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Assessment of Quality in Health Care Delivery

- On an Example of a Baseline Survey on Clients' Satisfaction
and Staffs' self assessed Capacity and Working Conditions in
two remote Provinces of Northern Vietnam

- Diplomarbeit -

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Map of Vietnam Provinces



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List of Acronyms

ADRA	Adventist Development and Relief Agency
AIDS	Acquired Immunodeficiency Syndrome
CHS	Commune Health Station
DH	District Hospital
FP	Family Planning
GSO	General Statistic Office of Vietnam
GTZ	German Technical Assistance (Gesellschaft für Technische Zusammenarbeit)
HCFP	Health Care Fund for the Poor
HIV	Human Immunodeficiency Virus
IEC	Information, Education, Communication
IUD	Intrauterine Device
MCH	Mother and Child Health
MDG	Millennium Development Goal
NGO	Non Governmental Organization
RH	Reproductive Health
RTI	Reproductive Tract Infection
STD	Sexual Transmitted Disease
VCPFC	Vietnamese Committee for Population, Family and Children
WHO	World Health Organization

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Executive Summary

Introduction

Within the framework of the GTZ project *Contribution to the improvement of health services in Cao Bang and Son La provinces* a survey to assess the quality of health care delivery was conducted. This survey particularly intended to find out which aspects contribute to clients' satisfaction respectively dissatisfaction with received health services in the cultural and geographical context of the remote and mountainous provinces Cao Bang and Son La. Understanding patients' perception of quality of health care services is important in order to be able to improve the quality of services according to the clients needs, and hence to develop measures to increase the low utilization rate of health facilities in rural and remote areas of Vietnam. The survey furthermore aimed to assess health staffs capacity in both project provinces and to identify areas in which staff is in need for additional training and support to ensure services appropriate to clients needs.

Methods

Three different tools were used during the survey. A "*client satisfaction questionnaire*" was designed to explore patients' perception of technical and interpersonal aspects of health services. A "*staff self assessment questionnaire*" measured aspects of technical and structural quality from the staff's point of view to find out if service providers are in fact enabled and get enough support to deliver the needed quality. Since the perception of clients and staff concerning the received, respectively supplied services can differ widely, a "*client-provider-interaction-checklist*" was used as a third tool for an external look on the two aspects of quality of health care services. In total 962 clients (inpatients and outpatients) were interviewed, 349 staff interviews were conducted and 326 client provider interactions were observed.

Findings

The general level of clients' satisfaction was high in both provinces, with Son La showing a slightly higher satisfaction level than Cao Bang. The fact that clients in this survey mostly valued their satisfaction with health services relatively high but at the same time answered that only few of their needs had been met, suggests that a high general satisfaction with received health services does not necessarily imply that all aspects of care were successfully delivered. When asked about specific parts of the received services a substantial part of the clients stated dissatisfaction with factors like drug supply, state of facilities (in terms of equipment, cleanliness or convenience), available expertise at primary level and explanations to their own condition or

the possibility to ask questions. The availability of help after working hours and in case of referral was as well a reason of concern for many clients.

The health staff assessed their own skills and knowledge, as well as their possibilities to deliver care of high quality, as low. More than half of the interviewed staff felt inadequately trained to provide all services within their responsibility. Besides unmet training needs staff doesn't feel well enough supported in their efforts to deliver care of high quality. Shortcomings in equipment, furniture, expandable supplies and drugs were also stated. The own working environment was often judged as difficult mentioning problems like unreliable water supply, no sufficient possibility for ventilation and too little space to maintain adequate privacy with clients. Though a multitude of guidelines to different topics and from different providers (governmental and non governmental) were found during the survey in rural health facilities, no standardized set of guidelines seemed to be available, and there seemed to be no guidelines to quality issues at all.

The observed client provider interaction in Cao Bang and Son La provinces confirmed that the personal attitude of staff towards the clients is mostly nice and friendly as stated by most of the clients. The technical skills and reliability of information provided by the observed staff are of more concern. Half of the staff didn't pass on accurate information to the clients and staff didn't seem to be familiar with rules of counseling procedures. Clients were rarely encouraged to ask questions or to participate actively in the consultation session.

It is interesting to see, that the survey revealed a wide consensus between clients and staff regarding the necessity of improvement in quality topics. Both parties stated that particularly issues like an unreliable drug supply at commune level, insufficiently equipped and furnished facilities, hygienic constraints and lack of professional experience (especially at commune level) inflict a loss on the quality of health care in their realm of experience.

Recommendations for the GTZ project

Empower clients to participate actively in all decisions concerning their health

- Increase clients' knowledge about what aspects belong to a good quality service and what they as patients are entitled to when visiting a public health facility.
- Familiarize staff with the concept of involving patients into decision making. The providers' side should learn to respect the clients' ability to participate in the decision making and to appreciate the contribution a client can make to her/his own health outcome.
- Highlight to the health staff how important it is to reassure clients and to encourage them explicitly to ask questions.

- Raise awareness in the communities about rational drug use and the risks inherent to the overuse of pharmaceuticals.
- Encourage clients more clearly to give feedback on received health services by a better promotion of the opinion boxes and books and by handing out feedback cards in the facilities on a regular basis.

Strengthen providers' performance and motivation:

- Make sure that the staff is well trained in counseling and communication skills and able to adopt these skills for their daily work. Providers stated particular problems in counseling women with complication after abortion, adolescents, clients coming for HIV, RTI and STD services, disabled patients and patients from different social and ethnic groups.
- Provide more training and refresher training for the staff particularly on primary level with a priority on Reproductive Health issues and the prevention of HIV, RTI and STD.
- Address the topic of hygiene in all training and supervision activities. Inform staff about clients' complaints about unhygienic conditions especially concerning the sanitary facilities of hospitals and health stations.
- Make sure that staff gets regular and constructive feedback on their performance by supervisors. Enable supervisors accordingly.
- Define clear standards for high quality services by working towards the development of praxis orientated and standardized treatment and quality guidelines and promote their distribution.
- Acknowledge and reward outstanding performance, for example with monetary incentives or additional training opportunities.
- Develop and improve management and planning skills at the primary level in order to enable staff and management to define targets and to monitor and steer individual performance.

Recommendations for administrators of local policies

Help to develop the necessary infrastructure

- Non clinical issues like a reliable clean water supply and food provision for inpatients need to be addressed.
- Ensure the availability of all basic equipment in all health facilities in the project area and train the staff in the appropriate use of it.
- Make sure that the staff is able to maintain the hygienic conditions in the health facilities in an appropriate way by ensuring the regular provision of all necessary supplies (gloves, needles, disinfection solution, sterilizers).

- Provide health facilities with enough printed IEC material on relevant topics. Implement a reordering system for IEC material to ensure the availability of printed information and to offer health staff at grassroots level a chance to get involved into the decision about which topics must be addressed in their commune.
- Provide facilities with inpatient service with enough beds to prevent the situation that two clients have to share one bed.
- Improve the access to the referral levels for patients by means of clearly structured referral processes.
- Facilitate for the local level the access to ambulances from the district level.
- Consider the expansion of opening hours of CHS, according to the needs of the mostly agriculturally employed patients. Ensure a reliable stand-by duty for emergency cases at commune level.

Further demand for research

- Investigate further to find out how serious the shortcomings in drug supply actually are on commune level, and how the project could assist in solving this problem.
- Acquire a deeper insight into the organization of food provision for inpatients in district hospitals. Investigate if the canteen service available in Cao Bang provincial hospital is transferable to hospitals on district level.
- Make further inquiry into the issue of supervision coverage and quality in Cao Bang and Son La, to find out if observed differences between both provinces were coincidental, or if indeed Son La has a better developed supervision and training system for public health staff which could be transferred to Cao Bang.
- This survey shows that the availability of equipment, as well as the clients' expectations regarding medical devices, influence the satisfaction with service substantially and probably contributes to the bypassing of primary health services and the overutilization of higher levels. Examine what exactly clients miss, when they complain about not enough equipment being available.
- This survey only investigated the quality perception of *users* of public health services. Explore further reasons for not using the health facilities at all and factors contributing to the low utilization rate of rural health facilities.

1. Introduction

The empirical foundation of this study is a baseline survey, conducted within the framework of the GTZ project *Contribution to the improvement of health services in Cao Bang and Son La provinces*, in 2007. The project was implemented in the end of 2005 and is planned for an operating period of six years (12/2005 – 11/2011).

The project comprises three components:

- Improve access to health services in communal health centers and hospitals
- Improve and secure the quality and efficiency of services in health centers and hospitals
- Health promotion in sexual and reproductive health topics

The primary concern leading to this study was the fact that utilization rates of primary health facilities in both project provinces are very low. This contributes to an over-utilization of secondary and tertiary facilities and leads to the paradox situation that the basic health care needs of a large number of people are still not being met although an extensive net of primary facilities exist in rural Vietnam. It was the aim of this study to analyze the current situation and to assess the quality of care offered at the health facilities in the two project provinces. Clients' satisfaction was used as a key indicator for patient-centered quality services, along with providers' self-assessment of skills and possibilities to deliver quality care, and the observation of interaction between clients and providers in the process of delivered care.

The underlying idea was that by involving clients it can be ensured that activities undertaken to increase quality in health care are indeed client-centered. That should always be the main focus, because even technically and structurally high developed services aren't likely to be used by clients if they do not match clients' requirements. Hence this study aims to inquire more into the perceived quality than into the observed quality. Results of such a survey aim to further the knowledge about the specific local demands of clients and health care providers and in this specific example they serve as an initial measure to assess the effect of interventions which will be undertaken by the GTZ-project.

The introductory chapter of this study gives some general information on the subject, in particular a definition of quality in health care delivery as it is used in this work and the explanation for the importance of client satisfaction.

For a better understanding of the initial situation in the two project provinces some background information on the demographic development in Vietnam is presented and in particular the structure and development of Vietnam's health system is described in the second chapter.

The third part of this thesis describes the methodology employed for the development of the instruments, the sampling, the data collection and analysis, as well as limitations and potential bias which might be inherent to this methodology.

In the fourth section the findings – separated according to the used collection instrument - are presented in detail and analyzed statistically.

The fifth chapter discusses first the experiences made with the employed methodology and recommends improvements for the further use of the developed data collection instruments.

Subsequently the findings won by the gathered data are discussed against their respective background.

In the sixth part of this paper conclusions - gained in the process of data collection and analysis - are summarized in a systematical way, and recommendations for actions to be taken in the two project provinces are derived from them. The formulation of further questions for research, which resulted from the findings of this paper, forms the end of this study.

1.1 Definition of quality in health care delivery

Obviously neither the number of health facilities in a region nor the available access to a health facility automatically means to have access to qualitative acceptable care.

To establish a conceptual basic principle for the subject that shall be assessed in this study a definition of the term “quality” in its relation to health care is necessary.

Donabedian suggested the division of the term “quality in health care delivery” into three main aspects, which are structure-, process- and outcome quality.

The **structural quality** comprises the more stable arrangements involved in the provision of care. It covers resources like the number and qualification of staff, the quantity and quality of equipment and the financial means. Quality of structure contains the geographical location of facilities and the working environment as well as the organizational setting. The availability of a health insurance belongs to the structure as well. The structure has the function to produce care and it influences the way in which care is provided [Donabedian 1980, p. 81].

Quality of processes refers to all actions being taken within the delivery of care. Process quality can be further divided into two aspects, which both affect patients’ health outcome¹ – the technical and the interpersonal quality of care [Donabedian 1982, p.3 f]:

- **Technical Quality** (curing function) in terms of the level of specialization, diagnosis and treatment refers to the impact that the health service can have on population’s health. Only clinical diagnostics, treatment, counseling and preventive measures which are

¹ Health outcome is: “the change in a patient’s current and future health status that can be attributed to antecedent health care” [Donabedian 1980, p. 82].

applied technically correct and comprehensive, can be beneficial for the health outcome of individuals and populations.

- **Interpersonal Quality** (caring function) comprises as well essential aspects like the friendliness and responsiveness of health staff as the degree of acceptability of services and refers also to the ability to meet socially defined norms and to satisfy clients' expectations². The amenities of the services as for example a nice waiting room, a comfortable bed or the provision of drinking water are considered as contributions to the interpersonal relationship since they indicate concern for the patient's convenience and satisfaction [Donabedian 1980, p.5].

The **outcome quality** encompasses the consequences, care entails for the clients health. These consequences can appear as an improvement of physical or psychological functions as well as a change in clients' health related knowledge and behavior [Donabedian 1980, p. 83].

Since clients are most likely to have an opinion about the process of care they have just received the main focus of this study lies on the assessment of the process quality, with its technical and interpersonal facets. Structural features like service environment, equipment and drug supply do influence clients' satisfaction as well and are thus part of the assessment. The staff interviews investigate into aspects of the process and structure quality, while the observation checklist focuses particularly on the process quality.

The aspect of health outcome is probably the most direct measure of quality. But to measure quality of health care in terms of health outcome is a complicated endeavour, because it needs a study design which allows a follow-up of clients. But even with follow-up results it is difficult to detect how much of an observed effect can be factually attributed to the received care. In a cross-sectional study like this, direct knowledge about the quality of outcomes cannot be achieved³. In summary, the quality of health care can be defined as "*the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge*" [Lohr 1990, p.4].

1.2 Reasons for using client satisfaction as an indicator for delivered quality

Clients' expectations regarding technical and interpersonal processes contribute greatly to the individual definition of quality of each patient. In this individual view on qualitative health service

² This part of quality shouldn't be underestimated since received sympathy and care are important factors to sooth clients' concerns and contribute to their recovery.

³ To some extent clients' satisfaction itself is regarded as an outcome of health care but in this study clients' satisfaction shall serve rather as an indicator for the quality of the structure and processes in health care.

one important aspect is the fulfillment of clients' requirements. Therefore clients are individually and collectively important definers of what quality means [Donabedian 1980, p.24]. Only by exploring clients' satisfaction the provider side can find out if they really met clients' expectations.

In any process of health care patients' satisfaction should be regarded as a crucial point for the following reasons:

- Satisfied clients will show a better compliance and cooperation and are more likely to follow the advice of health care professionals, including specific medical regimens. This facilitates clients' recovery.
- Satisfaction contributes to the development of a constant and confiding relationship with the provider side, leading to a continuity of care and ultimately to a better health outcome.
- By learning which factors contribute to clients' dissatisfaction, a health care provider can identify weaknesses in her/his performance and improve them [Donabedian 1980, p.25].

An additional reason to use clients' perception of quality in health care delivery in this particular study is that the low utilization rate of the primary health facilities can only be increased when reasons for dissatisfaction and unwillingness to use the facilities are fully understood.

However clients' satisfaction has also some limitations when used as a tool to measure quality. Obviously patients' perception of health services is always subjective and influenced by the extent to which expectations to health care were fulfilled. For a lack of professional knowledge clients understanding of medical procedures is inevitably incomplete which can lead to blurred judgments. In addition clients' expectations of services can be unreasonably high and demands for specific treatments or drugs can in some cases even be against best client's interests.

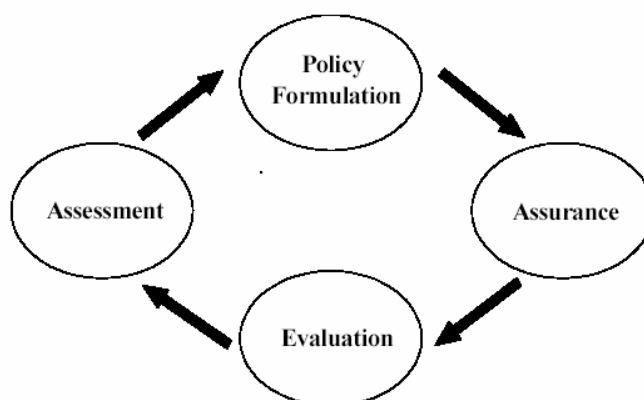
Donabedian counters that even in cases like that; clients' satisfaction is a valid measure for the improvement of quality, because unreasonable demands by a client show the provider that he failed to advise the client accordingly, to keep him from harm which might arise from his irrational ideas. And when dissatisfaction arises from the denial of a service desired by the client it is a valuable opportunity for the provider to reconsider the validity of his decision [Donabedian 1980, p.25, 26]. These considerations demonstrate that clients' satisfaction is an important key aspect and can be an indicator for service quality in health care delivery.

1.3 Public Health Action Cycle

To integrate this thesis into a broader scientific context a brief excursion to the model of the *Public Health Action Cycle* is necessary. This cycle is a theoretical model that was introduced to bring actions which ought to be taken in public health activities into a logical order to ensure effectiveness and efficiency.

The Public Health Action Cycle was recommended by the American National Academy of Sciences in 1988 to ensure rationality, consistency and appropriateness of health interventions. The cycle, originally proposed to guide governmental actions in public health, can be transferred to all kinds of intervention aiming at the establishment of public health goals.

Figure 1: Public Health Action Cycle



Source: Institute of Medicine: The Future of Public Health, Washington D.C. 1988. By Rosenbrock 1997 p.53

The model describes that the first step in solving a public health problem should always be the examination of the current problem under its medical, epidemiological and social aspects (**assessment**). This includes the collection of data, the identification of needs and the analysis of the causes of the problem. The preceding assessment contributes to evidence based decisions, economic assignment of resources and solutions appropriate to customers/clients requirements. Assessment is followed by **policy formulation**, a process in which priorities are set, goals are defined and proper means chosen to reach them. The model emphasizes as well that substantial gaps might appear between a formulated concept of an intervention and its conversion into practice, and that frequently obstacles occur, which need to be overcome before a successful implementation can take place (**assurance**). The Public Health Action Cycle finally highlights the importance to **evaluate** the results gained from implemented measures. Since the model forms a cycle, evaluation is then followed again by a re-assessment of the health problem, so that strategies are subject to continuous improvement [Institute of Medicine 1988, p. 43-45].

With this survey the first step of the Public Health Action Cycle – the assessment – is put into practice. Since strategies to improve public health matters must be based on objective and sound factors, this survey aims to collect data on clients' satisfaction and providers' skills and possibilities to deliver quality care. With the collection of this information the survey intends to identify specific problems and local demands of clients and health care providers in both project provinces. With the description of the status quo and the exact formulation of frequent problems and possible approaches to improvements this study will lay a sound foundation for intervention decisions and serve as a basis for future evaluations of project intervention outcomes.

1.4 Objectives

The main objectives of this study are to:

- **Gain baseline information about client's satisfaction and staff's capacity and working conditions.**

In order to improve quality in health service delivery according to the clients' needs, the main objective of the study was to find out which aspects contribute to clients' satisfaction respectively dissatisfaction with received health services in the specific structural and cultural context of northern remote Vietnamese provinces. Furthermore to assess in how far health staff is enabled and supported to ensure the desired quality.

- **Design tools for the measurement of quality in health care delivery.**

The developed survey tools aim to lay a foundation for further use in monitoring and evaluation processes.

A "*client satisfaction questionnaire*" was designed, to explore patients' perception of technical and interpersonal aspects of health services. The "*staff self-assessment questionnaire*" measures aspects of technical and structural quality from the staffs' point of view to find out if service providers are in fact enabled and enough supported to deliver the needed quality. A "*client-provider-interaction-checklist*" was designed as a third tool, to have an external look on the technical and interpersonal quality in health care services.

- **Derive recommendations from the data gathered**

A central aspect was to derive concrete recommendations for follow up actions from the gathered data and to suggest possible approaches for the improvement of quality deficiencies described by clients and staff.

2. Country background information

2.1 Demographic background

The Socialist Republic of Vietnam is situated in South East Asia. It borders China in the north and Laos and Cambodia in the west. Vietnam has a total population of 84 million inhabitants [WHO, National Health Account 2005].

The country is divided into 64 provinces which are further divided into districts, communes and villages.

Vietnam is, with 54 different ethnic groups, an exceptionally multiethnic society. The ethnic minority population is distributed throughout the country but the vast majority (about 75%) of the ethnic minority groups lives in mountainous areas like the northern mountains and the central highlands [WHO 2003, p.4]. While the official language is Vietnamese a lot of ethnic minority languages exist. Though ethnic minority groups make up for only 14% of the total population they form almost 30% of the poor in Vietnam [WHO 2003, p.6]. Poverty in Vietnam is heavily concentrated in remote ethnic minority regions.

About 73% of Vietnam's population is living in rural areas, the majority of which is engaged in agriculture and forestry [GSO, Population and Employment 2006].

Though Vietnam's economy is growing very fast⁴ it is still one of the world's poorest countries. Estimated 23% of Vietnam's population lives in poverty⁵ and 7% live below the food poverty line⁶ [GSO, Living Standard Survey 2004]. The GDP per capita was US\$ 723 in 2006 [GSO, National Accounts].

The country is characterized by a young population. Nearly 30% of the population is under the age of 15 while only 10% are over 60 years old [GSO, Living Standard Survey 2004]. The population growth rate has steadily decreased from 1.9 % in 1990 to 1.24 % in 2006 [GSO, Population and Employment].

Vietnam's health system is characterized by persisting insufficient public financing, which leads to high financial burdens for the mostly not insured patients. The total health expenditure in 2005 was 189 US\$⁷ per capita and accounted for 5.1% of the GDP. Government expenditure on health as a percentage of the total health expenditure decreased from 32 % in 1996 to 23 % in 2005 while private expenditure on health as a percentage of total health expenditure increased

⁴ Growth rate of GDP was 8,2 % in 2006 [GSO, International Statistics]

⁵ Government poverty standard: 200.000 Dong per capita per month in rural and 260.000 Dong per capita per month in urban areas. (1 US\$ = approximately 16.000 Vietnamese Dong)

⁶ Food poverty line: 124.000 Dong per capita per month in rural and 163.000 Dong per capita per month in urban areas [GSO, Living Standard Survey 2004].

⁷ This is the amount per capita at international dollar rate. The international dollar rate is a hypothetical unit of currency that has the same purchasing power that the US Dollar has in the United States at a given point of time. It shows how much a local currency unit is worth within the country borders.

from 67 % in 1996 to 77 % in 2005. The largest part of the private health expenditure is used for the purchase of pharmaceuticals [WHO, National Health Account, 2005].

In absence of adequate insurance systems the population has to spend a substantial part of their household income on health care. Particularly for the poorest part of the population health care is too expensive and the access therefore limited. To solve the problems arising from private health expenditures, leading whole families into depth and poverty, Vietnam introduced a Health Care Fund for the Poor (HCFP) in 2002⁸. The long-term goal of the fund is universal access through social health insurance. The fund intends to finance the costs of health care for the rural poor. Beneficiaries of the HCFP are poor people living below a defined poverty line, ethnic minority people from difficult mountainous provinces and residents of disadvantaged communes in remote areas [Article 2 of Decision 139/2002/QD-TTg]. The HCFP entitles beneficiaries at all levels to free inpatient and outpatient services, laboratory tests, x-ray and approved drugs on the health insurance reimbursement list. However the awareness of the HCFP among people eligible for free health care remains low, not all people who are eligible receive a card and some card holders do not use the card when visiting a health facility due to poor knowledge of its benefits [Axelson 2005, p. 49, 50].

Governmental efforts and reform measures in the health sector have already led to a positive development of population's health status. Key health indicators average those of middle income countries in the region, for example is the average life expectancy 70 years and the Infant mortality rate 17/1000 [World Bank 2005, p.1]. The comparatively good health status of the population was achieved partly because of Vietnam's extensive health care delivery network with a strong primary health care component. However rural areas and remote mountainous areas, with a high proportion of ethnic minorities in particular didn't keep pace with this development, so that the gap in health status and access to basic health services between these areas and the rest of the country is widening.

2.2 Vietnams' health system

Vietnams' health system has a hierarchical structure which is organized along the geographical division of the country. Vietnam comprises 64 provinces. Each province is divided into 10-20 districts, which are further divided into 16-25 communes or villages. Hamlets are the smallest units of this structure; each village comprises 8-10 hamlets [Ladinsky 2000, p. 84, 85]. Following this structure Vietnam's health system is divided into national, provincial, district and commune level. The commune level is the grassroots level of Vietnam's health system and encompasses an extensive net of commune health stations, with nearly every commune having its own health station. Commune health stations (CHS) are responsible for providing primary health care

⁸ Decision 139 of the prime minister in October 2002

including preventive ambulatory and inpatient services to between 3000 and 20000 persons [World Bank 2001, p. 87, 88]. CHS implement national health programs, such as MCH and family planning, acute respiratory infection, programs of immunization and communicable disease control. Complicated cases are referred by the CHS to higher levels of care.

According to the National Health Plan 2000-2010, CHS are required to have 8-9 rooms for different services like consultation, administration, drug storage, examination and first aid treatment, family planning, delivery, inpatient service, and traditional medicine [Ministry of Health: Decision No. 370/2002/QD-BYT]. However, the average number of rooms encountered on our field visits was 5. Usually CHS are staffed with 3-5 health workers [World Bank 2001, p. 89, 90]. Some have a medical doctor, but predominantly they are staffed with an assistant doctor⁹, a midwife, a pharmacist and a nurse [Ladinsky 2000, p.84]. The staff is supposed to work eight hours daily but due to low salaries it isn't uncommon that staff has a second job, which can result in a neglect of the work in the commune health station.

In addition to the CHS a village health worker strategy is implemented to ensure the provision of population with primary health care, particularly in remote areas. Village health workers are selected from each hamlet and get training on basic health topics from provincial health services [Ladinsky 2000, p.84]. Village health workers are supposed to offer simple treatment for the most common needs of population in villages and hamlets and have the role of an adviser in matters like clean water and sanitation, family planning, immunization or antenatal care.

The Vietnamese government took the different geographical conditions of its provinces into consideration and allowed regions with difficult terrain to have more CHS in relation to population than other regions [World Bank 2001, p.68]. However it is doubtful if this step fully compensates for the difficulties in access to health care, arising in remote and mountainous areas. Due to limited means of transportation walking is often the only transportation option in these areas and on foot it can take hours to reach the nearest CHS.

The first referral level for CHS is the district hospital. Each district has one general district hospital and two or more intercommune polyclinics. Intercommune polyclinics are commune health stations whose services have been upgraded with laboratory and surgical equipment. These polyclinics are staffed with 4-5 specialist doctors. District hospitals have about 100 beds, a laboratory and surgical facilities and include usually a department for mother and child care and family planning. District hospitals are supposed to provide training for health staff from commune level [World Bank 2001, p. 66, 67].

⁹ Medical doctors have six years of training while assistant doctors have only three years [World Bank 2001, p.128, 129]

The second referral level is the provincial hospital. Each province has at least one provincial hospital which includes usually a department for internal medicine, obstetrics and gynecology, surgery, pediatrics, infectious diseases, traditional medicine and an emergency ward. The provincial level of health care is intended to be a referral level only, but the bypassing of lower levels of care and direct consultation of the provincial hospitals isn't unusual [World Bank 2001, p. 66]. The provincial hospitals serve as well as training centers for the upgrading of medical staff [Ladinsky 2000, p.84].

The last and highest level of medical care in Vietnam are the national general and specialist hospitals [World Bank 2001, p. 66].

The utilization rates of CHS are quite low with a nation-wide average of 12 consultations daily [World Bank 2001, p.90], whereas the higher levels of medical care have to face an overutilization because many individuals bypass the primary levels and seek help directly at the secondary or tertiary levels, even with comparatively light diseases. The low number of consultations in CHS, which is even lower in poor and mountainous areas, might be the consequence of poor geographical access, a low perceived quality of curative services and the availability of alternative suppliers (private providers or drug outlets).

The staffing of the CHS, particularly in remote areas, is an additional problem, because they often have no medical doctor, which leads to a low capacity to cope with more serious cases [World Bank 2001 p. 66-71]. This problem doesn't seem to be due to a lack of manpower but due to a problem in the distribution of physicians. Ladinsky mentions in her reflection that it is very difficult to move physicians into underserved areas (which are mostly rural and remote) and that *"there are over 4.000 unemployed physicians in Vietnam who would rather remain un- or under-employed than live in the countryside"* [Ladinsky 2000, p.90].

On the administrative level the Ministry of Health is the main national authority of Vietnam's health system and formulates strategies and programs and implements them together with the People's Committees¹⁰ at provincial, district and communal levels. The provincial level is formed by the provincial health bureaus which are formally subordinated to the Provincial People's Committee in terms of organization, operational implementation and human resources management. They operate under close technical and strategic guidance as well as supervision of the Ministry of Health. On the district level district health centres are in charge of health management from district- down to the grassroots-level. District health centres conduct health activities in districts and communes and are responsible for local health personnel and their salaries [World Bank 2001, p. 65f].

¹⁰ The People's Committee is the executive arm of the provincial government and responsible for formulation and implementation of local policies

2.3 The Doi Moi reforms and their influence on the health sector

The major economic and social reforms known as *Doi Moi*¹¹ took place in Vietnam in 1986. The economy was transformed from a centrally planned to a market oriented and globally integrated model. Agriculture, parts of social services and trade sectors were privatized, price regulations ended and governmental subsidies to social services and industrial production were reduced. As a result of the reforms Vietnam's economic growth increased substantially - but so did the economic gap between the rich and the poor.

In the period before *Doi Moi* the governmental health system was free of charge for the entire population since the goal of the socialist party was, to deliver health services for everybody without barriers. A large network of health facilities was established, so that most people had access to health care. In mountainous and remote areas, where geographical access to health services is difficult, mobile examination teams and military medical units were employed to address the health problems.

The operating costs for the health system above commune level were fully subsidized by governmental budget. On commune level the health facilities were financed by revenues from the agricultural cooperatives. Since the state financing was insufficient to cover the costs, the facilities were mainly poorly equipped and the quality of services was low due to lack of recourses and limited access to updated medical information.

The supply with pharmaceuticals was insufficient; thus the government encouraged health facilities to focus on traditional medicine. At the end of the 1970s most of the CHS had an herbal medicine garden and about 80% of common diseases were treated by acupuncture and traditional herbal medicine.

The dependency on foreign financial aid (from Soviet Union and other socialist countries) to hold up the health system was substantial and when this assistance stopped at the end of the 1980s many health facilities were financially unable to maintain even daily routine and the already deficient supply with western drugs was disrupted totally. Since the government was no longer able to bear the costs of its health system, it was necessary to find alternatives to finance the health sector [Huong 2006, p. 27-30].

With the *Doi Moi* Reforms a lot of new strategies were implemented by the Vietnamese government aiming at the mobilization of alternative resources to finance the deteriorated health sector. The country began to charge patients for health care services and pharmaceuticals, which were previously free. The formerly exclusively public providers of health care were now – with the legalization of the private health sector – supplemented by private practices and drug

¹¹ Translation: Renewal or renovation

outlets [Bhushan 2001, p.52]. And the first health insurance schemes were introduced [Toan 2002, p.86].

The *Doi Moi* reforms had profound effects on every aspect of the country's development. While these effects were in many ways positive and Vietnam was able to make impressive progress "*to the point where several MDG's have been attained or even surpassed well ahead of time*"¹² [Vietnam Development Report 2007, p.96] disparities between the rich and the poor grew wider at the same time.

In the same way the health care sector was affected by the reforms through juxtaposed positive and negative effects. Fees for health services and charges for drugs in public health facilities were introduced officially in 1989. The fees were to be used by the collecting health facility to improve services and to award incentives to the staff's salaries. As user fees became an important source of income for health workers, the tendency to over-provide clients with examinations and pharmaceuticals increased and health costs rose [Huong 2006, p.30].

And while the user fees are an important factor to support staff and some basic supplies they are not sufficient to provide the facilities with new medical equipment or to finance the renovation of buildings [Ladinsky 2000, p.87]. But the very low state subsidies of today also don't cover such expenses.

