Namibia Public Expenditure Tracking Survey (PETS) and Quantitative Service Delivery Survey (QSDS)

The Health Sector

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Disclaimer

Though a large number of people contributed to this study only the authors bear full responsibility for any inaccuracies of this report. Any opinion in this report are those of the authors and do not reflect that of the World Bank or that of the Government of the Republic of Namibia.

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List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CHS	Catholic Health Services
CMO	Chief Medical Officer
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
MoHSS	Ministry of Health and Social Services
N	Number of responses
NEPRU	Namibian Economic Policy Research Unit
PETS	Public Expenditure Tracking Survey
PHCS	Primary Health Care Supervisor
PMO	Principal Medical Officer
QSDS	Quantitative Service Delivery Survey
RMS	Regional Medical Store

Executive Summary

With Independence in 1990, the government prioritised expenditure on social sectors such as education and health in order to address poverty and a highly skewed income distribution brought about by racial segregation. Investment in these sectors will result in a healthier and better educated population and enables it to take up economic opportunities. After 14 years of independence, the outcome has not always met expectations.

Thus, the focus has shifted from the mere allocation of financial resources to votes and budget lines to the efficient use of public resources. A tool developed over the past decade and used in many countries to track down the use of public resources is a Public Expenditure Tracking Survey. Government has decided to apply this survey to Namibia and selected two sectors – basic education and health. These two sectors have absorbed a major chunk of budget allocations since independence. The guiding hypothesis for this survey is that actual service delivery is much worse than budgetary allocations would imply, because public funds do not reach the intended facilities as expected and hence outcomes cannot improve. According to international statistics, Namibia spends more on health than most other African countries, while the output is mixed. On the one hand, immunisation rates are lower than in other countries and on the other hand, infant and under-five mortality rates are also lower.

To verify this hypothesis a sample of schools and health facilities in seven of Namibia's thirteen regions has been randomly selected. Questionnaires have been developed to collect information from different levels within the health sector on the use of financial resources, human resources and the availability of material and equipment. Extensive interviews were carried out with officials at regional and district level, with superintendents, Chief and Principal Medical Officers, other heads of health facilities, pharmacists, medical doctors, nurses and patients. 71% of the interviews planned were conducted.

Namibia is divided into health directorates, health regions and health districts. The central ministry allocates funds to health regions that either manage the funds on behalf of districts or allocate funds to districts depending on the degree of decentralisation. A comparison of funds allocated by the ministry or the region to the next lower level in the structure, with the records at regions and districts of funds available to them, revealed discrepancies in all cases. It could not be established whether this was due to a lack of proper record keeping or due to other factors. This area certainly needs further investigation. For the decentralisation process to be successful, the capacity at regional and district levels to manage and control financial resources needs to be increased.

It became evident that there are huge discrepancies in the allocation of financial and human resources per person of the catchment area and per patient between regions. This could be justified since health characteristics vary between regions. However, there are apparently no clear criteria for the allocation of resources such as population

and health characteristics. Suitable indicators need to be identified to allocate sufficient resources to regions and districts that reflect the demand for health services.

Fees for the use of health services are set by the government and differ between the various types of health facilities, such as clinics, health centres and hospitals. However, patients are exempt from paying fees if they cannot afford it. Though the heads of health facilities indicated that receipts for payments are always issued, patients have not always received receipts. It reportedly also happens that the amount stated on the receipt differs from the amount actually paid and that receipts are not issued but the amount is stated in the patient's health pass. To reduce incidents of fraudulent activities it is recommended to design posters that ask patients to always insist on correct, formal receipts.

Service fees are collected by the health facility on behalf of the Receiver of Revenue within the Ministry of Finance. Thus, neither the health facility nor the ministry of health benefits directly from the fee collection. To create a stronger incentive to collect fees it could be considered to allow hospitals to retain a certain share of the fees collected. However, government should continue providing health services free of charge to patients that cannot afford paying for them. To avoid affluent patients taking advantage of this policy a statement should be requested, issued by a traditional leader or other authorities confirming that the person is poor.

Namibia's health sector is confronted with a lack of qualified personnel. Almost all medical doctors and pharmacists working in the public health sector are expatriates. Though other countries send volunteers, not all posts can be filled, which has a detrimental impact on the quality of services provided. Furthermore, reportedly not all foreigners have the necessary expertise and skills, including language skills, needed for the Namibian health sector and would thus need an intensive induction programme in the areas where they lack expertise. Furthermore, it is recommended to conduct a short study comparing salaries and working conditions for qualified personnel in the public and private health sector. Based on the results, incentives could be designed to retain qualified staff in the public health sector. The lack of pharmacists, pharmacist assistants and experienced clerks working at medical stores leads to pharmaceuticals being delivered to wrong recipients in wrong quantities. This results subsequently in a lack of pharmaceuticals at other health facilities and in the expiry of stock if not returned immediately or at least in time.

The survey found out that control measures for the flow of pharmaceuticals are in place. However, not everyone was aware of the proper use of stock cards despite a manual published by the ministry that explains their use. Furthermore, prices and unit sizes of pharmaceuticals are changing. This will result in over expenditure and over- or under-supply of drugs if these changes are not communicated immediately to medical stores, pharmacies and control officers. The communication structure needs to be improved. Though stock cards are used, there is hardly any control once medicine has been dispensed from the pharmacy of a hospital or health centre. Drugs are pre-packed at dispensaries and issued to patients without records about the quantity provided to patients. Although the type of medication dispensed to a patient is often

stated in a screening book and nurses know about the quantity of pills patients are usually provided with, it is very cumbersome for someone from outside to control the use of drugs. Since pharmaceuticals are vital for the health sector and are often expensive control, measures at dispensaries and training of staff in the use of stock cards and in stock taking are recommended.

The lack of qualified personnel has also a bearing on the supervision of health facilities by the Chief Medical Officer – who is responsible for the region – and the Principal Medical Officer – who is responsible for the district. They are usually also medical doctors attending to patients in hospitals and have hence little time to visit other health facilities except for the routine general supervision once a year. In addition, the number of health facilities falling under a region and a district varies considerably.

Since personnel expenditure accounts for a substantial share of the ministry's total budget, specific attention was paid to the qualification and use of human resources. Information received by the central ministry, regional and district offices, as well as from the head of the health facility and nurses on the number of health professionals employed by health facilities corresponded in often less than 50% of all cases. This could be caused by the fluctuation of staff, but the exact reasons have not been established. To avoid employing ghost workers, it is recommended that information about changes in personnel are communicated as soon as possible to all relevant institutions. Furthermore, officials from regional and district offices could verify the staffing regularly during their visits to health facilities.

Government prioritises primary health care services. Nevertheless, 19% of nurses heading a clinic and 57% of nurses employed there do not have a nursing diploma but just a school certificate. It is thus recommended to create incentives to attract qualified personnel to clinics in rural areas. This will have a positive impact on the quality of services provided at clinics and can subsequently reduce the number of referrals - including self referrals – of patients to health centres and/or hospitals.

Medical equipment is essential for providing treatment to patients. However, the equipment is not maintained on a regular basis. This is partly because specialised equipment is imported from abroad and no local technician is trained in carrying out at least basic maintenance services and repairs. Bringing in foreign specialists is not only time consuming but also expensive. Thus, it is recommended that foreign suppliers provide at least a basic training in maintenance and repair of the equipment provided. Most obvious is the breakdown of vehicles whether due to poor maintenance, careless driving or bad roads. Almost half of all vehicles were not in a working condition during the time of the interview. Health centres and clinics are worst affected. Only 29% of their cars could be used. This certainly needs attention by the ministry not only because of the costs involved but also because of its implication for the provision of health services.

Finally, the survey found out that patients are overwhelmingly satisfied with the services provided by health facilities. Only a quarter rated the services as satisfactorily or poor and only 11% feel that their complaints have not at all been addressed.

To conclude: Namibia spends more on health than most other African countries but the outcome is rather mixed. Though the survey has identified areas that could indicate possible leakages, it could not prove any leakages. Thus, the hypothesis that the outcome is below expectation because of leakages could not be substantiated.

1. Introduction

1.1. Background

The Namibian Government inherited at independence in 1990 a highly divided society brought about by racial segregation over the previous decades. Well developed economic centres and a small wealthy population contrasted the informal economic sectors, subsistence farmers and people living in poverty. Thus, government identified poverty alleviation, reduction of income inequality, job creation and sustainable economic growth as the main four national development objectives. One way to achieve this is to prioritise expenditure in the social sectors – in particular health and education. Investment in both will result in a better educated and healthier population and enable citizens to take up economic opportunities and eventually improve their quality of living.

The education and health sectors received the highest budget allocations over the years[1]. It is often argued that increased public expenditure in health reduces the impact of diseases on the productive life of the population and hence supports economic growth and poverty reduction. In addition, public investment in especially the formerly neglected regions to spur economic activities has resulted in a high ratio of government expenditure over GDP. The ratio stands currently at about 34%. In the budget statement for the 2002/03 Financial Year, the government set a target of 30%, which would imply that expenditure grows less than GDP. This, however, does not necessarily result in a decline of the quantity or quality of public services provided. Government had already realised that high public expenditure does not automatically conform to high quality service delivery. Studies conducted elsewhere pointed out that budget allocation is a poor predictor when used as an indicator of the quality of public services provision (Dehn, Reinikka and Svensson, 2003). According to data from the World Bank, Namibia spends about 5% of GDP on public health services; more than many other African countries. However, the output is mixed. The share of children immunised against DPT and measles is lower than in most of the countries that spend less than Namibia and has even declined in 2001. On the other hand, the infant and under five mortality rates are below average (Table A1). Calculations by the World Health Organisation, ranked Namibia 189th of 191 countries in terms of her health sector's performances measured by the disability-adjusted life expectancy and 168th in terms of overall performance of the health sector (World Health Organisation, 2000, p.203).

At the same time, Namibia ranks 66th based on per capita health expenditure. This huge discrepancy in the ranking indicates that other countries with less spending per capita have achieved a higher 'level of health'. This mismatch between input and

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[1] Increased statutory expenditure (interest payments, loan guarantees) has led to the Ministry of Finance receiving the largest or second largest share of the budget since the new millennium.

output has shifted the focus from the mere allocations within the national budget to votes and budget lines to the efficient use of public resources. A study conducted by the World Bank in 1998 identified a need for an increased focus on efficiency and effectiveness of spending (World Bank, 1999). Increased efficiency in service delivery could furthermore help level out the impacts of reducing the expenditure ratio over GDP. Various reforms have been implemented over the past three years to enhance the use of financial resources and link budget allocations to outcome, such as the three-year rolling budget (Medium-Term Expenditure Framework), the Performance Efficiency and Management Programme, Medium Term Plans and an Integrated Financial Management System.

Concerns about the effective utilisation of public resources are, however, neither a recent phenomena nor are they limited to Namibia or developing countries. Years back in the 1970s a report found out that about 7 billion US dollars had been wasted and misused in the US Department of Health, Education and Welfare alone (Rahim and Bedari, 2003). A host of literature exists on budget allocation and the quality of service delivery in general and on individual countries. Research in this area received increased attention following studies carried out by staff from the World Bank during the 1990s in Ghana and Uganda. A new, innovative tool – the Public Expenditure Tracking Survey (PETS) - has been used to evaluate the use of financial resources at national, sub-national and frontline service provider levels. PETS tracks the flow of government resources from central government through all structures to service facilities, such as schools and health facilities. PETS is employed to determine how much of the original resources reach each level and on which item the funds are actually spent. It is a tool to locate and quantify the leakage of funds. The leakage of funds refers to the diversion of funds for other than the intended purposes and for private gain. More recently, the PETS has been combined with a Quantitative Service Delivery Survey (QSDS). The QSDS goes beyond the tracing of funds and tries to explore the determinants of poor service delivery (Dehn and Reinikka, 2000). It collects for instance information on resource allocation within service providers, staff attendance, financing patterns and management systems.

Since the Namibian government experienced the discrepancy between budget allocation and actual results, it has decided to conduct a Public Expenditure Tracking Survey combined with a Quantitative Service Delivery Survey. Two ministries have been selected for this survey, namely Basic Education and Health because they are absorbing a large chunk of the national budget. It is assumed that the results from the study can be applied to other public sectors as well.

1.2.   Working hypotheses

The overall hypothesis in the Terms of Reference for this study is that actual service delivery is much worse than budgetary allocations would imply because public funds do not reach the intended facilities as expected, and hence outcomes cannot improve. However, financial resources can reach the facilities but outcome does not improve

because human resources, material and equipment are not used for the intended purposes or are not used efficiently. This was used as an additional hypothesis.

Questionnaires for the survey have been designed in such a way that they cover all these aspects.

1.3.   Methodology

The project was supervised and guided by a Steering Committee chaired by the Office of the Auditor General. The main government institutions were represented on the Steering Committee – Ministry of Basic Education, Culture and Sport, Ministry of Finance, Ministry of Health and Social Services, National Planning Commission Secretariat, and the Office of the Prime Minister. Regular meetings were held to discuss the approach, the questionnaires and provide feedback on the progress.

The preparations for the survey started with an institutional mapping with specific focus on the two sectors selected. The mapping intended to capture the interaction between the various role players in the budget process from planning to execution and specifically the interaction of and responsibilities at different levels within these two sectors. In addition, a background paper on the health sector was prepared. The questionnaire built on information provided by these two documents.

1.3.1.   Sampling

A representative sample of seven of Namibia's thirteen administrative regions was chosen for the survey. This sample is a convenient sample focusing on the efficiency of the project rather than a random sample.

The north east of the country consists of two regions – Caprivi and Kavango – that have similar features. Kavango was chosen based on efficiency reasons as was Hardap. Hardap and Karas are the two regions making up the south of Namibia and reveal the same characteristics. Both regions are dominated by commercial livestock farmers and have a low population density.

The north central of Namibia consists of four regions of which two have been selected – Ohangwena and Omusati. Finally, Kunene in the north-west and Omaheke in the east were selected because these two regions depict characteristics of both, communal and commercial farming areas. Furthermore, Kunene is unique as part of the region is quite remote and the pastoralists in that area continue with a nomadic lifestyle. Khomas with the capital Windhoek needed to be part of the sample since it is the major urban area. These three regions combine same features as the two regions in central Namibia that were not covered, namely the Erongo and Otjozondjupa regions.

Namibia was divided into four Health Directorates that were dissolved at the beginning of 2004, similar to the changes in the structure of the education sector. Instead, the health regions that correspond with the political regions are headed now by Health

Directors. The regions are divided into health districts. The number of districts depends on the size of the region and varies between one and four. All districts became automatically part of the sample in regions that consist of not more than two districts. In other regions, two districts were randomly selected.

There is usually one hospital in each district as well as one health centre. The hospitals and health centres were always part of the sample and a number of randomly selected clinics. In total 12 districts, nine district hospitals, ten health centres and 25 clinics were covered by the survey. The discrepancy between the number of districts and hospitals is because there are no district hospitals for the Rundu district and the Windhoek district. Both towns house referral hospitals. Furthermore, there is no hospital for the Aranos district. All four referral hospitals were included in the sample. Referral hospitals are specialised health facilities that cater for patients across regions or from the whole country and do not fall under the health regions but receive their funds directly from the ministry. This brings the total sample of health facilities selected to 48. The sample was discussed with the Steering Committee and especially with the ministry's representative in the Steering Committee. Details about the sample are contained in Table A2.

Regions, districts and health facilities selected are representative for the whole country. While the name of the regions are mentioned and used in the report to underline and illustrate regional disparities within the country a list of health facilities is not provided. Since it is a representative sample, the situation at any randomly selected sample of health facilities is similar to what we found out about the facilities we visited.

1.3.2.   Questionnaires

Comprehensive questionnaires were developed for several respondents at each hierarchical level in the two sectors covered, with questions designed to extract the same type of information at all levels for comparison purposes. Questionnaires were developed for the ministry, regional health director, regional chief medical officer, principal medical officer at district level, head of the health facility (anyone in charge of a clinic, health centre or a hospital), medical doctors, nurses and patients (in-patients and out-patients). It should be noted that questions deal often with perceptions of respondents not necessarily with facts. If it happens that perceptions and facts do not match it could indicate the need for stronger communication between the various hierarchical levels and for an improved flow of information. It would have been beyond the scope of work to verify the perceptions of the respondents.

1.3.3.   The pilot survey

A pilot survey covering six schools and six health facilities (three in Windhoek, two in Okahandja and one in Groot-Aub for each sector) was carried out to test the questionnaire. Enumerators were trained and some participated already in the pilot survey. The pilot survey did not indicate any major problem with the questionnaire.

After a last round of discussions internally as well as with the two ministries involved the questionnaires were finalised.

1.3.4. The main survey

The project members were divided up into five teams, with four teams starting in the Kavango region as from 28 July 2003, while one team remained in the Khomas region. The teams consisted of one NEPRU staff and one or two enumerators. After having received training at NEPRU, the enumerators received a one-day refresher training when they joined the teams in the field. Especially for interviewing patients and school board members, the knowledge of local languages was essential. Therefore, we could usually use the same enumerators for only one or two regions.

One of the major challenges we encountered during the survey – besides locating the health facilities in the remote areas - was the poor communication infrastructure. Even health facilities that have telephone and a fax machine could often not be contacted because telephones and fax machines were not working or in some areas the telephone wires were stolen because of the copper content. Thus, except for Windhoek, health facilities were usually not informed about our visit and hence not prepared. In many instances, we had to return to the same institution more than once to collect outstanding information. Subsequently, we spent much more time at the facilities than planned to collect all the data and information needed.

Furthermore, clinics in remote areas were often manned by only one nurse and closed in the afternoon when there were no patients. On the other hand, so many patients were queuing at some clinics that it was difficult to interview nurses and the head of the facility. Since finances are administered at the district hospital on behalf of clinics and health centres, financial information could only be collected from hospitals. Records on patients and payments of fees by patients were often incomplete.

Other challenges included:

❖ The country-wide immunisation campaign in which most of the staff of clinics and health centres were involved. During this time, few interviews could be conducted at health facility level.

❖ Most of the medical doctors are expatriates. Some of them felt inadequate to participate in the survey.

We planned to interview the head of the health facility – clinic, health centre, hospital, referral hospital – two nurses (the matron at hospitals) and two medical doctors, two patients at clinics, five patients at health centres and five in-patients and five out-patients at hospitals. However, it was not always possible to interview all of them because of the reasons given above. Since the Principal Medical Officer was the head of the hospital and also in charge of the health district in general we interviewed him in his capacity as PMO to collect information on the district and not as head of the hospital. Instead, we interviewed where possible the matron on general hospital

matters. Finally, we interviewed three of the four health directors, the Chief Medical Officers and a number of pharmacists at hospitals and medical stores.

We have covered all but three health facilities. At one facility no one could be found, and two others were not willing to co-operate – among others one referral hospital. Table A2 contains the number of interviews conducted compared to the number of interviews planned.

The whole project took longer than initially planned and the schedule needed to be revised. The field survey was more time consuming than anticipated as described above. Thereafter we faced problems with the accuracy of data entry that caused a delay of about two months. Finally, two of the five team members left NEPRU, which necessitated a reorganisation of the team and the schedule.

