

# Health status of hostel dwellers

## Part II. Infant mortality and prevalence of diabetes, hypertension and syphilis among adults

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### Summary

The range of biomedical criteria selected to measure the health status of the residents of the urban migrant council-built hostels of Langa, Nyanga and Guguletu were investigated in a single survey. A single survey method screens health status and provides the opportunity to examine the interrelationship between findings on the different health criteria. Here a high infant mortality rate is examined against a low prevalence of diabetes, hypertension and syphilis and some of the effects of migrant labour on the health status of migrant hostel dwellers are identified. The low prevalence of disease among the Cape Town hostel residents suggests that migrant labour, by sifting out the able-bodied and employable, reproduces a 'healthy worker effect' among the migrant population with access to the city. The high infant mortality rate, in contrast, suggests that the disease burden of the migrants is being carried by the home-base population.

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A health status survey of the residents of the council-built hostels of Langa, Nyanga and Guguletu was carried out during October - November 1987.<sup>1</sup> Health status was measured on the basis of a number of criteria that were appropriate to the demographic profile of the migrant hostel dwellers and the impoverishment, both material and physical, of the hostel social situation.

A screen for health status in a single survey provides an overview of health status. It provides an unusual opportunity for an additional level of analysis that goes beyond the examination of the relationship between variables to examine the relationships between findings in the different health criteria. This article examines the infant mortality rates against the prevalence of hypertension, diabetes and syphilis, which were some of the range of health criteria investigated in this study. The infant mortality rate and prevalence findings show certain contradictions in terms of basic concepts of health.

The concept of health adopted in this study draws on a number of conceptualisations. Conceptualisations of health vary considerably from the basic biomedical definition of 'absence of disease' to the World Health Organisation's Utopian ideal of 'complete mental, physical and emotional well-being'.<sup>2</sup> The investigation of prevalence, the presence or absence of disease, is clearly biomedical. The WHO definition of health has been criticised as unrealistic, vague and ambiguous.<sup>3,4</sup> Yet it is useful, for it implies that health status is more than a single measure. It is an interrelationship between a number of criteria. A more practical view of health considers it as the *modus vivendi* of a social group,<sup>3</sup> the way in which people use

resources available strategically in given social situations to maintain health and prevent disease.<sup>5</sup>

Health as social action underpins the definition of the study population, the hostel dwellers, as oscillating migrant labourers. The home-base population in the eastern Cape is dependent on the cash earned in Cape Town for basic physical survival and therefore health.<sup>5,6</sup> The interdependence of the home and working dimensions of a migrant population is borne out by remittance arrangements and by demographic and movement patterns.<sup>6</sup>

Mobile or migrant populations in general present certain problems for epidemiological research.<sup>7</sup> Definition by geographical location alone is problematical. It is expensive and time consuming to research mobile populations across the home and workplace dimensions of their oscillating lifestyle. For logistical purposes the research on these divided populations tends to be carried out in one or other of the geographical locations. The research is designed to allow the health status of the broader population to be inferred from research carried out in a single geographical area.

The working concepts basic to the research design of this project have been described.<sup>1</sup> With regard to the criteria selected to measure health status,<sup>1</sup> infant mortality rates are recognised as a measure of overall health status. These rates address health status as a process over time. For a mobile population process over time is also process over place. The infant mortality rate is thus a broader measure that addresses both workplace and home-base dimensions of the migrant hostel dwellers. Prevalence data are specific to time and place. For this study, prevalence findings on syphilis, diabetes and hypertension refer to those of the migrant population in Cape Town at the time of the survey.

Findings on the infant mortality rate for the hostel dwellers is high, implying poor health status. The prevalence of hypertension, diabetes and syphilis is low. If health is absence of disease, then prevalence findings suggest the contrary — that Cape Town hostel dwellers are healthy. This article interprets these findings against different sets of data in order to investigate the effects of migrant labour on the health status of the broader migrant population.

### Subjects and methods

The criteria selected to measure health status have been described.<sup>1</sup> This article is based on selected findings of the survey. The infant mortality data are based on questionnaire responses from women who volunteered for the survey. Women were asked how many children they had ever borne and the number of children alive at the time of the study. Those women who had had children who died were asked the child's age at death, cause of death and place where death occurred. The survey investigated prevalence of hypertension, diabetes, syphilis, tuberculosis<sup>1</sup> and 'other' conditions<sup>8</sup> by questionnaire. Adult volunteers were also screened for syphilis, hypertension and diabetes by, respectively, VDRL test, blood pressure measurement (taken with a baumanometer in the sitting posi-

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tion), and the presence of random non-fasting glucosuria. Prevalence by objective measure is reported.

