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Operations Research on ESP Delivery

Addressing missed opportunities in primary health care clinics

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Acronyms

ANC	Antenatal Care
ARI	Acute Respiratory Infection
BCC	Behaviour Change Communication
CC	Community Clinic
DCC	Dhaka City Corporation
DGHS	Directorate General of Health Services
DD	Diarrhoeal Diseases
EPI	Expanded Programme on Immunization
ESP	Essential Services Package
FHC	Family Health Card
FP	Family Planning
FWA	Family Welfare Assistant
FWV	Family Welfare Visitor
GoB	Government of Bangladesh
GH	General Health
HA	Health Assistant
HPSP	Health and Population Sector Programme
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
NGO	Non Governmental Organization
NSDP	NGO Service Delivery Programme
PNC	Postnatal Care
PSTC	Population Services Training Centre
RTI	Reproductive Tract Infection
SACMO	Sub-Assistant Community Medical Officer
TT	Tetanus Toxoid
UFHP	Urban Family Health Partnership
UMIS	Unified Management Information System
USAID	United States Agency for International Development

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1. Executive Summary

1.1 Introduction

Following the 1994 International Conference on Population and Development (ICPD) in Cairo, there was an emphasis on providing a broader range of services in a package which would minimize costs. In 1998, the Government of Bangladesh adopted an integrated package of health and family planning services under the Health and Population Sector Programme (HPSP). A similar integrated approach was also adopted by the NGO sector, the National Integrated Population and Health Program (NIPHP), funded by the United States Agency for International Development (USAID). By the end of 2000, it became apparent that the main barrier to increasing utilization of this Essential Services Package (ESP) was not so much availability, but promotion of services.

The terms "unmet need" and "missed opportunity" for family health needs are inter-linked. A client who receives a requested service may need additional services. They may not be aware of that need or that the service is available. Usually clients visit a clinic for one specific need and providers concentrate on addressing that need. Unless clients are asked about additional needs, an opportunity may be missed to provide services which are needed. Other studies have shown that systematic screening in the primary health care setting can be effective to identify clients' needs and address them on one visit or through referral. This study was aimed at testing this strategy in ESP clinics in Bangladesh and extending it to identify the needs of other family members of the client. This intervention and evaluation was conducted from April 2002 to March 2003 and was funded by USAID.

1.2 Objectives of the study

- To assess the current practices and barriers to identify unmet health needs and tap missed opportunities at the ESP clinics.
- To test a screening tool as a strategy to identify unmet health and family planning needs of the clients and tap missed opportunities at the ESP clinics.
- To translate unmet needs into met need by addressing missed opportunities in ESP clinics through services, information, counseling and referral.

1.3 Methods

The study was carried out in collaboration with the Ministry of Health and Family Welfare and the NGO Service Delivery Programme. The intervention was carried out in Government clinics in Mirsarai union (Chittagong District) with clinics in Dhum union as comparison sites. The clinics in Sherpur Municipality (Type C) run by an NSDP supported NGO, Malancha, were selected as NGO intervention sites, with clinics in Kishoregonj Municipality (Type C) run by Population Services Training Centre (PSTC) as comparison sites. All the static and satellite clinics in these areas were included in the study. The study activities were conducted in two stages: 1) a baseline assessment; 2) the intervention stage in which an algorithm-based screening tool was developed, field tested and introduced in the intervention clinics.

1.4 Intervention strategies

- Screening all clients at selected clinics using a screening tool.
- Addressing additional needs identified among clients, by providing services, information/advice or referral
- Following up referral cases at home
- Monitoring the intervention activities

1.5 Evaluation

The effectiveness of using the checklist was evaluated in terms of changes (before and after the intervention period) in the extent of checking, identification of additional needs, meeting those needs, and impact on overall service provision. Changes in providers' knowledge, practice, time required for checking, and experience of using the checklist, were also assessed together with other determinants of missed opportunities, such as providers' time required to use the checklist, clients' knowledge on availability of services, and clients' views of the clinic services.

Data were collected through:

- Observation of client-provider interaction using an observation checklist.
- In-depth interview with providers using guidelines.
- Review of records and reports using formatted checklists and forms.
- Follow-up interview with all referred clients at their house using a structured questionnaire.
- Observation of the time spent on checking (using a standard time motion instrument).
- Review of the service delivery arrangements for using the checklist.
- Clients' views assessed through exit interviews with structured questionnaire.

1.6 Key Results

1.6.1 Providers' knowledge and experience of checking

Before the intervention, the Government providers were unaware of the concept of missed opportunities and additional needs of clients. NGO providers understood the concept as providing more services to clients to increase the client/service ratio. After the intervention, the providers considered the checklist useful for systematic checking, which required only about 4-5 minutes extra time. Providers reported some constraints to identifying additional needs, including a) lack of any screening tool to identify missed opportunities in the GoB clinics; b) an earlier tool used in the NGO clinics was complicated and difficult to use; c) lack of guidelines and training on checking; d) the additional money clients had to have with them to pay fees for additional services; e) time constraints for the clients; f) heavy client flow in peak hours (10am to 12 pm).