2.   Financial resources

Prior to independence in 1990, health services had benefited mainly a certain racial group while the majority was denied access to quality health services. This has been changed since then and the new government placed emphasis on Primary Health Care and on preventive rather than curative health services. New clinics in rural areas were opened while some hospitals were closed during this reprioritisation process. To improve access to health services substantial resources were allocated to the Ministry of Health and Social Services (MoHSS). The ministry has registered the second highest budget allocation after education for several years. In recent years, it received the third largest amount because of high statutory expenditure of the Ministry of Finance. High expenditure on health is justified on the grounds of its positive impact on the quality of life and productive life-years of the population and hence on private capital accumulation and economic growth. Notwithstanding improvements of certain health indicators such as child mortality, under-five mortality rates, maternal mortality rate, and an increase in life expectancy in the early 1990s, the overall outcome of health expenditure seems not to justify high budget allocations.

The Ministry of Health and Social Services is the central institution for the health sector. Previously, Namibia was divided into four Health Directorates. This changed at the beginning of 2004 and the four directorates were split into thirteen corresponding to the thirteen political regions and to the already existing thirteen health regions. The health regions are headed by regional Chief Medical Officers (CMOs). Each of the regions is divided into up to four health districts with Principal Medical Officers (PMOs) in charge of the district. There are in total 34 health districts in the country. Each district usually has one hospital – state or mission hospital – a health centre and various clinics depending on the geographical and population size of the district. In the process of decentralisation, funds have been directly allocated to the health regions and no longer through the directorates. Depending on the degree of decentralisation, some districts are managing the funds that are allocated to them by the region on their own while for other districts the regional office continues to manage the funds.

There are some health facilities that fall outside this structure. The four referral hospitals receive direct allocations from the ministry that are not handled by the regions. Secondly, a number of health facilities are run by missions. Catholic Health Services (CHS) was established by the Roman Catholic Church to manage all health facilities set up by this church. CHS entered into an agreement with government concerning the costs of providing health services to the public. Since the mid 1990s, government covers 100% of current expenditure and 50% of capital expenditure of CHS. Since CHS receives government allocation in cash, it is more flexible in spending the money though it prepares and submits a budget to government.

In the remainder of this section, we will focus on the budget process, additional resources available to health facilities and budget control.

2.1.   Budget process

A transparent budget process that involves various levels in the health sector ensures that budget allocations match the priorities of health care providers. Budget allocations to the ministry of health are part of the whole budget process that starts about nine months before the beginning of the Financial Year with meetings between the Ministry of Finance, the National Planning Commission Secretariat and the Bank of Namibia to outline the budget framework. Once the budget ceiling for the ministry has been set, the regions are approached for their inputs. Usually economising committees are set up at regional level also involving the districts. Through this structure, regions and districts are informed about budget ceilings and provide inputs into the budget. Clinics and health centres are rarely involved, though districts might ask them for their inputs. The Primary Health Care Supervisor at regional level provides in some cases inputs into the budget ensuring that the needs of clinics and health centres are reflected as well.

These procedures are confirmed by responses from the heads of clinics and health centres. Most of them indicated that they are either not involved in budget preparations or not informed about budget ceilings (Table 1).

Table 1   Are you informed about budget ceilings? – Responses from the Head of the Health facility

	other state hospital	clinic	health centre	Average
yes	100.0%	15.4%	28.6%	27.3%
no	0.0%	23.1%	57.1%	31.8%
not applicable	0.0%	61.5%	14.3%	40.9%

Chief and Principal Medical Officers generally feel that their priorities are fully or mainly reflected in the final budget allocation though about 40% think otherwise (Table A4). Although the percentage figures have to be treated with caution because of the low number of cases, there is apparently a need for more consultations on all levels to ensure that budget allocations match the priorities of service providers.

60% of the CMOs and 18% of PMOs indicated that they do not stick to budget ceilings during the financial year. Some of the reasons mentioned are increasing costs by service providers such as the Namibia Institute for Pathology, catering services, and transport. Since most of them are consulted during the budget process and feel that their priorities are at least mainly covered by the budget allocations, these results can be explained by a lack of fiscal discipline, increasing costs of services PMOs and CMOs do not have control over or that despite all consultations the allocations are still insufficient. To reduce the risk of unexpected price increases by service providers contracts should be signed that cover the whole financial year and include all services that can reasonably be expected during the course of a financial year.

Most of the medical officers and nurses confirmed that the health facility prepares a budget at the beginning of the financial year (Table 2). Responses from clinics and

health centres however do not correspond with information provided by the head of the facility and the structure of the health sector in general. Budgets are managed at either the district or regional level but rarely at lower levels. The responses from nurses therefore indicate that they are not well informed about financial matters at clinics and health centres.

Table 2   Is a budget prepared? Responses by medical officers and nurses

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
yes	81.8%	65.2%	60.0%	62.5%	64.3%	67.2%
no	0.0%	0.0%	0.0%	12.5%	14.3%	4.9%
Don't know	18.2%	34.8%	40.0%	25.0%	21.4%	27.9%

Furthermore, nurses and medical officers are partly involved in budget preparations at hospitals. This is to a larger extent the case at mission and referral hospitals than at other hospitals. Again, responses from clinics and health centres are not very reliable and are therefore not part of Table A3. Almost 70% of the health staff thinks that their priorities are reflected in the budget. The lack of knowledge about the budget is underpinned by responses from clinics and health centres. Staff there often does not know about budget allocations (Table A4).

Budget allocations are reconciled on the regional and district level and therefore they are always updated about remaining funds. 73% and 80% - PMO and CMO respectively – indicated that they are experiencing a delay in the release of funds. Of these, 75% consider it as a serious or very serious problem.

The findings show that the priorities of regions and districts are usually met by the budget allocations. This is indicative for their involvement in the whole process. Despite these findings, there is apparently a need for more consultations, since districts and regions generally do not stick to budget allocations though they reconcile budget allocations with commitments and are well informed about remaining funds. Furthermore, there is apparently a delay in the release of funds at the beginning of the Financial Year. However, this cannot be blamed on the late approval of the appropriation bill since the Ministry of Finance can authorise the withdrawal of up to one third of the previous financial year's allocation within the first four months. It is therefore necessary to establish the actual cause of the reported delay in the release of funds during the beginning of the financial year.

2.2.   Budget allocation

…by item

About 14% of the national budget is allocated to the MoHSS[2]. Excluding the budget allocation to social services, 10% is spent on health (Table A5). About 57% and 10% of the health budget is allocated to personnel, material and supplies respectively. The four referral hospitals have received some 37% of the allocation to health and the regions some 54%. Personnel expenditure accounts for almost two thirds of the referral hospital budgets and for slightly more than half of the regions' budgets. Materials and supplies absorb about 13% of the allocations to referral hospitals compared to 9% of the allocations to regions. On a first glance, the figures indicate that regions spent less on personnel and materials than referral hospitals. However, this is misleading since the budget allocation to regions includes a lump sum for subsidies to mission hospitals. Mission hospitals spend this amount as other health facilities do, namely on personnel, material and supplies, etc. Therefore, the actual spending on personnel, and on material and supply is higher than the budget figure indicates. Payments for utilities – electricity, water, telephone – account for almost 5% of allocations to health facilities (for details see Table A5).

Wages and salaries

Personnel expenditure is paid by central government and not by the regions or districts. Usually the wages are transferred to the employee's account unless the employee has joined the public service only recently and the direct transfer has not yet been processed. In this case, cheques are issued and forwarded to the employee. 95% of nurses and doctors indicated that no salaries are outstanding, while all other interviewees have received their full salaries. The results indicate that wages and salaries reach the intended recipient and that government is a reliable employer. However, it does not imply that there are no leakages in the form of persons being on the payroll who are actually not working for government. This topic is dealt with in more detail in Section 3.1 below.

…by health regions

Budgets are allocated to health regions. The amount allocated per head of population to regions differs substantially. Khomas receives the lowest amount – N$93 – but this has to be qualified since Windhoek accommodates two national hospitals that cater for the Khomas region and the country at large. Allocations to the national – referral – hospitals are not included in the regional budgets. The densely populated regions in the north – Ohangwena and Omusati – receive considerably less than other regions. According to the same table, Kavango receives N$139 per head. However, the intermediate hospital for the north eastern regions is located in Rundu benefiting the

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[2] The figures refer to the State Revenue Fund and do not include funds channelled to the sector outside the State Revenue Fund.

Kavango residents at large. If both amounts are combined, the per capita allocation to the Kavango population will amount to N$211. Budget allocation to the former North West Health Directorate was not even half of the allocation to the Central Health Directorate and just two thirds of the allocation to the south health Directorate (Table A6). There are of course good reasons for not allocating the same amount per head throughout the country. The population structure and health characteristics differ significantly between regions. For instance, the northern regions are affected by the outbreak of malaria in particular during the second quarter of the year, which requires substantial financial and human resources. Furthermore, relatively more clinics are needed in regions with a low population density to provide access to health facilities than in regions with a high population density. However, from the interviews conducted it appears that there are no clear criteria used for allocating funds to regions and referral hospitals. Allocations are based on the past and on the demand from the recipients. It is hence recommended that suitable criteria are identified and applied when allocating funds in the national budget.

Donations

Health facilities receive their funds almost exclusively from government. Except for one case clinics and health centres do not receive any direct financial support from donors, while there are a few district hospitals that get some funds. Responses from health centres and clinics are backed by responses from the districts that are supervising these health facilities. Responses from the regional level about funds directly channelled to districts do not always concur with information received from the districts. Five of the six Chief Medical Officers interviewed indicated that their region has received support from donors outside the State Revenue Fund but that the Ministry has been informed about it. It appears that there is an information gap at higher levels about these additional resources since regional health directors indicated that health facilities in their regions do not receive funds outside the State Revenue Fund. With the restructuring of the health sector and the introduction of health directorates at each administrative region this gap will probably be closed. However, it is advisable that health facilities inform the next higher levels about donations they are going to receive if these donations exceed an amount to be specified. This would increase the transparency in the health sector.

Other sources of income

Health facilities do not have other sources of income according to responses. The public generally does not make use of any equipment at the health facility, such as fax machine or photocopier. However, there are public phones that operate with phone cards. In few cases, the public has access to water and electricity but does not pay for it. Apparently, the equipment allocated to health facilities is used to provide health services and is not used for other purposes by the public.

2.3.   Use of financial resources

It was intended to collect financial information from various levels to compare allocations to regions and districts with commitments by health facilities. This was however only in part possible. Firstly, before the Financial Year 2002/03 the budget was not decentralised and thus the ministry has no records of commitments by regions but only the total commitment for the whole country. Secondly, regions are at different stages of decentralisation. In some regions, districts manage their own funds in others they are managed at regional level.   Thirdly, records are sometimes incomplete rendering a comparison futile. The analysis of data available reveals that amounts allocated by the ministry do not correspond to amounts recorded as available funds at regional offices and referral hospitals. Allocations to specific budget lines as well as total allocations are not consistent (Table A7). Figures provided by referral hospitals about amounts available were by between 9% and 18% higher than the data provided by the ministry, while the differences at regional level varied between 0.2% and 43%.

The comparison of funds allocated and used based on the data recorded at the regions shows no consistent trend. Some regions underspent their budgets while others overspent. Referral hospitals on the other hand seem to be more disciplined in the budget execution. According to their data, they under spent their original allocations by between 0.8% and 12%. However, the data provided by regions and referral hospitals concerning their commitments differed again from records at the ministry (Table A7). Most of them recorded higher amounts than the ministry.   Apparently, there is sometimes a communication breakdown between the central ministry and the regions. Payments are made by the ministry and regions feel they are not always informed about all payments made and hence their commitment registers differ from the general ledger at the ministry. It is therefore recommended that regions are informed instantly about all transactions that concern them. This would not only improve the information available at all levels but would also help to detect commitments wrongly assigned to a region.   The new Integrated Financial Management System could contribute to resolving some of the differences. However, there is also reportedly a lack of qualified and experienced staff at the institutions to manage the accounts.

2.4.   User fees

On first sight there seems to be another source of income for health facilities – the user fees paid by patients. However, these fees are collected by the health facility on behalf of the Ministry of Finance and are transferred to the Receiver of Revenue. Income from these fees is estimated to be about N$19 million for the Financial Year 2002/03 and almost N$28 million for 2004/05. The income accounts for 4.3% or 6.2% of the allocation to the health regions or referral hospitals respectively (Table A8). Since the fees collected are not part of the income of the health facility but transferred to the Receiver of Revenue, there is no strong interest in enforcing the payment. It could therefore be considered that regions and districts can retain a certain share of the user fees. They would thus benefit from the collection and could use the additional funds for own purposes. The retention of funds should be restricted to districts or regions that

have the necessary accounting personnel to manage finances. This is not the case with clinics and health centres.

User fees vary between clinics, health centres and hospitals and differ between services provided. Out-patients at clinics are usually charged N$4 from Monday to Friday, while they have to pay N$8 and N$15 at health centres and hospitals respectively. Fees are higher during weekends as well as for foreigners and private patients. In-patients pay between N$20 in the general ward and N$25 in the maternity ward. This data is generally backed by information provided by patients about fees paid so far. 94% of patients at clinics confirmed that they paid N$4, while the remaining paid N$6 (Table A9). We came across one clinic that charged higher fees in the afternoon than in the morning but it could not be clarified whether this is based on official approval. The average amount paid by patients at clinics, health centres and hospitals also indicates that the fee structure is more or less adhered to. Out-patients paid on average the lowest fees at clinics and the highest at hospitals (Table A10). In-patients paid or expect to pay higher fees. The averages range between N$31 at health centres and N$47 at referral hospitals. Since these fees are due on discharge, patients often did not know how much they will have to pay.

Payment in kind and non-payment

Health facilities belonging to the state do not allow fees to be paid in kind, while this is possible at health facilities run by missions. Payment in kind accounts for between 10% and 45% of fees collected at clinics and health centres owned by the Catholic Health Services in the Kavango region. The option of paying in kind explains most likely that all patients have paid the fees at these facilities. Since mission hospitals and health centres do not outsource catering services but provide in-patients with food prepared by the health facility they could use in-kind payments for the meals. State health facilities on the other hand outsource this activity and would be left with all different kinds of in-kind payment that they would need to sell. In addition, the valuation and recording of in-kind payments for accounting purposes would pose a challenge. Thus, in-kind payments at state run health facilities is not seen as an option to increase the share of payments made.

According to information provided by the head of the health facility, almost a third of patients in rural areas do not pay fees at state owned health facilities. The proportion is highest in the Ohangwena region and lowest in the Omusati region (Table A11). The proportion of non-payment is lower in urban areas. However, the referral hospital at Rundu faces apparently considerable problems with collecting fees. Since it is situated at the border to Angola, it caters for a large proportion of the population there who does not have access to any other adequate health services. Though they are foreigners and would have to pay the fees for foreigners, they reportedly often make use of Namibian health passports and indicate that they are unable to pay. This issue could be discussed with the Angolan Embassy and a lump sum paid by Angola for the treatment of Angolans in Namibia could be considered until health services are restored in southern Angola. On the other hand, health services provided to Angolans

can be seen as a support of the neighbour who supported Namibia during her struggle for independence.

It is government policy that patients should not be denied health services because of their inability to pay. Therefore, usually no action is taken in the case of non-payment and patients are treated. However, there are health facilities, which give a grace period for one to pay. This means that patients will be treated but given a period to come and settle their payments. There were also reportedly cases where patients with minor health complaints were encouraged to return home and collect money before they are treated. While it is applaudable that government provides health services for people who cannot afford paying for it, measures need to be put in place to avoid that patients who could afford paying fees taking advantage of the situation.

In the education sector, parents will be exempt from contributing to the School Development Fund if they provide a statement from traditional leaders or other authorities certifying that they are poor. This statement could be considered for the exemption from paying service fees at other government institutions as well – including health facilities. This will increase the threshold for the avoidance to pay. It needs to be ensured that these statements are properly handled and not misused. However, since health problems are not foreseen patients who do not have children of school going age will often not have the statement at hand in case of emergency. While on the one hand the policy of payment or providing a statement certifying the inability to pay should be pursued, the costs for follow ups and collecting outstanding fees need to be balanced with the benefits.

Receipts

Handling cash at institutions always bears the possibility that money is diverted. Issuing receipts can limit the extent to which this is possible.   76% of in-patients confirmed that they have always received a receipt, while 14% have never received one. This is apparently much more the practice in rural areas, where 28% of in-patient never received a receipt compared to 8% in urban areas (Table A12). State hospitals and mission hospitals issue receipts less often than health centres, while referral hospitals always provide receipts. All head of health facilities interviewed indicated that they keep records of money received from patients as well as issuing receipts for money received. However, this is not in all cases backed by information received from patients.

There are reportedly cases where patients received a receipt but the amount stated was lower than the amount actually paid. In other cases, the patient has not received a formal receipt but the amount was stated in the patient's book. To avoid these kinds of fraudulent activities, it is recommended to design posters that advise patients to always demand an official receipt and check the amount and other particulars on the receipt carefully. These posters should be fixed at all counters where payments are made.

User fees from clinics and health centres are collected by district hospitals and transferred to the Ministry of Finance.   All particulars of each patient including the

receipt number and the amount paid are captured in a screening book at the health facility. These books are controlled on a monthly or bi-monthly basis and the amount paid compared with the cash collected. One case was reported of a clerk who used a receipt book other than the normal cash receipt book to issue receipts and these receipts were not recorded in the patients register. Though there will always be some loopholes it is recommended that the books are properly controlled at least once a month and the cash collected compared to what could reasonably be expected from the health facility. This can further minimise the possibility of fraud.

2.5.   Budget control and auditing

Resources such as drugs, medical equipment and material at both the regional and district level are distributed in kind. Since a highly decentralised budget execution brings the possibility of leakages, appropriate auditing and control measures should be in place. The study reveals that 63% of the districts are audited internally while there is no internal auditing at the other districts. If in place, internal auditing takes place every six months. The results have to be qualified by the different degree of financial autonomy of districts and health facilities. Since the budgets for some districts are still managed at the regional level there is no need for internal auditing at the district level. In comparison, only one third of CMOs indicated that they do have an internal auditing system for their offices. Furthermore, in some regions the chief control officer from the region audits clinics and health centres. Finally, financial statements of Catholic Health Service that is operating the health facilities of the Roman Catholic Church are audited by an external, established auditing company.

Stock taking and inventories

Control of material and equipment is essential to use scarce resources efficiently and to make sure that equipment provided is kept at the health facility. 92% of the health staff confirmed that stock is regularly taken at health facilities (Table A13). In the Khomas region fewer facilities do a stock-take (71%). These findings are underpinned by responses from heads of health facilities, PMOs and CMOs, who all confirmed that there is regular stock taking. 78% of health facilities submit records of stock taking to the district office, which is confirmed by PMOs. 73% of the districts control the stock at health facilities in their district regularly and an additional 18% sometimes. 57% of districts control stocks at health facilities more often than every six months and the remaining once a year.

Inventories are compiled at all health facilities in urban areas and at 78% of health facilities in rural areas. According to the heads of health facility and health professionals, this is not always the case in the Omusati region, which corresponds with information from the PMO (Table A14). Otherwise, district and regional offices indicate that inventories exist at all health facilities. Inventories are controlled in almost all cases by officials from the district or even from the regional office (Table A15). Only 11% of heads of health facilities in rural areas indicated that this is not the case – again in the Omusati and Kavango regions. Inventories are controlled in the same intervals

as the stock – namely in 57% of the cases more often than every six months, otherwise every year.

According to the survey, tools are in place and regularly used to ensure that equipment at health facilities is regularly controlled.

