

# **Operations Research on ESP Delivery in Urban Areas**

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## **Operationalizing an Urban Essential Services Package Clinic: Findings and Implications**

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## Glossary

ANC	Antenatal Care
ARI	Acute Respiratory Infection
BCC	Behaviour Change Communication
BCG	Bacillus Culmete Gurine (Ante-TB Vaccine)
CS	Civil Surgeon
DCS	Deputy Civil Surgeon
DCC	Dhaka City Corporation
DHS	Department of Health Services
DFP	Directorate of Family Planning
DGHS	Directorate General of Health Services
DPT	Diphtheria, Pertusis, Tetanus
DD	Diarrhoeal Diseases
EPI	Expanded Programme on Immunization
ESP	Essential Services Package
ECDC	ESP Committee for Dhaka City
EOC	Emergency Obstetric Care
FP	Family Planning
FWV	Family Welfare Visitor
GoB	Government of Bangladesh
GH	General Health
GOD	Government Outdoor Dispensary
HPSP	Health and Population Sector Programme
HE	Health Education
IUD	Intra-Uterine Device
IPM	Inter Provider Meeting
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
LHV	Lady Health Visitor
LAP	Lower Abdominal Pain
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
MOLGRD&C	Ministry of Local Government, Rural Development & Cooperatives
ORP	Operations Research Project
ORS	Oral Rehydration Salt
ORT	Oral Rehydration Therapy
PNC	Postnatal Care
PID	Pelvic Inflammatory Diseases
RA	Reproductive Age
RTI/STD	Reproductive Tract Infection/Sexually Transmitted Diseases
SBN	Sher-e-Bangla Nagar
TT	Tetanus Toxoid
URTI	Upper Respiratory Tract Infection
VDS	Vaginal Discharge Syndrome
NAD	No Abnormality Detected

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## Summary

### Background

The urban areas and their health dynamics are different from those of the rural part of the country. The urban population is growing fast with high intra-urban mobility of inhabitants, creating excess of demand for healthcare and becoming problem for any kind of estimations. The municipalities and city corporations are constitutionally mandated to providing primary healthcare to their inhabitants. But usually they are under-staffed and under-equipped to meet the demand for healthcare and are obviously unable to meet the extra demand, specially when the government has adopted a health sector reform to provide her citizens with a broader range of services (ESP) at a minimum cost.

In this scenario and in the absence of any model, the biggest challenge before the local government authorities (MOLGRDC) was to identify the programmatic and management implications for effective ESP delivery in urban areas. The ORP of ICDDR,B, with partnership of MOHFW and MOLGRDC, undertook this intervention to develop and field-test the programmatic and management issues for the delivery of a package of essential health and family-planning services for the urban population, particularly for the disadvantaged population, from the existing government primary healthcare clinic. The objective of the intervention was conceptualized to attain by establishing a model ESP clinic at the Sher-e-Bangla Nagar Government Outdoor Dispensary situated in Zone 6 of Dhaka city, a predominantly slum-inhabited area of the city.

This report includes and highlights the findings of the final evaluation of this operations-research intervention to assess the programmatic and management aspects concerning the delivery of Essential Services Package (ESP) from an urban government outdoor dispensary. The intervention formed part of the operations research study on "Operationalizing a cost-effective tiered system for delivering the ESP within the public sector in urban and rural areas" of the Operations Research Project (ORP) (currently renamed as Family Health Research Project -FHRP) of ICDDR,B: Centre for Health and Population Research.

### Objectives

The specific objectives of the evaluation were to:

1. Examine the trends in using of the ESP services, and study the change in perceptions and knowledge of clients about the Clinic and its services.
2. Assess the effects of the intervention on knowledge and practices of the providers.
3. Assess the technical quality of care for selected ESP services.

The evaluation was conducted during 30 April-10 May 2001. Data were collected through observation of the physical infrastructure and organization of clinic services, observation of the client-provider interaction, exit interview of the clients, interview of providers and their managers, and review of reports and records. Service statistics for the January 1997-March 2001 period were reviewed. The impacts of the intervention were measured in the major areas of:

1. Service modalities (arrangement of services provided)
2. Use of the facility
3. Quality of services
  - i. Practice of providers
  - ii. Knowledge of providers
  - iii. Satisfaction of clients
  - iv. Knowledge of clients
4. Coordination and management.

## Findings

**Arrangement of services provided:** Significant changes in service-delivery arrangement occurred due to the intervention. Services offered by three different organizations had been integrated at the facility, resulting in an increased range of services. Eight different reproductive health services, six different child health services, and a huge spectrum of general health services were being provided from one point. The introduction of health education and counselling as a separate service entity became unique for the outdoor dispensary. The redefined job-description of providers helped eliminate gaps and duplication of services. It was possible to introduce other newer services, e.g. women TT, and special counselling on infant feeding and syndromic management of RTIs/STDs successfully.

**Client-flow:** Introduction of a systemic client-flow emerged as a unique feature for the Model Clinic. It was observed that most clients used to visit the clinic from 9:30 a.m. and 12:00 p.m. This influx of clients in a short time created problems for the providers to allocate adequate time per client at those hours, and increased the waiting time for clients. Several attempts have been made to make appointments for follow-up and revisit clients outside the busy hours, but it resulted in mixed success.

**Client-provider interaction and service time:** Remarkable changes were observed in the client-provider interaction. All the providers were found to greet their clients, tended to build rapport, and maintained a congenial atmosphere.



The average waiting time decreased to a maximum of 15 minutes from 20 minutes, and the client-provider interaction time increased per service from less than 1 minute to 15 minutes as had been observed earlier. It appeared that protocol-wise case management certainly indulged a provider into a set of actions for each case, thereby increasing the interaction time with clients.

## **Use of Services**

Overall, the use of services of the clinic was increased (72%) compared to the pre-intervention year. General and reproductive health services made the major contribution to this increase. Remarkable change was observed in the use of services of RTI/STD, women TT, distribution of condoms, and provision of contraceptive injectables. While women and children remained to be the major users of this facility, the number of male users also increased by 10%. In the general health category, each year 2,000-3,000 new clients attended the clinic. A major portion of them was adult female.

The overall use rate of reproductive health services increased by 68% compared to 1997. The number of users for women TT was double. The use of RTI/STD services increased many folds. Although the clients were mostly women, the number of users increased from 27 to 606 in 3 years. As a whole, the use of family-planning method increased by 71% from 1997. The rate of increase for oral pills, injectables, and condoms was 54%, 71%, and 95% respectively. In the category of child health, in the area of immunization, there was an overall increase in the use of services by 45% compared to 1997.

Encouraging results were obtained from the introduction of health education and counselling as a separate activity. Knowledge of clients on common ailments and availability of services was good.

Detecting and tapping the needs of clients for additional services was another encouraging strategy of the intervention. The main concept of providing 'one stop' service-delivery system could only be successfully achieved when people use the other services available at a clinic, while using the desired service (in-reach). In Sher-e-Bangla Nagar clinic, the performance of the providers gradually increased to such extent that, during 2000-2001, over 92% of clients were screened for additional services. It was observed that needs for additional services varied from 8-18% among the attending clients and about half of them were provided with services. The needs identified were mostly among the women of reproductive age for family-planning (26%), RTI/STD (21%), and TT (21%).

## **Quality of Care**

**Practice of providers:** All the providers of the clinic were oriented with a job-aid, which was also provided to them for ready reference. The providers were found to be more attentive to clients, taking histories properly, performing necessary physical

examinations, and taking appropriate measures for management. Thus, diagnosis became more and more protocol-based and drugs were prescribed rationally. Some irregularities were still observed in some areas. For example, in the management of ARI or diarrhoea, co-infection with either disease was less frequently inquired. Temperature of child was less frequently taken, and proper feeding advice was less frequently given. Similarly, while offering antenatal care or providing family-planning methods, some physical examinations, such as breast examination, were frequently missed, problems relating to method use were less asked, and emphasis on partner management in case of RTIs/STDs was not always given. The counsellor also did not advise properly on partner management. Hesitancy in talking about partners' management in RTI/STD cases may even prevail among the other providers too. The drug dispenser often failed to take feedbacks from clients.

**Knowledge of providers:** Knowledge of providers on all the selected ESP components was high. All major aspects of case management were adequately answered. The partial answers given by the counsellor in some aspects was probably due to the fact that she was not habituated to talking on those conditions.

**Satisfaction of clients:** Clients at exit expressed satisfaction in almost every aspect of the clinic. Good behaviour (95%), availability of drugs (82.2%), less-waiting time (83.6%), and information given (83.6%) were major reasons for satisfaction. Except the vaccinator (28.3%), all staff members were rated high by the clients. Satisfaction was expressed for greetings (98.6%) and history-taking (94.5%), and for providing information (80.8%). Views of clients on practice of providers also confirmed the observed poor practice of the providers in terms of less physical examination (34.2%), poor feedback on drug use (5.5%), and providing information on the availability of RTI/STD services (15.4%).

**Knowledge of clients:** Satisfactory knowledge of clients on common conditions, such as diarrhoea, ARI, vitamin A, and immunization indicates high-ranking information service. However, poor knowledge of clients was observed on RTI/STD, which reflects poor performance of providers only in case of RTI/STD.

## **Coordination and Management**

The weakest component of the intervention was supervision and monitoring by the respective supervisors. Apart from monitoring by the ORP staff, no systemic monitoring was operating properly. A supervisory checklist and guidelines were prepared with the help of all concerned supervisors and managers, which were field-tested and adopted, but these were seldom used by them. On the other hand, substantial inputs and feedbacks were obtained from the providers and managers during routine inter-

providers meeting or ECDC meeting. It indicates that, instead of individual supervision, an alternate mechanism of monitoring through routine group discussion among providers and monthly inter-providers meeting with participation of supervisors could be more effective to solve the problems and to improve the quality of services. Similarly, the ECDC, after convening in December 1997, had been enormously helpful in taking decisions, such as redesigning service-delivery, redefining the job descriptions of LHV as counsellor, obtaining an allotment of DD kits for the clinic, renovation of the clinic building, and perusing other activities undertaken for the intervention.

### **Views of Managers**

The Managers identified 'integration of services,' 'programme for addressing missed opportunities,' and 'systemic client flow mechanism' as strengths of the intervention. Some opined that 'health education and counselling programme,' 'job-aid for urban providers,' and 'formation of IPM and ECDC' are the strengths. The weaknesses identified by them were 'absence of unified management,' 'unidentified supply system,' and 'absence of appropriate referral system.' The managers suggested that the strengths mentioned should be adopted in the urban primary healthcare system and that more research should be carried out in the weak areas.

### **Lessons Learnt**

The intervention on operationalization of an urban ESP clinic revealed certain facts that can be learnt from this study. Many of them are related to the strategies adopted in the intervention, and some are obtained as outcome results. These findings provided the following important lessons for planning and operating urban primary healthcare programmes:

1. ESP services can be provided in an integrated manner through a combined approach from a public outdoor clinic, even when the providers belong to different agencies.
2. Integrated delivery of ESP services increases the range and types of services, and use of services.
3. Appropriate layout, upgraded physical structure, and maintenance of the facility are pre-requisites for the improvement of services, and contribute to improving the quality of services, and confidence and satisfaction of clients.
4. A systemic client-flow mechanism is conducive to address missed opportunities and proper management of time by both providers and clients.

5. Introduction of health education and counselling as a separate service can help increase knowledge and satisfaction of clients, address missed opportunities and increase service use.
6. Missed opportunities of service provision and unmet service needs of clients can be reduced by introduction and use of a screening algorithm.
7. Introduction and practice of protocol-based job-aid can help improve the diagnostic and management capabilities of the providers.
8. Syndromic management of RTIs/STDs is feasible to provide through public sector facilities when appropriate training and logistics are ensured.
9. Inter-provider review of service-delivery can detect problems, generate solutions, and promote linkages among the providers.
10. A central coordination committee, like ECDC, can be helpful for local-level planning and implementation of ESP delivery from public sector outdoor dispensaries.
11. A routine review meeting, including relevant supervisors and providers (IPM), may be more effective means of monitoring than directly observing clinics by using checklists.

The intervention on operationalizing the urban ESP clinic has yielded clear programmatic actions to be initiated in developing primary healthcare clinics or ESP clinics in urban areas. The lessons learnt from this intervention could be adopted and incorporated into the UPHCP programme. The tools developed and the manuals and guidelines prepared can also be used in urban ESP delivery system. A similar approach can also be used for operationalizing the ESP clinics in smaller municipalities. However, the need for support services, e.g. logistics, etc., for those areas may need to be studied to get a precise idea.

## **Introduction**

The Government of Bangladesh (GoB) is committed to ensuring the nationwide availability of the Essential Services Package (ESP). Its main aim is to make available key preventive and curative services and information, addressing the major causes of mortality and morbidity among children, women, and the poor in general. In Bangladesh, although the health and family-planning infrastructure has been developed to provide a range of services through a tiered system, in practice, most services are not linked to other services, especially at the urban primary care level, resulting in limited effectiveness. Despite the availability of the considerable infrastructure for service-delivery, services still remain largely fragmented, and are not organized to meet the basic health needs of customers adequately. By ensuring a one-stop provision of integrated package of essential services from a fixed site and by adopting a customer-oriented approach, the basic health needs of customers could be better addressed.

This report includes and highlights the findings of an operations-research intervention to assess the programmatic and management aspects concerning the delivery of Essential Services Package from an urban government outdoor dispensary. The intervention formed part of the operations research study on "Operationalizing a cost-effective tiered system for delivering the ESP within the public sector in urban and rural areas" of the Operations Research Project (ORP) (currently renamed as Family Health Research Project (FHRP) of ICDDR,B: Centre for Health and Population Research.

## **Background**

### ***Urban health***

In 1995, approximately 25 million people were living in the urban areas comprising 20% of the total population of Bangladesh [1]. With the current pace of growth (5-6% annually), the urban population may be doubled by 2010, i.e. 40% of the total population are expected to reside in the urban areas [2,3]. About 30% of the population in Dhaka city live in slums and squatter settlements without any basic services [4]. Other estimates show that about 50% of the urban poor do not even live in identified slums, and have little access to basic services [5]. Although at the aggregate level, the urban population is healthier than their rural counterparts, there is significant intra-urban differential in health and family-planning status. In the urban slums, neonatal tetanus and measles cause 19% and 5% of infant deaths respectively, while respiratory infections and measles cause 20% and 16% of all deaths among children aged 1-4 years [6]. The slum population has lower immunization coverage and contraception use rates compared to those of non-slum urban populations. The January 2000

Immunization Coverage Evaluation Survey shows that the proportions of children fully immunized by 12 months in slums of four city corporations are as low as 19-29% despite their wide access to immunization services (80-92% for BCG). Up to 17% of children had not been immunized at all in some slum areas [7]. There are also higher infant and child mortality rates and low antenatal care use among slum households. Data from the urban surveillance of the ORP of ICDDR,B depicted discernable intra-urban differentials by slum and non-slum populations in the coverage of health and family-planning indicators (Table 1).

**Table 1.** Intra-urban differentials in health and family-planning indicators

Indicator	Slums	Non-slums
Infant mortality rate	100.7	91.0
Child mortality rate	28.8	20.7
Crude birth rate	34.6	24.3
Crude death rate	7.3	5.3
Immunization rate of <1 year	58.0	77.0
Contraceptive prevalence rate	50.0	58.0

**Source:** ORP urban surveillance data 1995-1996

The baseline survey conducted in the study area revealed considerable differences in slum and non-slum populations in terms of education of parents, use of contraceptives, fertility, immunization status, and childhood illnesses (Table 2) [8].

**Table 2.** Selective indicators of intra-urban differences

Indicator	Slum	Non-slum
No education--women	66	13
No education--spouse	49	6
Median monthly expenditure	3,481(Taka)	5,511(Taka)
Total marital fertility	4.8	2.1
Contraceptive prevalence rate	48	61
Children fully immunized by 1 year	54	81
Cough with difficult breathing in last 2 weeks	54	43
Diarrhoea in last 2 weeks	20	15

**Note:** Figures are in percent (%) unless otherwise mentioned

**Source:** ICDDR,B working paper no. 133 [8]

### **Urban healthcare delivery**

The rural health service-delivery system in Bangladesh is relatively well-defined and structured, with the governmental agencies (Ministry of Health and Family Welfare--MOHFW) being the dominant providers. The situation in urban areas is, however, much

different. The city corporations and municipalities are traditionally and constitutionally empowered to provide primary healthcare in urban areas. The Directorate General of Health Services (DGHS) provides primary healthcare through outdoor dispensaries in cities and towns. In addition, a large number of non-government organization (NGO) programmes, private clinics and pharmacies have been operating in urban areas. The urban healthcare system is characterized by the presence of multiple providers and facilities each providing a limited range of services. While some urban areas have excess of facilities, others are under-served due to inadequate facilities. The multiplicity of providers, in the absence of proper coordination, often leads to gaps and duplications of services [8]. An assessment conducted by the ORP revealed that most urban facilities provided only a narrow range of services, and their quality was generally poor. Inadequate training of providers, inappropriate or absence of service-delivery protocols, weak support systems (e.g. logistics, supervision, monitoring), lack of emphasis on counselling, and inappropriate physical facilities were common to most urban health facilities [9].

### ***ESP delivery***

The lowest tier of the urban primary healthcare-delivery system comprises Satellite Clinics organized by NGOs. The next tier of service-delivery includes fixed clinics/dispensaries, managed by the GoB/NGOs. Several government agencies, such as, city corporation (or municipal) health department, DGHS and Directorate of Family Planning (DFP) together with a large number of commercial and voluntary organizations, provide ESP services in urban areas. A recent inventory of organizations delivering services in Dhaka city identified 76 NGOs providing ESP services from 539 facilities [10]. At the government dispensary level, the delivery of basic health and family-planning services is fragmented: Directorate of Health Services supervises the medical officers and provides limited curative cure; DFP supervises the paramedics (FWVs), and provides family-planning methods, antenatal care (ANC), postnatal care (PNC) etc., and the Dhaka City Corporation supervises the vaccinators who provide child immunization. The source of supplies is also multiple and different from each other.

Although these facilities are expected to provide essential services, individual facilities usually offer a limited range of services, and many of these have become single-purpose clinics, i.e. providing only immunization, or only family-planning, or only curative services, etc. The consequences of fragmentation of services not only increase the cost of providing these services, but also limit access to these services as inconvenience and opportunity costs for the clients increase. The staff of these facilities are either medical doctors or paramedics who could be trained further to provide a broader range of services and supervised by a common management structure to overcome their limitations.

In Bangladesh, the urban poor suffer more from the worst health status. The situation has worsened further because the population growth is concentrated mostly among the urban poor. In urban areas, the MOHFW has a limited preventive healthcare infrastructure. A mix of the private and NGO clinics and government hospitals (secondary and tertiary-level modern hospitals) complements this by providing mainly curative services. Because of the absence of a well-organized formal structure for providing basic health and family-planning services in urban areas, the government has emphasized on greater government-NGO collaboration in the Health and Population Sector Programme (HPSP). The Ministry of Local Government, Rural Development and Cooperatives (MOLGRDC) has also been currently entrusted to deliver the ESP in urban areas through the implementation of the Asian Development Bank (ADB)-funded Urban Primary Health Care Project (UPHCP).

### ***Operations research on urban ESP delivery***

To improve the health and well-being of the rapidly growing urban population, the ORP had embarked on a collaborative research with a number of government agencies. The experience was built on working in the slums of Dhaka and with the GOB and NGO stakeholders involved in the delivery of health and family-planning services [11], The government agencies involved in the partnership include: MOHFW, MOLGRDC, DGHS, DFP, and DCC. The purpose of this collaborative endeavour was to operationalize an integrated ESP delivery system in the public sector clinic at primary level for the urban population, with special focus on the slum and non-slum poor.

## **The ESP Intervention**

### ***The Model ESP clinic***

The study intended to design a model approach of operationalizing the delivery of quality ESP services by appropriately integrating basic curative (health) care, family-planning, and immunization programmes; increasing the technical capacity of providers; and developing a necessary support system under a unified management. The Model ESP Clinic intervention was formally inaugurated by the Mayor of Dhaka city at the Sher-e-Bangla Nagar (SBN) Government Outdoor Dispensary (GOD) of DGHS located in Ward 40, Zone 6 of DCC, in December 1997. In this facility, providers from three different government organizations, such as DGHS, DFP, and DCC, were deployed in dispensing three different kinds of services. This dispensary was located close to a large slum settlement with an estimated population of 61,000 to 76,000.



The present study explored the critical programmatic issues relating to ESP delivery in urban areas through the existing government outdoor dispensaries, and highlights the implications for replication of the model approach. A clinic-level needs-assessment study completed in September 1998 identified the following weaknesses for further improvement and strengthening [9]:

1. Absence of a proper physical facility and logistics, including insufficient seating arrangements, absence of an exclusive consultation area with privacy of clients, non-availability of a number of basic tools (vaginal speculum, spot light, gloves, etc.) and drugs.
2. Absence of job-aids (service-delivery protocols) for providers and training of providers on the corresponding national guidelines, poor use and inappropriate management of RTIs/STIs, and some childhood illnesses.
3. Poor supervision and absence of supervisory mechanism with little coordination among providers.
4. Overlapping of responsibilities and absence of clear-cut job descriptions of staff.
5. Inappropriate client appraisal, lack of history-taking and physical examination, and other aspects of client care.
6. Absence of any screening procedure for identifying need(s) of additional service(s) of clients.
7. Absence of any system of counselling and health education for attending clients.