1.6.2 Checking for additional needs

The key indicator selected for comparing changes before and after introduction of the checklist was checking for 2 or more additional needs. In the Government clinics, there

was an overall increase from 7% of clients checked for 2 or more additional needs to 17%. This increase was statistically significant (based on 95% confidence intervals) and significantly greater than in the comparison clinics where there continued to be virtually no checking. There was a much higher level of checking before the intervention in the NGO clinics. Nevertheless, the proportion of clients checked for 2 or more additional needs increased significantly, from 66% to 82%. However, it also increased in the comparison clinics, from 34% to 50%. The increase in the intervention clinics was, therefore, not significantly greater than in the comparison clinics. Had a lower performing intervention site been selected, the power of the study to detect significant changes in checking would have been greater.

1.6.3 Identification of additional needs

Overall, 1,087 additional needs were identified in the Government clinics in the intervention period (September 2002 – February 2003), mostly for general health (51.7%) and respiratory tract infection (RTI) services (31.4%). Many more clients attended the NGO clinics and 4,792 additional service needs were identified. The main services needed were again general health (25.0%) and RTI (13.8%), but also family planning (FP) (28.1%) and tetanus toxoid (TT) vaccination (17.7%). Taking into account the number of clients, for every 100 clients requesting RTI services, there were 314 other clients found to have RTI symptoms requiring attention in the Government intervention clinics, and 161 in the NGO intervention clinics. Overall, 30% more needs were identified through systematic checking in the NGO intervention clinics and 13% more in the Government clinics.

1.6.4 Addressing additional needs identified

Following the introduction of the checklist in the Government intervention clinics, exit interviews showed there was an increase in the proportion of additional needs that were met, from 4.6% to 14.0%. There was very little change in the comparison clinics. In the NGO intervention clinics, there was a very large increase in the proportion of identified additional needs that were met, from 24.3% to 80.3% following the introduction of the checklist. The increase in the proportion of additional needs that were met was statistically significant in both the GoB and NGO intervention clinics, and significantly greater than any increase in the comparison clinics.

1.6.5 Referral accomplishment

For the above indicator, the definition of meeting needs was a service provided at the clinic or referral. In the GoB intervention clinics, a total of 64 clients were referred for additional needs in the intervention period. Of these, almost half (44%) were referred for ANC including pregnancy complication, followed by FP (20%). Follow-up of referred clients in the home revealed that most of them (83%) went to the appropriate facility and received the additional service. In the NGO clinics, a total of 134 cases were referred during the intervention period. Most of the cases were referred for TT vaccination (49%) and child immunization (14%). On follow-up it was found that 72% of the referred NGO clients had received services. Those who did not receive services, reported on follow up that the main reasons were monetary problems, lack of interest, long distance to the

referral facility, sickness, or non-availability of medicines in the case of the GoB referral clinics.

1.6.6 Change in overall service provision

The extra service provision resulting from identifying and addressing additional service needs increased in both the Government and NGO areas following introduction of systematic checking. In the Government intervention clinics, 2.8% more services were provided as a result of checking before the intervention and 9.9% following the introduction of the checklist. There was negligible additional service provision at the beginning and end of the study period in the comparison clinics. In the NGO intervention clinics, 11.6% more services were provided as a result of checking before the intervention and 27.8% after introduction of the checklist. There was a smaller increase in the comparison clinics, from 5.3% to 10.0%. These increases in the GoB and NGO intervention clinics were statistically significant, and significantly greater than the increases in the comparison clinics.

1.7 Conclusion

The study developed and evaluated a screening tool for identifying additional services needed by clients attending ESP clinics and their family members, other than the services requested. The study found positive changes in knowledge and practice of providers over the study period. They reported that the tool was user friendly, not time consuming and it helped to improve client-provider interaction and satisfaction. Providers did, however, make some useful observations on constraints, including client flow in peak hours which inhibited thorough use of the checklist, the need to minimize record keeping, the problem of clients having to have more money than anticipated to pay for additional services in NGO clinics, the need to have supplies/services available to treat additional conditions identified, and the importance of ensuring that referral is accomplished. These constraints will need to be addressed if the screening tool is to be used to maximum effect in the primary health care setting in Bangladesh. The acceptability to providers of the checklist was encouraging and its effectiveness was clearly demonstrated through a significant increase in checking and additional needs identified. The significant increase in the proportion of additional needs being met at the clinics is probably attributable to the intervention. The overall increase in service provision in relation to one clinic visit was considerable, and again probably attributable to use of systematic checking and a greater focus on meeting additional needs. These findings suggest that introduction of a screening tool more widely in primary health care facilities in Bangladesh could significantly increase coverage of child and reproductive health services.

2. Introduction

Compared with many developing countries, Bangladesh has an innovative health sector and operations research in health and family planning services has been extensive [1]. In search of more effective strategies to reduce rapid population growth, address concerns about financial stability and offer a broader range of health services, the health sector has undergone reform. This includes a transition from door to door service delivery in the 1970s, to outreach clinics in the 1980s, and to a system of fixed site (static) clinics under the Health and Population Sector Programme (HPSP), 1998-2003 [2]. Following the 1994 International Conference on Population and Development (ICPD) in Cairo, there was an emphasis on providing a broader range of services in a package to minimize costs through shared use of inputs [3]. Clustering services can improve cost effectiveness through synergism between treatment and prevention activities, shared production costs, and better use of specialized staff. The latter can be achieved through screening of patients at the first level of care and ensuring that needs are identified and addressed through services or referral. The service package is more than a list of services, it can be a vehicle for orienting demand and improving referral [4].