3.   Human resources

Human resources form the backbone of any institution. The largest chunk of the ministry's budget is spent on personnel expenditure (Table A5), which justifies a closer look at qualification and experience of health professionals and at the use of human resources.

3.1.   Number of health professionals

The staffing of health facilities is determined by the staff establishment list compiled by the ministry. The new establishment list will be implemented during 2004 making provision for more posts to address staff shortages at health facilities. The survey also revealed the necessity to revise the establishment list. 83% of heads of health facilities indicated that they are experiencing a shortage of health professionals[3]. There are no major differences between rural and urban areas. All PMOs and CMOs confirmed the shortage of health professionals while staff at health facilities agrees to a lesser extent than the head of the facility. Interestingly, staff at urban health facilities feels much more the need (93%) for more nurses and medical officers than their counterparts in rural areas (64%). Referral hospitals are more affected by the shortage of staff than other health facilities according to responses by nurses and medical officers.

The main causes for the shortage as identified by the interviewees are the lack of qualified personnel, the staffing norms and a hesitation by health professionals to working in remote rural areas. The lack of qualified professionals in the public health sector is most evident with medical officers and pharmacists. Almost all of them are expatriates originating from various countries and regions such as Cuba, Nigeria as well as Western and Eastern Europe. Government has addressed the lack of qualified nurses by upgrading assistant nurses to enrolled nurses through further training. Moreover, as mentioned, new staffing norms increase the posts in particular at hospitals and health centres.

Comparison of data

Information about the number of health professionals employed at the health facility was collected from all levels. As Table A16 reveals the share of corresponding information concerning the number of nurses employed is rather low. Information from the district corresponds in 88% of all cases with information provided by the head of the health facility. This is to a much lesser degree the case with information available at the region (74%) and the ministry (48%). The correspondence between information provided by nurses and information provided by the head of the clinic or health centre is even lower (43%). Usually figures provided by nurses and by the head of the health

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[3] The question did not refer to vacancies but to the perception about the adequacy of staffing at the health facility.

facility differed by one, while figures obtained from district and regional levels and from the service provider varied by between one and ten.

Though it could not be established what caused these differences, one explanation could be that information on staff fluctuations are not immediately forwarded to other levels. About 2.8% of nurses have left the health facility during the first six months of 2003 and a further 1.4% passed away during the same period. The main reason provided for nurses leaving the health facility is that they found better jobs elsewhere. Clinics and health centres are harder hit by staff fluctuation than referral hospitals. 5.3% and 2% of health staff respectively has left the health facility or passed away, while the figures are considerably lower for referral hospitals – 2.5% and 1.3% respectively. Overall, 4.1% of all posts became vacant during the first half of 2003. The fluctuation amongst medical officers is higher (26.7%) and mainly caused by contracts of expatriates that have expired.

To avoid salaries being paid for staff that is no longer in the employ of the ministry it appears necessary to update information about staff fluctuations as soon as possible at all levels. In addition, information from the payroll needs to be verified with actual staffing at health facilities.

3.2.   Qualification and experience

Qualification and experience of health professionals are two main determinants for the performance of the health sector. Therefore, specific attention is paid to both factors in the following analysis.

Qualification

The highest formal qualification for 71% of the head of health facility is a nursing diploma and for a further 13% it is a school certificate. These figures are almost identical for rural and urban areas. However, there are more heads of health facilities in urban areas that have obtained a bachelor degree than in rural areas – 14% compared to 4% (Table A17). The heads of clinics have the lowest qualification and school leavers with no further formal qualification are only found there[4]. 62% of the clinics are headed by a nurse with a nursing diploma while this is the case at 88% of health centres. There are also regional discrepancies. A higher share of clinics in the Khomas, Ohangwena and Hardap regions are managed by a nurse with a school certificate.

Nurses are better educated in urban than in rural areas. 10% of nurses in urban areas have a bachelor degree as their highest qualification compared to 5% in rural areas, while 36% in rural areas have just a school certificate – 24% in urban areas (Table

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[4] With the upgrading of assistant nurses to enrolled nurses and the retiring of nurses who have not participated in the upgrading programme this is going to change.

A18). No nurses at clinics have a nursing diploma or any higher formal qualification. The best educated nurses are employed in referral and mission hospitals.

Medical doctors have appropriate medical qualification obtained abroad. Few Namibian medical doctors are employed in the public health sector and the few who are working for government are almost exclusively based in Windhoek. The employment of foreigners is not without problems. Reportedly, some of them lack the knowledge of the specific health characteristics of the country and English language skills. The latter point requires that there is always a nurse assisting the medical doctor in communicating with patients. This certainly reduces the efficient use of human resources.

The lower qualification of health staff at clinics in rural areas can be to some extent explained by relief nurses employed temporarily there to fill vacancies. Secondly, working at clinics is not attractive since no overtime is paid, while health staff at hospitals receive overtime payment. And finally, it is generally more attractive working in urban than in rural areas because of the infrastructure. However, since primary health care is government's priority and clinics are therefore meant to be the first point of access to health services, qualified personnel is needed at this level. Furthermore, nurses at clinics are working often on their own or with a very small team, but without the support of a medical doctor, and need therefore to be qualified and experienced. Quality treatment at clinic level would reduce referrals – including self referrals – to health centres and hospitals and thus reduce the workload there. Financial incentives could be considered to attract qualified health staff to clinics and rural areas. However, working in rural areas is not only a matter of financial incentives but influenced by many factors, such as available infrastructure and job opportunities for spouses. Hence, before deciding about any incentives it is recommended to conduct a small survey to establish the factors that could attract qualified personnel to rural areas. Based on these results and the budget available, incentives could be designed.

Acknowledging the lack of local medial doctors and appreciating the contribution of foreign doctors to the Namibian Health Service it is recommended that their qualification and practical experience meets the specific needs of the Namibian health sector. It is furthermore recommended that they all receive a proper introduction into the health characteristics of the population. Sufficient time should also be provided for those who lack English language skills to improve on that.

Finally, though not covered by the survey, the qualification of support staff – administration - at all levels of the health sector is equally important for managing the sector efficiently.

In-service training
Besides the formal qualification, in-service training is an important tool to increase and update the skills of personnel.

27% of nurses, 35% of heads of health facilities and more than half of the medical doctors have attended training courses during the first six months of 2003. Almost all indicated that these courses had a substantial impact on their daily work. The courses are mainly paid for by government and foreign donors. In some cases – especially medical doctors – participants paid for the course themselves. However, it appeared that nurses at clinics and health centres have less access to training courses than their counterparts at hospitals. Since government prioritises primary health care and since clinics are often manned by only one or two nurses and no medical doctors, it is recommended that training courses are specifically designed to address the needs of health professionals in the rural areas and at clinics. This would have a positive impact also on higher level health facilities since it can reduce referrals.

Experience

The head of a clinic or health centre in both – rural and urban areas - has on average almost 20 years of total professional experience.   They had some 12 years of professional experience before being appointed as head of this facility and stayed here for the past seven years. Again, the periods are similar for rural and urban areas, but differ between the types of health facilities (Table A19). Heads of clinics have spent more years (8 years) at the current clinic and arrived less experienced (11 years) than heads of health centres – 5 and 15 years respectively. Regional differences have to be qualified by the low number of cases for some regions. A low number of cases increases the weight every single case has and reduces the representativeness of results.

Nurses and medical doctors have on average 17 years of total professional experience and have been at the current health facility for seven years. They have worked for a longer period at referral hospitals and clinics than at any other type of health facility (Table A20).

Overall, employees of health facilities interviewed have a long experience at health facilities with only minor differences between rural and urban areas. However there exists a lack of adequately qualified personnel for the position of the Regional Chief Medical Officer and Principal Medical Officer. Unless these posts are occupied by foreigners, incumbents act only in an acting position with subsequently little experience in this position. It is recommended that training is provided to suitable candidates to fill these posts.

Satisfaction with working conditions

Besides the formal qualification and the working experience, the satisfaction with working conditions and the salary influences the performance of staff. Most of the health staff interviewed indicated that they are – at least somehow – satisfied with the working conditions. Overall, 51% of nurses and doctors expressed their satisfaction. The share is higher in rural areas (54%) than in urban (49%) and varies between regions. 29% of the staff in the Hardap region is not satisfied with the working conditions compared to 75% in the Ohangwena region. There might be a correlation

between the satisfaction with the working conditions and the number of patients a nurse or doctor has to care for per day. The Hardap region has the lowest number of patients per nurse and doctor while the Ohangwena has the highest (for more details see Section 3.4).

On the other hand, heads of health facilities are more satisfied at urban health facilities (71%) than at rural (58%). They are least satisfied at clinics. 43% of the heads of a clinic indicated that they are not satisfied. This can be explained by the fact that they are running the clinics in most cases by their own (Table A21 and Table A22) and are working in remote areas.

The majority of medical doctors and nurses are not satisfied with their salary. 56% at rural and at urban health facilities expressed their dissatisfaction. Though mission hospitals pay the same salary as any other health facility two thirds of the staff there is at least somehow satisfied with the remuneration (Table A23). Heads of health facilities and PMOs are generally satisfied with the remuneration. Only 39% and 36% of them believe the salary is too low.

3.3.   Absenteeism of health professionals

Besides formal qualification and experience, the dedication of staff in the health sector influences the quality of its service delivery. We have chosen the level of absenteeism as a proxy for dedication.

Reasons for absenteeism

In an effort to determine whether health professionals allocate all their time to health issues, they were asked to indicate whether they have taken time off as a result of either a personal emergency or official work. 80% of nurses interviewed indicated that they did not take time off during June 2003 as a result of any official work while about 83% did not take time off as a result of an emergency. Workshops and meetings are common reasons for official duties outside the health facility while the attendance of funerals or the illness of others causes absenteeism due to personal emergencies.

No medical doctor has taken time off as a result of a personal emergency. This could be owed to the fact that the majority of doctors and PMOs are foreigners who often do not have families in Namibia. Consequently, there are only few cases of personal emergencies. 58% of medical doctors and PMOs have taken time off to attend to official work.

Overall, relatively few health professionals have taken time off to attend to other official work or to family emergencies and were therefore available for providing health services to patients.

Only a minority of nurses and medical doctors is involved in other income generating activities that could distract them from their work at the health facility. Four out of 67 (6%) indicated that they receive income from other activities. Two of them – medical

doctors -spent more than ten hours per week on these activities. It is assumed that they have their own medial practice in addition to their job at the hospital.

Finally, absenteeism can be caused by the separation from the family. The majority of head of health facility, PMOs and medical doctors are either not married or staying together with their spouse. Thus, this analysis focuses on nurses. 27% of all nurses interviewed stated that they are not staying with their spouse because they are working elsewhere in the country. 50% of them indicated that their work is not affected by the separation, 29% that it affects their work considerably and 21% that it affects the work but not so much (Table 3). Though for 50% of them the separation does not affect the work, it can be assumed that the duration of absenteeism because of urgent family matters is longer when they are separated than in the case that the family stays together.

Table 3   Does the separation from your spouse affect your work?

	no	yes, but not so much	yes, considerably
N	7	3	4
same region	66.70%	33.30%	0.00%
elsewhere in Namibia	45.50%	18.20%	36.40%
Total	50.00%	21.40%	28.60%

Note: N refers to the number of cases.

Extent of absenteeism

Although the majority of interviewees indicated that absenteeism is not a major problem, Table A25 below indicates that it is still a threat to the efficient utilisation of available human resources. More than a quarter and more than a third of medical doctors and nurses respectively, cited absenteeism as a problem, and even more PMOs (44%).

According to responses from nurses and the head of the health facility, facilities in urban areas are more affected by absenteeism of staff than in rural areas (Table A25). Furthermore, it is seen more as a problem at the different kinds of hospitals than at clinics and health centres. The results are not surprising. The majority of clinics are served by one health professional, who is the head of the clinic, and in only few cases - mainly in urban areas - by additional nurses. Thus, absenteeism of this staff means that the clinic will be closed for the day. The same social pressure probably exists at health centres that have a relatively small staff establishment. Staying away from work would imply substantially more work for colleagues. This can explain that absenteeism in these facilities is to a lesser degree seen as a problem. Since these facilities are primarily located in rural areas the problem of absenteeism is rated lower there than in urban areas.

Only the Khomas and Hardap regions reported employing additional health staff as substitutes for absent health staff. While the Hardap region finances additional nurses through budget allocation from the MoHSS head office, the Khomas region uses other sources.

On average, every doctor and nurse was absent during June 2003 for 1.6 days mainly owed to official work (1 day). Personal errands such as attendance of funerals or own illness resulted in 0.6 days health professionals were absent. Rural areas are less affected than urban – 0.8 days compared to 2.2 days in total. Furthermore, health professionals were absent more at referral hospitals (4 days) than at any other health facilities (Table A26). Nurses and doctors at clinics were absent on average for 0.1 days during June 2003, meaning that out of ten employees one was absent for one day during that month.

The heads of health facilities have been absent more than nurses and medical doctors, namely on average 3.9 days during the same month. Absenteeism was caused to a lesser extent by personal emergencies – only 0.4 days – but mainly due to official obligations – 3.5 days. They were absent for more days in urban areas – 8.9 days – than in rural areas – 2.5 days, and at hospitals than at clinics – 10.5 days compared to 3.3 days (for details see also Table A26).

Absenteeism of Principal Medical Officers was only caused by official duties. They were not in office for 2.8 days on average – 3.3 days in urban areas and 1.7 days in rural.

The conclusions from the analysis of whether absenteeism is seen as a problem are reflected in the number of days health professionals were absent. Absenteeism at hospitals occurs more often and for longer periods of time than at clinics. Since hospitals are usually located in urban areas and clinics in rural areas, the number of days health professionals were absent in urban areas was considerably higher than in rural areas. The explanation provided above holds here as well. Because of the small number of health professionals at clinics in rural areas, every person absent would have a substantial impact on the workload of their colleagues or clinics would be closed at all.

Measures to deal with absenteeism

Health professionals were further asked whether measures are in place to deal with health staff that is absent without a valid reason. Both groups of interviewees, PMOs and the head of the health facility, indicated that measures are in place and are always enforced. The measures are based on the Public Service Act and include verbal warning, written warning and days absent regarded as unpaid leave.

3.4.   Use of human resources

The population of the catchment area of health facilities differs significantly between districts and regions (Table A27). The population per clinic ranges between 2,777 in the Hardap region and 13,651 in the Omusati region. A similar pattern emerges for health centres and district hospitals. The population per health centre and district hospital is lowest in the Hardap region and highest in the Omaheke and Omusati

regions. The Khomas region has been excluded from the analysis since there are two referral hospitals in Windhoek that patients can visit instead of the clinics.

The same pattern can be observed concerning the population per nurse and medical doctor. There are about 1,395 people per nurse in the Hardap region compared to 7,028 people per nurse in the Ohangwena region (Table A28). Differences in the population per health facility or per nurse are justified since the health patterns of regions and districts differ. It would need some more in depth research to compare the staffing of health facilities, districts and regions with the occurrence of certain illnesses such as malaria, tuberculosis or the prevalence of HIV/AIDS in that area. We have used the ratio of patients per nurse and medical doctor as an indication of the use of human resources and the adequacy of staffing norms.

As Table A29 indicates a high ratio of both in- and out-patients per nurse and medical doctor exists in the Ohangwena region, while it is low in the Hardap region. This corresponds with the analysis above concerning the population per region. A high ratio of population per nurse or doctor corresponds with a high number of patients per health professional.

Most interviewees feel that the workload is too high[5]. This is in particular the case with health professionals in urban areas - 81% compared to 57% in rural areas. Health professionals at district hospitals feel the work pressure more than at clinics, where the majority indicated that the workload is just right (Table A30). Sentiments about the workload by heads of health facilities mirror the same features though to a slightly lesser degree. Overall 61% of them indicated that the workload is too high – 71% in urban and 58% in rural areas. However, more heads of clinics think that the workload is too high than at other facilities. The responses about the workload do not correlate with the population per health facility or the number of patients per nurse or doctor. The share of interviewees that feel that the workload is too high is similar in the Hardap and Ohangwena regions that are at opposite ends regarding the number of patients per nurse or the ratio of population per health facility.

The results indicate that there is a need for revising the staffing norm at health facilities and to identify suitable indicators for the staffing. If this has not been addressed by the new staffing norm, it will need some attention.

3.5.   Institutional support

Performance can also be affected by the support that one gets from the district or region.

Table A34 indicates the level of contact between health facilities and districts. Almost half (47%) of the clinics interviewed were not visited by a district supervisor between

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[5] The question deals with perceptions of the respondent, which do not necessarily correspond with facts.

January and June 2003, while health centres were visited at least once. On average the Principal Medical Officer (PMO) who heads the district visited health facilities in the rural areas 1.4 times during the period of January to June 2003 and facilities in urban areas double as often, namely 2.8 times. Health facilities in regions such as Kavango and Hardap received more visits than in Kunene or Ohangwena. The Chief Medical Officer who is responsible for the region visited few health facilities in rural areas but in urban areas during the period under review. Reportedly, visits are undertaken when there is a great concern voiced by the community or when a minister is visiting the area.

The PMO spent at most facilities (56%) about 2 hours during his visits and only in exceptional cases (17%) between half a day and a day. The CMO stayed at 50% of the facilities between half a day and a day. At 47% of the facilities, no reports are available for the PMO visit while at 41% reports are available for all visits. At the remaining health facilities reports are available for some of the visits. The CMO visits are apparently better documented since only in 25% of all cases no reports were available and in 50% reports of all visits were available.

Overall, heads of health facilities are satisfied with the support by the PMO and CMO. Only 13% and 17% indicated that they are not satisfied with the PMO and CMO respectively. The degree of satisfaction however differs between rural and urban areas. While 80% in urban areas expressed that the relationship with the PMO is either excellent or good this applies to only 53% in the rural areas. The rating of the satisfaction with the CMO is slightly better - 100% in urban and 57% in rural areas feel that it is either good or excellent.

However, the results concerning the visits have to be qualified. Firstly, the CMO is usually the head of the hospital of the region's capital or if not then at least based near this hospital and thus visits it regularly. This explains the high number of visits for urban Omaheke region for instance. Secondly, PMOs and CMOs are almost always medical doctors at the hospital and have to attend to patients as well. This limits their capacity to visit other health facilities in the district or region. However, in some districts one of the medical doctors visits the clinics regularly to assist the nurses. This always provides an opportunity to discuss matters at the clinic and to pass information on to the CMO. And finally, a general supervision of health facilities by the CMO and the Regional Health Director is usually scheduled for once a year.

Despite the qualification, it appears necessary that the PMO visits the health facilities more frequently to discuss pertinent issues in particular in rural areas. Even brief reports would help following up on the issues that were discussed.

4.   Availability of medical material and equipment

The third largest budget item after personnel expenditure and other services and expenses is materials and supplies. Pharmaceuticals are the main sub-item of this budget line and a vital input into the provision of health services. The survey has

therefore focused in particular on the supply and use of pharmaceuticals and in addition of other equipment necessary to provide health services efficiently.