With the possibility to sell their services, providers started to focus more on the better off. Particularly the poor were discouraged to consult public health services by the introduction of service fees and the utilization rate especially at commune level went down to low levels. But when they had to seek care, especially the poor often faced catastrophic expenditures leading whole families into debt and poverty.

Governmental attempts to protect the poor from high out-of-pocket expenditures by exempting them from fees proved to be difficult [Vietnam Development Report 2007, p.96]. Beginning with the definition who is entitled to receive such subsidized services, continuing with the acceptance of such exemption warrants at the facilities, up to the point of the general potential of abuse which is inherent to such regulations there were many problems connected with the realization of this protective measure.

With the goal to improve the equal access to health care the Vietnamese government introduced the first voluntary health insurance schemes in 1992. The goal was universal health insurance coverage¹³. Since even the premium for the insurance was too much of a burden for the poorest

¹² According to national household survey data Vietnam has already achieved the first Millennium Development Goal of halving extreme poverty by 2015. These data indicate that the national poverty rate fell from 58.1% in 1993 to 28.9% in 2002. Other MDG's in which Vietnam made considerable improvements, are access to primary education and lowered rates of under-five-mortality and maternal mortality [United Nation Vietnam 2002, p.1]

¹³ Up to 2005 the combined coverage of social health insurance and Health Care Fund for the Poor was still only about 30% of the population [Ministry for Culture and Information 2005, p.29]

part of population, poverty alleviation funds financed the first health insurance for people below a defined poverty line. In 2002 the *Health Care Fund for the Poor* was implemented, which now provides for all provinces and is subsidized from state budget.

In addition since 2005 children under six years were provided with free health care [Huong 2006, p.32, 33]. This proves a strong commitment of the Vietnamese government to live up to their socialist orientation, even while transforming into a market economy.

With the *Doi Moi* reforms the cooperative agriculture model was replaced by a family based production. For the CHS this change resulted in the loss of revenues which were paid thitherto from the cooperatives to ensure the social services at commune level.

The income of public health workers declined and a lot of them found other work to generate income or changed into private health services. As a result the network of hamlet health workers distorted and many of the - qualitative already low - services at CHS worsened which was naturally followed by decreasing utilization rates [Huong 2006, p.30].

As a corrective action the government decided in 1994 to pay the salary of commune health workers from provincial budget. The goal was to raise the morale and to avoid that staff have to work privately, in a second job, during official working hours, to earn their living. This governmental measure, together with the rehabilitation of CHS by loans from the World Bank, the Asian Development Bank and bilateral support from Spain and France, rescued the primary health care level from the threatening collapse [Huong 2006, p.31].

2.4 The private health sector

Nowadays the private health sector proves to be a powerful competitor for the public health system in rural areas of Vietnam. Tuan found in his study to the comparative quality of private and public health services that private services have a much higher coverage¹⁴ in rural areas than public services, and handle more than two-thirds of all illness episodes of patients attending health services at commune level. This is - at a first glance - amazing, because the study showed as well that the direct costs of private services are no lower than in the public health facilities and that the quality of private health care services - which is not controlled by the government - is significantly poorer than that of public services.

The fact that private providers have a better coverage in rural areas seems to contribute to their popularity. Tuan reckons that the good accessibility of private services in terms of distance and opening hours is an important factor for their success and compensates for the direct costs and low quality of care [Tuan 2005, p. 324, 325].

¹⁴ 11.5 **private** providers/10.000 population versus 6.7 **public** providers/10.000 population [Tuan 2005, p.325]

Control over the spreading private health sector, in terms of quality and cost control, is a current problem in Vietnam. Many of the public health care workers practice privately as well and it isn't unusual that clients coming to public health service are referred to a private facility, in which the public health staff is engaged as well. No effective regulatory systems against abusive methods like these are established so far [Huong 2006, p.33].

An additional problem is the fact that the state pays for the training of the majority of health staff, whereas a considerable part of staff changes after completed education to private services. But the state gets no share from the revenues obtained in the private practices. Thus the state loses investment costs *and* patients to the private sector. As a result the public sector loses resource and experience and remains as an under-resourced last choice for those who cannot afford private services [Ladinsky 2000, p.94].

2.5 Situation in Son La and Cao Bang

Cao Bang is situated in the North East and Son La in the North West of the Northern Uplands of Vietnam. Cao Bang has about 500.000 and Son La about 1 Million inhabitants. More than 70% of Cao Bang's and Son La's inhabitants belong to ethnic minority groups. In Son La the majority of inhabitants belong to the Thai ethnicity and in Cao Bang Tay and Nung ethnicities form the majority of population [WHO 2003, p.5, 6]. More than 87% of the population in both provinces live in rural areas and most of them are engaged in the agricultural sector [GSO, Population and Housing Census 1999].

The project provinces Cao Bang and Son La are amongst the poorest in Vietnam. The North East where Cao Bang is located has a poverty rate of 29% of population and Son La, belonging to the North West region has a rate of 52%¹⁵ living in poverty [GSO, Living Standard Survey 2004]. Due to the high poverty rates in both provinces, wide parts of the population are eligible to free health care from the Health Care Fund for the Poor. Both provinces are characterized by a mountainous terrain, a difficult infrastructure and a low population density. Cao Bang has 77 inhabitants/km² and Son La 71 inhabitants/ km². The national average is 254 persons/km² [GSO, Population and Employment].

The level of education in the project provinces is comparatively low. The percentage of people who have never attended school is 9.6% in the North East and 20% in the North West. The nation wide average is 7.8% [GSO, Living Standard Survey 2002]. The literacy rate, particularly in the North West is low with 80% compared to the nation wide average of 93% [GSO, Living Standard Survey 2004]. A lot of the ethnic minority groups living in Cao Bang and Son La do not speak Vietnamese language.

¹⁵ In comparison: the nation wide poverty rate (according to government poverty standard) is 23 %

Cao Bang has 16 hospitals, 22 regional polyclinics and 189 commune health stations. In Son La there are 15 hospitals, 19 regional polyclinics and 201 commune health stations to ensure the medical service for the population [GSO, Education, Health and Living Standard 2006].

Health Indicators in these provinces are quite behind the comparatively good nationwide average. To give some examples: neonatal mortality is with 31.6 per 1000 life births high in the Northern Uplands compared to the nationwide average of 17.5/1000. The same is true for the under-5 mortality of 51.8/ 1000, which is nation-wide much lower with 32.9/1000.

The level of help that a woman receives during delivery has important consequences for her and her baby's' health. Health risks for women in the Northern Uplands are high due to a much higher proportion of home deliveries (56%) than in the rest of the country (21%) and the fact that these deliveries are in 37% only assisted by relatives.

The Northern Uplands have with 28% the highest prevalence of cough and lower respiratory tract infections, and as well a high prevalence of 16% of diarrhea among children under three years of age [Demographic and Health Survey of the Ministry of Health & GSO 2003, p. 80-97].

These indicators hint at the fact that access to, and quality of health care in the Northern Uplands lag fairly behind and the population in these areas does not share the progresses made in the Vietnamese health system in the last years.

3. Survey methodology

3.1 Development and description of the instruments

This study investigates the quality of health care delivery from the clients' and the providers' perspective and the interaction between these two sides. In order to achieve the required information, data collection instruments were developed in the form of questionnaires.

For the development of an intelligible and comprehensive quantitative questionnaire for the measurement of clients' satisfaction, an extensive insight into the ideas and concepts of quality and into aspects contributing especially to dissatisfaction within the specific context of this area was necessary. To learn more about the local population's perception of "quality" the three remotest districts of Cao Bang province were visited to gain an insight especially in the districts with the most difficult structural conditions.

In each district the district hospital and two commune health stations were visited. That way inpatients and outpatients could be interviewed and patients at district level as well as communal level were included.

Qualitative clients' interviews were carried out using semi-structured interviews with open and general questions on the topic. The clients were asked if they had received all services they wanted and expected or if they had additional needs which weren't met during the visit. Further they were asked if they experienced anything positive or negative which was unexpected by them. Clients were also asked to describe the factors they like best about their health system and the service just received and the things they like least about it. During the Interviews Clients were encouraged to speak freely about all experiences with health services which are important to them or lead to particular satisfaction respectively dissatisfaction.

Because experiences with health services can differ widely in the higher and lower levels of health service provision the provincial hospital of Cao Bang Town was also included in the qualitative clients' interviews. Altogether 30 qualitative interviews were conducted.

Frequently named factors influencing the satisfaction with received services were: Friendliness of staff, cleanness of facility, availability of drugs, diagnostical and technical capacity of staff, availability of food/drinking water in the facilities, quality of explanations, referral system, opening hours, availability of equipment, size of facility and thoroughness of examination.

The outcome of this research was used for the development of a quantitative client questionnaire with mainly closed questions.

The staff self assessment questionnaire considers aspects like: support of staff by management, supervision, possibilities for training and development, access to information and education material in the facility for staff and patients, infrastructure and availability of equipment and other supplies. It aims to find out if staff feels enabled and well enough supported to deliver services of appropriate quality, and to identify areas seen as problematic by staff members which should be addressed to increase quality of care.

The client-provider-interaction checklist¹⁶ observes technical skills and correctness of information given to the client as well as counseling skills and personal attitude of health staff (eye-contact, friendliness, body language). Four of the topics on the checklist focus particularly on counseling dialogues in Reproductive Health (a. provider asks client about reproductive intention; b. provider reviews a returning clients experience and satisfaction with the method; c. provider lets the client know she/he has options and that the choice belongs to her/him; d. provider discusses with client which method she/he would prefer). This focus was chosen because the improvement of RH services is one of the central points of the GTZ in the remote project areas where a lot of ethnic minorities and adolescents lack adequate access to gender sensitive RH services. Thus it was of particular interest to have a look at the quality of counseling interactions clients receive in RH consultations. The rest of the 18 topics on the checklist are of general nature and should be fulfilled in every counseling process.

In counseling talks to non-RH-topics these points (referring exclusively to RH) were simply exempted from observation.

The questionnaires originally developed in English were translated into Vietnamese and checked by retranslation into English.

All three tools were pre-tested in the provincial hospital in Cao Bang Town by conducting 10 client interviews, 10 staff interviews and 10 interaction observations. Only a few wording changes were made after the pretest to increase the comprehensibility of the questions, without changing the content.

3.2 Sampling method

The survey was conducted in all districts belonging to Cao Bang and Son La provinces¹⁷. In Son La province the data of two districts were excluded from analysis since they were highly suspicious because the vast majority of the returned questionnaires in these districts were ticked in an exactly identical way and further included identical answers and suggestions in the open

¹⁶ This checklist follows in parts the "Checklist for Quick Investigations of Quality" developed by the Johns Hopkins Bloomberg School of Public Health [Rudy 2003, p.17]

¹⁷ Cao Bang province comprises 13 districts and Son La 11.

questions. It can be assumed that the interviewers in these two districts have copied down their own opinion about health services repeatedly and omitted to ask clients and staff members.

Table 1: Facilities included in the sample

	Cao Bang	Son La
Provincial Hospital	1	1
Provincial Traditional Hospital	1	0
Provincial Preventive Center	1	0
Provincial RH Center	1	0
District Hospitals	12	9
Commune Health Stations	70	52
Total	86	62

The two provincial hospitals were included. Further in every district the district hospital and 3 to 7 commune health stations (depending on the size of the district) were included. Four fifth of the 148 surveyed health facilities are commune health stations and one fifth hospitals. Since most of the commune health stations are located in rural areas the biggest part of the sample consists of rural facilities.

The commune health stations in the poorest regions of the country (like the Northern Uplands) have the lowest utilization rate. The mean number of daily clients' contacts in Cao Bang is 5,6 and in Son La 4,2 [World Bank 2001, p. 89] – with some CHS having an even lower average. For this reason the health facilities were not chosen randomly but purposely. To get a meaningful sample size in a justifiable time, the best frequented facilities in every district were chosen.

3.3 Selection and training of interviewers

To ensure a corresponding technical background only health staff was chosen as interviewers. Further selection criteria were at least five years working experience in a health profession, good communication skills and knowledge of at least one minority language common in the districts. Interviewers were also supposed to have a motorbike, because some of the chosen health facilities are not accessible by car.

One interviewer from each district was chosen which amounts to 13 interviewers in Cao Bang and 11 in Son La. The vast majority of interviewers were female.

The interviewers were trained for two days in the provincial capital town. On the first day they were introduced to the project, the goals of the survey and general interviewer skills. The survey tools were introduced to them in detail and practiced within the group. On the second day the interviewers practiced all survey tools in different health facilities of Cao Bang and Son La town on a supervised basis.

3.4 Data collection methodology

The Vietnamese Committee for Population, Family and Children (VCPFC) is the national representative for the Project supported by GTZ on behalf of the German government. The VCPFC serves as an independent ministry and is responsible for the implementation of national population programs. To conduct the survey the Provincial Committee for Population, Family and Children (which is a department of the VCPFC on provincial level) and the Health Office of each district were asked for permission.

The data collection started in Cao Bang province, where each interviewer was responsible for the collection in her/his home district. Because the interviewers were all recruited from the district hospitals, it would have biased the survey if they had carried out the survey in their own workplaces. Therefore every interviewer started the investigation in the district hospital of her/his neighbor district and returned afterwards to her/his home district to continue the survey in the commune health stations.

After a reflection of results gained with this method in Cao Bang, the methodology was changed for the survey conduction in Son La province. To ensure more objectivity and to prevent interviewers from meeting and questioning clients or staff personally known by them, each interviewer conducted the whole survey in another district and not in her/his home district. The interviewers spent one day in each facility.

Interviewed were clients over 15 years. Outpatients were asked directly after the medical consultation. Inpatients were included in the survey if they were longer than one day in the hospital and had already received a medical treatment or intervention.

As mentioned above the commune health stations aren't very well frequented. Therefore the clients to be interviewed were not chosen randomly but selected on a convenience basis from those, coming to the facility to see a physician, at the time the interviewer was present. In each hospital eight clients and in each commune health station six to seven clients were interviewed.

Staff was as well chosen on a convenience basis from those being on duty and willing to participate at the time the interviewers were present. In each hospital three staff members and in each commune health station two staff members were chosen for the interviews. Three interaction observations were conducted in each hospital and two in each commune health station. The sample for interaction observations was chosen from clients coming for a counseling talk *without* physical examination¹⁸, because it would have been too intrusive to ask clients to allow an observer in a physical examination.

¹⁸ With the exception of a mere blood pressure or pulse examination

The number of interviews and observations per hospital is slightly larger than those in each commune health station because usually in hospitals more staff members and clients are available than in CHS.

In total 962 clients (inpatients and outpatients) were interviewed, 349 staff interviews were conducted and 326 client provider interactions were observed.

Table 2: Number of data collection tools implemented by facility type

	Client Interview	Staff interview	Interaction Observation
Provincial Hospital	21	11	5
Provincial Traditional Hospital	8	3	5
Provincial Preventive Center	4	4	2
Provincial RH Center	8	9	2
District Hospitals	169	69	74
Commune Health Stations	752	253	238
Total	962	349	326

The data collection in Cao Bang took place from 04.05.-12.05.07. In Son La data were collected from 02.07.-11.07.07. The interviews lasted between 15-20 minutes.

The interviews took place directly in the health facilities but in a separate room, with no other persons present. The goals of the survey were explained to the respondents prior to the interview and they were asked for permission. The data collection was anonymous; neither staff members nor clients were asked for their names.

3.5 Data entry and analysis

For the descriptive analysis presented in this thesis, the questionnaires were recoded to suit the computer Statistical Package for Social Sciences (SPSS) version 13.0.

The majority of variables were measured on nominal and ordinal scales. Mean, median, standard deviation and frequency distribution were calculated. Cross tabulations were done to determine the relationship of certain variables. Pearson's Chi square test was employed to evaluate the relationship between categorical variables. The assumption that less than 20% of contingency tables should have an expected frequency below 5 was fulfilled in all tests.

Since the Kolmogorov-Smirnov-Test proved that the data aren't normally distributed the non-parametric Mann-Whitney-U-Test¹⁹ was used to investigate into differences in conditions (like satisfaction) between different, independent groups of the sample. The U-Test looks at the relative rank of subjects in two groups [Altman 1991, p. 194, Field 2005, p. 522].

¹⁹ The Mann-Whitney-U-Test is the non-parametric equivalent for the parametric independent t-test. Non-parametric tests are not restricted to data coming from normal distributions, like parametric tests are [Janssen 2005, p. 537].

Two-sided p-values of less than 0.05 were regarded as significant. In the shown statistical tests always the actual p-value is quoted, to allow the reader to make her/his own interpretation.

3.6 Limitations and potential bias

The survey has a number of limitations that should be considered.

Due to the general low utilization of rural health stations, the facilities for investigation were not selected in a randomized procedure. A purposely sampling strategy was applied and in each district the best frequented health facilities were chosen. Since the better visited facilities are possibly better frequented because they are already known for a better service, or because they are easier to access, the satisfaction of clients in these facilities might be already above average. For this reason the results of this survey must be interpreted with caution. The client's satisfaction in the very low frequented facilities of the two provinces can differ clearly from the results of this survey. Though the data are collected in a quantitative way they should be interpreted mainly as qualitative, because of the limited possibility of generalization for the whole project area.

Although interviewers were trained to administer the interviews in a standardized way, an interobserver-bias might have taken place, because of the multitude of interviewers. To some degree, there will always be variability in observation between different interviewers, leading to different classifications of the same observation and reduce the reliability of results. Further the specific personality of each interviewer can influence respondents in their responding manner and can thus affect the reliability of interviews.

The presence of observers during counseling sessions might further have influenced providers' performance in a positive way.

To collect reliable data to clients' satisfaction is a challenging task; particularly in Asian countries, where negative comments and opinions are given more sparingly. Hence it has to be kept in mind, that the level of satisfaction expressed, might be influenced by the social desirability of positive answers.

The dependency of clients on the health service providers, especially in remote areas with a very limited number of accessible health facilities and no range to choose from, can further lead to an ignorance of negative aspects in received health care.

Staff interviews are valuable tools to determine factors that influence providers' performance and motivation. One disadvantage however is that providers may be inclined to present themselves as favorable as possible and to give overoptimistic accounts of their performance.

4. Findings

This chapter is divided into four main sections. Firstly the findings from the client interviews are presented, secondly answers from the staff self assessment are summarized, the third section shows the results from the client-provider-interaction observations. The last section presents the findings from the evaluation of the available opinion boxes/books for clients' feedback. Where necessary for a better understanding of the presented data, the results are already commented by the author.

4.1 Client Satisfaction

4.1.1 Profile of clients

The majority of responding clients in Cao Bang and Son La were between 20 and 49 years old (Mean: 42 years in Cao Bang and 36 years in Son La). Women made up 66% of the survey respondents in Cao Bang and 69% in Son La. Most of the respondents in Cao Bang belong to Tay and Nung ethnicities. In Son La most of the respondents belong to Thai and Mong ethnicities.

Table 3: Profile of interviewed clients

	Cao Bang		Son La	
	Male	Female	Male	Female
Age:				
15-19	3	2	4	18
20-34	30	106	46	153
35-49	68	154	68	108
50-64	52	64	18	22
65+	19	10	6	10
Total	172	336	142	311
	(34%)	(66%)	(31%)	(69%)
Education:				
No schooling	0	5	19	74
Primary	46	67	47	97
Secondary	44	89	60	86
High school	36	74	10	32
Vocational training	46	101	6	22
Ethnicity:				
Tay	89	178	--	--
Nung	64	125	--	--
H'mong	7	10	--	--
Dao	8	12	--	--
Thai	--	--	90	200
Kinh	4	11	11	34
Mong	--	--	20	32
Muong	--	--	14	29
Other	--	--	7	29

Remarkable is the fact that the samples in Son La and Cao Bang differ substantially concerning clients' education. Whereas half of the respondents in Cao Bang had high school or higher education half of the respondents in Son La stated to have no schooling or only visited a primary school. Concerning education none of these two samples is representative for the population of the provinces. According to *Vietnam's Demographic and Health Survey 2002* the population in the Northern Uplands is educationally divided into 15% without education, 58% with primary school education, 20% with secondary school education and only 7% with completed secondary school or higher education [Ministry of Health & GSO 2003, p.12]. A completed secondary education is required to start high school or vocational training.

In the context of education it is interesting to see, that (in aggregation) Son La's respondents, who have a much lower level of education than the sample coincidentally chosen in Cao Bang, show a higher level of satisfaction with nearly all aspects of health service. The "Situation Analysis of Reproductive Health Services in Vietnam" conducted in 1999 came to the conclusion that "*clients are too easily satisfied, need to learn more about the quality of care and need to be educated to demand higher quality services*" [Ministry of Health/UNFPA 1999, p.96]. The difference between the samples of Cao Bang and Son La seems to suggest as well that education and a higher demand for quality are correlated. However, if stratified into different educational levels the data collected in this survey brought up no clear evidence and didn't support the hypothesis that clients with a lower education are generally easier to be satisfied (see Table 46, p.120 and Table 47, p.121).

Figure 2: Respondents education (Cao Bang)

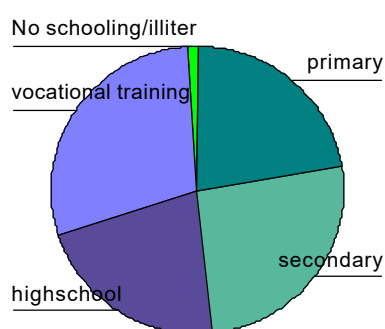
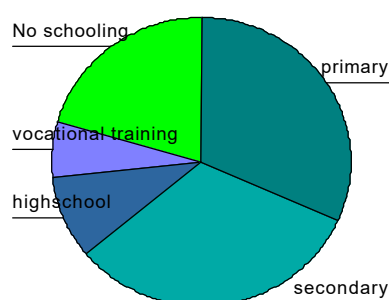


Figure 3: Respondents education (Son La)



4.1.2 Overall satisfaction

In the first section²⁰ of the questionnaire clients were asked to rate their overall satisfaction with the health service or treatment received on a four point scale. For each question the clients

²⁰ The questions in this section follow mainly the system of the CSQ-8 questionnaire developed and validated by Attkisson & Zwick (1982)

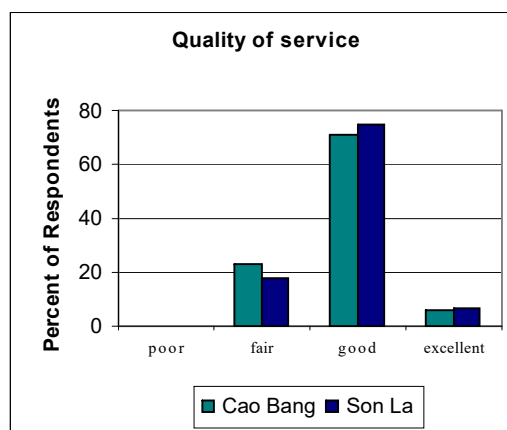
could express their opinion as very unfavorable (1), mildly unfavorable to neutral (2), favorable (3) and very favorable (4).

Excellent as well as very bad estimations were rarely given. Learning from the results in Cao Bang the questionnaire was improved for Son La and clients who had given an unfavorable answer (1 or 2) were asked additionally for the exact reason of their negative judgment.

How would you rate the quality of services received?

The majority of 71% in Cao Bang and 75% in Son La rated the quality as good. Excellent notes were only given by 7%, and 23% (18% in Son La) estimated the quality as fair. Main reasons given for rating the quality only as fair were: lack of drugs (n=57), lack of equipment (n=15), no thorough examination received (n=9) and the fact that the facility was perceived as noisy and dirty (n=4). Further reasons given were for example unfriendly staff (n=3) or the fact that patients had to share the bed in hospital with someone else. Remarkable in this context is the fact that even the two respondents who had to share the bed with another person, stated in question 7 to be generally satisfied with received services (further reasons Table 17; p. 103).

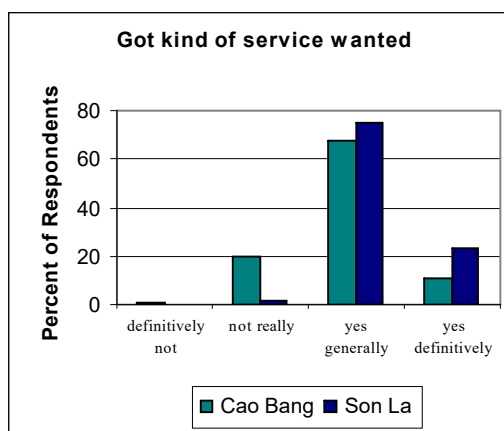
Figure 4: Quality of received service



Did you get the kind of service you wanted?

68% in Cao Bang and 75% in Son La answered that they got in general the service wanted. 11% (Cao Bang) to 23% (Son La) got definitely the treatment wanted. 21% of respondents in Cao Bang felt that they didn't get what they came for, whereas in Son La only 2% chose this answer. If asked what differed from their expectations clients answered mainly that they didn't receive enough drugs (n=6), that they have got the impression, there is not enough equipment for good examination and treatment (n=3) and that the examination they received wasn't thoroughly done (n=2). (Further reasons see Table 18; p. 103)

Figure 5: Received kind of service wanted



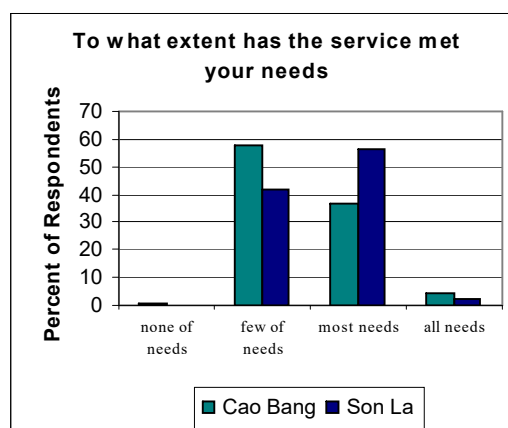
To what extent has the service met your needs?

37% in Cao Bang and 56% in Son La felt that most of their needs have been met. A substantial part of 59% of Cao Bangs' respondents and 42% of Son Las' respondents answered that only few of their needs have been met. Clients mainly complained about not getting enough drugs (n=124), about insufficient equipment (n=57) and about a lack of expertise (n=14) in the health facility

since no doctor is available and only light and common diseases can be treated.

(Further reasons see Table 19; p. 104)

Figure 6: Extent to which the service met the needs



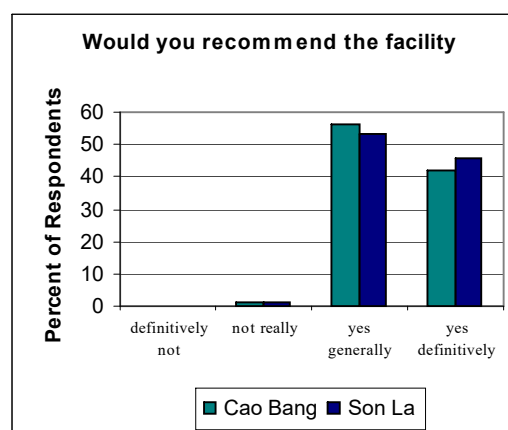
Would you recommend the facility to a friend?

56% of respondents in Cao Bang and 51% in Son La would generally recommend the facility and 42% (Cao Bang) to 46% (Son La) would definitely do it. Only 1-2% answered that they wouldn't recommend it.

The main reason stated for not recommending the facility was the unreliable drug supply (n=4).

(Further reasons see Table 20; p. 104)

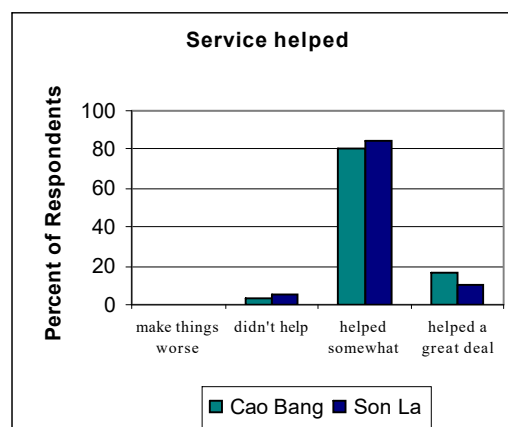
Figure 7: Willingness to recommend the facility



Have the received services helped you to deal better with your problems?

80% of respondents in Cao Bang and 85% in Son La stated that the received service helped somewhat. 17% in Cao Bang and 10% in Son La felt that it helped a great deal and only 3% in Cao Bang or 5% in Son La answered that it didn't help at all.

Figure 8: Helped the service in dealing with the problem

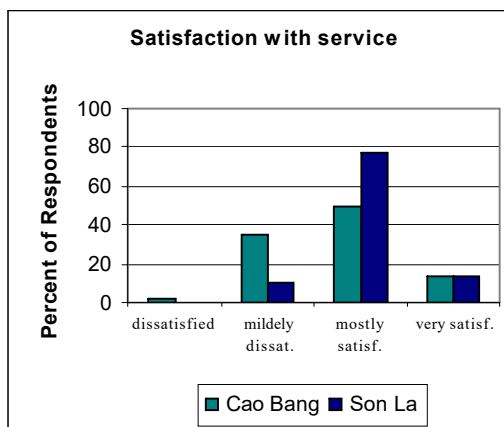


In a general sense, how satisfied are you with the service received?

The majority of 50% in Cao Bang and 70% in Son La answered to this question that they are mostly satisfied. 13% in both provinces felt very satisfied and 35% in Cao Bang and 10% in Son La answered that they are indifferent or mildly dissatisfied. 2% of respondents in Cao Bang felt quite dissatisfied. Main reasons for dissatisfaction were insufficient drug supply (n=18), lack of explanation of the client's

condition (n=3) or the fact that the client got no or no thorough examination (n=6) or had to wait very long to get examined (n=3); (Further reasons see Table 21; p. 105).

Figure 9: Satisfaction with service received



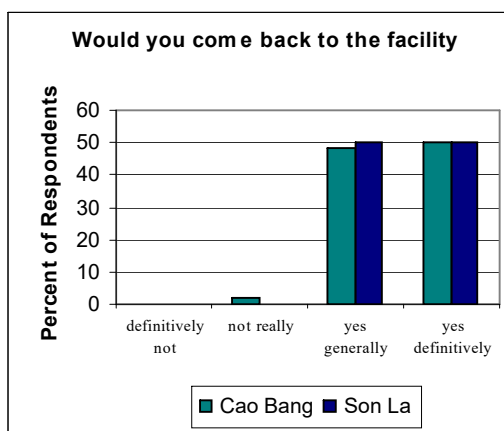
If you were to seek help once again, would you come back to this facility?

Half of the respondents in both provinces would definitely come back and the other half would generally do so. Only a very small part of 3% in Cao Bang didn't intend to come back ever.

However it must be kept in mind that the willingness to come back in the remote areas of Vietnam isn't always an indicator for perceived quality. During the qualitative interviews some of the clients stated that they surely would come back because they

simply haven't got an alternative. One reason given for not coming back to the health facility, which was in this case a commune health center, was the perception that the drug supply on a higher level (hospital) is more reliable.

Figure 10: Willingness to come back to the facility



4.1.2.1 Overall score of satisfaction

An aggregation procedure was used to calculate summary scores. Worst estimations to the questions of overall satisfaction were coded with 1; best estimations were coded with 4. From the sum of coded estimations results a summary score. The possible range for satisfaction lies between 7 (very unsatisfied) and 28 (very satisfied) with the cut off point between satisfaction

and dissatisfaction at 17,5 points. Very obvious the majority of clients show high overall levels of satisfaction. Only 10% of respondents in Cao Bang and 3% in Son La show a summary score below the point of 17,5.