Under HPSP which began in July 1998, the Government of Bangladesh (GoB) aimed to provide an Essential Health Services Package (ESP). This combined basic health and family planning (FP) services that would be accessible to all the rural population at minimal or no cost through fixed site clinics. Packaging was aimed at maximizing health benefits per capita expenditure, meeting felt needs of clients, strengthening service delivery and improving health systems management. A one-stop service delivery system was envisaged with ESP provided in community clinics serving a population of about 6000 people in rural areas [5]. A similar integrated approach was also adopted by the NGO sector, the National Integrated Population and Health Program (NIPHP), funded by the United States Agency for International Development (USAID). By the end of 2000, it became apparent that the principal barrier to increasing utilization of services was not the presence or absence of services, but a lack of promotion of existing services. A mid term service delivery survey (SDS) in 2001 found the proportion of the population using ESP services remained low at 14% [6]. This raised questions about whether offering services was enough to improve utilization of clinics, and whether all needs of clients were being met during a single visit. This study has focused on these questions and evaluated an intervention to identify and meet the additional needs of clients attending clinics. The intervention was carried out from September 2002 to March 2003 at GoB clinics in two unions of Mirsarai Upazila of Chittagong district and at NGO clinics in Sherpur and Kishoregonj municipal areas. The study was funded by USAID.

3. Background

3.1 Missed opportunity and unmet need

The terms "unmet need" and "missed opportunity" for family health needs are inter-linked. A client who receives a requested service may need additional services, and if not identified these constitute "unmet need" and a "missed opportunity" to provide services. The concept of unmet need was based on the view that "Government goals for

family planning services should be defined in terms of unmet needs for information and services" [3] (UN 1995; 32). Unmet need was considered to be the number of people, or percentage of the population, that needs to use a service, but for a variety of reasons, including lack of access to information or services is not currently using that service [7].

3.2 Additional needs for ESP services

According to the World Bank, about one-third of the total disease burden in developing countries among women in the age group of 15-44 years is linked to health problems related to pregnancy, childbirth, abortion and reproductive tract infections (RTI). Available data for South Asia show that women and their families have many unmet needs for services related to these conditions. There is, therefore, an urgent need to develop strategies to address these unmet health needs [8] (Saroj Pachauri, 1998).

While lack of awareness on the part of clients represents an important barrier to improving service utilization, providers' time and costs are also important considerations. Recent research in Latin America has demonstrated that simple screening instruments can make integrated service provision more effective through provision of more services to individuals already attending a health facility. It was estimated that in Mexico and Guatemala, the marginal cost per service for up to two additional services was less than one US dollar, a saving of over two dollars compared with stand-alone services. Only 15-30% of additional provider time was required (9).

A lack of systematic screening to identify clients' healthcare needs is an important weakness in most integrated health and family planning programs. A study in Guatemala found that 29% of women attending health centers did not know that family planning was available and 11% were not aware of well baby services [9]. In Bangladesh, a survey found that many (14%) women interviewed at home were not aware of services at satellite clinics, Union Health and Family Welfare Centres (UHFWCs) (29%), or Upazila Health Complexes (UHCs) (30%) [10]. In Guatemala a study of 167 women visiting health centers for non FP services were also interested in having contraception, but only one received a family planning appointment during her visit. Similarly, many women in Mexican health centers were found to have unmet need for counseling on breastfeeding and on cervical and breast cancer screening [11]. Situation analyses in Africa had indicated that the problem of inadequate screening for preventive services is not limited to Latin America [11].

In Bangladesh, the Demographic and Health Survey (BDHS 1999-2000) estimated that 15% of married women of reproductive age (MWRA) had an unmet need for FP services [12]. A further study estimated family planning unmet need at 22.9% among married women, and 90% of them live in rural areas [13] (Abul Barkat et al, 1997). A recent study [14] [Khatun J, et.al] conducted through exit interviews revealed substantial unmet health need among clients at NGO clinics of six municipal areas of the country under the Urban Family Health Partnership (UFHP). Almost one-quarter of the under 2 year old children had unmet needs for immunization; almost two-fifths of children under 5 years of age had unmet needs for treatment of diarrhoeal diseases and two-fifths for ARI; and 26% of MWRAs needed FP, 11% ANC, 54% tetanus toxoid (TT) immunization and 15% services for respiratory tract infection/sexually transmitted diseases (RTI/STD) symptoms.

Preliminary findings from operations research conducted in an urban Government Primary Health Care Centre in Dhaka City demonstrate that there were missed opportunities for provision of family health services among 8-15% of clients screened during clinic attendance. Three-quarters of these unmet health needs were among women of reproductive age: RTI/ STD (24%), TT vaccination (25%), and FP (27%). The clinic providers detected these needs using a screening algorithm. More than half of the unmet needs could be addressed at that center through an inter-provider referral and linkage system introduced in the study [15].