Based on the above findings, the key research issues were defined, and the intervention was designed. A Model ESP Clinic was defined to be characterized by:

- Appropriate physical facility
- Appropriate staffing
- Availability of essential health and family-planning services of acceptable quality
- Linkage of services and providers
- Appropriate counselling and health education to clients
- Identification of needs of the clients for additional service(s) and tapping of missed opportunities
- Improved satisfaction of clients with awareness on the services available

The operations research was conducted during October 1998-March 2001, and the following activities were undertaken either consecutively or simultaneously (Annexure 1). Each of these activities was properly monitored, and the related processes and effects were documented.

## **Intervention Activities**

1. Routine monthly meetings of the service providers of the Model ESP Clinic (Inter-Providers Meeting) and all city-level health managers (ESP Committee for Dhaka City - ECDC) were organized to improve coordination and management of the Model Clinic and implementation of the intervention.
2. A needs-assessment study was conducted during January to April 1998 to assess the organization of the existing service-delivery system at the clinic and availability of ESP services in the vicinity.
3. A community-based baseline survey was completed in 1999 in the intervention area to investigate the health and family planning status of the urban population (sample population).
4. Some physical refurbishment of the clinic was done during 1998-1999 to better facilitate integrated service-delivery, and the client flow system was reorganized.
5. The service needs of clients were assessed and selected services were added/strengthened (August-September 1998). This included introduction of several new services, such as syndromic management of RTIs/STDs, women TT, promotion of appropriate infant feeding, etc.
6. The job-aid (July-August 1998) for the urban clinic providers was revised, and the service providers were given training on it to provide improved quality of ESP services.
7. A systematic inter-provider cross-referral mechanism was introduced for better use of the available services by the clients (May-June 1998).
8. To meet the additional family health needs of clients, an algorithm-based screening system for identifying the need(s) for additional service(s) and addressing them was introduced in October 1999. All the providers were oriented on its use.
9. To address the behaviour change communication (BCC) needs of clients and to promote better use of the services available at the clinic, health-education and individual and group counselling sessions were introduced as a separate component to be implemented by the Health Counsellor (October 1999). The Health Counsellor was trained for a week to perform this task.
10. A routine monitoring and regular supportive supervision mechanism was established for managers using the standard supervisory guideline and checklist (June 2000).
11. A qualitative study was completed in July 2000 which examined the health-seeking behaviour and BCC needs of the population in the intervention area [12].
12. A final evaluation of the intervention to assess the effects of the above activities was done in April-May 2001.

## **1. Improvement of Coordination and Management**

The first step in the implementation of the intervention involved policy decisions on related reorganization needs. A coordination mechanism was required to facilitate this process. Accordingly, a committee called ESP Committee for Dhaka City (ECDC), comprising the Civil Surgeon and Deputy Civil Surgeon of Dhaka, Deputy Director (FP) and Assistant Director (Clinical Contraception) of Dhaka, Chief Health Officer of DCC, Project Director and Deputy Project Director of the UPHCP and concerned researchers of ORP, ICDDR,B was formed. Its objective was to facilitate and oversee the intervention activities, and review the findings on an ongoing basis.

In addition to the central-level coordination, a local-level initiative called Inter-Providers Meeting (IPM) was introduced at the Model Clinic. The providers of the clinic used to meet once a month in presence of some supervisory staff and ORP research team. Problems identified as barriers to the implementation of programme and other administrative issues were discussed and shared. This helped solve many implementational problems quickly and establish better understanding among the providers.

## **2. Assessment of Needs**

The situation analysis conducted in 1998 at the clinic level helped identify the areas of insufficiencies needed to be improved or addressed [9].

The study also estimated the availability of various ESP services in the surrounding areas of the clinic. It was observed that 21 different facilities had been providing ESP services in Ward No. 40 where the clinic is situated. Sixteen of them were run by different government agencies (DGHS, DFP and DCC), one by an NGO, and the rest four were private outfits. The non-government facilities were found to have been providing limited ESP services, and some were charging user-fees for their services.

## **3. Baseline Survey**

A community-based baseline survey was conducted at the beginning of the intervention covering a sample of 1,817 married women of reproductive age (MWRA), of which 1,322 were drawn from slum households [8]. The survey recorded the notable intra-urban differences. The important differences were in literacy status of the respondents and their spouses, family income, fertility patterns, contraceptive prevalence rate (CPR), and illness pattern among children (Table 2). The differences were also observed in immunization drop-out, health-seeking behaviour, attitude of clients toward family-planning, etc.

#### **4. Renovation of Clinic**

Based on the recommendations of the needs-assessment study, a reorganization committee of GOB staff and researchers of ORP conducted several brain-storming sessions to develop a reorganization plan for service-delivery. One part of the plan was aimed at ensuring optimal use of floor space, ensuring auditory and visual privacy of clients during physical examinations and counselling and improving the sanitation facility. Accordingly, rooms were allocated rationally for providing various services. The room of Medical Officer was provided with an examination cubicle fitted with a suitable examination table for speculum examination of RTI/STD cases with adequate light. The waiting space was expanded and provided with benches for clients to sit in. Arrangement was made for the receptionist (or the person assigned to register clients) to sit at one side of the waiting space in a built-in cubicle. All rooms were marked with specific numbers on the door top, and were provided with fans and adequate light. Running water, washbasins, and working latrines were ensured, and an incinerator was installed for safe disposal of wastes. The Public Works Department (PWD) of GOB undertook all these renovation works.

#### **5. Expansion of Range of Services and Strengthening of ESP Delivery**

The programme managers decided that the health, family-planning and immunization services would be provided in an integrated manner from the clinic. In addition, the number and types of services were increased during August-September 1998 and then again in 1999 and 2000 in a phased manner. Woman TT was introduced with assurance of daily supply of vaccines from the zonal office of DCC. Diagnosis, treatment, and management of RTIs/STDs became an important part of ESP delivery. Testing feasibility of implementing syndromic management of RTIs/STDs was initiated here since December 1999, and the providers were trained on speculum and non-speculum based syndromic management. Necessary instruments were supplied for speculum-examination. It was felt that provision of services only did not guarantee their increased use. Routine counselling and motivation by a specified provider was lacking in all the urban government facilities [9]. It was thought that a regular systemic mechanism to inform clients about the range of services available at the centre, and to motivate them would result in more use of the services and would help address the additional needs of clients. Algorithm-based screening to detect additional needs of clients, health education, and counselling were introduced at the clinic in October 1999. The following services were made available from the clinic:

### **Child health**

- i. Child immunization
- ii. Supplementation of vitamin A capsules
- iii. Management of acute respiratory tract infection (ARI)
- iv. Management of diarrhoeal diseases
- v. Curative care of other common diseases, such as scabies, helminthiasis, ear infection, etc.
- vi. Promotion of appropriate infant feeding\*

### **Reproductive health**

#### Family planning

- i. Injectable, IUD
- ii. Non-clinical contraceptive methods
- iii. Management of side-effects and complications

#### Safe motherhood

- i. Antenatal care
- ii. TT immunization\*
- iii. Postnatal care

#### Reproductive tract infections

- i. Syndromic management of RTIs/STDs\*  
(Initially non-speculum-based and then speculum-based)

#### Counselling and health education\*

General healthcare/limited curative care

## **6. Capacity Enhancement of Providers**

To promote appropriate case management, a job-aid was developed according to the national guidelines on ESP services, and the providers were subsequently trained on it during July-August 1998. The job-aid was prepared considering the following facts:

1. It should cover all the components of ESP services that would be available from the clinic, and the providers would be trained on them so that protocol-based management could be ensured.
2. It should be acceptable by all urban providers both from GOB and NGO sectors. To achieve this it should be developed as a standard one, and should be adapted from the existing national and international guidelines.

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\* Services previously not available

3. It will be made as user-friendly as possible by printing it in multi-colours following the colour codes for the algorithms, in good paper, in large and bold fonts, and spiral-bound for easy use. Moreover, it will be made available in Bangla with simple sentences so that all types of service providers find it friendly.
4. The protocol follows an algorithm-based management of each ESP component. For each ESP condition, there is a screening questionnaire at the beginning and with direction of management procedures at each step of the algorithm. Finally, the algorithm would have the scope to explore the unmet needs of clients and provision of necessary health education.
5. In the management of any condition, whenever any recommendation on medication is made, locally-available medicines and commodities are always considered. A drug list with doses and administration with possible side-effects is also included in the protocol.
6. The disease conditions are narrated in such a way that, at each step of algorithm, necessary health and preventive information are incorporated. At the end of each condition, information on essential health education and counselling is repeated, and furthermore, a comprehensive section on BCC messages is added to the protocol.

The contents of the job-aid included: Syndromic management (7 syndromes) of RTIs/STDs (both non-speculum and speculum-based); common childhood ailments such as ARI and diarrhoea; reproductive healthcare, such as antenatal care and postnatal cares; family-planning methods and management of complications; EPI and vitamin A; and treatment of skin diseases. Periodic observations on compliance of the job-aid were done, and based on the findings of these observations and needs of clients, the job-aid was subsequently modified. Accordingly, sections on malnutrition and anaemia in children, measles-related complications, acute ear infection, and storage and drug dispensing were incorporated in March 2000, and the providers were given training in these items.

## **7. Organized Client Flow with Central Registration and Necessary Cross-referral**

Prior to the intervention, clients used to go directly to the three main providers at the clinic without any central registration process. The three providers (from three departments of GOB, namely DGHS, DFP, and DCC) operated separately in the same facility without any coordination among them. It was found that an effective inter-provider cross-referral system was required to meet the additional service needs of clients. As a primary step, three different client flows and service-delivery were integrated (May-June 1998) by implementing a central registration mechanism and an organized client-flow system which also facilitated screening of clients for additional services, and provision of health education and cross-referral to them, if necessary.

**The Client-flow System:** At present, the clinic is run 6 days a week, and remains open from 8.30 a.m. to 2.30 p.m. daily. Generally, clients start to attend the clinic around 9.00 a.m. All new clients require registration. For revisit clients, the names are entered without giving any registration number. All registrations are done in one centre place, and a registry clerk provides tickets to all clients. After registration, all revisit or new clients are directed to the Counsellor's room. Clients having any emergency are, however, directed to the Medical Officers directly without any registration. They are registered subsequently while providing service. Clients who come for family-planning services are again directed straight to the FWV's room instead of routing through the Counsellor's room. The Counsellor arranges for health education and counselling sessions both for individual or groups on the basis of needs of clients. She also assesses the needs of clients based on an algorithm to identify their additional family-health needs [13]. The clients are, afterwards, escorted to the relevant provider's room for the requested service and additional need, if any. Similarly, the FWV and Medical Officers also assess for the additional needs of clients while providing the requested services. The pharmacist's room is located at the end of the final common pathway to the exit. The essential features of the present client-flow system are, thus, a common entry for all types of clients with provision for a central registration, counselling, and screening mechanism for all clients for identification of additional needs, and service provision for requested and additional services. All these together resulted in reduction of waiting time for clients and at the same time optimal distribution of the workload of the providers.

#### **8. Algorithm-based Screening for Additional Services of Clients**

In the needs-assessment study, it was observed that clients tended to attend the clinic to seek one service at a time, and the providers, in turn, were used to meet that specific service. The opportunity was not used to assess additional health needs of a client or his/her attendant and to offer appropriate services to them. To tap these missed opportunities, an algorithm-based screening mechanism was designed and introduced in October 1999. The algorithm is provider-specific, and has two parts for each provider. One part having a set of questions to be asked routinely to all clients and the other part to acquire information on other service needs of clients. Thus, a client attending for family-planning needs is screened for EPI and TT needs for herself or for her children, and also for general health and needs for RTI/STD treatment. Similarly, clients attending for general health needs are also screened for family-planning and other service needs. Screening is usually followed with provision of information to clients on the availability of other services in the clinic.

### 9. Provision of Health Education to Clients through Individual and Group Sessions by Counsellor

The client-provider interactions at the clinic were observed at the beginning of OR. It was observed that the providers spent very little or no time with clients to perform counselling or health education. After an extensive discussion and after examining several strategies for providing necessary health education to clients, it was decided to introduce health education as a separate function/service at the clinic. The job-descriptions of the providers were redefined to this end. The existing Lady Health Visitor (LHV)'s post at the clinic was re-designated as Health Educator and Counsellor. A separate space was allocated with auditory and visual privacy to facilitate counselling on sensitive issues, for example individual counselling on RTIs/STDs. A set of BCC materials were identified and collected for the purpose. The essential BCC messages were incorporated into the job-aid. The Health Educator was trained on them and the programme started working in October 1999. The following table describes the BCC materials and the areas of counselling at Sher-e-Bangla Nagar (SBN) Government Outdoor Dispensary (GOD).

**Table 3.** Areas of health education and counselling with required materials and target audiences

Area	Target audience	Methods and materials	Responsibility
RTI/STD	RTI/STD clients and partners	Individual using BCC material	MO/ Counsellor
EPI	Mother/attendant	Group or individual using BCC material	Counsellor
Diarrhoea	Mother/attendant	Group or individual using BCC material	Counsellor
ARI	Mother/attendant	Group or individual using BCC material	Counsellor
Supplementary feeding	Mother/attendant	Group or individual using BCC material	Counsellor
FP methods	Users	Individual using BCC material	FWV
Antenatal care	Pregnant	Individual using BCC material	FWV

**Table 3.** (contd.)



**Table 3. (contd.)**

Area	Target audience	Methods and material	Responsibility
Postnatal care	Mother/pregnant or husband	Individual using BCC material	FWV
Women TT	Women of RA	Group or individual using BCC material	Counsellor/ FWV
Vitamin A	Mother/attendant	Group or individual using BCC material	Counsellor/ FWV
Management of family-planning-related side effects	Users	Group or individual using BCC material	Counsellor/ FWV
Breastfeeding	Mother/attendant	Group or individual using BCC material	Counsellor/ FWV

In addition to imparting health education and counselling, the Counsellor screens clients for identifying their additional family-health needs. The Counsellor, thus, has the unique opportunity to inform all clients about the services available at the clinic during health-education session and screen for needs of the clients for additional services without involving an extra time.

#### **10. Monitoring and Supervision Using Guidelines and Checklists**

To effect better coordination and understanding that are critical for the integrated service-delivery, monthly inter-provider meetings were introduced in April 1999. These meetings review service use of the facility and performance of the providers. Similarly, guidelines and checklists were designed, field-tested, and put into implementation since June 2000 to monitor and supervise technical skills of the providers and the quality of services. The higher-level managers and supervisors conducted bi-monthly review of performance, and necessary monitoring formats were developed to record the outcomes.

Moreover, the research team also monitored the use of ESP services once every two-months by reviewing service statistics. The providers were observed during providing services, and exit-interview of clients was also done periodically. Results of provider-observation and client-interview were shared regularly in the inter-provider meetings.

#### **11. BCC Study**

A qualitative study completed in July 2000 examined the health-seeking behaviour and BCC needs of the population in the intervention area [13]. The major findings were: people relate good health to their physical well-being (*asuk/bishuk na thaka*) and ability

to work (*kaj kara*); diseases need to mature, i.e. become acute (*aopekha karle rog pake*) before any consultation; taking care of children is *women's responsibility*; and payment of moderate user-fee for better services are acceptable. The Model ESP Clinic is well-known in the community and considered as "women's clinic", providing basically EPI and family-planning services. The study highlighted the need for intensive dissemination of correct information to the community on the appropriate health-seeking practices and on the availability of quality ESP services in the clinic with the involvement of community key informants and orientations of key community mobilizers.

## **Evaluation of Intervention**

### ***Objectives of the evaluation study***

The principal research question for the evaluation was: How the urban intervention has affected the ESP delivery and use of the ESP services at the Model ESP Clinic?

The specific objectives of the evaluation were to:

4. Examine the trends in using of the ESP services, and study the change in perceptions and knowledge of clients about the Clinic and its services.
5. Assess the effects of OR on knowledge and practices of the providers.
6. Assess the technical quality of care of selected ESP services.

### **Methodology**

The evaluation was conducted during 30 April-10 May 2001. Data were collected through observation of the physical infrastructure and organization of clinic services, exit interview of the clients, interview of providers and their managers, preparation of inventories, and review of reports and records. Observation guidelines, prepared and tested during the needs-assessment study, were used after necessary modifications [9]. The observers had experience of such work, and were further oriented on using the evaluation tools. The general part of observations included assessment of the facility, clinic organization and status of services provided, the client-flow system, client-provider interaction and other related processes. Some findings were noted through direct observations and physical verification. Clients were interviewed at exit to know their knowledge and expectation of services using a structured questionnaire. The practices of the providers in specific case management were observed using a checklist. The providers were also interviewed through another questionnaire to obtain their opinions and to know their knowledge on specific case management and some managerial issues. Opinions of the managers were taken through a semi-structured open-ended questionnaire. Service statistics for the January 1997-March 2001 period were reviewed. The major areas of investigation along with indicators and means of measurement are given in Table 4.

**Table 4.** Indicators and means of measurement

Indicator	Means of verification	Instruments
<b>Service organization</b>		
Clinic organization and status of services	Observation + review of records	Observation guidelines
Client flow	Observation + review of service records	Observation guidelines
Service time and waiting time	Observation + review of records	Observation guidelines
Provider-client interactions	Observation + review	Observation guidelines
Referrals	Observation + review of records	Observation guidelines
<b>Facility Use</b>		
Range of services	Observation + review of service records	Observation guidelines
Client attendance	Review of service records	Data sheets
Service Utilization	Review of service records	Data sheets
Reproductive Health Services ANC/PNC/TT/RTI/STD Family-planning methods Management of side-effects	Review of service records	Data sheets
Child health services ARI/DD/EPI/Vitamin A	Review of service records	Data sheets
Basic curative care general health	Review of service records	Data sheets
Health education and counselling	Review of service records	Data sheets
Additional needs met	Review of service records	Data sheets
<b>Practices of providers</b>		
General observation of: Diagnosis pattern ARI/DD/RTI/STD Drug treatment ARI/DD/RTI/STD	Observation of case Management + service records	Observation checklists + data sheets

**Table 4.** (contd.)

**Table 4. (contd.)**

Indicator	Means of verification	Instruments
Selective case management (ARI/DD/RTI/STD/FP/ANC/PNC/EP I/HE and counselling, drug dispensing) History-taking Physical examinations Diagnosis and treatment Counselling Follow-up Missed opportunity address	Observation	Observation checklist
<b>Knowledge of providers</b>		
Selective case management History-taking Physical examinations Diagnosis and treatment Counselling	Interview with provider	Interview questionnaire
<b>Client satisfaction</b>		
Reason for visit Satisfaction criteria Opinion about services Opinion about facility Opinion about providers	Exit interview with clients	Interview questionnaire
<b>Clients' knowledge</b>		
Selected ESP Services (ARI/DD/infant feeding, EPI, vitamin A, RTI/STD)	Exit interview with clients	Interview questionnaire
Perceptions of clients about missed opportunity	Exit interview with clients	Interview questionnaire
<b>Management issues</b>		
Facility organization (cleanliness, waiting place, privacy, water supply, adequate light, general condition of the structure of the building, logistics)	Interview, record review, observation	Facility assessment form
Safety/waste disposal	"	"
Supervision and monitoring	"	"
Opinions of managers	Exit interview with managers	Interview questionnaire

## Findings

### Organization of Clinic

At the time of evaluation, three Medical Officers, one Family Welfare Visitor (FWV) and two vaccinators were engaged in providing various components of ESP services. They were supported by a number of staff (Total=13), including two Pharmacists, one Counsellor, one Paramedic, and other support staff. The senior most Medical Officer is designated as Clinic-in-Charge. The clinic is open on 6 days a week with Friday as a weekly holiday. The usual clinic hour is from 8.30 a.m. to 2.30 p.m. on all weekdays. It was observed that 70-80 clients visited the clinic everyday. The peak attendance of clients was between 9.30 a.m. to 12.30 p.m., and the majority of them were women and children (as observed earlier in the needs-assessment report). All the providers were trained on "job-aid for urban ESP clinic providers" with the exception of the newly-appointed Clinic-in-Charge who joined the clinic recently at a later stage of the intervention. However, she was given a brief orientation on the job-aid subsequently. In addition, each provider had also received separate training from their department on different areas, including management and treatment of ARI and diarrhoea, RTIs/STDs, EPI and family-planning methods.

The findings showed that the MOs provided treatment and management of all common childhood diseases, including management of ARI, diarrhoea, malnutrition, anaemia, fever, skin conditions, and minor injuries. They also participated in routine antenatal care examination at third trimester, and treating antenatal care-related complications, management of complications of family-planning methods, management of RTIs/STDs, including counselling. With the implementation of speculum-based syndromic management, all three MOs were participating in the management of RTI/STD cases. They did not, however, treat PNC-related complications and Emergency Obstetric Care (EOC) cases. A long list of general health services was provided by the MOs with the exception of treatment of leprosy and malaria. The usual centre for referral was Shishu Hospital for child cases, Suhararwardi Hospital, Dhaka for general healthcare and complicated cases, and Mohammadpur Fertility Centre, Dhaka for family-planning cases. Suspects of tuberculosis and leprosy cases were referred to the Shyamoli TB Clinic, Dhaka.