The survey achieved a 3% sample of the bedhold population and 60% of this population volunteered for the health interview.<sup>1,9</sup> Health interview response was highest for Guguletu (65%), and from women (72%) and higher-income bedholds (70%).<sup>1</sup>

## Results

### Infant mortality

The crude infant mortality rate based on number of live births for this sample was 136,6/1 000 (122 deaths (0 - 1 year)  $\times$  1 000/893 live births). The rate based on the number of live births for 1986 - 1987 was 98,5/1 000 (7 deaths  $\times$  1 000/71 live births). The majority of deaths occurred in the post-neonatal period (62,3%). Mothers listed 'diarrhoea and vomiting' (22,1%) and measles (17,2%) as the major causes of death. Although the majority of infant deaths occurred in Transkei (89,3%), a minority of children are born there (31,8%).

### Hypertension

Overall prevalence of hypertension was 11,1 - 12,6% for men and 9,6% for women. Overall for those  $\geq$  50 years the prevalence was 21,2%. For men of this age group it was 20,4% and for women 24,1%. For those < 50 years of age, the overall prevalence was 5,5% — for men it was 1,3% and for women 6,9% (Table I).

### Diabetes

Overall prevalence for diabetes was 1,1% and was similar for men and women. For those > 50 years, the prevalence was 1,5% — for men in this age group 1,9%, for women 0%. For those < 50 years, the overall prevalence was 0,8% — for men 0% and for women 1,3% (Table II).

Overall prevalence for syphilis was 8,7% — for men 6,9%, for women 10,4%. Overall for those  $\geq$  50 years, the prevalence was 5,8% — for men 6,3%, for women 4,4%. For those < 50 years, the overall prevalence was 10,4% — for men 7,8%, for women 11,5% (Table III).

## Discussion

### Infant mortality

The infant mortality rates, 136,6/1 000 and 98,5/1 000, although not strictly comparable methodologically, nevertheless seem high. They are high relative to the national estimate for blacks of 94 - 124/1 000;<sup>10</sup> relative to infant mortality rates of 38,3/1 000 for the black population of the Cape Town metropolitan area;<sup>11</sup> and relative to the rates (50,57/1 000) for the black population of the peri-urban regional services region.<sup>12</sup> The rate is also well above the WHO criterion, which sets 10 - 20 deaths per 1 000 live births as acceptable for a city, and 50/1 000 for 'developing' countries.<sup>11</sup>

The infant and child mortality rates for these urban-based hostel dwellers are indicative of the material and social impoverishment commonly associated with the 'rural homelands'. The time of the majority of deaths, the post-neonatal

TABLE I. PREVALENCE OF HYPERTENSION BY OBJECTIVE MEASURE BY AGE AND SEX

Age (yrs)	Men			Women			Total		
	No.	Blood pressure		No.	Blood pressure		No.	Blood pressure	
		> 90 mmHg	%		> 90 mmHg	%		> 90 mmHg	%
$\geq$ 50	103	21	20,4	29	7	24,1	132	28	21,2
< 50	79	1	1,3	159	11	6,9	238	13	5,5
Not recorded	10	1	10,0	—	—	—	1	—	—
<b>Total</b>	<b>182</b>	<b>23</b>	<b>12,6</b>	<b>188</b>	<b>18</b>	<b>9,6</b>	<b>371</b>	<b>41</b>	<b>11,0</b>

TABLE II. PREVALENCE OF DIABETES BY OBJECTIVE MEASURE BY AGE AND SEX

Age (yrs)	Glycosuria > +, men			Glycosuria > +, women			Not recorded	Glycosuria > +, total		
	No.	$\geq$ +		No.	$\geq$ +			No.	$\geq$ +	
		%	%		%	%				
$\geq$ 50	105	2	1,9	28	0	0,0	0	133	2	1,5
< 50	82	0	0,0	149	2	1,3	5	236	2	0,8
<b>Total</b>	<b>187</b>	<b>2</b>	<b>1,1</b>	<b>177</b>	<b>2</b>	<b>1,1</b>	<b>5</b>	<b>369</b>	<b>4</b>	<b>1,1</b>

TABLE III. PREVALENCE OF SYPHILIS BY OBJECTIVE MEASURE BY AGE AND SEX

Age (yrs)	Men			Women			Total		
	No.	VDRL		No.	VDRL		No.	VDRL	
		+ve	%		+ve	%		+ve	%
$\geq$ 50	80	5	6,3	23	1	4,4	103	6	5,8
< 50	51	4	7,8	131	15	11,5	182	19	10,4
Not recorded	0	0	0,0	0	0	0,0	2	0	0,0
<b>Total</b>	<b>131</b>	<b>9</b>	<b>6,9</b>	<b>154</b>	<b>16</b>	<b>10,4</b>	<b>287</b>	<b>25</b>	<b>8,7</b>

period, and the causes, also suggests social conditions of rural poverty to be the factor determining the high rate.<sup>13</sup> But by geographical location and by bedholders' average length of stay in Cape Town (26 years),<sup>14</sup> hostel dwellers may be considered 'urban'. Further, while the majority of infant deaths occurred in the rural areas, a minority of hostel children are born there.

