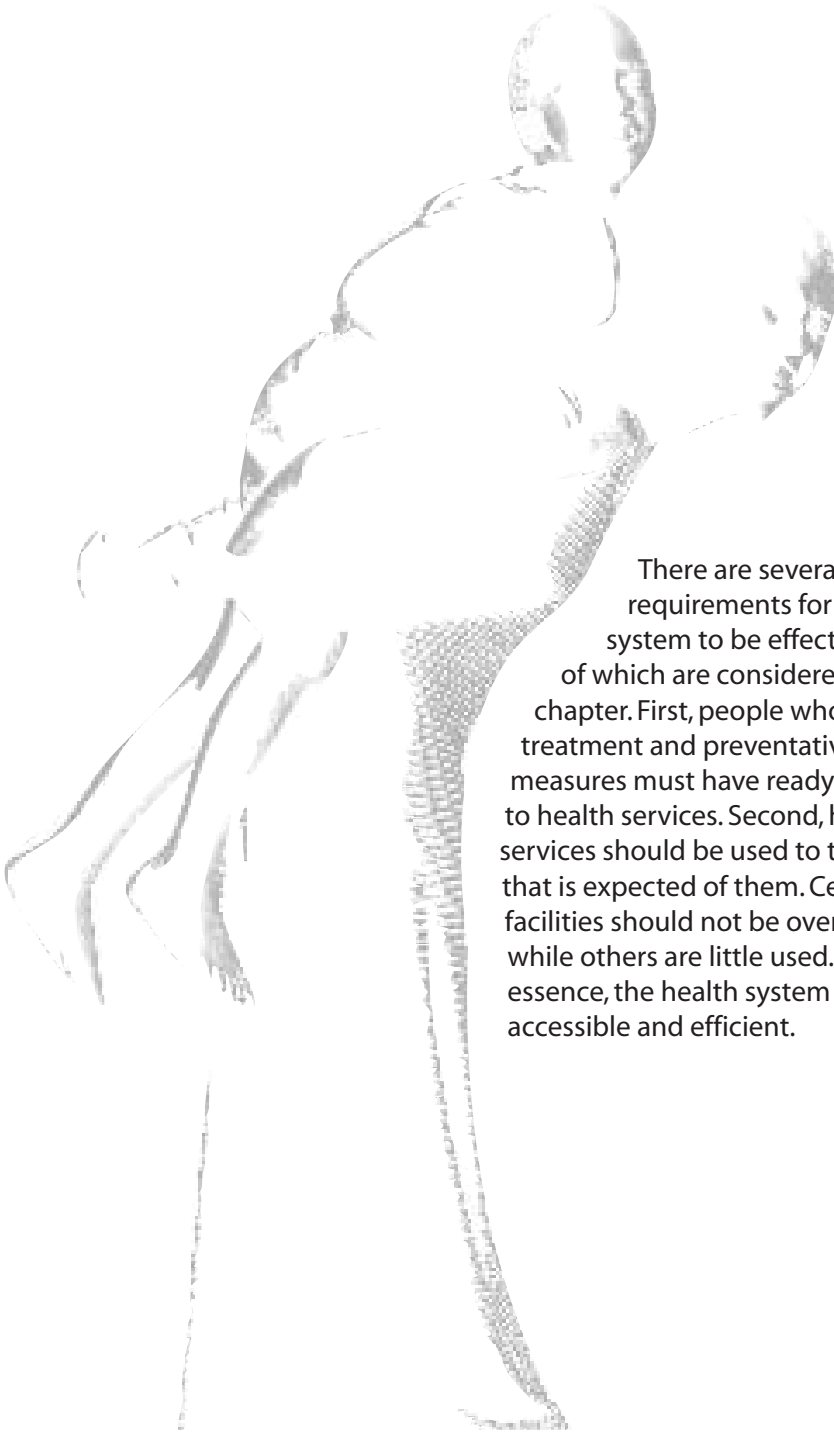


## Chapter Three



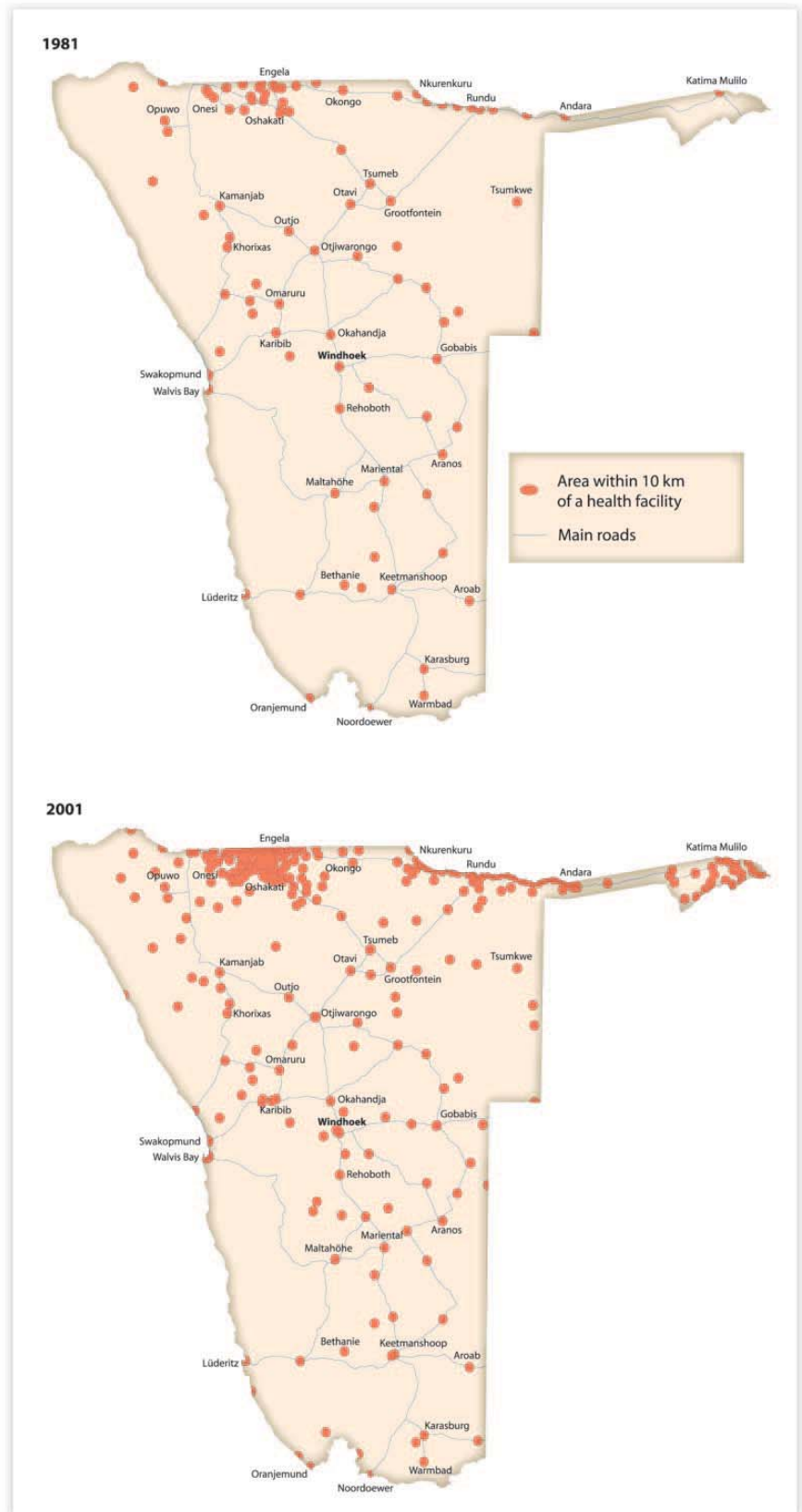
There are several requirements for a health system to be effective, two of which are considered in this chapter. First, people who need treatment and preventative measures must have ready access to health services. Second, health services should be used to the extent that is expected of them. Certain facilities should not be overcrowded, while others are little used. In essence, the health system should be accessible and efficient.