The FWV primarily offered services relating to family-planning methods. All temporary methods, such as pills, condom, injectables, and IUD, were offered, and their side-effects and complications were also managed. For permanent methods, clients were referred to the Mohammadpur Fertility Centre or Mirpur Fertility Clinic, Dhaka. The FWV also provided services for ANC and PNC clients. In addition, she screened all clients coming to her for their additional health needs, and provided them with necessary counselling, and referral, and in some cases, treatment of some common ailments, especially to mothers.

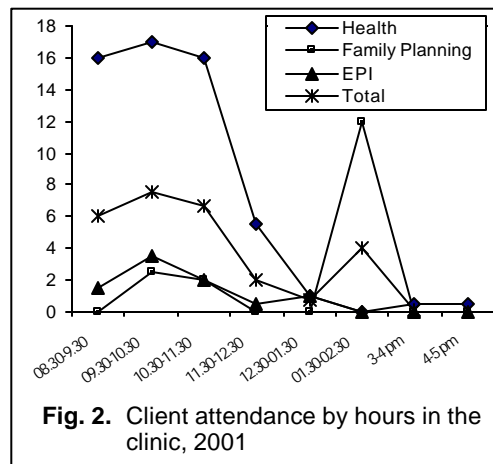
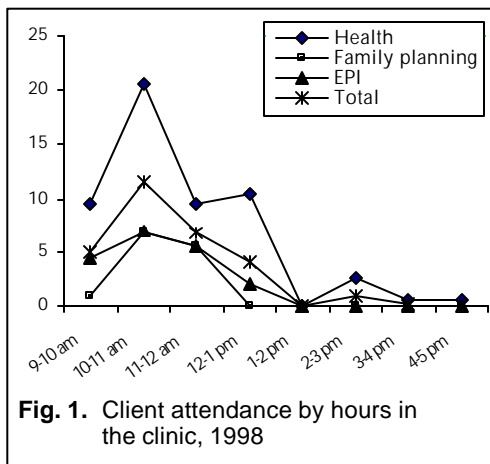
The Vaccinators provided routine EPI services and women TT, and distributed vitamin A. Immunization services were offered for 5 days instead of 6 days a week. Although trained, they did not take part in routine screening for missed opportunities.

The Counsellor, on the other hand, provided counselling and health education on child immunization, women TT, diarrhoeal diseases, ARI, family-planning methods, ANC, PNC, RTIs/STDs, skin diseases, worm infestation, breastfeeding, supplementary feeding, cleanliness and general health conditions. She organized routine group sessions on these topics, and arranged individual sessions as and when necessary. Particularly for RTI/STD clients she offered individual counselling for the sake of privacy and motivation. She also screened all the clients for needs for additional services as per the screening algorithm.

The registry clerk, who is a lower level employee, played an important role in registering all clients and directing them appropriately to different service providers. The Pharmacists received training on ESP services to improve the quality of services offered. He is the last person a client has to visit before he/she leaves the clinic. He provided medicines and other supplies and also took feedbacks from clients about treatment compliance. He reminded the clients about the importance of follow-up and completing the course of treatment.

### Client-flow Analysis and Service-delivery Set-up

Figure 1 and 2 show the patterns of daily client flow for the health, family planning, and EPI services and to the clinic as a whole. Data on clients attending the clinic for some days were collected, compiled, and compared with the similar data of 1998.



The data were analyzed to determine the major service-wise client flow and to establish a temporal relationship, and were aggregated into an overall clinic client flow. Figure 1 and 2 reveal that the peak flow of the clients was between 10:30 a.m. and 12:30 p.m., with a relatively less number of clients in the afternoon. Client flow was more for general health and immunization services. However, the pattern of client flow did not change much from 1998 to March 2001 even with the change of working hours from 9.00 a.m.-5.00 p.m. and 8.30 a.m.-2.30 p.m.

### **Time Spent for Services**

The observers followed each individual client through his/her total time spent at the clinic, and also noted the time elapsed per service, the waiting time, and the interaction of providers in each case. On an average, a patient spent about half an hour in the clinic when all types of services were considered. However, this half an hour time was calculated from his/her arrival at the clinic to the exit from the clinic, and included the time for registration, counselling, getting the wanted service, having an additional service if any, and getting medicines or commodities before exit. For any wanted service-delivery, the minimum time requirement was 5-8 minutes for vaccination, and the maximum for family-planning services was 6-12 minutes. This minimum or maximum time was spent for the total interaction with a client, including history-taking, examination, providing treatment, and screening for additional services. A good amount of time was still spent for record-keeping on family-planning as was done previously. Table 5 shows the client-provider interaction time by some selected ESP services.

There were two major waiting times for some clients: one before getting their requested service after registration and counselling, and another before getting additional service (if any) after having the requested service. However, the counsellor used this waiting time to arrange for health-education and counselling sessions. The total waiting time varied from 8 to 15 minutes depending upon the type of service needed and pattern of client flow, which, in turn varied, with the hours of day. However, clients having family-planning needs (either requested service or additional need) had to wait more, i.e., 10-14 minutes, compared to other services.

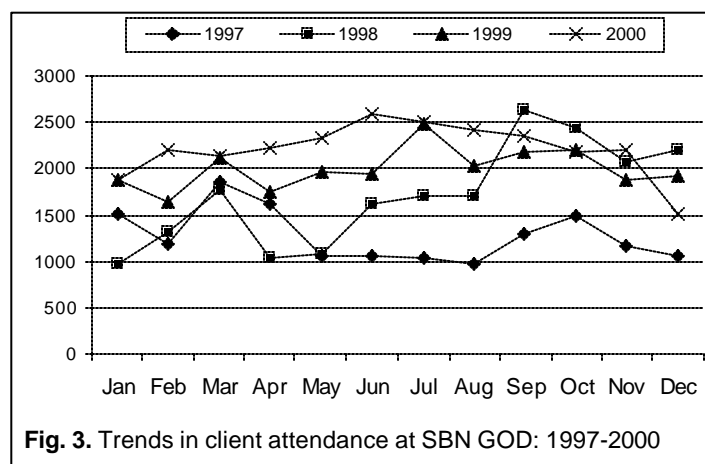
**Table 5.** Client-provider interaction time by selected types of services

Type of service	Time (minutes) spent		
	Mean	Minimum	Maximum
ARI	5.1	3	11
Diarrhoea	4.1	2	6
<i>Immunization</i>			
BCG/DPT-1	6.3	2	10
DPT-2/DPT-3	4.7	2	11
Measles	3.3	2	5
Immunization-average	4.9	2	8.5
TT	6.4	2	18
ANC-1	16.3	13	25
ANC-2	11.1	4	17
RTI/STD	5.3	3	10
Drug dispense	1.5	1	3
<i>Family-planning Methods</i>			
Pills	6.3	4	10
Condoms	4.2	3	6
Injectables	7.4	5	11
Family-planning average	6.2	4	12

**Client-provider Interaction:** In total, 105 observations on selected ESP components were made. In general, all the providers greeted the clients on arrival. It was also observed that the clients were not unfamiliar to the clinic and the providers knew many of them. This fact was also confirmed from exit interviews of clients that they had a very high level of satisfaction (96%) with the behaviour of the providers and that many of them (70%) were regular clients of the clinic and hence were familiar to the providers.

**Use of Services**

The service use of the clinic increased, and was evident by a 72% increase in client attendance from 1997 to 2000. Table 6 shows the distribution of ESP services by types at the SBN Clinic. The increase was observed in the use of all ESP components at the clinic but was more marked (79%) in the areas of



**Fig. 3.** Trends in client attendance at SBN GOD: 1997-2000



general health services. The proportion of male users increased from 20% in 1997 to 30% at the end of 2000. This change was also observed among the adolescent age groups (9-19 years). The increase did not, however, change the proportion of share among different age groups. The proportion varied from 27% to 37% in children aged less than 5 years, 5-11% in children aged 5-8 years, 18-20% in teens, and 40-45% in persons aged over 20 years (Annexure 2, Table 1). The only exception was observed in the increase of proportion of children aged less than 5 years (48%) and in decrease in persons aged 20 years and over (25%) in 1998. Figure 3 reflects the increase in annual client flow during 1997-2000. The client flow showed two peaks in general throughout the years: during February-April and August-November. The sharp increase in client-flow after August 1998, reflects the excess number of client attendance immediately after the devastating flood throughout the country.

**Table 6.** Relative distribution of ESP services by types at SBN GOD (ESP Clinic)

Selected ESP services	1997	1998	1999	2000	2001 (Jan-Mar)
<b>General healthcare</b>	<b>9,414</b>	<b>12,580</b>	<b>14,172</b>	<b>16,527</b>	<b>3,484</b>
ANC/PNC	1,189	1,378	1,108	1,243	183
RTI/STD	27	361	701	606	70
TT	506	808	1,084	1,043	153
<b>Reproductive health</b>	<b>1,722</b>	<b>2,547</b>	<b>2,893</b>	<b>2,892</b>	<b>406</b>
Pill	540	1,095	1,239	816	144
Condom	363	287	419	711	145
Injection	725	908	1,327	1,268	325
IUD	24	11	6	27	10
<b>Family Planning</b>	<b>1,652</b>	<b>2,301</b>	<b>2,991</b>	<b>2,822</b>	<b>624</b>
Family-planning/related side-effects	8	42	9	18	2
<b>Family-planning Total</b>	<b>1,660</b>	<b>2,343</b>	<b>3,000</b>	<b>2,840</b>	<b>626</b>
<b>Referral</b>	<b>46</b>	<b>132</b>	<b>3</b>	<b>291</b>	<b>60</b>
<b>Child Health</b>	<b>2511</b>	<b>2946</b>	<b>3914</b>	<b>4008</b>	<b>891</b>
DD	627	987	229	626	106
ARI	424	728	1,093	1,268	270
BCG	238	275	605	493	141
DPT/OPV	1,039	736	1,602	1,343	331
Measles	183	220	385	278	43
EPI	1,460	1,231	2,592	2,114	515
Total No. of clients	15,353	20,548	23,982	26,558	5,467
Health education+ counselling (S)	-	-	523	2,056	788
Health education+ counselling (G)	-	-	195	769	195

**General healthcare:** The remarkable change in the use of services was found in the areas of general health. Each year, about 2,500 new clients attended the clinic than the previous year. These clients attended the clinic for many reasons, ranging from allergy or simple injury to serious abdominal problems or other varieties of ailments. The providers registered 50 categories of common ailments during this period. Those who attended for general health services were mostly female aged above 20 years. Most general ailments were related to management of different types of fever, gastro-intestinal problems, skin diseases, and general weakness.

**Reproductive healthcare:** The number of clients seeking various reproductive health services showed almost a two-fold increase from 1,722 in 1997 to 2,892 in 2000 (68%) without counting the family-planning clients. The number of clients who attended for women TT increased during 1997-2000 from 506 to 1,043. A good number of the TT clients were adolescents. The number of TT clients among adolescents was 496 in 1999, which increased to 974 in 2000 (Annexure 2, Table 9). Similarly, the use of ANC and PNC services increased steadily over time. Syndromic management of RTI/STD was introduced in mid-1999, and the number of clients attending for RTI/STD services increased from 27 in 1997 to 606 in 2000.

**Family Planning:** The number of users of family-planning methods increased considerably. For non-clinical methods, the number of clients increased from 540 in 1997 to 816 (51%) in 2000 for pills, and from 363 to 711(double) for condoms. Clients who procured condoms from the clinic were mostly women. In clinical methods, the number of users of injectables increased from 725 in 1997 to 1,268 (74%) in 2000. The use of IUD did not, however, remarkably increase. This increased use was probably due to regular screening for missed opportunities and effects of introduction of syndromic management of RTI/STD cases and also due to routine arrangement of health-education and counselling sessions.

**Management of side-effects:** It was observed that the number of clients for side-effects of family-planning reduced gradually from earlier years, which implied better client selection, follow-up of family-planning clients and improved technical qualities of services. The number of clients attending for management of different side-effects of family-planning methods reduced from 42 in 1998 to 18 cases in 2000 and only two cases in the 1st quarter of 2001.

**Child healthcare:** In all the components of child health, a gradual increase of service use was observed. It was marked in the use of all kinds of vaccinations, especially DPT and OPV, and BCG and for measles. The number of clients for EPI services was 1,460 in 1997, but increased to 2,114 (45%) in 2000. The increase was mostly marked in BCG and less in measles vaccination.

The number of clients attending for ARIs increased from 424 in 1997 to 1,268 in 2000, however children suffering from diarrhoeal diseases did not attend the clinic in that proportion. On the other hand, there was a fall in the number of clients attending for management of diarrhoeal cases in 1999 and 2000. It was observed that among the children attending for management of diarrhoeal diseases and ARIs, males outnumbered females (Annexure 2, Table 10 and 11), as a whole from 1997 to 2000.

**Health education and counselling:** As many as 3,367 and 1,159 individual and group sessions were held at the clinic. Only in the first quarter of 2001, 788 individual and 195 group sessions were arranged, i.e. on an average, 262 individual and 65 group sessions per month, and 10 individual and 3 group sessions per day (Annexure 2, Table 13). All the 11 selected ESP areas were covered during these sessions. Most group sessions concentrated on the management of ARIs, diarrhoeal disease, importance of immunization (EPI), and women TT, and on breast-feeding or supplementary feeding. Whereas single sessions concentrated on the use of family-planning methods and treatment of RTIs/STDs along with the above subjects.

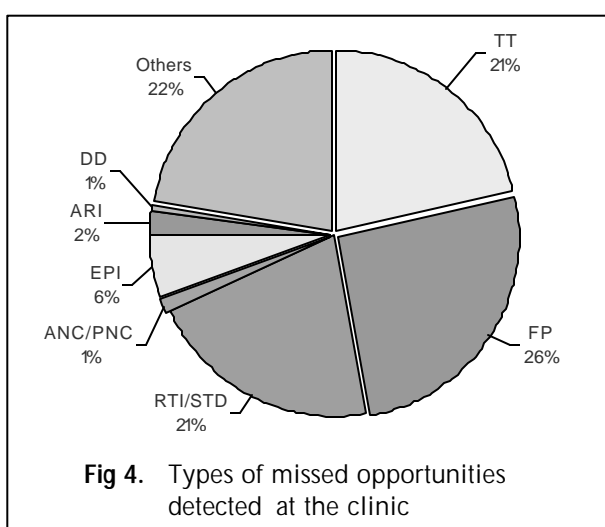
### **Needs of Additional Services**

The needs of additional services of clients and their accompanied persons were routinely screened, by the providers using a screening algorithm, and services were provided for the needs identified either meeting these directly or by referral. The programme was introduced in October 1999. It was observed that among the attending clients, needs for additional services varied from 8% to 18% of cases, and about half of them were provided with services. To meet this extra demand no extra supply of medicines/logistics was required, and no shortage of medicines/logistics was reported either. It was noted that the screening process gradually increased in proportion, and at the end of first quarter of 2001, more than 93% clients attending the clinic were screened for additional services (Table 7).

**Table 7.** Missed opportunities detected during October 1999-March 2001 at SBN GOD

Clients	1999		2000		2001	
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar
Clients attending the clinic	6,001	6,215	7,147	7,050	5,884	5,467
Clients screened for additional needs	2,608	5,375	6,425	6,601	5,439	5,080
Missed opportunities detected	289	652	531	690	526	910
Missed services provided	0	134	196	320	226	338

Among the types of missed opportunities detected 69% were related to women of reproductive age group with needs of family-planning (26%), RTIs/STDs (21%) and women TT (21%) (Fig 4.)



**Fig 4.** Types of missed opportunities detected at the clinic

## Quality of Care

### Practice of providers

The practice of the providers on management of selected ESP services was observed and analyzed during the evaluation. In general, the practice had gradually become more protocol-wise as expected, particularly in diagnosis and treatment of cases. The practices of the providers were followed over time, and the service statistics on diagnosis and treatment in cases of ARI, diarrhoeal disease, and RTIs/STDs were recorded accordingly. Specific case-wise management, observed during the evaluation, confirmed these changes in the practice of the providers.

Correct case management means algorithm-based diagnosis and correct drug treatment. The providers were found to practise more and more correct case management according to the protocol. Figure 5 shows the practice of the providers in diagnosis of ARIs among children aged less than 5 years. In 1997 and 1999, a

considerable number (18% and 4%) of cases were diagnosed as Reproductive Tract Infection (RTI) or Upper Respiratory Tract Infection (URTI) (Annexure 3: Quality of care). This pattern had changed in 2000 and onwards, when diagnosis was made according to the guidelines. In the management of ARI cases, the practice also showed improvement (Fig. 7). The prescribing pattern changed gradually from non-specific antibiotics to more specific drugs, such as cotrimoxazole and paracetamol, with health education and counselling. A marked change was observed in the use of antihistamine, its use was reduced drastically from 1997 to 2001.

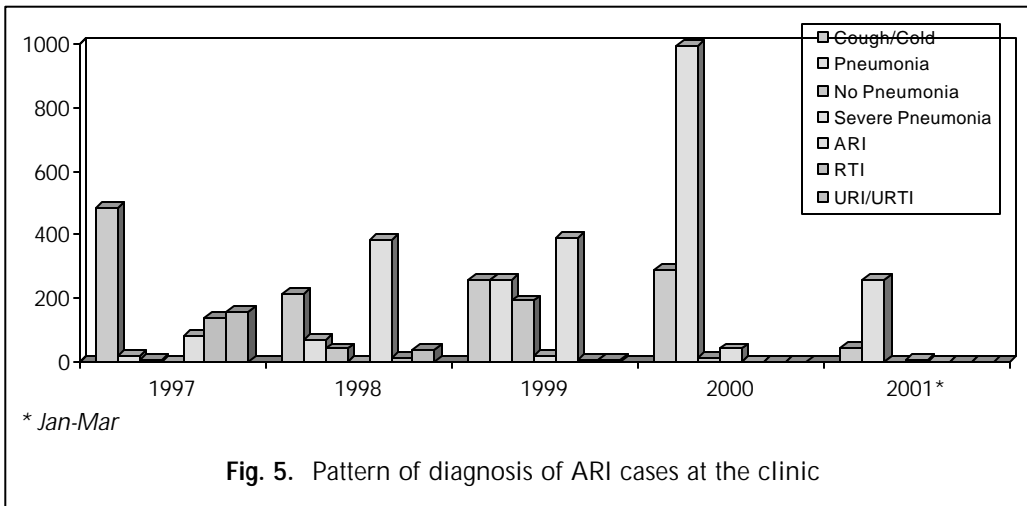


Fig. 5. Pattern of diagnosis of ARI cases at the clinic

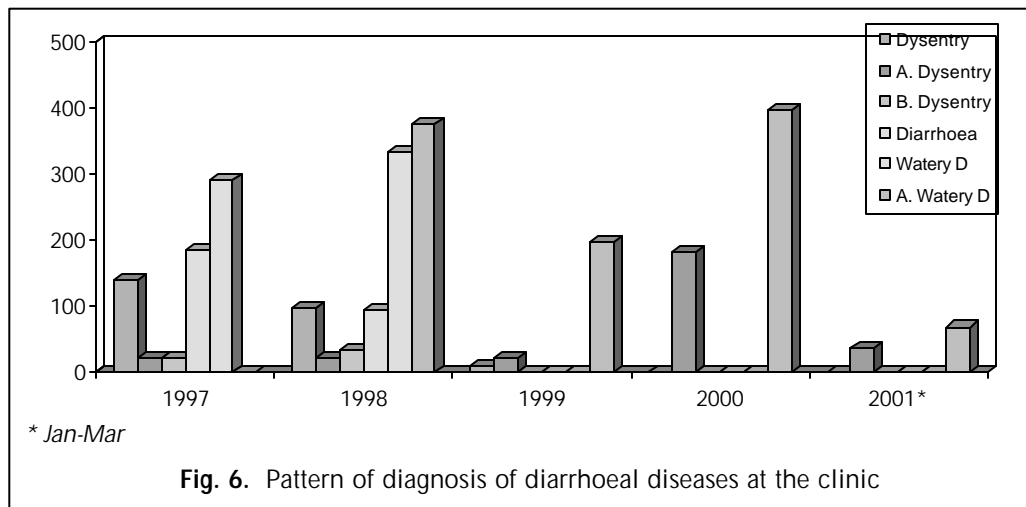
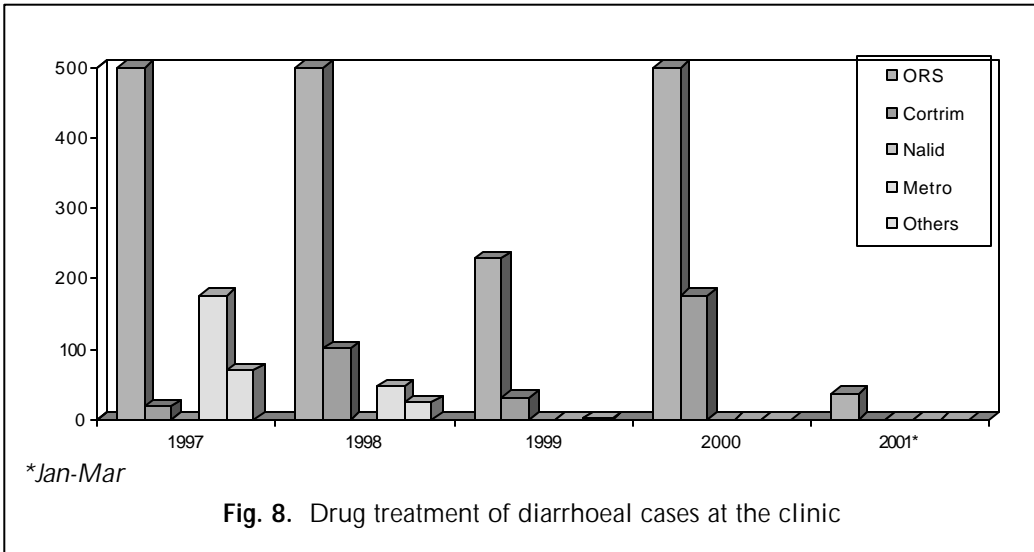
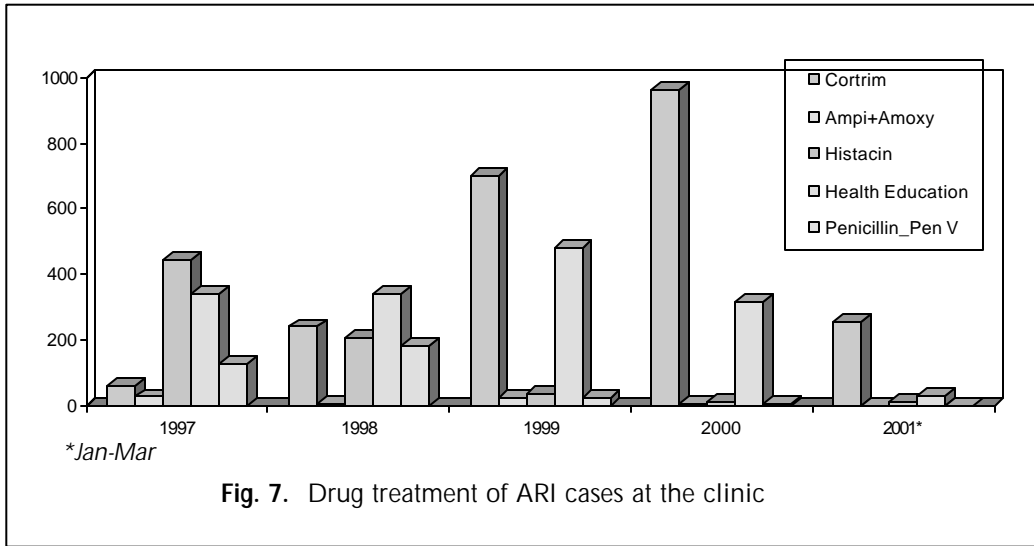


Fig. 6. Pattern of diagnosis of diarrhoeal diseases at the clinic

In the management of diarrhoeal cases in children aged less than 5 years, these changes were also observed. The trend of diagnosis varied from the traditional pattern of a variety of diagnoses (Fig. 6) to a more protocol-wised diagnosis. The drug

treatment also changed from the use of many drugs to either ORS in acute watery diarrhoea or Cotrimoxazole in case of dysentery (Fig. 8).