Figure 11: Overall score of satisfaction (Cao Bang)

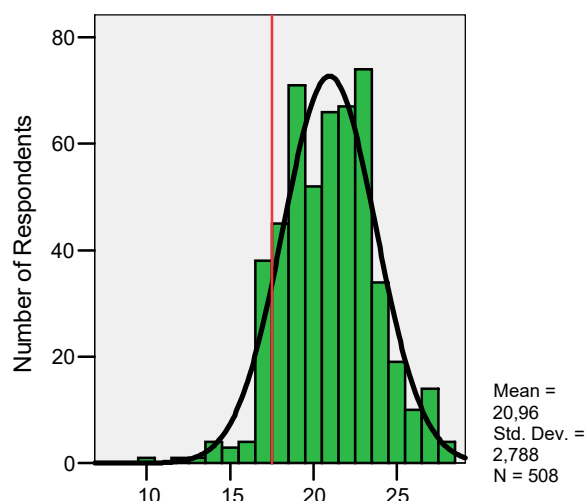
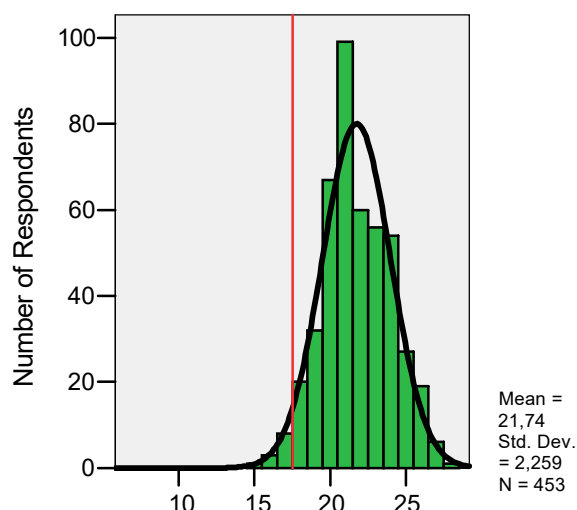


Figure 12: Overall score of satisfaction (Son La)



4.1.2.2 Overall score of satisfaction in different kinds of facilities

The sample was stratified into commune health stations and hospitals²¹ to explore if patients' level of satisfaction differs in the different kinds of health facilities. The result suggests that indeed the clients' level of satisfaction increases with the level of health facility. Taking clients' satisfaction as an indicator for quality in health care delivery this result hints at a better quality care in hospitals than in commune health stations.

Table 4: Overall score of satisfaction in different kinds of health facilities

	Commune Health Station		Hospital	
	Cao Bang	Son La	Cao Bang	Son La
N	384	368	117	80
Mean	20	21	23	23
Median	20	21	23	23
Mode	19	21	23	21
Minimum	10	15	15	10
Maximum	28	27	27	28
Variance	6.869	4.601	6.173	5.154

²¹ Included in the strata hospitals are: provincial hospitals, district hospitals and traditional hospitals

Further the Mann-Whitney-U Test was employed to verify the differences in client's satisfaction between CHS and hospitals. It shows that client's mean satisfaction of all interrogated aspects is higher in hospitals than in CHS, and that these differences are statistically highly significant.

Table 5: Difference in general satisfaction between CHS and hospitals

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services*	Hospital	197	3.03	0.451	59669	<0.001
	CHS	752	2.81	0.509		
Did you get the service wanted*	Hospital	197	3.30	0.579	52979	<0.001
	CHS	752	2.98	0.510		
To what extent has service met needs*	Hospital	197	2.82	0.512	47898	<0.001
	CHS	752	2.43	0.547		
Would you recommend facility*	Hospital	197	3.62	0.487	56080.5	<0.001
	CHS	752	3.37	0.517		
Has the service helped*	Hospital	197	3.20	0.451	64247.5	<0.001
	CHS	752	3.06	0.386		
How satisfied with service received*	Hospital	197	3.14	0.603	54233	<0.001
	CHS	752	2.80	0.598		
Would you come back to facility*	Hospital	197	3.68	0.480	56809.5	<0.001
	CHS	752	3.43	0.532		

* Results are statistically significant at the 0.05 level

4.1.3 Satisfaction with specific aspects of service²²

The results from the first section of the questionnaire show relatively high levels of reported **overall satisfaction**. Because clients in this survey mostly valued their satisfaction with health services relatively high but at the same time answered that only few of their needs have been met the results also suggest that satisfaction with received health services and a willingness to recommend the facility does not imply that all aspects of care were successfully delivered.

Evidence from many client satisfaction surveys conducted in different developing countries and contexts suggests that patients generally show a tendency to report relatively high levels of satisfaction with services received [Baltussen 2002, Abejero 2006, Haddad 2000, Jenkinson 2002, Gadallah 2003].

However client satisfaction studies revealed as well, that respondents who indicate that they are generally satisfied with health care received, report about problems when asked for **specific aspects** of the service [Jenkinson 2002, p. 339].

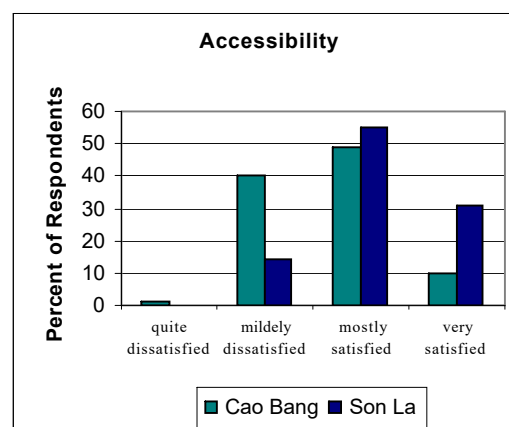
Because the stated overall satisfaction might present a limited and over-optimistic picture, the second section of the questionnaire asks for detailed items of health services to find out which specific areas are in need of improvement from the clients point of view. In Cao Bang 12 specific aspects were asked. Learning from the results in Cao Bang the client questionnaire was improved and further 3 aspects were added to the survey in Son La.

Like in the first section clients were asked to rate their satisfaction with specific aspects of health service, on a four point scale. For each aspect the client could choose between the answers “quite dissatisfied” (1), “indifferent or mildly dissatisfied²³” (2), “mostly satisfied” (3), and “very satisfied” (4).

Accessibility of health facility

Though one of Vietnam’s greatest achievements over the last 30 years is the establishment of an extensive network of commune health centers, with the Northern Uplands having more commune health stations per population than every other region in Vietnam [World Bank 2001, p.68], satisfaction with the accessibility is still low. In Cao Bang 41% of clients stated to be indifferent or dissatisfied with this aspect.

Figure 13: Satisfaction with accessibility



²² All percentages are summarized in Table 22 and 23, p. 105, 106

²³ In the graphics this point is displayed only as “mildly dissatisfied”

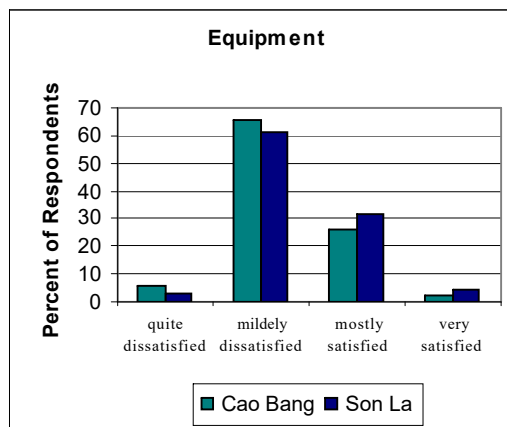
Reasons for the relatively low satisfaction might be that the mountainous terrain is difficult to traverse, possibilities of transportation are limited and on foot it can still take hours to reach the nearest health facility. Clients in Son La turned out to be much more satisfied with this aspect though traveling conditions are the same as in Cao Bang. In Son La only 14% stated to be indifferent or dissatisfied with the accessibility of services.

Availability of equipment

Appropriate equipment is an important aspect of quality care, because it allows the staff to perform in a technically competent way. The adequacy of equipment was one of the major concerns for responding clients. 72% in Cao Bang and 64% in Son La stated to be indifferent or dissatisfied with this aspect of service. Many of the commune health stations are poorly equipped with a lack of basic instruments for medical examinations,

as emphasized by many of the respondents. The result suggests that this fact contributes to dissatisfaction with the service and leads to a bypassing of the primary health services and over-utilization of the secondary or tertiary facilities, which are perceived as better equipped.

Figure 14: Satisfaction with equipment

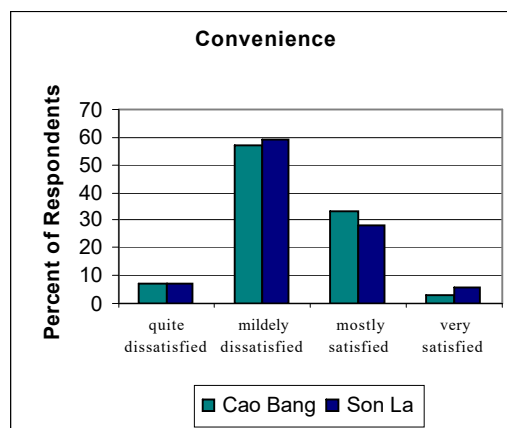


Convenience of facility

Opinions about the convenience offered by the health facility were not very favorable either. 64% of respondents in Cao Bang and 66% in Son La stated to be indifferent or dissatisfied with this aspect of health service. Remarks about the convenience often included the lack of water (for drinking and washing), bad ventilation in the facilities, inconvenient patients' rooms and lack of furniture, especially beds. Some

hospital inpatients mentioned that it is an additional hardship for patients that they have to care for their food by themselves because hospitals generally don't provide any.

Figure 15: Satisfaction with convenience

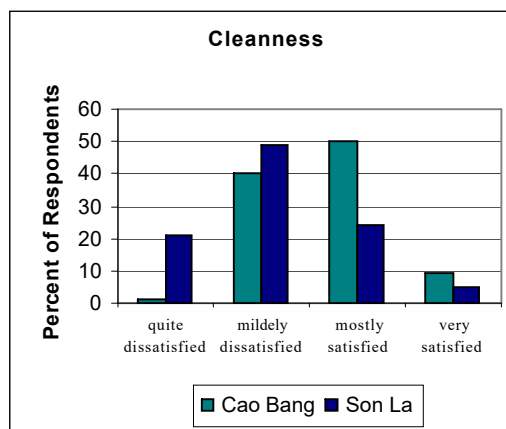


Cleanness of facility

A clean working environment allows the staff to conduct medical procedures in a hygienic and aseptic way. It also suggests that facility staff is committed to their work. It can be assumed that

a clean and neat facility increases clients' trust and confidence into services received at this facility. This aspect was of major concern and dissatisfaction for respondents in Son La, were 21% stated to be quite dissatisfied and another 49% to be indifferent or mildly dissatisfied. In Cao Bang 41% of responding clients valued the cleanness of the health facilities as not satisfactory. Complaints were often given about the hygienic state of the toilets (n=19). Because a lot of facilities lack of water, the hygienic conditions, especially of the sanitary facilities are indeed a reason for concern. In the qualitative interviews

Figure 16: Satisfaction with cleanness

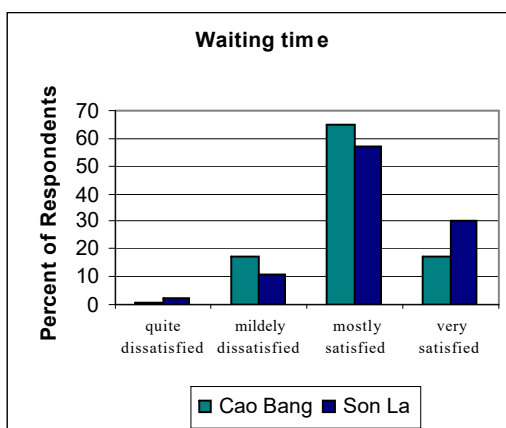


sometimes clients complained about a “bad smell” in the clients' rooms. It can be assumed that this is a term to paraphrase dissatisfaction with the cleanness as well.

Length of waiting time in the facility

82% of the respondents in Cao Bang and 87% in Son La were mostly or very satisfied with the time they had to wait for their consultation. Since utilization in the communal health stations is generally low clients are mostly immediately treated. In the outpatient ward of hospitals and on market days it is sometimes crowded and clients have to wait for service but this doesn't seem to be a serious cause for dissatisfaction

Figure 17: Satisfaction with waiting time



because, like one female respondent stated: “*I can see that the staff is doing their best to treat everyone as quickly as possible*“. Only very sporadically patients complained about having to wait too long for services. In these cases they mostly reported that they had to wait long because the staff was absent during working hours (n=7).

Time spent with the physician

The high majority of respondents presented themselves as satisfied with this aspect of received services. In Cao Bang 80% of the respondents and in Son La 87% were mostly or very satisfied with this aspect of service. In Cao Bang 21% of the respondents answered to be indifferent or dissatisfied, whereas in Son La only 13% were mildly or quite dissatisfied. When asked in the qualitative interviews about their estimation of time spent for the examination, three respondents said that the examination was quickly done but stated as well that they got the impression it was

thoroughly done and that they even like it when they don't have to spend so much time for an examination.

In the Situation Analysis of public RH services in Vietnam 1999 an even higher proportion of over 95% in nearly every kind of health facility stated that the provider spent enough time with them [Ministry of Health/UNFPA 1999, p. 53]. On the other hand a lot of clients in this survey complained explicitly about getting no or no thorough examination. The picture remains heterogeneous and maybe the perception of a thorough examination is in the cultural

context of Vietnam's remote areas more linked to the use of high tech equipment than to the length of time a health care professional spends with the client to discover the cause of illness.

Explanation about what was done to you

The majority of 69% in Cao Bang and 77% in Son La was very or mostly satisfied with the explanations received. In the qualitative interviews four of the clients stated to be satisfied with this aspect even if they got only very brief or no explanations because they emphasized to trust the staff entirely to do exactly the right thing. This finding suggests that satisfaction with the explanations received does not necessarily indicate comprehensive and sufficient explanations.

However 32% of clients in Cao Bang and 23% in Son La remain indifferent or dissatisfied. In the qualitative interviews some of the clients (n=5) stated that they received explanations but didn't understand them and felt uncomfortable to ask for further clarification.

Clarification of your health problems (asked in Son La only)

It can be assumed that every client is eager to understand her/his health problem and that health staff which is able to explain and clarify the client's condition to her/him will contribute greatly to her/his satisfaction. A client who remains confused and unenlightened after the consultation is much more likely to seek the help of other providers or to resort to self medication. 77% of Son

Figure 18: Time spent with the physician

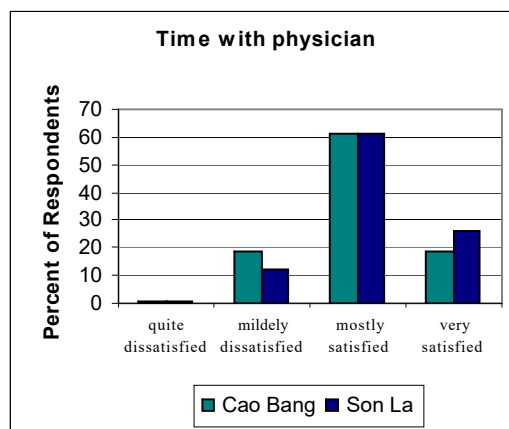
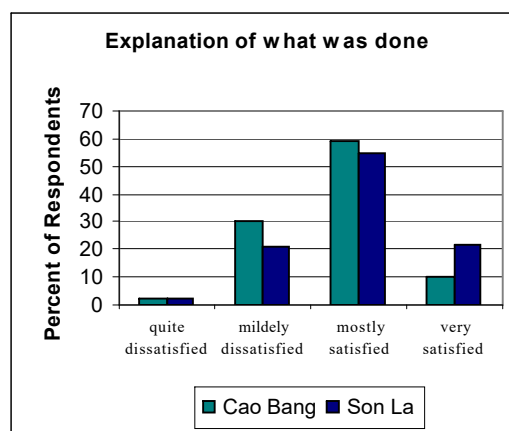


Figure 19: Explanation of what was done



La's respondents claimed to be mostly or very satisfied with the clarification they received. 23% remain indifferent or dissatisfied.

This question is related to the above mentioned question regarding received explanations and to the later on determined possibility to ask questions. Not surprisingly the responds to these three questions are very similar. It can be assumed that the clients who feel dissatisfied with the aspect of clarification are the same who are dissatisfied with received explanations of what was done to them and with the possibility to ask questions. In this context it

is interesting to see that clients with higher education (secondary school and higher) show a significant higher level of satisfaction with this aspect, than clients with a lower education (illiterate or primary school); (Mean: 3.14 versus 2.93, Mann-Whitney-U = 19892.5, $p = 0.001$). This finding suggests that explanations offered by the provider-side do not suffice, particularly for clients with a lower education, who may need more detailed background information to understand their condition.

Explanation of the chosen treatment (asked in Son La only)

81% of the respondents stated to be mostly or very satisfied with the explanations received on the chosen treatment. 19% of clients answered to be indifferent or dissatisfied with the explanations and instructions received. Though this percentage doesn't seem to be very high it is an alarming factor since it reveals the number of clients who leave the facility without sufficient knowledge about the correct application of their treatment or

medicine. This is in so far a matter of concern, as incorrect applied drugs can harm the client and are a danger to her/his health. Again clients with higher education (secondary school and higher) showed significant higher levels of satisfaction with the explanations of the chosen treatment than clients with lower education (Mean: 3.21 versus 2.92, Mann-Whitney-U = 18893, $p = <0.001$).

Figure 20: Clarification of health problem

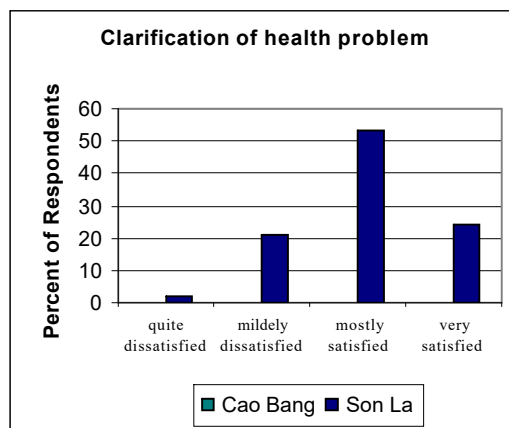
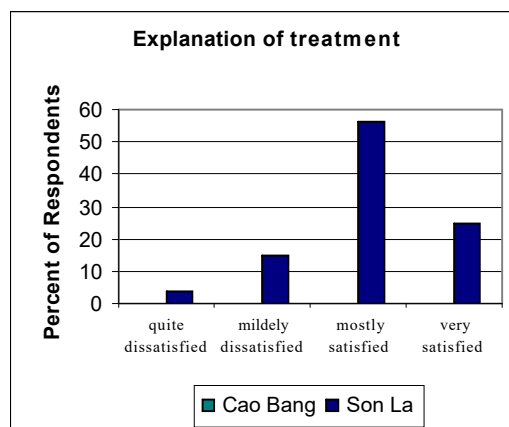


Figure 21: Explanation of chosen treatment

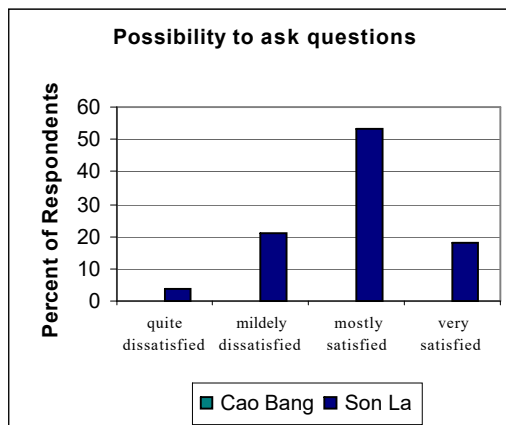


Possibility to ask questions (asked in Son La only)

The majority of 71% felt that they were given the chance to request more information about their condition or illness. 25% hadn't the impression that they got sufficient possibility to clarify all their doubts and an additional 4% of clients stated that they had no questions at all. The interaction observation revealed that the staff mostly responds to questions a client brings up, but they usually don't encourage them to ask further. So the

main problem seems to be that some clients need to be reassured because otherwise they do not dare to ask.

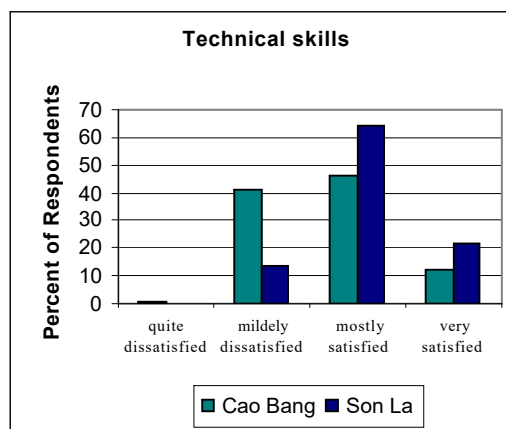
Figure 22: Possibility to ask questions



Technical skill of health care professional

58% of the respondents in Cao Bang valued the technical skills as satisfactory whereas 42% were indifferent or dissatisfied. Clients in Son La presented themselves much more satisfied with this aspect; 86% stated to be very or mostly satisfied and only 14% remained indifferent or mildly dissatisfied. Since presumably the staff's expertise doesn't differ substantially in the two provinces it remains unclear what causes this big difference in the clients' perception.

Figure 23: Technical skills of staff



In the qualitative interviews the technical skills of hospital staff were mostly estimated as higher than that of communal health station staff. In communal health stations the lack of a doctor was often associated with the perception of a lack of technical expertise. Clients complained as well about a lack of diagnostical skills on all levels and emphasized that the staff are usually only capable of diagnosing and handling common diseases. 43 clients mentioned as an additional remark in the questionnaire that they wished the knowledge of the staff would generally be upgraded and 15 persons suggested that staff should improve their examination techniques.

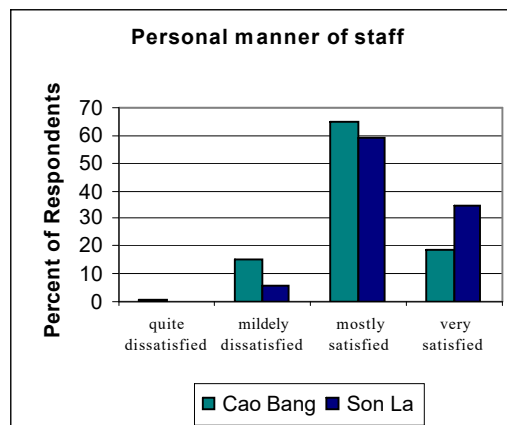
Attitude and behavior of health care staff

The way a patient is treated by the provider can considerably influence his overall satisfaction and his continued use of the services. Therefore it is a pleasant finding that the staff’s attitude towards the client got the best rating of all items. 84% of the clients in Cao Bang and 94% in Son La were mostly or very satisfied with the friendliness and courtesy of the staff.

Duong found the same very high level of

appreciation of health staff in his study about client perceived quality of maternal services in rural Vietnam and explained the highly positive perception with the fact that personnel at commune health stations is often recruited locally and therefore familiar to the residents [Duong 2004].

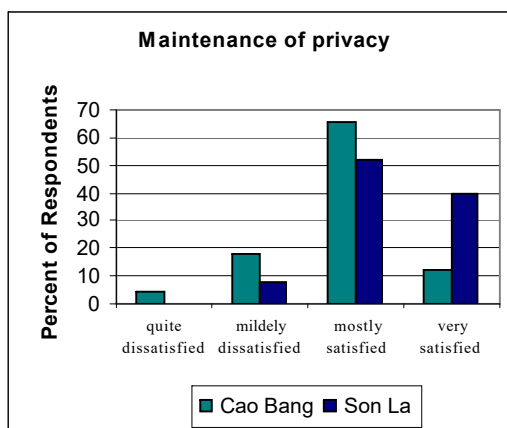
Figure 24: Personal manner of staff



Maintenance of privacy

Although we observed during field visits to some communal health stations that consultations mostly take place with other clients present in the same room, 78% of respondents in Cao Bang and 92% in Son La stated to be mostly or very satisfied with the maintenance of their privacy. 22% of respondents in Cao Bang felt indifferent or dissatisfied and only a proportion of 8% in Son La felt that their privacy wasn’t properly respected. The Situation Analysis of public

Figure 25: Maintenance of privacy

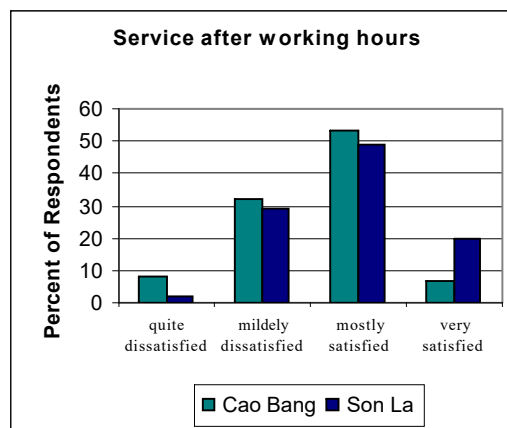


sector RH services in Vietnam1999 found the same high perception of respect for privacy - despite the fact that observers reported substantial privacy problems - and concludes that “*either clients are not sensitive to the issue or their answers contain a substantial courtesy bias*” [Ministry of Health/UNFPA 1999, p.53]. But it is also possible that a lot of respondents didn’t fully understand what was meant by the term of privacy or that the cultural concept of privacy in Vietnam differs profoundly from the European perception of it.

Availability of service on weekends, at night or after opening hours

40% of the clients in Cao Bang and 31% in Son La felt indifferent or dissatisfied about the operating hours of health facilities. In some of the qualitative interviews respondents demanded that communal health stations should have a reliable standby-duty for emergency cases at night times (n=5). Some clients in Son La emphasized that even during working hours staff isn't always present (n=7) and some complained especially about the fact that they cannot receive drugs from the facility after working hours (n=3).

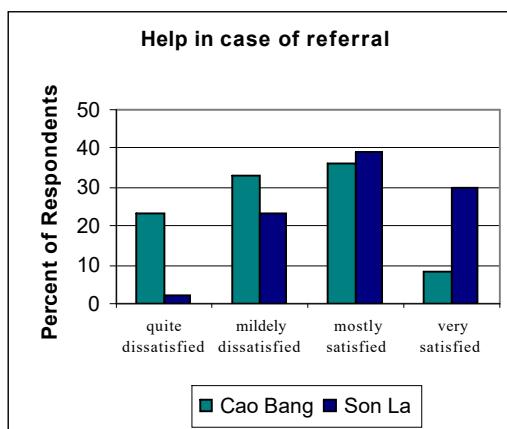
Figure 26: Service after working hours



Availability of help in case of referral

Opinions about help offered by the health facility in case of referral were not very favorable. 33% of respondents in Cao Bang stated to be indifferent or mildly dissatisfied and 23% to be quite dissatisfied. In Son La once again clients were more satisfied but even here 25% of clients were indifferent or dissatisfied with the referral system. In the qualitative interviews clients expressed that they have a feeling of abandonment when they are in need of referral and do not know

Figure 27: Help in case of referral



where to turn to and that they don't get sufficient advice. Particularly the transportation to the referral level was often perceived as problem and clients expressed their wish to get assistance with the transport especially in emergency cases.

4.1.3.1 Score of satisfaction with specific aspects of health service

Like with the overall scores of satisfaction, also in this case an aggregation procedure to calculate summary scores of satisfaction with specific aspects was used. Worst estimations to the questions of satisfaction with specific aspects of health services were coded with 1; best estimations were coded with 4. From the sum of coded estimations a summary score results.

Possible ranges in Cao Bang and Son La are different due to different numbers of included variables and not directly comparable. The possible range of satisfaction for Cao Bang lies between 12 (very dissatisfied) and 48 (very satisfied) with the border between satisfaction and dissatisfaction at a point of 30. Scores in Son La can range between 15 (very dissatisfied) and 60 (very satisfied) with the exact middle at 37,5 points.

The summary scores for satisfaction with specific aspects of health services show a picture which is a little bit less optimistic than the summary scores for overall satisfaction. 31% of respondents in Cao Bang show a score below 30 points and 14% of respondents in Son La have a summary score below 37,5.

Table 6: Summary score of satisfaction with specific aspects (Cao Bang & Son La)

	Cao Bang	Son La
	Possible range 12 (very unsatisfied) to 48 (most satisfied)	Possible range 15 (very unsatisfied) to 60 (most satisfied)
N	491	453
Mean	32	44
Median	31	44
Minimum	18	21
Maximum	46	60
Variance	23.648	40.981

Figure 28: Score of satisfaction with specific aspects (Cao Bang)

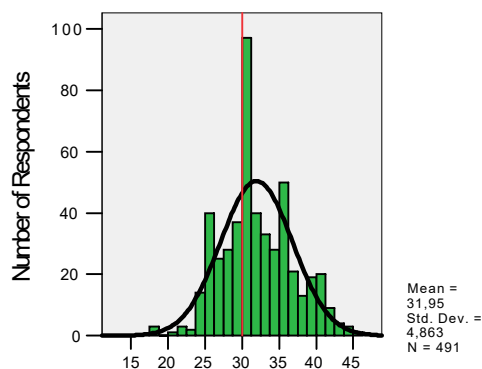
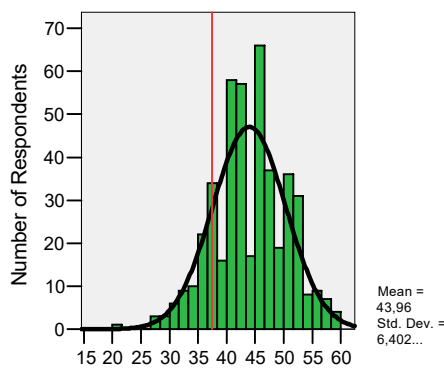


Figure 29: Score of satisfaction with specific aspects (Son La)



4.1.3.2 Score of satisfaction with specific aspects in different kinds of facilities

Like in the summary scores of overall satisfaction the sample, stratified into different kinds of facilities, shows once again higher levels of satisfaction in hospitals²⁴ than in commune health stations, which suggests that also specific aspects of health care are better delivered in hospitals than on commune level and not only the more vague overall perception of quality is higher.

Table 7: Score of satisfaction with specific aspects in different kinds of health facilities (Cao Bang)

Possible range: 12 (very dissatisfied) to 48 (most satisfied)

Cao Bang	Commune Health Station	Hospital
N	384	104
Mean	31	35
Median	31	35
Minimum	18	25
Maximum	44	46
Variance	20.871	18.746

Table 8: Score of satisfaction with specific aspects in different kinds of health facilities (Son La)

Possible range: 15 (very dissatisfied) to 60 (most satisfied)

Son La	Commune Health Station	Hospital
N	368	80
Mean	44	45
Median	44	45
Minimum	27	21
Maximum	60	58
Variance	37.170	48.197

The Mann-Whitney-U Test was employed to verify differences in clients' satisfaction with specific aspects between CHS and hospitals. No significant differences in clients' satisfaction were found concerning the aspects: waiting time, clarification of health problem, explanation of treatment, possibility to ask questions, personal manner of staff and maintenance of privacy. The quality of these aspects doesn't differ in clients' perception in CHS and hospitals.

All other aspects were rated as better delivered in hospitals. The observed differences in perception are statistically highly significant, as shown in the table below.

