MEASURING THE MOVE TOWARDS EQUITY

From the Site of Service Delivery

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Results from the Nine Provinces

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EXECUTIVE SUMMARY

Introduction

It is important that policies and strategies towards equity in service provision are measured in terms of their impact on health service delivery. This would begin to demonstrate the practical impact of health reform.

In an attempt to measure in part the progress (or lack of progress) towards equity one step would be to measure the quality of service provision at the community (primary care) level. This would give an overview of the disparities between as well as in provinces, and between rural, urban and peri-urban parts of the country.

Purpose of the survey

The overall aim of the research was to evaluate the quality of service provision rendered at the primary level in South Africa, and to describe any major differences between provinces and between rural and urban / peri-urban parts of the country.

Process

A request to undertake the survey was obtained from the nine provincial health departments. The National Department of Health was also informed about the nature of the study. The Provincial Health Departments further paved the way for the survey by ensuring that easy access was available to the clinics and staff.

A total of 160 clinics, 3 from every region of each province in South Africa were visited. 71 were rural, 39 peri-urban and 50 urban. A questionnaire was used to collect information which was then collated.

Indicators

The following primary level care indicators related to inputs, processes and outputs were used to measure service provision at the selected clinics:

Infrastructure:	availability and reliability of electricity, water and telephone
Workload:	number of patients per nurse per month
Support:	visit by doctor and / nurse in the last month
Equipment:	availability of working scales for weighing babies, availability and reliability of refrigerator
Drugs availability:	a selection of drugs from the essential drugs list and oxygen
Emergency referral:	response time for emergency transport
Management of STDs:	use of syndromic management approach to STD management
TB services:	time to get sputum results
Integration of services:	days on which family planning and immunisation services were available
Antenatal care services:	availability of syphilis testing facilities

Findings

Findings were collated under the following categories:

Infrastructure:

Unreliable electricity, water and telephone services and functional refrigerators are all issues of concern.

Human Resources:

It was encouraging to note that nurse supervision appeared relatively high in all provinces, however this was not complemented by adequate doctor visits, especially to rural clinics.

Quality of Care:

In the area of child health services and family planning services there were some encouraging findings, for example a relatively acceptable level of child health services and about 72% clinics offering family planning services on a daily basis. Areas of concern included two priority health problems, namely sexually transmitted diseases and tuberculosis, being far from attaining standards set for their management.

Recommendations

- Particular attention needs to be placed on rural areas and on the poorest provinces of the country, thereby reducing those aspects of inequity illustrated by this study.
- An ongoing process of monitoring the quality of service provision, particularly at the primary health care level is essential to ensure that it is the worst areas that are benefitting the most by the restructuring of South Africaís health system.

MEASURING THE MOVE TOWARDS EQUITY

What is equity?

Equity is concerned with creating more equal opportunities for health, and reducing differences between groups of people to the minimum. Inequity in health can therefore be defined as unjust and unfair differences which are avoidable. Differences in health because of biological variation or because of an individual's choice to partake in a dangerous sport or pastime cannot be classified as inequitable. Exposure to unhealthy living and working conditions and inadequate access to essential health and other public services are inequitable.

Why do we need to measure equity?

South Africa's history has brought the country the unenviable title of being one of the most inequitable countries in the world. This is obvious when looking at the differences in health status between racial groups, or by looking at health facilities which are available to the poor compared to the rich. It is clearly unjust and unfair.

Addressing inequity is core to South Africa's new Constitution, and has been one of the guiding principles of the Government of National Unity. It is therefore essential that we are able to measure how much we are moving towards this goal.

Equity can be measured by looking at differences in health status in groups of people. Examples of these differences can be between:

- Geographical areas (districts, provinces, countries)
- People who are employed and unemployed
- People with different levels of educational achievement
- Ethnic groups
- Income groups
- Sexes

While an ultimate goal of health planners is equity in health status, what is of more practical use to health planners are input and process indicators of equity. These may include measuring differences in:

- Utilisation of health services
- Access to health services
- The amount of money and other resources allocated to different areas
- Drugs and supplies availability
- Human resources availability
- Quality of service delivery
- Infrastructure quality

Why a clinic survey?

Up to now, much of the discussion about achieving greater equity in health care in South Africa has centred around the inter-provincial allocation of resources. The CASE[1] study of 1995 considered consumer perspectives of access and utilisation. What has been neglected has been a measurement of movement towards equity at the site of service delivery. The health care delivery system hinges on there being a functional primary health care system and it is essential that we measure how much policies are making a practical impact on this level of service delivery.

1 Community Agency for Social Enquiry for the Kaiser Family Foundation, USA, A National Household Survey of Health Inequalities in South Africa.

Clinic Survey

This clinic survey was a rapid appraisal, with the intention of painting a picture of clinics around the country. The overall aim of the survey was to gather baseline information that would measure the quality of care provided at primary health care clinics, by describing some aspects of service provision rendered at this level. This way, one can begin to define a framework for evaluating the impact of policies and strategies towards equity at primary level service delivery.

The objectives of the survey were to

- *To describe the quality of health care in selected clinics in each of the nine provinces. This description would be in terms of indicators related to inputs, processes and outputs.*
- *To compare the clinics between provinces, as well as within provinces, and describe the differences in terms of the quality of service.*

STEPS IN THE SURVEY PROCESS

1 Drawing up of the survey design / protocol, and developing indicators

Basic indicators of primary level care were chosen to describe service provision. An important factor influencing the choice of indicators was whether there would be reliable and readily available information by which to describe them.

Comments from various researchers and experts working in primary health care –particularly in rural clinics (see acknowledgements) were sought, and these helped to refine the protocol for the survey.

The National and Provincial Health Departments paved the way for this survey by ensuring that easy access was available to clinics and staff.

Indicators:

- ***Infrastructure : availability and reliability of electricity, water, telephone (or other means of communication)***
- ***Workload: number of patients per nurse per month***
- ***Support: visit by doctor and nurse in month prior to the survey***
- ***Equipment: availability of working scales for weighing babies; refrigerator***
- ***Drug availability: essential drug availability at the time of the visit***
- ***Emergency referral: length of time for ambulance to arrive***
- ***Management of sexually transmitted diseases: Treatment of uncomplicated penile discharge***
- ***Tuberculosis service quality: time to get a TB sputum result, and number of patients cured***
- ***Integration of services: number of days family planning/immunisation offered***
- ***Antenatal care quality of service: availability of syphilis testing facilities***

2 Designing and piloting a questionnaire for the survey

The questionnaire was piloted at selected clinics (rural, urban and peri-urban) clinics within KwaZulu-Natal province. The pilot exercise helped in refining the questionnaire.

3 Drawing a sample

In all health regions of the country, one district was randomly selected as the study site. Within the district, data was collected from three clinics, using a standard questionnaire, resulting in a total of 160 clinics. The selection of clinics was not necessarily random but with assistance from Provincial Departments of Health, particularly the District Health Managers.

In KwaZulu Natal and Northern Cape provinces there were no districts demarcated at the time of the survey. In these provinces, the region was taken to be the study site, from which three clinics were identified and visited. In a number of provinces where demarcation of districts had recently been completed, uncertainty regarding the location of some clinics was often observed but this was not a critical limitation.

4 Field work

Data collection was carried out between June and September 1997. Questionnaires were administered by means of face to face interviews and observation, lasting approximately 15 minutes. Back-checks, where necessary, were done by telephone.

Data was collected from a total number of 160 clinics. Of these, 71 were classified as rural, 39 peri-urban and 50 urban.

Table of clinics surveyed

	Rural	Peri-urban	Urban	Total
Eastern Cape	13	5	2	**20**
Free State	7	7	4	**18**
Gauteng	0	0	15	**15**
KwaZulu-Natal	17	6	1	**24**
Mpumalanga	10	9	1	**20**
Northern Cape	2	0	16	**18**
Northern Province	7	6	4	**17**
North West Province	10	1	4	**15**
Western Cape	5	5	3	**13**
SOUTH AFRICA	71	39	50	**160**

It needs to be borne in mind that some provinces are largely rural or urban, thus the rural-urban mix in these provinces would be skewed.