The similar pattern was also observed in the management of RTI/STD cases. The pattern of diagnosis became more syndromic-based (Table 8) than to a number of other broad vague diagnoses practised earlier. In 1997, the pattern of diagnosis was mostly related to one presenting symptom, such as leucorrhoea, and hence management was also followed with more use of non-specific drugs. The introduction of syndromic management and orientation of the providers on it changed the practice gradually along with drug management that is reflected in the practice, and now more health education or specific drugs such as Cotrimoxazole, Metronidazole or Ciprofloxacin are prescribed.



**Table 8.** Pattern of diagnosis of RTI/STD cases at the clinic during 1997-2001

Types of diagnosis	1997	1998	1999	2000	2001 (Jan-Mar)
Candidiasis	1	6	2	39	7
Cervicitis	0	0	0	29	0
Trichomoniasis	0	0	0	47	138
Lower abdominal pain	0	0	0	1	61
Pelvic inflammatory disease	0	0	0	2	0
RTI/STD	0	87	28	33	0
STD	0	0	15	1	0
STD cervicitis	0	0	0	11	0
Vaginal disease syndrome (VDS)	1	107	621	369	0
VDS NAD	0	0	0	12	0
VDS candidiasis	0	0	0	15	0
VDS cervicitis	0	0	0	10	0
VDS trichomoniasis	0	0	0	8	0
VDS vaginitis	0	0	0	17	0
Vaginitis	5	7	5	11	0
Leucorrhoea	14	119	26	1	0
Moniliasis	3	4	1	0	0

***Specific observation***

The practice of the providers was observed while they were engaged in delivering services. The main objective was to note how closely they were following the job-aid and practising all the components of service-delivery. The observation guideline was developed and tested during the needs-assessment study in the same facility, and was also used for periodical observations for monitoring the intervention. In general, marked changes and improvement were observed in the practice of the providers in all the components of case management (Annexure 4).

***Management of ARI***

In total, 11 ARI cases were observed. On an average, 5 minutes were spent per case, which was less than a minute in 1998. Cordial greetings, and building up of rapport before starting consultation were observed as a common practice. Age of patients was determined in all cases.

**History-taking:** All 5 components of history-taking were asked in most cases. Duration of cough was asked most frequently (7/11). But feeding status was asked much less frequently (2/11). Co-infection of diarrhoea, an important aspect of history-taking, was inquired in only half of the cases.

**Physical examination:** The danger signs of ARI were looked for in every case observed. All 5 components were examined in most cases, while temperature in children aged less than 2 years was less checked, and malnutrition was checked less frequently. Respiratory rate was counted, and chest indrawing was frequently observed.

**Diagnosis and treatment:** All the cases were diagnosed and classified according to the guideline provided, and there was no disagreement with the observer except in one case. The good practice prevailed with the initiation of treatment according to the classification, and appropriate drugs were prescribed accordingly.

**Counselling:** In most cases, mothers were appraised on all the components of home care, and counselling was done either by the Medical Officer alone or sometime again by the counsellor. The component that was less addressed was the feeding advice during the illness of children. The most frequent advice was how to clear the nose in case of blockade. Mothers were also informed of the danger signs of ARI and when to return for immediate treatment. An important component like inability to drink by the child was omitted most frequently. Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

#### ***Management of diarrhoea***

Ten cases were observed. The average time spent per case was 4 minutes. Determination of age was done in all cases.

**History-taking:** All 6 components of history-taking were asked in most cases. Duration, frequency, consistency, and blood in stool were asked most frequently, while fever and convulsion were less frequently inquired. Co-infection of ARI was not inquired at all.

**Physical examination:** All 3 components of the danger signs for diarrhoea were looked for in every case observed. Skin pinch for dehydration was done in all cases. Signs of dehydration in other places of the body were also looked for.

**Diagnosis and treatment:** All the cases were diagnosed and classified according to the guideline provided, and there was only one disagreement with the observer. ORS was prescribed and supplied in all cases. An antibiotic when prescribed was found to be appropriate.



**Counselling:** In all cases, the mothers were asked about the preparation of ORS and its use. Necessary explanation on the antibiotic use was given and feedback was taken. The three advices on home management of diarrhoea were given in each case, and feedback was taken. The danger signs for referral were also discussed. Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

***Antenatal care (first visit)***

In total, 12 cases were observed. The average time spent per case was 16 minutes.

**History-taking:** All 6 components of history-taking were asked in most cases. However, history of drug allergy was not asked.

**Physical examination:** A general physical examination, including per abdominal examination, was done in all cases. Breast examination was done in one-third of cases. Routine laboratory tests for haemoglobin were advised in all cases, but tests for urine sugar and albumin were advised in one-third of cases. (Actually, these tests had routinely been done by the FWV. She had the supply of hematometry instrument and uristrix for haemoglobin and urine albumin and sugar estimation. However, on the days of observation, the water supply of the clinic was hampered, which prevented her to arrange these tests).

**Counselling:** In the majority of cases, the counsellor's discussion included information on: TT vaccination, feeding practices and necessity of nutrients, safe delivery practice and preparation for it, necessity for PNC visits and follow-up. Iron and folic acid were provided to all cases.

Follow-up advice was given to every case, but missed opportunity was screened partially.

***Antenatal care (revisit)***

In total, 8 cases were observed. The average time spent per case was 11 minutes.

**History-taking:** All 6 components of history-taking were asked in most cases.

**Physical examination:** A general physical examination, including per abdominal examination, was done in all cases. Breast examination was done in most cases. Routine laboratory tests were advised less frequently in revisit cases.

**Counselling:** In the majority of cases, the discussion concentrated on: warning signs during pregnancy and of difficult labour, TT vaccination, feeding practices and necessity of nutrients, safe delivery practice and preparation for it, necessity for PNC visit and follow-up. Iron and folic acid were provided to all cases.

Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

### ***Family-planning services***

#### **Oral pill (new + revisit)**

In total, 11 (new + revisit) cases were observed. The average time spent per case was 5-6 minutes.

**History-taking:** All the components of the screening procedure were adequately followed. Last menstrual period (LMP) was asked in all cases. Relevant medical history was taken with the exception of inquiring about breast lump. History of chronic diseases, such as tuberculosis was not asked at all. In revisit cases, problems relating to method use were rarely asked and whether the client wants to switch the method was never asked.

**Physical examination:** A general physical examination was done in all cases, but routine breast examination was done less frequently. Laboratory tests were not advised in new cases, and were only asked in half of the revisit cases.

**Counselling:** In the majority of cases, how the method works was not discussed, and the warning signs and side-effects were discussed partially and less frequently. However, how to use the method was discussed fully in all cases.

Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

#### **Injectables**

In total, 9 (new + revisit) cases were observed. The average time spent per case was 6-8 minutes.

**History-taking:** All the components of the screening procedure were adequately followed. LMP was asked in all cases. Relevant medical history was taken. The less-frequently asked components were history of heart diseases, severe headache, and breast lump. In revisit cases, problems relating to method use were rarely asked, and whether the client wants to switch the method was never asked.

**Physical examination:** A routine general physical examination was done, but examination of breast and checking for jaundice were not done. No laboratory tests were advised in either new or revisit cases.

**Counselling:** In the majority of cases, how the method works was not discussed, and the warning signs and side-effects were discussed partially and less frequently. However, how to use the method was discussed fully in all cases. For the new users, the use of other methods was discussed with the use of IEC materials.

Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

## **IUD**

Only one case was observed. The time spent was 15 minutes.

**History-taking:** All screening procedures were adequately followed. LMP was asked, and relevant medical history was taken.

**Physical examination:** A general physical examination was done according to the guideline, and a pelvic examination was also done following all steps.

**Counselling:** Different options of contraceptive methods were not discussed, but how IUD works was properly discussed. The warning signs and side-effects relating to IUD were partially discussed. No laboratory tests were done. However, follow-up advice was given, and missed opportunity was screened partially.

## **Condom (new + revisit)**

Six cases, including new and revisit cases, were observed. All clients were female. The average time spent was 4 minutes.

**History-taking:** All components were asked properly and relevant history was taken. In revisit cases, problems relating to method use were not asked, and whether the client wanted to switch the method was never asked.

**Counselling:** The side-effects and minor difficulties relating to condom use were not discussed. However, options for other contraceptive methods were discussed. IEC materials were seldom used. Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

### ***Management of RTIs/STDs***

In total, 10 cases were observed. The average time spent per case was 5.3 minutes.

**History-taking:** The history taking of RTIs/STDs has 13 components, and most components were inquired in most cases. The important components that missed frequently were the history of multiple partners and any past history of RTIs/STDs.

**Physical examination:** A general physical examination was done, but necessary per abdominal examination was not done. Per vaginal examination was not done during the observation period due to non-supply of water on that day. However, it was reported that per vaginal examination was done routinely. Examination of inguinal lymph nodes in some cases was not done.

**Diagnosis and treatment:** Syndromic diagnosis was made in all cases, and there was no disagreement between the provider and the observer. Appropriate drugs were prescribed in all cases.

**Counselling:** Advice on drug use and necessity of completing treatment were addressed properly. On the other hand, messages on partner management and other prevention measures were less frequently given. Over and above, the provider maintained a respectful and non-judgmental attitude while rendering services in RTI/STD cases.

Follow-up advice was given to every case. Missed opportunity was screened with all of its components in most cases.

### ***Child immunization and women TT***

A total of 18 cases of child immunization and 9 cases of women TT were observed. The average time spent per case was 5-6 minutes. Age was determined in all cases.

**Preparation:** The vaccinator arranged the sessions as per the guideline. The table was organized as directed. Vaccines were brought to the clinic daily from the zonal office of the DCC. Sterilization of syringes, needles, and other equipment was done properly and placed appropriately before vaccination.

**Vaccination procedure:** Complete aseptic measure was taken in each case. Vaccines were taken in proper doses and administered as per appropriate route (orally, injection, etc.) In case of injection, an appropriate pushing technique was used.

**Record-keeping:** In all cases, vaccine cards were checked, and relevant information was written.

**Counselling:** In most EPI cases, information on benefit of immunization, necessity for completion of the schedule, and preservation of cards and some description of side-effects were given. But the information was given to half of women TT cases only.

Follow-up advice was given to every case. According to the new client-flow system, all clients must pass through the counsellor before going to the vaccinator. Therefore, missed opportunity was screened by the counsellor with all of its components in most cases.

### ***Drug dispensing***

The pharmacist in charge for dispensing drugs was observed during dispensing processes. A total of 10 cases were observed, and the pharmacist spent an average of 1.5 minutes for each case. All clients were greeted.

**Dispensing practice:** In all cases, the pharmacist gave information on drug doses, route of administration, and necessity for completion of the dose schedule. He emphasized on regular administration of drugs in most cases. However, feedbacks from clients were taken in only half of the cases. He took feedbacks less frequently from revisit clients, and provided information further less frequently on the common side-effects of drugs.

**Record-keeping:** All the drugs dispensed were recorded properly.

**Storage and preservation:** The drugs were properly preserved in clean and dry places, and the practice was to take out a small supply for daily dispensing. The drugs were found in good condition and within shelf-life date of expiry.

Follow-up advice was given to every case. Missed opportunity, in regard to inquiring whether the client had the session of counselling or health education was screened for all cases.

### Health education and counselling

In total, 6 individual and 4 group counselling sessions were observed. The average time spent for an individual session was 6.7 minutes, and the average time spent for a group session was 7.3 minutes.

Table 9 summarizes the number of sessions and pattern of flip-charts/IEC materials used during the sessions.

**Table 9.** Number of sessions and pattern of IEC materials used during health education sessions

Number and type of health education sessions	Total no.	Breast-feeding	Diarrhoea	ARI	Cleanliness	Night blindness	Worm	RTI/STD	Infant feeding	EPI	
Single	6	0	0	6	2	6	0	1	0	3	1
Group	4	2	0	2	1	2	0	1	1	4	2
Total	10	2	0	8	3	8	0	2	1	7	3

The practices of the counsellor were found mostly to be very good, and were according to the guideline. She routinely screened missed opportunities. It was observed that most additional needs of clients were detected during health-education and counselling sessions conducted by her counsellor. The practices of the counsellor are summarized in Table 10.

**Table 10.** Practice of counsellor

Observation	Yes
Greet clients	10
Arrange the group (wait if necessary)	4
Make appropriate sitting arrangements	10
Ask requested service need of clients	10
Assess the knowledge of clients on the topic of discussion	10
Use of IEC materials during assessing knowledge at the beginning	10
Use of IEC materials during the session	9
Take feedbacks after HE session	10
Tried to involve everyone	4
Summarize the session at the end	9
Maintain privacy during counselling (RTI/STD cases)	As appropriate
Maintain non-judgmental attitude (RTI/STD cases)	As appropriate
Emphasize on partner management	2
Emphasize on completion of treatment	3

### ***Practice of providers in using screening algorithm to detect missed opportunities***

The practice of counsellor in using screening algorithm was also observed in 24 cases. She usually spent 23 minutes, apart from education session, to screen for missed opportunities. During the screening, in most cases, she followed most components of the algorithm. The only less-frequently inquired area was the requirement for vitamin A and, in some cases, childhood immunization.

Similarly, practice of FWV in using the algorithm to screen for additional needs of clients was also observed in 12 cases. Like the counsellor, she routinely followed all components of the algorithm to screen. These two providers were mainly responsible for primary screening for the additional needs of attending clients. The client flow was also organized, and, as such, all clients had to pass through this screening before going to other providers. The Medical Officers and vaccinator also took part in screening only secondarily using the same algorithm, but the vaccinator seldom did the screening. Their practices were observed along with specific case management and reported as such.

### ***Knowledge of providers***

Knowledge of providers on different components of ESP services was investigated using a questionnaire. Essential elements in history-taking, physical examinations, diagnosis and classification, criteria for treatment, and counselling were selected and adopted for the questionnaire following the job-aid for the providers. The providers were given training and refresher's training on the job-aid earlier in 1998, 1999, and 2000. They were questioned only on those aspects of services that were provided by them everyday. All the providers of the clinic, including three medical officers, FWV, one vaccinator, and the counsellor, were interviewed. In general, most providers had good knowledge on the service components that they practise routinely. Adequate answers were given about most aspects that were asked for. Partial answers, when given, were on those areas that did not appear in to their regular practice (Annexure 5).

**History-taking:** The Medical Officers adequately mentioned about most elements relating to history-taking on diarrhoea, ARI, childhood diseases, and management of ANC/PNC and RTIs/STDs. A few aspects, such as signs of malnutrition and anaemia in children, cases of RTI that were not STD, and all steps of client selection for family-planning methods, were partially mentioned by some, probably because the providers were not dealing with such cases regularly.

**Physical examination:** The providers possessed good knowledge on essential physical examination of most cases. Partial answers were given in case of assessment of dehydration and of severe diseases in children aged less than 5 years. Some elements of physical examination of the newborns were also not mentioned well by the providers.

**Treatment and management:** All the providers responded well regarding contraindications and side-effects of family-planning methods and their management, and doses and schedules of EPI including TT vaccines. However, the vaccinator did not adequately mention the main contraindications of DPT vaccination. The counsellor had good knowledge on main messages on breast-feeding, infant feeding, diseases preventable by vaccines, and home management of diarrhoea. On the other hand, signs of neonatal tetanus and danger signs of ARI were partially mentioned by the Counsellor. Some of them did not adequately mention the 4 Cs (C=Counselling, C=Compliance with treatment, C=Condom use, C=Contact tracing) in the management of RTIs/STDs.

## **Clients' Satisfaction**

### ***Knowledge and perceptions of clients at exit interview***

Perception and opinions of clients about the clinic, the services offered, and the service-delivery system were investigated using a pre-tested questionnaire. Trained and experienced staff interviewed 73 clients who visited the clinic for different services. About 95% of them were female, and more than 70% used the facility for the second time. General curative healthcare was the major cause of visit of the clients (Table 11). In general, they had good knowledge on the services available from the clinic, but they were less aware of the management of diarrhoea and ARI cases (Annexure 6).



**Part A: Perceptions of clients about service-delivery**

**Table 11.** Perceptions of clients about service-delivery at SBN GOD

Reasons for present visit	%	Reasons for present visit	%
Family-planning methods (new)	15.1	General health	34.2
Family-planning methods (re-supply)	2.7	Diarrhoea	8.3
ANC	21.9	ARI	9.6
TT	15.1	Immunization	9.6
RTI/STD	11.0	Others	5.5
<i>Knowledge on availability of services</i>			
<u>Service items</u>	<u>%</u>	<u>Items</u>	<u>%</u>
Family-planning methods (new)	93.2	General healthcare	87.7
Immunization	79.5	Diarrhoea	38.4
ANC/PNC	69.9	ARI	23.3
RTI/STD	15.1	Simple injuries	13.7
Health education	28.8	Others	6.8
<i>Client-provider interaction</i>		<i>Drug dispensing</i>	
<u>Items</u>	<u>%</u>	<u>Items</u>	<u>%</u>
Greeted clients	98.6	Explained doses and time	72.6
Taken history	94.5	Explained route of administration	76.7
Performed physical examination	34.2	Importance of completing the course	43.8
Explained the condition	80.8	Feedbacks taken from clients	5.5
<i>Providers rating good by clients</i>		<i>Clinic rating good by clients</i>	
<u>Items</u>	<u>%</u>	<u>Items</u>	<u>%</u>
Registrar	91.8	Waiting time	83.6
Counsellor	71.1	Staff behaviour	95.9
Medical Officer	57.5	Interaction time	91.8
FWV	43.8	Information given	83.6
Pharmacist	69.9	Drug availability	82.2
Vaccinator	28.2	Health education and counselling	93.2

*Multiple responses were accepted*

The average waiting time in clients' opinion was less than 30 minutes, and the major reason cited was providing more time to the previous client. The clients candidly expressed very high opinion about the client interaction processes performed by the providers, about the behaviour of staff, waiting time, drug availability, and information given to them. On the other hand, during drug dispensing it was observed that enough (5.5%) feedback was not taken from them. A comparatively lower percentage (34.2%) was satisfied about the physical examination performed by the providers.