To improve child health, the HPSP in Bangladesh aims to achieve 85% immunization coverage in infants by 2003. The target for ANC coverage and TT immunization of pregnant women is 80% by 2003 [6]. Provision of ESP services at different tiers of GoB and NGOs health facilities under the National Integrated Population and Health Programme (NIPHP) in rural and urban areas has the potential to meet these targets. Integration of health and family planning services at Upazila level and below was aimed at providing an increased range of services from static clinics, but these alone could not guarantee increased utilization and coverage of ESP services. Additional family health needs can be identified and addressed through strategies to tap missed opportunities at the clinics Many clients are not aware of all of their health needs when they visit a clinic. Usually clients visit for one specific need and providers concentrate on addressing that need Other family health needs are likely to remain unmet unless clients are asked about needs apart from the requested services. The success of offering ESP from the static clinics ultimately rests on addressing a range of family health needs of clients and their family members.

An appropriate strategy for exploring unmet service needs of clients and family members could lead to more efficient utilization of the clinic. Checking for additional needs of clients, identifying them, and providing information services or referral, could improve coverage of ESP services. This study was aimed at evaluating an intervention to introduce more systematic checking for additional, unmet family health needs.

4. Study objectives

The Objectives of the study were:

1. To assess the current practices and barriers to identify unmet health needs and tap missed opportunities at the ESP clinics.
2. To test a screening tool as a strategy to identify unmet health and family planning needs of the clients and tap missed opportunities at the ESP clinics.
3. To translate unmet needs into met need by addressing missed opportunities in ESP clinics through services, information, counseling and referral.

In addition, the study also planned to assess the time required by a provider to use a screening tool and the additional training and supervision required.

5. Methods

5.1 Study design

The study followed a quasi-experimental time series design to monitor indicators over time and document operational issues. A non-equivalent control group was used to compare the specific effects of the intervention based on indicators measured before and after the intervention, in intervention and comparison areas.

5.2 Study sites

The study was carried out in collaboration with the Ministry of Health and Family Welfare (MOHFW) and the NGO Service Delivery Programme-NSDP (formerly UFHP). Site selection was based on types of clinics, services available and willingness of the partners to participate in the study. The study was conducted in two GoB sites and two NSDP areas. Mirsarai union, under Mirsarai Upazila of the Chittagong district was the intervention area and Dhum union the comparison area. Sherpur Municipality (Type C), with clinics run by an NSDP supported NGO, Malancha, was selected for intervention, while Kishoregonj Municipality (Type C) with clinics run by Population Services Training Centre (PSTC) was selected for comparison. In both intervention and comparison areas, all the static and satellite clinics were selected for the study. The selected areas are summarized below:

Area	GoB	NSDP NGO
Intervention	Mirsarai union, Chittagong	Sherpur, Type C Municipality
Comparison	Dhum union, Chittagong	Kishoregonj, Type C Municipality

5.3 Research activities

The study activities were carried out in two stages:

1) In the first stage a baseline assessment was conducted to understand the existing service delivery mechanism, the extent of missed opportunities, current practices and barriers to detect and address unmet needs. The activities in the first stage were:

(i) Assessment of current practices to address missed opportunities
(ii) Assessment of knowledge of providers on missed opportunities
(iii) Assessment of barriers to address missed opportunities
(iv) Assessment of extent of missed opportunities for providing selected health and FP services

2) The activities in the second stage were:

(i) Development of an algorithm-based screening tool
(ii) Orientation of the supervisors on the intervention
(iii) Training of the service providers
(iv) The intervention

5.3.1 First stage

(i) *Assessment of current practices to identify additional needs*

Before assessment, the study tools were developed and pre-tested. An assessment of current practices to identify additional needs was carried out through a review of existing tools used for checking in the clinics, observation of client-provider interaction, and in-depth interviews with all providers. Assessment focused on what the providers actually do to identify additional service needs of clients who request specific services, how they screen them (using a screening tool or verbally), when they screen clients, whom they screen, and whether there were any gaps in practice which would lead to missed opportunities. All the providers in all tiers of two study areas were observed while providing services using a set of guidelines. About 400 observations in each site were carried out on selected ESP services.

(ii) *Assessment of knowledge of providers about additional needs and missed opportunities:*

Assessment of knowledge of providers about additional needs and missed opportunities was carried out through in-depth interviews with providers, using a guideline which was pre-tested. Knowledge assessment included questions regarding the concept of missed opportunities and mechanisms to detect and tap them. All the providers in all tiers of both study areas were interviewed.

(iii) *Assessment of barriers to address missed opportunities at the ESP clinics*:

To identify the barriers, interviews were conducted with providers who were also observed, interviews were conducted with clients on exit from the clinics, and discussions were held with concerned managers.

(iv) *Assessment of extent of missed opportunities:*

Assessment of the extent of missed opportunities for providing additional health and FP services was carried out through observation of client-provider interaction, analysis of monitoring data, and exit interviews with clients. Representative samples of consecutive clients were drawn according to the types of clinic and proportionate to the types of service. Clients were selected from all the tiers of service delivery and about 400 exit surveys were conducted in each site.

