percentage actually have their husbands present at their deliveries.

Reasons underlying the preference for the husband's presence need to be further explored, before it is assumed that the reasons expressed by many Western women—companionship and shared experience—apply to Pedi women as well.

The financial assistance of the Human Sciences Research Council is gratefully acknowledged. Opinions expressed are not necessarily those of the HSRC. Thanks are due to Dr M. Mphahlele, Secretary of Health and Welfare, Lebowa, and Drs Beukes and Van den Heever, Superintendents of the Soweto Community Health Centres and Baragwanath Hospital, for permission to conduct this study.

REFERENCES

Material constraints at rural clinics in Transkei

G. SOLLEDER

Summary
A 1-day survey of a random sample of rural government clinics in Transkei was conducted in order to assess the existence, magnitude and distribution of material constraints which impair the proper functioning of comprehensive community-based health services. Information on the availability of 50 material requirements was obtained from questionnaires completed by professional nurses in charge of clinics; these requirements included physical structures, equipment, logistics, medicines and other disposable supplies. Each measurement was given a score depending on its relevance towards three groups of primary health care services, namely care for mother and child, promotion of community health in general, and treatment of minor ailments, emergencies and long-term medication. The results show that material constraints exist at all clinics and that they are substantial at the majority of clinics. The three groups of services are affected, promotion of community health in general being more impaired than the other two. In addition each requirement was assessed separately and the effects of its non-availability were evaluated. Recommendations as to how these constraints can be remedied through short-term intervention or long-term planning are made.

Department of Health, Umtata, Transkei
G. SOLLEDER, STATE EXAMINATION GERMANY, M.D., D.H.S.M.
TABLE I. SCORING OF RCs IN RESPECT OF MATERIAL REQUIREMENTS FOR PHCs

<table>
<thead>
<tr>
<th>Scores obtained in %</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Weighted scoring for all services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of clinics</td>
<td>%*</td>
<td>No. of clinics</td>
<td>%*</td>
</tr>
<tr>
<td>Below 45</td>
<td>4</td>
<td>5,0</td>
<td>18</td>
<td>23,0</td>
</tr>
<tr>
<td>45 - 49</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 - 54</td>
<td>12</td>
<td>15,0</td>
<td>11</td>
<td>14,0</td>
</tr>
<tr>
<td>55 - 59</td>
<td>10</td>
<td>12,5</td>
<td>12</td>
<td>15,0</td>
</tr>
<tr>
<td>60 - 64</td>
<td>14</td>
<td>17,5</td>
<td>11</td>
<td>14,0</td>
</tr>
<tr>
<td>65 - 69</td>
<td>12</td>
<td>15,0</td>
<td>14</td>
<td>17,5</td>
</tr>
<tr>
<td>70 - 74</td>
<td>14</td>
<td>17,5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 - 79</td>
<td>10</td>
<td>12,5</td>
<td>8</td>
<td>10,0</td>
</tr>
<tr>
<td>80 - 90</td>
<td>3</td>
<td>4,0</td>
<td>5</td>
<td>6,5</td>
</tr>
<tr>
<td>91 - 100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>100</td>
<td>79</td>
<td>100</td>
</tr>
</tbody>
</table>

*Percentages have been adjusted to the nearest total or half.

Results

Seventy-nine questionnaires (95%) were returned; 80% were completed during the days earmarked for the survey, the others shortly before or after and this irregularity was seen as negligible. Eighty-four per cent had been checked by a supervisor, only 1 question on each 4 questionnaires remained unanswered and these were scored as ‘no’ answers. Table I displays the scores attained by the sampled RCs in respect of groups 1, 2 and 3 and the weighted score. Not one RC has all material requirements and very few reach a score of 80-90% (4%, 6,5%, 10% of RCs in respect of groups 1, 2 and 3 respectively and 2,5% overall). The mean score is 64%, 57% and 64% in respect of groups 1, 2 and 3 consultation respectively and 63% overall. A score of less than 50% is found in 5,5%, 23% and 10% of RCs in respect of groups 1, 2 and 3 respectively and in 10% overall. Scores of between 50% and 80% are fairly evenly distributed over the three groups.