In general

Heads of health facilities were asked whether facilities are satisfactorily equipped with medical equipment. 51% indicating that there is satisfactory equipment. 80% of medical doctors and nurses on the other hand are of the opinion that the health facility is not satisfactorily equipped. This is apparently especially in the Kunene, Ohangwena, Omaheke, and Omusati regions the case. In the Khomas and Hardap regions only 56% and 57% respectively indicated that facilities are not sufficiently equipped. The dissatisfaction with the equipment is highest at the various types of hospitals (Table A35). 21% of the head of a health facility and 17% of medical doctors and nurses identified pharmaceuticals as the shortage that affects their work most severely. Other items mentioned are vehicles – in particular in rural areas – beds, suction machines and blood pressure gauges.

Rating the equipment compared to the previous year, 60% of the medical doctors and nurses and 73% of the head of health facilities feel it is the same. However, 21% and 19% respectively think it has improved. The situation at referral hospitals appears to be worse than at other facilities. 31% of the health staff indicated that the equipment has deteriorated, while none at a clinic shared this opinion. Subsequently, equipment at facilities in rural areas received a more favourable rating than equipment at urban areas since clinics are overwhelmingly located in rural areas and referral hospitals in urban.

Maintenance of the equipment appears to be problematic. 28% of the head of health facility stated that equipment is not maintained at all and a further 51% indicated it is sometimes maintained. Maintenance lacks especially at clinic level. 35% of head of clinic indicated that no maintenance is done and only 10% stated that it is done regularly. These findings are somehow backed by responses from medical doctors and nurses. 38% at clinics and 33% at mission hospitals stated that no maintenance is carried out. On the other hand, 50% at clinics and referral hospitals indicated that there is regular maintenance. Reportedly, maintenance - and repair - of specialised equipment purchased abroad is problematic since no qualified technicians are available in Namibia. It is expensive and time consuming to bring in experts from abroad to service the equipment. It is therefore recommended, that service contracts are entered into with the purchase of equipment from outside the country and that these costs are taken into consideration when buying equipment. Secondly, Namibians can be trained for basic service of the equipment, which could ensure that maintenance is carried out on a regular basis. Furthermore, it could be considered to allocate contingency funds to regions and districts for smaller maintenance and repair work. This would reduce the dependence on the Ministry of Works and speed up the repair.

4.1. Pharmaceuticals

Order and delivery procedures

This section analyses the flow of pharmaceuticals from medical stores to regions, districts and the service provider. There are three categories of pharmaceuticals, namely, vital pharmaceuticals which should always be in stock, essential pharmaceuticals which are defined as those drugs which are necessary to treat the most common health problems and should be available at all times in appropriate quantities, and necessary drugs which even if not available will not derail the function of the facility. These categories are commonly referred to as VEN – vital, essential, necessary.

Clinics and health centres place their orders of pharmaceuticals with the district hospital. There are restrictions on the quantities of pharmaceuticals that can be ordered at one time and they are mentioned on the order form. After verification the district hospital forwards the order to the Regional Medical Stores (RMS) – there are two, one in Oshakati and one in Rundu - or directly to the Central Medial Store in Windhoek. Drugs are then delivered to the RMS or directly to the district hospitals. The RMS distributes drugs to the District Hospital Pharmacy from where they are delivered to its own dispensary and to dispensaries at clinics and health centres.

The establishment list provides for pharmacists at the regional hospital but not at district hospitals. Only pharmacist assistants are employed below regional level. Due to the lack of qualified Namibians, most pharmacists are expatriates. However, most positions at the regional level are still vacant. The shortage of qualified pharmacists and pharmacist assistants impacts on the control of pharmaceutical deliveries. District hospitals are insufficiently staffed with an average of two pharmacist assistants who are unable to check the truck load of pharmaceuticals in the presence of the truck driver for verification purposes, since they are at the same time needed in the pharmacy and dispensary. Therefore, the shipment is often controlled later after the driver has left. Thus, there is no opportunity for double checking. In addition, delivery notes often contain the number of boxes with no details of the content of the box. Boxes can contain different kinds of drugs that are ordered in small quantities and packed in one box.

Furthermore, control of pharmaceuticals is reportedly complicated by the fact that sometimes the quantities stated on the delivery note differ from order books and invoices. This is further exacerbated by changes in the unit size. The order form refers to the number of units of a specific medicine that is ordered. This unit can be for instance 100 tablets. To get 500 tablets, five units of this drug is ordered. However, sometimes order forms are not filled in correctly and instead of the unit the total quantity of tablets is stated. In some cases this mistake is obvious in others not – in particular when the unit refers to a small quantity. It also happens that the supplier has changed the unit size – for example from 100 tablets to 50 tablets – but order forms have not been updated. If this is not checked accurately at district hospitals and the medical stores either too many or too few tablets are delivered. This problem is

corroborated by the lack of qualified and experienced staff also at medical stores that would detect order forms that are wrongly filled in. While previously a clerk controlled order forms at the Central Medical Store, this is now taken over by a pharmacist assistant.

It happens that deliveries are sometimes made to wrong health facilities. Although pharmacist assistants are instructed to return wrong deliveries this is not always done, mainly because of a lack of manpower, and takes time. Subsequently, it can result in shortages at other facilities and can lead to the expiry of drugs.

It has also emerged during the survey that companies that won the tender are not always in a position to sufficiently and timely supply the required quantity. In this case, the company will sub-contract another company, which is time consuming or the medical store has to order the drugs from elsewhere. Though the contract with the supplier stipulated that the supplier had to bear any additional costs in case he cannot deliver the quantities agreed upon, this had rarely been enforced owed to the shortage of qualified staff. However, this is going to change and suppliers will be held responsible for non-deliveries, which could lead to substantial savings.

Invoices are sent directly to regional offices where payments are authorised. The problem with this procedure is that when payments are made regional offices do not always know what has actually been delivered. Finally, the quantities stated on the order form differ in some cases from the quantity stated on the invoice.

It appears that most of these problems will be avoided if dispensaries, pharmacies and medical stores are manned with sufficient, qualified and experienced staff. Order forms need to be updated regularly to avoid differences in the unit size. It is also necessary to communicate changes in unit sizes to all institutions involved immediately to avoid discrepancies in the number of pills ordered and delivered.

Availability of pharmaceuticals

In an effort to ascertain the availability of drugs at health facilities, the survey inquired whether facilities have sufficient drugs during the time of the survey. The majority of health professionals interviewed confirmed that they do have sufficient drugs (Table 4).

Table 4   Do you have sufficient drugs

	Vital	Essential	Necessary
Nurse	78.4	81.6	76.3
Medical doctor	70.6	76.5	58.8
Head of Health Facility	84.6	92.0	92.3
Pharmacist	60.0	75.0	100.0

Except for mission hospitals, there are no major differences in the availability of pharmaceuticals at health facilities. Mission hospitals seem to face a shortage of necessary drugs based on the responses from medical doctors and nurses (Table

A36). According to the head of the health facility clinics and health centres are well equipped with drugs.

However, this is not to say that health facilities always have enough stock of drugs. More than 50% of doctors and nurses interviewed mentioned that they are running out of drugs once a month or more often. This is mainly the case at referral and mission hospitals but less so at district hospitals and clinics. These responses, however, were not confirmed by the head of health facilities. Most of them indicated that they are running out of drugs once a year or less. According to their responses, there are more problems in the supply of vital than other drugs. 30% indicated that they are short of vital drugs once a month or more often while this applies to only 18% and 14% for essential and necessary drugs.

The responses from the Principal and Chief Medical Officer are more in line with the information from the head of health facilities. The majority stated that it is rare not to have shortages in the supply of pharmaceuticals. The share is however lower in rural than urban areas indicating that urban areas are better provided with drugs than rural.

Almost all patients received their medicine (76%) or were waiting to receive their medicine (17%). Three quarters of those who did not receive drugs indicated that, according to the health staff, it was not necessary. Only one patient indicated that he did not receive medicine because it was not available. Seven percent of patients feel that the provision of pharmaceuticals was worse than the previous year, but almost a third that it has improved. The impression that the supply has deteriorated is stronger in rural areas (10%) than in urban (5%). Accordingly, more patients at clinics think that the provision of drugs is poorer than the previous year. This again underlines the previous findings that health facilities in rural areas face more problems in getting medicine than health facilities in urban areas.

Running out of certain drugs does not necessarily imply that patients cannot receive treatment. In most cases, drugs can be substituted by other available pharmaceuticals so that the treatment is ensured.

Some interviewees indicated transport as one of the factors affecting the flow of drugs to health facilities especially at remote facilities. However, pharmacists attributed it to the lack of strict supervision and lack of skills especially at dispensers in terms of book keeping, description of stock size and units ordered. As mentioned above unit sizes are changed and the staff at medical stores seems not always to be aware of it.

Overall, it appears that the supply of pharmaceuticals has improved compared to the previous year. 41% of the heads of clinics, health centres and district hospitals are of this opinion and 31% of medical doctors and nurses. This compares favourably to 19% and 15% of them respectively who feel that the supply has deteriorated. The others stated that it has not changed. Nevertheless, the lack of pharmaceuticals is identified by 17% of the head of health facilities and 21% of medical doctors and nurses as the shortage that affects their work most severely. It is the item that ranks first as the most severe shortage and hence attention needs to be paid towards further improvements.

Record keeping and control of pharmaceuticals

The ministry has published a brochure describing the procedure of ordering and storing pharmaceuticals and explaining the use of stock cards. Stock cards for each drug contain amongst others details about drugs ordered, received, issued to patients, and the balance. However, it appears that not all health facilities are aware of the ministry's publication. This is partly caused by vacancies, especially at clinics, that are temporarily filled with relief nurses. Relief nurses work usually for a month at a clinic before returning to their health facility. They do not always have the necessary knowledge of managing pharmaceuticals, using stock cards, taking stock etc. The same applies to other health facilities where nurses stand in for pharmacist assistants. Furthermore, stock cards are not always kept at clinics but at the pharmacy of the district hospital.

Stock cards are filled-in whenever pharmaceuticals leave the medical store or pharmacy. However, it is difficult to trace drugs once they have reached the dispensary. They are pre-packed at the dispensary to be provided to patients. Pharmaceuticals issued to patients are only stated in the patient card that is kept by the patient. There are screening books for out-patients that contain details about causes of illness, diagnosis, prescription of medicine and the distribution. However, only the name of the medicine but not the quantity is stated. Since pills are always pre-packed in a certain quantity it would be possible to calculate the total number of pills dispensed. However, screening books are reportedly not always filled in.

This procedure explains why most of the head of health facilities confirmed that they keep record of the drugs distributed to patients (Table A37) but hardly anyone could provide the average amount of pills provided to patients per month. Apart from Hardap and Kavango where 50% and 25% of the head of health facility respectively do not keep records of medicine received, all regions seem to be doing very well in recording the supply of medicine. However, when it comes to medicine provided to patients the situation is quite different with a substantial number of interviewees at Kunene, Ohangwena, Omaheke, Hardap and Kavango indicating that they do not keep records.

In some districts, the pharmacist assistant controls stock at clinics and health centres on a monthly basis and the PMO checks the stock cards at the district hospital in the same interval. However, this is apparently not the case in all districts.

Therefore, one cannot infer whether leakages do or do not take place at health facilities. There are reportedly cases where pharmaceuticals disappeared, even from the delivery van. Some interviewees expressed the opinion that there is hardly an informal market for pharmaceuticals since the provision of health services is almost free of charge. This can be different in the north since the health infrastructure in neighbouring Angola is still affected by decades of civil war. This might create incentives to divert drugs from Namibian health facilities to sell on the Angolan market.

These findings indicate that the control of pharmaceuticals needs more attention to reduce the possibility of leakages. Separate records at the dispensary that state the

name and the quantity of the drug received by patients are recommended. These records can then easily be compared with the stock cards at the pharmacy.

4.2. Facilities and equipment

Appropriate facilities and sufficient equipment in working condition is vital for quality service delivery.

55% of clinics and health centres have access to piped water while 36% receives their water from boreholes. The remaining facilities have other sources of water supply such as ponds and rivers. The shares for district hospitals are 67% and 22% respectively. Almost all of them rated the water source as very reliable though there were three clinics where water is unreliable and patients could not drink from this source at the time of the interview. Furthermore, 90% of the head of health facilities are of the opinion that there are enough toilets at their facility. Flush toilets are the exclusive type of toilets in urban areas, while pit latrines are used at 21% of health facilities in rural areas. The remaining 79% also have access to flush toilets.

94% of health centres and clinics have electricity; all in urban areas and almost all in rural areas. 100% of them in urban areas are connected to the national grid, while 14% in rural areas uses solar panels and five percent generators. 69% rates the supply of electricity as very reliable and 21% as somewhat reliable. Apparently, generators and solar panels are not reliable sources of electricity based on the responses from interviewees. Hospitals rate the provision of electricity as at least somehow reliable, but have generators in case of power short cuts.

The basic communication infrastructure is also in place. Clinics have on average 0.76 telephones, meaning that 76% of them have on average one telephone. Health centres are better equipped with almost two telephones on average per facility. District hospitals have on average more than 20 telephones and they are all in working conditions. This is only for 88% of telephones at clinics and 93% at health centres. There are some regional discrepancies in the availability of telephones. Clinics and health centres in the Hardap region are better equipped – 1.25 telephones per facility – while the average stands at 0.75 and 0.4 in the Kavango region and the rural area of the Omusati region respectively. This indicates that in Omusati region only four out of ten health facilities have one telephone.

Clinics do not have fax machines, while roughly every third health centre has one and every district hospital. 80% of the fax machines are working. Photocopiers exist only at hospitals and two thirds of them are in a working condition.

Finally, computers are available at 10% of clinics and 25% of health centres on average, while it is a common item at hospitals. 82% of them could be used during the time of the interview.

Overall, the basic infrastructure and communication equipment is available. The reasons for the low ratio of telephones per health facility in the Omusati region would

require some further investigation. Computers are not widespread at clinics and health centres. Their introduction could be considered for health centres since they are facing more administrative tasks than clinics. Computers and the internet could be used to order pharmaceuticals and other equipment. The advantage would be that the medical store in Windhoek could instantly update order forms whenever changes concerning pharmaceuticals occur, such as price changes, unit size changes etc. The updated order forms could be sent to all health facilities and regional medical stores as templates and thus reduce the number of cases of wrong quantities being delivered. Staff needs to be trained to make efficient use of the new technology.

4.3.   Vehicles

Vehicles including ambulances are essential equipment to provide quality services. Without ambulances patients cannot be transported to hospital and emergency treatment cannot be provided to patients elsewhere than the hospital. Furthermore, there is always the risk that vehicles are used for personal errands if no proper control tools are in place. Last but not least, vehicles are costly and financial resources are scarce. Thus, the survey focused on the availability and the control of the use of vehicles.

There are on average 0.11 vehicles available at clinics, meaning that every tenth clinic possesses one vehicle. At health centres, the ratio stands at 0.75 implying that you will find on average three cars at every four health centres. Hospitals usually have a larger fleet of vehicles. However, most of the vehicles are not in working condition. Out of the 48 vehicles mentioned by heads of health facilities, only 14 were in a working condition at the time of the interview. This equals 29% of all vehicles. Based on responses by Chief Medical Officers 37 of a total of 68 cars could be used, which represents a share of 54%. The share is considerably better at referral hospitals – 80%. Overall, only 55% of all vehicles could be used. The shortage of vehicles is identified by 14% of medical doctors and nurses, 7% of the head of health facilities and 10% of Principal Medical Officers as the shortage that affects their work most severely. These results are of great concern and warrant immediate steps to establish the causes for the high rate of damaged cars and to rectify the situation.

Logbooks exist to control the use of vehicles at all health facilities. They are, in all but one case, always filled in and controlled regularly. These results are unexpected given frequent reports in the media about the misuse of government cars.

It is obvious that the fleet management needs attention. Cars are costly and essential in providing health services in time to patients, but a large proportion is out of order.

Requests for medical equipment

Health professionals were asked whether they have requested any health material between January 2003 and the time the survey took place. 86% of medical doctors and 69% of nurses confirmed that they requested material. However, two-thirds of the

doctors and half of the nurses that requested equipment indicated that they have not received it. Most of them could not provide reasons for not having received the equipment while 38% and 33% respectively indicated the lack of funds as the main reason. In some cases, the request had not yet been approved at the time of the interview.

The fact that the lack of funds figures so prominently in the ranking, can, to a certain extent, be explained by the period in which the question was based. Usually budget allocations are depleted towards the end of the financial year and no additional commitments are entered into. On the other hand, it takes some time at the beginning of the financial year until the Appropriation Bill is finally signed by the President. Orders are kept on hold unless they are vital until the bill is signed.

Despite this qualification, it appears that health material is lacking at health facilities. Medical doctors and nurses could be more involved in the budget process to ensure that the equipment needed is also available. However, this budget line will often be squeezed by additional demands from other budget items such as personnel expenditure, utilities, and other services that usually take priority.

5.   Health Management

The flow of information through various levels of the hierarchy within an organisation is important for efficiency and the quality of output. Briefings of and meetings with staff are therefore necessary means to share information and discuss issues that are arising.

Table A32 indicates that regular briefings of nurses and medical doctors by the head of the health facility are common. 80% of staff at urban health facilities confirmed that they are briefed regularly by the head of the health facility compared to 61% of staff at rural health facilities. This is confirmed by the head of the health facility. Two thirds of them to whom the question applied indicated that they provide regular briefings[6]. According to responses from nurses and doctors, briefings are more common at clinics than at health centres or hospitals (see also Table A32). At 80% of the health facilities staff is briefed at least once a week and at the other facilities about once a month.

Meetings are held at more then 80% of health facilities (Table A33). At more than 50% of health facilities meetings are held once a month and at about 20% once in a quarter. In over 90% of all cases, minutes are either always or often taken. At only about 5% of health facilities, this is never the case. Minutes at most facilities are always circulated. 11% of nurses and doctors indicated that this is never the case, which is confirmed by 25% of the heads of health facilities.

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[6] There is often only one nurse at a clinic so that the question does not apply.

The results show that measures are in place at all health facilities to share information and discuss matters on a regular basis. Apparently meetings and briefings are less regular at larger health facilities – namely district and referral hospitals. However, it can also be the case that not all staff is invited to regular meetings and briefings at these health facilities because of the number of nurses and medical doctors. Therefore, some staff members might not be aware of the meetings, while at health facilities with a smaller number of staff all health professionals are involved. To close information gaps at hospitals it is recommended to publish minutes of meetings on information boards so that all staff is frequently informed about issues discussed.

Three quarters of nurses and doctors rated the management of the health facility as at least satisfactory (Table A31). They are more satisfied at clinics and mission hospitals than at state hospitals and health centres. 38% of them at referral and district hospitals rated the management at either hardly satisfactory or even very poor.   The main reasons why medical doctors are not satisfied seem to be resulting from management not forwarding requests or complaints from staff to the next higher level. This was supported by about 18% of nurses interviewed. However, a significant number of nurses indicated poor communication with staff as one of the main reason, while 47% cited other reasons, which were identified as unfairness, non-commitments and shortage of medicines. All rural doctors are apparently satisfied with management while no nurse in the urban area described the management as excellent. 23% and 13% of them rated the quality of management either as hardly satisfactory or poor.

The PMOs and CMOs are generally less critical. Almost all PMOs and 80% of the CMOs indicated that the management of the health facility in their district is either good or satisfactory.   Dissatisfaction by the CMOs and PMOs mainly arises from low motivation of the head of the health facility and a lack of experience.

6.   Service delivery

Various indicators have been used to measure the quality of service delivery. Patients have been the main source of information.