## Access and coverage

One of the most important changes made to the health system after independence was the switch in emphasis from hospital-based curative services to primary health care. Curative measures were largely delivered at urban hospitals and so people living far from these centres could make little use of them. The primary health care system, by contrast, brings health services close to people, both to provide treatments and immunisation, education and other preventative measures.

The concentration of hospitals and clinics in towns before independence is made clear in *Figure 3.1*. This map also shows how the coverage of health services has grown by comparing areas within 10 kilometres of facilities in 1981 with equivalent areas in 2001. The proportion of the population living within 10 kilometres of health facilities in 1981 is not known, but the area of coverage has grown from about 23,300 km<sup>2</sup> in 1981 to about 71,200 km<sup>2</sup> in 2001. Another aspect to these changes comes from the fact that there were only 98 public health facilities in 1981 compared to the 317 public hospitals, health centres and clinics in 2001. This growth has been concentrated on clinics because the number of public hospitals actually decreased from 57 in 1990 to 36 hospitals in 2001.

Figure 3.1. Zones of coverage surrounding health facilities in 1981 and 2001. The red shaded zones cover areas within 10 km of all hospitals, health centres and clinics<sup>3,13</sup>



Despite the improvements, some people in remote areas still do not have ready access to health facilities. Problems of access are most severe in Omaheke and Kunene, where less than half the people are close to a clinic or hospital (*Figure 3.2*). Access is somewhat better in Otjozondjupa and Oshikoto, with about two-thirds of people being within 10 km of health facilities. All the other regions provide coverage for about 80% or more of the population. Of all people in Namibia, about 80% or 1,510,000 people live within 10 km of a public health facility. This leaves about 380,000 people living in places where they do not have that kind of ready access to health services.



Figure 3.2. Percentages of people living within 10 km of a health facility in 2000<sup>13</sup>

The poorer access in Omaheke, Kunene and elsewhere is due to the fact that so many people live in remote, scattered and small settlements. It is thus hard to justify the provision of a fixed facility - consisting of a clinic building, equipment, supplies, electricity and staff - in an area where there are relatively few people. However, outreach points have been developed as a way of supplying health services to people in remote areas. The position of these points has not been mapped in all regions, but an indication of the coverage they provide is available for north-central Namibia (*Figure 3.3*). This map reveals three features. First, it shows that many outreach points indeed serve areas outside the normal reach of clinics and hospitals. Second, the map shows that a great number of the points are surprisingly close to fixed facilities. Finally, the map suggests areas where new fixed facilities are perhaps needed because there is a relatively high density of people, such as in parts of north-eastern Ohangwena and central Oshikoto.



Figure 3.3. The distribution of outreach points and other, fixed health facilities in north-central Namibia. Also shown are zones covering areas within 10 km of fixed health facilities, and areas where the density of people exceeds 5 people per km<sup>2</sup>

Over and above the variation in access to facilities, there are also substantial differences in access to staff and hospital beds in the 13 regions, as shown in the table below. The best staff allocations are in Khomas and Oshana, but these two regions have very large referral hospitals that are staffed to serve both people in these two regions and patients referred there from other regions. The next best allocations are in Oshikoto, Karas and Kavango, where the number of people per doctor or registered nurse is two to three times lower than in Ohangwena and Omaheke, the regions with the worst allocations. For Namibia as a whole, there are about 7,500 people per public service doctor, and 950 people per registered nurse.

Khomas, Oshana, Karas and Kavango are best equipped with hospital beds in relation to the number of people in each region, although Khomas and Oshana also serve people from elsewhere. The allocation of beds in these four regions is roughly three times more generous than in Ohangwena and Omusati, where each hospital bed serves a population of more than 400 people. Nationally, there are 271 people per hospital bed.