5 Data analysis and report writing

Data was captured and analysed using the EpiInfo statistical programme version 6.4.

LIMITATIONS

- **Lack of definition of district boundaries**. In provinces where the districts were not clearly defined, regions were used as the unit for sampling.
- **Poor information systems.** The survey had planned to determine the number of patients in various categories, such as family planning, antenatal, child health and TB. However in many cases this was not possible because records were not held within the clinics, or for some reason the data was not available. Few clinics took an interest in these data, but perceived it as a requirement for someone else! The variety of recording methods was also noted, with a lack of consistency of quality both within and between provinces.
- **Sample selection.** Selection of clinics was informed by health service personnel in the respective provinces rather than a random selection. Although this facilitated the process of locating the clinics and ensured that visits coincided with working hours of the clinic, such an approach does introduce an element of selection bias. In some provinces the data collection visit was seen as an opportunity by the district personnel to 'show off' their achievements; whilst other provinces used the opportunity to convey their desperation for improvement of services in their districts by deliberately targeting the most deprived and inaccessible facilities.
- **Timing.** The survey was affected by the timing of the survey, particularly in reference to the number of patients seen in the last month. In some clinics it was noted that there was an immunisation campaign during the last month, thereby reflecting a higher level of utilisation than normal.

Findings

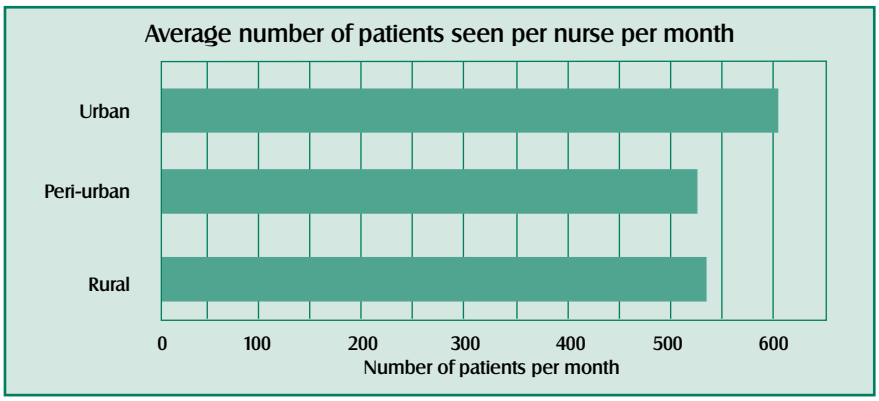
Human resource issues

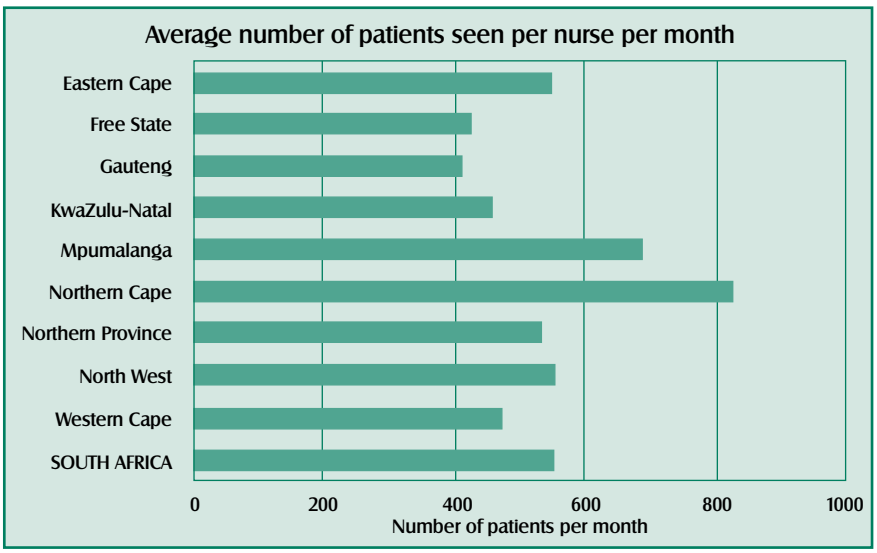
Indicators:

- ❑ *Workload: Number of patients per nurse per month*
- ❑ *Number of visits by doctor and nurse supervisor in the month prior to the survey*

Workload

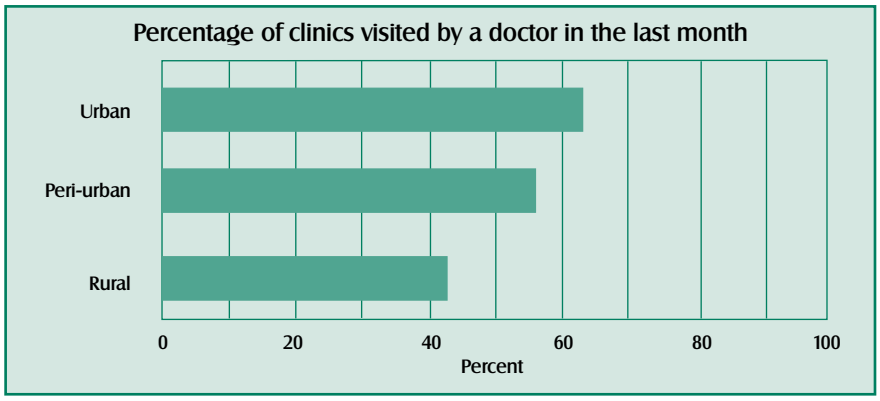
- The average number of patients seen per nurse per month was 553. (This is based on the number of patients seen at the clinic in the past month divided by the total number of professional and staff nurses).
- Urban clinics see relatively more patients than do rural clinics.
- The figures for the Northern Cape show an unusually high workload.