Travelling time and costs of transport for patients

27% of the heads of health facilities indicated that there are many people in their catchment area who are getting sick but are not visiting their health facility. This is mainly owed to long travelling distances (75%) followed by the inability to pay. That travelling distances are long is confirmed by responses from patients. Though the majority of patients interviewed (62%) travel less than an hour to reach the health facility about 21% travels for more than an hour and an additional 17% more than two hours (Table A39).

As expected the shortest travelling time is in Khomas were the majority (78%) travels less than 15 minutes while the longest travelling time is experienced in the Omaheke, Ohangwena and Kunene regions where the majority travels more than two hours to reach the health facility. There are no major differences in travelling time to reach health facilities in rural and urban areas. However, clinics and health centres are closer to the people than hospitals. About 46% of patients at clinics travelled up to 30 minutes to reach the health facility while the share for hospitals is lower at around 33% (Table A39).

One would have expected that patients travel for a longer time in rural than in urban areas to visit health facilities. That this is apparently not the case can be explained by two factors. Firstly, patients interviewed at health facilities in urban areas do not necessarily live in the town but could have travelled from rural areas to get treatment in town. Secondly, the mode of transport determines the travelling time and not necessarily the distance. Almost three quarters of patients in rural areas walked to the health facility while this is only the case for 23% of patients interviewed at urban health facilities. Most of them came either by taxi or ambulance, or were dropped by neighbours or friends. These results correspond with the transport used to reach the different types of health facilities. The majority of patients walked to clinics and health centres while they reached hospitals by car – either taxi or ambulance (Table A40).

The means of travelling also explains the difference in the costs. 60% of patients did not pay for transport, either because they walked, were dropped free-of-charge by others or used their own car. Patients who paid, incurred on average costs of N$9.53 at rural health facilities and N$13.09 at urban. To reach referral hospitals is most expensive (N$18.39), followed by other state hospitals (N$13.25) and mission hospitals (N$10.11). This is not surprising since people have to travel longer distances to visit these facilities compared to health centres and clinics. Based on all patients travelling costs to get to rural health facilities are about N$2.16 compared to N$7.09 to get to urban health facilities (Table A41).

Access to health facilities is for most of the patients within reasonable distances based on the time spent. However, according to responses by the head of health facilities there is still a number of people that do not make use of public health services due to the distance and the costs involved. The extent to which this is the case would warrant further investigation.

Referrals[7]

Health facilities refer on average 55 patients per month to other health facilities. The average figure covers considerable differences between health facilities in rural and urban areas. While on average 27 patients are referred to other health facilities in rural areas, the number is more than fivefold in urban areas (141). Health centres (75) refer more patients than clinics (47) or district hospitals (55). This result is confirmed when comparing referrals as a share of total patients treated at the health facility. Health centres refer about 14% of their patients to other health facilities compared to 9% from clinics and 4% from district hospitals.

The most common reason for a referral is health complications (40%) followed by lack of equipment (27%) and lack of qualified staff (10%). Lack of pharmaceuticals does not play a significant role. Only 7% of head of health facilities identified this as the main reason for referrals. There are differences between the various types of health facilities. Health centres apparently suffer more from a lack of qualified personnel since 25% of heads of health centres mentioned this as the main reason for referrals while this hardly counts at clinics.

Patients were asked whether they were referred to the health facility from another health facility. Comparing rural and urban areas referrals are more common in urban areas. This might be because people have easy access to other health facilities. Regional comparisons indicate that apart from Ohangwena region where about 70% of patients were referrals the majority of patients were not transferred from other health facilities. Most of the patients at referral hospitals indicated that they were referred from other health facilities. This was to a lesser degree the case with patients at district hospitals. The lowest share of patients referred to was found at health centres.

The analysis indicates that health centres are apparently less capable in treating patients than clinics and hospitals. They have the highest ratio of referrals compared to the total number of patients and only few patients are referred to these facilities. This could be caused by the lack of qualified personnel. Further research would be needed to establish whether health centres fulfil the role they are supposed to play.

Immunisation campaigns and family planning services

Immunisation services in Namibia are provided free of charge usually during an immunisation campaign once a year. Its coverage is an indicator of the services

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[7] The analysis does not include self referrals but only referrals from one health facility to another.

provided by health facilities. District hospitals reached the largest number of people during their campaign followed by health centres and clinics. However, in terms of total number of immunisation as share of the total population of the catchment area health centres performed better. The total number of immunisations over the total population stands at 56% for health centres compared to 44% for district hospitals and just 26% for clinics[8]. Using this ratio some regions – Khomas, Omaheke and Hardap – performed much better than others (Table A44).

Immunisation against measles reached the highest number of people, followed by Vitamin A injections and polio. Meningitis was not covered during this period in all regions (Table 5).

Table 5   **Total number of people immunized between January and June 2003**

	Measles	Polio	Meningitis	Vitamin A	Other	Total	Family planning
rural	13,665	7,624	0	14,712	837	36,838	1,160
urban	41,239	31,809	0	38,441	358	111,847	18,034
Hardap	834	541	0	853	0	2,228	71
Khomas	22,379	27,643	0	22,589	358	72,969	15,592
Omaheke	19,960	182	0	19,960	25	40,127	552
Kunene	2,492	309	0	628	0	3,429	1,844
Ohangwena	4,797	4,584	0	3,721	0	13,102	144
Omusati	3,547	4,636	0	1,684	0	9,867	153
Kavango	895	1,538	0	1,017	812	4,262	834
Total	54,904	39,433	0	50,452	1,195	145,984	19,194

Another important function of health facilities is to provide family planning services. Clinics apparently play an important role in this respect. During the month of June 2003 the total number of people who were provided family planning services as a share of the total population reached 4.6% at clinics compared to 3.9% at health centres and 0.5% at district hospitals. The coverage was much higher in urban (10.5%) than in rural areas (2.6%). The same regions that performed better in the immunisation campaign also provided family planning services to more people (Table A45).

Follow up investigations are recommended to establish why certain regions performed so much better in reaching out to the communities than others. This is especially important to know for introducing further counselling and treatment of HIV/AIDS.

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[8] The figures do not indicate the share of population immunised. The share was calculated by adding up the number of people immunised against various diseases. This implies that people will be counted twice or even thrice if they are immunised against two or more diseases. Nevertheless the figure is regarded as useful to compare regions and health facilities.

Waiting time before consultation

The time patients have to wait before they are consulted and treated is an indication for the efficiency of service delivery at health facilities.

Based on responses from the head of the health facility patients have to wait longest in the Khomas region, namely more than an hour. In most of the other regions the majority of patients wait up to 30 minutes before they are attended to. Patients wait less at clinics than at health centres. The majority of patients are attended to within 15 minutes at clinics, while most patients at health centres wait for at least 30 minutes if not more than an hour.

According to responses from patients, the majority wait up to 30 minutes at the different types of health facilities (Table A46). However, there are differences in the proportion of patients that have to wait for more than an hour. The share is highest for referral hospitals (35%) and lowest for mission hospitals (12%). Between 24% and 32% of patients at the other health facilities have to wait for more than an hour. A regional comparison reveals that patients have to wait longest in the Khomas region. 60% of them wait for more than an hour. In the Ohangwena region only 12% have to wait so long (also Table A46). On average waiting times in urban areas are higher compared to rural areas with about 30% and 23% of patients respectively indicating waiting for more than an hour. A similar share of patients wait for up to 30 minutes – 54% in urban and 57% in rural areas.

There is no clear cut correlation between the number of patients per nurse and the waiting period. Khomas has the highest number of patients per nurse and the largest share of patients waiting for more than an hour while it is the opposite for the Hardap region. However, other regions do not follow this pattern (Table A29 and Table A46).

Consultation time

The consultation with the patient takes in the majority of cases about 10 minutes based on responses from nurses and doctors. Health centres tend to spend more time on the consultation than hospitals and clinics. 57% of respondents indicated they spend 15 minutes and more (Table A47). There are also regional differences. Over 80% of health professionals in the Kunene region said they spend up to 10 minutes on the consultation compared to 44% of them in the Khomas region.

According to responses from patients, consultation periods are shortest at health centres, which contradicts information from nurses and medical doctors. 70% of patients there have been consulted for up to 10 minutes. The share is much lower at district and mission hospitals – 44% and 47% respectively. More patients at mission hospitals are consulted for more than 15 minutes than at any other health facility, namely 41%. More time is spent on consultation with patients in the Hardap region than in other regions. Only 14% of the patients indicated that the consultation took up to 10 minutes while for 41% of them it was 15 minutes. In other regions consultations with patients takes usually between five and ten minutes (Table A47).

The consultation time provides an indication for the quality of health services delivered. Another measure is whether patients feel that their health complaints have been addressed. The majority feels that the complaints have been fully addressed while 11% indicated that this was not at all the case (Table A48). The share is highest at mission hospitals – 81% of patients believe that their health complaints have been fully addressed – and lowest at referral hospitals. There are no differences between health facilities in rural and in urban areas. At both, the majority of patients have received the appropriate treatment of their health problems. However, it is striking that in the Hardap region that has less patients per nurse and longer consultation periods, a large proportion of patients (36%) is of the opinion that there complaints have not been addressed. The Khomas region follows in this regard – 30%. In all other regions, the share is below 10%.

There is no clear correlation between the length of the consultation and the patient's opinion that the health issue is addressed. Though the largest share of patients that feel their health complaints have been fully addressed was consulted for more than 30 minutes, the second largest share was only consulted for five minutes (Table A49). Furthermore, 50% of the patients whose health complaints have apparently not been addressed were consulted between 15 and 30 minutes. Other factors than the time spend on consulting with patients are decisive for the outcome.

Service delivery and attitude of staff

A further indicator for the quality of services provided is the satisfaction of patients with overall service provision and the attitude of health professionals.

Table A50 indicates that almost all patients interviewed were satisfied with the service delivery at both, regional and facility level. On average 8% of patients rated the services as poor and three quarters as either good or even very good. However, a significant share of patients in the Omaheke and Kunene regions were not at all satisfied – 19% and 18% respectively. In the Omaheke region patients were dissatisfied with services of rural health facilities while in the Kunene region with urban health service providers. While mission hospitals received the best rating – 35% rated the services as very good and 53% as good – they also scored the highest share of patients dissatisfied with the services (12%). Otherwise, the rating corresponds with the degree of satisfaction about their health issues being addressed. Health facilities that scored high concerning health complaints being addressed also scored high concerning services provided. Notwithstanding the overall satisfaction, the high degree of dissatisfaction in the Omaheke and Kunene regions warrants some attention by the ministry.

32% of the patients indicated that services have improved compared to the previous year, while 12% thinks it is worse. Improvements have in particular happened at district hospitals, health centres and referral hospitals, though the rating of health centres is mixed. 22% of patients regarded the services as worse than before (Table A51). The provision of health services has apparently deteriorated especially in the

Kavango and Omaheke regions, which corresponds with the degree of dissatisfaction of patients.

Furthermore patients were asked to rate the friendliness and attention of health staff. Patients have overwhelmingly rated nurses and medical doctors as friendly or very friendly with only a fraction classified them as unfriendly (3%). Health professionals at mission hospitals are apparently less friendly than at other health facilities. 6% of patients feel staff is unfriendly and a further 24% that it is neutral. These shares are much lower for other health facilities (Table A52).

The rating of the attention by health staff paid towards patients follows similar patterns. However, mission hospitals are rated worse. 18% feels that nurses and doctors there are not attentive. This is far above the average of all health facilities – 4% (Table A53). Finally, staff in the Kavango region is rated as less attentive than in other regions.

While nurses and medical doctors are to a large extent rated as being friendly and attentive, mission hospitals would need to find out why their staff receives less favourable ratings.

Provision of food and blankets

Services provided by hospitals and health centres reach beyond treatment. In-patients need to be provided with food, beds and blankets and the facilities need to be cleaned. These are further indicators for the quality of output of the health sector.

In-patients received food and are generally satisfied with the quality and quantity. 60% rated the quality as either good or very good. The quality appears to be worse at mission and district hospitals (Table A42). 25% and 20% of their patients interviewed rated the quality as poor. About one third of patients at health facilities in the Kavango and Hardap regions are not at all satisfied with the quality and quantity of food. Almost three quarters of all patients receive food from home. Rather surprisingly, only 56% of the patients who rated the food as poor received food from home while about three quarters of patients who are more satisfied received additional food from home. The large number of patients who received additional food from home does not necessarily reflect the quality and quantity of food received at the hospital. It is rather a matter of custom to take food to patients indicating that one cares and a matter of preference.

On average 60% of the patients brought their own blankets. The share is higher at district and mission hospitals where up to 80% of the patients provided their own blanket. Furthermore, all patients in the Ohangwena region and almost all in the Kunene region have brought their own blankets. In rural areas 38% of patients bring their own blankets compared to 67% in urban areas (Table A43). It needs to be established whether there are not enough blankets – there are reports that blankets are stolen – or whether patients prefer using their own blankets rather than blankets used by someone else before.

Finally, rooms are generally cleaned on a daily basis. In less than 10% of all cases cleaning is done less regular.

Rating of service fees

Satisfaction with services provided increases the willingness to pay for the service. 62% of patients are of the opinion that the fees are reasonable, while a third thinks they are too high. The majority of patients at referral hospitals find the fees too high, while more than two thirds of patients at mission and district hospitals as well as clinics see the fees as reasonable. There are no differences between health facilities in rural and urban areas.

24% of patients who rated the services provided as very good feel the fees are too high, while the share increases to 69% of the patients who rated the services as poor (Table 6). This correlation indicates the willingness of service users to pay if they are satisfied with the services.

Table 6   Correlation between satisfaction with services provided and rating of fee level

		Service provision				
		Very good	**Good**	**Satisfactory**	**Poor**	**Average**
Fee level	Too high	24.2%	33.7%	25.9%	68.8%	33.9%
	Okay	75.8%	60.7%	74.1%	25.0%	62.4%
	Too low	0.0%	5.6%	0.0%	6.3%	3.6%

7.   Conclusion and recommendation

Government has spent considerable amounts of money in improving access to health facilities and the qualification of health professionals. New health facilities have been built in particular in the previously neglected regions. Nurses are encouraged and supported to upgrade their qualification resulting in almost all nurse assistants having been upgraded to enrolled nurses. Though Namibia has spent a high share of GDP on health in international comparison, the results are rather mixed. Namibia performed better than other countries concerning mortality rates but worse concerning immunisation rates. Furthermore, the survey reveals that considerable gaps continue to exist between rural and urban areas and between regions, concerning the availability of resources. However, it could not be proven that the mixed outcome is owed to leakages of resources though there are areas such as control and auditing that need improvements.

The following conclusions and recommendations address the most relevant issues:

1. There are apparently no clear criteria for the allocation of funds to regions and districts. Allocations are based on the past and on demands from the regions. It is recommended that budget allocations are based on criteria that include population size and structure and health characteristics.

2. Though regions and districts are usually involved in the national budget process through economising committees there appears to be the need for closer consultations at these levels. This would ensure that budget allocations match with priorities of service providers.

3. The comparison of allocations by the ministry to regions with funds received as recorded by regions and districts revealed substantial differences. It could not be established whether this is owed to poor record keeping or other factors. The recently launched Integrated Financial Management System will certainly contribute to more consistent data. However, it is recommended that the ministry looks into it since these inconsistencies could result in under- and overspending and in leakages of funds.

4. Concerns exist about the late release of funds in particular at the beginning of the financial year. Since the Ministry of Finance can authorise the withdrawal of up to one third of the previous year's budget this delay cannot be explained by a delay in the approval of the Appropriation Bill. It needs to be established within the two ministries what leads to the reported delay to avoid any negative impacts on service delivery.

5. To provide incentives for collecting consultation and treatment fees from patients the retention of a certain share by the hospital could be considered. The hospital would directly benefit from the fees collected and could use these amounts for additional purchases of goods and services.

6. Since not all patients received receipts for payments made, which could indicate leakages, it is recommended that the ministry starts an awareness campaign. Simple posters at cash points could call upon patients to always insist on formal receipts and compare amounts stated with amounts actually paid.

7. It is applauded that government provides health services free of charge if patients cannot pay. However, to avoid people, who could actually afford payment, taking advantage it could be considered that a statement by a traditional leader or other authority is requested for the exemption from payment. The costs and benefits of any measures need to be weighted.

8. Discrepancies exist in the information about the staffing at health facilities. To avoid that ghost workers are paid it is recommended that the information is updated at all levels as soon as possible whenever changes occur. The PMO, CMO or control officers could verify the staffing on a regular basis, for instance during visits to health facilities.

9. There is a lack of qualified personnel in the health sector, especially amongst medical doctors and pharmacists. In the short term, the gaps need to be filled by foreigners. However, it is important to choose health personnel that have adequate skills including language skills or provide induction programmes that address any deficiencies. Furthermore, employing better qualified nurses at clinics will not only improve the quality of health services provided but could also reduce the number of self referrals and of referrals to other health facilities.

This would lessen the burden on health centres and in particular hospitals. Finally, qualified administrative personnel are needed at all levels to manage the health sector and control the use of resources.

10. It became evident that there is a severe lack of qualified pharmacists and pharmacist assistants in the public health sector. This has negative impacts on the flow and control of pharmaceuticals that are a vital input in the health system. A short study could be carried out comparing working conditions in the public and private sector to establish why qualified personnel prefer working in the private sector. Based on this study, incentives could be designed to retain qualified staff.

11. There are measures in place, such as stock cards, to control the flow of pharmaceuticals until the time they leave the pharmacy. There is no proper control at the dispensary what could lead to the leakage of medicine. It is therefore recommended that the number of pills issued to patients is stated in the screening book that contains other details about the patients. Patients can confirm the receipt of medicine with their signature in the screening book. Furthermore, medical stores, pharmacies, and dispensaries need to be manned with enough and sufficiently qualified staff to ensure proper management of pharmaceuticals. Finally, nurses need to be trained in using stock cards and taking stock.

12. It is necessary to update stock cards and order forms for pharmaceuticals immediately when prices and unit sizes change. This information needs to be circulated by the medical store. Together with better qualified staff at medical stores and pharmacies, this can help reduce the wastage of pharmaceuticals due to wrong deliveries and subsequently expiry.

13. The high ratio of referrals from health centres to hospitals and the low number of referrals to health centres warrants further investigation. There is apparently a lack of qualified personnel in particular at health centres. It needs to be established what other factors lead to this high ratio and whether or not health centres fulfil the role they are supposed to play within the health sector.

14. Maintenance of the equipment at health facilities is in most cases not done regularly, but only sometimes or not done at all. Since equipment is expensive and essential for providing treatment it is recommended that maintenance is carried out on a regular basis. Technicians need to be trained to carry out at least basic maintenance services and repairs to avoid the breakdown of equipment. Suppliers from abroad could be contractually bound to provide basic training for local technicians. In addition, a contingency fund could be allocated to regions and districts to carry out minor maintenance and repair work themselves.