In addition to doctors and registered nurses serving in public health services, there were approximately 370 doctors and specialists in private practice in 2000. Over two-thirds of them were in Windhoek.<sup>4</sup>

Numbers of people per doctor, registered nurse and hospital bed in public health facilities in 2000<sup>14</sup>

Region	Per doctor	Per registered nurse	Per bed
Khomas	3,129	321	157
Oshana	3,529	550	180
Oshikoto	6,704	1,192	270
Karas	8,573	1,456	181
Kavango	8,588	1,491	204
Kunene	11,818	1,576	257
Erongo	12,170	1,503	236
Otjozondjupa	12,413	2,069	312
Caprivi	12,454	1,437	368
Omusati	15,983	1,598	425
Hardap	16,624	1,814	285
Omaheke	19,713	2,464	352
Ohangwena	22,144	2,388	514
<b>Namibia</b>	<b>7,545</b>	<b>947</b>	<b>253</b>

## Water and sanitation

Having access to clean water and hygienic sanitation contributes to good health. Water is considered to be “safe” if it is supplied through pipelines after having been cleaned or treated, or if it is pumped directly from underground sources. River water or water drawn from open wells is defined as “unsafe”, and is considered to be a major cause of diarrhoea (see page 67). About 77% of all households in Namibia had access to safe sources of water in 2000, leaving roughly 444,000 people making use of unsafe water.<sup>9</sup> Almost all households (98%) living in urban areas had access to safe water, whereas only 67% of rural homes had safe water. The great majority of households using unsafe water were in northern, rural areas (*Figure 3.4*). Water drawn from open wells or oshanas, which is shared with livestock, is the main source of unhygienic water in Kunene, Omusati, Oshana, Oshikoto and Ohangwena. The Okavango, Zambesi, Kwando and Chobe Rivers are the major sources of unsafe water in Kavango and Caprivi. In the southern regions, by contrast, the great majority of people in rural areas use safe water pumped from underground.

Differences in the use of hygienic sanitation follow the same pattern as those for water supply: people in towns generally have adequate sanitation, while those in rural areas do not, especially so in the northern regions (*Figure 3.5*). Households having “adequate” sanitation are those that have various types of flush toilets and pit latrines. People in households without these facilities generally use the bush as a toilet. Approximately 41% of all Namibian households have adequate sanitation, but much greater proportions of urban homes (85%) than rural households (19%) have that kind of sanitation.<sup>9</sup> Over 1.1 million people do not have adequate sanitary facilities.

There have been marked improvements in the supply of safe water over the past 10 years (*Figure 3.6*), the proportion of all Namibian households having safe water rising from 65% in 1991 to 77% in 2000. Most of these improvements were in rural areas, especially in north-central Namibia and Caprivi where extensive networks of piped water have been provided in recent years. The use of adequate sanitation has also increased, but less so than for the use of safe water. In 1991, 36% of all households had adequate sanitation compared to 41% in 2000.



Figure 3.4. Percentages of households that have access to safe water supplied through pipelines or from underground sources <sup>15</sup>