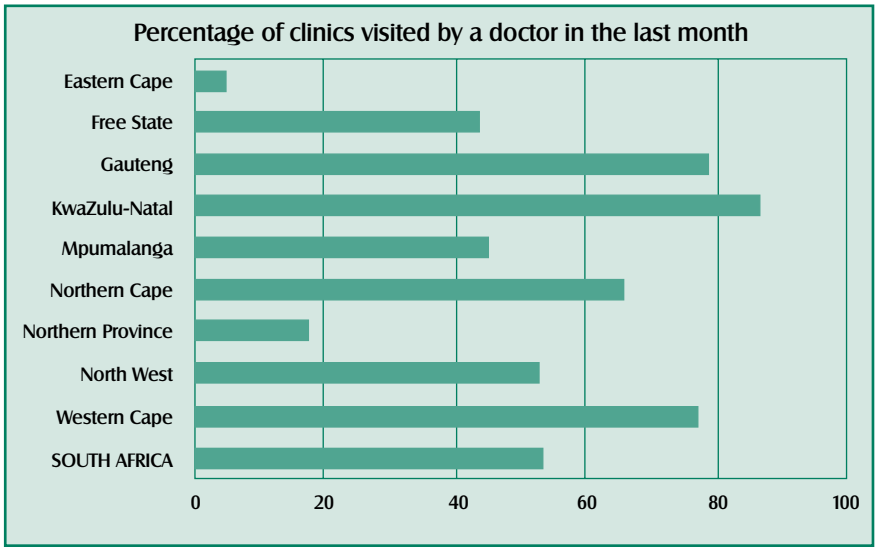


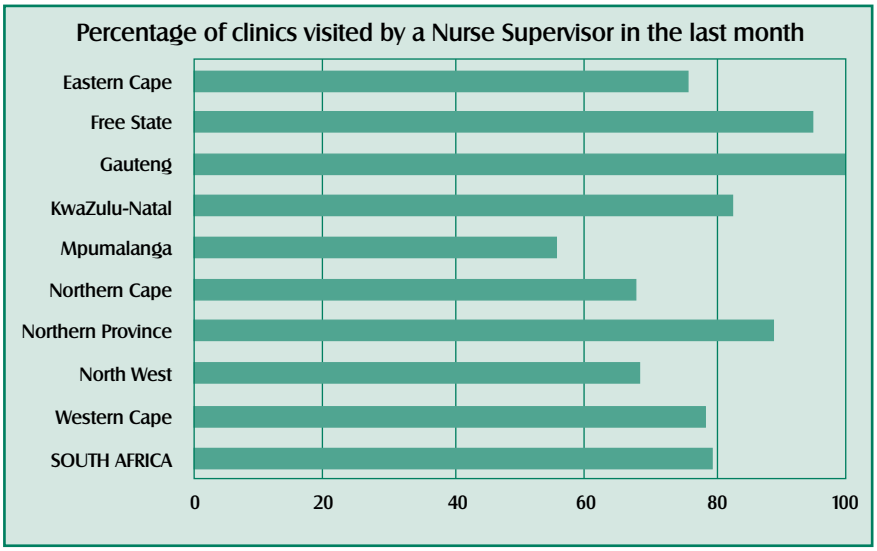


Support and supervision

- Visits by doctors to urban clinics are more frequent than to rural clinics. This is supported by inter-provincial comparisons, where relatively rural provinces such as the Northern Province and the Eastern Cape had very few doctor visits.
- Nearly 80% of all clinics had a nurse supervisor visit in the past month. However the role of these visits appeared to be predominantly for administration purposes with little attention to monitoring of service quality.
- There were instances where staff nurses were working alone in the clinics at the time of the survey visit. This is disturbing as these staff are not trained to work independently.







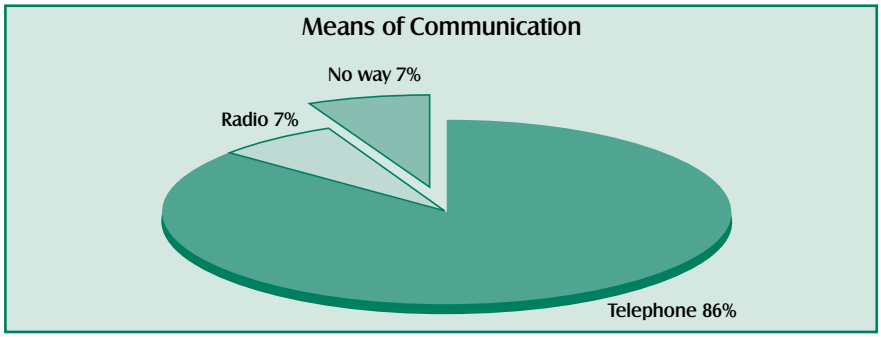
Infrastructure

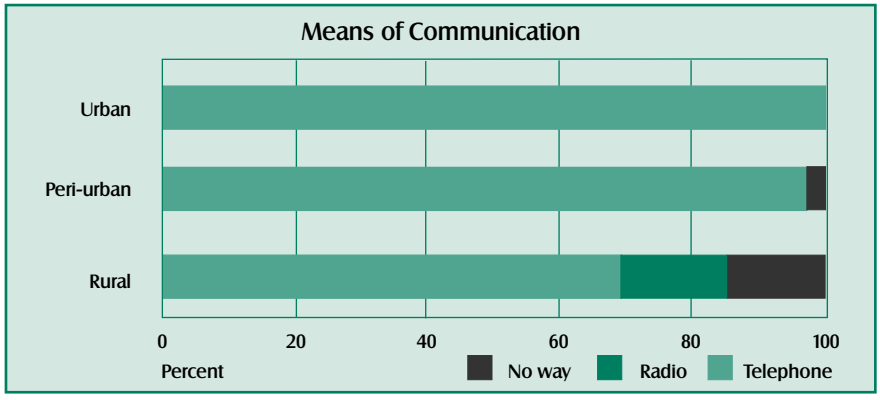
Indicators:

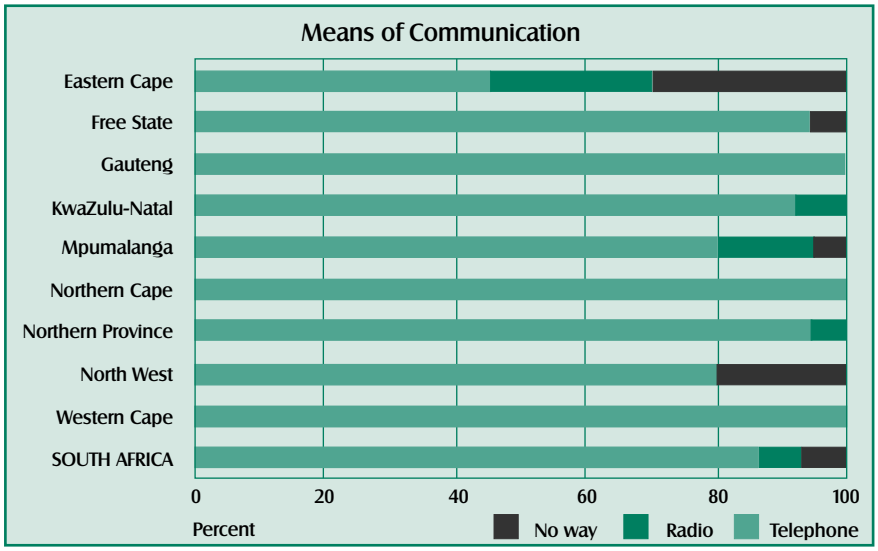
- ❑ *Availability and reliability of telephones (or other means of communication), electricity, and tap water.*

Communication

- ◆ The most common means of communicating an emergency is by a telephone, with 7% of clinics relying on a radio. All those clinics relying on a radio were in rural areas.
- ◆ Seven percent of clinics had no means of communication. This represents 15% of the clinics in rural areas. Three out of ten (30%) of the clinics visited in the Eastern Cape had no means of communicating in emergencies.