²⁴ The strata "hospital" includes provincial, district and traditional hospitals

Table 9: Differences in satisfaction with specific aspects of service in CHS and hospitals

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)																																																																																																																																																							
Accessibility*	Hospital	197	3.14	0.631	57401.5	<0.001																																																																																																																																																							
	CHS	752	2.85	0.698			Equipment*	Hospital	197	2.62	0.641	49260	<0.001	CHS	752	2.20	0.548	Convenience*	Hospital	197	2.61	0.642	52833.5	<0.001	CHS	752	2.24	0.645	Cleanness*	Hospital	197	2.56	0.732	63230.5	<0.001	CHS	752	2.37	0.770	Waiting Time	Hospital	197	3.06	0.664	74044.5	0.993	CHS	752	3.06	0.643	Time spent with physician*	Hospital	197	3.14	0.586	67084.5	0.019	CHS	752	3.01	0.652	Explanation of what was done*	Hospital	197	2.99	0.681	64060.5	0.001	CHS	752	2.82	0.669	Clarification of health problem	Hospital	80	3.13	0.769	12894.5	0.055	CHS	368	2.96	0.705	Explanation of treatment	Hospital	80	3.14	0.725	13298	0.129	CHS	368	3.00	0.729	Possibility to ask questions	Hospital	78	2.91	0.706	13440.5	0.716	CHS	353	2.87	0.755	Technical skills*	Hospital	197	3.06	0.594	59838	<0.001	CHS	752	2.81	0.692	Personal manner	Hospital	197	3.22	0.629	68547	0.059	CHS	752	3.13	0.592	Maintenance of privacy	Hospital	187	3.15	0.621	66440	0.184	CHS	752	3.06	0.694	Service at weekends/night*	Hospital	197	2.98	0.654	57823	<0.001	CHS	752	2.66	0.763	Help in case of referral*	Hospital	197	3.20	0.726	48354	<0.001	CHS
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* Results are statistically significant at the 0.05 level

4.1.4 Satisfaction with drug supply²⁵

Since it can be assumed that a reliable provision of drugs is a very important determinant of utilization of health facilities, the third section of the questionnaire investigates the satisfaction with the drug supply.

Nearly half of the survey respondents (45% in Cao Bang and 49% in Son La) felt dissatisfied with the prescription and availability of drugs in public health facilities. Satisfaction with the drug supply was much higher in hospitals than in CHS (78% versus 46%, Pearson $\chi^2 = 64.777$, $df = 1$, $p = <0.001$) On the communal level the absence of drugs for specific diseases (like diabetes, heart diseases and high blood pressure) was often criticized and clients emphasized that usually only basic drugs are available.

22% of respondents in Cao Bang and 27% in Son La tried to solve their health problems with self medication²⁶ during the last three months. This proportion is consistent with a study of Okumura on drug utilization in rural Vietnam in 2002 who found a proportion of self medication of 29.8% [Okumura 2002, p.1881]. But it has to be kept in mind, that only clients coming to the health facilities were asked and that all patients relying entirely on self medication weren't included in the survey at all, so that the percentage of self medication in the entire population might be much higher.

Main reasons given for self medication were that the health facility ran out of drugs (n=66) or that the (specifically) needed drug wasn't available at the facility (n=44). Further reasons for self medication which were frequently named are, that the client didn't receive enough drugs in the facility (n=32), that the disease wasn't serious and the client knew how to treat it by herself/himself (n=26) and that the private pharmacy was nearer than the next health facility and more convenient to reach (n=23).

(Further reasons given for self medication see Table 25; p. 107).

The quality of drugs received in the health facility doesn't seem to be a serious cause of concern for the clients participating in this survey. 86% of respondents in Cao Bang and 90% in Son La answered that the quality was as expected. Nevertheless satisfaction with the quality of drugs was perceived as better in hospitals than in CHS (92% of satisfied respondents in hospitals versus 87% in CHS, Pearson $\chi^2 = 4.047$, $df = 1$, $p = 0.044$).

For 12% of respondents the quality differed from expectations. Main reasons for dissatisfaction given were that the available variety of drugs is too small (n=45), that the drug received in the health facility didn't help (n=16), that only basic drugs (and no "high quality drugs") are available

²⁵ Percentages are summarized in Table 24, p. 106

²⁶ Self medication means the purchase of drugs from a private pharmacy or drug outlet without medical consultation

(n=25) and that the client didn't get enough drugs (n=13), which is actually not a matter of quality (additional reasons see Table 26; p. 107).

4.1.5 Supply of information education communication material

Though the staff of 46% of the facilities in Cao Bang and 41% in Son La stated to have IEC material for patients to take home, 66% of the clients didn't receive any printed material, neither to read at the facility nor to take home.

21% of the clients stated that they got some material to read at the facility and only 13% got printed information material to take home.

Subjects of the received materials were mostly: HIV/AIDS prevention, Reproductive Health, Child health, Family Planning, and Malaria prevention (further subjects see Table 27; p. 108).

4.1.6 Suggestions for areas of service improvement from clients

In the last open question of the client satisfaction questionnaire the clients were asked for their remarks and suggestions.

In Cao Bang the clients were asked if they had any additional remarks concerning the health services. The respond rate to this question was with 43% off the clients relatively low, 57% of respondents simply answered they had no additional remarks. Learning from this result the question was differently verbalized in Son La. Instead clients were asked to give one suggestion for the improvement of health services which they regard as most important for themselves. This change led to a substantially better respond rate. In Son La only 26% of the respondents answered that they had no suggestions.

The answers showed once again that the drug supply is of major concern for the clients, with 234 clients stating that the facilities should have more drugs, 38 clients suggesting that a bigger variety of drugs should be made available to clients and 34 clients complaining that the drug supply from the health insurance program isn't reliable (With 34 the number of people complaining about the unreliability of the supply of free-of-charge-drugs for people with an insurance card is quite high and could indicate that clients, who are eligible for free health care, do not always really get the benefits they are entitled to).

193 respondents said that in their opinion more equipment would lead to a better service. The state of medical expertise was perceived as problematic as well, 43 respondents suggested that the knowledge of staff should be upgraded and 37 said that the facility needs a doctor to improve services.

Frequently named infrastructural suggestions were to provide a reliable water source for the facility (n=35) and to add more rooms to the building (n=33) because the health facility was perceived as too small to offer good services (for further details see Table 28, p. 108, 109).

4.1.7 Interrelation of satisfaction and sex

Two thirds of the health facility users found in our sample were female and only 1/3 male. Obviously the facilities are better frequented by women than by men. This could suggest that the services offered at the facilities are better fine-tuned to the needs of female clients. But it could as well be due to the fact that men and women generally show a different health seeking behavior, with women seeking more often and in an earlier state of disease the help of a professional. Additionally it can be said that particularly women come as well for services concerning their children's health and that women are often the responsible part for Reproductive Health issues and attend health facilities for information and family planning services. Thus the discovery that the facilities are obviously better frequented by women isn't a really surprising finding.

Female respondents showed in 4 of the 7 questions to the general satisfaction a significant higher level of satisfaction, as can be seen in the table below.

Concerning the satisfaction with specific aspects of health care delivery however, female respondents stated only a higher satisfaction with the possibilities of help at night and at weekends (mean of female satisfaction: 2.77 versus mean of male satisfaction: 2.65, $p = 0.039$). In all other questions on specific aspects of health care no significant differences in satisfaction between male and female respondents were discovered (see Table 43, p.117).

It is certainly easier to criticize specific aspects of service (e.g. waiting time) without having the feeling to answer in an impolite way than to utter dissatisfaction with the whole service in general. Hence the fact that women's level of satisfaction didn't differ from that of men in the specific aspects of health care delivery, suggests that their more favorable answers to the questions on general satisfaction might be solely caused by a greater female tendency to give polite and socially desired answers, and do not really reflect a higher satisfaction.

Therefore from the gathered data no inequality in access to health services between male and female clients can be derived (based on the assumption that satisfaction is an indicator for adequate provision with health services).

Table 10: Interrelation of satisfaction and sex

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2- sided)
Did you get the service wanted*	Male	314	2.97	0.578	91839.5	0.002
	Female	647	3.09	0.523		
To what extent has service met needs*	Male	314	2.47	0.588	93936	0.031
	Female	647	2.55	0.551		
Would you recommend facility*	Male	314	3.38	0.504	94067	0.032
	Female	647	3.45	0.528		
Would you come back to facility*	Male	314	3.43	0.528	93427	0.020
	Female	647	3.51	0.530		
Service at weekends/night*	Male	314	2.65	0.773	93950	0.039
	Female	647	2.77	0.757		

*Results are statistically significant at the 0.05 level

4.2 Staff Self Assessment

To obtain an impression of the quality of the services delivered from a different perspective, staff of the health facilities was asked to assess their own capacity and their working conditions and environment. **All findings in this chapter are based upon staffs statements**, no facility inventory checklist was used to cross-check to what extent the answers of staff met the reality. It wasn't the purpose of this part of the study to give an exact picture of infrastructure conditions (which have been already done by other studies, like the Situation Analysis of public RH services 1999 and the Demographic and Health Survey 2002) but to find out, how staff perceive their working conditions and in which areas they might have problems to cope with their daily work effectively. Findings were structured around the following areas: support by management, supervision, training and development, counseling abilities, ability to address special RH related topics, information and education and infrastructure.

4.2.1 Profile of staff

The majority of responding staff in Cao Bang and Son La was between 30 and 39 years old (Mean: 37 years in Cao Bang and 38 years in Son La). 39 physicians, 64 nurses, 78 midwives and 24 nurse assistants were interviewed in Cao Bang. In Son La the sample consists of 15 physicians, 69 nurses, 45 midwives and 15 nurse assistants. Staff in Son La were asked for their years of experience in the health sector. The staff is very experienced with a mean of 15 years working in a health occupation. Roughly 80% of responding staff in both provinces was female and 20% male.

Table 11: Profile of interviewed staff

	Cao Bang		Son La	
	Male	Female	Male	Female
Age:				
20-29	5	34	2	17
30-39	15	72	10	53
40-49	11	59	18	38
50-59	4	5	4	2
Total	35 (17%)	170 (83%)	34 (24%)	110 (76%)
Occupation:				
Doctor	16	23	4	11
Nurse	15	49	26	43
Midwife	0	78	0	45
Nurse assistant	4	20	4	11
Years experience:	Not asked	Not asked	Mean: 16	Mean: 14

4.2.2 Support from management

It can be assumed that only staff who are well supported and motivated by their management will perform in a qualitative good way. Consequently it was of interest to have a look into the staff's perception of this aspect. Staff's stated satisfaction with support and performance of the management turned out to be extremely high in both provinces. Over 90% of respondents stated that the management is respectful to staff and encourages them to make suggestions to improve the services. Nearly all respondents answered that their responsibilities are clearly delineated and that their work shifts are well organized. About 90% of all respondents felt motivated by their management by recognition of well done work and constructive feedback. And the vast majority stated to have a job description and to be paid on time (summarized percentages see Table 29, p. 110).

4.2.3 Supervision

Supervision is a consultation concept used to assure and improve the quality of professional performance. It has the goal to strengthen professional competence and autonomy, optimize job-satisfaction and to increase the effectiveness of services performed [Schwarz 2007, p. 122]. Supervision is an excellent opportunity to work with the staff to establish goals, monitor performance and identify and correct problems. It is a good tool to improve the quality of services particularly when not mainly perceived as control. 54% of questioned staff in Cao Bang and 70% in Son La answered that they are supervised regularly.

Cao Bang:

The districts of Cao Bang seem to be very differently provided with supervision. In some districts (Ha Quang, Thong Nong and Tach An) none of the interviewed staff did ever receive supervision whereas others particularly Cao Bang Town are obviously well frequented by supervisors from different organizations and institutions. Most often the *Preventive Medical Check up Center*, the *Health Office* and the *Department of Health* were mentioned as supervising authorities. *ADRA* as an NGO was mentioned in 3 of the districts. None of all organizations, governmental institutions or NGO's seem to cover the whole province in a systematical way (further details see Table 30; p. 110).

The majority of supervised staff answered that they had received their last supervision visit within the last two month, indicating regular supervision visits.

92% of the supervised staff articulated that they received constructive feedback from their supervisors. But only 30% reported that the supervisor assessed their learning needs and a small proportion of 13% stated that the supervisor ensures training activities according to the shortcomings identified in the supervision visits.

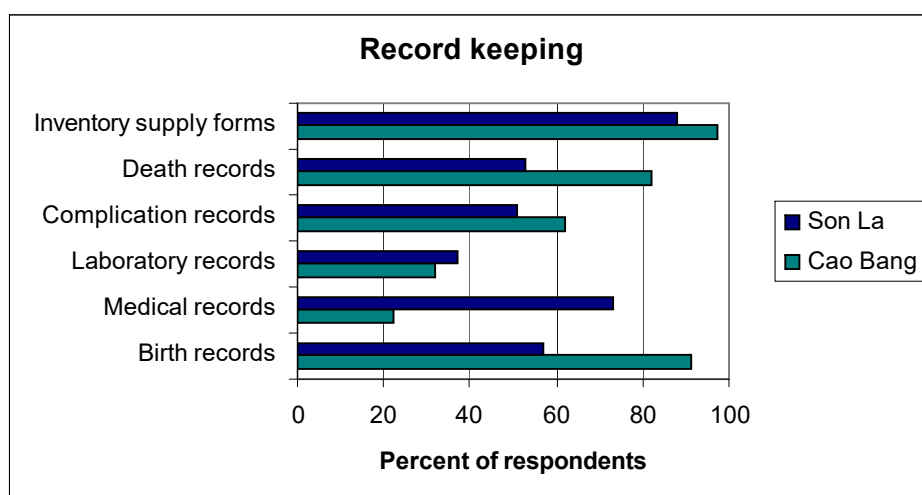
Son La:

In all districts supervision activities take place. Most often the *Preventive Medical Check up Center, District Health Center, Health Office* and the *Department of Health* were mentioned as supervising authorities. 89% of supervised staff in Son La reported to get constructive feedback from supervisors and 77% answered that the supervisor as well assessed their learning needs and ensured training activities according to the observed needs. The survey results show that indeed the surveyed staff of Son La was more likely to have received refresher training recently than the staff in Cao Bang (see Figure 36 on page 53).

4.2.4 Record keeping

Since medical records help health staff to manage the clients' care in a proper way, they are an essential component of good quality services. This section aims to inquire into staff's ability and motivation to handle records properly.

Figure 30: Percent of respondents who considered their record keeping system as properly filled in



88% of staff in Son La and 97% in Cao Bang estimated their inventory supply forms as well kept. Death records were reported to be orderly kept by 82 % of the responding staff in Cao Bang and 53% in Son La. 91% of staff in Cao Bang and 57% in Son La estimated the birth records kept by them as properly filled in. But 68% of responding staff in Cao Bang and 63% in Son La stated that laboratory records are not properly filled in and reviewed. A reason might be that commune health centers usually have no laboratory and therefore seldom have to deal with laboratory records so that this number simply indicates the absence of records for laboratory results.

Problems seem to occur with medical records in Cao Bang where only 22% of the responding staff assessed these records as properly filled in and regularly reviewed. In this context it doesn't seem consistent on the other hand that 62% of interviewed staff in Cao Bang judged their

complication records as well kept. Since the complication record is part of the medical record keeping system, this gap cannot be explained by the gathered information.

Very different to Cao Bang 73% of interviewed staff in Son La stated that their medical record keeping system is sufficient and properly kept. Complication records were judged as properly done by half of the interviewed staff (summarized percentages see Table 35, p. 113).

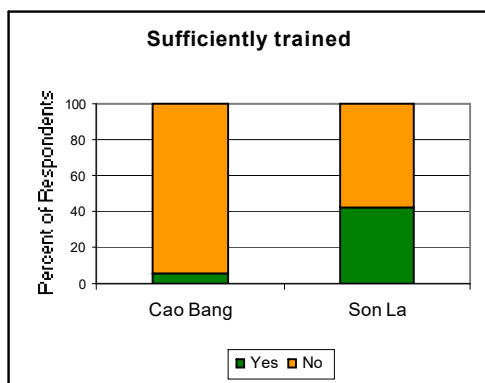
4.2.5 Training and development

In any organization, staff members will be less able to perform adequately when they lack the right skills and knowledge. Adequate pre- and in- service training is essential to expect health workers to deliver care of high quality. Therefore this section of the questionnaire aims to inquire into the confidence of the staff in their own professional abilities.

The responding staff members estimate their own abilities to provide services of appropriate quality as very low. 94% of respondents in Cao Bang and 58 % in Son La answered that they do not feel sufficiently trained to provide all services within their responsibility. In the different occupations nurses are the group feeling best prepared to provide all services. 31% of nurses and 23% of nurse assistants stated to feel well prepared, whereas only 14% of midwives and 13% of physicians said so (Pearson $\chi^2 = 13.661$, df = 3, p = 0.003).

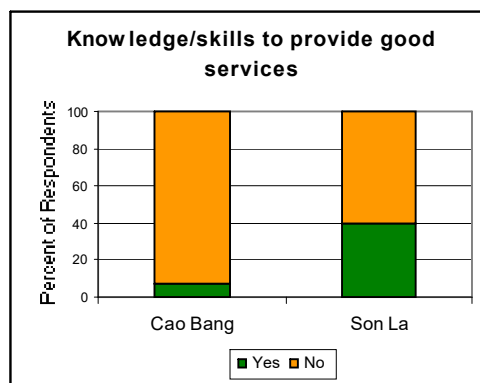
93% of responding staff in Cao Bang and 60 % in Son La don't think that their knowledge and skills are well enough developed to provide services of good quality.

Figure 31: Percent of respondents who feel sufficiently trained to provide all services within their responsibility



(6% in Cao Bang versus 42% in Son La. Pearson $\chi^2 = 65.684$, df = 1, p = <0.001)

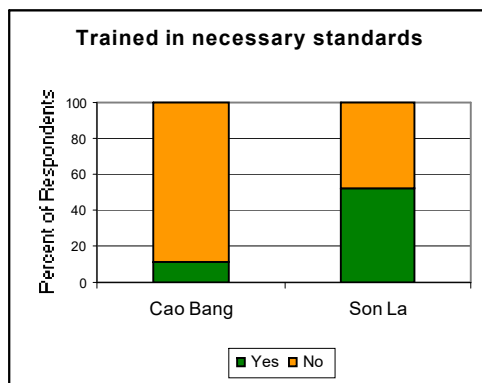
Figure 32: Percent of respondents who state to have all skills/knowledge to provide good services



(7% in Cao Bang versus 40% in Son La. Pearson $\chi^2 = 53.439$, df = 1, p = <0.001)

About half of the interviewed staff in Son La doesn't feel well enough trained in all necessary standards and procedures, including those for infection prevention, to practice them in a qualitative good way. In Cao Bang the proportion is with 89 % of respondents even higher.

Figure 33: Percent of respondents who are trained in all necessary standards and feel well prepared to practice them

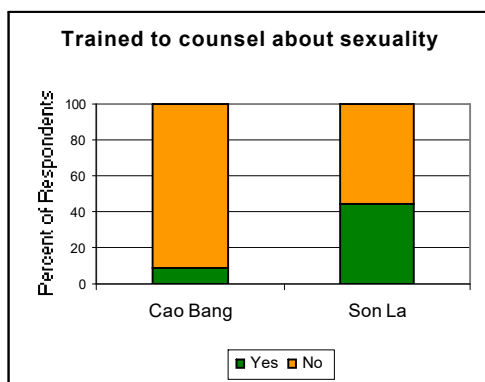


11% in Cao Bang versus 52% in Son La.
 Pearson $\chi^2 = 72.070$, $df = 1$, $p < 0.001$)

91% of respondents in Cao Bang and 56 % in Son La stated that they have never been trained in counseling clients about sexuality, even the 123 interviewed midwives, who have to deal with topics related to sexuality in their daily work, didn't estimate their professional training concerning this topic much better than the rest of the respondents. Staff above the average age of 37 years was more likely (29%) to be trained in counseling clients about sexuality than younger staff below the average age (17%); (Pearson $\chi^2 = 6.536$, $df = 1$, $p = 0.011$).

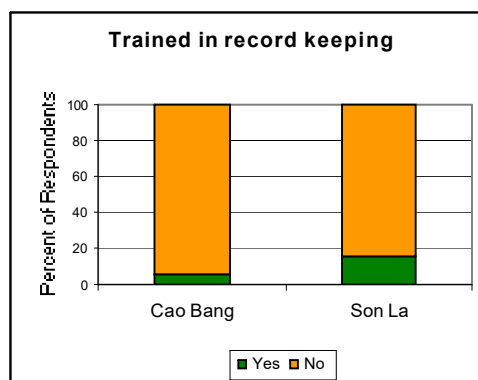
More than 80% of respondents in both districts answered that they have never had training in record keeping; indicating that documentation is mostly learned by simply copying colleagues.

Figure 34: Percent of respondents who have been trained to counsel about sexuality



(9% in Cao Bang versus 44% in Son La.
 Pearson $\chi^2 = 58.036$, $df = 1$, $p < 0.001$)

Figure 35: Percent of respondents who have been trained in record keeping



(6% in Cao Bang versus 16% in Son La.
 Pearson $\chi^2 = 8.480$, $df = 1$, $p = 0.004$)

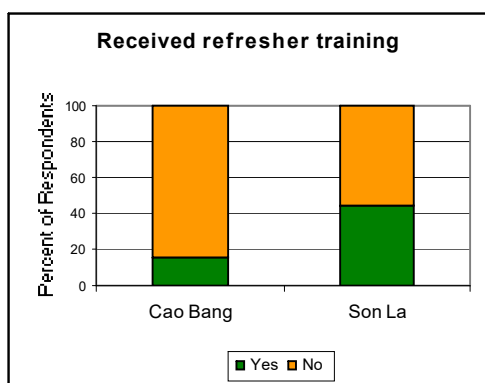
Only 16% of the respondents in Cao Bang have received a refresher training recently. Frequently named topics of training courses in Cao Bang were: HIV/AIDS prevention, safe motherhood and supervisory skills (further topics see Table 33; p. 112).

Anyhow 45% of the interviewed staff in Son La stated that they had received a refresher training recently. Frequently named topics of received training in Son La were: Vaccination, Malaria and Tuberculosis prevention (further topics see Table 34; p. 112).

The probability to have received refresher training was differently distributed in the occupations. 44% of the physicians and 32% of nurses stated to have received training recently. But only 22% of midwives and 13% of nurse assistants got a refresher training (Pearson $\chi^2 = 14.751$, $df = 3$, $p = 0.002$).

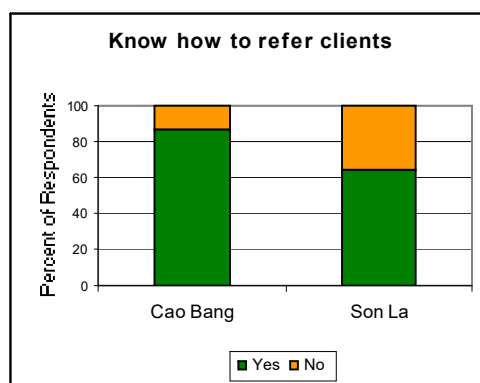
87% of the responding staff members in Cao Bang and 65% in Son La answered that they know how to refer clients for health services outside their area of expertise. This is not at all consistent with the client's perception of the referral system in Cao Bang, where clients were highly dissatisfied with the aspect of help and advice in case of referral. This mismatch in perception indicates that staff is unaware of clients' problems with the referral system.

Figure 36: Percent of respondents who received refresher training recently



(16% in Cao Bang versus 45% in Son La. Pearson $\chi^2 = 35.324$, $df = 1$, $p = <0.001$)

Figure 37: Percent of respondents who stated to know how to refer clients for health services outside the own area of experience



(87% in Cao Bang versus 65% in Son La. Pearson $\chi^2 = 24.129$, $df = 1$, $p = <0.001$)

The answers of this section suggest that most of the staff in both provinces feel unsure and ill prepared to deal with their daily tasks. This pervades all occupations, including physicians. No differences in state of training between female and male staff were detected, but it is striking that Son La has in nearly all aspects a larger proportion (statistically highly significant) of staff feeling well enough enabled for their work than Cao Bang (see Table 48, p.122). This finding in combination with a significantly higher likelihood to have received a refresher training recently in Son La, could indicate a better developed supervision and training system in Son La.

4.2.5.1 Counseling skills

Good counseling and interpersonal skills are important because they help staff to focus in a competent way on client’s needs and concerns. This can lead to a better provider client interaction and an increased client’s satisfaction and ultimately a better health outcome.

Corresponding to the generally low self estimation on performance, the responding staff judged their counseling abilities as insufficient for many specific topics and target groups. But like in the preceding point a statistically significant higher proportion of staff in Son La feels well enough enabled to counsel different groups of clients than in Cao Bang (see Table 48, p.122).

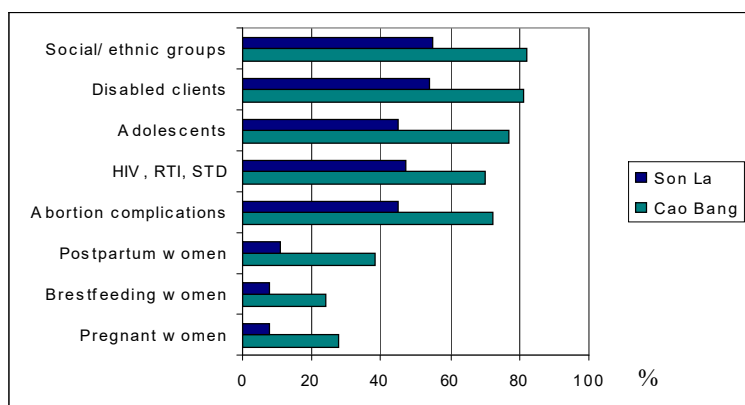
Cao Bang:

The majority of respondents felt confident about counseling pregnant women (72%), breastfeeding women (76%) and postpartum women (62%), but over 70% of respondents stated to feel ill prepared to counsel women with complication after abortion, clients with HIV, RTI and STD, adolescents, disabled patients and patients from different social and ethnic groups. This uncertainty pervades all occupations. Even the physicians who are presumably the best trained group didn’t assess their counseling abilities much higher than the average (Table 51, p.125).

Son La:

About 90% of the responding staff in Son La stated to feel well prepared to counsel pregnant women, breastfeeding women and postpartum women. Slightly more than half of the staff stated to have all the knowledge to counsel women with complications after abortion, adolescents and clients who come for HIV, RTI and STI services. And slightly less than half of the staff answered to be well enough prepared to counsel disabled patients and members from different social and ethnic groups. Summarizing it can be said that half of the responding staff in Son La doesn’t judge their counseling skills as good enough to handle all target groups belonging to their daily work (summarized percentages see Table 32, p. 111).

Figure 38: Percent of respondents who feel ill prepared to counsel or treat clients from the listed target groups



4.2.5.2 Ability to address RTI and STD

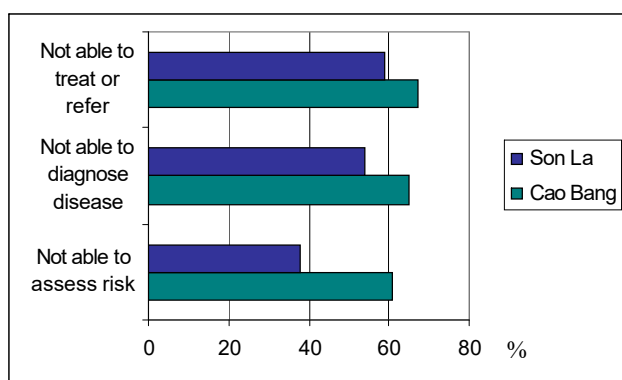
Cao Bang:

More than 60% of the staff in Cao Bang stated that they have a lack of knowledge and skills to address diseases like RTI and STD. 67% answered that they don't know how to treat or refer clients suffering from diseases like that. This statement is consistent with the client's perception that health staff usually only has got the ability to handle common diseases and cannot give sufficient advice in case of referral.

Son La:

38% of staff in Son La didn't judge their knowledge as good enough to assess the risk of RTI and STD and more than half of them (54%) didn't feel able to diagnose these diseases correctly. 59% of responding staff stated their inability to treat patients with these diseases or refer them to a facility where they can get specialized help (summarized percentages see Table 36, p. 113).

Figure 39: Percent of respondents who didn't know how to address RTI and STD



The members of the different occupational groups estimated their ability to handle diseases like RTI and STD quite differently. Highest confidence in their own ability was stated by physicians and midwives, whereas nurse assistants estimated their abilities to offer adequate care very low, as shown in the table below.

Table 12: Difference in ability to address RTI and STD between occupations

RTI and STD	Doctor	Nurse	Midwife	Nurse assistant	Pearson χ^2	df	p-value (2-sided)
Able to assess risk*	57%	45%	55%	28%	10.514	3	0.015
Able to diagnose disease*	54%	34%	46%	18%	16.328	3	0.001
Able to treat or refer*	52%	32%	42%	13%	17.682	3	0.001

* Results are statistically significant at the 0.05 level

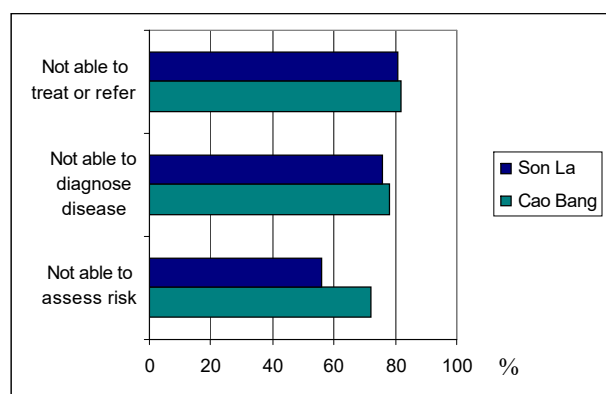
4.2.5.3 Ability to address HIV/AIDS

The capacity to handle clients with HIV is low. 72% of the interviewed staff in Cao Bang and 56% in Son La feel unable to assess the risk of a client and about 80% of the staff in both provinces stated inability to diagnose, treat or refer patients with HIV (for summarized percentages see Table 37, p. 113).

This result suggests that a client suffering from HIV isn't likely to get the right diagnosis or even if rightly diagnosed will mostly not get access to sufficient treatment.

In an area with increasingly spreading HIV infections, where all health service providers should be able to contribute to HIV/AIDS prevention and treatment this is an alarming result.

Figure 40: Percent of respondents who didn't know how to address HIV



Physicians were the staff members who felt best prepared to deliver adequate care and treatment to patients with HIV. But even in this presumably best educated and trained group it was a total of only 33% who stated to be able to treat clients suffering from HIV correctly. Midwives are medical experts for all RH questions and are very likely to be approached from women seeking help and advice if infected with HIV. Hence the fact, that they estimated their ability to address this disease very low shows an urgent need for action.

Table 13: Difference in ability to address HIV between the occupations

HIV	Doctor	Nurse	Midwife	Nurse assistant	Pearson χ^2	df	p-value (2-sided)
Able to assess risk*	57%	34%	27%	28%	16.477	3	0.001
Able to diagnose disease*	44%	20%	18%	18%	17.463	3	0.001
Able to treat or refer*	33%	17%	15%	13%	10.422	3	0.015

*Results are statistically significant at the 0.05 level

It must be added that midwives and nurses are not supposed to diagnose and treat HIV/AIDS. But they should at least be able to assess the risk of a patient, know about typical symptoms and be able to take suitable actions in case of a suspicion, e.g. give sound behavioral advice, guide the client and refer her/him to the HIV center of the district.

Hospital staff felt generally better prepared to address HIV than staff in commune health stations, as shown in the table below.