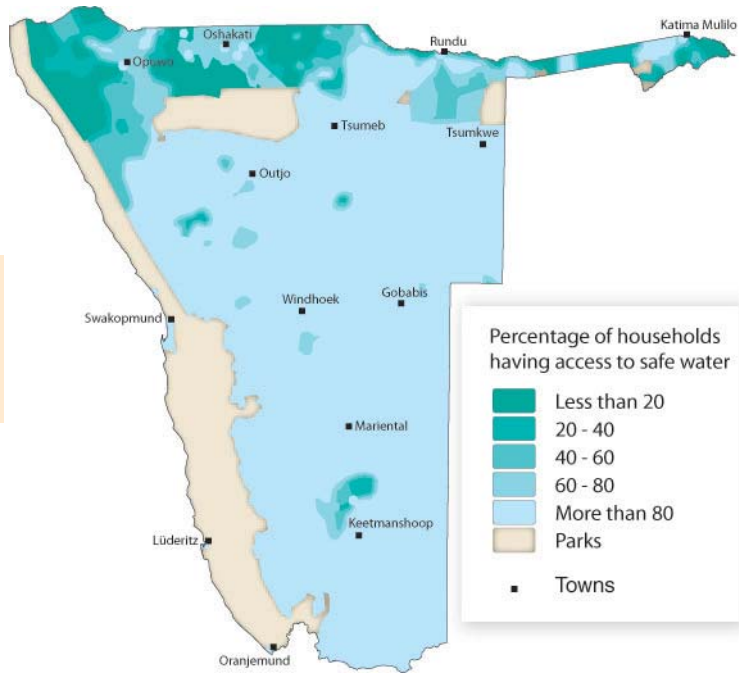
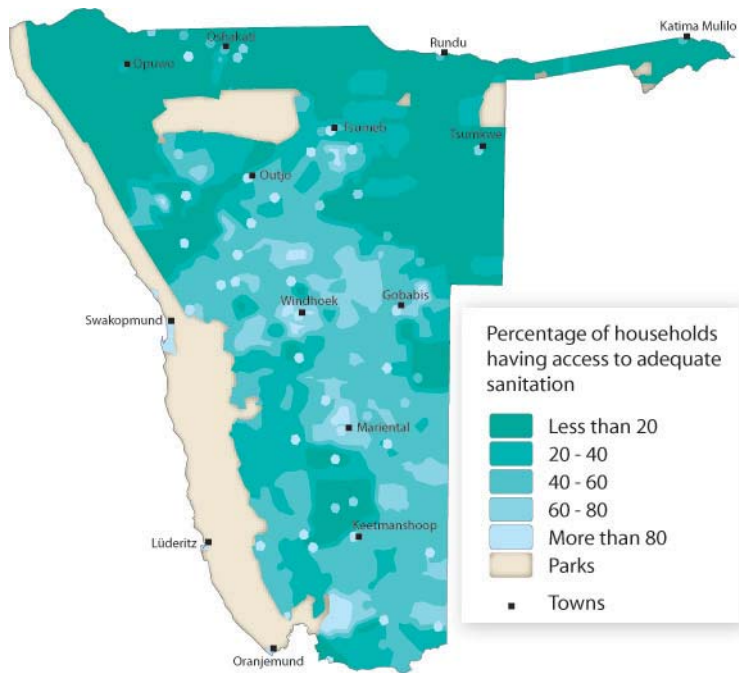


Figure 3.5. Percentages of households having "adequate" sanitation in the form of various types of flush toilets and pit latrines. People in households without these facilities generally use the bush as a toilet <sup>15</sup>