Parents in the hostels prefer their children to be born in Cape Town where they feel assured of competent and easily accessible care should there be a problem at delivery (it should not be overlooked that these migrant mothers experience the tragedy of high infant mortality first hand; they will do everything possible to prevent it).<sup>5</sup> But within the first few months after delivery women must return to their rural responsibilities, which include maintaining a home-base for a population for whom permanent urban settlement is curtailed by government policy.<sup>6</sup> Children born in Cape Town succumb to the hazards of rural Transkei/Ciskei poverty, as is evident in the high post-neonatal mortality rate. Despite the urban-base of the hostel dweller, an enforced oscillation prevents improvements in overall health status, as identified by a drop in infant mortality rates, which are known to accompany permanent urban settlement.

### Disease prevalence

The failure to achieve the target sample makes statistical significance of the prevalence of hypertension, diabetes and syphilis difficult to determine. Although a number of epidemiological studies are under way at present, there are few recent surveys that can provide useful comparisons. This 'Discussion' examines these findings against earlier studies.

### Hypertension

A single blood pressure reading recorded by mercury sphygmomanometer and a diastolic pressure of > 90 mmHg is not strictly diagnostic of hypertension<sup>15</sup> but it serves as a broad screen. Thus overall hypertension was not high (11%) among hostel dwellers, although the older age group reflected world-wide figures. World-wide it is estimated that 15 - 20% of people are afflicted with hypertension.<sup>16</sup> Our findings in the older age group (21,2%) were also more in line with southern African findings. In southern Africa, studies claim that 20% of whites and 25% of blacks have hypertension.<sup>17-20</sup> However, these findings are not easily compared because of the definition of the research population.<sup>1</sup> Hypertension has been found to be low among rural dwellers but high among urban blacks; among urban blacks > 50 years half are said to suffer from the condition; migrant labourers have been found to have a higher diastolic blood pressure and a higher death rate from hypertension.<sup>20</sup>

### Diabetes

Glucosuria is also not strictly diagnostic of diabetes but is widely used as a screening measure. Prevalence, on screening among hostel dwellers (1%) reflects that of the general population of Western countries (0,5 - 1%).<sup>21</sup> In comparison with South African survey findings, diabetes among hostel dwellers is lower than that for whites — 3,6%; for blacks — 4,1%; for Indians in Cape Town — 19,1%; and Cape Coloureds — 10,7%.<sup>22</sup>

A low prevalence of diabetes among impoverished urban hostel dwellers may be due to response rates.<sup>1</sup> Otherwise these findings are difficult to explain on the basis of earlier surveys. Diabetes is said to be a disease of affluence but in urban societies it is not necessarily more common in a richer com-

munity than in a poorer one, unless poverty is accompanied by actual deprivation of calories.<sup>21</sup> Findings show that hostel dwellers' diets are largely carbohydrate based, but more varied and more frequent<sup>8</sup> than in a 'rural' migrant situation.<sup>5</sup> The incidence of diabetes is also said to increase with age. Although hostel men are on average older than the women, the prevalence of diabetes is similar for both sexes.

### Syphilis

Syphilis is not notifiable and attendance figures for Cape Town City Council clinics, while not a true measure, are the only indications of prevalence available. Attendance figures for venereal disease total 2,6% of Cape Town's population; attendance figures for all types of sexually transmitted diseases total 3,2%.<sup>23</sup> These attendance figures are estimated to represent about 20% of total prevalence.<sup>23</sup> Syphilis in hostel dwellers is thus also relatively low in comparison with estimates for Cape Town.

### Final remarks

The low disease prevalence as against the high infant mortality rates in the context of migrant labour suggest that urban hostel dwellers with direct access to cash-wage earnings are the 'healthy survivor population' of the system that selects access to the urban areas. The healthy, as evident in a low prevalence of disease, are employable, can renew contracts and return to the urban workplace. The sick, the unemployed, the unemployable and the elderly are returned or remain in the 'rural' homelands, the health status of which are reflected in the infant mortality data.

Hostel dwellers are not representative of the larger migrant population. As in the 'healthy worker effect',<sup>24</sup> hostel dwellers have less disease. Furthermore, urban migrant hostel dwellers relative to township residents are not experiencing the improvements in overall health status which are recognised to accompany permanent urban settlement.

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