Table 14: Difference in self assessed knowledge to address patients with HIV between staff from CHS and hospitals

HIV	CHS	Hospital	Pearson χ^2	df	p-value (2-sided)
Able to assess risk*	30%	45%	6.046	1	0.014
Able to diagnose disease*	15%	41%	24.599	1	<0.001
Able to treat or refer*	14%	30%	11.782	1	<0.001

*Results are statistically significant at the 0.05 level

4.2.6 Information and education

Staff stated in 47% of the interviews in Cao Bang and in a much higher proportion of 81% in Son La, that client information materials are available for clients to look at in the facility. In 46% of the facilities in Cao Bang and in 41% in Son La education materials for the clients to take home were available. But only slightly more than 20% of the staff in both provinces answered that they have a kind of reordering system for IEC materials, indicating that most of the facilities are provided with materials more or less coincidentally.

The availability of job aids²⁷ turned out to be very different in both provinces as well. Whereas 74% of staff in Son La answered that relevant job aids are available, only 21% of the staff in Cao Bang stated to have these materials. But although the supply with job aids in Son La seems to be much better than in Cao Bang the staff didn't make much more use of it than in Cao Bang. The interaction observation revealed that only in 3% of the observed counseling talks in Cao Bang and in 15% in Son La job aids were actually used (for summarized percentages see Table 38, p. 113). This result suggests that the staff isn't familiar with the right use of job aids and in need of training on how to integrate these materials into their daily work.

²⁷ Job aids are tools that health workers can use to explain complex health topics to a client. They are available in the form of books or cards. On one side (which faces the health worker) they summarize all necessary information of a particular health topic or steps to be taken in the counseling procedure. On the other side (which is shown to the client) graphic depictions to the topic are mapped, to visualize the given information for the client. The job aid is intended to assist the counselor to give clear and complete instructions.

4.2.7 Infrastructure

According to staffs assessment infrastructure conditions especially in the commune health stations are still difficult. Of particular concern is the lack of a reliable supply with clean water²⁸ in 61% of the surveyed health facilities in Cao Bang and in 27% of the facilities in Son La. This situation causes hazardous hygienic conditions in the health facilities and was often reason for complaints by clients.

Likewise the issue of regular hand washing is problematic. Hand washing facilities were available in over 70% of the health stations or hospitals in both provinces but the vast majority hasn't got a hand washing facility in every examination room. Hospitals were more likely to have hand washing facilities in every room. In commune health stations often a hand washing facility is only located in the toilet room.

A reliable source of electricity is important in a health facility to provide sufficient lightening and of course for the use of certain kinds of equipment especially sterilizers. Fortunately the electricity supply doesn't seem to be a problem, with over 90% of the responding facilities stating to have a reliable source of electricity.

Yet, the availability of electricity does not necessarily mean, that sufficient lightening is available. Particularly commune health stations are among the 41% of facilities in Cao Bang, stating that they haven't sufficient lightening to do their work well. Staff in Son La rarely reports to have a problem with this aspect with only 6% complaining about insufficient lightening.

Possibilities for room temperature control turned out to be quite differently distributed in both provinces. In Cao Bang 80% of the facilities stated to have no possibility of temperature control by fan or air conditioning. Most of the facilities that are in possession of air-conditioning are hospitals. Only very few of the commune health stations have a source of ventilation which is also often a cause of complaints by clients. In Son La the staff reported much better conditions with only 10% of facilities having no possibility of temperature control by fan or air-conditioning (air-conditioning is - like in Cao Bang - rarely available and only in hospitals).

Another aspect of infrastructure is the size and number of rooms²⁹ in which patients can be treated. Obviously health staff in Cao Bang has a very different and much more sensitized perception of maintenance of privacy with their clients than the clients themselves. Keeping in mind that 78% of Cao Bang's clients were mostly or very satisfied with this aspect it is interesting to see that 81% of the staff emphasizes that they haven't enough space (or rooms) to maintain appropriate privacy with their clients. In Son La only 38% of the responding staff stated to have

²⁸ Some of the facilities visited relied on the collection of rain water. Even if tap water is available, shortages in water supply are common during the dry season.

²⁹ The average number of rooms in a CHS is 5.

too little space to maintain their client's privacy in an appropriate way. Since health facilities do not consist of more rooms in Son La this finding seems to indicate that staff in Son La and Cao Bang have different philosophies about this aspect.

An emergency transport was only available in 30% of facilities in Cao Bang and in 21% in Son La.

A telephone is important particularly in the remote areas to request help in emergency cases and to help clients in case of necessary referral. 62% of the facilities surveyed in Son La have a telephone³⁰. Higher levels were more likely to have a telephone. Nearly all hospitals had telephone services whereas only half of the commune health stations stated to have a telephone. 18% of the surveyed staff answered to have a private mobile phone which could be used in case of emergency. The low availability of mobile phones could be due to a limited coverage of the network or due to the fact that public staff cannot afford to have one (for summarized percentages see Table 39, p. 114).

4.2.8 Supplies and equipment

To deliver services of good quality the staff depends on a certain basic set of equipment and a reliable supply of expendable goods. Therefore this section aims to find out if staff feels well enough provided with all items necessary for their daily work.

27% of the interviewed staff in Cao Bang and 43% in Son La stated that in the last three months not all of the drugs and expendable supplies were available. This is consistent with the perception of the clients who very often complained about a lack of drugs in the facilities.

In 33% of the interviews in Cao Bang and 17% in Son La the staff answered that they had not enough supplies like gloves, needles and disinfection solution during the last three month. These supplies are essential for the staff to do their work in a hygienic and aseptic way, hence even small percentages of staff stating that they are not well enough supplied are a reason for serious concern, because it indicates that in these facilities staff endangers its own and client's health.

38% of the staff in Cao Bang and 60% in Son La stated that they hadn't all the needed equipment and the majority in both provinces answered that they hadn't enough furniture. This matches most clients' perception of poorly equipped and furnished health facilities.

According to the staff there seems to be no major problem with the stock keeping of drugs and contraceptives. 85% of the respondents in Cao Bang and 79% in Son La reported that all drugs and contraceptives stocked are within expiry date. The majority of 89% in Cao Bang and a

³⁰ In Cao Bang no investigations concerning the availability of telephones were made.

clearly smaller proportion of 68% in Son La said that the facility keeps an inventory to organize the reordering procedure of drugs.

The possibilities for disinfection and sterilization of instruments and tools, as well as the disposal of medical waste, are still a problem in a lot of rural health facilities. Only half of the respondents (51% in Cao Bang and 43% in Son La) stated to have disinfection solution available in every examination room and 44% of staff in Cao Bang answered that they haven't appropriate facilities to dispose of needles, sharps and other medical waste. 49% of the interviewed staff in Cao Bang and 34% in Son La emphasized to have no working sterilizer. This indicates that a lot of facilities operate under hazardous conditions (for summarized percentages see Table 40, p. 114).

4.2.9 Guidelines

Guidelines for specific clinical conditions and guidelines on quality issues aim to reduce inappropriate practice and improve the efficiency of care [Hoomans 2007, p.305; Grimshaw 1993, p.1317]. Hence it was of interest to know whether or not staff in the project provinces is supplied with relevant guidelines. The interviewers were asked to list all guidelines and reference books found in the facilities during visit.

A multitude of clinical guidelines on different topics, such as mother and child care, nutrition, primary health care, treatment of malaria or tuberculosis and others were found. These guidelines were supplied from different governmental and non governmental organizations. Most of the facilities had at least 4-5 guidelines or reference books, but each facility had a different set of guidelines and not one sample of guidelines was found to be available in all (or at least most) of the facilities.

No guidelines at all were found on quality issues.

4.3 Client-Provider Interaction Observation

The Client-Provider Interaction Observation was used as a third instrument to complement the assessment of the services.

The interaction between provider and client was observed during the survey using a checklist³¹. This checklist lists issues like applied professional knowledge and correctness of information given to the client, counseling skills and personal attitude of health staff (like eye-contact, friendliness and body language).

Clients and staff were asked for permission to observe the counseling talk. To avoid that observation was perceived as intrusiveness or violates privacy only counseling talks without physical examination were observed (an exception was made with examinations like blood pressure or pulse control).

The observed client provider interaction in Cao Bang and Son La provinces revealed, that the attitude of the staff towards the clients is mostly warm and friendly, confirming the statements of the clients. A large majority of observed staff in both provinces greets the clients respectfully, 71% in Cao Bang and 93% in Son La use a friendly tone of voice and an attentive body language. Roughly 80% listen to what the client says. When clients ask questions 86% of the staff in Cao Bang and 82% in Son La offered feedback and responded to the questions. 85% in Cao Bang and 97% in Son La use language and terms easily understood by the client and about 70% in both provinces gave full attention and eye contact to the client during the counseling talk.

The professional skills and reliability of information provided by the observed staff are of more concern. In RH consultations 68% of the staff in Cao Bang and 46% in Son La didn't ask clients about reproductive intentions. And though it is an important key factor that clients get the opportunity to state their preferred method and judge which method is appropriate for their social circumstances, about half of the staff in both provinces didn't involve the client into the decision about the method by discussing it with her.

In more than half of the observed cases the provider didn't revise a returning client's experiences with the currently used FP method and didn't elucidate the patients about the fact that there are as well other options to choose from.

Even more of concern is the observed fact that 56% of the professional staff in Cao Bang and 47% in Son La didn't pass on accurate information about the chosen method or treatment

³¹ This checklist follows in parts the "Checklist for Quick Investigations of Quality" developed by the Johns Hopkins Bloomberg School of Public Health [Rudy 2003, p.17]

indicating that a substantial part of the clients leave the facilities with too little or even wrong information.

Figure 41: Accurate information given by the provider

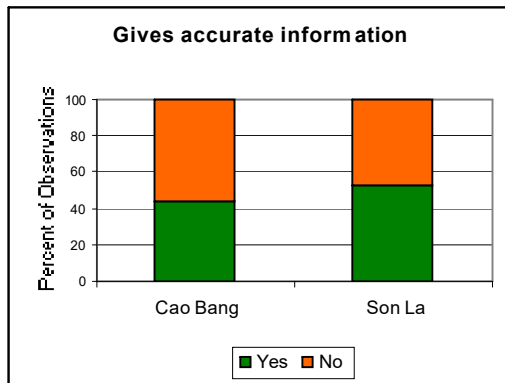
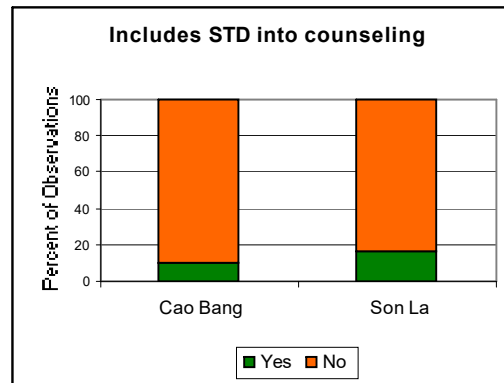


Figure 42: STD included into the counseling process



As mentioned above a lot of staff feels very unsure in counseling sexuality-related topics like STD so it is not a surprising finding, that 90% of the observed staff in Cao Bang and 84% in Son La didn't include any STD prevention advices into the counseling process.

Further the staff didn't seem to be familiar with applying rules of counseling processes in their daily work. Only 43% of the staff in Cao Bang and 52% in Son La reconfirmed that the addressed person really understood the given information. Merely 3% of the staff in Cao Bang and 15% in Son La used any job aids to guide the interaction and to help the client to understand complex information given in the consultation.

70% of the staff in Cao Bang and 57% in Son La didn't encourage the client to ask questions, which is an important point in counseling processes because a lot of patients feel shy or uncomfortable to ask and need to be reassured by the provider.

Figure 43: Job aids used during counseling process

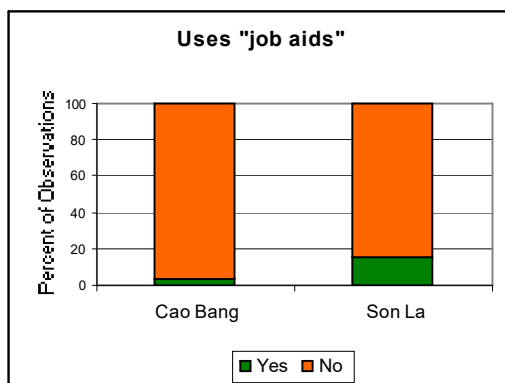
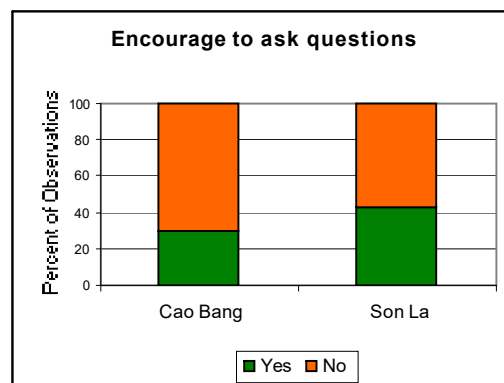


Figure 44: Clients encouraged to ask questions



4.4 Client Opinion Boxes and Opinion Books

Opinion boxes and books are tools used by public health facilities in both project provinces to evaluate clients' perception of received services. Opinion boxes and books are only available in hospitals. Communal health stations don't have opinion boxes or books.

During the survey the opinion boxes and opinion books were checked to find out whether they are used by clients. In every hospital the opinion box (there is only one in each hospital) and opinion books from three different wards were checked.

The opinion box is always located on an outside wall near the outpatients department.

The boxes in the visited facilities were marked but no further explanations to the goal of the box were given. In none of the hospitals paper and pencils were available near the boxes to write down an opinion. The opinion box aims at collecting the opinion of outpatients. The inpatients' opinions are collected in opinion books, which are located either directly in the client's room or in the staff's room.

The concept of an opinion box or book is to give the clients a possibility to express their opinions and their complaints in a protected and anonymous way. By learning something about the client's perception of the service the provider gets the possibility to address weaknesses in his performance and to improve it according to the needs expressed by his clients.

So far this concept does not seem to work in the district hospitals of Cao Bang and Son La province. The boxes and books are extremely rarely used by the clients (see Table 15 and 16 below).

Reasons might be that in some regions of Cao Bang and Son La illiteracy is still high and that the clients are not used to express opinions in a written way.

Gratitude for received help and the dependency of clients on the health services might also result in a reluctance to express criticism. It can be assumed that clients are more reluctant to express complaints while still on service site, because they fear negative consequences for their treatment.

However, during our field visit we experienced that some clients expressed their complaints quite frankly to us. When asked if they had written down their complaints in the opinion books as well, we found that none of the patients were aware of this possibility. Even if opinion books are available in all patients rooms not all the patients necessarily recognize this, or do understand what the books are for. Hospitals interested in their clients' feed back must promote the opinion boxes and books much more clearly to their clients.

The few critical opinions found in the boxes of Son La hospitals nevertheless revealed a greater likelihood to receive critical comments in the boxes than in the opinion books. Anonymity is more easily kept in putting a letter in a box, which is usually located outside the building than in a book inside the ward. In the opinion books, located in the patients' rooms, mainly letters of thanks were found and critical comments extremely seldom. The opinion books which are administered by the staff and kept in the staff's room are as good as never used.

Table 15: Client Opinion Boxes/Books (Cao Bang)

Cao Bang	Opinion Box available	Opinions received during last 12 month	Opinion Books available in all wards	Opinion Books available in all patient rooms	On an average received opinions/month
Cao Bang	yes	0	yes	no	0-1
Bao Lac	yes	0	yes	no	0
Bao Lam	yes	0	yes	no	1-2
Ha Quang	no	--	yes	no	? ³²
Thong Nong	yes	0	yes	yes	0
Tra Linh	yes	0	yes	yes	1
Trung Khan	yes	0	yes	yes	0
Nguyen Binh	yes	0	yes	yes	1-2
Hoa An	yes	0	yes	yes	?
Quang Uyen	yes	0	yes	yes	?
Phuc Hoa	yes	0	yes	yes	0-1
Ha Lang	yes	11	yes	yes	1
Tach An	yes	0	yes	yes	1

Table 16: Client Opinion Boxes/Books (Son La)

Son La	Opinion Box available	Opinions received during last 12 month	Opinion Books available in all wards	Opinion Books available in all patient rooms	On an average received opinions/month
Son La	yes	0	yes	yes	0
Mai Son	yes	0	yes	no (only in staffs room)	0
Yen Chau	yes	0	yes	no	0
Moc Chau (1)	yes	2	no	no	--
Moc Chau (2)	yes	3	yes	no (only in staffs room)	0-1
Bac Yen	yes	0	yes	yes	0
Phu Yen	yes	5	no	no	--
Muong La	yes	0	yes	yes	0-1
Thuan Chau	yes	0	yes	no	0
Quynh Nhai	yes	0	yes	yes	0
Song Ma	yes	2	yes	yes	2
Sop Cop	yes	3	in some	no (only in staffs room)	0-1

³² ? = Interviewers failed to report the average number of received opinions

5. Discussion

5.1 Methodological discussion

To get reliable data on a delicate topic like client's satisfaction is a very challenging task because it requires a lot of empathy and patience and at the same time the necessary professional distance to avoid influencing the clients in their responding behavior.

For this survey – to summarize shortly again the used methodology – clients and staff were interviewed using structured questionnaires with mainly closed questions. Only *users* of the public health facilities were included in the survey. Interviews took place inside the health facilities.

The interaction between health care provider and client was assessed by the interviewer with the help of a checklist. To assess the interaction, interviewers had to be present during the health consultation. Interviewers/observers were chosen from each district hospital. All of which had a medical background, but none of which had thitherto experience in data collection. Because of the dimension of the survey area interviewers were supervised during there data collecting activity only by some small random inspections. Some lessons learned result from the applied methodology.

It has been proved as doubtful whether non professional interviewers, even if trained, are capable to manage such a complex task as a client satisfaction survey in a reliable and comparable way. Besides, the experience of this survey showed that it is very difficult to supervise and control the interviewers sufficiently to avoid fraud. To ensure a better reliability and to prevent the inter-observer bias, it might be better to choose a smaller sample and select only few interviewers who are either professionals or have a real personal interest in the topic and don't do it mainly for the reason of generating income.

For the data collection itself, qualitative methods might be more suitable than a quantitative evaluation while it has to be kept in mind, that the qualitative methods usually do require more resources.

Because the questionnaires were designed for a quantitative data collection, and interviewers took down only short sentences to a few open questions, the information gained are frequently not detailed enough to allow comprehensive interpretation of clients' answers but rather show trends only. To give an example: clients demanded "high quality drugs", but from the information available on the returning questionnaire it cannot be explained what exactly they meant by this term. Hence, for some information, that was revealed as crucial by this survey (like the drug supply) a subsequent qualitative data collection could be advisable.

The qualitative interviews, conducted in the first preparation phase of the survey, often showed that clients, after initially stating satisfaction with everything, only in the course of discussion expressed discontent and criticism as well. This observation suggests the conclusion that clients are more likely to report about their dissatisfying experiences when they are brought more in a reporting and less in a responding role.

The clients' answers to the initial section of the questionnaire regarding their overall satisfaction, don't correlate too well with the following sections concerning specific topics. The overall satisfaction seems to be mostly too high for the level of satisfaction expressed with specific parts of the service. This fits the observation from the qualitative interviews, that clients only after a time of „warming-up“ express criticism and discontent. Therefore it seems to be more advisable to ask for the overall satisfaction at the end of the questionnaire, when the respondent has answered all questions to the specific topics of health care delivery and has had the time to fully make up her/his mind in the process of judging and answering.

Interviewers were told how important it is to separate the clients from the staff and any other persons while conducting the interviews. When visiting some commune health stations we experienced that the staff and other clients are mostly very interested in listening to the interviews. Hence it is sometimes not that easy to separate the respondent and requires a good deal of assertiveness. In the Vietnamese culture where courtesy is a very important virtue it cannot be ruled out that some of the interviewers didn't follow the instruction strictly. Some of the interviews might have been conducted with staff within earshot, which would have influenced the clients substantially in their answering manner. One possibility to solve problems like this is to collect client's opinions not in the health facility itself but to do a household survey (though it has to be kept in mind that this kind of survey is susceptible for recall-bias and selection-bias, so that where one problem is solved, another might arise).

A disadvantage of direct interaction observation is that in the presence of an observer a provider may be inclined to perform better. To avoid that the presence of the observer influences clients' and staff's behavior during the consultation too much, the observers were asked to sit in the background and not to ask any questions or interfere in any kind during the observation. They were supposed to simply observe the items specified on the checklist and to judge whether they were fulfilled. But it has to be kept in mind that a consultation with an observer present will always be artificial, and service and attitude may differ from the usual norm. A problem like this can be solved by using mystery-clients³³. But the use of mystery clients needs much more

³³ Mystery clients are used in studies and surveys. They are trained to act like clients and visit the facility in the assumed role of clients, to report afterwards on their experience [Boyce 2006].

resources, prearrangements and very skilled actors. It wasn't feasible to use this concept in the presented survey.

5.2 Discussion of findings from the client interviews

Patient's satisfaction was used in this study as one factor to measure quality of health care delivery. However, it must be kept in mind that the client's satisfaction with the services received will also be influenced by their expectations of service. The relatively high general satisfaction levels found in this study are in contrast to the observed often poor possibilities to deliver quality care particularly in commune health stations. This finding suggests that client's expectations particularly in remote and mountainous areas aren't very high and therefore easy to satisfy. An explanation might be that a lot of clients from these geographical difficult areas have no range of health facilities to choose from and therefore lack the possibility to compare and to develop a notion of what can be expected of a health facility. Most of the clients might only have the possibility to compare the current situation in health services with the situation in the past and since many improvements have taken place in the last years client's satisfaction and gratitude might particularly refer to these improvements.

To expect and demand services of higher quality, clients need a better understanding of what aspects belong to a good quality service and what they, as patients, are entitled to when visiting a public health facility. In this study most of the clients seem to define quality of health care mainly in terms of equipment and drug supply, since the majority of suggestions for quality improvement from clients refer to these two topics.

A substantial courtesy bias might have influenced the client's answers as well, and clients might not be as satisfied as they express themselves. It is well known that there is a tendency to overstate satisfaction with received health services. Therefore the negative responses, even if not the majority, may represent a significant number of dissatisfied patients who withhold criticism and reveal areas in need for improvement.

Moreover, during the survey only clients who visited a health facility were interviewed. In view of the very low utilization rate of rural facilities, they are not a true representative sample of the population. These clients are likely to be already more satisfied or have a better relation to the staff than others who aren't willing to make use of the services, and therefore the level of satisfaction measured from this sample is likely to be higher than the average level in the entire population of the two project provinces. A sample chosen in the health facilities excludes systematically all patients who are so dissatisfied with the services that they didn't even come to the health station and it would be interesting to investigate further into reasons for not using the

facilities at all. Some valuable information can be gained from the health facility samples but the findings must be interpreted with caution.

Despite the high general level of satisfaction stated by clients a lot of specific aspects were criticized and a clear pattern of aspects leading to dissatisfaction became perceptible:

One of the main reasons for client's dissatisfaction articulated in this survey was getting too few drugs or none at all, and with not enough variety.

Until 1989 drugs in public health facilities were dispensed free of charge to all clients and shortage of drugs in the facilities was very common throughout the Vietnamese health system. But since the introduction of a market economy in 1986 the Vietnamese domestic production of drugs has increased very fast and a large number of private pharmacies and drug outlets have emerged. Nowadays health facilities are supposed to have an adequate stock of drugs and the Vietnamese health sector review 2001 found that "*even commune health centers in rural areas, which used to be chronically short of drugs, have [now] adequate supplies of drugs*" [World Bank, p.107].

Since the most frequently named suggestion for improvement of health services by clients in this study was that facilities should have a more reliable drug supply, the results in Cao Bang and Son La rather suggest on the contrary, that shortcomings in the supply of drugs continue to occur on a regular basis in commune health stations.

Clients often reported that they had to resort to self medication because the health facilities run out of drugs. Self medication is very common in Vietnam [Huong 2006, p. 83]. In this survey 25% of the clients, met in public health facilities, reported the private purchase of drugs without medical consultation, within the last 3 month. This practice is potentially risky because it can result in inappropriate treatment for the individual and can influence populations' health negatively for example by dissemination of bacterial resistances through the unreasonable use of antibiotics.

The Ministry of Public Health is aware of this problem and promulgated Decision No. 1847/2003/QD-BYT to handle problems caused by self medication and to restrict prescription drug sales at private pharmacies. In reality and particularly in rural areas it is observed that nearly all kinds of drugs can be bought over the counter without prescription and self medication remains widely spread, because the governmental prohibition to do so is not strictly enforced [Okumura 2002, p.187].

The complaint about lack of drugs might indicate a general problem with drug supply in the remote areas but might on the other hand as well be an indicator for irrational and inappropriate demand for drugs by the clients. Further investigations in the project provinces are necessary to get a deeper insight into this issue. However this is one of the main reasons for clients' dissatisfaction and obviously contributes to the risky practice of self medication. Hence this area has to be addressed with high priority.

A substantial part of clients complained about the lack of equipment and available expertise particularly at primary level. They often had the perception that a thorough examination and diagnosis was therefore impossible. The issue of adequate equipment is indeed problematic. The budget predominantly doesn't allow the purchase of new medical devices and new equipment is mainly provided from foreign donors. This equipment often deteriorates very quickly because of lack of spare parts for foreign products, lack of staffs training in maintaining the equipment properly and lack of necessary infrastructure support. This being the situation the diagnostical and treatment capacity of staff remains low [Ladinsky 2000, p.88]. Diagnostic capacity is further limited because often laboratory services are not available at primary level, which reduces options for differential diagnosis. Patients apparently perceive the availability of a certain amount of equipment to be closely related with the quality of examination and treatment. In connection with the fact that often no physician is available at the primary level and that the technical abilities of the other health personnel is judged as rather moderate, the lack of equipment leads to the patient's conviction that primary facilities are only capable to handle minor diseases. And this conviction surely contributes to the bypassing of primary health services and the overutilization of higher levels.

Clients frequently presented themselves dissatisfied with the received explanations to their own condition or the possibility to ask questions. It is of particular concern that some of the clients stated to feel shy to ask questions even if they need explanations and that they are usually not encouraged to do so from the provider's side (In single cases clients even reported that the provider reacted impatient to their questions or shouted at them). It can be assumed that this leads to a substantial part of clients leaving the service site without understanding their own condition or even the correct application of their treatment, which can cause additional hazards for clients' health. Staff doesn't seem to be familiar with the idea to involve the clients into the consultation session and into decision making. The interaction observation confirmed that clients are usually not encouraged to ask questions, which is problematic because - as shown in the clients' statements - a lot of them need to be reassured by the provider to ask for the issues they don't understand.

Clients, particularly in Son La, often stated dissatisfaction with the cleanness of health facilities. Especially the sanitary facilities were repeatedly reported to be unacceptable.

A very frequent complaint was the lack of clean water for washing and the fact that generally no drinking water is provided for clients in the facilities. In Cao Bang Provincial Hospital, women at the maternity ward reported that no warm water is available to wash the newborns.

A further reason for dissatisfaction was the perception of insufficient ventilation and temperature control in the facilities. Lack of furniture - especially beds - were frequently reported by clients and two of the respondents interviewed in hospitals, reported to share their bed with another person which is not acceptable for hygienic and privacy reasons. An additional hardship often named by inpatients, is the fact that generally no food is offered by health facilities, so that clients either have to cook for themselves or if unable to do so, bring a relative with them to care and cook for them³⁴. An exception found during the survey was the provincial hospital in Cao Bang, which has a cantina for clients and offers free drinking water for the patients as well.

Though staff mostly stated to know how to refer clients to health services outside their area of expertise, clients frequently expressed that they have a feeling of abandonment if in need of referral, they do not know where to turn to and didn't get sufficient advice. This mismatch in perception between staff and clients suggests that staff is unaware of the uncertainty and the fears aroused in clients when they need to be referred to the next higher level. Patients have to deal with a lot of constraints when referred and staff should be sensitized to the fact that comprehensive advice is necessary in cases of referral.

The question about support in referral cases originally intended to find out if clients receive enough information and guidance in case of a referral. But (as interviewers reported afterwards) it turned out that the question was understood in two different ways by the clients. A part of clients refers in their answers - as planned - to the received amount of information about the referral level, but another part refers specifically to the availability of help with the transportation to the referral level – so that the percentages shown in the findings include a conglomerate of these two aspects. Because the questionnaire included no additional open question to this part of the health service, it cannot be detected how many of the clients refer in their answers to the aspect of information and how many to the aspect of transportation.

Repeatedly clients complained that a stand-by duty is not, or not reliably, available at the commune health stations. The service at night or at weekends was generally perceived as better organized in hospitals. But in the qualitative interviews that were used as a preparatory step for the survey questionnaire, one hospital inpatient reported that he has to pay extra fees for every service he needs at night or at weekends. Whether this is common practice or an individual case

³⁴ Normally patients are accompanied by a relative who covers all activities related to the care, like washing the patient, cooking for him, feeding him if necessary and other. The staff is only involved in treatment not in actual care.

can not be concluded from the data collected in this study. In the qualitative interviews clients reported to turn to private doctors if in need for help after working hours of public services, or to buy drugs at a private pharmacy to treat themselves. It can be assumed that this is no option for the poorest part of the population because private services aren't accessible for them for financial reasons.

5.3 Discussion of findings from the staff interviews

Since Vietnam is presently going through an epidemiological transition, health care workers in Vietnam are facing difficult challenges in their daily work. Non communicable diseases such as cardiovascular diseases, cancer, diabetes, accidents and injuries are steadily increasing, while long-term problems, like malnutrition, still persist, and new emerging communicable diseases like SARS and HIV/AIDS have to be combated [Ministry for Culture and Information 2005, p. 29, Vietnam Development Report 2007, p.97]. This leads to a double burden of disease and the skills and knowledge needed by staff, to cope with the multitude of tasks, continue to grow and change rapidly. Staff is asked to provide more and higher quality health services and is not always sufficiently enabled to do so.

Health care personnel will continue their work for many years, while the information they acquired during their education may very soon become outdated. Health care workers must continuously keep up with new developments in the quickly changing health care sector. Thus, it is an urgent task to help staff to continue their professional development and enable them accordingly to improve the care that they provide.

Qualified and motivated staff is one of the most important factors of quality in health care. In order to increase the quality, it is necessary to look very closely at staff's needs, value their contribution and to ensure all necessary support.

The findings of this survey suggest that staff in the remote project provinces doesn't feel sufficiently enabled and supported. This dissatisfaction with working conditions is likely to influence their motivation, and thus the quality of delivered care, negatively.

It is of special concern that staff members in general assessed their own knowledge and skills very low, indicating that staff's training-needs aren't sufficiently addressed yet. More than half of the surveyed staff didn't feel adequately trained to provide all services within their responsibility and didn't judge their knowledge and skills as well enough developed to provide services of good quality. Staff stated to feel unsure in counseling many target groups belonging to their daily work, like women who come with complication after abortion, clients who come for HIV, RTI or STD services, adolescents or young adults, disabled people with their specific health needs and members of different social and ethnic groups. And in fact the client provider interaction observation revealed that half of the observed staff didn't pass on all necessary or correct

information, indicating serious shortcomings in professional knowledge. Staff in Son La seems to feel better prepared than their colleagues in Cao Bang. Still a substantial proportion of staff in this province articulated shortcomings in their professional knowledge as well.

One specific example for a lack of updated medical information resulting in an inappropriate handling of some diseases is the HIV-disease.