## Part B: Perceptions of clients on missed opportunities

As discussed earlier, an algorithm-based screening to detect the additional service needs of clients and their accompanied persons was introduced and practised since October 1999. The process of detection of missed opportunities was monitored through collection of service statistics, periodical observations, and exit interviews of clients. During the evaluation, as part of the exit interview, clients leaving the clinic having different requested services were inquired about their various additional needs. Behaviour of the providers in this regard was also inquired. The results are summarized in Table 12. It has been observed that unmet need for RTIs/STDs was common among all groups of respondents, and next was the need for family planning. In most cases, the identified needs were either referred for available services or given appropriate information. However, some identified unmet needs were not referred for services. Absence of routine and regular supervisions and monitoring by appropriate authorities and non-adherence to the protocol might be the reasons for missing some of these opportunities. However, the clients leaving the clinic might sometimes be reluctant to avail themselves of the services offered other than those besides their requested one.

**Table 12.** Information on missed opportunity screening from client at the clinic

Requested service	Unmet need		Referred
	Type	Yes	Yes
FP services (n=13)	TT	1	0
	RTI/STD	5	1
EPI/TT (n=18)	RTI/STD	7	1
	FP	2	0
	EPI	7	2
ANC/PNC (n=17)	RTI/STD	7	1
General health (n=40)	TT	8	2
	RTI/STD	19	8
	EPI	2	2
	FP	19	14

## Part C: Knowledge of clients

At the exit, the clients were asked questions about the preparation of ORS at home, other ORT fluids, when to seek care in case of ARI and other pertinent questions relating to vitamin A, breast-feeding and infant feeding, and about general knowledge on RTIs/STDs. All these items are subject matters for the daily routine health education and counselling programme. As the majority of these clients were revisit clients (>70%), it was expected that they would possess good knowledge on these subjects. Table 13 summarizes the knowledge of clients on different subjects.

**Table 13.** Knowledge of clients on selected ESP services at the clinic

Knowledge items	%	Knowledge items	%
<b>Diarrhoea</b>		<b>Main messages of Vitamin A</b>	
Preparation of ORS	98.4	Deficiency cause night-blindness	56.3
Amount to feed	80.6	Initial dose with measles vaccine	20.3
3 rules of home care		<b>Infant feeding</b>	
More fluid to child	67.7	Main messages of breast-feeding	
Continue normal feeding	46.8	Best food for infant	79.0
Observe to refer (seek care)	62.9	Immediately after birth	74.2
Name of any other ORT fluids	85.5	Feeding initiate more milk	38.7
When to seek care (refer)		Can be continued during and	
Many watery stool	95.2	after diarrhoea	22.6
Frequent vomiting	74.2	In case of working mother	
Marked thirst	4.8	Expressed breast-milk	11.3
Eating or drinking poorly	22.6	Position of mother during breast-	
Fever	19.4	feeding	46.6
Blood in stool	16.1	Position of infant during feeding	37.1
Sunken eyes	38.7	Posture of baby during sucking	41.9
Child not improved in 3 days	43.5	Ingredients of khichuri	85.2
<b>ARI</b>		Preparation of khichuri	80.3
Home care of cough and cold		Feeding of child	77.0
Breastfeed/more fluid to child	40.0	Use of IEC materials by	
Continue normal food	26.7	counsellor	57.4
Give extra diet after condition	26.7	Did she use	54.1
Clean the nose	43.3	Did those help	90.2
Signs of pneumonia		Health education is helpful	
Rapid breathing	63.3	<b>RTIs/STDs</b>	
Not feeding well	43.3	Advices given on	35.6
Gradually more seek	28.3	Completing treatment	23.7
Signs of improvement		Treating companion	23.7
Normal breathing	58.3	Follow-up visit	11.9
Less or remission of fever	36.7	Safe sexual practice	20.3
Increase appetite	30.0	Use of condom	5.1
<b>EPI</b>		Others	
Prevent from 6 diseases	71.9	Minor illness is not	15.6
Need 4 time visit to complete the		contraindicated	46.9
schedule	42.2	To preserve the EPI card	
Measles vaccine is given at			
completion of 9 months	40.6		

*Multiple responses were accepted*

Most clients had good knowledge on presenting symptoms, important signs, home care and management of common ailments, such as diarrhoea, ARI, vitamin A deficiency, and importance of immunization. Above 90% of the respondents had excellent knowledge on the preparation and use of ORS and other home fluids, and danger signs of diarrhoea. They also had good knowledge on the importance of breastfeeding, complementary feeding in infants, and preparation of weaning food. On the other hand, a lower percentage of the respondents could satisfactorily answer the importance of completing treatment, treatment of companion, and safe sexual practices in case of RTIs/STDs. A lower proportion of the respondents answered correctly the importance of continuous breastfeeding during diarrhoea, and some signs for care-seeking in case of diarrhoea. About 50% recognized the use of IEC materials by the counsellor and admitted that those were helpful to understand the messages that were intended for.

## **Organization and Management**

### **Facility assessment**

#### ***Reception area***

Clients attending the facility for any kind of services were required to collect a free ticket from the registry clerk in the waiting space. Registration was not required for revisit or follow-up patients. The reception area was adequately spacious and well ventilated. Rooms of all the providers were connected through this space. There were several benches and stools for the clients. The reception, thus, served for clients of both the registration and waiting area.

#### ***Consultation area***

There were five rooms for consultations with clients in the clinic: 2 rooms for 3 Medical Officers and one each for FWV, Counsellor, and Vaccinator. Two Medical Officers shared one room at a time, while the MO (Clinic-in-Charge) used the other room. All the rooms were provided with adequate tables, chairs, stools, curtains and lights. Privacy was ensured during client consultation in most cases.

#### ***Examination area***

There were two examination areas in the clinic: one was used by the MOs and the other by the FWV. One examination table was located in the MO in-charge's room, and the other one was used by the FWV. Both the examination areas had screens for privacy, beds with bed sheets, and sufficient light. The examination areas also had enough auditory privacy. In both Medical Officer's room and FWV's room, there were provisions for running water and hand-washing. The service area for the vaccinator was not spacious; this was a convert area rebuilt afterwards. There was no window in the room, and it was not comfortable as reported by the providers. Piped water supply was also not available in that room.

### ***Counselling area***

The room for health education and counselling was a big room, and was the most comfortable one in the clinic. There were adequate light and ventilation. The room was provided with several chairs and stools.

### ***Dispensing area***

An adequate space was marked for dispensing drugs. The area had a glass-panelled dispensing table, a table, and a few chairs.

### ***Sanitation***

There were two toilets--one in the room of MO in-charge and the other one in the FWV's room. Both the toilets had good water supply and flush system. The clinic had an incinerator installed by the family-planning department, where normal wastes were incinerated weekly. Some wastes from the family-planning activities (syringe, needles, ampoules, vials, etc.) were collected in a box and submitted to the Family Planning Officer of Mirpur thana. Some wastes collected after screening examination for RTI/STD cases and at the end of the vaccination sessions were covered in a bucket and carried back to the ICDDR,B hospital at Mohakhali for disposal.

### ***Storage***

There was a separate room for storage of pharmaceutical supplies and other logistics. Steel almirahs and racks for storage of medicine and other commodities were available. The store room was clean and ventilated. Family-planning commodities were stored in a separate steel almirah in the FWV's room. The FWV maintained a separate stock register for IUDs, pills, injectables, and condoms. There was no separate store for immunization services provided by the DCC. The vaccinators kept their sterilizer in one corner of the FWV's room. They also preserved other logistics such as bowl, bag, card, and register book, in the same place.

### ***IEC***

At the outside of the clinic, there was a signboard displaying the name of the clinic. At the entrance, there was another billboard displaying information on the services available, working hours, and charges (free). Besides, different IEC materials were abundantly displayed inside the waiting space and providers' rooms. In the Medical Officer's room, the RTI/STD treatment algorithm was displayed in Bangla. On the tabletop of each provider, the screening algorithm for detecting missed opportunities was found.

**Safety and waste disposal:** It was observed that the providers took routine precaution in using sterile equipment for all invasive purposes as guided in the protocol. Sterilization of immunization instruments was routine and regular. The procedure of vaccination was aseptic in practice. The instruments used for examination of RTI/STD cases or for family-planning clients were cleaned and stored as per direction. Privacy during examination was maintained, and consent of clients was taken in all cases. For routine ANC follow-up and for IUD insertion, all necessary precautions were taken including use of disposable gloves. All the wastes of the clinic were collected in covered buckets for incineration at the clinic or sent to Thana Health Complex at Mirpur or ICDDR,B hospital for final disposal.

#### **Supplies of medical and surgical requirements**

The Sher-e-Bangla Nagar Government Outdoor Dispensary received supply of medicines and logistic from 3 different sources. Most medicines were supplied from the Civil Surgeon's office, the family-planning methods were supplied from the Family Planning Office, Mirpur, and the vaccines were supplied from the zonal office of DCC. The providers maintained five stock registers to record the supplies. The pharmacists maintained the register for medicines and the register for stationary, while the FWV maintained the family-planning stock register, IUD stock register, and IUD cash register. All the registers were found to be updated on the day of observation. The vaccinators did not keep any stock in the clinic, as they were used to get their vaccines daily from the zonal office. The current stock position of drugs and equipment was found updated, and the providers expressed their satisfaction on the adequacy of supply of medicines and other logistics. The only lack of supply was ciprofloxacin required for treatment of RTIs/STDs, which was not on the list of medicines supplied by the health department.

#### **Clinic information system**

The Medical Officers usually used 5 registers for daily service-delivery and made one monthly report for the Civil Surgeon's office. On the other hand, the FWV used 12 different registers routinely and used to prepare 4 reports monthly which took almost half of her daily working time. The EPI vaccinator used three registers, while the pharmacist and the counsellor used one register each. All of them prepared a monthly report. In addition, the vaccinator prepared a daily use tally report (Annexure 8).

**Supervision and Monitoring:** A supervisory guideline and a checklist had been prepared and adopted for the clinic use since June 2000. Beforehand, the providers reported that they were visited and supervised vertically by their respective departmental supervisors. Later on, the supervisors were said to meet all the providers of the clinic, irrespective of department, and made enquiry about some aspects of their services during their supervisory visits. Nevertheless, no filled-up supervisory checklist was found at the clinic as was planned by the ECDC.

### **Views of Managers**

This operation research had the advantage of having a board of decision-makers (ECDC) as the advisory body of the intervention. The ECDC, through bimonthly meetings and brainstorming sessions, identified and defined the problems, and systematically examined the potential strategies to overcoming them. During the evaluation, the study team asked a set of questions to the managers and decision-makers involved with the intervention for their opinion. The questions were:

- Q.1 *What were the strengths of ESP intervention at the SBN GOD?*
- Q.1 *What were the weaknesses of ESP intervention at the SBN GOD?*
- Q.3 *What important aspects of the intervention were adaptable in the national programme?*
- Q.4 *What were the critical research areas for urban ESP delivery/urban healthcare?*

The common strengths (Annexure 7) identified by the managers were: integrated service-delivery system or in other words providing health, family-planning and immunization services from one centre (one-stop delivery), addressing the missed opportunities by providing services for the additional needs of clients, necessary supportive changes such as alternate client-flow system and inter-provider referral. Introduction of health education and counselling, as a separate programme, was also appraised by some. The managers of the health department (CS/DCS-DGHS) also emphasized on the attitude to bring changes by managerial decisions through ECDC and IPM and by carrying out the necessary physical changes as positive inputs. Similarly, the local government authorities (DCC and UPHCP), motivation of the providers and performing according to satisfaction of clients were considered as important steps. Both health and family-planning departments expressed that the job-aid for urban providers and the subsequent training were a very critical factor to change the attitude of the providers and improve the quality of services.

The weaknesses, on the other hand, included: absence of unified management or single command, unidentified supply system for drugs and logistics, and absence of an appropriate referral system. In the opinion of family planning department (DFP) informants, another weakness was excess workload for one FWV in an integrated service-delivery system. All of them identified absence of comfortable coordination among different partners as a critical weakness of the intervention.

When asked about the adaptability of the intervention in the national programme, all the respondents had some common suggestions. The common strategies that could be adapted were:

1. Integration of service-delivery (one-stop service-delivery)
2. Addressing missed opportunities through the screening algorithm
3. Routine health education and counselling by a counsellor.

Management of time through structured client flow, improved drug dispensing practice, and job-aid for the providers were also considered by some as important strategies that could be adapted.

The major research questions that were suggested as necessary for urban healthcare were as follows:

1. What should be the ideal (client-oriented) package for urban ESP?
2. What should be the Management Information System (MIS) in urban service-delivery?
3. How health education and counselling or BCC activities could be strengthened?
4. How the dropouts of family-planning and immunization services can be followed up?
5. What could be the module for alternate service-delivery in absence of one provider (e.g. can the pharmacist provide the services of a vaccinator in her absence or vice-versa? Also other services?)

Among the other issues discussed were the male involvement in reproductive healthcare, time constraint for FWVs, testing of local-level planning, and referral linkage strategy.

## **Discussion and Conclusions**

The urban areas and their health dynamics are different from those of the rural part of the country. The urban population is growing fast with high intra-urban mobility of inhabitants, creating excess of demand for healthcare and becoming problem for any kind of estimations. In recent years, the number of municipalities has increased from 84 to 209. The municipalities and city corporations are constitutionally mandated to providing primary healthcare to their inhabitants. But usually they are under-staffed and under-equipped to meet the demand for healthcare and are obviously unable to meet the extra demand, specially when the government has adopted a health sector reform to provide her citizens with a broader range of services (ESP) at a minimum cost. The reform initiative has initially focused totally on reorganizing and restructuring of rural service-delivery, and only started to develop a strategy for urban areas.



The problems of large cities, particularly Dhaka, are grave. The growth rate (6.18%) is higher, which is 0.93% to 1.15% faster than other cities [14]. Dhaka is also engorged with problems of water supply, housing, pollution, waste disposal, social health issues such as drug addiction, marginalization, sexual abuse and violence -- all together creating more health problems. The intra-urban differences in health status are also growing along with the urban growth. People in cities, particularly the poor and newly-arrived, women, and children, are being seriously affected. The fragmented service-delivery, presence of multiple providers with narrow range of services, and lack of coordination among them had failed to produce any effective results in the past.

In this scenario and in the absence of any model, the biggest challenge before the local government authorities (MOLGRDC) was to identify the programmatic and management implications for effective ESP delivery in urban areas. The ORP of ICDDR,B, with partnership of MOHFW and MOLGRDC, undertook this intervention to develop and field-test the programmatic and management issues for the delivery of a package of essential health and family-planning services for the urban population, particularly for the disadvantaged population, from the existing government primary healthcare clinic. The objective of the intervention was conceptualized to attain by establishing a model ESP clinic at the Sher-e-Bangla Nagar Government Outdoor Dispensary situated in Zone 6 of Dhaka city, a predominantly slum-inhabited area of the city.

The intervention activities were directed and followed up over the period to address several issues relating to the research question, e.g. "What activities were critical to facilitate an integrated delivery of ESP services from urban GoB facilities (Primary Health Care Centre)?" The impact of these activities and their outcomes at the facility level were assessed. The results obtained may either be due to the independent or combined effects of these activities.

The impacts of the intervention were noted in the major areas of:

1. Service modalities (arrangement of services provided)
2. Use of the facility
3. Quality of services
  - i. Practice of providers
  - ii. Knowledge of providers
  - iii. Satisfaction of clients
  - iv. Knowledge of clients
4. Coordination and management.

### **Arrangement of services provided**

Significant changes in service-delivery arrangement occurred due to the intervention. Services offered by 3 different organizations had been integrated at the facility, resulting in an increased range of services. Eight different reproductive health services, 6 different child health services, and a huge spectrum of general health services were being provided from one point. The introduction of health education and counselling as a separate service entity became unique for urban government outdoor dispensaries. The redefined job-description of providers helped eliminate gaps and duplication of services. It became possible to designate one paramedic (Lady Health Visitor) as the counsellor, who offered health education and counselling on 15 different subjects. Considering the existing and emerging importance of RTI/STD cases, particularly for urban areas, syndromic management of RTIs/STDs was introduced successfully. It was also possible to introduce other newer services, e.g. women TT, and special counselling on infant feeding which are also national priorities.

**Client-flow:** Introduction of a systemic client flow emerged a unique feature for the Model clinic. It was observed that the client flow with central registration at entry became conducive to several other functions of the clinic, namely addressing missed opportunities, health education and counselling, and necessary cross-referral among providers, and had indirectly increased the use of services at the facility. It was also observed that most clients used to visit clinic from 9:30 a.m. and 12:00 a.m., and this pattern did not change much with the change of office hours, (Fig. 1 and 2). It appeared that, for the urban poor, particularly women and children, this was only available time (after breakfast and before lunch) to attend the clinic for healthcare. This influx of clients in a short time created problems for the providers to allocate adequate time per client at those hours, and increased the waiting time for clients. Several attempts have been made to make appointments for follow-up and revisit clients outside the busy hours, but it resulted in mixed success. However, the office time introduced since April 2000 (8:00 AM-2:30 PM) had disrupted that endeavor of appointments outside the busy hours.

**Client-provider interaction and service time:** Remarkable changes were observed in the client-provider interaction. All the providers were found to greet their clients, tended to build rapport, and maintained a congenial atmosphere.

The average waiting time decreased to a maximum of 15 minutes from 20 minutes, and the client-provider interaction time increased per service from less than 1 minute to 15 minutes as had been observed earlier [9]. This was reflected in higher level of client satisfaction. It appeared that protocol-wise case management certainly indulged a provider into a set of actions for each case, thereby increasing the interaction time with clients. Moreover, discussions in inter-providers meeting and sharing experiences among themselves created an overall positive attitude among the service providers.

## **Use of services**

Overall, the use of services of the clinic was increased (72%) compared to the pre-intervention year. General and reproductive health services made the major contribution to this increase. Remarkable change was observed in the use of services of RTI/STD, women TT, distribution of condoms, and provision of contraceptive injectables. While women and children remained to be the major users of this facility, the number of male users also increased by 10%. In different inter-provider meetings, it was expressed that the presence of a male physician among others could attract more male users, especially for services for RTIs/STDs.

In the general health category, each year 2,000-3,000 new clients attended the clinic. A major portion of them was adult female. The reasons for non attendance of male clients were listed in a qualitative study [12]; the reasons were: 'The clinic was for women only'; 'Clinic for family-planning purpose'; 'There was no male provider'; 'Women suffer more', etc. Presence of a male provider would probably dispel such misunderstandings.

In the category of reproductive health services, the use of services doubled in most services offered. The overall use rate increased by 68% compared to 1997 (Table 6). The number of users for women TT was double. The use of RTI/STD services increased many folds. Although the clients were mostly women, the number of users increased from 27 to 606 in 3 years. Many reasons can be put forward for this; some of them are: good performance by the providers, confidence on the providers, availability of quality management, i.e. syndromic management and to some extent availability of drugs, all together put a positive impact on the clients' behaviour. However, it was evident that demand for RTI/STD management in urban clinics was growing at a very high rate.

As a whole, the use of family-planning method increased by 71% from 1997 (Table 6). The rate of increase for oral pills, injectables, and condoms was 54%, 71%, and 95% respectively. Among the family-planning methods, like other parts of the country, the use of injectables is becoming popular. Interestingly, the use of condoms also showed an upward trend. It is to be reminded here that the majority of clients of this clinic came from neighbouring slums and disadvantaged families of lower-middle class, and they were the major users of injectables. However, good management of side-effects at the clinic, regular counselling by the counsellor, and overall conducive atmosphere contributed to produce such results.

In the category of child health, in the area of immunization, there was an overall increase in the use of services by 45% compared to 1997 (Table 6). However, relatively more increase in the use of BCG vaccine and marginal increase in measles

indirectly indicate many drop-outs in between. The immunization drop-out specially from BCG, measles, DPT1-DPT3 and DPT3-measles was 27%, 16%, and 12% respectively in the catchment area of the clinic in the baseline study [8] and even more (29%) in other evaluation studies [7]. Non-compliance with the immunization schedule still remains an unattended challenge for the urban service-delivery system.

Encouraging results were obtained from the introduction of health education and counselling as a separate activity. Knowledge of clients on common ailments and availability of services was good. The presence of counsellor in the client-flow system also helped enormously to address missed opportunities as the majority of additional needs of clients were detected by the counsellor, and thus, contributed to the overall increased use of services.

Detecting and tapping the needs of clients for additional services was another very encouraging strategy of the intervention. The main concept of providing 'one stop' service-delivery system could only be successfully achieved when people use the other services available at a clinic, while using the desired service (in-reach). In Sher-e-Bangla Nagar clinic, the performance of the providers gradually increased to such extent that, during 2000-2001, over 92% of clients were screened for additional services. The needs identified were mostly among the women of reproductive age for family-planning (26%), RTI/STD (21%), and TT (21%). This again suggests the fact that, in urban areas, the regular and routine availability of quality RTI/STD services along with other reproductive and family-planning services is essential.