15. The high share of vehicles that are out of order is evident that the use and maintenance of vehicles needs attention. Cars are not only a costly item but are also essential to assist patients in need of treatment outside the health facility

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Appendix – Detailed tables

Table A1   Namibia's health sector in international comparison, 2000 and 2001

	2000					2001		
	PHE[1]	IDPT[2]	IM[3]	MRI[4]	MR[5]	PHE[1]	IDPT[2]	IM[3]
Botswana	4	97	90	74	101	4	97	90
Egypt	2	98	98	38	45	2	99	97
Ghana	2	84	84	62	100	3	80	81
Kenya	2	80	77	77	120	2	84	78
Lesotho	5	82	74	92	133	4	79	70
Mauritius	2	88	84	17	20	2	92	90
Morocco	2	95	93	41	46	2	96	96
Namibia	5	79	69	56	69	5	63	58
Senegal	3	52	48	80	139	3	52	48
South Africa	4	79	77	50	63	4	81	72
Swaziland	2	77	72	101	142	2	77	72
Tunisia	5	96	85	22	28	5	96	92
Uganda	3	53	56	85	145	3	60	61
Zambia	3	78	85	102	182	3	78	85

Notes: 1 Public Health Expenditure[9] (% of GDP),
           2 Immunisation, DPT (% of children ages 12-23 months),
           3 Immunisation, measles (% of children ages 12-23 months),
           4 Mortality rate infant (per 1,000 live births),
           5 Mortality rate under 5 years of age (per 1,000)

Source: World Bank, 2004. The definition used by the World Bank goes beyond the allocation to health in the national budget. The budget allocation would represent about 3.5% of GDP in Namibia (see Footnote).

Table A2   Number of interviews planned and conducted

Persons interviewed	Actual Number	Intended Number	Share
Regional Health Director	3	4	75%
Chief Medical Officer	5	7	71%
Principal Medical Officer	9	12	75%
Head of Health Facility	34	48	71%
Medical Doctor	18	46	39%
Nurse	52	96	54%
Patients	192	230	83%
Total	**313**	**443**	**71%**

Note:

Doctor   Often too busy to be interviewed
Nurse   Usually there were no nurses at clinics in rural areas but only the Head of the Clinic.
Patients   Often none or only one patient was available at rural clinics in the afternoon.

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[9] Public health expenditure (% of GDP): Public health expenditure consists of recurrent and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organisations), and social (or compulsory) health insurance funds.

Table A3   Are you involved in the budget preparation? Responses form medical officers and nurses

	referral hospital	other state hospital	mission hospital	Average
yes	69.2%	45.0%	75.0%	56.8%
no	30.8%	55.0%	25.0%	43.2%

Table A4   Are your priorities reflected in the budget allocations?

				Medical doctors and nurses at…					
	PMO	CMO	Head of health facility	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
	8	5	6						
Yes, fully	25.00%	40.00%	66.70%	50.00%	0.00%	50.00%	33.30%	33.30%	28.10%
Yes, mainly	37.50%	20.00%	16.70%	30.00%	45.50%	50.00%	33.30%	50.00%	40.60%
No	37.50%	40.00%	16.70%	20.00%	36.40%	0.00%	0.00%	0.00%	18.80%
Don't know	0.00%	0.00%	0.00%	0.00%	18.20%	0.00%	33.30%	16.70%	12.50%

Note: N stands for the number of cases.

Table A5   Allocation to health, selected subdivisions and budget lines, in N$ and %

	2000/01	2001/02	2002/03
Total GRN budget	8,446,912,000	9,781,989,000	10,786,339,000
Total allocation to Health*	955,857,087	979,391,363	1,079,570,630
Total personnel expenditure to Health	575,995,716	540,405,627	619,555,388
Total material and supplies to Health	97,481,369	99,403,643	112,717,224
Total utilities to Health	38,066,523	48,782,499	51,242,659
Total allocation to Referral Hospital Services	334,022,000	364,228,000	413,166,000
Personnel expenditure Referral Hospital Services	234,103,000	230,284,000	271,115,000
Materials and supplies Referral Hospital Services	42,940,000	46,808,000	52,793,000
Utilities Referral Hospital Services	6,264,000	19,967,000	20,573,000
Total allocation to Regional Health	522,484,000	551,630,000	578,255,000
Personnel expenditure to Regional Health	282,600,000	277,451,000	299,592,000
Materials and Supplies to Regional Health	44,165,000	49,222,000	56,531,000
Utilities - Regional Health	17,877,000	19,966,000	19,904,000
Total allocation to Primary Health Care (PHC)	18,642,000	14,080,000	19,195,000
Personnel expenditure to PHC	15,606,000	9,130,000	13,797,000
Materials and Supplies to PHC	1,550,000	2,042,000	2,100,000
Utilities – PHC	39,000	46,000	55,000

	2000/01	2001/02	2002/03
Allocation to Health as share of total budget	11.32%	10.01%	10.01%
Personnel expenditure as share of total allocation to Health	60.26%	55.18%	57.39%
Material and supplies as share of total allocation to Health	10.20%	10.15%	10.44%
Total Utilities as a share of total allocation to Health	3.98%	4.98%	4.75%
Total allocation to Referral Hospital Services as share of Health budget	34.94%	37.19%	38.27%
Total allocation to Regional Health Services as share of Health budget	54.66%	56.32%	53.56%
Total allocation to Primary Health Care as share of Health budget	1.95%	1.44%	1.78%
Personnel expenditure as share of total allocation to Referral Hospital Services	70.09%	63.23%	65.62%
Personnel expenditure as share of total allocation to Regional Health Services	54.09%	50.30%	51.25%
Personnel expenditure as share of total allocation to PHC	83.71%	64.84%	71.88%
Materials and supplies as share of total allocation to Referral Hospital Services	12.86%	12.85%	13.21%
Materials and supplies as share of total allocation to Regional Health Services	8.45%	8.92%	9.67%
Materials and Supplies as share of total allocation to PHC	8.31%	14.50%	10.94%
Utilities as share of total allocation to Referral Hospital Services	1.88%	5.48%	4.87%
Utilities as share of total allocation to Regional Health Services	3.42%	3.62%	3.40%
Utilities as share of total allocation to PHC	0.21%	0.33%	0.29%

*Note: The amount refers to the actual allocation to health and not to the allocation of the Ministry of Health and Social Services at large. Allocations to social welfare are excluded.

Source: Government of the Republic of Namibia, various years.

Table A6   Population and budget allocation per directorate, region and referral hospital

Directorate

	South	Central	North West	North East
Population of catchment area				
- information from survey 2003				282,520
- information from Population Census 2001	455,926	311,576	778,857	
Budget allocation	106,202,680	106,729,000	119,464,000	55,583,000
Per head budget allocation	232.94	342.55	153.38	196.74

Regions

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati
Population of catchment area							
- information from survey 2003	69,766	224,097	263,480	72,750		70,876	240,393
- information from Population Census 2001					227,728		
Budget allocation	24,467,000	31,166,000	24,520,000	27,134,000	43,259,000	17,551,680	38,866,000
Per head budget allocation	350.70	139.07	93.06	372.98	189.96	247.64	161.68

Referral Hospitals

	Rundu*	Katutura	Oshakati	Windhoek Central
Population of catchment area				
- information from survey 2003	400,000		800,000	
- information from Population Census 2001				
Budget allocation	28,559,000	107,065,204	92,362,000	123,737,000
Per head budget allocation	71.40		115.45	

*Note: The estimate includes parts of Angola since the lack of health facilities there forces Angolans to make use of Namibian health facilities.

Table A7   Comparison of commitments as provided by the ministry, regional offices and referral hospitals

	Kavango	Kunene	Omaheke	Referral hospitals			
				Rundu	Katutura	Oshakati	Windhoek Central
Personnel payment	10.67%	29.30%	-6.03%	-10.58%	-2.38%	10.14%	-0.58%
Travel and Subsistence Allowances	-567.60%	-7.33%	-370.64%		60.76%	-62.27%	75.99%
Materials and Supplies	7.72%	55.57%	19.19%	25.71%	25.98%	23.58%	26.72%
Transport	-33.69%	21.28%	-6.93%	7.25%	-3.98%	-11.74%	29.66%
Utilities	-11.04%	-12.71%	-28.71%	8.65%	-5.20%	-4.77%	-12.06%
Maintenance Expenses	11.19%	36.26%	54.14%	10.55%	-46.43%	-14.05%	8.75%
Furniture and Office Equipment	-3,627.46%	-5.62%	5.64%	18.43%	-166.11%	100.00%	-99.17%
Total	-3.87%	28.07%	-13.62%	-13.84%	-15.09%	2.13%	-4.09%

Note: The table compares data provided by the ministry with the data provided by the regions/referral hospitals. A positive number indicates that the amount recorded at the ministry was higher than the amount recorded at the health facility, while a negative figure indicates that the amounts recorded at the health facility was higher than the amount provided by the ministry.

Table A8   Health Service fees as share of allocation to regions and referral hospitals

	2002/03	2003/04	2004/05
Income			
Health services	19,263,839	27,864,000	27,864,000
Ambulance fees	34,848	40,000	40,000
Expenditure			
Primary Health Care Services	17,324,463	22,851,000	19,160,000
Regional Health and Social Welfare Services	636,385,277	665,312,000	645,126,000
Hospital Management Services	419,565,857	452,026,000	439,171,000
Fees as % of expenditure			
Primary Health Care Services	111.4%	122.1%	145.6%
Regional Health and Social Welfare Services	3.0%	4.2%	4.3%
Tertiary Health Care Services	4.6%	6.2%	6.4%

Source: Government of the Republic of Namibia, 2004

Table A9   Fees paid by patients at different health facilities

		N$0.00	N$4.00	N$6.00	N$8.00	N$9.00	N$10.00	N$15.00	N$20.00
Referral hospital	N	6	1	0	1	1	5	3	1
	%	27.30%	4.50%	0.00%	4.50%	4.50%	22.70%	13.60%	4.50%
State hospital	N	8	13	4	7	0	0	0	19
	%	14.30%	23.20%	7.10%	12.50%	0.00%	0.00%	0.00%	33.90%
Mission hospital	N	0	0	3	9	4	0	0	0
	%	0.00%	0.00%	17.60%	52.90%	23.50%	0.00%	0.00%	0.00%
Clinic	N	0	45	2	0	0	0	0	0
	%	0.00%	93.80%	4.20%	0.00%	0.00%	0.00%	0.00%	0.00%
Health centre	N	2	3	0	14	0	2	1	0
	%	8.70%	13.00%	0.00%	60.90%	0.00%	8.70%	4.30%	0.00%

Note: N refers to the number of responses

Table A10   Average fees paid by out- and in-patients at health facilities

		Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre
Out-patients	rural		6.56	7.50	5.10	5.63
	urban	12.00	8.89	9.70	4.00	8.78
	Average	12.00	8.14	8.72	4.86	7.29
In-patients	rural		34.80	56.00		31.33
	urban	46.77	41.03	34.60		
	Average	46.77	40.12	42.63		31.33

Table A11   Share of patients that have not paid service fees

	Hardap	Khomas	Omaheke	Kunene	Ohangwena	Omusati	Kavango	Average
rural	40.75		30.00	30.00	54.67	9.25	31.86	32.04
urban		2.00	40.00		15.00		10.00	11.83
Average	40.75	2.00	33.33	30.00	44.75	9.25	29.13	27.86

Table A12   Have you received a receipt?

…by health facility

		Referral hospital	Other state hospital	Mission hospital	Health centre	Average
rural	Always		60.0%	0.0%	80.0%	61.1%
	Often		0.0%	33.3%	0.0%	5.6%
	Never		40.0%	66.7%	10.0%	27.8%
	Don't know since I did not pay myself		0.0%	0.0%	10.0%	5.6%
urban	Always	84.6%	76.7%	100.0%		81.3%
	Never	0.0%	13.3%	0.0%		8.3%
	Don't know since I did not pay myself	15.4%	10.0%	0.0%		10.4%
Total	Always	84.6%	74.3%	62.5%	80.0%	75.8%
	Often	0.0%	0.0%	12.5%	0.0%	1.5%
	Never	0.0%	17.1%	25.0%	10.0%	13.6%
	Don't know since I did not pay myself	15.4%	8.6%	0.0%	10.0%	9.1%

…by region

		Hardap	Omaheke	Kunene	Ohangwena	Omusati	Kavango	Referral hospital	Average
rural	Always					71.4%	50.0%		61.1%
	Often					0.0%	16.7%		5.6%
	Never					28.6%	33.3%		27.8%
	Don't know since I did not pay myself	.				0.0%	0.0%		5.6%
urban	Always	100.0%	100.0%	40.0%	100.0%	100.0%		81.3%	81.3%
	Never	0.0%	0.0%	40.0%	0.0%	0.0%		0.0%	8.3%
	Don't know since I did not pay myself	0.0%	0.0%	20.0%	0.0%	0.0%		18.8%	10.4%
Total	Always	77.8%	100.0%	40.0%	100.0%	83.3%	50.0%	81.3%	75.8%
	Often	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	1.5%
	Never	11.1%	0.0%	40.0%	0.0%	16.7%	33.3%	0.0%	13.6%
	Don't know since I did not pay myself	11.1%	0.0%	20.0%	0.0%	0.0%	0.0%	18.8%	9.1%

Table A13   Is stock regularly taken?

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral Hospital	Total
N	7	7	7	5	8	3	16	10	63
yes	100.0%	85.7%	71.4%	100.0%	87.5%	100.0%	93.8%	100.0%	92.1%
no	0.0%	14.3%	28.6%	0.0%	12.5%	0.0%	6.3%	0.0%	7.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table A14   Is an inventory compiled at your health facility?

Responses by heads of health facilities

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
	N	3	8	3	4	3	3	5	29
rural	yes	100.0%	85.7%		100.0%	66.7%	100.0%	40.0%	78.3%
	no	0.0%	14.3%		0.0%	33.3%	0.0%	60.0%	21.7%
urban	yes		100.0%	100.0%	100.0%		100.0%		100.0%
Total	yes	100.0%	87.5%	100.0%	100.0%	66.7%	100.0%	40.0%	82.8%
	no	0.0%	25.0%	100.0%	25.0%	33.3%	33.3%	60.0%	37.9%

…by health professionals

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral Hospitals	Average
	N	6	6	6	4	8	1	14	9	54
rural	yes	100.0%	83.3%			100.0%		54.5%		75.0%
	no	0.0%	16.7%			0.0%		45.5%		25.0%
urban	yes	100.0%		100.0%	100.0%	100.0%	100.0%	66.7%	88.9%	93.3%
	no	0.0%		0.0%	0.0%	0.0%	0.0%	33.3%	11.1%	6.7%
Total	yes	100.0%	83.3%	100.0%	100.0%	100.0%	100.0%	57.1%	88.9%	85.2%
	no	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	42.9%	11.1%	14.8%

Table A15   Is the inventory controlled by the district?

Responses by heads of health facilities

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
	N	3	7	3	4	2	3	2	24
rural	yes	100.0%	83.3%		100.0%	100.0%	100.0%	50.0%	88.9%
	no	0.0%	16.7%		0.0%	0.0%	0.0%	50.0%	11.1%
urban	yes		100.0%	100.0%	100.0%		100.0%		100.0%
Total	yes	100.0%	85.7%	100.0%	100.0%	100.0%	100.0%	50.0%	91.7%
	no	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	50.0%	8.3%

…by health professionals

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral Hospitals	Average
yes	25.0%	66.7%	66.7%	100.0%	83.3%	50.0%	71.4%	57.1%	65.9%
no	50.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	14.3%	9.8%
don't know	25.0%	33.3%	16.7%	0.0%	16.7%	50.0%	28.6%	28.6%	24.4%

Table A16   Corresponding information about health professionals employed

	Nurses								Support staff
	MoHSS-HoF*	MoHSS-CMO	MoHSS-PMO	HoF-CMO	HoF-PMO	CMO-PMO	MoHSS-Superintendent	HoF-Nurse	Comparison MoHSS-HoF
Number of cases	23	34	24	23	17	25	3	7	26
Share of corresponding information	47.83%	35.29%	41.67%	73.91%	88.24%	68.00%	0.00%	42.86%	53.8%

*Note: HoF stands for Head of Health Facility

Table A17   Highest qualification of the head of the health facility

…by region and rural and urban

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
	N	4	8	3	4	3	3	6	31
rural	senior secondary	25.0%	0.0%		0.0%	50.0%	0.0%	16.7%	12.5%
	nursing diploma	50.0%	85.7%		100.0%	50.0%	50.0%	66.7%	70.8%
	bachelors degree	0.0%	0.0%		0.0%	0.0%	0.0%	16.7%	4.2%
	other	25.0%	14.3%		0.0%	0.0%	50.0%	0.0%	12.5%
urban	senior secondary		0.0%	33.3%	0.0%	0.0%	0.0%		14.3%
	nursing diploma		0.0%	66.7%	100.0%	100.0%	100.0%		71.4%
	bachelors degree		100.0%	0.0%	0.0%	0.0%	0.0%		14.3%
total	senior secondary	25.0%	0.0%	33.3%	0.0%	33.3%	0.0%	16.7%	12.9%
	nursing diploma	50.0%	75.0%	66.7%	100.0%	66.7%	66.7%	66.7%	71.0%
	bachelors degree	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	16.7%	6.5%
	other	25.0%	12.5%	0.0%	0.0%	0.0%	33.3%	0.0%	9.7%

…by type of health facility

	state hospital	clinic	health centre	Total
N	2	21	8	31
senior secondary	0.0%	19.0%	0.0%	12.9%
nursing diploma	100.0%	61.9%	87.5%	71.0%
bachelors degree	0.0%	4.8%	12.5%	6.5%
other	0.0%	14.3%	0.0%	9.7%

Table A18   Qualification of nurses

…by region and rural and urban

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
	N	6	6	2	5	6	13	6	7	51
rural	senior secondary	33.3%				0.0%	45.5%	33.3%		36.4%
	nursing diploma	66.7%				100.0%	45.5%	33.3%		50.0%
	bachelors degree	0.0%				0.0%	0.0%	16.7%		4.5%
	other	0.0%				0.0%	9.1%	16.7%		9.1%
urban	senior secondary	0.0%	33.3%	0.0%	20.0%	50.0%	0.0%		28.6%	24.1%
	nursing diploma	100.0%	33.3%	50.0%	80.0%	50.0%	50.0%		42.9%	55.2%
	bachelors degree	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%		28.6%	10.3%
	other	0.0%	33.3%	0.0%	0.0%	0.0%	50.0%		0.0%	10.3%
total	senior secondary	16.7%	33.3%	0.0%	20.0%	33.3%	38.5%	33.3%	28.6%	29.4%
	nursing diploma	83.3%	33.3%	50.0%	80.0%	66.7%	46.2%	33.3%	42.9%	52.9%
	bachelors degree	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	16.7%	28.6%	7.8%
	other	0.0%	33.3%	0.0%	0.0%	0.0%	15.4%	16.7%	0.0%	9.8%

…by type of health facility

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
N	7	19	4	7	14	51
senior secondary	28.6%	15.8%	0.0%	57.1%	42.9%	29.4%
nursing diploma	42.9%	78.9%	50.0%	0.0%	50.0%	52.9%
bachelor degree	28.6%	5.3%	25.0%	0.0%	0.0%	7.8%
other	0.0%	0.0%	25.0%	42.9%	7.1%	9.8%

Table A19   Experience of health professionals

…by region and rural and urban

Head of health facility

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	3.00	12.57		2.33	9.00	1.00	4.67	6.61
urban		7.00	8.67	10.00	7.00	1.00		7.29
total	3.00	11.88	8.67	4.25	8.33	1.00	4.67	6.77

Medical doctors and nurses

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	21.67	18.29			5.33	7.00	16.85		16.11
urban	18.67		16.22	13.67	12.20	2.00	15.33	22.08	17.00
total	20.17	18.29	16.22	13.67	9.63	4.50	16.56	22.08	16.64