The HIV/AIDS epidemic is a current threat for Vietnam. Compared with other Asian countries the HIV prevalence in Vietnam is with 0.5% still low³⁵ [Vietnam Development Report 2007, p.97]. But the disease is clearly on the rise. HIV/AIDS has by now been detected in all 64 provinces of Vietnam and starts to spread beyond the “high risk population” - like injecting drug users - into the general population. The Ministry of Health noticed that: *“The rate of transmission of the epidemic from high-risk groups to the community was seen in the HIV/AIDS prevalence rate among pregnant women and military candidates”* [Ministry of Health: Decision 36/2004/QD-TTg, p.18].

HIV/AIDS is a threat particularly for ethnic minority groups who live isolated in remote areas and have - through cultural and language barriers - generally a limited access to information which increases their vulnerability and risk of infection. Thus particularly the health sector in remote areas has got a high responsibility for preventing the transition of the epidemic into the whole population. It is of utmost importance that health care providers in these areas are empowered to give all help and advice needed, to clients which may have little other sources of information and health care. The fact that health care providers, interviewed in this survey, stated predominantly that they don't feel qualified to handle HIV/AIDS reveals an urgent need for action.

Considering the staff's generally low assessment of their own skills, the stated high satisfaction with the performance of their management is surprising. When the majority of staff states to feel poorly prepared to deal with their daily tasks, it sounds more likely that the management isn't able to respond adequately to staff's needs, identify weaknesses and take suitable actions to solve problems.

Staff was assured of confidentiality and no names were asked during the interviews but it cannot be excluded that staff members nevertheless had scruples to give their opinions, especially while still at their working place, or that the result is substantially influenced by a diplomatic bias. Anyhow it is an encouraging finding that the vast majority of surveyed public staff stated to be paid on time and that responsibilities are clearly distributed by job descriptions.

Measures regularly taken in both provinces to support staff are supervision visits. However the coverage with supervision, as well as its benefits, were quite differently described from

³⁵ HIV prevalence at the end of 2005 in Thailand: 1.4%; Myanmar: 1.3%; Cambodia: 1.6%; India: 0.9% [UNAIDS 2006]

interviewed staff in Cao Bang and So La. In Cao Bang some of the more difficult accessible districts are apparently neglected. A substantial part of the staff in this province also answered, that learning needs are not assessed during supervision and supervisors do not ensure training activities tailored to the shortcomings identified in the supervision visits. Correspondingly the staff in Cao Bang received only seldom refresher training. Son La seems to be better covered with supervision visits and the likelihood to receive refresher training was much higher in Son La than in Cao Bang.

Though most of the staff stated to be supervised regularly, a substantial part of respondents reported that the supervision entails no consequences (like training according to identified weaknesses). Moreover health care workers in Vietnam apparently perceive supervision more often as control than as an offer for help and support as Dieleman found in her study about job motivation of health care workers in rural Vietnam [Dieleman 2003]. These results suggest that the quality of supervisory contacts is of more concern than their frequency.

A second measure to improve staffs performance, which is increasingly common throughout Vietnam, is the use of practice guidelines [Huong 2006, p.123]. Guidelines aim to promote clinical interventions of proven benefit and to eliminate ineffective clinical practice. Ultimately they intent to change the behavior of health care professionals [Grimshaw 1993 p.1317, Hoomans 2007, p.305].

Various guidelines and reference books were found in all facilities during the survey, but no standardized set of guidelines was detected and nothing at all on quality issues.

Apparently a lot of diagnostic and treatment guidelines have been developed already, but the dissemination seems to be more or less coincidental and without networking between the different governmental and non governmental providers. Further it is not clear how these guidelines have been introduced to the staff. Grimshaw and Russel found in a review about the effectiveness of guidelines that dissemination and implementation strategies used for a guideline can have a substantial effect on their acceptance and effectiveness. Their findings suggest that using a specific educational intervention as the dissemination strategy is important for the acceptance and effective use of guidelines. Guidelines that are developed by an external group without explicit knowledge about the local situation, and disseminated without educational intervention, or simply published in a journal, are unlikely to have an effect [Grimshaw 1993, p. 1320].

Hoomans, who reviewed the cost effectiveness of guideline implementation strategies concluded that evidence from economic evaluations of guideline implementation is - due to lack of methodological rigour - still too limited to be used to guide decision makers in best implementation practices [Hoomans 2007, p.312].

However, the development and introduction of guidelines cost substantial resources. Thus sound judgment is needed about how to disseminate and introduce guidelines in a way that guarantee their acceptance and effective use by staff. An uncoordinated and impersonal dissemination of various guidelines isn't likely to change staffs performance and behavior in the desired direction.

In addition to a generally low educational support, the staff seems to face resource constraints on a regular basis. Staff, particularly in CHS, stated to have to deal with shortcomings in equipment, furniture, expendable supplies and drugs. A considerable part has no reliable supply of clean water and no possibility to ensure good ventilation at their work place. The facilities are often very small which makes it difficult for staff to maintain privacy with their clients and escape distraction during counseling. A telephone to call for advice, or for help in case of referral or to order necessary supplies, is often not available.

One third of the interviewed staff in Son La judged the furniture in their own facility to be dirty. Health staff can be assumed to know very well how important a clean working environment is for conducting work in a hygienic way. Dirty furniture and equipment causes dangerous conditions for clients and the staff themselves.

These findings hint at a lack of commitment and motivation in health staff. On the other hand 60% of the surveyed facilities in Cao Bang and about 30% in Son La didn't even have a reliable water supply. Under these circumstances it is very difficult to maintain hygienic working conditions. The staff must be enabled to do their work correctly, and clean water is one of the very basic requirements. If even basic supplies and prerequisites aren't available in adequate quantities all measures to improve staff's motivation and quality of care are likely to fail.

Staffs motivation to perform well is a very important prerequisite for a health care system of good quality. And since staff, particularly in remote areas, has to deal with various constraints, it is of exceptional importance to give positive incentives to prevent inner resignation. Dieleman found that low income, no updated information, lack of knowledge and a heavy workload without plan are major discouraging factors for rural health staff in Vietnam. Whereas appreciation and support from managers and colleagues, stable job income and training influence the job motivation positively [Dieleman 2003]. This illustrates that motivation is not only influenced by monetary incentives. More important are often measures which show respect for staffs' contribution and continuing education. Moreover, in an area where (as shown by this survey) a wide part of staff complain especially about lack of professional knowledge and training, continuing education could be one of the most valuable measures to increase staffs' motivation.

5.4 Discussion of findings from the interaction observation

A good face-to-face-communication between client and provider is a very important factor to meet clients' needs. The quality of interaction and communication with the provider can have a substantial influence on clients' perception of received quality of care. Good quality of communication can lead to constant and confiding relationship with the provider and influence clients' understanding of treatment and their compliance to follow specific medical regimes [Rudy 2003, p.1, 3]. A good interaction between client and provider creates an atmosphere of trust, can improve health programs, empower clients and help them to a better understanding and thus ultimately to a better health outcome.

In the observations the majority of staff turned out to treat the clients friendly, respectfully and attentively. They also demonstrated their ability to bridge the gap in professional knowledge by using an easy language and terms understandable to patients.

But, as stated by staff in the self assessments as well, deficiencies in staffs' counseling and communication skills were noticeable. Patients' background and medical history was seldom reconsidered, providers failed to involve clients and to discuss their wishes and concerns. Especially in counseling talks to RH matters clients weren't empowered to make an informed choice, by explaining all options and involving the client into the decision which method is most suitable for her/his individual circumstances.

Half of the staff didn't pass on complete and accurate information, so that the likelihood for a patient to leave the service site with too little or wrong information was high. Adding to this risk is the fact that a majority of staff omitted to reconfirm that the given information were understood by the client.

The observations showed that clients who asked questions were likely to get a sufficient respond, but clients were rarely actively invited to ask questions. It should be highlighted to staff that clients need reassurance because they might be afraid to take an active part due to lack of knowledge and communication skills, and it is staffs' responsibility to overcome these constraints. Only good communication can result in sound decisions for clients' health.

Very seldom information on STD - an increasing reproductive health problem - was included in the counseling process. To have the client at the service site is a unique opportunity to provide her/him with information on the prevention of issues relevant for public health and should, at any rate, be used. Job aids can be valuable instruments to impart prevention information to clients, but job aids, even if available, were hardly ever used to help clients to understand complex information and to stay focused.

Like with the treatment guidelines it is unclear, how job aids have been introduced to staff: Impersonal distribution is unlikely to suffice, but a special educational intervention is necessary to familiarize service providers with the correct use and benefits which can be gained from use.

The fact that client provider interaction hasn't achieved its full potential yet could have various reasons. One barrier might be, that staff isn't sufficiently trained and familiarized with the concept of patient centered care. Lack of knowledge and communication skills can result in an inability of providers to pass on accurate information and in a poor interpersonal relation to clients.

There is evidence that the interaction can as well be affected if provider and client have different backgrounds such as race/ethnicity, gender, age, social classes or religious traditions [Scheppers 2006, p.328, 339-341; Cooper 2004, p.4-15]. Both provinces have an exceptionally multiethnic population, so that ethnic discordances might hamper the communication.

Frequently client and provider didn't even speak the same language, so that a friend or relative, who is able to speak both languages, must accompany the patient to translate. Particularly in areas predominantly inhabited by ethnic minorities, it is crucial to ensure that staff serving ethnic minorities can successfully communicate with the clients. Local staffing can be a core strategy because a functioning communication is much more likely to happen if staff is known by the community [Bhushan 2001, p.70].

Limitations in communication can as well occur when client and provider are not of the same sex and, for example, a female client feels reluctant and ashamed to bring up certain topics with a male provider. Whenever a client feels uneasy to express her/his needs and withhold information which are potentially important, the interaction is disturbed and a good quality of care cannot be achieved.

To create the necessary atmosphere of trust and mutual understanding, particularly in a multiethnic and multilingual context, is an extraordinary challenging task and staff needs support to develop the skills, necessary for a culturally empathetic and gender sensitive communication.

6. Conclusion and recommendations

The multi-faceted findings and indications gained from this study show vividly that a lot of valuable information for areas of quality improvement in health care delivery can be achieved by asking the people actually affected by the topic – those who deliver and those who receive the services. Both sides are genuine experts in the field of quality. Clients, because only they can define how services must be designed to comply with their values and expectations on the subject of the technical and interpersonal quality; and providers, because they have the best insight into changes which would entail the best results in their specific working environment. Clients' and staffs' expressed needs and concerns shall in this chapter be used for the derivation of activities and measures necessary to develop quality services which match the demands of people involved. The chapter is divided into three sections. The first section highlights infrastructure conditions in need of improvement as a *very prerequisite* for the delivery of quality care. In the second section measures are described which could empower clients to participate more actively in medical consultations, aiming at an informed client, who is enabled to act as a co-expert in finding the right solutions for her or his specific health needs. The third section gives an overview about necessary measures to increase staffs performance and to enable them to adopt a qualitative appropriate and patient centered care.

6.1 Necessary infrastructure developments

Infrastructure conditions particularly in commune health stations are still difficult and some of the observed problems are likely to hinder the implementation of quality assurance concepts if they remain unsolved.

6.1.1 Ensure the availability of all basic prerequisites

Professional skills and services of high quality can hardly be developed and maintained in the absence of necessary equipment, supplies and drugs. In this survey clients and staff strongly complained about the lack of equipment and drugs. Insufficient professional skills and knowledge in combination with constant lack of equipment and drugs will lead to a low service coverage and low capacity for solutions at the primary level and is very likely to damage the client's trust in public health facilities.

According to staff even essential supplies like gloves, needles and disinfection solution or equipment like sterilizers aren't always available. These supplies and equipments are necessary for the staff to do their work in a hygienic and aseptic way. Hence even small percentages of staff stating that they are not well enough supplied are a reason for utmost concern because it indicates that in these facilities the staff works under hazardous conditions.

The insufficient water supply and the lack of sanitary facilities in a part of the rural CHS cause many problems. A proper hygienic working environment cannot be maintained, patients have no possibility to attend to their personal hygiene and no drinking water can be offered to clients.

A lot of facilities seem to be already satisfactorily supplied with all necessities but in facilities which don't even have the downright basic prerequisites (clean water, electricity, disposable syringes, sterilizer, disinfection solution, gloves, basic supply of drugs, beds for inpatients) all other measures for quality improvement must fail until these problems are solved.

Recommendation: Ensure that the very basic prerequisites for health services like a reliable supply of clean water and electricity, sufficient equipment, beds for inpatients, means for disinfection and sterilization are available in every health facility in Cao Bang and Son La provinces. Make sure that staff is enabled to use equipment and supplies in an appropriate way.

6.1.2 Improve the referral system, opening hours and stand-by duty

The referral system as well as a lack of possibilities to get help at night or at weekends in rural public health facilities contributes to clients' dissatisfaction. When referred to a higher level of care, patients are often left alone with their worries about how to get there, where to turn to and who to contact at the referral facility. Particularly the poorest part of clients is affected by these problems. They have to master great difficulties in organizing the necessary means to visit a referral level (since referral hospitals are usually far away from many of the small villages, cost for transportation and necessary accommodation exceeds the financial resources of the poorest part of the Vietnamese population).

For financial reasons they also cannot afford to turn to a private provider, if need arises, after opening hours of public facilities. Hence these are areas where social disparities, leading to an inequality in access to health care, are clearly evident. Measures like an improved stand-by duty in rural health facilities could help to mitigate the gap.

Recommendation: Forward the fact that a substantial part of clients stated to be dissatisfied with opening hours and the referral system to the Ministry of Health and the District Health Offices, so that it can be considered in future policy making.

6.1.3 Improve the ambulance system

Particularly the transportation to the referral level was perceived as problematic and clients expressed their wish to get assistance with the transport especially in emergency cases. More than 70% of the facilities involved in the survey had no emergency transport available which is a real hardship for clients in rural areas where roads are difficult to traverse, means for transportations are generally low and a lot of agricultural accidents happen, which make immediate transportation to the next hospital necessary.

Recommendation: It is not realistic for a CHS to purchase and manage an ambulance for budgetary reasons. An intermediate-term solution could be to make sure that at least all district hospitals are provided with an ambulance supported by an effective communication system, linking all commune health stations and allowing them to access these district ambulances for emergency transportation when need arises.

6.1.4 Improve the dissemination of IEC materials

Since the coverage with mass media is still quite low in the Northern Uplands³⁶ the health facilities have a very important role in spreading health relevant information.

Information and education materials on a lot of different topics were found during the survey, indicating that for many topics printed materials are already developed but they are not widely enough distributed. Two thirds of the clients received no printed health information material, neither to read at the facility nor to take home. Only 13% of clients reported that they have got information material to take home though more than 40% of facility staff stated to have materials available for the clients to take home. This result suggests either that health staff, even if information material is available, doesn't disseminate it actively enough to the clients, or that they mostly haven't got the right and relevant material for their clients' specific needs.

Nearly 80% of the staff in both provinces answered that they have no reordering system for IEC materials, indicating that most of the facilities are provided with materials more or less coincidentally, and hence possibly not with materials on topics really needed in the commune.

Recommendation: Involve health staff in the decision, which topics must be addressed in their commune by printed education material. The District Health Offices should enable staff to order the relevant materials by establishing a reliable reordering system. Because of the multilingual environment and a relatively high illiteracy rate, posters and materials with a lot of self-explanatory illustrations might be better suitable than materials with written information.

6.2 Empower clients to participate actively in all decisions concerning their health³⁷

6.2.1 Increase room for posing and answering questions

For patients' compliance with the medical regime or preventive advices, as well as for her/his health outcome, it is of utmost importance that she/he fully understands her/his own conditions

³⁶ 60% of North East and 42% of North West households have TV. 15% of North East and 23% of North West households have radio [GSO, Living Standard Survey 2004].

³⁷ The concept of empowerment was introduced on the first international conference for health promotion in Ottawa (1986). It seeks to enhance the individuals' ability to control their own health status by developing people's skills including those of decision making and problem solving, so that the individual will be able and willing to take control over their own life [Ottawa Charta 1986 translated and cited by Franzkowiak 1993, p.99].

respectively risks and the actions taken to treat or to prevent them. Since there is obviously a gradient in professional knowledge between clients and health care professionals, patients often feel unsure to ask questions, assumably especially in situations where they received explanations but didn't understand them due to a lack of background knowledge. Hence a health care provider cannot be sure that given information have really reached the addressee until she/he has checked that all information given are understood by the client. It is important to create an atmosphere of mutual respect, so that a client doesn't have to fear to make a fool of himself, if she/he asks for clarification, or to get an impatient reaction.

Recommendation: Sensitize health care providers for the fact that clients often need to be reassured by the provider to ask for the issues they don't understand and for the importance of giving enough room for posing and answering of questions during consultation.

6.2.2 Increase clients' knowledge about what they are entitled to when visiting a health facility

Taken as a whole the results of this study suggest that many clients don't have a comprehensive notion about what can be expected and what they as patients are entitled to, when visiting a public health facility. It is necessary to help patients play a more active role in the medical consultations because studies suggest that patients who ask more from the provider are more likely to receive higher quality care in return [Das 2007].

Health staff traditionally take the perspective that a paternalistic attitude towards the clients, is in the best clients' interest, because the disclosure of certain information could cause harm. Moreover clients are not perceived as capable to make a judgment about their medical fate [Beauchamp 2001, p.176-179]. To discuss and share all information and the decision making with the patient is often a strange and new concept to both parties. But it is desirable to involve the client to act as a second "expert" in a consultation because only the client has full information about her/his personal situation - information which is often crucial for diagnosis or adequate treatment. The provider will only be able to tailor information and treatment to a client's needs when the client brings up her/his personal worries. Hence it can be very beneficial for clients to communicate actively with the provider, take responsibility for the decision making and demand as well as share all relevant information. To take this active role clients have to be empowered appropriately.

Recommendation: Develop and implement IEC activities using the mass media³⁸ as well as outreach visits with educational sessions at commune level.

³⁸ To use mass media is a concept and a strategy used in health promotion. It has the purpose to spread health information - assuming that media have a strong influence on topics discussed in broad public and are consequently addressed on political level [Seibt 2003, p.131].

6.2.3 Familiarize staff with the concept of involving patients into decision making

At the same time the provider's side must understand the negative impact of an uneven client provider relationship and learn to respect the clients' ability to participate in the decision making. Staff, who appreciates the contribution a client can make to her/his own health outcome and communicate effectively with the patient, can improve the interaction process and ultimately the health outcome greatly. Because clients are generally more used to remain passive and to trust exclusively in the provider's expertise, the provider has the challenging task to use professional expertise as well as communication skills to help the client to assess her/his own needs and preferences and to participate in an adequate medical decision. Clearly this isn't an easy task at all, and it needs providers who are convinced of the capability of clients to participate in decision making and are well trained in counseling procedures.

Recommendation: Help the provider side to grow into the new role of an active communication moderator by training combined with supportive supervision. Staff should be familiarized with the concept of a client-provider cooperation, well trained in necessary communication skills and (particularly in the first month after training) closely accompanied by supervisors who are able to help staff constructively to cope with all problems which might arise in implementing this new concept.

6.2.4 Encourage clients' to give feedback

Though clients' opinion boxes and opinion books are available at district level the survey revealed that they are very rarely used by clients. Reasons might be that in some regions of Cao Bang and Son La illiteracy is still high and that the clients are not used to express opinions in a written way. On the other hand the staff doesn't promote the possibility to give feedback via boxes and books actively, and most patients aren't aware of this possibility. To overcome the clients' difficulties to express their opinion, ready made "opinion cards" with some relevant closed questions relating to the quality of services could be handed out to all hospital patients or could be located near the opinion boxes and in all patients' rooms. In this way clients could only tick the answers and are not forced to formulate sentences themselves (but still can do so, if they want to, on a free space of the card). It is important as well that the staff points out the possibility of feedback much more clearly to the clients because it can be assumed that clients will only be encouraged to give feedback if they get the impression that their feedback is honestly wanted and will have consequences.

Recommendation: Hand out opinion cards actively to clients on a regular basis. Familiarize management and staff with this instrument of quality improvement and make sure that this method is understood properly and isn't misused to control or punish the staff, but to help them by finding out in which areas they need more training and support

to cope with their daily work effectively. Secure that the necessary management capacities are established to draw consequences from the clients' comments³⁹.

6.2.5 Raise awareness about rational drug use

Though an active participation of clients in their recovery process is very desirable the habit of self medication without prior consultation of a health care professional is counter productive.

Since self medication, was reported by a fourth of all clients in this survey, it is important to inform patients comprehensively about risks which can arise from this common practice for individuals as well as for the whole population. Especially the risk to spread antibiotic resistances should be addressed.

Recommendation: raise awareness in the communities about rational drug use and the risks adherent to the overuse of pharmaceuticals. Spots broadcasted by mass media as well as information material placed in waiting areas of the health facilities could help to sensitize clients to this topic.

6.3 Strengthen providers' performance and motivation

Since the quality of services is very closely related to the performance of the individual staff members, a particular focus on staff's well-being is necessary. The most important factors influencing staff's performance are their professional abilities, their motivation or willingness to perform, feedback gained on their performance and their overall working conditions. Thus these factors must be considered in all activities to improve the quality of delivered care.

6.3.1 Strengthen staffs' professional abilities

6.3.1.1 Meet training needs

Only adequately trained staff can perform and meet quality standards. The survey's findings show that staff assesses its own professional skills as inadequate for many topics, and clients as well often complained about low expertise particularly at grassroots level. This study revealed some areas which could be improved by training and upgrading of knowledge. Most of the surveyed staff has never been trained in counseling patients about sexuality and in this light it isn't surprising that observations showed that STD, being a sexuality related topic, is nearly never integrated into counseling processes. In addition, and particularly on commune level, staff judged their ability to handle HIV as very low. Since some of the clients in remote and rural areas may have only very seldom contact to a health care provider it is an exclusive opportunity and as well a responsibility of the provider to help clients to protect themselves against

³⁹ Otherwise the whole measure remains senseless or will in the worst case indeed be used to simply blame staff members instead of enabling them

spreading diseases like STD and HIV. Information about STD and HIV should be a standard part of counseling processes. To address these topics on a regular basis can help staff to overcome their reluctance to counsel potentially embarrassing topics.

Recommendation: Offer training which is adjusted to the specific needs of health staff. Ensure that the staff is regularly updated with all professional information to address STD, RTI, HIV and Reproductive Health issues in general in an appropriate way.

The staff self assessment as well as the interaction observation revealed that most of the staff doesn't seem to be familiar with rules of professional counseling talks. Since a good communication between client and provider is one of the most important keys for high quality services it should be ensured that health care providers are familiar with the rules of counseling. Considering the low level of professional self confidence, which became noticeable in the staff interviews, and the frustration adherent to feeling poorly prepared, it can be assumed that staff is willing to be trained and to develop their communication skills as well as their technical skills.

A second important measure is to implement the appropriate use of job aids during interaction. The use of these materials can help clients to understand new and therefore maybe difficult information better. And a better understanding will increase clients' compliance with treatment. For staff it can be likewise beneficial to use job aids because having reference information and reminders help staff to conduct the consultation in a complete fashion and can guide them in decision making.

Recommendation: Train health care providers in necessary communication skills to address patients from different social and ethic backgrounds, as well as pregnant women, adolescents and disabled patients, with their special health needs, in a culturally empathetic and gender sensitive way. Implement appropriate job aids and train staff on how to guide counseling talks by using them.

Most of the surveyed staff stated not to be trained in record keeping. Medical records, laboratory records and complication records were often judged as not properly kept by the responsible staff. Since medical records are an important source to follow up a client's history, allow a quick and sufficient communication among health providers and are a valuable source for statistical purposes they can help to increase the quality of care and hence should be kept in a complete and proper fashion.

Recommendation: Ensure that all staff members are capable of filling in all medical forms properly and understand the importance of medical record keeping.

6.3.1.2 Introduce guidelines and special quality-standards⁴⁰

Apart from training, staff also needs guidance. They need to know how quality in health care is defined, what is expected of them and how quality issues can be realized practically in their daily work. The survey showed that most of the staff has a job description defining their general tasks and responsibilities. A multitude of guidelines to very different topics and from different providers (governmental and non governmental) were found in rural health facilities. But the guidelines seem to be disseminated more or less coincidentally. No standardized set of guidelines was found and no guidelines to quality issues at all.

Recommendation: Work towards the development of standardized⁴¹ praxis orientated guidelines or promote their distribution where they already exist. Make sure that local practitioners are involved in the development of quality standards to guarantee their feasibility and acceptance. Introduce new guidelines and standards by workshops, which leave enough room to practice for the staff supposed to adopt them.

6.3.1.3 Address the topic of hygiene / cleanness

Clients were often concerned about the hygienic conditions in health facilities and even staff admitted their furniture to be dirty. In the environment of a health facility lack of cleanness is not a mere esthetic problem, but potentially jeopardizes the health of staff and clients and is therefore in no way acceptable. However it has to be kept in mind that facilities without a reliable water supply have a real problem in ensuring hygienic conditions.

Recommendation: Address the topic of hygiene in every supervision visit. Train supervisors to address this matter in a constructive and sensitive but insisting way. Investigate further into possibilities how the project could assist in ensuring a water supply for all facilities.

6.3.2 Give feedback on performance

Training is an important measure to strengthen provider's performance when quality deficiencies are due to lack of knowledge and interpersonal skills. But since there can be a big difference between what staff knows and what staff actually does, programs also have to deal with other factors that affect provider's ability and willingness to deliver good services, as for example the support and motivation of staff.

To support staff in an adequate way all staff members should receive constructive feedback on their performance on a regular basis. As mentioned above, a supervision system is already available in Cao Bang and Son La but some areas are neglected and training needs are not always adequately addressed during supervision.

⁴⁰ Standards are professionally developed expressions of the range of acceptable variations from a defined norm.

⁴¹ Standardized meaning that everywhere in Vietnam, on all levels of health care, the same guidelines are used.

Feedback can be given by a supervisor but as well by clients. It is helpful if feedback includes acknowledgement of work well done as well as suggestions for improvement and is given in a supportive and respectful manner. If staff is supposed to adopt patient-oriented care it is important that their supervisors are supportive as well and able to help staff to overcome problems which might arise in implementing new concepts.

Recommendation: Ensure that staff gets feedback on their performance on a regular basis. Checklists based on quality standards (for the use in supervision contacts) should be developed, agreed upon by all stakeholders and implemented to make sure that the content of supervision is comparable in different districts and addresses all quality-relevant topics. Supervisors must be trained to give constructive feedback on all relevant topics and to create a supervision atmosphere which is perceived as supportive by staff and not as mere inspection.

6.3.3 Raise staffs' motivation

Any human being needs incentives to spend efforts into his deeds. Even well trained staff feeling confident about their own professional skills will only perform well if they are able to gain personal satisfaction from their work, can make a living on their salaries and are constantly motivated. Therefore good quality performance should be acknowledged and rewarded, and bad performance should promptly be addressed by management. Only staff who are satisfied with their working conditions and well supported by their management will adopt a culture of quality in their daily work. Positive incentives for staff don't have to be necessarily of monetary nature. Staff cannot be motivated by money alone but on the other hand it has to be kept in mind that staff who can hardly make a living on their salaries aren't very likely to invest a lot of efforts into their work. Hence in Vietnam where the pay level for rural health staff is low, monetary rewards for good performance could have a positive effect. Maybe more important are recognition and appreciation of good performance, clear criteria for promotion, performance based career schemes or additional training and a good and humane working environment.

Recommendation: Develop a system of quality indicators in order to measure changes in quality of services over the time. Reward excellent performance by suitable and innovative incentives. Highlight to facility managers how important respect and appreciation of staff's contributions are, in order to create a working environment in which quality has a first priority.

6.3.4 Improve staffs' working conditions

To ensure a good working environment which allows staff to focus on quality in health care delivery, first the infrastructure shortcomings have to be addressed and sufficient support and supervision have to be ensured, as recommended above. An effective facility leadership is crucial to overcome the named constraints, to create good and humane working conditions and

to implement and maintain quality components. Hence a special focus on the development of facility managers is necessary.

In order to steer organizational processes and individual performance, objectives have to be defined and targets to be set and monitored. Staff and management which isn't familiar with basic planning methods like target setting and monitoring will not be able to adopt institutional changes and quality management in an effective way.

Further the identification and elaboration of necessary improvements in the specific working environment, as well as the implementation of a systematic quality management depends on a close relationship between management and staff. Changes can only be put into practice, and a culture of quality can only be established if clear and effective communication channels exist between staff and management. Staff and management have to work closely together to enhance the working conditions, identify weaknesses in performance and areas for quality improvement.

Recommendation: Improve basic management skills such as team work, good communication, effective problem solving and performance monitoring. Particularly managers of rural facilities should be trained on skills and techniques necessary for an effective leadership.

7. Demand for further research

Though this study aimed to give a comprehensive overview about the quality in health care delivery in the surveyed public health facilities from different points of view, the results have raised further research questions. Additional areas for study are:

7.1 Reasons for not using the facilities at all

A sample chosen in health facilities is selective and excludes all patients which are so dissatisfied with services that they don't use the health facilities at all. Hence factors, influencing patients' satisfaction, found in this study are not representative for the whole population of Cao Bang and Son La. Since it is an important issue to increase the utilization rate of rural health facilities and to relieve the work load of the referral levels it is of utmost interest to find out what reasons lead to the complete refusal to make use of the commune level and to meet these objections urgently. A household survey, though resource intensive, could bring up new insight.

7.2 Supervision system in both provinces

The coverage with, and the benefits of supervision were quite differently described by staff from Cao Bang and Son La. Staff in Son La stated much more frequently that supervision visits entail consequences and that detected shortcomings in knowledge are addressed by training.

It would be interesting to find out if supervisors in Son La and Cao Bang differ in their supervisory knowledge and concepts, or if differences in budget, public policy or responsibility caused the different results. A deeper insight into the supervision systems and concepts of both provinces could provide valuable information about the organization of the supervisor network, and the best practice on hand could be shared by both provinces. The review of supervision reports combined with interviews with supervisors could serve to generate the necessary information.

7.3 Availability and expectations towards equipment

The results of this study suggest that satisfaction with services is substantially influenced by the availability of a certain amount of equipment. This demand for medical devices probably contributes to the bypassing of primary health services and the over-utilization of higher levels. In clients perception equipment seems to be strongly associated with quality of health care. Nevertheless in the interviews it became apparent that clients often had no clear notion about what kind of equipment exactly is missing, but had the vague feeling that diagnosis and treatment would be better if only more equipment were available. Quality of care was frequently reported to be better in hospitals because they are better equipped. But since hospitals employ more specialized staff and physicians, and therefore generally possess of more expertise it

cannot be ruled out that equipment is a confounder and the issue really addressed by clients is reliable medical, technical and diagnostic expertise. To find out what clients exactly miss, when complaining about non-sufficient equipment, focus group discussions could be a useful method to gain a more comprehensive insight.

Sure enough expertise depends to a certain degree on the availability of equipment. And a basic set of equipment is a necessary prerequisite for proper care. To find out if shortcomings with even basic equipments occur regularly on commune level, existing data from supervisory visits could be reviewed or, if not available, a facility inventory of a representative sample could help to confirm the lack of equipment which was reported in this survey by clients and staff.

7.4 Shortcomings in drug supply

A main factor influencing clients' satisfaction, found in this study, was the drug supply. Clients felt generally undersupplied with medicines and it can be assumed that this feeling contributes to the very common but risky practice of self medication. Staff as well reported about shortcomings in drug provision. Because no inventory of the dispensaries was done during the survey, the data collected cannot prove whether in fact the facilities are generally undersupplied with drugs, or if these reports are caused by an unreasonable demand for drugs by clients and/or by the prescription behavior of staff. Since the provision with adequate medicine is one of the very basic needs articulated by clients, the low utilization rates of public health facilities are not likely to change if patients often experience that this need cannot be satisfied. Hence it is advisable to investigate further into this matter, to find out how serious the shortcomings in drug supply actually are on commune level. Further investigation into the appropriateness of clients drug using behavior and into the question where they got their notions about drug use from, would be valuable to have a sound starting point when educating the population about benefits and risks adherent to pharmaceuticals.