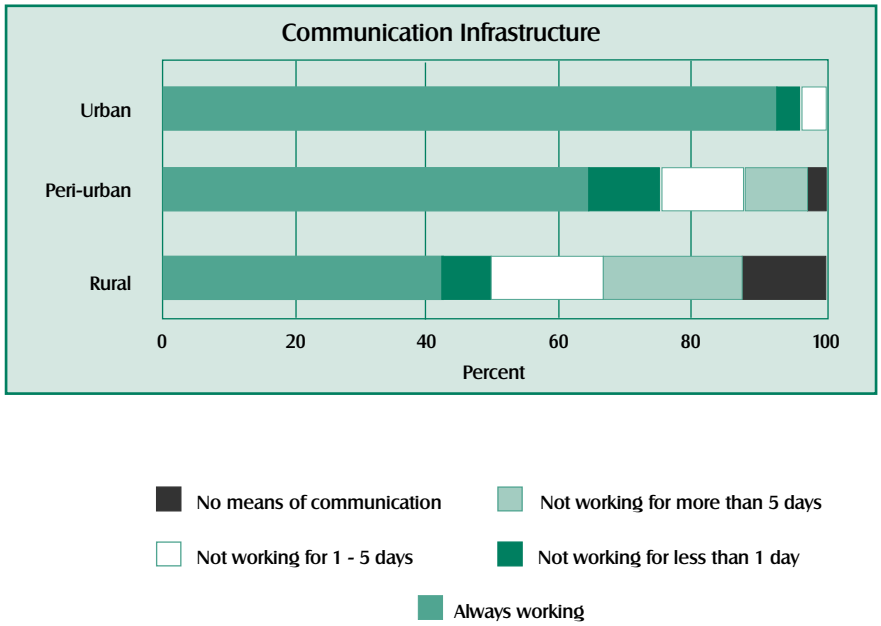


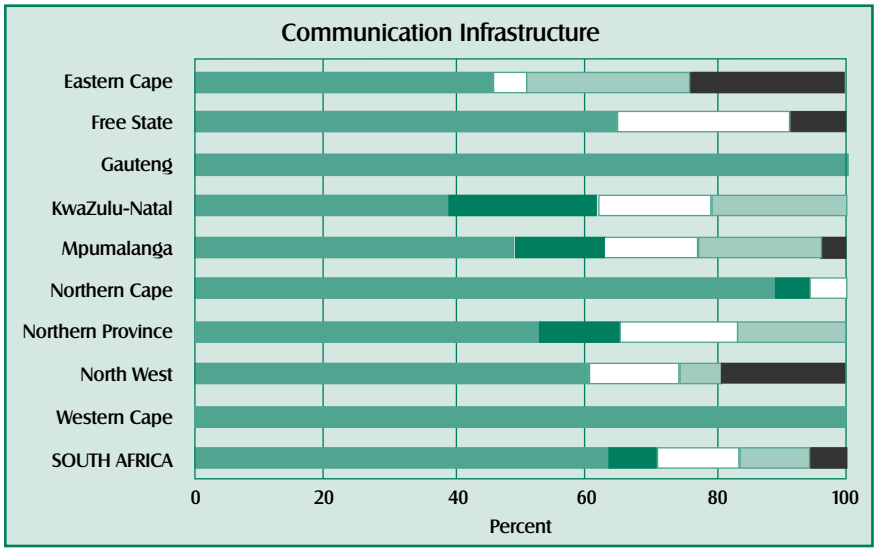




Communication infrastructure

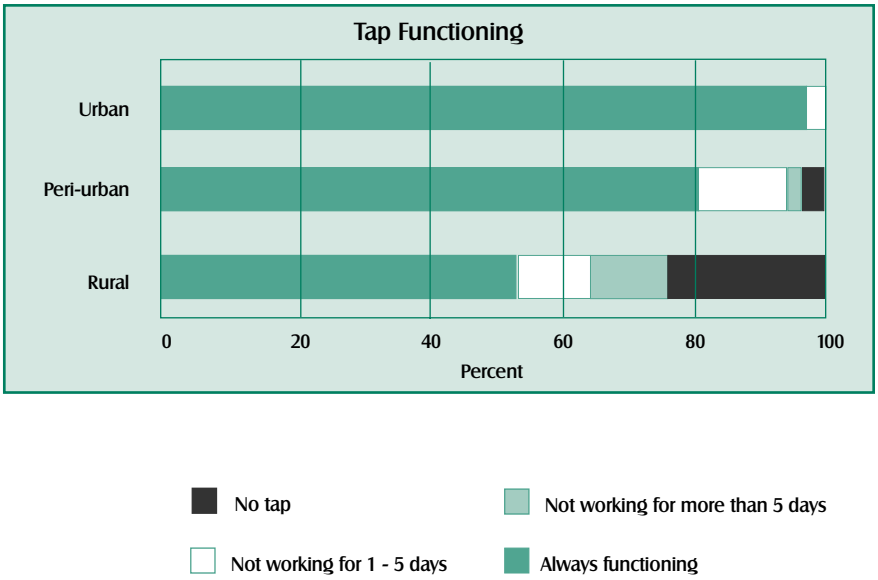
- 92% of clinics in urban areas have their telephones always working; and when there are problems, they are fixed with in a week.
- Only 42% of the rural clinics visited had their means of emergency communication (telephone or radio) always working, and when there were problems, only half were fixed within 5 days.
- One rural clinic reported that while they did have a telephone, it had not been working for over a year!
- Many of the clinics that relied on radio communication complained about its unreliability
- Clinics often reported that the functioning of the telephone was dependent on the weather.
- In only two provinces, Gauteng and the Western Cape, was the means of emergency communication always working.

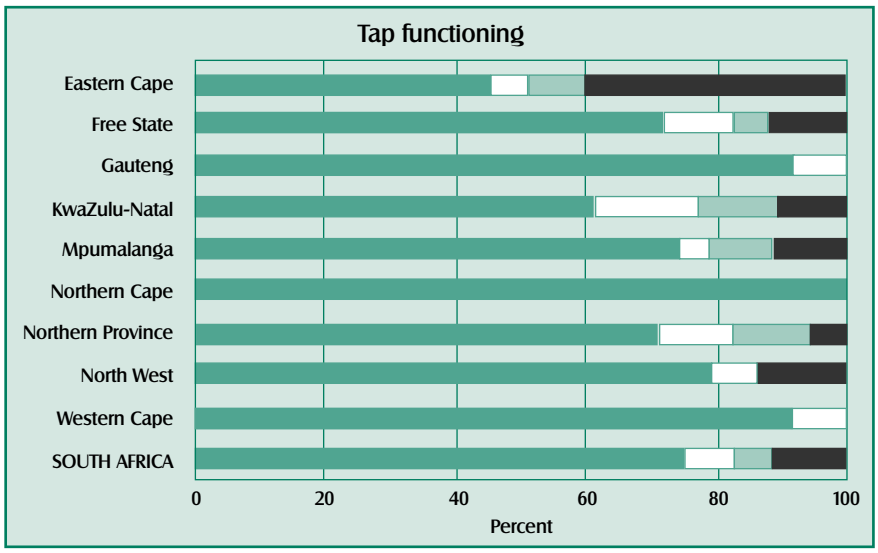




Water Supply

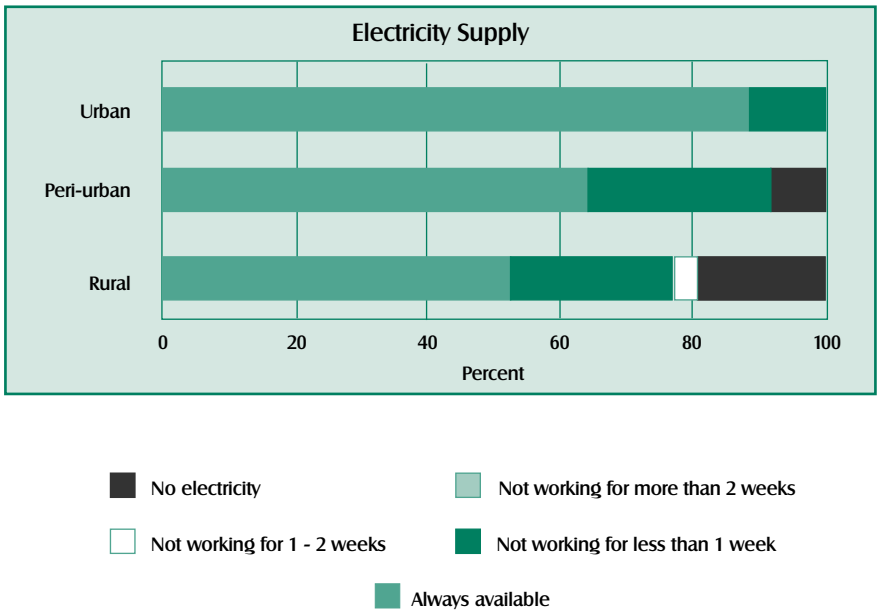
- Almost all (98%) urban clinics visited had taps within the clinic premises which were "always functioning".
- 22% of clinics in rural areas were without taps.
- In those rural clinics with taps, only 70% were always working. One clinic reported that their tap had not been functional for the last three years!
- Some rural clinics were dependent on rain water tanks during the rainy season. During the dry periods, the Department of Works and Energy was supposed to fill their tanks. In reality, this filling was unreliable. Other rural clinics used solar power to pump their water, and this too was noted as unreliable.