…by type of health facility

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
Nurses/doctors	22.08	12.48	13.00	17.78	18.94	16.64
Head of health facility		6.50		7.55	4.88	6.77

Table A20   Number of years at current health facility

…by region and rural and urban

Medical doctors and nurses

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	11.25	8.29			2.67	1.00	9.46		8.39
urban	11.00		8.11	7.33	6.60	6.00	10.33	14.08	9.98
total	11.14	8.29	8.11	7.33	5.13	4.33	9.63	14.08	9.33

Principal Medical Officer

	Hardap	Kavango	Kunene	Ohangwena	Omaheke	Omusati	Mean
rural	8.00	5.00				4.00	5.67
urban	1.00		4.25	1.00	2.00	2.00	2.88
total	4.50	5.00	4.25	1.00	2.00	3.00	3.64

CMO and Superintendent of referral hospital

CMO	Superintendent
2.00	4.67

…by type of health facility – medical doctors/nurses

referral hospital	other state hospital	mission hospital	clinic	health centre	Average
14.08	6.63	8.67	10.33	9.24	9.33

Table A21   Satisfaction with working conditions

…by region and rural and urban

Medical doctors and nurses

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	yes	50.0%	57.1%			0.0%	100.0%	38.5%		42.9%
	no	25.0%	42.9%			100.0%	0.0%	46.2%		46.4%
	some how	25.0%	0.0%			0.0%	0.0%	15.4%		10.7%
urban	yes	66.7%		44.4%	0.0%	40.0%	0.0%	100.0%	15.4%	31.7%
	no	33.3%		55.6%	83.3%	60.0%	0.0%	0.0%	53.8%	51.2%
	some how	0.0%		0.0%	16.7%	0.0%	100.0%	0.0%	30.8%	17.1%
total	yes	57.1%	57.1%	44.4%	0.0%	25.0%	33.3%	50.0%	15.4%	36.2%
	no	28.6%	42.9%	55.6%	83.3%	75.0%	0.0%	37.5%	53.8%	49.3%
	some how	14.3%	0.0%	0.0%	16.7%	0.0%	66.7%	12.5%	30.8%	14.5%

…by type of health facility – medical doctors/nurses

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
yes	15.4%	25.0%	83.3%	55.6%	41.2%	36.2%
no	53.8%	58.3%	16.7%	44.4%	47.1%	49.3%
some how	30.8%	16.7%	0.0%	0.0%	11.8%	14.5%

Table A22   Satisfaction with working conditions – Head of health Facility

…by region and rural and urban – Head of health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
Rural	yes	25.0%	42.9%		66.7%	0.0%	0.0%	33.3%	33.3%
	no	50.0%	14.3%		33.3%	100.0%	100.0%	33.3%	41.7%
	some how	25.0%	42.9%		0.0%	0.0%	0.0%	33.3%	25.0%
Urban	yes		100.0%	33.3%	100.0%	0.0%	100.0%		57.1%
	no		0.0%	33.3%	0.0%	100.0%	0.0%		28.6%
	some how		0.0%	33.3%	0.0%	0.0%	0.0%		14.3%
Total	yes	25.0%	50.0%	33.3%	75.0%	0.0%	33.3%	33.3%	38.7%
	no	50.0%	12.5%	33.3%	25.0%	100.0%	66.7%	33.3%	38.7%
	some how	25.0%	37.5%	33.3%	0.0%	0.0%	0.0%	33.3%	22.6%

…by type of health facility – head of health facility

	state hospital	clinic	health centre	Average
N	2	21	8	31
yes	100.0%	33.3%	37.5%	38.7%
no	0.0%	42.9%	37.5%	38.7%
some how	0.0%	23.8%	25.0%	22.6%

Table A23   Satisfaction with salary

…by region and rural and urban

Medical doctors and nurses

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	yes	100.0%	14.3%			0.0%	100.0%	23.1%		29.6%
	no	0.0%	71.4%			66.7%	0.0%	61.5%		55.6%
	some how	0.0%	14.3%			33.3%	0.0%	15.4%		14.8%
urban	yes	33.3%		14.3%	33.3%	40.0%	0.0%	33.3%	23.1%	25.6%
	no	66.7%		71.4%	50.0%	40.0%	100.0%	0.0%	61.5%	56.4%
	some how	0.0%		14.3%	16.7%	20.0%	0.0%	66.7%	15.4%	17.9%
total	yes	66.7%	14.3%	14.3%	33.3%	25.0%	33.3%	25.0%	23.1%	27.3%
	no	33.3%	71.4%	71.4%	50.0%	50.0%	66.7%	50.0%	61.5%	56.1%
	some how	0.0%	14.3%	14.3%	16.7%	25.0%	0.0%	25.0%	15.4%	16.7%

…by type of health facility – medical doctors/nurses

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
N	13	23	6	9	15	66
yes	23.1%	26.1%	33.3%	33.3%	26.7%	27.3%
no	61.5%	60.9%	33.3%	55.6%	53.3%	56.1%
some how	15.4%	13.0%	33.3%	11.1%	20.0%	16.7%

Table A24   Satisfaction with salary

…by region and rural and urban – Head of health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	yes	75.0%	14.3%		0.0%	0.0%	100.0%	16.7%	29.2%
	no	25.0%	14.3%		100.0%	100.0%	0.0%	16.7%	33.3%
	some how	0.0%	71.4%		0.0%	0.0%	0.0%	66.7%	37.5%
urban	yes		100.0%	33.3%	100.0%		100.0%		66.7%
	no		0.0%	66.7%	0.0%		0.0%		33.3%
Total	yes	75.0%	25.0%	33.3%	25.0%	0.0%	100.0%	16.7%	36.7%
	no	25.0%	12.5%	66.7%	75.0%	100.0%	0.0%	16.7%	33.3%
	some how	0.0%	62.5%	0.0%	0.0%	0.0%	0.0%	66.7%	30.0%

…by region and rural and urban – PMO

		Hardap	Kavango	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	yes	100.0%	100.0%				0.0%	66.7%
	some how	0.0%	0.0%				100.0%	33.3%
urban	yes	0.0%		25.0%	0.0%	0.0%	100.0%	25.0%
	no	0.0%		75.0%	0.0%	100.0%	0.0%	50.0%
	Some how	100.0%		0.0%	100.0%	0.0%	0.0%	25.0%
Total	yes	50.0%	100.0%	25.0%	0.0%	0.0%	50.0%	36.4%
	no	0.0%	0.0%	75.0%	0.0%	100.0%	50.0%	45.5%
	some how	50.0%	0.0%	0.0%	100.0%	0.0%	0.0%	18.2%

Table A25   Is absenteeism of Health Staff at this facility a problem?

	Head of health facility	Doctor	Nurse	PMO	CMO	Regional Health Director
N					6	3
yes	8.3	26.7	36	44.4	33	33
no	91.7	73.3	64	55.6	67	67

Table A26   Number of days health professionals were absent during June 2003

Responses from nurses and medical doctors

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral Hospitals	Mean
rural	0.25	1.29			0.33	0.00	0.85		0.79
urban	3.67		0.67	2.50	0.80	0.00	0.00	4.00	2.15
Total	1.71	1.29	0.67	2.50	0.63	0.00	0.69	4.00	1.59

Responses Head of health facility

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Mean
rural	2.75	1.29		1.00	1.50	2.50	4.83	2.50
urban		8.00	7.00	21.00	2.00	10.00		8.86
total	2.75	2.13	7.00	6.00	1.67	5.00	4.83	3.94

…by type of health facility – medical doctors/nurses

	referral hospital	other state hospital	mission hospital	clinic	health centre	Mean
Medical doctors/nurses	4.00	1.50	0.33	0.11	1.12	1.59
Head of health facility		10.50		3.33	3.88	3.94

Table A27   Population of catchment area

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
Clinics	rural	2,777	3,970		2,589	7,028	7,009	13,651	5,633
	urban		3,357	50,854	16,237				23,483
	Total	2,777	3,868	50,854	7,138	7,028	7,009	13,651	8,311
Health centres	rural	4,223	15,576					15,828	13,810
	urban			44,267					44,267
	Total	4,223	15,576	44,267				15,828	21,424
District hospitals	rural	9,636	38,655					35,749	28,013
	urban	29,043			35,487	22,476	72,000	96,529	45,249
	Total	19,340	38,655		35,487	22,476	72,000	66,139	40,549

Table A28   Population per nurse and medical doctor

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke
nurse	1,395	2,324	7,744	2,589	7,028	1,500
medical officer	12,555		69,694			10,502

	Eenhana	Gobabis	Kongo	Mariental	Nyangana	Opuwo	Rundu	Tsandi	Windhoek
nurse	7,957	1,500	5,170	1,395	4,906	1,320	1,620	809	7,744
medical officer		10,502		12,555				6,468	69,694

Table A29   Patients per nurse and medical doctor

		rural	Urban	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral Hospital
In-patient	Nurse	23	33	10	39		19	50	23	9	63
	Doctor	28	34	5	40		30	62		22	29
Out-patient	Nurse	46	85	5	37	168	54	135	60	47	3
	Doctor	39	58	8	30	77	40	58	30	58	42

Table A30   Rating of workload

Responses by nurses and medical doctors

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	too high	50.0%	57.1%			66.7%	0.0%	61.5%		57.1%
	just right	50.0%	42.9%			33.3%	100.0%	38.5%		42.9%
urban	too high	66.7%		77.8%	100.0%	100.0%	50.0%	66.7%	76.9%	80.5%
	just right	33.3%		22.2%	0.0%	0.0%	50.0%	33.3%	23.1%	19.5%
total	too high	57.1%	57.1%	77.8%	100.0%	87.5%	33.3%	62.5%	76.9%	71.0%
	just right	42.9%	42.9%	22.2%	0.0%	12.5%	66.7%	37.5%	23.1%	29.0%

Responses by Head of health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	too high	75.0%	42.9%		33.3%	100.0%	100.0%	50.0%	58.3%
	just right	25.0%	57.1%		66.7%	0.0%	0.0%	50.0%	41.7%
urban	too high		100.0%	100.0%	0.0%	100.0%	0.0%		71.4%
	just right		0.0%	0.0%	100.0%	0.0%	100.0%		28.6%
total	too high	75.0%	50.0%	100.0%	25.0%	100.0%	66.7%	50.0%	61.3%
	just right	25.0%	50.0%	0.0%	75.0%	0.0%	33.3%	50.0%	38.7%

…by type of health facility – medical doctors/nurses

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
too high	76.9%	83.3%	50.0%	44.4%	70.6%	71.0%
just right	23.1%	16.7%	50.0%	55.6%	29.4%	29.0%

Table A31   Satisfaction with management of the health facility

Response by medical doctors and nurses

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Total
rural	excellent	25.0%	0.0%			0.0%	0.0%	23.1%		14.3%
	good	75.0%	42.9%			33.3%	100.0%	38.5%		46.4%
	satisfactory	0.0%	42.9%			0.0%	0.0%	23.1%		21.4%
	hardly satisfactory	0.0%	14.3%			66.7%	0.0%	7.7%		14.3%
	very poor	0.0%	0.0%			0.0%	0.0%	7.7%		3.6%
urban	good	33.3%		77.8%	16.7%	40.0%	0.0%	0.0%	23.1%	34.1%
	satisfactory	66.7%		0.0%	66.7%	20.0%	0.0%	66.7%	38.5%	34.1%
	hardly satisfactory	0.0%		0.0%	0.0%	20.0%	50.0%	33.3%	38.5%	19.5%
	very poor	0.0%		22.2%	16.7%	20.0%	50.0%	0.0%	0.0%	12.2%
total	excellent	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	18.8%	0.0%	5.8%
	good	57.1%	42.9%	77.8%	16.7%	37.5%	33.3%	31.3%	23.1%	39.1%
	satisfactory	28.6%	42.9%	0.0%	66.7%	12.5%	0.0%	31.3%	38.5%	29.0%
	hardly satisfactory	0.0%	14.3%	0.0%	0.0%	37.5%	33.3%	12.5%	38.5%	17.4%
	very poor	0.0%	0.0%	22.2%	16.7%	12.5%	33.3%	6.3%	0.0%	8.7%

Response by PMO

	Hardap	Kavango	Kunene	Ohangwena	Omaheke	Omusati	Total
Good	71.4%	33.3%	50.0%	100.0%	50.0%	75.0%	63.3%
Satisfactory	28.6%	66.7%	50.0%	0.0%	50.0%	12.5%	33.3%
Hardly satisfactory	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	3.3%

Table A32   Briefing of staff

Response by medical doctors / nurses

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Total
rural	yes	0.0%	71.4%			100.0%	100.0%	61.5%		60.7%
	no	100.0%	28.6%			0.0%	0.0%	38.5%		39.3%
urban	yes	33.3%		88.9%	83.3%	100.0%	50.0%	100.0%	75.0%	80.0%
	no	66.7%		11.1%	16.7%	0.0%	50.0%	0.0%	25.0%	20.0%
total	yes	14.3%	71.4%	88.9%	83.3%	100.0%	66.7%	68.8%	75.0%	72.1%
	no	85.7%	28.6%	11.1%	16.7%	0.0%	33.3%	31.3%	25.0%	27.9%

Response by Head of health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Total
rural	yes	100.0%	100.0%				100.0%	40.0%	66.7%
urban	yes		100.0%	66.7%		100.0%	0.0%		66.7%
total	yes	100.0%	100.0%	66.7%		100.0%	50.0%	40.0%	66.7%

Table A33   Meetings with staff

Response by medical doctors / nurses

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Total
rural	yes	75.0%	100.0%			100.0%	100.0%	76.9%		85.7%
urban	yes	100.0%		100.0%	66.7%	100.0%	50.0%	100.0%	84.6%	87.5%
total	yes	85.7%	100.0%	100.0%	66.7%	100.0%	66.7%	81.3%	84.6%	86.8%

Table A34   Average visits by the PMO

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral Hospital	rural	urban	Average
N	3	4	3	2	2	2	7	3	14	12	26
PMO	0.67	1.25	2.00	0.00	1.00	0.00	1.43	0.67	1.29	0.75	1.04
CMO	1.33	0.75	2.00	1.50	0.00	0.50	0.57	1.67	0.57	1.50	1.00
Director	0.67	0.50	0.00	0.50	2.00	0.50	0.57	2.00	0.57	1.00	0.77

Table A35   Health facility satisfactorily equipped?

Responses by medical doctors/nurses

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	yes	25.0%	28.6%			0.0%	0.0%	23.1%		21.4%
urban	yes	66.7%		44.4%	0.0%	0.0%	0.0%	0.0%	15.4%	19.5%

Responses by Head of health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	yes	25.0%	71.4%		33.3%	66.7%	0.0%	80.0%	54.2%
urban	yes		0.0%	100.0%	0.0%	0.0%	0.0%		42.9%

Table A36   Sufficient pharmaceuticals

Responses by medical doctors/nurses

		referral hospital	other state hospital	mission hospital	clinic	health centre	Average
vital	yes	72.7	86.7	60.0	87.5	66.7	75.9
essential	yes	81.8	93.8	80.0	87.5	60.0	80.0
necessary	yes	63.6	75.0	40.0	100.0	66.7	70.9

Responses by Head of health facility

		other state hospital	clinic	health centre	Average
vital	yes	50.0	94.4	66.7	84.6
essential	yes	100.0	89.5	100.0	92.3
necessary	yes	100.0	89.5	100.0	92.3

Table A37   Records of pharmaceuticals

Response by head of health facility

Records of…		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati
…medicine received	yes	50.00%	75.00%	100.00%	100.00%	100.00%	100.00%	80.00%
	no	50.00%	25.00%	0.00%	0.00%	0.00%	0.00%	20.00%
…medicine provided to patients	yes	75.00%	75.00%	100.00%	0.00%	50.00%	66.70%	80.00%
	no	25.00%	25.00%	0.00%	100.00%	50.00%	33.30%	20.00%

Table A38   Average number of vehicles and share of vehicles in working condition

Response by head of health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	vehicles available	0.50	0.43		0.00	0.00	0.50	0.40	0.33
	Share of vehicles in working condition	100.0%	66.7%				0.0%	0.0%	42.9%
urban	vehicles available		0.00	0.00	1.00	9.00	31.00		5.86
	Share of vehicles in working condition				100.0%	11.1%	29.0%		26.8%
Total	vehicles available	0.50	0.38	0.00	0.25	3.00	10.67	0.40	1.71
	Share of vehicles in working condition	100.0%	66.7%		100.0%	11.1%	28.1%	0.0%	29.2%

Response by PMO

		Hardap	Kavango	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	vehicles available	5.0	7.0				8.0	6.7
	% working condition	20.0%	57.1%				37.5%	40.0%
urban	vehicles available	0.0		6.0	9.0	31.0	5.0	8.6
	% working condition			37.5%	11.1%	29.0%	100.0%	34.8%
Total	vehicles available	2.5	7.0	6.0	9.0	31.0	6.5	8.1
	% working condition	20.0%	57.1%	37.5%	11.1%	29.0%	61.5%	36.0%

Table A39   Travelling time to health facility

	rural	urban
Less than 15 minutes	17.90%	20.20%
15 to less than 30 minutes	19.20%	18.30%
30 minutes to 1 hour	20.50%	26.90%
Between 1 hour and 2 hours	23.10%	20.20%
More than 2 hours	19.20%	14.40%

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
Less than 15 minutes	17.60%	29.00%	77.80%	10.70%	7.70%	25.00%	6.50%	19.20%
15 to less than 30 minutes	35.30%	29.00%	11.10%	21.40%	19.20%	12.50%	9.70%	18.70%
30 minutes to 1 hour	23.50%	9.70%	11.10%	25.00%	26.90%	12.50%	35.50%	24.20%
Between 1 hour and 2 hours	11.80%	19.40%	0.00%	17.90%	19.20%	18.80%	38.70%	21.40%
More than 2 hours	11.80%	12.90%	0.00%	25.00%	26.90%	31.30%	9.70%	16.50%

	Referral hospital	District hospital	Mission hospital	Clinic	Health centre	Average
Less than 15 minutes	20.8%	9.5%	17.6%	22.8%	38.1%	19.2%
15 to less than 30 minutes	8.3%	22.2%	17.6%	22.8%	9.5%	18.7%
30 minutes to one hour	37.5%	23.8%	17.6%	21.1%	23.8%	24.2%
Between one hour and two hours	25.0%	23.8%	35.3%	14.0%	19.0%	21.4%
More than two hours	8.3%	20.6%	11.8%	19.3%	9.5%	16.5%