## **Quality of care**

**Practice of providers:** All the providers of the clinic were oriented with a job-aid, which was also provided to them for ready reference. Repeated training, a job-aid for reference and regular supervision had a combined positive impact on the practice of the providers. The providers were found to be more attentive to clients, taking histories properly, performing necessary physical examinations, and taking appropriate measures for management. Thus, diagnosis became more and more protocol-based and drugs were prescribed rationally. Some irregularities were still observed in some areas. For example, in the management of ARI or diarrhoea, co-infection with either disease was less frequently inquired. Temperature of child was less frequently taken, and proper feeding advice was less frequently given. Similarly, while offering antenatal care or providing family-planning methods, some physical examinations, such as breast examination, were frequently missed, problems relating to method use were less asked, and emphasis on partner management in case of RTIs/STDs was not always given. The counsellor also did not advise properly on partner management. Hesitancy in talking about partners' management in RTI/STD cases may even prevail among the other providers too. The drug dispenser often failed to take feedbacks from clients.

Absence of adequate supervision and lack of motivation on the part of some providers may be responsible, among many other reasons, for such failures. However, the gradual increase in client-flow certainly may have forced the providers to compromise quality management in some cases, especially at the peak hours of client flow. It appeared that defining an optimal client flow and time allocation per service per case may need to be studied further for urban centres. However, frequent supportive supervision and occasional refresher's training would certainly successfully address such fewer lapses.

**Knowledge of providers:** Knowledge of providers on all the selected ESP components was high. All major aspects of case management were adequately answered. The partial answers given by the counsellor in some aspects was probably due to the fact that she was not habituated to talking on those conditions. The educational background and previous training status of the vaccinator were not enough to accomplish in the present changed scenario. When problems, such as fever in a child, were presented to the vaccinator, the case was referred to the Medical Officers for decision. It was sometimes opined that a new generation of vaccinators with higher educational background and capability of performing some other works, such as dispensing drugs, etc., may be needed for the urban clinics in future.

**Satisfaction of clients:** Clients at exit expressed satisfaction in almost every aspect of the clinic. Good behaviour (95%), availability of drugs (82.2%), less-waiting time (83.6%), and information given (83.6%) were major reasons for satisfaction. Except the vaccinator (28.2%), all staff members were rated high by the clients. Satisfaction was expressed for greetings (98.6%) and history-taking (94.5%), and for providing information (80.8%). Views of clients on practice of providers also confirmed the observed poor practice of the providers in terms of less physical examination (34.2%), poor feedback on drug use (5.5%), and providing information on the availability of RTI/STD services (15.1%).

**Knowledge of clients:** Satisfactory knowledge of clients on common conditions, such as diarrhoea, ARI, vitamin A, and immunization indicates high-ranking information service. However, poor knowledge of clients was observed on RTI/STD, which reflects poor performance of providers only in case of RTI/STD. The providers' practice in detection of missed opportunities was also assessed, by interviewing clients at exit from the clinic. It was found that missed opportunities still prevailed in cases who were returning after immunization. This indicates poor performance by the vaccinators in detecting additional needs of clients.

## **Coordination and management**

The weakest component of the intervention was supervision and monitoring by the respective supervisors. Apart from monitoring by the ORP staff, no systemic monitoring was operating properly. A supervisory checklist and guidelines were prepared with the help of all concerned supervisors and managers, which were field-tested and adopted, but these were seldom used by them. The urban managers, especially in Dhaka, were overburdened with many assignments. Supervision at a regular frequency of a particular facility demands a considerable amount of time. On the other hand, substantial inputs and feedbacks were obtained from the providers and managers during routine inter-providers meeting or ECDC meeting. It indicates that, instead of individual supervision, an alternate mechanism of monitoring through routine group discussion among providers and monthly inter-providers meeting with participation of supervisors could be more effective to solve the problems and to improve the quality of services. This view was supported by the fact that the inter-provider meeting of the clinic contributed to solve many problems of services-delivery, and provided a forum to exchange views among the providers, supervisors, and managers. It was also noted that the providers' discussion resolved many problems relating to client flow, tapping of missed opportunities, and providing RTI/STD services.

Similarly, the ECDC, after convening in December 1997, had been enormously helpful in taking decisions, such as redesigning service-delivery, redefining the job descriptions of LHV as counsellor, obtaining an allotment of DD kits for the clinic, renovation of the clinic building, and perusing other activities undertaken for the intervention.

Therefore, it is necessary that a local-level coordination meeting be arranged at the clinic level to promote continuous monitoring and problem-solving measures and central-level coordination among supervisors and managers to evaluate and impart newer activities to be instituted.

## **Views of managers**

The Managers identified 'integration of services,' 'programme for addressing missed opportunities,' and 'systemic client flow mechanism' as strengths of the intervention. Some opined that 'health education and counselling programme,' 'job-aid for urban providers,' and 'formation of IPM and ECDC' are the strengths. The weaknesses identified by them were 'absence of unified management,' 'unidentified supply system,' and 'absence of appropriate referral system.' The managers suggested that the strengths mentioned should be adopted in the urban primary healthcare system and that more research should be carried out in the weak areas. However, they also suggested areas of newer research as mentioned elsewhere in this paper.

## Lessons Learnt

The intervention on operationalization of an urban ESP clinic revealed certain facts that can be learnt from this study. Many of them are related to the strategies adopted in the intervention, and some are obtained as outcome results. These findings provided the following important lessons for planning and operating urban primary healthcare programmes:

1. ESP services can be provided in an integrated manner through a combined approach from a public outdoor clinic, even when the providers belong to different agencies.
2. Integrated delivery of ESP services increases the range and types of services, and use of services.
3. Appropriate layout, upgraded physical structure, and maintenance of the facility are pre-requisites for the improvement of services, and contribute to improving the quality of services, and confidence and satisfaction of clients.
4. A systemic client-flow mechanism is conducive to address missed opportunities and proper management of time by both providers and clients.
5. Introduction of health education and counselling as a separate service can help increase knowledge and satisfaction of clients, addressing missed opportunities and increase service use.
6. Missed opportunities of service provision and unmet service needs of clients can be reduced by introduction and use of a screening algorithm.
7. Introduction and practice of protocol-based job-aid can help improve the diagnostic and management capabilities of the providers.
8. Syndromic management of RTIs/STDs is feasible to provide through public sector facilities when appropriate training and logistics are ensured.
9. Inter-provider review of service-delivery can detect problems, generate solutions, and promote linkages among the providers.
10. A central coordination committee, like ECDC, can be helpful for local-level planning and implementation of ESP delivery from public sector outdoor dispensaries.
11. A routine review meeting, including relevant supervisors and providers (IPM), may be more effective means of monitoring than directly observing clinics by using checklists.

## **Policy Implications**

The Government of Bangladesh with the technical and financial assistance of the Asian Development Bank has been implementing the Urban Primary Health Care Project (UPHCP) under the overall guidance of the MOLGRD&C. The UPHCP will make available an ESP for the urban poor and vulnerable groups through 190 Primary Health Care centres (new and existing) in 4 city corporations in the first phase. The services will be provided in a partnership approach with different NGOs through a contractual agreement. The existing government outdoor dispensaries are expected to participate in this approach. However, the mechanism to incorporate them is still unclear.

The intervention on operationalizing the urban ESP clinic has yielded clear programmatic actions to be initiated in developing primary healthcare clinics or ESP clinics in urban areas. The lessons learnt from this intervention could be adopted and incorporated into the UPHCP programme. The tools developed and the manuals and guidelines prepared can also be used in urban ESP delivery system. A similar approach can also be used for operationalizing the ESP clinics in smaller municipalities when the UPHCP will be expanded in those areas. However, the need for support services, e.g. logistics, etc., for those areas may be studied to get a precise idea.



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### Intervention Activities

Sl.No.	Activities	1997	1998	1999	2000	2001	Output
<b>Phase I</b>							
1	Routine ECDC and IPM meeting to review activities and improve problem solving	As needed Done	As needed Done	Monthly Done	Bi-monthly Done	Bi-monthly Done	Inputs and guidelines in intervention activities
2	Needs assessment study	Initiated	Completed	Report published			Report published as ICDDR,B working paper No.125 [9]
3	Technical training of GoB providers on ESP service delivery protocol	Yes	Yes	Yes			Job-aid prepared, subsequently modified
4	Base line study initiated to assess the family health status of the community		Initiated	Finished	Report written		Report published as ICDDR,B working Paper No.133 [8]
<b>Phase II</b>							
<i>Reorganization of the service delivery system</i>							
1	Introduction of a systemic client flow mechanism through provision of central registration		Initiated	Follow up	Follow up	Follow up	Cross referral among providers
2	Job description reviewed and redefined		Done				Gaps and duplication avoided LHV re-designated as Counsellor
3	Joint visitation with government officials and plans for physical renovation		Started	Continued	Finished		Physical renovation ensured privacy, comfortable waiting place, separate counselling room, provision of safe drinking water and clean latrine

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Annexure 1

Sl.No.	Activities	1997	1998	1999	2000	2001	Output
	<i>Capacity enhancement of the providers</i>						
4	Refresher training of the providers on further modified job-aid				Done		Job-aid further modified with inclusion of newer chapters
	<i>Strengthening ESP delivery</i>						
5	Algorithm based client screening mechanism designed, tested and introduced			Done	Follow-up	Follow-up	Addressed missed opportunity and increase utilization of services
6	Development of counselling strategy and introduction of counselling as separate service			Done	Follow-up	Follow-up	Health education and counselling need of the clients met
7	IEC materials for counselling defined, developed and adopted			Done	Follow-up	Follow-up	Facilitate counselling
8	Non-speculum based syndromic management of RTI/STD initiated			Done	Follow-up	Follow-up	Better management of RTI/STD cases, increase facility utilization
9	Speculum based syndromic management of RTI/STD cases initiated				Done	Follow-up	Better management of RTI/STD cases, increase facility utilization
10	Supervisory guideline defined, checklist developed, pre-tested and introduced				Done	Follow-up	Quality supervision expected
11	A qualitative study examined the health seeking behaviour and BCC needs of the community				Done		Report published as ICDDR,B working paper No.142 [12]
12	Final evaluation of the intervention					Done	Report written

## Service Statistics

**Table 1.** ESP service utilization at Sher-e-Bangla Nagar (SBN) Government Outdoor Dispensary (GOD) year: 1997-2001

Indicators	1997	1998	1999	2000	2001*
Total clients	15353	20548	23982	26558	5467
Female:Male	81:19	80:20	77:23	70:30	73:27
Under 5 years child (%)	28.3	48.0	37.0	29.7	27.3
5-8 years (%)	10.8	7.1	5.1	6.8	7.8
Adolescent (%)	18.1	20.0	18.0	18.3	13.0
20+ years (%)	42.8	24.9	39.9	45.2	51.9

**Table 2.** Distribution of ESP services by types at SBN GOD (ESP Clinic)

Name	1997	1998	1999	2000	2001*
<b>GH</b>	<b>9414</b>	<b>12580</b>	<b>14172</b>	<b>16527</b>	<b>3484</b>
ANC/PNC	1189	1378	1108	1243	183
RTI/STD	27	361	701	606	70
TT	506	808	1084	1043	153
<b>Reproductive health</b>	<b>1722</b>	<b>2547</b>	<b>2893</b>	<b>2892</b>	<b>406</b>
Pill	540	1095	1239	816	144
Condom	363	287	419	711	145
Injection	725	908	1327	1268	325
IUD	24	11	6	27	10
<b>FP</b>	<b>1652</b>	<b>2301</b>	<b>2991</b>	<b>2822</b>	<b>624</b>
Side effect	8	42	9	18	2
Refferal	46	132	3	291	60
<b>Total</b>	<b>54</b>	<b>174</b>	<b>12</b>	<b>309</b>	<b>62</b>
DD	627	987	229	626	106
ARI	424	728	1093	1268	270
<b>Total</b>	<b>1051</b>	<b>1715</b>	<b>1322</b>	<b>1894</b>	<b>376</b>
BCG	238	275	605	493	141
DPT/OPV	1039	736	1602	1343	331
Measles	183	220	385	278	43
<b>EPI</b>	<b>1460</b>	<b>1231</b>	<b>2592</b>	<b>2114</b>	<b>515</b>
<b>Grand Total</b>	<b>15353</b>	<b>20548</b>	<b>23982</b>	<b>26558</b>	<b>5467</b>
HE+Con (S)	-	-	523	2056	788
HE+Con (G)	-	-	195	769	195

\* Jan-Mar 2001

**Note:** GH=General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, PNC=Postnatal Care, ANC=Antenatal Care, BCG=TB Vaccine, DPT/OPV=Diphtheria, Pertussis, Tetanus/Oral Polio Vaccine, TT=Tetanus Toxoid, IUD=Intra-uterine Device, SE=Side-effects, Ref=Reference, HE+Con (S)=Health Education and Counselling (Single session), HE+Con (G)=Health Education and Counselling (Group session).

**Table 3.** Distribution of patients by months and years at SBN GOD:1997-2001 (1 qtr)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
1997	1514	1197	1855	1622	1068	1059	1044	966	1290	1496	1175	1067	15353
1998	978	1307	1772	1043	1084	1627	1696	1697	2632	2439	2071	2202	20548
1999	1880	1644	2125	1747	1962	1933	2480	2032	2178	2200	1882	1919	23982
2000	1885	2203	2127	2223	2338	2586	2498	2418	2360	2185	2208	1521	26558
2001	2117	1611	1739	0	0	0	0	0	0	0	0	0	5467

**Table 4.** Distribution of patients by types of services: 1997

Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
GH	486	394	751	713	577	693	605	547	753	946	652	543	7660
DD	113	76	119	182	168	101	103	108	151	146	151	133	1551
ARI	145	120	132	122	75	70	73	55	69	149	114	130	1254
RTI/STD	3	1	0	0	3	2	1	0	4	1	3	9	27
PNC	0	0	0	0	0	0	0	0	0	0	0	0	0
ANC	89	54	105	87	123	75	116	109	128	103	111	89	1189
BCG	68	41	77	52	0	0	0	0	0	0	0	0	238
DPT/OPV	269	292	284	194	0	0	0	0	0	0	0	0	1039
Measles	40	46	51	46	0	0	0	0	0	0	0	0	183
TT	151	94	155	106	0	0	0	0	0	0	0	0	506
Pill	54	18	32	31	29	24	23	46	68	75	61	79	540
Condom	16	26	29	22	18	24	47	55	55	13	30	28	363
Injection	75	27	112	62	69	59	70	40	59	56	44	52	725
IUD	2	0	2	2	1	2	2	3	0	1	6	3	24
SE	0	0	2	0	0	1	0	0	1	4	0	0	8
Ref	3	8	4	3	5	8	4	3	2	2	3	1	46
HE+Con	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1514	1197	1855	1622	1068	1059	1044	966	1290	1496	1175	1067	15353

**Note:** GH=General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, PNC=Postnatal Care, ANC=Antenatal Care, BCG=TB Vaccine, DPT/OPV=Diphtheria, Pertussis, Tetanus/Oral Polio Vaccine, TT=Tetanus Toxoid, IUD=Intra-uterine Device, SE=Side-effects, Ref=Reference, HE+Con (S)=Health Education and Counselling (Single session), HE+Con (G)=Health Education and Counselling (Group session).

**Table 5.** Distribution of patients by types of services: 1998

Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
GH	493	712	829	506	609	873	995	874	1258	963	920	1012	10044
DD	83	124	264	164	131	240	194	208	468	422	196	134	2628
ARI	157	144	204	68	63	52	90	145	177	164	166	193	1623
RTI/STD	6	14	83	12	11	16	15	19	50	32	44	59	361
PNC	0	0	0	0	0	0	0	0	0	0	0	0	0
ANC	64	112	107	84	104	130	107	153	176	139	92	110	1378
BCG	0	0	0	0	0	0	0	0	22	76	77	100	275
DPT/OPV	0	0	0	0	0	0	0	0	98	197	226	215	736
Measles	0	0	0	0	0	0	0	0	40	54	55	71	220
TT	31	43	43	43	50	71	85	75	113	102	82	70	808
Pill	71	80	116	67	46	113	110	88	89	154	75	86	1095
Condom	14	17	24	23	14	31	25	38	23	26	20	32	287
Injection	51	51	84	60	47	84	57	85	94	98	97	100	908
IUD	0	3	2	0	0	2	0	2	1	0	0	1	11
SE	5	4	4	7	2	8	1	-	2	4	1	4	42
Ref	3	3	12	9	7	7	17	10	21	8	20	15	132
HE+Con	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	978	1307	1772	1043	1084	1627	1696	1697	2632	2439	2071	2202	20548

**Note:** GH=General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, PNC=Postnatal Care, ANC=Antenatal Care, BCG=TB Vaccine, DPT/OPV=Diphtheria, Pertussis, Tetanus/Oral Polio Vaccine, TT=Tetanus Toxoid, IUD=Intra-uterine Device, SE=Side-effects, Ref=Reference, HE+Con (S)=Health Education and Counselling (Single session), HE+Con (G)=Health Education and Counselling (Group session).

**Table 6.** Distribution of patients by types of services: 1999

Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
GH	919	783	1004	884	1021	1125	1333	1098	1294	1393	1036	1085	12975
DD	115	74	70	96	92	48	88	67	70	70	57	53	900
ARI	135	115	173	144	165	75	157	102	80	143	157	173	1619
RTI/STD	50	55	56	41	40	56	59	46	54	50	74	120	701
PNC	0	0	0	0	1	4	6	4	2	3	4	3	27
ANC	106	81	91	64	30	81	168	122	68	89	100	81	1081
BCG	72	64	75	52	45	31	54	33	43	33	44	59	605
DPT/OPV	176	161	215	155	162	104	135	98	104	83	101	108	1602
Measles	37	35	43	26	52	32	46	39	25	11	23	16	385
TT	60	51	68	68	104	67	201	150	194	111	6	4	1084
Pill	87	97	163	101	97	87	88	118	99	88	116	98	1239
Condom	19	33	32	22	30	37	36	48	25	33	60	44	419
Injection	101	93	128	90	121	186	109	107	120	93	104	75	1327
IUD	2	0	2	0	2	0	0	0	0	0	0	0	6
SE	1	2	4	2	0	0	0	0	0	0	0	0	9
Ref	0	0	1	2	0	0	0	0	0	0	0	0	3
HES+Con	0	0	0	0	0	0	0	0	0	71	203	249	523
HEG+Con	0	0	0	0	0	0	0	0	0	47	69	79	195
Total	1880	1644	2125	1747	1962	1933	2480	2032	2178	2200	1882	1919	23982

**Note:** GH=General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, PNC=Postnatal Care, ANC=Antenatal Care, BCG=TB Vaccine, DPT/OPV=Diphtheria, Pertussis, Tetanus/Oral Polio Vaccine, TT=Tetanus Toxoid, IUD=Intra-uterine Device, SE=Side-effects, Ref=Reference, HE+Con (S)=Health Education and Counselling (Single session), HE+Con (G)=Health Education and Counselling (Group session).



**Table 7.** Distribution of patients by types of services: 2000

Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
GH	928	1173	1331	1397	1366	1411	1374	1381	1263	1310	859	15309	
						1516							
DD	57	73	82	93	129	126	119	101	120	90	105	69	1164
ARI	148	150	134	98	158	160	147	229	221	160	178	165	1948
RTI/STD	139	97	32	24	68	84	53	32	30	13	20	14	606
PNC	3	8	3	7	8	5	8	5	6	9	11	3	76
ANC	85	84	74	103	130	131	122	107	106	103	80	42	1167
BCG	31	61	40	40	27	48	28	43	41	51	42	41	493
DPT/OPV	141	154	131	121	78	110	105	95	80	130	109	89	1343
Measles	33	24	19	17	12	21	37	26	20	32	20	17	278
TT	72	93	53	56	69	119	185	123	94	62	73	44	1043
Pill	73	79	76	97	74	65	70	48	57	71	67	39	816
Condom	46	74	38	64	72	70	89	66	47	57	50	38	711
Injection	101	105	91	92	128	106	96	120	117	115	112	85	1268
IUD	0	2	3	1	1	2	4	2	8	2	2	0	27
SE	0	0	0	0	0	1	0	8	2	3	1	3	18
Ref	28	26	20	13	18	22	30	39	30	24	28	13	291
HES+Con	61	64	70	86	74	71	67	66	67	54	54	35	769
HEG+Con	156	89	104	70	74	44	27	278	367	487	250	110	2056
Total	1885	2203	2127	2223	2338	2586	2498	2418	2360	2185	2208	1521	26558

**Note:** GH=General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, PNC=Postnatal Care, ANC=Antenatal Care, BCG=TB Vaccine, DPT/OPV=Diphtheria, Pertussis, Tetanus/Oral Polio Vaccine, TT=Tetanus Toxoid, IUD=Intra-uterine Device, SE=Side-effects, Ref=Reference, HE+Con (S)=Health Education and Counselling (Single session), HE+Con (G)=Health Education and Counselling (Group session).

