinically significant discords of definition being clear. Culture-specific explanations of disease accounted for much of the discordance in definitions between Xhosa-speaking parents and English-speaking doctors.

Interpreters should be made more widely available, and doctors should be educated in how best to utilise their services. Doctors should learn basic greetings and questions in African languages, and learn more about patients’ culture and models of illness. Jargon terminology should be avoided or used with full explanation aided by an interpreter.

The word ‘isifuba’ should be avoided as a disease name. The word ‘asthma/i-esma’ should be explored further if used by a patient to determine whether it refers to any generic chest disease or symptoms or to a specific chest disease. This chest disease may not be compatible with a medical diagnosis of asthma. If the word ‘asthma’ is used for counselling a patient about asthma, full explanation will be needed, and it may be useful to refer to ‘isifuba se-esma’. Words referring to ‘respiratory distress’ include ‘ukumintsa’, ‘iphika’ and ‘ukukalela kwesifuba’. The word ‘fever’ as used by English-speaking doctors is not equivalent to the word ‘i-fiva’ used by Xhosa-speaking patients, and should be avoided. ‘Ushushu’ may be used to refer to a raised body temperature.

**Conclusions**

A frequently updated systemic study of the use of medical language by Xhosa speakers needs to be compiled and taught to health workers in order to improve communication and ultimately the quality of care for patients. In addition health workers should be aware of common culture-specific models of illness in order to effectively negotiate a shared explanatory model that will improve their relationships, communication and patients’ adherence to medical advice and treatment.
References


Accepted 11 August 2006.