Table A40   Mode of transport to health facility

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	Walking	80.0%	84.6%		66.7%	72.7%	66.7%	57.1%		72.5%
	Dropped by neighbour/friend	0.0%	0.0%		33.3%	18.2%	33.3%	4.8%		8.8%
	Taxi	0.0%	11.5%		0.0%	9.1%	0.0%	33.3%		13.8%
	Ambulance	10.0%	3.8%		0.0%	0.0%	0.0%	0.0%		2.5%
	Other	10.0%	0.0%		0.0%	0.0%	0.0%	4.8%		2.5%
urban	Walking	22.2%	80.0%	10.0%	36.4%	6.7%	30.0%	20.0%	12.5%	22.9%
	Own car	33.3%	0.0%	0.0%	9.1%	6.7%	20.0%	0.0%	8.3%	9.5%
	Dropped by neighbour/friend	22.2%	0.0%	0.0%	36.4%	26.7%	0.0%	10.0%	8.3%	16.2%
	Taxi	0.0%	20.0%	90.0%	4.5%	46.7%	10.0%	60.0%	50.0%	35.2%
	Ambulance	11.1%	0.0%	0.0%	0.0%	13.3%	30.0%	10.0%	16.7%	10.5%
	Government bus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	1.0%
	Other	11.1%	0.0%	0.0%	13.6%	0.0%	10.0%	0.0%	0.0%	4.8%
Total	Walking	52.6%	83.9%	10.0%	42.9%	34.6%	43.8%	45.2%	12.5%	44.3%
	Own car	15.8%	0.0%	0.0%	7.1%	3.8%	12.5%	0.0%	8.3%	5.4%
	Dropped by neighbour/friend	10.5%	0.0%	0.0%	35.7%	23.1%	12.5%	6.5%	8.3%	13.0%
	Taxi	0.0%	12.9%	90.0%	3.6%	30.8%	6.3%	41.9%	50.0%	25.9%
	Ambulance	10.5%	3.2%	0.0%	0.0%	7.7%	18.8%	3.2%	16.7%	7.0%
	Government bus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.5%
	Other	10.5%	0.0%	0.0%	10.7%	0.0%	6.3%	3.2%	0.0%	3.8%

Table A41   Costs of transport for patients

Average transport costs for all patients interviewed

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Mean
rural	0.80	0.80	.	1.67	2.18	12.50	3.57		2.16
urban	0.00	1.00	4.50	9.29	6.73	3.00	7.10	10.73	7.09
Total	0.42	0.83	4.50	7.59	4.81	7.75	4.71	10.73	4.93

Average transport costs for all patients who paid for transport by region

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospitals	Mean
rural	8.00	10.00	.	5.00	12.00	12.50	9.38		9.53
urban	.	5.00	5.00	17.73	11.22	6.00	10.14	18.39	13.09
Total	8.00	8.33	5.00	15.77	11.36	10.33	9.73	18.39	12.21

Average transport costs for all patients who paid for transport by type of health facility

Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Mean
18.39	13.25	10.11	8.00	5.38	12.21

Table A42   Rating of food provided at hospital

		Hardap	Kavango	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	Very good	40.0%	0.0%				14.3%		16.7%
	Good	40.0%	33.3%				71.4%		50.0%
	Satisfactory	20.0%	33.3%				0.0%		16.7%
	Poor	0.0%	33.3%				14.3%		16.7%
urban	Very good	0.0%		10.0%	10.0%	0.0%	20.0%	41.2%	19.2%
	Good	20.0%		40.0%	40.0%	40.0%	60.0%	35.3%	38.5%
	Satisfactory	20.0%		30.0%	50.0%	40.0%	20.0%	23.5%	30.8%
	Poor	60.0%		20.0%	0.0%	20.0%	0.0%	0.0%	11.5%
total	Very good	20.0%	0.0%	10.0%	10.0%	0.0%	16.7%	41.2%	18.6%
	Good	30.0%	33.3%	40.0%	40.0%	40.0%	66.7%	35.3%	41.4%
	Satisfactory	20.0%	33.3%	30.0%	50.0%	40.0%	8.3%	23.5%	27.1%
	Poor	30.0%	33.3%	20.0%	0.0%	20.0%	8.3%	0.0%	12.9%

Table A43   Brought own blanket

		Hardap	Kavango	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	Yes	40.0%	16.7%				57.1%		38.9%
urban	Yes	80.0%		90.0%	100.0%	40.0%	100.0%	29.4%	67.3%

	Referral hospital	Other state hospital	Mission hospital	Health centre	Average
Yes	29.4%	80.0%	75.0%	30.0%	60.0%

Table A44   Number of immunisations as share of total population of catchment area

	Hardap	Kavango	Khomas*	Kunene	Ohangwena	Omaheke	Omusati	Mean
rural	46.7%	12.5%		4.5%	5.1%	95.3%	24.7%	27.6%
urban		11.9%	103.0%	17.3%	53.3%	33.9%		60.8%
Total	46.7%	12.4%	103.0%	10.9%	17.2%	74.8%	24.7%	35.6%

other state hospital	clinic	health centre	Mean
43.6%	26.1%	56.4%	35.6%

*Note: To calculate the share the number of immunisation of different diseases was added up. This implies that people are counted more than once if they are immunised against more than one disease. Therefore, the share can exceed 100%. Nevertheless, the ratio is regarded as a good tool to compare regions.

Table A45   Number of people provided with family planning services as share of total population

	Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Average
rural	10.02%	1.18%		0.39%	0.80%	1.49%	0.40%	2.55%
urban		9.53%	14.04%	11.04%		0.47%		10.53%
total	10.02%	2.23%	14.04%	3.94%	0.80%	1.15%	0.40%	4.26%

other state hospital	clinic	health centre	Mean
0.5%	4.6%	3.9%	4.3%

Table A46   Waiting period before consultation

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospitals	Average
	N	21	30	10	27	25	16	31	26	186
rural	Less than 15 minutes	54.5%	52.0%		33.3%	40.0%	0.0%	47.6%		44.3%
	Between 15 and 30 minutes	9.1%	8.0%		50.0%	10.0%	16.7%	9.5%		12.7%
	More than 30 min. but < one hour	18.2%	20.0%		0.0%	30.0%	33.3%	19.0%		20.3%
	More than an hour but less than two	18.2%	16.0%		16.7%	10.0%	16.7%	4.8%		12.7%
	More than two hours	0.0%	4.0%		0.0%	10.0%	33.3%	19.0%		10.1%
urban	Less than 15 minutes	30.0%	40.0%	10.0%	42.9%	20.0%	30.0%	40.0%	38.5%	32.7%
	Between 15 and 30 minutes	30.0%	0.0%	30.0%	14.3%	26.7%	20.0%	20.0%	23.1%	21.5%
	More than 30 min. but < one hour	30.0%	40.0%	0.0%	4.8%	46.7%	10.0%	20.0%	3.8%	15.9%
	More than an hour but less than two	10.0%	0.0%	20.0%	9.5%	0.0%	20.0%	10.0%	30.8%	15.0%
	More than two hours	0.0%	20.0%	40.0%	28.6%	6.7%	20.0%	10.0%	3.8%	15.0%
total	Less than 15 minutes	42.9%	50.0%	10.0%	40.7%	28.0%	18.8%	45.2%	38.5%	37.6%
	Between 15 and 30 minutes	19.0%	6.7%	30.0%	22.2%	20.0%	18.8%	12.9%	23.1%	17.7%
	More than 30 min. but < one hour	23.8%	23.3%	0.0%	3.7%	40.0%	18.8%	19.4%	3.8%	17.7%
	More than an hour but less than two	14.3%	13.3%	20.0%	11.1%	4.0%	18.8%	6.5%	30.8%	14.0%
	More than two hours	0.0%	6.7%	40.0%	22.2%	8.0%	25.0%	16.1%	3.8%	12.9%

…by type of health facility

	Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Average
N	26	62	17	56	25	186
Less than 15 minutes	38.5%	33.9%	47.1%	35.7%	44.0%	37.6%
Between 15 and 30 minutes	23.1%	17.7%	17.6%	17.9%	12.0%	17.7%
More than 30 min. but < one hour	3.8%	24.2%	23.5%	17.9%	12.0%	17.7%
More than an hour but less than two	30.8%	8.1%	5.9%	16.1%	12.0%	14.0%
More than two hours	3.8%	16.1%	5.9%	12.5%	20.0%	12.9%

Table A47   Consultation period

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
	N	22	30	10	27	26	16	30	24	185
rural	5 minutes	8.3%	36.0%		16.7%	27.3%	33.3%	30.0%		27.5%
	10 minutes	16.7%	36.0%		50.0%	36.4%	16.7%	25.0%		30.0%
	15 minutes	41.7%	8.0%		33.3%	9.1%	16.7%	10.0%		16.3%
	between 15 and 30 min.	25.0%	4.0%		0.0%	9.1%	16.7%	10.0%		10.0%
	more than 30 minutes	8.3%	16.0%		0.0%	18.2%	16.7%	25.0%		16.3%
urban	5 minutes	0.0%	20.0%	70.0%	47.6%	26.7%	40.0%	10.0%	37.5%	34.3%
	10 minutes	0.0%	0.0%	10.0%	19.0%	20.0%	20.0%	30.0%	20.8%	17.1%
	15 minutes	40.0%	60.0%	10.0%	19.0%	26.7%	10.0%	20.0%	12.5%	21.0%
	between 15 and 30 min.	30.0%	0.0%	0.0%	14.3%	0.0%	30.0%	20.0%	16.7%	14.3%
	more than 30 minutes	30.0%	20.0%	10.0%	0.0%	26.7%	0.0%	20.0%	12.5%	13.3%
total	5 minutes	4.5%	33.3%	70.0%	40.7%	26.9%	37.5%	23.3%	37.5%	31.4%
	10 minutes	9.1%	30.0%	10.0%	25.9%	26.9%	18.8%	26.7%	20.8%	22.7%
	15 minutes	40.9%	16.7%	10.0%	22.2%	19.2%	12.5%	13.3%	12.5%	18.9%
	between 15 and 30 min.	27.3%	3.3%	0.0%	11.1%	3.8%	25.0%	13.3%	16.7%	12.4%
	more than 30 minutes	18.2%	16.7%	10.0%	0.0%	23.1%	6.3%	23.3%	12.5%	14.6%

…by type of health facility

	referral hospital	other state hospital	mission hospital	clinic	health centre	Average
N	24	63	17	54	27	185
5 minutes	37.5%	25.4%	11.8%	33.3%	48.1%	31.4%
10 minutes	20.8%	19.0%	35.3%	24.1%	22.2%	22.7%
15 minutes	12.5%	23.8%	11.8%	20.4%	14.8%	18.9%
between 15 and 30 min.	16.7%	12.7%	17.6%	13.0%	3.7%	12.4%
more than 30 minutes	12.5%	19.0%	23.5%	9.3%	11.1%	14.6%

Table A48   Have health complaints been addressed

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
	N	22	28	10	28	25	16	29	23	181
rural	Fully	41.7%	69.6%		50.0%	0.0%	66.7%	84.2%		57.1%
	Some how	8.3%	21.7%		50.0%	100.0%	33.3%	15.8%		32.5%
	Not at all	50.0%	8.7%		0.0%	0.0%	0.0%	0.0%		10.4%
urban	Fully	10.0%	40.0%	60.0%	63.6%	64.3%	60.0%	90.0%	43.5%	54.8%
	Some how	70.0%	60.0%	10.0%	27.3%	35.7%	30.0%	10.0%	39.1%	33.7%
	Not at all	20.0%	0.0%	30.0%	9.1%	0.0%	10.0%	0.0%	17.4%	11.5%
total	Fully	27.3%	64.3%	60.0%	60.7%	36.0%	62.5%	86.2%	43.5%	55.8%
	Some how	36.4%	28.6%	10.0%	32.1%	64.0%	31.3%	13.8%	39.1%	33.1%
	Not at all	36.4%	7.1%	30.0%	7.1%	0.0%	6.3%	0.0%	17.4%	11.0%

…by type of health facility

	Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Average
N	23	62	16	53	27	181
Fully	43.5%	50.0%	81.3%	52.8%	70.4%	55.8%
Some how	39.1%	43.5%	12.5%	34.0%	14.8%	33.1%
Not at all	17.4%	6.5%	6.3%	13.2%	14.8%	11.0%

Table A49   Correlation between time of consultation and health complaints being addressed

	5 minutes	10 minutes	15 minutes	Between 15 and 30 minutes	More than 30 minutes	Average
N	55	40	35	23	26	179
Fully	61.8%	52.5%	37.1%	60.9%	73.1%	56.4%
Some how	29.1%	37.5%	45.7%	21.7%	23.1%	32.4%
Not at all	9.1%	10.0%	17.1%	17.4%	3.8%	11.2%

Table A50   Satisfaction of patients with services provided

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
	N	22	31	10	28	26	16	32	25	190
rural	Very good	50.0%	7.7%		16.7%	0.0%	16.7%	27.3%		19.3%
	Good	41.7%	65.4%		83.3%	90.9%	16.7%	40.9%		56.6%
	Satisfactory	8.3%	15.4%		0.0%	9.1%	33.3%	27.3%		16.9%
	Poor	0.0%	11.5%		0.0%	0.0%	33.3%	4.5%		7.2%
urban	Very good	10.0%	0.0%	10.0%	4.5%	20.0%	0.0%	60.0%	32.0%	18.7%
	Good	50.0%	60.0%	70.0%	54.5%	60.0%	80.0%	40.0%	44.0%	55.1%
	Satisfactory	40.0%	40.0%	10.0%	18.2%	20.0%	10.0%	0.0%	12.0%	16.8%
	Poor	0.0%	0.0%	10.0%	22.7%	0.0%	10.0%	0.0%	12.0%	9.3%
total	Very good	31.8%	6.5%	10.0%	7.1%	11.5%	6.3%	37.5%	32.0%	18.9%
	Good	45.5%	64.5%	70.0%	60.7%	73.1%	56.3%	40.6%	44.0%	55.8%
	Satisfactory	22.7%	19.4%	10.0%	14.3%	15.4%	18.8%	18.8%	12.0%	16.8%
	Poor	0.0%	9.7%	10.0%	17.9%	0.0%	18.8%	3.1%	12.0%	8.4%

…by type of health facility

	Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Average
N	25	64	17	57	27	190
Very good	32.0%	9.4%	35.3%	15.8%	25.9%	18.9%
Good	44.0%	62.5%	52.9%	56.1%	51.9%	55.8%
Satisfactory	12.0%	21.9%	0.0%	21.1%	11.1%	16.8%
Poor	12.0%	6.3%	11.8%	7.0%	11.1%	8.4%

Table A51   Service provision compared to previous year

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
	N	22	31	10	27	26	12	33	25	186
rural	Better	33.3%	19.2%		0.0%	0.0%	50.0%	39.1%		25.0%
	The same	33.3%	57.7%		100.0%	100.0%	33.3%	21.7%		51.2%
	Worse	0.0%	23.1%		0.0%	0.0%	16.7%	17.4%		13.1%
	Don't know	33.3%	0.0%		0.0%	0.0%	0.0%	21.7%		10.7%
urban	Better	30.0%	40.0%	30.0%	33.3%	80.0%	16.7%	20.0%	32.0%	37.3%
	The same	50.0%	40.0%	60.0%	33.3%	6.7%	33.3%	30.0%	32.0%	33.3%
	Worse	20.0%	20.0%	10.0%	9.5%	13.3%	16.7%	0.0%	8.0%	10.8%
	Don't know	0.0%	0.0%	0.0%	23.8%	0.0%	33.3%	50.0%	28.0%	18.6%
total	Better	31.8%	22.6%	30.0%	25.9%	46.2%	33.3%	33.3%	32.0%	31.7%
	The same	40.9%	54.8%	60.0%	48.1%	46.2%	33.3%	24.2%	32.0%	41.4%
	Worse	9.1%	22.6%	10.0%	7.4%	7.7%	16.7%	12.1%	8.0%	11.8%
	Don't know	18.2%	0.0%	0.0%	18.5%	0.0%	16.7%	30.3%	28.0%	15.1%

…by type of health facility

	Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Average
N	25	59	17	58	27	186
Better	32.0%	40.7%	11.8%	25.9%	37.0%	31.7%
The same	32.0%	32.2%	47.1%	58.6%	29.6%	41.4%
Worse	8.0%	11.9%	11.8%	8.6%	22.2%	11.8%
Don't know	28.0%	15.3%	29.4%	6.9%	11.1%	15.1%

Table A52   Rating of the friendliness of health staff

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	Very friendly	66.7%	11.5%		16.7%	0.0%	50.0%	31.8%		26.5%
	Friendly	33.3%	69.2%		83.3%	90.9%	50.0%	59.1%		63.9%
	Neutral	0.0%	11.5%		0.0%	0.0%	0.0%	9.1%		6.0%
	Unfriendly	0.0%	7.7%		0.0%	9.1%	0.0%	0.0%		3.6%
urban	Very friendly	10.0%	0.0%	10.0%	9.1%	20.0%	20.0%	40.0%	38.5%	21.3%
	Friendly	70.0%	60.0%	80.0%	77.3%	60.0%	60.0%	40.0%	42.3%	60.2%
	Neutral	20.0%	40.0%	0.0%	13.6%	20.0%	20.0%	20.0%	15.4%	16.7%
	Unfriendly	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	3.8%	1.9%
total	Very friendly	40.9%	9.7%	10.0%	10.7%	11.5%	31.3%	34.4%	38.5%	23.6%
	Friendly	50.0%	67.7%	80.0%	78.6%	73.1%	56.3%	53.1%	42.3%	61.8%
	Neutral	9.1%	16.1%	0.0%	10.7%	11.5%	12.5%	12.5%	15.4%	12.0%
	Unfriendly	0.0%	6.5%	10.0%	0.0%	3.8%	0.0%	0.0%	3.8%	2.6%

…by type of health facility

	Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Average
Very friendly	38.5%	12.5%	29.4%	26.3%	25.9%	23.6%
Friendly	42.3%	73.4%	41.2%	63.2%	63.0%	61.8%
Neutral	15.4%	12.5%	23.5%	8.8%	7.4%	12.0%
Unfriendly	3.8%	1.6%	5.9%	1.8%	3.7%	2.6%

Table A53   Rating of the attention paid to patients

…by region

		Hardap	Kavango	Khomas	Kunene	Ohangwena	Omaheke	Omusati	Referral hospital	Average
rural	Very attentive	83.3%	15.4%		16.7%	18.2%	33.3%	13.6%		26.5%
	Attentive	16.7%	57.7%		83.3%	81.8%	66.7%	72.7%		61.4%
	Neutral	0.0%	11.5%		0.0%	0.0%	0.0%	13.6%		7.2%
	Not attentive at all	0.0%	15.4%		0.0%	0.0%	0.0%	0.0%		4.8%
urban	Very attentive	10.0%	0.0%	20.0%	9.1%	20.0%	10.0%	20.0%	30.8%	17.6%
	Attentive	70.0%	80.0%	70.0%	63.6%	66.7%	70.0%	70.0%	50.0%	63.9%
	Neutral	10.0%	20.0%	10.0%	27.3%	6.7%	20.0%	10.0%	11.5%	14.8%
	Not attentive at all	10.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	7.7%	3.7%
total	Very attentive	50.0%	12.9%	20.0%	10.7%	19.2%	18.8%	15.6%	30.8%	21.5%
	Attentive	40.9%	61.3%	70.0%	67.9%	73.1%	68.8%	71.9%	50.0%	62.8%
	Neutral	4.5%	12.9%	10.0%	21.4%	3.8%	12.5%	12.5%	11.5%	11.5%
	Not attentive at all	4.5%	12.9%	0.0%	0.0%	3.8%	0.0%	0.0%	7.7%	4.2%

…by type of health facility

	Referral hospital	Other state hospital	Mission hospital	Clinic	Health centre	Average
Very attentive	30.8%	9.4%	17.6%	29.8%	25.9%	21.5%
Attentive	50.0%	75.0%	52.9%	57.9%	63.0%	62.8%
Neutral	11.5%	12.5%	11.8%	10.5%	11.1%	11.5%
Not attentive at all	7.7%	3.1%	17.6%	1.8%	0.0%	4.2%