5.3.2 Second stage

(i) *Development of an algorithm based screening tool.*

The baseline findings were shared with the programme managers of GoB and NGO clinics and several brain storming sessions were held. Different options of a screening tool were considered.

a) Using Family Health Card (FHC) or ESP card as a screening tool
b) Using the existing tool introduced by UFHP
c) Develop a user-friendly screening tool based on the above

a) *Use of FHC or ESP card as screening tool*:
There was no existing tool for systematic checking nor any practice for addressing missed opportunities in GoB clinics before the intervention. The FHC and ESP Cards allow recording of the different services offered. The cards are extensive in size and content, but do not follow any algorithm. In GoB areas, the card is distributed to clients and hence its use during service delivery is not ensured. In most places, the providers were found to use many old formats (e.g. the EPI register) [16]. Initially, the FHC was distributed only in Chittagong and Jessore districts in the areas under ICDDR,B surveillance. There was no mechanism to detect and record unmet needs of clients on the FHC card. The ESP card used by NGO providers was even more comprehensive than the FHC. The ESP cards have been recently introduced in the clinics and include several algorithms for delivering different services and hence were not suitable for screening every customer. The card is a three-fold sheet, with eight different sections on different services to record details of the history of clients and their family members. In order to use it as screening tool, a provider would have to refer to all these sections for a client on each visit, even when they were not all applicable. It was also observed that providers were using ESP cards just for recording purposes while providing services.

b) *Using the existing tool introduced by the UFHP*:
In the NSDP setting an algorithm-based screening tool was introduced to identify additional needs. The tool first identifies the type of client (male, female married or unmarried), and then additional needs by asking multiple questions. The algorithm appeared to be complicated and not very user-friendly, which was subsequently confirmed during interviews with providers. It was also time consuming to use.

c) *Develop a user-friendly screening tool based on the above:*
It was agreed among the managers that a new screening tool was required which would have the following characteristics:

- Short and easy to use
- An algorithm to identify additional needs suitable for every type of client
- Can be used while providing the requested service
- Not time consuming
- Not costly and easily replicable

Several models were developed and discussed with the managers and providers. Some other algorithms used in reproductive health programmes in other countries were also reviewed. It was decided to prepare one that could be easily read and used by any person or provider. The tool developed contained two columns side by side (Annex 2). One identifies the requested service of the client and the other the possible areas of additional need. The provider reads it from left to right, which was expected to take about 2 minutes. The initial screening tool was the same for GoB and NGO clinics. It was subsequently developed for multipurpose use in the NGO clinics during the intervention period.

(ii) *Orientation of the supervisors on the intervention*

To create a supportive environment for providers, sessions were arranged for the supervisors and managers to orient them on how the intervention activities were to be carried out and who would do what. In GoB settings sessions were arranged for Line Director Unified Management Information System (UMIS), Civil Surgeon, Upazila Health and Family Planning Officer (UHFPO), Medical Officer-Maternal and Child Health (MO-MCH) and Upazila Family Planning Officer. In the NGO settings, sessions were arranged for the then UFHP Chief of Party, Liaison NGO Officer, and the Project Director and local NGO managers of Malancha and PSTC.

(iii) *Training of service providers of GoB and UFHP clinics*

Two-day training sessions were organized for the providers of all tiers involved in the intervention. A training manual and guidelines for identifying and tapping missed opportunities were developed and used during the training. Training was provided on the intervention, who would be involved, their role, and how to use the checklist to identify additional health and family planning needs.

In GoB settings training sessions were arranged for the Sub-Assistant Community Medical Officer (SACMO) and Family Welfare Visitor (FWV) from Union Health & Family Welfare Centre (UHFWC), FWV and Health Assistant (HA) from satellite and HA and Family Welfare Assistant (FWA) from the community clinic (CC). Orientation for NSDP providers was arranged for the Medical Officer, FWV/paramedics, Senior Service Promoter (SSP) and the counselor from static clinics, and paramedics and service promoters (SP) from satellite clinics.

5.4 Intervention

5.4.1 Overall strategy

The intervention consisted of a set of activities which would enable the providers to screen for other possible health needs of a client and his/her family members and to address them through information, services or referral, in addition to providing the requested services.

The intervention strategies included:

1. Screening all attending clients and family members for additional needs for selected ESP services using a screening tool.
2. Addressing additional needs of clients by providing services, effective referral and adequate information.
3. Following up of referral cases at home to record whether additional needs were met.
4. Monitoring the intervention activities

5.4.2 Screening for additional needs

Use of the checklist started from September 15 in NGO clinics and September 22 in GoB clinics, and the study lasted until February 2003. Screening involved checking for additional needs of clients and other family members. At the GoB clinics, the main users of the checklist were the FWVs together with the HA at the CC and the SACMO at the UH&FWC. The client flow at the NGO intervention static clinic necessitated first contact being with the counselor, who was responsible for appraising the client about the service required, providing the encounter form, collecting revenues and channeling clients to the appropriate provider. The static clinic has a client flow of about 60-70 clients per day. The Medical Officer (MO) saw only referred cases or a few who elected to pay more. The senior paramedic posted at the static clinic saw the majority of clients. At the satellite clinic, the paramedic was the only provider, so paramedics were the main users of the checklist. However, all service promoters, counselors and the MO were included in the training on use of the checklist.