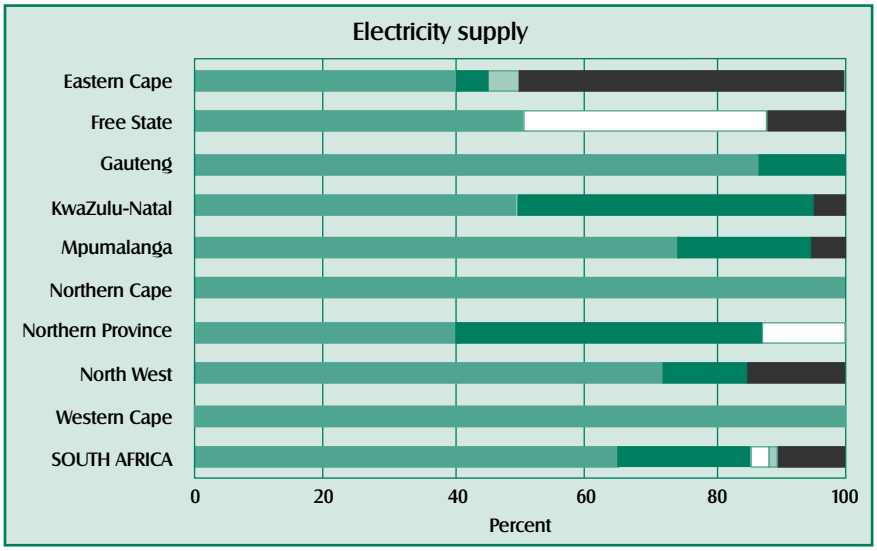




Electricity Supply

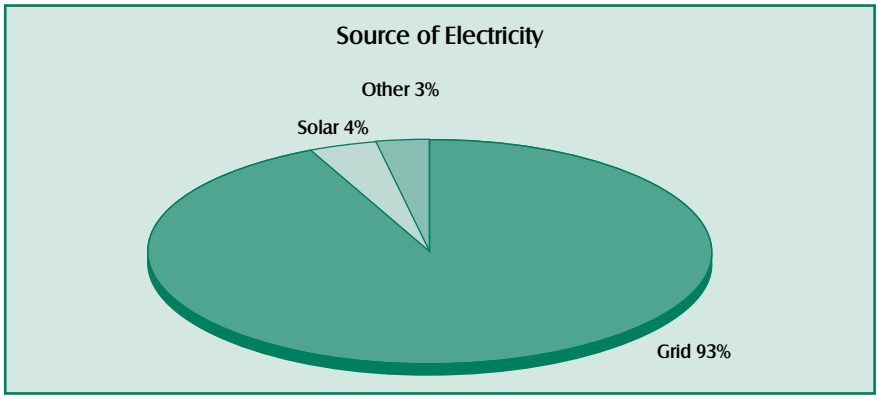
- About 80% of clinics located in the rural areas and 92% of clinics in peri-urban areas have electricity. All urban areas have electricity
- Where electricity supply was in place, it was recorded as **not working** consistently over the last month in:
  - 36% of rural clinics,
  - 31% of peri-urban clinics and
  - 12% of urban clinics.
- In the Eastern Cape only 50% of the clinics visited in this study were electrified and, of those that were, in 10% the electricity had not been fully functional over the last month.
- While all the clinics visited in the Northern Province had electricity, in almost 60% the electricity had not been fully functional over the last month.
- It is encouraging to note that the majority of electrical supply faults were corrected within a week.





Source of Electricity

Only a few clinics had electrical supply other than grid electricity. The others either had solar electricity or a generator, which were reported to be generally unreliable. The majority of those clinic which had solar or a generator were in rural areas.



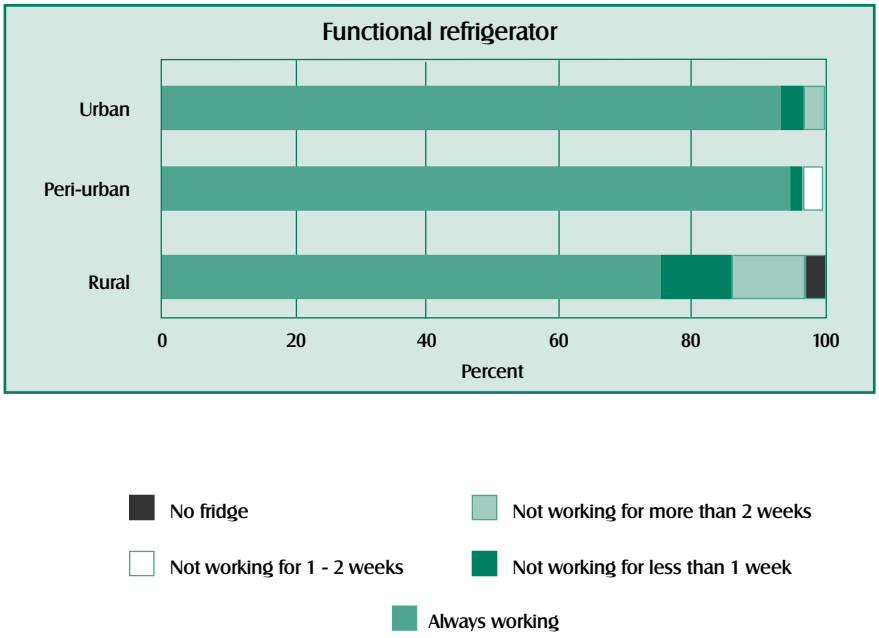
Equipment

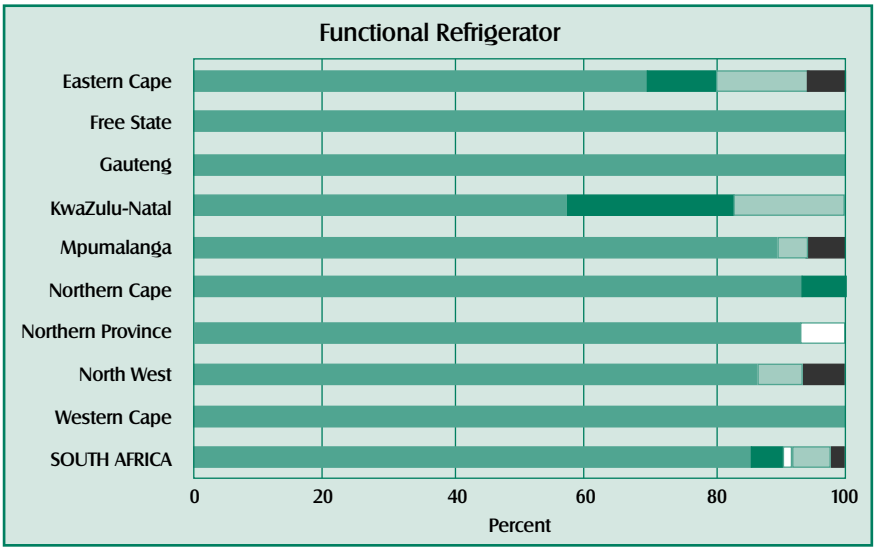
Indicators

- ❑ *Availability and reliability of refrigerators and baby weighing scales*

Availability of Refrigerator

- All of the clinics, except for three rural clinics, had refrigerators.
- Almost a quarter, (22%) of the rural clinics reported incidences of the refrigerator not working. Of these, half indicated that the refrigerator had been out of order for more than 2 weeks. This has serious implications on maintaining a cold chain.
- For those clinics which did not have electricity, their refrigerators were gas powered. Most of these refrigerators were reported to be functional, but the staff often complained that the gas supply was not reliable.





Baby weighing scales

- Almost all (99%) clinics visited had baby weighing scales which were in good working order.