As the above scores are composed from a total of 50 differently weighted measurements in respect of each clinic, an assessment was made of the contribution of each individual measurement to the material constraints. Table II indicates the availability of physical structures, equipment and services in the 79 clinics assessed; Table III provides information about medicines and other disposable supplies. The measurements are arranged in order of availability, beginning with the most restricted item.

Discussion

The limitations of a 1-day survey, the collection of data by a large number of observers, the arbitrary selection and fixing of a minimum stock in respect of disposable material requirements...
and some vague definitions, such as 'supply of water adequate for all needs', are methodological shortcomings of this study. Nevertheless, the 95% response rate achieved from a 43% sample of RCs and the similar trends for all groups of services provide reasonable confidence in the results.

The majority of RCs suffer substantial material constraints, a minority severe ones and another minority minor ones. These constraints impair all PHCSs, most severely those in group 2. Of those constraints listed in Table II, lack of water is the most severe; only 33% of RCs had sufficient water at the time of the survey. The fact that the survey was done in winter has certainly influenced this result, but the dependence of 77% of RCs on water tanks, which have to be filled by tankers in the absence of sufficient rain, leaves no doubt that the water shortage is a recurring problem. Lack of water affects all clinic services and certainly prohibits a worthwhile demonstration garden which 77% of RCs are trying to provide. The effective-ness of a demonstration garden is further impaired by the lack of garden tools in 47% of RCs. The fact that telephones were available at only 39% of RCs makes obstetric deliveries and emergencies hazardous affairs! These activities are further jeopardised by a lack of instruments for suturing episiotomies and minor wounds, available in only 44% of RCs.

The staff of only 52% of RCs indicated that they are able to reach the majority of homes in the administrative areas served. Although community members are often prepared to walk long distances, RC staff must be able to move easily around the villages in order to promote a healthy environment, and engage in postnatal care and the care of the old and the chronically sick. The availability of bus transport between 47% of RCs and the neighbourhoods they serve ameliorates the situation only partly; although details of such services were not assessed, it is well known that buses serve only a fraction of communities directly.

Less than 60% of RCs have adequate room for examination, consultation, treatment and delivery; this impairs the performance of the staff and hurts the patient's dignity as he or she is denied privacy. Most basic items of equipment are found in over 75% of RCs, a functioning scale is available in 72% and a refrigerator in 77%; these items are so important that no RC should be without them. Only 22% of RCs had sufficient measles vaccine — a shocking finding as measles is a major infant killer in Transkei. Vaccine was available for polio in 61%, diphtheria, pertussis and tetanus (DPT) in 62% and BCG in 73% of RCs; 19% had no vaccines at all and half of these had no functioning refrigerators; thus a vital component of PHCSs is lacking.

Family-planning services are also affected by lack of supplies, Depo-Provera being available in only 46%, and oral contraceptives in only 51% of RCs. Long-term medication to be collected by patients every month is sadly lacking; methyldopa was available at 38% of RCs, phenobarbitone at 51% and chlorpromazine at 53%. Several clinic nurses indicated that these drugs were supplied and dispensed by visiting medical officers; although this might work and may prevent inadequately controlled use of the drugs, it is often the case that doctor and patient do not meet as a result of transport and other problems, causing 'defaulting' of patients. It did appear, however, that the stock of isoniazid-thiosemicarbazone tablets, according to our treatment schedule still necessary for tuberculosis patients after discharge from hospital, was sufficient in 90% of clinics — a small consolation! Most items used for the treatment of so-called minor ailments, solutions for disinfection and wound treatment were sufficient in 50 - 70% of RCs. There is no lack of hydrocortisone ampoules which are seldom needed, but vacolites which may be vital were only found in 50% of RCs — either an indication that priorities are set wrongly or a result of non-use of hydrocortisone leaving the original supply untouched for long periods. There was hardly any lack of disposable supplies such as stationary, suture material, syringes and needles.