Checking consisted of following the checklist and asking simple questions about particular needs. For DD, ARI and immunization of children, the accompanying adult was asked whether their children had these needs or not, whether they were under treatment, and if necessary they were advised to have the required service. For ANC, PNC, TT and FP women were asked about use of the services, confirming this if possible by asking secondary questions (e.g., the date of the last TT injection). For RTI, the providers asked the standard questions for syndromic management, namely, whether the client had any vaginal discharge or lower abdominal pain. When an additional need was identified, further steps were taken according to the standard protocol for that particular condition.
After providing the requested service, the provider checked for other needs of the client and other family members. For example, if a mother came with a child for immunization, it would be provided and she would be asked about other needs for that child (e.g., whether treatment was needed for ARI or DD). Subsequently she would be asked about her needs for FP, ANC, PNC, RTI, and TT vaccination.

5.4.3 Addressing additional needs

Information on addressing needs was obtained from monitoring data, service statistics and exit interviews with the clients. Through the client exit interviews, the study assessed the extent to which additional needs were addressed, including provision of service, advice or information or referral of the client. In most cases additional needs were addressed with services. Referral was made in particular for immunization of

children and TT vaccination for women when these services were not currently being provided at the satellite clinics, and also for general health services when these were not available.

If an additional need was identified and a service provided, this was recorded in the service/refer column of the service delivery registers, as were referrals. This provided an estimate of how many additional needs were identified through checking. In the CC and UHFWC there was an internal referral system between HA and FWA/FWV and FWV and SACMO. A temporary mark in the register was used for internal referral and the final status was noted at the end of the working day. If the service was not given, the final referral status was noted and the researcher followed up the patient during field visits. In the NGO clinics, referral slips were issued and clients were identified by the referral number during a subsequent field visit.

5.4.4 Following up referral cases

Initially it was decided to follow up 10% of all referral cases at home to ascertain whether the client attended a referral facility and the additional need was met. However, there were only a few referrals from GoB or NGO clinics. After discussion with partners and providers, and a joint field visit with donor representatives, it was decided to follow up all referred cases at their home. Accordingly, in the NGO clinics, a standard format was used to collect the follow-up information. The format contained the name of the client, address, purpose of referral, place of referral and result (service received, or not, and why not). The identification information was collected from the clinics and accomplishment information from the clients. In the GoB clinics, all the administrative information came from the UMIS1 & 2, which contained a separate column for referral information. In both areas, the researchers followed up referral cases at their home during routine field visits and noted the referral status.

5.4.5 Monitoring the intervention activities

Monitoring of the intervention was carried out in the GoB and NGO intervention areas through the following activities:

- Monthly meetings of the research team to review the intervention activities.
- Developing and using a registration system for the referred cases.
- Quarterly follow-up of all referral cases at their home to assess compliance.
- Incorporating any lessons learned on an ongoing basis.
- Review of service records to assess utilization of services.
- Meetings with partners and sharing findings on an ongoing basis.

During testing of the tool, it became apparent that records would have to be kept to monitor the intervention activities. NSDP clinics do not have any patient register for daily recording of services. In the monthly reviews and discussions with NGO providers, it was decided to introduce simple marking systems for recording on the screening tool itself. It was also decided to print the screening tool on the opposite page of the encounter form used for each patient at the NSDP clinics. In the GoB clinics, providers use a daily service register (UMIS). Providers were instructed to put a mark in the cell for a particular service in the register whenever any additional need was identified and record when a service referral or advice/information was given. Monitoring data was collected

each month for analysis and review of progress. In the GoB areas, a laminated tool was provided for each provider, which could be used repeatedly as a screening tool and for recording the outcome in the service register. It was envisaged that the tool should be easily replicable for use by all providers, both in terms of cost and speed of production (Annex 2,3,4).

5.5 Evaluation methods

5.5.1 Evaluation strategy and objectives

The overall objective of the evaluation was to assess the impact of using the checklist on identifying and addressing additional needs of clients at ESP clinics. The specific objectives of the evaluation were to know:

1. How much the checklist increased checking for additional needs
2. How much more additional need was identified using the checklist
3. How much of the identified additional need was met
4. How much checking increased overall service provision
5. How much of the referral was accomplished.
6. What changes there were in the knowledge and practice of providers

The effectiveness of the checklist was evaluated on the basis of indicators for checking, identification and addressing additional needs of clients and also changes in terms of providers knowledge, practice, time required and user friendliness of the checklist. The evaluation also assessed other determinants of missed opportunities, such as providers' time to use the checklist, clients' knowledge on availability of services, and clients' views of the clinic services.

5.5.2 Indicators

Need for the following health and family planning services was the basis for the study indicators:

Reproductive Health (RH) Services indicators:

Antenatal Care (ANC)
Postnatal Care (PNC)
Tetanus Toxoid (TT) Immunization
Reproductive Tract Infections (RTI)
Family Planning (FP)

Child Health (CH) Services indicators:

Expanded Programme on Immunization (EPI)
Diarrhoeal Diseases (DD)
Acute Respiratory Infections (ARI)

The effectiveness of using the checklist was evaluated in terms of changes in the extent of checking, identification of additional needs, meeting those needs and impact on overall service provision. The key indicators were:

Checking for additional needs:

Checking for 2 or more additional service needs

Identification of additional needs:

Number of additional needs identified
Number of additional need identified per 100 requested services

Addressing additional needs:

Number of additional need addressed
Percentage of additional needs addressed
Referrals made and services provided

Overall service provision:

Additional services provided per 100 requested

In addition other important indicators related to service delivery measured were:

Providers' knowledge and views:

Providers' knowledge about additional needs
Providers' practice on checking for additional needs
Perceived barriers and suggestions

Clients' knowledge and views:

Clients' knowledge of services
Clients' views on the clinic services

5.5.3 Data Sources

Data were collected through:

- Observation of client-provider interaction using an observation checklist.
- In-depth interview with providers using guidelines.
- Review of records and reports using formatted checklists and forms.
- Follow-up interview with all referred clients at their house using a structured questionnaire.
- Observation of the time spent using the checklist for 52 of the observed clients (18 NGO; 34 GoB) , using a standard time and motion instrument.
- Review of the service delivery arrangements using a service delivery checklist.
- Clients' views assessed through exit interviews with structured questionnaire.