7.5 Food provision for inpatients

Clients stated frequently that it is a special hardship for inpatients that hospitals offer no food provision or canteen of any kind. Thus a family member always needs to accompany the client to care for his food. This causes financially difficult conditions for poor families because more than one family member is excluded from gainful employment for the time being.

An exception was found in the provincial hospital of Cao Bang, which has a canteen for clients and offers free drinking water. It would be very beneficial for clients if this system could be transferred to all district hospitals. Thus it is advisable to acquire a deeper insight into the organization and budgeting of this service and into possibilities to implement it at district level as well.

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Annex 1

Eidesstattliche Erklärung

Ich versichere, dass ich die vorliegende Arbeit ohne fremde Hilfe selbständig verfasst und nur die angegebenen Hilfsmittel benutzt habe. Wörtliche oder dem Sinn nach aus anderen Werken entnommene Stellen sind unter Angabe der Quelle kenntlich gemacht.

Hamburg 06. Januar 2009



Gaby Zeck

Annex 2**Client Satisfaction Questionnaire**

date/...../.....

Kind of health facility:

District / Commune:

Name of Interviewer:

Please help us improve the provision of health services by answering some questions about the services you have just received. We are interested in your honest opinion, whether they are positive or negative. We also welcome your comments and suggestions. Thank you very much; we really appreciate your help.

What was the client's reason for the visit?

- Mother and child care (including vaccination)
- RH services (Family planning, counseling RH matters, STI)
- Respiratory complaints
- Gastro intestinal complaints
- Fever of unknown origin
- Headache and other body pains
- Other

Please tick ✓ the right answer

1a. How would you rate the quality of service/treatment you received?			
Excellent (4)	Good (3)	Fair (2)	Poor (1)
1b. For the Interviewer: If client answers 1 or 2 please ask him why:			
.....			
.....			
.....			
.....			

2a. Did you get the kind of service/ treatment you wanted?			
No definitively not (1)	No not really (2)	Yes generally (3)	Yes definitively (4)
2b. For the Interviewer: If client answers 1 or 2 please ask him why not:			
.....			
.....			
.....			
.....			

3a. To what extent has the service/ treatment met your needs?			
Almost all my needs have been met (4)	Most of my needs have been met (3)	Only a few of my needs have been met (2)	None of my needs have been met (1)
3b. For the Interviewer: If client answers 1 or 2 please ask him which needs haven't been met:			
.....			
.....			
.....			

4a. If a friend were in need of similar help, would you recommend this health facility to him or her?			
No, definitively not (1)	No, not really (2)	Generally Yes (3)	Definitively Yes (4)
4b. For the Interviewer: If client answers 1 or 2 please ask him why not:			
.....			
.....			
.....			

5. Have the services / treatment you received helped you to deal more effectively with your problems?			
Yes they helped a great deal (4)	Yes they helped somewhat (3)	No they really didn't help (2)	No they seemed to make things worse (1)

6a. In a general sense, how satisfied are you with the service you have received?			
Very satisfied (4)	Mostly satisfied (3)	Indifferent or mildly dissatisfied (2)	Quite dissatisfied (1)
6b. For the Interviewer: If the client answers 1 or 2 please ask him why:			
.....			
.....			
.....			

7a. If you were to seek help again, would you come back to this health facility?			
No definitively not (1)	No not really (2)	Yes generally (3)	Definitively Yes (4)
7b. For the Interviewer: If the client answers 1 or 2 please ask him why not:			
.....			
.....			

8. How satisfied are you with some specific aspects of the health service you received:

Please tick ✓ the right answer	Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied
a. Accessibility of the health facility				
b. Equipment available				
c. Convenience of facility (e.g. bed, washing water, ventilation, drinking water)				
d. Cleanness of facility (e.g. toilets)				
e. Length of waiting time in the facility				
f. Time you spend with the physician/ health care professional				
g. Explanation of what was done to you				
h. Clarification of your health problems				
i. Explanation of the treatment (e.g. how and for how long to use the medicine)				
j. Possibility to ask questions				
k. Technical skills (thoroughness, carefulness, competence) of the physician /healthcare professional				
l. Personal manner (courtesy, sensitivity, friendliness) of the physician/ healthcare professional				
m. Respect of privacy				
n. Availability of service on weekends, at night or after opening hours				
o. Availability of help in case of referral				

9a. Are you satisfied with the prescription and availability of drugs in this facility?

- Yes
 No

9b. Is the quality of the drugs like you expected?

- Yes
- No

If no what differs from your expectations?

.....
.....

9c. Did you go elsewhere in the last 3 month (e.g. private pharmacy) to get drugs, instead of going to a health facility?

- No
- Yes

If yes, what was your reason for self medication?

.....
.....

10. Did you get any printed health information materials during this visit?

- No
- Yes, but only to read at the facility
- Yes, to take home

If yes, what was the subject of the material?

.....
.....

11. If you could suggest one improvement to the health service what would be the most important for you?

.....
.....

12. Personal data (will be kept confidential)

a. Gender: male female

b. Age (in years):

c. Highest education primary secondary highschool vocational training
 no schooling

d. Ethnicity: Kinh Thai Mong Dao
 Muong Kho mu La ha Khang
 Sinh mun Nhang Tho Other

<p><i>For the Interviewer:</i> Was the questionnaire translated into a minority language on the spot of interview?</p> <p><input type="checkbox"/> No <input type="checkbox"/> Yes If yes, which language</p>

Annex 3**Staff Self Assessment**

Date...../...../.....

District: Commune: Kind of facility: Name of Interviewer:	Respondent: Age (in years): Gender: Occupation: Since how many years working in health sector:
--	--

Management		yes	no
1.	Do you feel that the management is supportive, encouraging and respectful to the staff?		
2.	Does the management encourage you to make suggestions about improving quality of services?		
3.	Do you think that the staff responsibilities are clearly delineated?		
4a.	Are the work shifts in your facility clearly explained?		
b.	Are the work shifts in your facility well organized?		
5.	Does the management motivate you to perform well by doing the following:	----	----
a.	<input type="radio"/> Recognize work well done		
b.	<input type="radio"/> Providing timely and constructive feedback on your work		
6.	Do you have a job description?		
7.	Are you paid on time?		
Supervision		yes	no
8.	When did you receive your last supervision and from whom? Date:/...../..... Name:	----	----
9.	Do external supervisors provide you with constructive feedback?		
10.	Are the following records always properly filled out and periodically reviewed by the responsible person in your facility:	----	----
a.	<input type="radio"/> Birth records		
b.	<input type="radio"/> Medical records		
c.	<input type="radio"/> Laboratory records		
d.	<input type="radio"/> Complication records		
e.	<input type="radio"/> Death records		
f.	<input type="radio"/> Inventory supply forms		
11.	Do supervisors organize activities to assess the learning needs of facility staff?		
12.	Do supervisors ensure that training activities take place regularly?		
Training and Development		yes	no
13.	Did you fill in the one page for the Training Need Assessment?		
14.	Do you feel sufficiently trained to provide all services within your responsibility?		
15.	Are you trained in all necessary standards and procedures, including those for infection prevention and do you feel well prepared to practice them?		

16.	Have you ever been trained to counsel clients about sexuality?		
17.	Have you received a refresher training recently? If yes, which subject and how many days:		
18.	Do you have all necessary skills and do you feel well prepared to educate and counsel the following clients:	----	----
a.	○ Pregnant women		
b.	○ Breastfeeding women		
c.	○ Postpartum women		
d.	○ Women who come for treatment of abortion complications		
e.	○ Clients who come for HIV/ RTI and STI services		
f.	○ Adolescent and young adults (female and male)		
g.	○ Disabled clients		
h.	○ Members of different social and ethnic groups		
19.	Do you know how to refer clients for health information and service outside your area of expertise?		
20.	Are you trained in record keeping and reporting (including reporting complications and deaths)?		
21.	Are you able to provide contraceptive methods that involve a clinical procedure such as:	----	----
a.	○ IUD		
b.	○ Implants		
c.	○ Injectables		
d.	○ Tubal ligation		
e.	○ Vasectomy		
22.	Do you feel well prepared to address RTI's including STI as follows:	----	----
a.	○ Assessing risk		
b.	○ Diagnosing		
c.	○ Treatment or referring		
23.	Do you feel well prepared to address HIV as follows:	----	----
a.	○ Assessing risk		
b.	○ Diagnosing		
c.	○ Treatment or referring		
24.	Do you feel that you have the knowledge and skills needed to provide good services?		
Information & Education		yes	no
25.	Are relevant client education materials available in the facility (posters, models)?		
26.	Does the facility have a system for ordering client education material?		
27.	Are materials available for clients to take home?		
28.	Are relevant job aids (wall charts, flipcharts) available in the facility?		
Infrastructure		yes	no
29.	Does the facility have a reliable supply of clean water?		
30.	Does the facility have a reliable supply of electricity?		
31.	Does the facility have a fan or air-conditioning?		
32.	Do you have enough lightening to do your work well?		
33a.	Are hand washing facilities available in the facility?		
b.	Are hand washing facilities available in every examination room?		
34.	Have you got enough rooms to maintain appropriate confidentiality and privacy with your clients?		

Annex 4

Observation checklist for Client- Provider Interaction

District: Commune: Kind of health facility: Name of Observer: Date:	Was the Interaction Observation translated into a minority language? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, into which language?
---	---

Provider →	Yes	No
1. Greets respectful according to local norms		
2. Assures client of confidentiality		
3. Asks client about reproductive intention (e.g. more children, when?)		
4. Discusses with client which method she would prefer		
5. Review a returning clients experience and satisfaction with the method		
6. Let the client know she has options and that the choice belongs to her		
7. Uses language and terms easily understood by client		
8. Uses a friendly tone of voice and attentive body language to convey warmth, interest and respect		
9. Tailors key information to the particular needs of the specific client		
10. Encourages client to ask questions		
11. Listens and observes what client says and does		
12. Offers feedback to clients questions and concerns		
13. Gives accurate information on the method/treatment chosen (how to use, side effects, complications)		
14. Consistently gives full attention / eye contact to client		
15. Uses appropriate IEC “job aids” (e.g. wall charts, brochures) to guide the interaction		
16. Includes STD prevention into counseling process		
17. Checks that the client understands		
18. Gives instruction on when to return		

Annex 5

Summarizing Additional Tables

Client Satisfaction Questionnaire

Table 17: Clients' reasons given for a low rate for the quality of services

(Only asked in Son La)	Number of mentions
Lack of drugs	57
Lack of equipment	15
No thorough examination	9
Facility is dirty and/or noisy	4
Staff isn't friendly	3
Not enough staff (only one person)	2
Facility runs out of IUD	2
Have to share bed with someone else	2
No inpatient room/service	1
Had to wait 5 days for OP	1
Staff refused to give enough drugs	1
It rains into the patient room	1
Wanted ultra sound but the doctor refused	1
Staff wasn't present at facility, had to wait long	1
Facility too small	1
No reliable electricity	1
No experienced doctor available	1
Had to wait long time and no place to sit down	1

Table 18: Clients answers about what differed from their expectation concerning the treatment

(Only asked in Son La)	Number of mentions
Didn't get enough drugs	6
No equipment for good examination	3
Examination wasn't thoroughly done	2
Didn't get the right medicine	1
No ultra sound available	1
No specialized/ experienced doctors	1

Table 19: Clients answers about needs unmet by the health service

(Only asked in Son La)	Number of mentions
Drug needs aren't satisfied (not enough drugs)	124
Not enough equipment for good examination	57
Facility has no doctor (not enough expertise)	7
Only common diseases can be treated	7
No clean water available	5
Health station is too small	4
Staff hasn't got caring attitude	3
No drugs available to treat my disease(High blood pressure/heart disease/diabetes)	3
Infrastructure (rooms/toilets) is not good	3
Had to wait long for the examination	3
Facility doesn't offer IUD	2
No inpatient room/service	2
Examination not thoroughly done	2
Got no explanation to my condition	2
Diagnostical skills of staff are poor	2
Quality of service is too low	1
No x-ray available	1
No laboratory tests available	1
Had to stay too long in the hospital	1
No one helped me to find the lab, x-ray	1
No abortion possible, had to go to the hospital	1
Need injectable drugs, but got only tablets	1
No quality material available to treat my fracture	1
No drinking water for clients	1

Table 20: Clients reasons for not recommending the facility

(Only asked in Son La)	Number of mentions
Facility has no sufficient drug supply	4
No sufficient equipment for examination	4
I'm not satisfied with the service	1

Table 21: Clients reasons given for being generally dissatisfied with the service received

(Only asked in Son La)	Number of mentions
Drug supply insufficient	18
No one explained my disease to me	3
No equipment for thorough examination/diagnosis	3
Got no examination	3
Had to wait very long for the examination	3
Staff has no caring attitude	2
Facility often closed during working hours	2
Not all my needs were satisfied	2
Facility is to small (crowded)	2
No doctor, therefore no qualified examination	2
Examination not thoroughly done	2
Facility cannot provide special drugs (for heart disease/diabetes)	2
Unhygienic conditions	2
Sanitary facilities not acceptable	1
Staff didn't answer my questions	1
Was transferred for IUD, which should be possible at the CHS	1
Doctor was ill-tempered and shouted at me	1
The registration procedure took too much time	1
No electricity	1
Injections aren't done in a sensitive way (painful)	1

Table 22: Satisfaction with specific aspects of health service (Cao Bang)

Cao Bang	Quite dissatisfied (Count, %)	Indifferent or mildly dissatisfied	Mostly satisfied	Very satisfied
Accessibility of health facility	5 (1%)	201 (40%)	249 (49%)	53 (10%)
Equipment available	31 (6%)	333 (66%)	135 (26%)	9 (2%)
Convenience of facility	34 (7%)	290 (57%)	166 (33%)	18 (3%)
Cleanness of facility	4 (1%)	202 (40%)	255 (50%)	47 (9%)
Length of waiting time in the facility	5 (1%)	84 (17%)	331 (65%)	88 (17%)
Time you spend with the physician	5 (1%)	99 (19%)	308 (61%)	96 (19%)
Explanation of what was done to you	8 (2%)	152 (30%)	297 (59%)	51 (10%)
Technical skills of the health care professional	6 (1%)	207 (41%)	232 (46%)	63 (12%)
Personal manner of healthcare professional	3 (1%)	74 (15%)	333 (65%)	98 (19%)
Maintenance of privacy	18 (4%)	91 (18%)	326 (66%)	62 (12%)
Availability of service on weekends, at night or after opening hours	39 (8%)	160 (32%)	269 (53%)	37 (7%)
Availability of help in case of referral	109 (23%)	169 (33%)	181 (36%)	41 (8%)

Table 23: Satisfaction with specific aspects of health service (Son La)

Son La	Quite dissatisfied (Count, %)	Indifferent or mildly dissatisfied	Mostly satisfied	Very satisfied
Accessibility of health facility	-- (--)	63 (14%)	251 (55%)	139 (31%)
Equipment available	16 (3%)	275 (61%)	143 (32%)	19 (4%)
Convenience of facility	32 (7%)	269 (59%)	127 (28%)	25 (6%)
Cleanness of facility	96 (21%)	224 (49%)	109 (24%)	24 (5%)
Length of waiting time in the facility	7 (2%)	51 (11%)	257 (57%)	138 (30%)
Time you spend with the physician	4 (1%)	53 (12%)	278 (61%)	118 (26%)
Explanation of what was done to you	8 (2%)	96 (21%)	249 (55%)	100 (22%)
Clarification of your health problems	8 (2%)	94 (21%)	241 (53%)	110 (24%)
Explanation of the treatment	15 (4%)	69 (15%)	255 (56%)	114 (25%)
Possibility to ask questions ⁴²	18 (4%)	96 (21%)	240 (53%)	82 (18%)
Technical skills of the health care professional	2 (--)	61 (14%)	289 (64%)	101 (22%)
Personal manner of healthcare professional	1 (--)	25 (6%)	266 (59%)	161 (35%)
Maintenance of privacy	2 (--)	36 (8%)	234 (52%)	181 (40%)
Availability of service on weekends, at night or after opening hours	11 (2%)	132 (29%)	221 (49%)	89 (20%)
Availability of help in case of referral ⁴³	6 (2%)	102 (23%)	178 (39%)	142 (30%)

Table 24: Satisfaction with the drug supply

	Cao Bang		Son La	
	Yes	No	Yes	No
Are you satisfied with the prescription and availability of drugs in the facility?	279 (55%)	229 (45%)	231 (51%)	222 (49%)
Is the quality of the drugs as you expected?	425 (86%)	72 (14%)	406 (90%)	47 (10%)
Did you go elsewhere in the last 3 month to get drugs, instead of going to a health facility?	111 (22%)	386 (78%)	122 (27%)	331 (73%)

⁴² 4% of clients stated that they had no questions at all and cannot answer this question

⁴³ 6% of clients stated that they have never been referred and cannot answer this question

Table 25: Clients reasons for self medication

	Cao Bang Number of mentions	Son La
Health facility run out of drugs	30	36
The needed drug wasn't available at the station	32	12
Didn't received enough drugs in the health facility	20	12
It was no serious illness, I knew how to treat it myself	--	26
Private pharmacy was nearer than health station	12	11
Needed drug wasn't covered by HI card	--	6
Drug was needed after working hours of health station	2	4
Health station was crowded	3	--
Drugs for insured patients are limited (and I needed more)	3	1
Drug provided from health facility didn't help	3	1
Bought a drug only to store it	--	2
Health facility didn't provide injectable drugs	1	2
Don't want to go to the health facility so often	2	--
Consulted a private doctor, therefore had to buy drugs private	1	--
I'm not insured, so I have to buy private	1	1
Didn't have enough time to go to the health station	--	1
I went to the DH, they have more drugs	--	1
Bought an antibiotic to treat myself	--	1
It cost too much time to go to the health station	--	1
I have a constant problem and always have to buy drugs private	--	1

Table 26: Clients reasons given for being dissatisfied with the quality of drugs received

	Cao Bang Number of mentions	Son La
Available variety of drugs is too small	36	9
Received medicine didn't help	12	4
Only basic drugs available	18	7
No high quality drugs available	2	2
Drugs for adult are being used for children	3	--
Didn't get enough drugs	--	13
I didn't get drugs at all	--	4
No drugs to treat diabetes available	--	1
Clients with HI card didn't get enough drugs (limited)	--	3
Received drug didn't help quick enough (was not powerful enough)	--	1

Table 27: Subject of IEC material received during the visit

Subject	Number of mentions
HIV/AIDS prevention	25
Reproductive health	21
Child welfare/health	18
Family planning	16
Malaria prevention	15
General health care information	15
Contraceptive methods	12
Food safety	12
Vaccination	10
Malnutrition prevention	8
Tuberculosis	7
Disease prevention	6
Bird flu	6
STI	5
Safe motherhood	5
Mother and child health	4
Nutrition	4
Breastfeeding	3
Health insurance	2
Intestinal parasites	2
Fever	1
Iodized salt	1
Leprosy	1

Table 28: Clients suggestions for the improvement of health services

Additional Remarks/ suggested Improvements:	Cao Bang (Number of mentions)	Son La
Drug supply		
Facility should have more drugs	95	139
Bigger variety of drugs necessary	33	5
Drug supply from health insurance program is not reliable	26	8
Lack of drugs for children	2	--
Drugs shouldn't be so expensive	--	1
Drugs should be made available by facilities even after opening hours	1	2
Provide quality drugs (not only common and cheap drugs)	--	5
Equipment		
More equipment necessary	49	144
Special equipment like ultra sound necessary	5	9
Not enough instruments for medical check up	2	--
Facility should have an othoscope	1	--
No endoscopical operations possible	1	--
Better equipment is necessary	--	3
Doctor should use x-ray and ultra sound	--	1
Lack of instruments for gynecological examination	1	--
Available Expertise		
More health staff is necessary	12	5
Specialized doctors are necessary	--	6
Facility should have a doctor	9	28
Examination techniques should be upgraded	1	14
Knowledge of staff should be upgraded	22	21

Additional Remarks/ suggested Improvements:	Cao Bang (Number of mentions)	Son La
Health facility		
Health facility is too small (add rooms)	20	13
Lack of clean water in the facility	12	23
Infrastructure must be improved	11	19
More beds for inpatients necessary	7	10
Facility is in need of renovation	4	3
Facility needs electric light	1	2
Not enough space to maintain privacy	3	--
Ventilation in the facility is bad	2	2
Lack of chairs in the waiting area	1	--
Improve the facilities compound	--	2
Provide kitchen for clients	--	3
Facility should have bed for delivery	1	--
More examination rooms are necessary	1	2
Waiting and examination area should be separated	4	5
More furniture necessary	4	--
Staff		
Health staff isn't friendly enough	4	--
Health staff should do work more thoroughly	4	13
Health staff should give more explanations	2	4
Staff doesn't spend enough attention to clients	--	6
Doctor shouldn't shout at the client	--	1
Staff should always be present during working hours	--	7
Staff should greet the clients	--	1
Staff should give more prevention advices	--	1
Hygienic conditions		
Sanitary facilities not acceptable	1	18
Facility should be clean	--	6
Opening hours		
Facility should offer service and examination every day	1	--
Facility should have a standby-duty for emergency cases	1	--
24 hours duty should be implemented	--	4
Facility should be open at weekends and on holiday times	1	
Convenience of Facility		
Provide drinking water for clients	--	1
Provide newspaper/books for waiting clients	--	1
Improve the clients beds	--	1
Improve patients rooms	--	7
Hospital map necessary to help clients to find their way	--	1
Clients shouldn't have to wait for examination	--	1
Contraceptive methods		
Provide better choice of contraceptive methods	--	1
Provide IUD	--	5
Other		
Government should care more for health situation in remote areas	--	1
Financial help in case of referral should be provided	2	--
Can get only one examination/ month on the health insurance card – this is too little	2	--
Provide basic laboratory tests	--	1
No emergency transport possible	2	
Clients should be treated equally (some get earlier examination/treatment)	--	2
Provide inpatient service (in CHS)	--	10

Staff Self Assessment

Table 29: Support from management

Management	Cao Bang		Son La	
	Yes Count	No %	Yes	No
Is the Management supportive, encouraging and respectful to the staff?	199 (97%)	6 (3%)	142 (99%)	2 (1%)
Does the management encourage you to make suggestions about improving quality of services?	196 (96%)	9 (4%)	142 (99%)	2 (1%)
Do you think that the staff responsibilities are clearly delineated?	203 (99%)	2 (1%)	143 (99%)	1 (1%)
Are the work shifts in your facility clearly explained?	201 (98%)	4 (2%)	135 (94%)	9 (6%)
Are the work shifts in your facility well organized?	195 (95%)	10 (5%)	132 (92%)	12 (8%)
Does the management motivate you by recognizing work well done?	196 (96%)	9 (4%)	130 (90%)	14 (10%)
Does the management motivate you by providing constructive feedback on your work?	176 (86%)	29 (14%)	140 (97%)	4 (3%)
Do you have a job description?	183 (89%)	22 (11%)	127 (88%)	17 (12%)
Are you paid on time?	188 (92%)	16 (8%)	137 (95%)	7 (5%)

Table 30: Health staff supervising authorities

	Cao Bang (number of mentions)	Son La
Preventive medical health Center (of the district)	33	41
District health center	--	26
Health Office	19	9
ADRA	13	--
Facility intern Supervision	10	--
Department of Health	9	9
District hospital	--	6
Central Malaria Institute	5	--
Provincial malaria prevention center	--	4
Malaria global fund	--	3
Social Disease Prevention Center	2	--
Food security office	--	2
Department of Reproductive Health	2	--
Committee for Mother and Child Protection	2	--
Cao Bang medicine company	1	--
HIV/AIDS Prevention Center	1	--
Reproductive Health Center	1	--
Provincial hospital	--	1
Never received Supervision	94	43

Table 31: Staffs' training and development

Training & Development	Cao Bang		Son La	
	Yes Count	No %	Yes	No
Do you feel sufficiently trained to provide all services within your responsibility?	13	(6%)	192 (94%)	61 (42%) 83 (58%)
Are you trained in all necessary standards and procedures, including those for infection prevention and do you feel well prepared to practice them?	22	(11%)	183 (89%)	75 (52%) 69 (48%)
Have you ever been trained to counsel clients about sexuality?	18	(9%)	187 (91%)	63 (44%) 81 (56%)
Have you received a refresher training recently?	33	(16%)	172 (84%)	65 (45%) 79 (55%)
Do you know how to refer clients for health services outside your area of expertise?	178	(87%)	27 (13%)	93 (65%) 51 (35%)
Are you trained in record keeping?	13	(6%)	192 (94%)	23 (16%) 121 (84%)
Do you feel that you have the knowledge and skills needed to provide good services?	15	(7%)	189 (93%)	57 (40%) 87 (60%)

Table 32: Staffs' counseling abilities

Ability to counsel different target groups	Cao Bang		Son La	
	Yes Count	No %	Yes	No
Do you feel well prepared to counsel pregnant women ?	147	(72%)	58 (28%)	132 (92%) 12 (8%)
Do you feel well prepared to counsel breastfeeding women ?	155	(76%)	50 (24%)	132 (92%) 12 (8%)
Do you feel well prepared to counsel postpartum women ?	127	(62%)	78 (38%)	129 (89%) 15 (11%)
Do you feel well prepared to counsel women with complications after abortion ?	57	(28%)	148 (72%)	79 (55%) 65 (45%)
Do you feel well prepared to counsel clients who come for HIV/ RTI and STD services?	62	(30%)	143 (70%)	76 (53%) 68 (47%)
Do you feel well prepared to counsel Adolescents and young adults?	47	(23%)	158 (77%)	79 (55%) 65 (45%)
Do you feel well prepared to counsel disabled clients ?	39	(19%)	166 (81%)	66 (46%) 78 (54%)
Do you feel well prepared to counsel members of different social and ethnic groups ?	37	(18%)	168 (82%)	65 (45%) 79 (55%)

Table 33: Topic of received refresher training (Cao Bang)

Subject of recently received refresher training Cao Bang	Number of mentions	Duration of training
HIV/ AIDS	7	2-5 days
Safe motherhood	5	5 days
Supervision skills	4	1-10 days
Contraceptive methods	1	3 days
Rabies	1	1 day
Vaccination	1	2 days
Reproductive Health	1	7 days
Handle 3 phases of delivery	1	5 days
Adolescent Health	1	3 days
Ultra sound	1	?
Endoscopy	1	3 month
Rehabilitation	1	7 days

Table 34: Topic of received refresher training (Son La)

Subject of recently received refresher training Son La	Number of mentions	Duration of training
Vaccination	20	1-4 days
Malaria	12	1-10 days
Tuberculosis prevention	9	1-3 days
Reproductive Health	7	1-20 days
HIV/ AIDS	7	1-10 days
Malnutrition prevention	4	1-2 days
Nutrition	4	2-3 day
Orthopedic foot problems	3	1-3 days
Child emergency cases	3	2-20 days
Supervision skills	3	3-10 days
Food safety	3	1 day
Diagnostic and treatment skills	2	3 days
Safe motherhood	2	3-15 days
Contraceptive methods	1	1 day
Safe abortion	1	14 days
Hemorrhagic fever	1	1 day
Leprosy	1	1 day
Management	1	3 month

Note: Some Respondents got more than 1 training recently

Table 35: Record keeping

Record keeping	Cao Bang		Son La	
	Yes Count %	No	Yes	No
Are birth records properly filled in and reviewed periodically?	187 (91%)	18 (9%)	82 (57%)	62 (43%)
Are medical records properly filled in and reviewed periodically?	46 (22%)	159 (78%)	105 (73%)	39 (27%)
Are laboratory records properly filled in and reviewed periodically?	65 (32%)	140 (68%)	53 (37%)	91 (63%)
Are complication records properly filled in and reviewed periodically?	128 (62%)	77 (38%)	74 (51%)	70 (49%)
Are death records properly filled in and reviewed periodically?	168 (82%)	37 (18%)	76 (53%)	68 (47%)
Are inventory supply forms properly filled in and reviewed periodically?	198 (97%)	7 (3%)	127 (88%)	17 (12%)

Table 36: Ability to address RTI and STD

Ability to address RTI and STD	Cao Bang		Son La	
	Yes Count %	No	Yes	No
Able to assess risk	79 (39%)	126 (61%)	90 (62%)	54 (38%)
Able to diagnose the disease	72 (35%)	133 (65%)	66 (46%)	78 (54%)
Able to treat or refer	67 (33%)	138 (67%)	59 (41%)	85 (59%)

Table 37: Ability to address HIV

Ability to address HIV	Cao Bang		Son La	
	Yes Count %	No	Yes	No
Able to assess risk	57 (28%)	148 (72%)	63 (44%)	81 (56%)
Able to diagnose the disease	45 (22%)	160 (78%)	34 (24%)	110 (76%)
Able to treat or refer	36 (18%)	169 (82%)	27 (19%)	117 (81%)

Table 38: Availability of IEC materials

Information & Education	Cao Bang		Son La	
	Yes Count %	No	Yes	No
Are relevant client education materials available in the facility?	96 (47%)	108 (53%)	116 (81%)	28 (19%)
Are materials available for clients to take home?	95 (46%)	110 (54%)	60 (41%)	84 (59%)
Does the facility have a system for ordering client education material?	49 (24%)	155 (76%)	31 (21%)	113 (79%)
Are relevant job aids available in the facility?	42 (21%)	162 (79%)	106 (74%)	38 (26%)

Table 39: Infrastructure of health facilities

Infrastructure	Cao Bang		Son La		
	Yes Count	No %	Yes	No	
Does the facility have a reliable clean water supply?	80	(39%)	125 (61%)	105 (73%)	39 (27%)
Does the facility have a reliable supply of electricity?	191	(93%)	14 (7%)	138 (96%)	6 (4%)
Does the facility have a fan or air-conditioning?	40	(20%)	165 (80%)	129 (90%)	15 (10%)
Do you have enough lightening to do your work well?	120	(59%)	85 (41%)	135 (94%)	9 (6%)
Are hand washing facilities available in the facility?	168	(82%)	37 (18%)	102 (71%)	42 (29%)
Are hand washing facilities available in every examination room?	84	(41%)	121 (59%)	34 (24%)	110 (76%)
Do you have enough rooms to maintain appropriate privacy with your client?	39	(19%)	166 (81%)	90 (63%)	54 (38%)
Does the facility have emergency transport available during hours of service?	61	(30%)	143 (70%)	30 (21%)	114 (79%)
Does the facility have a telephone to manage emergency situations/arrange referrals?	Not asked		Not asked	89 (62%)	55 (38%)
Do you have a mobile phone which could be used for professional purposes?	Not asked		Not asked	26 (18%)	118 (82%)

Table 40: Supplies and equipment

Supplies & Equipment	Cao Bang		Son La		
	Yes Count	No %	Yes	No	
During the last three months, did the facility have all of the drugs and expandable supplies that were needed?	149	(73%)	56 (27%)	82 (57%)	62 (43%)
During the last three months, did the facility have all of the equipment that was needed and was it in working order?	126	(62%)	79 (38%)	58 (40%)	86 (60%)
Are all drugs and contraceptives that are in the stock within the expiration date?	175	(85%)	30 (15%)	113 (79%)	31 (21%)
Does the facility keep an inventory to help staff when to reorder supplies?	183	(89%)	22 (11%)	98 (68%)	46 (32%)
Do you have enough buckets, bleach and water to ensure that 0.5% chlorine solution is always available in each room?	105	(51%)	100 (49%)	62 (43%)	82 (57%)
Do you have the supplies and facilities needed to properly dispose of sharps and other medical waste?	115	(56%)	90 (44%)	121 (84%)	23 (16%)
Do you have equipment and supplies for sterilization and working properly?	104	(51%)	101 (49%)	95 (66%)	49 (34%)
Do you have supplies such as gloves, needles and syringes and antiseptic solutions available in necessary quantities?	137	(67%)	68 (33%)	119 (83%)	25 (17%)
Is there enough furniture in the facility?	31	(16%)	169 (84%)	68 (47%)	76 (53%)
Is the furniture undamaged?	167	(94%)	11 (6%)	123 (85%)	21 (15%)
Is all the furniture clean?	162	(91%)	16 (9%)	96 (67%)	48 (33%)