Service quality

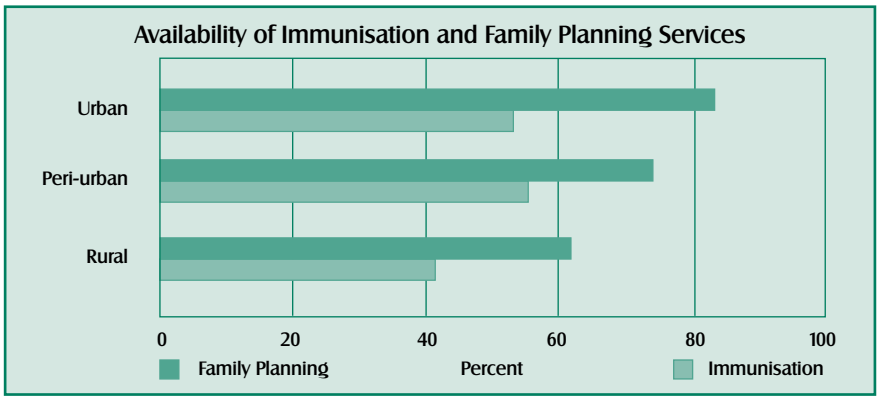
Immunisation and family planning services

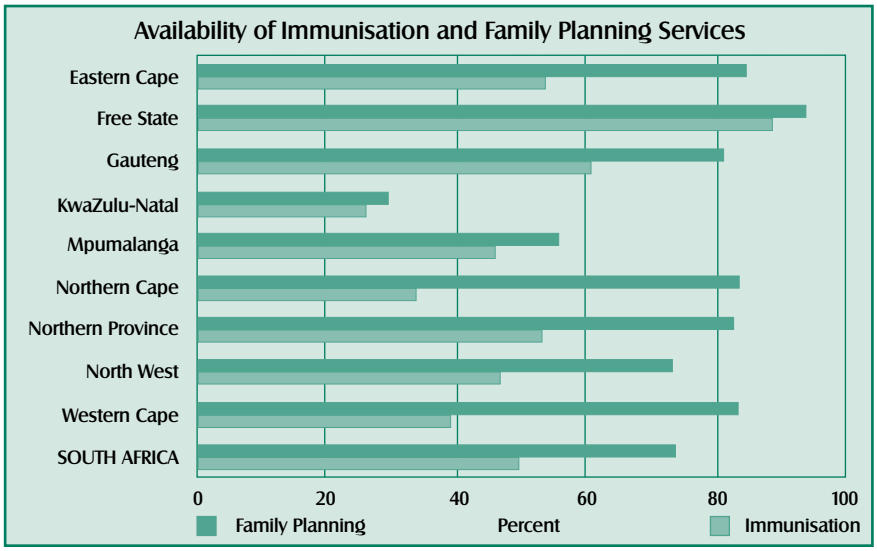
Indicators

- ❑ *% of clinics offering immunisation and family planning services daily, Mondays to Fridays.*
- ❑ *Response time to emergencies*
- ❑ *% of clinics that provide syphilis testing services for pregnant women, and management of STDs*
- ❑ *Time to get TB sputum result*
- ❑ *% of clinics with selected essential drugs and oxygen available*

To overcome the fragmented way in which services were organised in the past, the policy is that all clinics should increase accessibility by having all services available during normal working hours.

- Only half of all the clinics visited offered immunisation services on a daily basis.
- Family planning services were available on a daily basis in almost three quarters (72%) of all the facilities visited.

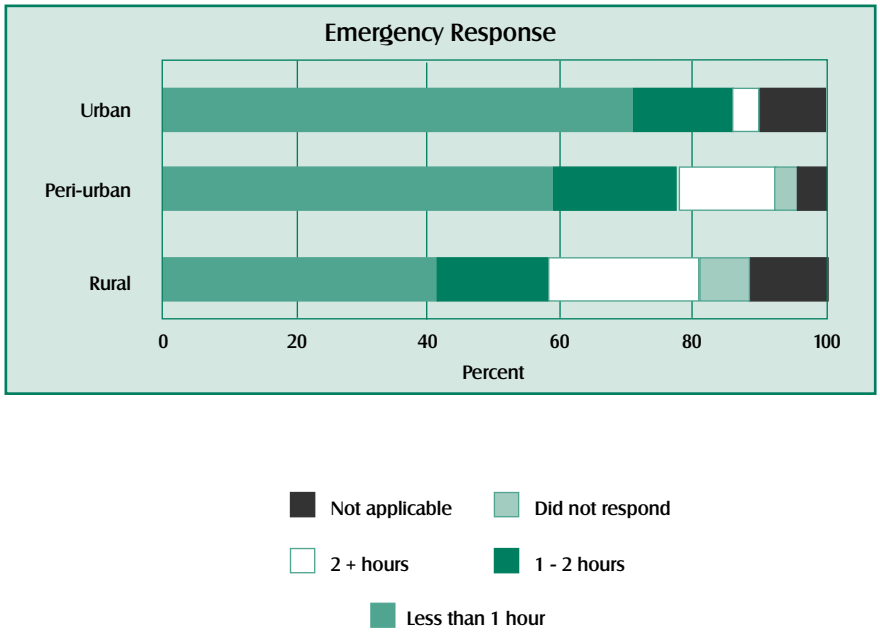


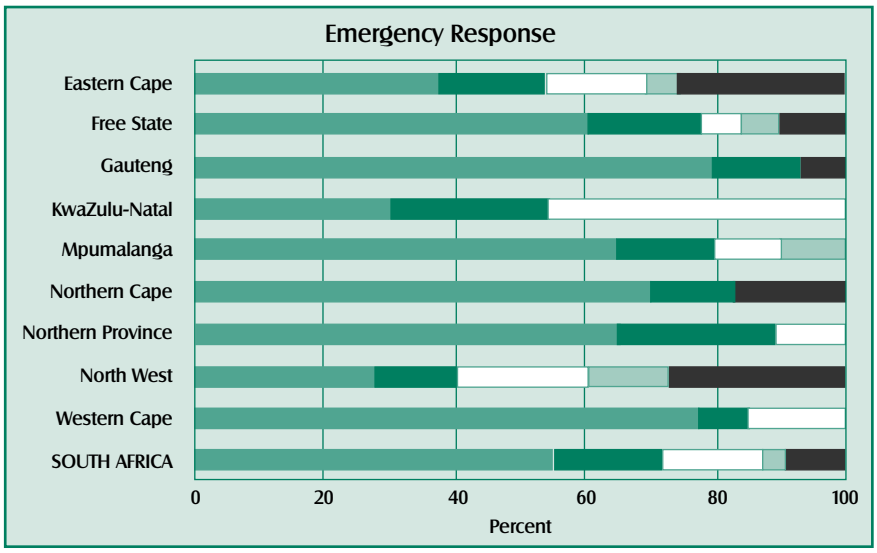


- The implications are that much reorganisation of clinics is required to make services more available.

Time to respond to emergencies

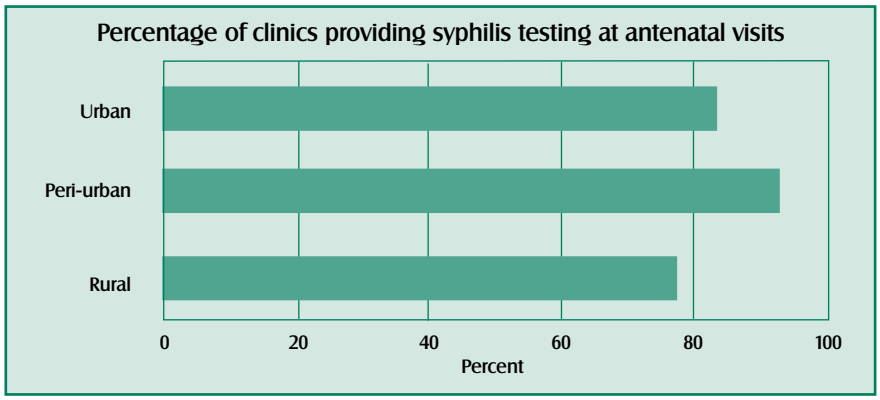
- Only 41% of rural clinics had an ambulance at their door step within an hour of an emergency call. This compares with 59% in peri-urban clinics and 74% in urban clinics.
- 7% rural clinics reported that when they call an emergency vehicle, they usually do get any response. To validate this data we asked how long an emergency vehicle took to respond. 9% reported on the last occasion, no emergency vehicle responded to their call.