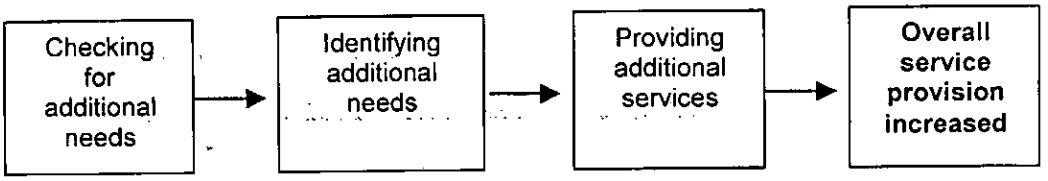
5.5.4 Sample for client exit survey

Unmet need for additional services was treated as a bi-nominal variable. Using the standard formula, it was calculated that a sample of about 400 would give a precision of +/- 5% on an estimated prevalence of 25% [17] (Fisher A.A. et al. 1998). Consecutive clients were selected in each intervention and comparison area in proportion to the type

of service requested to ensure a representative sample. The clients unwilling to participate in the survey were excluded.

5.5.5 Framework for data analysis

The data were analyzed according to the analytical framework shown below for assessment of the key indicators before and after the introduction of systematic checking. In addition, data were analyzed on providers' knowledge and barriers to identify additional needs, and experience of using the checklist.



6. Results

6.1 Clients characteristics, knowledge and attitudes

6.1.1 Clients characteristics:

The characteristics of clients interviewed on exit from the clinic are shown in Table 1. Most of the clients were middle-aged women with a mean of 3-4 years schooling, about 10 years residence near (1-1.5 km) the clinic, and an average income of about 3500-5500 taka per month. Characteristics of clients were similar in the intervention and comparison areas, before and after the intervention, with a few exceptions. Clients were slightly older in the GoB comparison area and had lived there longer. Clients in the NGO area had received more schooling. There were some differences in mean incomes in the different groups. None of these differences are considered likely to affect the results of the evaluation.

Table 1: Characteristics of clients interviewed while attending GoB intervention and comparison clinics

Variables (Mean/SD)	GoB				NGO			
	Intervention		Comparison		Intervention		Comparison	
	Before	After	Before	After	Before	After	Before	After
Age (years)	28.4 ±9.8	29.9 ±10.9	32.2 ±11.5	33.1 ±13.6	26.4 ±8.7	25.6 ±7.9	26.6 ±7.5	25.5 ±6.7
Education (years)	3.2 ±3.9	3.3 ±3.8	3.1 ±3.6	3.9 ±4.0	4.5 ±4.6	4.9 ±44	4.8 ±4.3	6.0 ±4.2
Length of residency (years)	13.0 ±10.3	14.1 ±12.1	18.7 ±14.6	21.5 ±15.9	13.7 ±10.6	10.0 ±8.8	12.7 ±9.9	9.3 ±7.7
Distance from home (km)	1.5 ±0.6	1.6 ±0.7	1.1 ±0.3	1.1 ±0.3	1.4 ±0.6	1.3 ±0.6	1.1 ±0.4	1.1 ±0.3
Monthly income (Taka)	4629 ±3847	5120 ±4601	4502 ±3240	4909 ±4634	5530 ±5699	3665 ±2062	6484 ±9336	5300 ±4705

6.1.2 Clients' knowledge about services

Clients' knowledge on the availability of different services could be an important determinant of utilization of clinic services. Table 2 summarizes the knowledge of clients about different services before and after the intervention. In general, clients had good knowledge about the availability of FP services in both GoB and NGO clinics, less about child health services, and much less about PNC and ARI services.

Table 2: Percentage of clients knowing about availability of different ESP services

Services	GoB				NGO			
	Intervention		Comparison		Intervention		Comparison	
	Before (%) *	After (%)	Before (%)	After (%)	Before (%)	After (%)	Before (%)	After (%)
ANC	66.7	60.0	22.4	57.2	46.3	67.5	57.3	82.0
PNC	1.2	8.3	0.2	17.3	7.1	8.0	10.3	52.8
TT	27.5	19.6	24.2	79.5	45.5	48.2	42.5	44.3
RTI	1.9	2.4	2.3	0.3	10.0	9.6	12.0	13.4
FP	79.9	84.9	92.0	90.1	64.5	77.4	69.3	96.8
RHS Total	92.1	92.4	95.1	99.0	92.4	97.0	93.7	99.5
DD	10.7	6.1	21.7	11.7	14.7	3.3	6.7	9.5
ARI	3.3	5.9	3.9	0.3	14.2	5.6	20.7	7.6
IMM	26.3	30.7	43.6	76.3	40.0	31.0	49.0	18.2
CHS Total	8.7	41.4	65.4	78.8	56.8	37.1	60.3	32.0
GH Total	78.1	60.3	87.9	27.6	39.2	49.9	41.3	17.7

(* The total for all services is greater than 100% because of multiple responses)

6.1.3 Clients' views on the clinics

At exit interview the majority of clients in the GoB clinics reported that they used the clinic because it was near their residence, the providers were friendly, and because the cost was low. In addition to expressing these views, clients in the NGO areas were more likely to report that the quality of service was good.