Conclusions

The study has proved that material constraints exist at RCs in Transkei. These are substantial and widespread and of such a nature that they affect all promotive, preventive and curative aspects of PHCSs at community level. This means that an essential policy goal of the Department of Health cannot be properly met. Community members become dissatisfied, particularly those who are well disposed towards clinic services; some will seek help elsewhere, some will go without; those who depend on long-term medication are likely to 'default' and the most needy ones will be hardest hit. Clinic staff become frustrated, particularly those who are well motivated
towards community health care, while the less motivated staff members have an easy excuse for not making an effort. In addition, the situation is uneconomical, as on the one hand clinic staff who cannot function fully have to be paid, and on the other, expenses increase for hospitalisation of patients whose condition could have been prevented or treated at clinic level.

The situation calls for remedial action through long-term planning and short-term organisational measures. The following recommendations must be pursued: (i) a borehole and pump must be installed at each existing RC without a permanent water supply and no new RCs must be erected without such provision being made; (ii) pressure must be exerted on the responsible authorities to speed up the institution of a radio communication system to replace inadequate telephone services, as planned some time ago; (iii) RCs must be erected within easy walking distance of the communities and more effort must be made to find the necessary finances to upgrade minor, so-called tribal roads and introduce public minibuses—services which would be of help, particularly in areas of low population density; (iv) adequate room must be provided in new RCs, some of the existing ones will have to be completely replaced and others will have to be enlarged; (v) an immediate effort must be made to provide all missing items of essential equipment; (vi) factors likely to contribute to the lack of medicines and vaccines — transport difficulties, shortages at central medical stores, unwise distribution and others — must be fully assessed and remedied through better organisation and the situation must be carefully monitored in future; and (vii) a repeat survey should be conducted in 2 years’ time to evaluate the effects of remedial action.

I thank the clinic staff for their co-operation, Professor John Gear of the Department of Community Medicine, University of the Witwatersrand, for advice, and the Secretary-General for Health, Transkei, for permission to publish.

REFERENCES

Mortality figures in a rural hospital
W. B. BARENDREGT

Summary
The causes of death in a rural hospital in Bophuthatswana were recorded in 1983, 1984 and 1985. Several preventable conditions were found to be the most common causes of death in adults and in children.

Little is known about mortality profiles for blacks in the RSA, especially in the independent homelands.1,2 There is no central statistical service registering all deaths. Figures are, however, particularly important for public health planning.1,2 In our community hospital an attempt was made to obtain mortality rates in a rural area in Bophuthatswana by analysing all deaths which occurred in our hospital in 1983, 1984 and 1985. A disadvantage of this analysis is of course the limited value in defining mortality profiles in the community itself, but the analysis may be useful in pinpointing priorities both for the community and the hospital. Gelukspan Community Hospital has 600 beds for general and tuberculosis patients and admits nearly 10 000 patients a year. It serves a population of 87 000 people and acts as a referral hospital for surrounding areas of the RSA.

Methods
Deceased patients’ bedletters were analysed to get a final diagnosis, usually the main diagnosis of the doctor who treated the patient. Autopsies could not always be done, even in doubtful cases. Excluded from the figures are patients who were dead on arrival at the outpatient department and patients who died in referral hospitals.3 Patients referred to our hospital from other districts and from the RSA were included.

Results
We had 434 deaths in 1983, 347 deaths in 1984 and 367 deaths in 1985. Table 1 shows the most important causes of death in men and women in 1983, 1984 and 1985. Acquired cardiovascular disease was mainly cardiac failure, frequently without specification of the primary cause. Cerebrovascular accidents were usually seen in hypertensive patients. ‘Other pulmonary disease’ refers mainly to infectious pulmonary disease such as bronchopneumonia, bronchiectasis or empyema. Carcinoma in women was most commonly gynaecological (cervix); in men the largest numbers were of oesophageal, primary liver and primary lung carcinomas. A number of cancer patients were discharged from hospital after establishing

---

**Gelukspan Community Hospital, Radithuso, Bophuthatswana**

W. B. BARENDREGT, ARTS EXAMEN (NEDERLAND) (Present address: Department of Surgery, St Radboud Hospital, Nijmegen, The Netherlands)