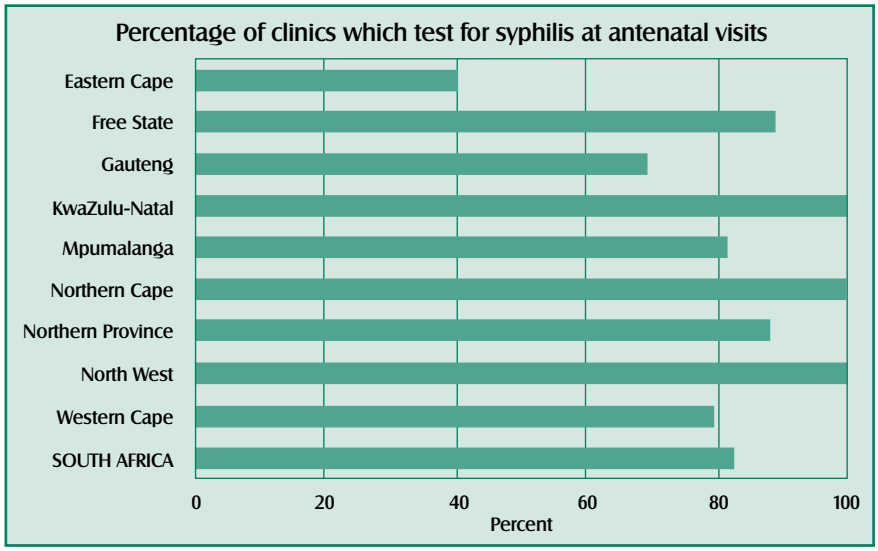




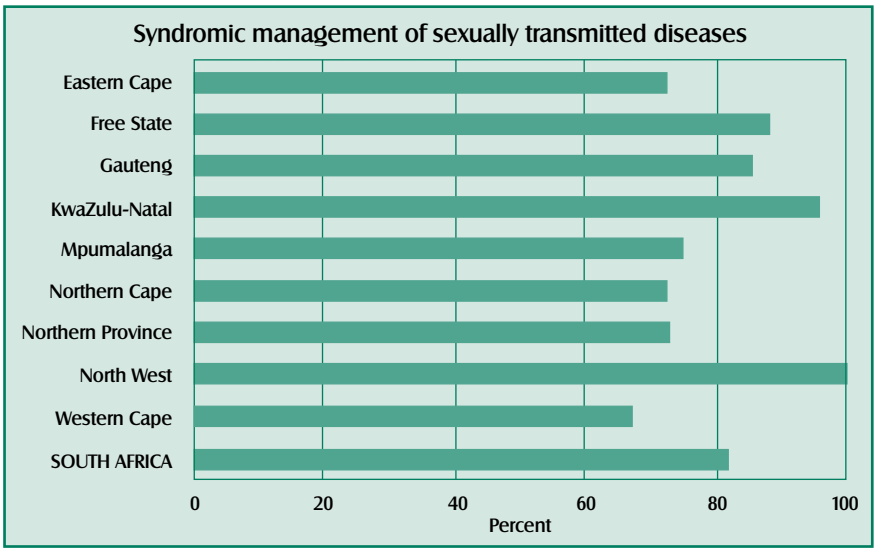
Management of Sexually transmitted diseases

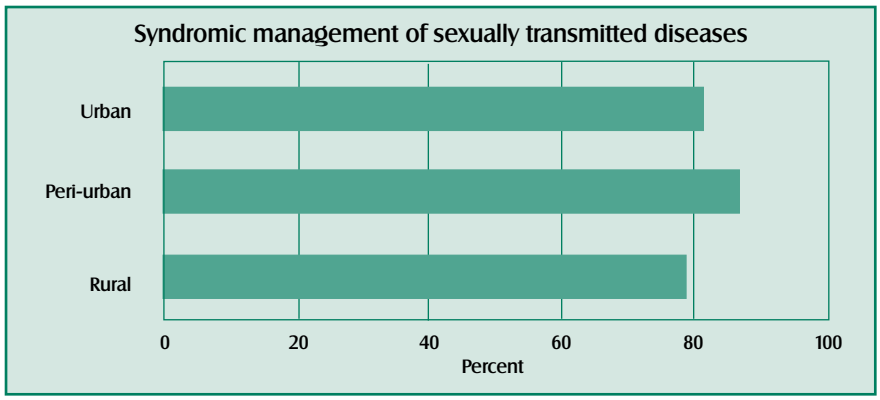
- 23% of rural clinics do not provide syphilis testing services for pregnant women. This compares with 17% in urban areas and 8% in peri-urban clinics.





- Eighty one percent of all clinics use a syndromic approach to STD management.



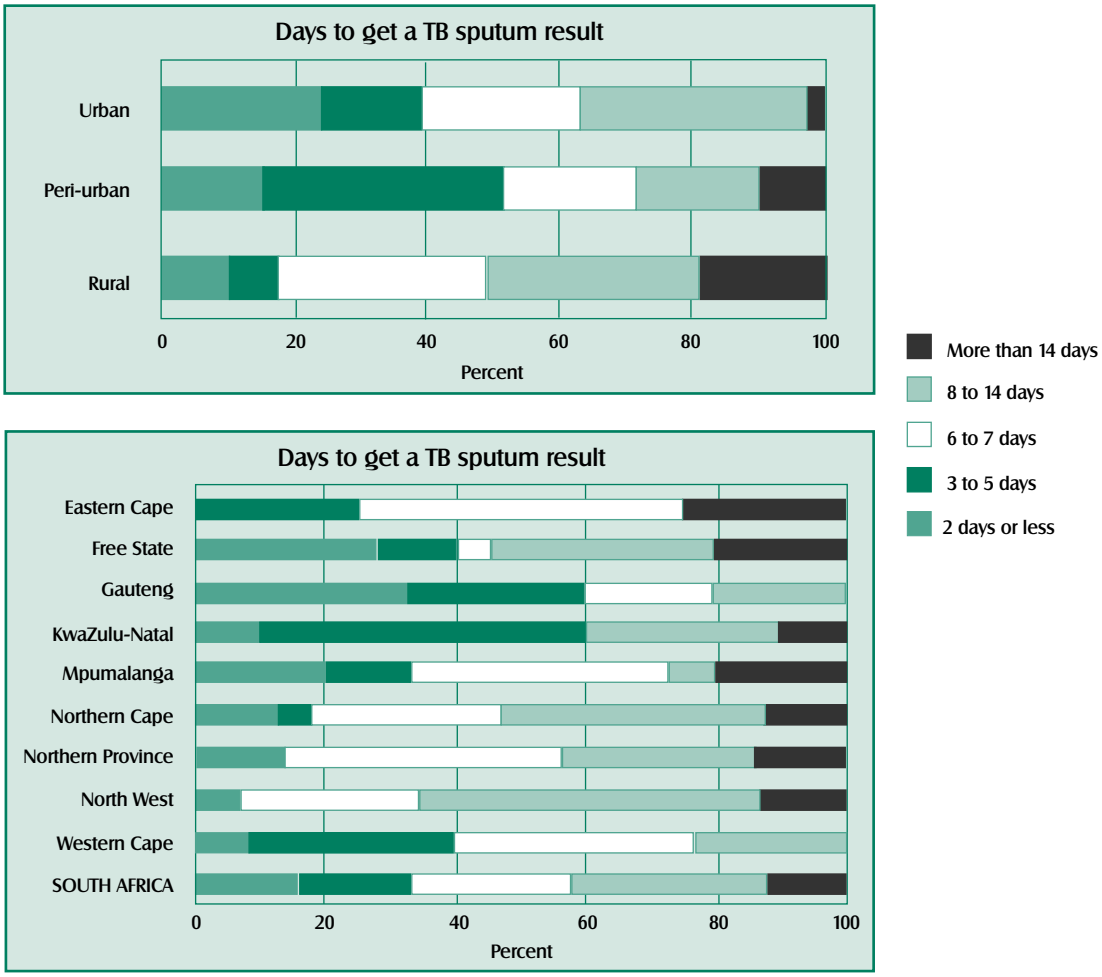


Tuberculosis services

- Only 16% of the 113 clinics offering TB treatment, are able to receive sputum results within 48 hours, which is the recommended guideline set by the Tuberculosis Control Programme.
- The average time taken to receive sputum results was 10 days.
- The poor quality of TB clinic records was notable throughout the country. Most patients are recorded on a clinic TB register, but follow up care is poorly recorded. It is therefore impossible for most clinics to determine the percentage of patients who are cured.