**Table 8.** Distribution of patients by types of services: 2001

Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	OCT	Nov	Dec	Total
GH	1231	1004	1031	0	0	0	0	0	0	0	0	0	3266
DD	73	46	66	0	0	0	0	0	0	0	0	0	185
ARI	115	148	146	0	0	0	0	0	0	0	0	0	409
RTI/STD	31	16	23	0	0	0	0	0	0	0	0	0	70
PNC	4	0	1	0	0	0	0	0	0	0	0	0	5
ANC	73	50	55	0	0	0	0	0	0	0	0	0	178
BCG	65	41	35	0	0	0	0	0	0	0	0	0	141
DPT/OPV	133	99	99	0	0	0	0	0	0	0	0	0	331
Measles	25	10	8	0	0	0	0	0	0	0	0	0	43
TT	65	46	42	0	0	0	0	0	0	0	0	0	153
Pill	68	34	42	0	0	0	0	0	0	0	0	0	144
Condom	69	25	51	0	0	0	0	0	0	0	0	0	145
Injection	134	79	112	0	0	0	0	0	0	0	0	0	325
IUD	4	1	5	0	0	0	0	0	0	0	0	0	10
SE	0	1	1	0	0	0	0	0	0	0	0	0	2
Ref	27	11	22	0	0	0	0	0	0	0	0	0	60
HEG+Con	79	49	67	0	0	0	0	0	0	0	0	0	195
HES+Con	250	298	240	0	0	0	0	0	0	0	0	0	788
Total	2117	1611	1739	0	0	0	0	0	0	0	0	0	5467

**Note:** GH=General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, PNC=Postnatal Care, ANC=Antenatal Care, BCG=TB Vaccine, DPT/OPV=Diphtheria, Pertussis, Tetanus/Oral Polio Vaccine, TT=Tetanus Toxoid, IUD=Intra-uterine Device, SE=Side-effects, Ref=Reference, HE+Con (S)=Health Education and Counselling (Single session), HE+Con (G)=Health Education and Counselling (Group session).

**Table 9.** Distribution of adolescent clients by sex at SBN GOD 1999-2000

Age 9-19 Adolescent	1999		2000	
	M	F	M	F
ANC	-	412	-	289
Pill	-	443	-	95
Condom	109		127	-
Injection	-	369	-	161
TT	-	496	-	974
GH	776	1251	1192	1562
ARI	31	64	71	87
DD	82	126	85	120
RTI/STD	1	74	2	84
Total	999	3235	1477	3372
Percentage	23.6	76.4	30.4	69.6
Total Adolescent (%)	4234(17.8)		4849 (18.3)	
Total patient	23982		26558	

**Note:** GH= General Health Services, DD=Diarrhoeal Diseases, ARI=Acute Respiratory Infections, RTI/STD= Reproductive Tract Infection/Sexually Transmitted Diseases, ANC=Antenatal Care, TT=Tetanus Toxoid,

**Table 10.** Distribution of diarrhoeal diseases in <5 years by sex 1997-2001(1qtr)

Month	1997		1998		1999		2000		Jan-Mar 2001	
	M	F	M	F	M	F	M	F	M	F
Jan	21	22	24	17	25	23	19	12	21	25
Feb	13	8	26	18	24	16	24	16	12	11
Mar	17	11	48	41	8	4	23	13	19	17
Apr	36	30	42	28	6	7	25	18	0	0
May	48	26	31	21	7	9	26	30	0	0
Jun	16	19	71	34	4	1	24	25	0	0
Jul	23	12	42	19	8	11	25	26	0	0
Aug	28	22	38	40	8	2	22	28	0	0
Sep	26	25	109	26	6	7	30	30	0	0
Oct	36	30	71	72	8	7	70	20	0	0
Nov	37	32	60	48	15	5	45	31	0	0
Dec	30	29	32	29	9	9	23	21	0	0
Total	703	390	654	614	128	101	356	270	52	53

**Table 11.** Distribution of ARI cases in <5 years by sex 1997-2001

Month	1997		1998		1999		2000		2001*	
	M	F	M	F	M	F	M	F	M	F
Jan	21	28	46	28	44	30	54	44	61	48
Feb	19	17	28	25	43	14	60	29	44	41
Mar	18	16	57	31	74	37	64	34	34	42
Apr	22	18	21	14	54	22	20	38	0	0
May	17	19	12	9	61	42	35	53	0	0
Jun	8	17	14	8	30	21	57	56	0	0
Jul	4	15	27	11	60	36	52	50	0	0
Aug	10	10	50	25	51	26	80	95	0	0
Sep	12	10	51	38	49	22	78	67	0	0
Oct	27	23	53	26	82	36	47	49	0	0
Nov	23	24	44	31	79	51	60	53	0	0
Dec	21	25	55	24	76	53	47	46	0	0
Total	202	222	458	270	703	390	654	614	139	131

**Table 12.** Distribution of client for general health at SBN GOD by sex: 1997-2001

Month	1997		1998		1999		2000		2001*	
	M	F	M	F	M	F	M	F	M	F
Jan	272	289	252	324	362	625	368	579	465	881
Feb	220	284	338	514	282	499	445	692	348	742
Mar	425	449	484	575	398	614	425	650	414	717
Apr	420	452	285	332	354	572	507	855	0	0
May	327	360	296	399	455	562	526	351	0	0
Jun	395	355	376	570	394	633	575	1065	0	0
Jul	390	278	468	656	459	769	599	925	0	0
Aug	230	383	354	637	310	683	517	933	0	0
Sep	401	484	650	838	425	774	569	947	0	0
Oct	477	624	513	696	439	967	510	874	0	0
Nov	318	454	370	574	317	651	480	924	0	0
Dec	251	427	400	641	403	657	350	606	0	0
Total	4253	4678	4178	6355	4598	7906	5871	10001	1227	2340

\* Jan-Mar 2001

**Table 13. Group and Single sessions of Health Education and Counselling at SBN GOD: 1999-2001\***

Name	Type	1999				2000												2001				
		Oct	Nov	Dec	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Jan	Feb	Mar	Total
EPI	S	12	24	34	70	8	6	7	4	1	2		82	97	93	50	16	366	20	49	75	144
	G	1	10	12	23	24	32	29	24	23	19	17	12	20	17	15	6	238	19	81	12	112
TT	S	10	4	4	18	11	2	5	2	6		4	90	63	43	80	22	328	18	9	13	40
	G	4	-	-	4	2	6	3	1	2	2	3	1	1	2	2	1	26	4	14	6	24
DD	S	26	23	14	63	5	-	8	1	-	-	-	62	95	75	30	15	291	25	3	48	76
	G	4	-	1	5	20	24	23	23	24	27	23	21	26	19	17	11	258	19	31	18	68
ARI	S	58	63	69	190	5	2	-	1	-	1	-	212	242	161	80	12	716	17	118	116	251
	G	14	14	14	42	20	21	20	21	22	15	20	22	21	13	12	10	217	15	9	9	33
FP	S	37	32	41	110	14	24	20	21	10	1	2	30	43	33	20	18	236	36	32	17	85
	G	9	3	-	12	2	3	-	-	-	6	2	1	1	-	-	1	16	3	10	10	23
SEM	S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANC	S	19	4	7	30	-	-	-	-	1	-	-	-	6	6	1	2	16	2	7	1	10
	G	10	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNC	S	-	-	3	3	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-
	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RTI/ STD	S	18	47	84	149	97	50	63	32	57	44	22	42	54	42	16	21	540	43	36	33	112
	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BF	S	1	19	9	29	11	6	2	4	3	-	3	40	4	-	18	14	105	53	9	6	68
	G	-	4	18	22	36	35	35	21	13	32	4	15	15	15	20	7	248	19	10	18	47
S. Food	S	56	28	1	85	7	1	2	2	2	-	2	26	4	-	8	18	72	14	5	2	21
	G	26	11	11	48	32	28	31	18	12	25	4	13	15	12	13	7	210	16	10	13	39
Vit-A	S	-	-	-	-	-	-	-	-	-	-	-	11	9	-	6	3	29	12	4	1	17
	G	-	-	-	-	-	5	9	4	4	11	1	-	-	-	-	-	34	-	1	2	3
Cleanliness	S	3	1	-	4	4	-	-	-	-	-	-	2	-	-	6	-	12	-	1	-	1
	G	47	47	-	94	14	2	7	10	3	2	8	7	5	2	-	1	61	9	5	1	15
Total	S	71	203	249	523	156	89	104	70	74	44	27	278	367	487	250	110	2056	250	298	240	
	G	47	69	79	195	61	64	70	86	74	71	67	66	67	54	54	35	769	79	49	67	

\* Jan-Mar 2001

## Quality of Care

## 1. Pattern of diagnosis of ARI cases at SBN GOD 1997-2001

	1997	1998	1999	2000	2001*
Cough/Cold	483	212	258	288	40
Pneumonia	16	68	257	997	257
No Pneumonia	4	38	190	11	0
Severe Pneumonia	0	0	16	39	3
ARI	77	385	390	0	0
RTI	134	11	4	0	0
URI/URTI	158	34	3	0	0
Total	872	748	1118	1335	300

## 2. Pattern of drug treatment of ARI at SBN GOD 1997-2001

	1997	1998	1999	2000	2001*
Cortrim	60	240	701	965	256
Ampi+Amoxy	25	5	21	4	0
Histacin	445	206	35	9	9
HE	341	340	480	317	28
Penicillin +Pen V	128	182	24	4	0

## 3. Pattern of diagnosis of diarrhoeal cases at SBN GOD 1997-2001

	1997	1998	1999	2000	2001*
Dysentery	138	98	10	0	0
Acute Dysentery	22	21	22	182	37
Blood Dysentery	22	33	0	0	0
Diarrhoea	186	93	0	0	0
Watery Diarrhoea	291	333	0	0	0
A. Watery Diarrhoea	0	377	197	397	68

\* Jan-Mar 2001

#### 4. Drug treatment of diarrhoeal cases at SBN GOD 1997-2001

	1997	1998	1999	2000	2001*
ORS	520	912	229	579	105
Cotrim	19	101	32	176	37
Nalid	1	0	0	1	0
Metro	176	48	0	0	0
Others	70	25	2	1	0

#### 5. Pattern of Treatment of RTI/STD cases at SBN GOD 1997-2001

Drugs	1997	1998	1999	2000	2001*
Cipro	0	0	3	0	0
Doxy	0	2	5	1	0
Metronidazol	15	254	623	451	61
Clotrimazol	0	81	22	0	0
Condom	0	0	0	7	0
Tetracycline	0	0	1	50	0
Amoxicilin	0	0	1	8	0
Paracetamol	0	0	0	15	2
Histacin	0	0	0	15	3
Nystal	0	0	0	2	0
HE	10	13	68	116	9
Others	11	168	261	223	16

\* Jan-Mar 2001

**Providers' Practice in Selective Cases Management  
at Sher-e-Bangla Nagar GoD**

**Providers' practice in ARI cases management at  
Sher-e-Bangla Nagar GOD**

Total observation : 11 cases  
Average time spent per case : 5.1 (3-11) minutes  
Age determination : Done in all cases

Items	Observation
History taking	All 5 components asked in most cases Duration of cough asked most frequently (7/11) Feeding status asked less frequently (2/11)
Looking danger sings	All 5 components looked in most cases Temperature in <2 yrs less checked Malnutrition checked less frequently
Checked respiratory rate	All cases
Checked chest indrawing	Most frequently
Classify illness (as per guidelines)	All cases
Disagreement P/O	1 case
Drug prescribed appropriate	All cases
Advise mother home care	All 6 components advised in most cases Clear the nose advised most frequently Feeding advise given less frequently
Inform mother danger signs	All 5 components informed in most cases Unable to drink-informed less frequently
Follow up advice	Provided in most cases
Co infection of Diarrhoea	Inquired in half of the cases
Missed opportunity screened	All components in most cases



**Providers' practice in diarrhoeal diseases cases management at  
Sher-e-Bangla Nagar GOD**

Total observation : 10 cases  
 Average time spent per case : 4.1 (2-6) minutes  
 Age determination : Done in all cases

Items	Observation
History taking	All 6 components asked in most cases Duration/Frequency/Consistency and blood in stool asked all cases Fever and convulsion asked less frequently
Look dehydration signs	All 3 components looked in most cases
Pinched skin for dehydration	Most frequently (8/10)
Classify dehydration (As per guidelines)	All cases
Disagreement P/O	1 Case
Make a diagnosis	All cases
Disagreement P/O	No
Prescribe/Supply ORS	All cases
Checked ORS preparation & Dispensing knowledge of client	Most frequently
Took feedback from client	Most frequently
Prescribed antibiotics	Yes (2/8) appropriately
Explain antibiotic administration	Yes
Prescribe anti-diarrhoeal agents	No
Advised on hygienic practice	Most frequently
Explain 3 rules of treating diarrhoea at home	Most frequently
Follow up advice (6 signs and symptoms)	Most frequently
Checked co-infection of ARI	No
Missed opportunity screened	All components in most cases

### Providers' Practice in Ante-natal Case Management at Sher-e-Bangla Nagar GOD

#### Ante-natal client (New)

Total observation : 12 cases  
Average time spent per case : 16.3 (13-25) minutes

Items	Observation
History taking	All 6 components asked in most cases Drug allergy not asked
Physical examination (General+Abdominal)	Done in most cases Breast examination done in 1/3 <sup>rd</sup> of cases (4/12)
Lab tests	HB % = All cases Urine (Sugar + Albumin) in 1/3 <sup>rd</sup> of the cases <sup>1</sup>
<i>Information given on:</i> Warning signs	Most frequently Prolonged/obstructed labour-less frequently (2/12)
TT vaccination	
Feeding practice	All cases
Provided iron/folic acid	All cases
Safe delivery practice	All cases
Follow up visit	Most frequently (9/12)
Missed opportunity screened (PNC visit/Breast feeding/Complementary feeding/Immunization)	All cases Less frequently None

#### Ante-natal client (Revisit)

Total observation : 8 cases  
Average time spent per case : 11.1 (5-17) minutes

Items	Observation
History taking	All components asked in most cases
Physical examination	Done in most cases
Lab tests	Less frequently (Hb% 2/8, Urine 3/8)
<i>Information given on:</i> Warning signs	Most frequently Prolonged/obstructed labour-less frequently
TT vaccination	All cases
Feeding practice	All cases
Provided iron/folic acid	All cases
Safe delivery practice	All cases
Follow up visit	All cases
Missed opportunity screened	Most frequently RTI/STD less frequently 2/8

### Providers' Practice in Family Planning Case Management at Sher-e-Bangla Nagar GOD

#### Oral Pill Clients (New)

Total observation : 5 cases  
Average time spent per case : 6 (4-7) minutes<sup>4</sup>

<sup>1</sup> Water supply to the clinic was hampered during the observation period

Items	Observation
Greetings	All cases
History taking	All screening procedure adequately followed
LMP	All cases
Medical history	All components asked in most cases Breast lump less frequently (1/5)
H/o Tuberculosis and Epilepsy	Never asked
Physical examination	All components most frequently Breast examination less frequently (1/5)
Discussed different methods (Using IEC materials)	All cases (3/5)
How the method works	None
How to use the method	All cases
Side effects/Warning signs	Partially discussed
Lab tests	None
Follow up visit	All cases
Missed opportunity	Most frequently (TT and other services)

**Oral Pill Clients (Revisit)**

Total observation : 6 cases  
Average time spent per case : 6.7 (4-11) minutes

Items	Observation
Greetings	All cases
History taking	All 6 components asked in most cases
LMP	All cases
Problem related to use	Asked rarely (1/6)
Decide to switch method	Never asked
Lab tests	Less frequently (half of the cases)
Follow up visit	All cases
Missed opportunity	TT and other services frequently RTI/STD less frequently (1/6)

**Providers' Practice in Family Planning Case Management at  
Sher-e-Bangla Nagar GOD**

**Injectables (New)**

Total observation : 4 cases  
Average time spent per case : 8.7 (7-11) minutes

Items	Observation
Greetings	All cases
History taking	All screening procedure adequately followed
LMP	All cases
Medical history	All components asked in most cases
Heart diseases/Severe headache & Breast lump	Less frequently (1/5)
Physical examination	All 5 components most frequently
Breast examination	Less frequently (2/5)
Checked Jaundice	Less frequently (2/5)
Discussed different methods	Most frequently (3/5)
IEC materials used	Less frequently (2/5)
How the method works	None
How to use the method	All cases
Side effects/Warning signs	Partially discussed
Lab tests	None
Follow up visit	Most frequently
Missed opportunity	Most frequently

**Injectables (Revisit)**

Total observation : 5 cases  
Average time spent per case : 6.4 (4-10) minutes

Items	Observation
Greetings	All cases
History taking	All 4 components asked in most cases
LMP	All cases
Problem related to use	Asked rarely (1/6)
Decide to switch method	Never asked
Lab tests	None
Follow up visit	All cases
Missed opportunity	All components most cases

**Providers' Practice in Family Planning Case Management at Sher-e-Bangla Nagar GOD**

**IUD**

Total observation : 1 case  
 Average time spent per case : 15 minutes

Items	Observation
Greetings	Properly
History taking	All screening procedure adequately followed
LMP	Asked
Medical history	All components not asked
Physical examination	All components done
Pelvic examination	Steps were followed
Discussed different methods	Not discussed
IEC materials used	Not used
How the method works	Yes
How to use the Method	Yes
Side effects/Warning signs	Partially discussed
Lab tests	None
Follow up visit	Advised
Missed opportunity	Partially explored

**Condom (New + revisit)**

Total observation : 4 new and 2 re-supply clients  
 Average time spent per case : 4.2 (3-6) minutes

Items	Observation
Greetings	All cases
History taking	All components asked in most cases
Problem related to use	Not asked (applicable to re-supply clients)
Decide to switch method	Not asked (applicable to re-supply clients)
Discussed different methods	All cases (applicable to new clients)
IEC materials used	Not used always (1/4)
How the method works	Most frequently
How to use the Method	Yes
Side effects/Warning signs	Not discussed
Follow up visit	Most cases (5/6)
Missed opportunity screened	All components most cases RTI/STD less (2/6)

**Providers' Practice in RTI/STD Cases Management at  
Sher-e-Bangla Nagar GOD**

Total observation : 10 cases  
Average time spent per case : 5.3 (3-10) minutes

Items	Observation
Greetings	All cases
History taking	All 13 components asked in most cases
Multiple/Recent partner	Not asked
Past history of RTI/STD	Less frequently (4/10)
Per-abdominal examination	Not done
Inguinal lymph nodes	Not palpated
Per-vaginal examination	Not done <sup>1</sup>
Syndromic diagnosis made	All cases
Drug prescribed appropriate	All cases
Counselling on taking medicine	Addressed properly
Prevention messages	Not addressed
Partner management	Less frequently discussed
Follow up advice	Provided to half of the total cases
Missed opportunity	All components in most cases
Maintained respectful and non-Judgmental attitude	All cases

<sup>1</sup> Water supply system was hampered during the time of observation

**Providers' Practice in providing Immunization at  
Sher-e-Bangla Nagar GOD**

**Child Immunization (EPI)**

Total observation : 18 cases  
Average time spent per case : 5 (2-10) minutes  
Age determination : Done in all cases

Items	Observation
Greetings	All cases
Sterilized properly	Yes
Vaccinators' table organized	Yes
Follow the proper pushing technique	Most cases
Documented properly	Yes
<i>Information given on</i>	
Benefit of immunization	Most cases (11/18)
Side effects	Most cases (16/18)
Necessity for completion	All cases
Necessity for card preservation	All cases
Follow up visit	All cases
Missed opportunity screened	All components in most cases

**Women TT**

Total observation : 9 cases  
Average time spent per case : 6.4 (2-11) minutes  
Age determination : Done in all cases

Items	Observation
Greetings	All cases
Sterilized properly	Yes
Vaccinators' table organized	Yes
Follow the proper pushing technique	Most cases
<b>Information given on</b>	
Benefit of immunization	Half of the cases
Side effects	Less frequently (2/9)
Necessity for completion	Most cases (8/9)
Necessity for card preservation	All cases
Follow up visit	All cases
Documented properly	Yes
Missed opportunity screened	All components in most cases

**Providers' Practice in Drug Dispensing at  
Sher-e-Bangla Nagar GOD**

Total observation : 10 cases  
Average time spent per case : 1.5 (1-3) minutes

Items	Observation
Greetings	All cases
Explain drug doses	All cases
Drug administration instruction	All cases
Emphasize on regular administration and completion	Most cases
Took feedback	Half of the total cases
Explain usual side-effects	Less frequently (3/10)
Encourage follow up	Less frequently (3/10)
Collected feed back from recycle clients on drug side effects	Less frequently (2/10)
Record keeping of drugs	Properly
Storage and preservation of medicines and other supply	Properly
Clients' reception of health education and counselling	Enquired from all cases



**Providers' Practice in Health Education and Counselling at  
Sher-e-Bangla Nagar GOD**

Total observation : 6 individual and 4 group sessions  
 Average time per Group session : 7.3 (5-10) minutes  
 Average time per individual session : 6.7 (2-10) minutes

Did the provider	Yes	No	NA
1. Greet the client	10		
2. Wait for sometimes to make group (5-7 persons)	6		
3. Make appropriate sitting arrangement	10		
4. Ask requested service needs of client	10		
5. Assess the knowledge of clients about the topic of HE and counselling	10		
6. Assess the knowledge by showing pictures at the beginning of the HE session	10		
7. Use IEC materials during HE session	9		
8. Take feedback after HE session	10		
9. Tried to involve everyone if it is group session	4		
10. Summarize the session after the HE session	9		
11. Maintain privacy during Counselling (RTI/STDS)	10		
12. Maintain non-judgmental attitude (RTI/STDs)	10		
13. Emphasize on partner management	2		
14. Emphasize on completion of treatment	3		

**Number and pattern of health education by flip-chart/summary of health education**

Number and pattern of HE	Breast- No.	Breast- feeding	FP	Diarrh- oea	Pneu- monia	Clean- liness	Night blindness	Worm	RTI	Weaning food	EPI
Single discussion	6	0	0	6	2	6	0	1	0	3	1
Group discussion	4	2	0	2	1	2	0	1	1	4	2
<b>Total</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>8</b>	<b>3</b>