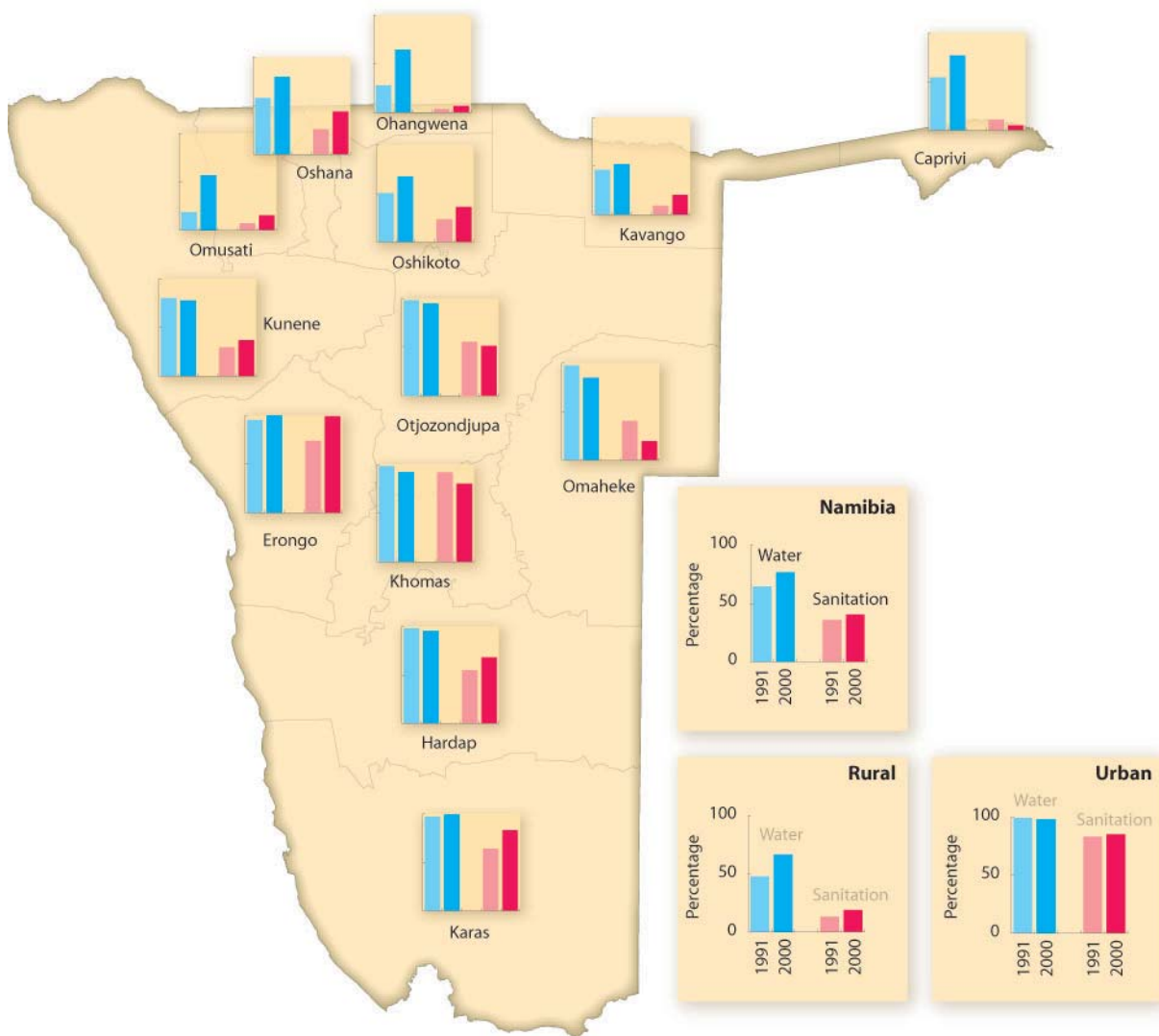


Figure 3.6. Percentages of households using safe water (blue bars) and adequate sanitation (pink bars) in 1991 and 2000 for each region, for urban and rural areas and for Namibia as a whole <sup>8,9</sup>

## Utilization of health facilities

The previous pages explored issues to do with the supply of health services and how they relate to the population they serve. This section turns to aspects of how these services are used and the demands placed upon them: how often do people visit health facilities, how many people visit them each day, and how long people stay in hospital, for example? Answers to these questions provide some insight into the broader issue of whether Namibian health services are used efficiently.

Each person visited a clinic as an outpatient 1.5 times on average per year during 1995-1999. These are new visits, each visit being for a different reason or treatment. The figure is high compared to many African countries, where there are often less than 0.5 visits per year on average. The high figure also adds weight to the conclusion that most Namibians have good access to health facilities. However, access is not the only factor to determine the frequency of visits. This is because people do not visit clinics as often as would be expected in some regions where the majority of people live within 10 km of health facilities (*Figure 3.2*). Ohangwena is an example: 86% of people live within 10 km of health facilities but each person went to a clinic only 1.3 times per year on average. Oshana (2.3 visits), Kavango (2.1 visits) and Oshikoto (2.0 visits per person each year) had the highest frequencies of visits in the country.

There is a great deal of variation in the number of people that clinics treat each day. Thirty-four clinics (14% of all clinics) attended to more than 50 people each day on average, 106 (44%) were visited by between 15 and 50 people per day, and 103 clinics (42%) had less than 15 people each day. There was a similar high degree of variation in rates of attendance at health centres and hospitals, as shown in the table below.