Reported number of days to receive TB sputum results (% of clinics)

	2 days or less (%)	3-5 days (%)	6-7 days (%)	8-14 days (%)	Greater than 14 days (%)	Average (days)
Eastern Cape	0	25	50	0	25	8
Free State	28	11	6	33	22	10
Gauteng	33	27	20	20	0	5
KwaZulu-Natal	10	50	0	30	10	9
Mpumalanga	20	13	40	7	20	9
Northern Cape	12	6	29	41	12	12
Northern Province	14	0	43	29	14	9
North West	0	7	27	53	13	20
Western Cape	8	31	38	23	0	6
SOUTH AFRICA	16	17	25	30	11	10



Availability of drugs including oxygen

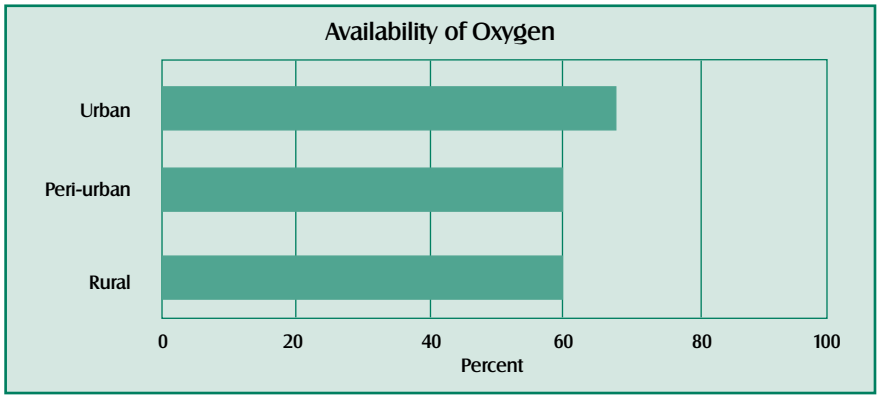
- There appears to be a need to improve supply of drugs to clinics. There were no significant differences between the availability of drugs in rural, peri-urban or urban areas.
- Many clinics noted that certain drugs, particularly medication for diabetes and hypertension were not kept in stock, and were only ordered for individual patients.

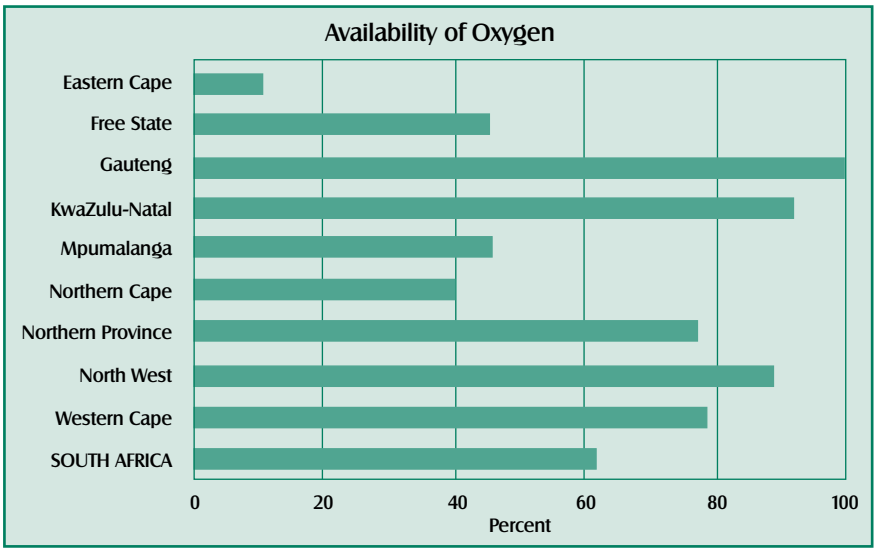
Availability of selected essential drugs and oxygen (% of clinics)

	Asthma	Antibiotics	Vaccines	Tuber-culosis	Hyper-tension	Diabetes	Oxygen
Rural	79	89	96	76	83	83	60
Peri-urban	82	97	97	77	77	77	59
Urban	70	96	98	92	83	83	65

	Asthma	Antibiotics	Vaccines	Tuber-culosis	Hyper-tension	Diabetes	Oxygen
Eastern Cape	63	89	90	60	75	75	10
Free State	61	78	100	53	39	39	44
Gauteng	67	100	100	100	85	85	100
KwaZulu-Natal	96	91	100	79	96	96	91
Mpumalanga	80	95	85	95	100	100	45
Northern Cape	83	100	100	94	100	100	39
Northern Province	76	94	100	59	76	76	76
North West	93	100	100	100	100	100	87
Western Cape	58	92	100	100	50	50	77
SOUTH AFRICA	76	93	97	82	80	65	61

- Oxygen supply is a cause for concern. Only 10% of clinics in the Eastern Cape, and less than half of the clinics in the Northern Cape., Free State and Mpumalanga had oxygen available at the time of the survey.
- While there was an insignificant difference in the distribution of oxygen available between urban and rural areas, this is an area of concern; not only because oxygen should be available in all clinics, but also because rural clinics have greater need for oxygen as referral centres are less accessible.





Discussion

This study was a baseline rapid appraisal, and while the sample size was relatively small, it gives a useful snapshot of what is happening in clinics around the country. Although the study was unable to provide an exact quantification of the problems, it highlights some areas of concern. In particular, the study indicates inequity of service provision around the country with the rural areas and the poorest provinces of South Africa faring worse.

The selected indicators for this study are basic measures of the quality of service provision. Ideally all clinics should meet these standards and health managers should aim that 100% is scored by every clinic around the country. Particular attention needs to be placed on rural areas and on the poorest provinces of the country, thereby reducing the obvious inequity illustrated by this study. This process needs to be monitored to ensure that it is the worst areas that are benefiting most by the restructuring of South Africa's health system.

Data Collection in Clinics

This study found a wide variation in the quality of data collected in clinics. There was also an amazing variety in the style of data collection forms, from simple clinic produced note books, to sophisticated standard data collection forms. In some clinics, that data was not analysed on site, and so the clinic had little indication of their own workload, nor changes in it.

Workload

A relatively high patient-nurse ratio exists in the urban clinics compared to peri-urban facilities. This may be a reflection of the influx of people into urban areas where service provision has not been designed to cope with such a demand. It may also be a result of the perception of higher quality of care in urban areas.

Supervision

It was encouraging to note that nurse supervision appeared relatively high in all provinces. However, this was not complemented by adequate doctor visits, especially to rural clinics. This confirms the well known critical shortage of doctors in the rural areas.

Drug availability

In some instances, the availability of drugs was dependent on the services offered at the clinic. For example, a clinic which does not offer TB treatment, would not have TB drugs. The overall availability of essential drugs was around 80%. Given the relatively recent introduction of the Essential Drugs List, this is encouraging. However, oxygen supply, regarded as an essential commodity in any health facility, was available in three out of every five clinics assessed.

Infra structural quality

Unreliable electricity, water and telephone services and functional refrigerators are all issues of concern.

One in fourteen of the clinics visited have no way of communicating in emergencies. On top of this, many telephones are not consistently working. This is further compounded by the slow response to emergency calls. Together this means that many clinics have to work in isolation, without the ability to refer emergency patients.

Child Health Services

Although a relatively acceptable level of child health services seems to be in place (as reflected by the availability of baby scales and adequate vaccines), this seems to be offset by the fact that only 48% of all the clinics visited offer immunisation services on a daily basis. This lack of daily immunisation services occurs despite the move towards integration of services, particularly at clinic level.

Family planning services

It is encouraging to note that family planning services are generally well integrated, with about 72% of clinics offering this service on a daily basis.

Sexually transmitted diseases & TB treatment

It is an area of concern that two priority health problems, namely, sexually transmitted diseases and tuberculosis, are far from attaining the standards set for their management. This relates to testing for syphilis and speedy return of tuberculosis sputum results.

The way forward

It is hoped that this rapid appraisal will provide useful information for improving the quality of primary health services. Furthermore, it is planned that this study will be repeated, so as to monitor the improvements, and thereby measure South Africa's move towards equity in primary health service provision.