### Providers' Knowledge on Selected ESP Services and Counselling

Indicators	Adequately mentioned						Partially mentioned					
	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or
<b>Management of diarrhoea</b>												
Elements of history taking	✓	✓	✓									
Assessing dehydration	✓	✓							✓			
Management a case of no dehydration	✓	✓	✓									
Advise for home management	✓	✓	✓									
Danger signs for caretakers	✓		✓					✓				
Criteria for antibiotics	✓	✓	✓									
Reasons for other drug treatment	✓	✓							✓			
Instructions for ORS use	✓	✓	✓									
Additional information to clients (Missed Opp)		✓					✓		✓			
<b>Management of ARI cases</b>												
Elements of history taking	✓	✓	✓									
Assessment of ARI	✓	✓	✓									
Signs of severe disease	✓	✓	✓									
<i>Physical Examination</i>												
Respiratory rate	✓	✓	✓									
Chest in drawing	✓	✓	✓									
Others	✓	✓	✓									
<i>Respiratory rate for different age groups</i>									✓			
2-12 Months	✓	✓										
1-5 Years							✓	✓	✓			
Signs of severe disease in 2 months-5 yrs	✓	✓	✓									
Management of simple pneumonia (2 months - 5 years)	✓	✓	✓									
Signs of improvement of ARI cases	✓	✓	✓									
Signs of referral in ARI cases	✓	✓	✓									

\* MO = Medical Officer. FWV = Family Welfare Visitor

Indicators	Adequately mentioned						Partially mentioned					
	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or
<b>Management of other childhood diseases</b>												
Signs of malnutrition and anaemia in children	✓	✓	✓									
Presentation of severe complicated measles	✓	✓	✓									
Signs of mastoiditis	✓		✓					✓				
Signs of acute Ear infection	✓	✓	✓									
Conditions for Vit-A administration	✓	✓	✓									
<b>Management of RTI/STD cases</b>												
RTIs cases but not STD	✓		✓					✓				
STD cases but not RTI	✓		✓					✓				
Main task for managing vaginal discharge syndrome	✓	✓	✓									
Referral reasons for lower abdominal pain syndrome in women	✓	✓							✓			
<b>Pruritic discharge from eyes in new born</b>												
Steps of management			✓				✓	✓				
Treatment			✓				✓	✓				
Meaning of 4 Cs	✓	✓							✓			
Main complications of antenatal period	✓	✓	✓							✓		
Main complications of postnatal period	✓	✓	✓							✓		
Additional information to clients (Missed Opp)												
<b>Management of ANC/PNC cases</b>												
No. of ANC should be done	✓	✓		✓					✓			
Elements of ANC physical examination	✓	✓	✓	✓								
Lab tests for ANC	✓	✓	✓	✓								
Elements of physical examination of newborn	✓	✓	✓	✓								
Common complications of newborn	✓	✓		✓					✓			
Advise for cracked nipples	✓	✓	✓	✓								

Indicators	Adequately mentioned						Partially mentioned					
	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or
Advises for umbilical sepsis	✓	✓	✓	✓								
Additional information to clients (Missed Opp)												
<b>Management of Family Planning methods</b>												
Steps of client selection	✓	✓		✓				✓				
When to suggest pill/ Selection criteria for pill	✓	✓	✓	✓								
Main complications of injectables	✓	✓	✓	✓								
Main side-effects of IUD	✓	✓	✓	✓								
Additional information to clients (Missed Opp)	✓		✓	✓			✓					
<b>Knowledge on EPI vaccination</b>												
Times of visit needed to complete the schedule						✓						
Appropriate for completion of vaccination						✓						
Time for measles vaccination						✓						
Schedule and doses of EPI vaccines						✓						
Schedule of women TT						✓						
Time for 1st dose of TT in pregnant women (Not immunized earlier)						✓						
When to give Vit-A to children						✓						
Common side-effects of BCG vaccination						✓						
Main contraindication for DPT												✓
Additional information to clients (Missed Opp)						✓						
<b>Assessment of counsellor's knowledge</b>												
Appropriate period for counseling on breastfeeding and additional feeding					✓							
Main messages about breastfeeding					✓							
Six diseases prevented by vaccine					✓							
Signs of AFP					✓							

Indicators	Adequately mentioned						Partially mentioned					
	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or	MO1	MO2	MO3	FW V	Counsell or	Vaccinat or
Signs of neonatal tetanus											✓	
Three main messages for home management for diarrhoea					✓							
Referral signs for acute diarrhoea											✓	
Name of other ORT fluids (other than ORS)					✓							
Main messages for prevention of diarrhoea					✓							
Occasions for hand-washing					✓							
Danger signs of ARI					✓							
Signs of improvement of ARI											✓	
Method of counselling advisable in case of RTI/STD											✓	
Basic four information for prevention of RTI/STD					✓							

## Exit Interview Data

**Knowledge and perception of clients attending at SBN GOD ESP Clinic**  
(Exit Interview Results)

**1. General characteristics (N=73)**

<b>Age</b>	<b>Number of respondents</b>	<b>%</b>
16-20	17	23.3
21-25	17	23.3
26-30	24	32.9
31-35	7	9.6
35+	8	10.9
<b>Sex</b>		
Male	4	5.5
Female	69	94.5
<b>Marital status</b>		
Married	68	93.2
Unmarried	1	1.4
Others	4	5.4
<b>Number of visit</b>		
First	21	28.8
Second	7	9.6
More	45	61.6
<b>Time of Last visit</b>		
<1 Month	15	28.8
<2 Month	13	25.0
<6 Month	17	32.7
<1 Year	3	5.8
>1 Year	4	7.7

**2. Reason for present visit**

<b>Method</b>	<b>Number of respondents</b>	<b>%</b>
FP	13	17.8
ANC	16	21.9
PNC	0	0
TT	11	15.1
RTI/STD	8	11.0
EPI	7	9.6
DD	6	8.3
ARI	7	9.6
GH	25	34.2
Others	4	5.5

### 3. Knowledge of availability of services

Services	Number of respondents	%
FP	68	93.2
Immunization	58	79.5
Diarrhoea	28	38.4
ARI	17	23.3
Simple injuries	10	13.7
General health	64	87.7
RTI/STD	11	15.1
ANC/PNC	51	69.9
Health education	21	28.8
Others	5	6.8

\* Multiple responses were accepted

### 4. Waiting time

Time	Number of respondents	%
0 minutes	28	38.4
<30 minutes	16	21.9
30-60 minutes	14	19.2
>60 minutes	15	20.6

### 5. Perception about waiting time

	Number of respondents	%
More time to previous client	17	37.8
Usual for the centre	4	8.9
Providers were attending a serious case	2	4.4
Can't say late	1	2.2
Others	9	20.0

### 6. Client Provider interaction

Interactions	Number of respondents	%
Greeted clients	72	98.6
History taking	69	94.5
Physical examination	25	34.2
Explanation of the condition	59	80.8
Necessary advises given		

\* Multiple responses were accepted

## 7. Drug dispensing

Items	Number of respondents	%
Dose and time	53	72.6
Importance of completing course	32	43.8
Route of administration	56	76.7
Feedback about present medicines	14	19.2
Feedback about previous medicines	4	5.5
Follow-up visit	51	70.0
Others	4	5.5

\* Multiple responses were accepted

## 8. Motivation for revisit

Issues	Number of respondents	%
Free service	47	63.0
Cheap	3	2.7
Providers spent enough time	11	15.3
Good service	41	56.9
Others	19	32.9
Providers explain about the condition	7	9.7
Providers are known	20	27.8
Close to house	52	72.2
Other centres' unavailability	3	4.2

\* Multiple responses were accepted

## 9. Opportunity costs

Distance from residence	Number of respondents	%
Within 1 Km	64	87.7
1-3 Km	6	8.2
3-5 Km	2	2.7
5+ Km	1	1.4

## 10. Payment in the clinic

Response	Number of respondents	%
Yes	2	2.7
No	69	94.5
Occasionally	2	2.7



**11. About the facility**

Source of information about clinic	Number of respondents	%
Neighbours	55	75.3
Friends	11	15.1
Relatives	18	24.7
Family members	5	6.8
Others	11	15.1

\* Multiple responses were accepted

Informed others about the clinic	Number of respondents	%
Yes	52	71.2
No	21	28.8
Can't say	0	0

Knowledge on working hour of the clinic	Number of respondents	%
Yes	28	38.9
No	43	59.7
Don't know	1	1.4

**12. Provider rating by client: Satisfied**

Provider	Number of respondents	%
Register	67	91.8
Counsellor	52	71.1
Medical Officer	42	57.5
FWV	32	43.8
Pharmacist	51	69.9
Clinic Attendant	47	64.4
Vaccinator	21	28.2

\* Multiple responses were accepted

**13. Clinic rating by client: Satisfied**

Opinion	Number of respondents	%
Waiting time	61	83.6
Staff behaviour	70	95.9
Interaction time	67	91.8
Information given	61	83.6
Drug availability	60	82.2
Health education/Counselling	68	93.2
Distance	67	91.8

#### 14. Information of missed opportunities screening from clients

Clients leaving after having FP/Reproductive Health Services (N=13)	Yes
Provider inquired about TT status	8
Unmet need for TT	1
Referred to Vaccinator for unmet need	0
Provider inquired about RTI/STD	5
Unmet need for RTI/STD	5
Referred to Provider for unmet need	1
Provider inquired about immunization (EPI) status	1
Unmet need for immunization	0
Referred to Vaccinator for unmet need	N/A
Provider inquired about infant feeding status	1 case applicable
Unmet need for infant feeding information	1
Referred to Counsellor for unmet need	1
Provider informed about other services available at the clinic	0

Clients leaving after having EPI Services (N=18)	Yes
Provider inquired about FP status	10
Unmet need for FP	2
Referred to FWV for unmet need	0
Provider inquired about RTI/STD	6
Unmet need for RTI/STD	7
Referred to Provider for unmet need	1
Provider inquired about immunization (EPI) status	7
Unmet need for immunization	2
Referred to Vaccinator for unmet need	2
Provider inquired about infant feeding status	7
Unmet Need for infant feeding information	N/A
Referred to Counsellor for unmet need	N/A
Provider informed about other services available at the clinic	7

Clients leaving after having ANC / PNC (N=17)	Yes
Provider inquired about FP status	12
Unmet need for FP	0
Referred to FWV for unmet need	N/A
Provider inquired about RTI/STD	10
Unmet need for RTI/STD	7
Referred to Provider for unmet need	1
Provider inquired about TT status	14
Unmet need for TT	N/A
Referred to Vaccinator for unmet need	N/A
Provider inquired about infant feeding status	0
Unmet need for infant feeding information	N/A
Referred to Counsellor for unmet need	N/A
Provider inquired about Vit A status	4
Provider informed about other services available at the clinic	4

Clients leaving after having General Health Services (N=40)	Yes
Provider inquired about FP status	30
Unmet need for FP	19
Referred to FWV for unmet need	14
Provider inquired about RTI/STD	22
Unmet need for RTI/STD	19
Referred to Provider for unmet need	8
Provider inquired about immunization (EPI) status	9
Unmet need for immunization	2
Referred to Vaccinator for unmet need	2
Provider inquired about infant feeding status	10
Unmet need for infant feeding information	N/A
Referred to Counsellor for unmet need	N/A
Provider inquired about TT status	23
Unmet need for TT	8
Referred to Vaccinator for unmet need	2
Provider informed about other services available at the clinic	8

**15. Client's knowledge at exit: Yes (%)**

Knowledge on diarrhoea	Number of respondents	%
Preparing ORS	61	98.4
Amount to feed	50	80.6
Duration of preservation	43	69.4
<i>3 rules of home care</i>		
More fluid to children	42	67.7
Continue normal feeding	29	46.8
Observe to refer (seek care)	39	62.9
Name any other ORT fluid	53	85.5
<i>When to seek care</i>		
Many watery stool	59	95.2
Frequent vomiting	46	74.2
Marked thirst	3	4.8
Eating or drinking poorly	14	22.6
Fever	12	19.4
Blood in stool	10	16.1
Sunken eyes	24	38.7
Child did not improve in 3 days	27	43.5
<i>Knowledge on ARI</i>		
<i>Home care of cough and cold</i>		
Breast feed/more fluid to child	24	40.0
Continue normal feeding	16	26.7
Extra diet	16	26.7
Clean the nose	26	43.3
<i>Signs of Pneumonia</i>		
Rapid breathing	38	63.3
Not feeding well	26	43.3
Gradually more seek	17	28.3
<i>Signs of improvement</i>		
Normal breathing	35	58.3
Less or remission of fever	22	36.7
Increase appetite	18	30.0

**Contd...**

**15. Client's knowledge at exit: Yes (%) (contd.)**

Knowledge on Infant feeding	Number of respondents	%
<i>Knowledge on EPI and Vit A</i>		
<i>Main messages of EPI</i>		
Prevent 6 diseases	46	71.9
Total 4 visit to complete schedule	27	42.2
Measles at 9 month	26	40.6
Minor illness is not contraindication	10	15.6
Preserve EPI card	30	46.9
<i>Main messages of Vit A</i>		
Night blindness	36	56.3
1 <sup>st</sup> dose with measles vaccine	13	20.3
<i>Main messages on breast feeding</i>		
Best food for infant	49	79.9
Immediately after birth	46	74.2
Frequent feeding to initiate milk	24	38.7
Continue during illness	14	22.6
<i>In case of working mother</i>		
Expressed milk	7	11.3
Position of mother during breastfeeding	29	46.6
Position of infant during feeding	23	37.1
Posture of baby during sucking	26	41.9
Ingredients of khichuri	52	85.2
Preparation of khichuri	49	80.3
Feeding of child	43	77.0
<i>Use IEC materials by counsellor</i>		
Did she use	35	57.4
Did those help	33	54.1
She is helpful	55	90.2
<i>Management of RTI/STD</i>		
<i>Advises given on</i>		
Completing treatment	21	35.6
Treating companion	14	23.7
Follow up visit	14	23.7
Safe sexual practice	7	11.9
Use of condom	12	20.3
Others	3	5.1

### Managers'/Supervisors' View on the Intervention

Issues discussed	Department of the respondent			
	DGHS	DGFP	DCC	UPHCP
<i>What are the strengths of the ESP intervention at SBN GOD?</i>	<ul style="list-style-type: none"> <li>- Restructuring the physical facility to achieve the alternate service delivery</li> <li>- Job-aid for the providers</li> <li>- Training of providers on Job-aid</li> <li>- High motivation of providers</li> <li>- Monitoring through supervisory check lists</li> <li>- (ECDC)</li> <li>- Coordination among providers (IPM)</li> <li>- Feedback by ICDDR,B</li> <li>- Health Education and Counselling</li> </ul>	<ul style="list-style-type: none"> <li>- Missed opportunity addressed</li> <li>- Motivation of service providers</li> <li>- Service to keep high level clients' satisfaction</li> <li>- Health education and Counselling</li> <li>- Client flow system</li> <li>- Optimal utilization of manpower</li> </ul>	<ul style="list-style-type: none"> <li>- One stop service delivery</li> <li>- Inter provider coordination</li> <li>- Inter provider referral</li> <li>- Health Education and Counselling</li> <li>- BCC activities</li> <li>- Coordinated intervention attempt in urban ESP</li> <li>- delivery is good</li> <li>- Good referral system(?)</li> </ul>	<ul style="list-style-type: none"> <li>- Integration of services</li> <li>- Coordination among providers</li> <li>- Inter provider referral</li> <li>- BCC (Health Education and Counselling)</li> <li>- Missed opportunity addressed</li> <li>- Motivation of the providers</li> </ul>
<i>What are the weaknesses of the ESP intervention at SBN GOD?</i>	<ul style="list-style-type: none"> <li>- ANC screening was considered as FWV's work</li> <li>- Weak participation of some partners (if multi-partner)</li> <li>- Transfer of staff</li> <li>- Absence of appropriate mechanism for supplying medicines (Specially of RTI/STDs)</li> <li>- Absence of appropriate referral mechanism</li> <li>- Weak supervision by some partners</li> </ul>	<ul style="list-style-type: none"> <li>- Weak MIS system</li> <li>- FWV has excess of work</li> <li>- Referral system not well developed</li> <li>- Follow up of drop outs not addressed</li> </ul>	<ul style="list-style-type: none"> <li>- Absence of single command</li> <li>- Absence of routine and regular supply of medicines &amp; logistics</li> <li>- Weak supervision</li> <li>- Multipartner cooperation was not always comfortable</li> <li>- Workload of all workers was not equal</li> </ul>	<ul style="list-style-type: none"> <li>- Absence of unified management</li> <li>- Regular supply system not identified</li> <li>- Staff under different commands</li> <li>- Absence of local level management</li> </ul>

Issues discussed	Department of the respondent			
	DGHS	DGFP	DCC	UPHCP
<i>What important aspect(s) of the intervention is/ are adaptable?</i>	<ul style="list-style-type: none"> <li>- Client flow</li> <li>- Health education and counselling</li> <li>- Job-aid for providers</li> <li>- Dispensing of drug (Partial)</li> <li>- Time management –Waiting time can be reduced</li> <li>- Missed opportunity through screening algorithm</li> </ul>	<ul style="list-style-type: none"> <li>- Missed opportunity</li> <li>- Health education and counseling</li> <li>- Client flow system</li> </ul>	<ul style="list-style-type: none"> <li>- Missed opportunity address</li> <li>- Integrated service delivery</li> <li>- Referral system (?)</li> </ul>	<ul style="list-style-type: none"> <li>- Integrated service delivery</li> <li>- Missed opportunity address</li> </ul>
<i>What are the critical research areas for urban ESP delivery/ urban health care?</i>	<ul style="list-style-type: none"> <li>- Workers time</li> <li>- Work load and time management</li> <li>- Urban ESP- What should be the package</li> <li>- Urban ESP needs-Services and referral</li> <li>- Strengthening health education and counselling or strong BCC</li> <li>- Introduction of management of RTI/STD at ESP primary clinics level</li> <li>- Capacity of the City Corporations (Management and coordination)</li> <li>- Monitoring system (MIS)</li> <li>- Universal accessibility</li> </ul>	<ul style="list-style-type: none"> <li>- Follow up of drop outs</li> <li>- Male involvement in reproductive health care system</li> <li>- Introduction of LLP (Local level planning) and IPM (Individual performance management)</li> </ul>	<ul style="list-style-type: none"> <li>- Options for alternative service delivery in absence of providers (Can pharmacist do the works of vaccinator?)</li> <li>- Management under single command</li> <li>- Sustenance of for continuous effect</li> <li>- Nutrition component to be strengthened (Within or without HE and counseling)</li> <li>- Improve coordination if multipartner approach</li> </ul>	<ul style="list-style-type: none"> <li>- Options for alternative service delivery in absence of providers (Can pharmacist do the works of vaccinator?)</li> <li>- Management under single command</li> <li>- Sustenance of for continuous effect</li> <li>- Violence against women</li> <li>-Drop out management</li> <li>-Referral linkage test</li> </ul>

### Clinic Information System at Sher-e-Bangla Nagar GOD

Sl.No.	Provider	Record keeping	Reports/Frequency	Utilization
1.	Medical Officer	4 types of Patient Register - For male - For female - For children (> 15 yrs) - For diarrhoea	Monthly - Disease Profile, Civil Surgeon's Office - <i>Referral pattern, ORP</i> - <i>Drug use, ORP</i> - <i>Service statistics, ORP</i> - <i>Missed opportunity data, ORP</i>	SBN ORP ECDC CS Office, Dhaka
2.	Family Welfare Visitor (FWV)	11 types - Stock Register for pill/condom/injectables - Stock Register for IUD - Daily Injectable forward Register - Pill & condom Register - IUD Client Payment Register - IUD Follow up Register - IUD Certificate Book - General Health and Child Health Register - ANC & PNC Register - IUD, Inj. & ANC Cards for clients	Monthly Performance report to Mirpur thana FP office 1 Disposable syringe destroy form 1 Stock position for logistics  <i>Family Planning</i>  Service statistic, ORP  Missed opportunity data, ORP Referral pattern, ORP	To replenish supply ORP FP Office, Mirpur
3.	Vaccinator	3 Registers - Child Register - Women Register - Daily Immunization Report Form - Immunization Card to clients - Tally Sheet	Daily Tally Sheet Monthly consolidated report prepared by vaccinator Immunization service statistics, ORP Missed opportunity data, ORP	To replenish the supply of logistics On adhoc basis on NID and other occasion ORP Zone 6, DCC Office
4.	Counsellor	Daily Attendance Register (Other IEC materials)	<i>Service statistics, ORP</i> Missed opportunity data, ORP	ORP
5.	Pharmacist	1 Stock Register	Indent for supply/Need based	To replenish the supply/ ORTP
6.	Registrar	1 General Register	Client flow statistics, ORP	ORP
7.	Observation Data	Observation of providers, collected by team members	Observation during work Need based	ORP
8.	Exit Interview data	Interview of clients at exit, done by team members	Clients at exit, ORP <i>Need based</i>	ORP
9.	Base line data	Surveillance team	FSS team/3 monthly	ORP

*Note: Records used by nurses and laboratory technician not included*