Annex 6

Statistics & Analysis

Table 41: Differences in clients' satisfaction stratified by province

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Cao Bang	508	2.83	0.518	109059.5	0.074
	Son La	453	2.89	0.493		
Did you get the service wanted	Cao Bang	508	2.90	0.574	84219	<0.001
	Son La	453	3.22	0.452		
To what extent has service met needs	Cao Bang	508	2.45	0.585	96897	<0.001
	Son La	453	2.60	0.529		
Would you recommend facility	Cao Bang	508	3.41	0.520	111450	0.332
	Son La	453	3.44	0.523		
Have the services helped	Cao Bang	508	3.14	0.431	105588.5	0.001
	Son La	453	3.05	0.376		
How satisfied with service received	Cao Bang	508	2.75	0.695	88604	<0.001
	Son La	453	3.03	0.483		
Would you come back to facility	Cao Bang	508	3.48	0.552	113683.5	0.713
	Son La	453	3.50	0.505		
Accessibility	Cao Bang	508	2.69	0.666	73593.5	<0.001
	Son La	453	3.17	0.647		
Equipment	Cao Bang	508	2.24	0.584	104292.5	0.003
	Son La	453	2.36	0.622		
Convenience	Cao Bang	508	2.33	0.653	112859	0.560
	Son La	453	2.32	0.686		
Cleanness	Cao Bang	508	2.68	0.648	71691.5	<0.001
	Son La	453	2.13	0.805		
Waiting Time	Cao Bang	508	2.99	0.615	98271	<0.001
	Son La	453	3.16	0.674		
Time spent with physician	Cao Bang	508	2.97	0.651	101221.5	<0.001
	Son La	453	3.13	0.631		
Explanation of what was done	Cao Bang	508	2.77	0.641	96961.5	<0.001
	Son La	453	2.97	0.710		
Technical skills	Cao Bang	508	2.69	0.697	80231	<0.001
	Son La	453	3.08	0.608		
Personal manner	Cao Bang	508	3.04	0.601	90452.5	<0.001
	Son La	453	3.30	0.577		
Maintenance of privacy	Cao Bang	497	2.87	0.661	74843	<0.001
	Son La	453	3.31	0.633		
Service at weekends/night	Cao Bang	508	2.62	0.756	97199.5	<0.001
	Son La	453	2.86	0.752		
Help in case of referral	Cao Bang	508	2.35	0.956	63778	<0.001
	Son La	453	3.17	0.886		

Table 42: Differences in clients' satisfaction stratified by kind of facility**CHS:** Commune Health Station**Hospital:** Provincial Hospital, Provincial Traditional Hospital, District Hospital

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Hospital	197	3.03	0.451	59669	<0.001
	CHS	752	2.81	0.509		
Did you get the service wanted	Hospital	197	3.30	0.579	52979	<0.001
	CHS	752	2.98	0.510		
To what extent has service met needs	Hospital	197	2.82	0.512	47898	<0.001
	CHS	752	2.43	0.547		
Would you recommend facility	Hospital	197	3.62	0.487	56080.5	<0.001
	CHS	752	3.37	0.517		
Have the services helped	Hospital	197	3.20	0.451	64247.5	<0.001
	CHS	752	3.06	0.386		
How satisfied with service received	Hospital	197	3.14	0.603	54233	<0.001
	CHS	752	2.80	0.598		
Would you come back to facility	Hospital	197	3.68	0.480	56809.5	<0.001
	CHS	752	3.43	0.532		
Accessibility	Hospital	197	3.14	0.631	57401.5	<0.001
	CHS	752	2.85	0.698		
Equipment	Hospital	197	2.62	0.641	49260	<0.001
	CHS	752	2.20	0.548		
Convenience	Hospital	197	2.61	0.642	52833.5	<0.001
	CHS	752	2.24	0.645		
Cleanness	Hospital	197	2.56	0.732	63230.5	<0.001
	CHS	752	2.37	0.770		
Waiting Time	Hospital	197	3.06	0.664	74044.5	0.993
	CHS	752	3.06	0.643		
Time spent with physician	Hospital	197	3.14	0.586	67084.5	0.019
	CHS	752	3.01	0.652		
Explanation of what was done	Hospital	197	2.99	0.681	64060.5	0.001
	CHS	752	2.82	0.669		
Clarification of health problem	Hospital	80	3.13	0.769	12894.5	0.055
	CHS	368	2.96	0.705		
Explanation of treatment	Hospital	80	3.14	0.725	13298	0.129
	CHS	368	3.00	0.729		
Possibility to ask questions	Hospital	78	2.91	0.706	13440.5	0.716
	CHS	353	2.87	0.755		
Technical skills	Hospital	197	3.06	0.594	59838	<0.001
	CHS	752	2.81	0.692		
Personal manner	Hospital	197	3.22	0.629	68547	0.059
	CHS	752	3.13	0.592		
Maintenance of privacy	Hospital	187	3.15	0.621	66440	0.184
	CHS	752	3.06	0.694		
Service at weekends/night	Hospital	197	2.98	0.654	57823	<0.001
	CHS	752	2.66	0.763		
Help in case of referral	Hospital	197	3.20	0.726	48354	<0.001
	CHS	752	2.60	1.025		

Table 43: Differences in clients' satisfaction stratified by sex

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Male	314	2.83	0.495	97231	0.168
	Female	647	2.88	0.512		
Did you get the service wanted	Male	314	2.97	0.578	91839.5	0.002
	Female	647	3.09	0.523		
To what extent has service met needs	Male	314	2.47	0.588	93936	0.031
	Female	647	2.55	0.551		
Would you recommend facility	Male	314	3.38	0.504	94067	0.032
	Female	647	3.45	0.528		
Have the services helped	Male	314	3.07	0.373	97227.5	0.103
	Female	647	3.11	0.424		
How satisfied with service received	Male	314	2.84	0.641	96507.5	0.144
	Female	647	2.91	0.609		
Would you come back to facility	Male	314	3.43	0.528	93427	0.020
	Female	647	3.51	0.530		
Accessibility	Male	314	2.88	0.711	97672	0.288
	Female	647	2.93	0.693		
Equipment	Male	314	2.26	0.614	96093.5	0.110
	Female	647	2.32	0.600		
Convenience	Male	314	2.29	0.707	97232	0.221
	Female	647	2.34	0.649		
Cleanness	Male	314	2.41	0.816	101308.5	0.942
	Female	647	2.43	0.755		
Waiting Time	Male	314	3.08	0.660	100408	0.738
	Female	647	3.07	0.644		
Time spent with physician	Male	314	3.04	0.638	100882.5	0.843
	Female	647	3.05	0.650		
Explanation of what was done	Male	314	2.83	0.703	97409	0.247
	Female	647	2.88	0.670		
Clarification of health problem	Male	142	2.93	0.731	18440	0.055
	Female	311	3.07	0.707		
Explanation of treatment	Male	142	3.02	0.678	19573	0.364
	Female	311	3.07	0.744		
Possibility to ask questions	Male	138	2.90	0.697	20423	0.900
	Female	298	2.88	0.773		
Technical skills	Male	314	2.87	0.680	101140	0.904
	Female	647	2.88	0.686		
Personal manner	Male	314	3.11	0.590	95657	0.087
	Female	647	3.18	0.609		
Maintenance of privacy	Male	306	3.08	0.650	97591.5	0.787
	Female	644	3.08	0.700		
Service at weekends/night	Male	314	2.65	0.773	93950	0.039
	Female	647	2.77	0.757		
Help in case of referral	Male	314	2.69	1.025	97779	0.325
	Female	647	2.76	1.003		

Table 44: Differences in clients' satisfaction stratified by age (younger/older mean)

Mean of age in the whole sample (clients): 39 years

Young defined as younger/equal mean**Old** defined as older mean

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Young	562	2.89	0.505	105417	0.043
	Old	399	2.82	0.507		
Did you get the service wanted	Young	562	3.09	0.540	104075	0.017
	Old	399	3.00	0.547		
To what extent has service met needs	Young	562	2.55	0.552	104013.5	0.030
	Old	399	2.48	0.579		
Would you recommend facility	Young	562	3.41	0.514	109137	0.417
	Old	399	3.44	0.531		
Have the services helped	Young	562	3.12	0.425	107231.5	0.081
	Old	399	3.07	0.382		
How satisfied with service received	Young	562	2.93	0.601	102795	0.010
	Old	399	2.82	0.641		
Would you come back to facility	Young	562	3.48	0.521	109916	0.551
	Old	399	3.50	0.544		
Accessibility	Young	562	2.95	0.722	105560	0.090
	Old	399	2.87	0.664		
Equipment	Young	562	2.31	0.630	109960.5	0.549
	Old	399	2.28	0.567		
Convenience	Young	562	2.32	0.683	109991.5	0.569
	Old	399	2.34	0.648		
Cleanness	Young	562	2.35	0.756	97724	<0.001
	Old	399	2.52	0.792		
Waiting Time	Young	562	3.08	0.655	110405	0.642
	Old	399	3.06	0.641		
Time spent with physician	Young	562	3.04	0.661	111300.5	0.825
	Old	399	3.06	0.624		
Explanation of what was done	Young	562	2.90	0.688	104931	0.057
	Old	399	2.81	0.669		
Clarification of health problem	Young	252	3.07	0.749	22245	0.014
	Old	201	2.91	0.680		
Explanation of treatment	Young	252	3.08	0.784	22911	0.051
	Old	201	2.98	0.659		
Possibility to ask questions	Young	243	2.89	0.785	22954.5	0.675
	Old	193	2.88	0.703		
Technical skills	Young	562	2.90	0.679	106913	0.174
	Old	399	2.84	0.690		
Personal manner	Young	562	3.18	0.578	108809	0.363
	Old	399	3.13	0.638		
Maintenance of privacy	Young	558	3.10	0.649	107593	0.628
	Old	392	3.06	0.731		
Service at weekends/night	Young	562	2.74	0.754	111822	0.939
	Old	399	2.72	0.778		
Help in case of referral	Young	562	2.74	1.019	111311	0.842
	Old	399	2.73	1.000		

Table 45: Differences in clients' satisfaction stratified by age (in extreme groups)

Young defined as 15-25 years old

Old defined as 50-99 years old

(Note: The age group 26-49 years was left out!)

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Young	143	2.90	0.527	13701.5	0.353
	Old	201	2.84	0.514		
Did you get the service wanted	Young	143	3.17	0.556	12617	0.019
	Old	201	3.02	0.565		
To what extent has service met needs	Young	143	2.58	0.509	13408.5	0.230
	Old	201	2.54	0.616		
Would you recommend facility	Young	143	3.48	0.501	13835	0.495
	Old	201	3.44	0.508		
Have the services helped	Young	143	3.13	0.426	13996.5	0.531
	Old	201	3.10	0.387		
How satisfied with service received	Young	143	3.00	0.581	12912.5	0.064
	Old	201	2.88	0.670		
Would you come back to facility	Young	143	3.52	0.515	14222	0.850
	Old	201	3.51	0.521		
Accessibility	Young	143	3.06	0.720	12617	0.033
	Old	201	2.90	0.656		
Equipment	Young	143	2.38	0.592	13270	0.162
	Old	201	2.30	0.609		
Convenience	Young	143	2.35	0.705	14107.5	0.741
	Old	201	2.37	0.621		
Cleanness	Young	143	2.38	0.778	11970	0.004
	Old	201	2.61	0.748		
Waiting Time	Young	143	3.12	0.707	13169.5	0.130
	Old	201	3.02	0.648		
Time spent with physician	Young	143	3.08	0.707	13744	0.432
	Old	201	3.04	0.627		
Explanation of what was done	Young	143	2.94	0.694	12845	0.061
	Old	201	2.80	0.721		
Clarification of health problem	Young	92	3.08	0.745	2282.5	0.204
	Old	56	2.91	0.721		
Explanation of treatment	Young	92	3.12	0.823	2260.5	0.170
	Old	56	2.98	0.674		
Possibility to ask questions	Young	87	2.97	0.706	2107.5	0.248
	Old	54	3.09	0.759		
Technical skills	Young	143	2.99	0.666	12790.5	0.054
	Old	201	2.85	0.698		
Personal manner	Young	143	3.24	0.569	14130	0.764
	Old	201	3.19	0.683		
Maintenance of privacy	Young	143	3.13	0.640	13458.5	0.685
	Old	201	3.08	0.734		
Service at weekends/night	Young	143	2.76	0.760	13906.5	0.568
	Old	201	2.80	0.707		
Help in case of referral	Young	143	2.80	1.002	14216.5	0.858
	Old	201	2.77	0.958		

Table 46: Differences in clients' satisfaction stratified by education (education in two groups)

Low education: illiterate and primary school
High education: secondary school, high school, vocational training

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Low edu	355	2.85	0.506	105097	0.447
	High edu	606	2.87	0.508		
Did you get the service wanted	Low edu	355	3.11	0.526	99484	0.015
	High edu	606	3.02	0.533		
To what extent has service met needs	Low edu	355	2.56	0.581	100943	0.070
	High edu	606	2.50	0.554		
Would you recommend facility	Low edu	355	3.40	0.525	104151	0.343
	High edu	606	3.44	0.519		
Have the services helped	Low edu	355	3.05	0.391	99786.5	0.005
	High edu	606	3.13	0.416		
How satisfied with service received	Low edu	355	2.89	0.567	105682.5	0.598
	High edu	606	2.88	0.649		
Would you come back to facility	Low edu	355	3.46	0.532	102811.5	0.189
	High edu	355	2.85	0.506		
Accessibility	Low edu	355	3.01	0.689	95343	0.001
	High edu	606	2.86	0.700		
Equipment	Low edu	355	2.30	0.575	105701	0.597
	High edu	606	2.30	0.622		
Convenience	Low edu	355	2.22	0.656	93205	<0.001
	High edu	606	2.39	0.668		
Cleanness	Low edu	355	2.22	0.779	82886.5	<0.001
	High edu	606	2.54	0.748		
Waiting Time	Low edu	355	3.09	0.673	104997.5	0.477
	High edu	606	3.06	0.635		
Time spent with physician	Low edu	355	3.07	0.668	10328	0.228
	High edu	606	3.03	0.632		
Explanation of what was done	Low edu	355	2.85	0.683	105552.5	0.587
	High edu	606	2.87	0.681		
Clarification of health problem	Low edu	227	2.93	0.690	19892.5	0.001
	High edu	209	3.14	0.730		
Explanation of treatment	Low edu	227	2.92	0.730	18893	<0.001
	High edu	209	3.21	0.687		
Possibility to ask questions	Low edu	227	2.84	0.790	22168.5	0.191
	High edu	209	2.94	0.701		
Technical skills	Low edu	355	2.92	0.680	101513.5	0.106
	High edu	606	2.85	0.686		
Personal manner	Low edu	355	3.21	0.610	99553.5	0.025
	High edu	606	3.13	0.598		
Maintenance of privacy	Low edu	353	3.18	0.668	92353	<0.001
	High edu	597	3.02	0.686		
Service at weekends/night	Low edu	355	2.73	0.795	106930.5	0.867
	High edu	606	2.73	0.745		
Help in case of referral	Low edu	355	2.81	1.036	100710	0.085
	High edu	606	2.69	0.993		

Table 47: Differences in clients' satisfaction stratified by education (education in extreme groups)**Low education:** illiterate and primary school**High education:** high school & vocational training (*Note: secondary school was left out!*)

	Grouping Variable	N	Mean	Standard deviation	Mann-Whitney-U	p-value (2-sided)
How would you rate quality of services	Low edu	355	2.85	0.506	56648	0.485
	High edu	327	2.87	0.497		
Did you get the service wanted	Low edu	355	3.11	0.526	51172	0.001
	High edu	327	2.97	0.564		
To what extent has service met needs	Low edu	355	2.56	0.581	54335.5	0.102
	High edu	327	2.50	0.559		
Would you recommend facility	Low edu	355	3.40	0.525	54335.5	0.097
	High edu	327	3.47	0.518		
Have the services helped	Low edu	355	3.05	0.391	51531	<0.001
	High edu	327	3.17	0.421		
How satisfied with service received	Low edu	355	2.89	0.567	55506.5	0.251
	High edu	327	2.85	0.664		
Would you come back to facility	Low edu	355	3.46	0.532	53380.5	0.037
	High edu	327	3.54	0.529		
Accessibility	Low edu	355	3.01	0.689	47376.5	<0.001
	High edu	327	2.77	0.678		
Equipment	Low edu	355	2.30	0.575	56734	0.549
	High edu	327	2.29	0.619		
Convenience	Low edu	355	2.22	0.656	49615	<0.001
	High edu	327	2.41	0.643		
Cleanness	Low edu	355	2.22	0.779	40662.5	<0.001
	High edu	327	2.63	0.678		
Waiting Time	Low edu	355	3.09	0.673	53712	0.052
	High edu	327	3.00	0.602		
Time spent with physician	Low edu	355	3.07	0.668	54485	0.109
	High edu	327	3.01	0.602		
Explanation of what was done	Low edu	355	2.85	0.683	57640	0.860
	High edu	327	2.84	0.659		
Clarification of health problem	Low edu	237	2.90	0.694	6025.5	<0.001
	High edu	70	3.27	0.721		
Explanation of treatment	Low edu	237	2.91	0.736	5535	<0.001
	High edu	70	3.37	0.618		
Possibility to ask questions	Low edu	227	2.84	0.790	6823	0.079
	High edu	69	3.03	0.785		
Technical skills	Low edu	355	2.92	0.680	50706	0.002
	High edu	327	2.76	0.677		
Personal manner	Low edu	355	3.21	0.610	51611.5	0.003
	High edu	327	3.09	0.575		
Maintenance of privacy	Low edu	353	3.18	0.668	48648.5	<0.001
	High edu	320	3.00	0.660		
Service at weekends/night	Low edu	355	2.73	0.795	57970	0.976
	High edu	327	2.73	0.780		
Help in case of referral	Low edu	355	2.81	1.036	53707	0.078
	High edu	327	2.67	0.944		

Table 48: Differences in staffs' training status stratified by province

	Cao Bang		Son La		Chi-Square	df	p-value (2-sided)
	Yes (%)	No	Yes	No			
Feels sufficiently trained to provide services within responsibility	6	94	42	58	65.684	1	<0.001
Trained in necessary standards and procedures	11	89	52	48	72.070	1	<0.001
Trained to counsel sexuality related topics	9	91	44	56	58.036	1	<0.001
Recently received refresher training	16	84	45	55	35.324	1	<0.001
Able to counsel pregnant women	72	28	92	8	21.015	1	<0.001
Able to counsel breastfeeding women	76	24	92	8	14.928	1	<0.001
Able to counsel postpartum women	62	38	90	10	33.041	1	<0.001
Able to counsel women with complications after abortion	28	72	55	45	26.035	1	<0.001
Able to counsel clients with HIV/RTI/STD	30	70	53	47	17.966	1	<0.001
Able to counsel adolescents	23	77	55	45	37.392	1	<0.001
Able to counsel disabled clients	19	81	46	54	28.902	1	<0.001
Able to counsel different social and ethnic groups	18	82	45	55	30.010	1	<0.001
Knows how to refer clients for appropriate treatment	87	13	65	35	24.120	1	<0.001
Trained in record keeping	6	94	16	84	8.480	1	0.004
Able to assess risk of RTI and STD	38	62	62	38	19.448	1	<0.001
Able to diagnose RTI and STD	35	65	46	54	4.059	1	0.044
Able to treat or refer clients with RTI/STD	33	67	41	59	2.519	1	0.112
Able to assess risk of HIV	28	72	44	56	9.532	1	0.002
Able to diagnose HIV	22	78	24	76	0.133	1	0.715
Able to treat or refer clients with HIV	18	82	19	81	0.081	1	0.776
Have all knowledge to provide services of good quality	7	93	40	60	53.439	1	<0.001

Table 49: Differences in staffs' training status stratified by kind of health facility

The group hospital includes: provincial hospital, district hospital and provincial traditional hospital

	Hospital		CHS		Chi-Square	df	p-value (2-sided)
	Yes (%)	No	Yes	No			
Feels sufficiently trained to provide services within responsibility	19	81	20	80	0.042	1	0.837
Trained in necessary standards and procedures	32	68	24	76	2.176	1	0.140
Trained to counsel sexuality related topics	22	78	21	79	0.012	1	0.912
Recently received refresher training	25	75	27	73	0.152	1	0.697
Able to counsel pregnant women	67	33	85	15	12.036	1	0.001
Able to counsel breastfeeding women	72	28	86	14	8.843	1	0.003
Able to counsel postpartum women	67	33	75	25	1.956	1	0.162
Able to counsel women with complications after abortion	48	52	36	64	3.993	1	0.046
Able to counsel clients with HIV/RTI/STD	45	55	36	64	1.828	1	0.176
Able to counsel adolescents	30	70	38	62	1.618	1	0.203
Able to counsel disabled clients	29	71	31	69	0.137	1	0.711
Able to counsel different social and ethnic groups	25	75	30	70	0.639	1	0.424
Knows how to refer clients for appropriate treatment	76	24	77	23	0.068	1	0.795
Trained in record keeping	10	90	11	89	0.083	1	0.773
Able to assess risk of RTI and STD	52	48	47	53	0.483	1	0.487
Able to diagnose RTI and STD	51	49	35	65	6.338	1	0.012
Able to treat or refer clients with RTI/STD	42	58	33	67	2.060	1	0.151
Able to assess risk of HIV	45	55	30	70	6.046	1	0.014
Able to diagnose HIV	41	59	15	85	24.599	1	<0.001
Able to treat or refer clients with HIV	30	70	13	87	11.782	1	0.001
Have all knowledge to provide services of good quality	19	81	20	80	0.020	1	0.886

Table 50: Differences in staffs' training status stratified by age

Mean age in the sample (staff): 37 years

Young: younger/equal mean**Old:** older mean

	Young		Old		Chi-Square	df	p-value (2-sided)
	Yes (%)	No	Yes	No			
Feels sufficiently trained to provide services within responsibility	18	82	24	76	2.295	1	0.130
Trained in necessary standards and procedures	25	75	30	70	1.203	1	0.273
Trained to counsel sexuality related topics	17	83	29	71	6.536	1	0.011
Recently received refresher training	26	74	30	70	0.530	1	0.466
Able to counsel pregnant women	82	18	78	22	1.088	1	0.297
Able to counsel breastfeeding women	87	13	78	22	5.210	1	0.022
Able to counsel postpartum women	78	22	69	31	3.491	1	0.062
Able to counsel women with complications after abortion	40	60	38	62	0.058	1	0.810
Able to counsel clients with HIV/RTI/STD	39	61	40	60	0.035	1	0.852
Able to counsel adolescents	38	62	35	65	0.388	1	0.533
Able to counsel disabled clients	32	68	29	71	0.387	1	0.534
Able to counsel different social and ethnic groups	31	69	28	72	0.524	1	0.469
Knows how to refer clients for appropriate treatment	76	24	79	21	0.365	1	0.546
Trained in record keeping	8	92	12	88	1.058	1	0.304
Able to assess risk of RTI and STD	49	51	48	52	0.116	1	0.734
Able to diagnose RTI and STD	40	60	39	61	0.001	1	0.973
Able to treat or refer clients with RTI/STD	35	65	37	63	0.073	1	0.787
Able to assess risk of HIV	30	70	38	62	2.082	1	0.149
Able to diagnose HIV	19	81	25	75	1.724	1	0.189
Able to treat or refer clients with HIV	15	85	21	79	2.443	1	0.118
Have all knowledge to provide services of good quality	18	82	23	77	1.709	1	0.191

Table 51: Differences in staffs' training status stratified by occupation

(Note: only "yes" answers are displayed)

	Doctor (%)	Nurse	Midwife	Nurse assistant	Chi-Square	df	p-value (2-sided)
Feels sufficiently trained to provide services within responsibility	13	31	14	23	13.661	3	0.003
Trained in necessary standards and procedures	28	34	25	15	5.822	3	0.121
Trained to counsel sexuality related topics	19	23	27	21	1.762	3	0.623
Recently received refresher training	44	32	22	13	14.751	3	0.002
Able to counsel pregnant women	80	81	86	59	13.702	3	0.003
Able to counsel breastfeeding women	80	81	89	72	6.881	3	0.076
Able to counsel postpartum women	80	72	77	56	7.858	3	0.049
Able to counsel women with complications after abortion	43	38	42	28	2.542	3	0.468
Able to counsel clients with HIV/RTI/STD	46	37	42	31	3.076	3	0.380
Able to counsel adolescents	35	35	37	38	0.336	3	0.953
Able to counsel disabled clients	35	28	28	39	2.642	3	0.450
Able to counsel different social and ethnic groups	28	29	29	36	0.957	3	0.812
Knows how to refer clients for appropriate treatment	91	74	78	72	7.319	3	0.062
Trained in record keeping	13	15	5	8	7.836	3	0.050
Able to assess risk of RTI and STD	57	45	55	28	10.514	3	0.015
Able to diagnose RTI and STD	54	34	46	18	16.328	3	0.001
Able to treat or refer clients with RTI/STD	52	32	42	13	17.682	3	0.001
Able to assess risk of HIV	57	34	27	28	16.477	3	0.001
Able to diagnose HIV	44	20	18	18	17.463	3	0.001
Able to treat or refer clients with HIV	33	17	15	13	10.422	3	0.015
Have all knowledge to provide services of good quality	17	21	20	28	2.001	3	0.572

Table 52: Differences in staffs' training status stratified by sex

	Male		Female		Chi-Square	df	p-value (2-sided)
	Yes (%)	No	Yes	No			
Feels sufficiently trained to provide services within responsibility	27	73	20	80	2.064	1	0.151
Trained in necessary standards and procedures	26	74	28	72	0.125	1	0.724
Trained to counsel sexuality related topics	14	86	25	75	3.666	1	0.056
Recently received refresher training	30	70	27	73	0.236	1	0.627
Able to counsel pregnant women	72	28	82	18	3.000	1	0.083
Able to counsel breastfeeding women	72	28	85	15	5.621	1	0.018
Able to counsel postpartum women	71	29	74	26	0.240	1	0.624
Able to counsel women with complications after abortion	39	61	39	61	0.001	1	0.975
Able to counsel clients with HIV/RTI/STD	32	68	41	59	2.109	1	0.146
Able to counsel adolescents	36	64	36	64	0.001	1	0.980
Able to counsel disabled clients	35	65	29	71	0.902	1	0.342
Able to counsel different social and ethnic groups	35	65	28	72	1.284	1	0.257
Knows how to refer clients for appropriate treatment	75	25	78	22	0.259	1	0.610
Trained in record keeping	12	88	10	90	0.152	1	0.697
Able to assess risk of RTI and STD	43	57	50	50	0.842	1	0.359
Able to diagnose RTI and STD	30	70	42	58	2.984	1	0.084
Able to treat or refer clients with RTI/STD	26	74	39	61	3.740	1	0.053
Able to assess risk of HIV	39	61	33	67	0.859	1	0.354
Able to diagnose HIV	22	78	23	77	0.040	1	0.842
Able to treat or refer clients with HIV	14	86	19	81	0.736	1	0.391
Have all knowledge to provide services of good quality	16	84	22	78	1.182	1	0.277

Annex 7 Health facilities included in the survey

Cao Bang Province

District	Commune	Facility
Cao Bang Town	Hop Giang Tan Giang Ngoc Xuan De Tham	RH-Center Commune Health Station Preventive Health Center Provincial Hospital Provincial Traditional Hospital Commune Health Station Commune Health Station Commune Health Station
Bao Lac	Bao Lac Town Thuong Ha Co Ba Hong Tri Hung Dao Dinh Phung Bao Toan Khanh Xuan	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Bao Lam	Bao Lam Town Ly Bon Vinh Quang Nam Quang Tan Viet Vinh Phong Thai Hoc Quang Lam	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Ha Quang	Ha Quang Town Phu Ngoc Soc Ha Dao Ngan Keo Yen Lung Nam	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Thong Nong	Thong Nong Town Da Thong Can Yen Luong Thong Yen Son Luong Can	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Tra Linh	Tra Linh Town Co Muoi Quang Trung Luu Ngoc Xuan Noi Quoc Toan	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Trung Khanh	Trung Khanh Town Thong Hue Chi Vien Canh Tien Duc Hong Dam Thuy	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Nguyen Binh	Nguyen Binh Town Tinh Tuc Minh Thanh Bac Hop Lang Mon Phan Thanh The Duc Tam Kim	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Hoa An	Hoa An Town Huong Dao Duc Long Nguyen Hue Hoang Tung Dan Chu	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Quang Uyen	Quang Uyen Town Doc Lap Phuc Sen Hong Dinh Hoang Hai	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station

	Hanh Phuc	Commune Health Station
Phuc Hoa	Phuc Hoa Town Ta Lung Hong dai Cach Linh Dai Son My Hung	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Ha Lang	Ha Lang Town Dong Loan Thang Loi Vinh Quy Thai Duc Thi Hoa	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Thach An	Thach An Town Kim Dong Thai Cuong Canh Tan Thuy Hung Duc Long	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station

- 1 Provincial Hospital
- 1 Provincial Traditional Hospital
- 1 Provincial Preventive Center
- 1 Provincial RH Center
- 12 District Hospitals
- 70 Commune Health Stations

86 Health Facilities included in Cao Bang Province

Son La Province

District	Commune	Facility
Son La Town	Son La Town Chieng Sinh Quyet Tam Chieng Den Hua La Chieng Ngan	Provincial Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Mai Son	Mai Son Town Muong Tranh Co Noi Chieng Mung Muong Bon Muong Bang Chieng Ban	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Yen Chau	Yen Chau Town Tu Nang Sap Vat Chieng Sang Phieng Khoai Long Phieng	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Moc Chau	Moc Chau Town Nong Truong Phieng Luong Chieng Khoa Hua Pang Van Ho Long Luong To Mua	District Hospital District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Bac Yen	Bac Yen Town Muong Khoa Song Pe Hong Ngai Pac Nga Ta Khoa	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Phu Yen	Phu Yen Town Gia Phu	District Hospital Commune Health Station

	Tuong Phu Tuong Tien Tuong Ha Suoi Bau Muong Coi Muong Thai	Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Muong La	Muong La Town Pi Toong Muong Trai Chieng Lao Hua Trai Ta Bu	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Thuan Chau	Thuan Chau Town Chieng Pha Tong Co Chieng Pac Tong Lenh Noong Lay Chieng Ngan Chieng Bom	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Quynh Nhai	Quynh Nhai Town Pha Kinh Pac Ma Chieng Khoang Muong Giang Chieng On	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Song Ma	Song Ma Town Chieng Khuong Chieng Cang Chieng Khoang Muong Hung Chieng So Yen Hung	District Hospital Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station Commune Health Station
Sop Cop	Sop Cop Town Muong Va Nam Lanh Rom Cang	District Hospital Commune Health Station Commune Health Station Commune Health Station

1 Provincial Hospital
9 District Hospital
52 Commune Health Station

62 Health Facilities included in Son La Province