Many of the clinics that are little used are in sparsely populated areas, such as in Kunene and south of the Okavango River (*Figure 3.7*). However, others are in areas where large numbers of people live. This is true in the north-central regions and especially so in Caprivi, where very many clinics attend to fewer than 15 people each day, on average.

The very high proportion and distribution of under-utilized clinics suggest that there may be too many health facilities in certain areas. They also indicate that if resources at under-utilized clinics were to be shifted, health services could be improved elsewhere.

The number of health facilities attending to different numbers of people each day

Patients per day	Clinics	Health Centres	Hospitals
Less than 15	103	4	8
15 - 50	106	15	8
More than 50	34	12	20



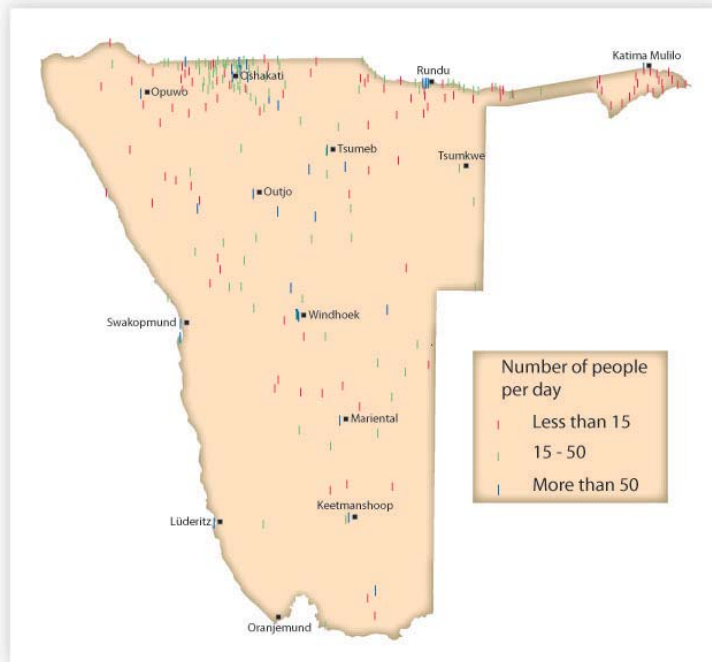


Figure 3.7. The distribution of clinics attending to different average numbers of people per day

Numbers of hospitals with low, medium and high rates of bed occupancy in their adult and paediatric wards

An analysis of bed occupancy also shows that resources at some hospitals are used much more intensively than at others. Eleven wards (adults and paediatric) recorded an occupancy rate of less than 40%. These hospitals are almost certainly under-utilized. On the other hand, 17 other wards had their beds occupied for more than 80% of the time and are over-utilized. Several hospitals have indeed recorded occupancy rates of over 100%. There may be large differences in rates of occupancy between wards within the same hospital, suggesting that an internal reorganisation of beds would improve efficiency. For example, bed occupancy rates of 5% in the Katima Mulilo Hospital paediatric ward were 13 times lower than in the same hospital's adult ward (68% occupancy).

Bed occupancy	Adult wards	Paediatric wards
Low (less than 40%)	4	7
Medium (40 - 80%)	27	18
High (more than 80%)	6	11

For example, bed occupancy rates of 5% in the Katima Mulilo Hospital paediatric ward were 13 times lower than in the same hospital's adult ward (68% occupancy).

The length of time that patients spend in hospital depends mainly on the kind of disease or condition being treated. Children spend an average of 5.9 days in paediatric wards, while adult patients are in hospital for an average of 8.6 days. Mothers spend an average of 3.1 days in maternity wards. People treated for chronic diseases are in hospital much longer than others. For example, tuberculosis patients may spend up to two months in hospital, and the growing number of tuberculosis and AIDS patients has led to an increase the average length of time spent in hospital. The average length of stay by adults in hospitals in Ohangwena increased from 9.7 days in 1995 to 11.2 days in 1999, for example.