Table 3: Percentage of clients with various opinions about using the clinics

Opinions	GoB				NGO			
	Intervention		Comparison		Intervention		Comparison	
	Before (%) *	After (%)	Before (%)	After (%)	Before (%)	After (%)	Before (%)	After (%)
Less expensive	11.7	33.1	66.5	90.8	62.4	29.6	21.7	67.0
Good Quality	24.9	5.0	0.7	9.9	22.6	2.3	17.7	23.7
Friendly behaviour	27.0	29.5	5.5	7.4	10.3	20.0	19.7	20.8
Provide information	1.2	0.0	0.0	0.7	3.7	4.2	6.3	4.5
Known to Providers	12.8	12.3	12.0	26.9	8.4	39.1	11.3	11.4
Nearness to Residence	85.3	59.6	96.5	91.2	44.2	58.8	75.3	73.9

(* The total for all services is greater than 100% because of multiple responses)

6.2 Providers' knowledge and experience of checking

Before the intervention, the GoB providers were unaware of the concept of missed opportunities. NGO providers understood the concept as providing more services to clients to increase the client-service ratio from 1:1 to 1:2 or more, as requested by the UFHP management. The providers considered the checklist useful for systematic checking, which required little extra time. The average time required by all types of providers in all areas was about 4-5 minutes, based on observation of 18 NGO clients and 34 GoB clients. Providers reported a similar time in the in-depth interviews. There were some time constraints during peak hours for client flow, but that was related to provision of requested services rather than the screening process.

Tables 4 and 5 summarize the experience of providers before and after using the checklist. The main barriers to identifying additional needs reported by providers were: a) absence of any tool to identify missed opportunities in the GoB areas; b) a screening tool had been introduced earlier in the NGO clinics, but was found to be complicated and difficult to use; c) absence of guidelines for checking and no training; d) the client has to have money for more user fees when an additional need is identified; e) time constraints for the clients; f) heavy client flow in peak hours (10am to 12 pm) posed problems for using the screening tool. No solutions to these problems were implemented during the study.

Table 4: Experiences of GoB providers before and after using checklist

Issues	GoB Clinics: findings from in-depth interviews	
	Before	After
Providers Knowledge	Partial and superficial "I give services for which the clients come, I refer when I fail, I do not understand correctly what is meant by additional needs"	Acceptable knowledge in intervention clinics "Finding health needs of clients in addition to what she has come for and finally offer that service"
Reported practice	Only providing the requested service	Used checklist in most cases or sometimes checked from memory (e.g. in peak hours)
Barriers to checking	No training No algorithm Inadequate logistics	Inadequate logistics Uncertainty of health policies Difficulties in record keeping
Usefulness of checking		Very useful and easy to use. Some difficulty in peak hours Negligible time required Improved client-provider interaction and client satisfaction
Suggestions		Can be a part of service register Can be mounted on wall

Table 5: Experiences of NGO providers before and after using the checklist

Issues	NGO clinics: findings from in-depth interviews with providers	
	Before	After
Providers Knowledge	Some awareness of additional needs	More aware of additional needs "A more comprehensive approach for checking"
Reported practice	Using flow chart infrequently Sometimes checking from memory	Using checklist in more systematic way to identify additional needs.
Barriers to Checking	No training No algorithm Heavy client flow	Clients need to give more user fees for additional services (may not have brought enough money) Sometimes it requires more clients' time Sometimes difficult when the client flow is heavy
Usefulness of Checking	Very few aware of the usefulness of checking	Easy to use. Improved client-provider interaction and client satisfaction
Suggestions	Need a user friendly method Need guidelines Need formal training Need a system for recording Minimize other record keeping	Need a strategy for user fees Need to address peak hour problem Minimize other record keeping Strategy to know that referral is accomplished

6.3 Checking for additional needs

Did the checklist increase the amount of checking?

Checking of clients for 0, 1, 2, 3 or more additional service needs was observed and recorded. Table 6 shows that the rates of checking for additional needs increased following the introduction of the checklist. However, rates also increased in the comparison clinics and there was a considerable amount of checking in the NGO clinics before the checklist was introduced. For example, even before the intervention, 90.7% of those attending the NGO intervention clinics for child health services were checked for at least one additional need, and 67.4% for 3 or more needs. There was much less checking in the Government clinics before the intervention and virtually no patients were checked for 3 or more additional needs before or after the intervention.

Checking for at least one additional need is part of the protocol for some services. For example, checking for RTI symptoms among FP clients and tetanus toxoid immunization status for ANC attenders. On the other hand, checking for 3 or more services may not be applicable for some clients. For example, clients attending for ANC will not currently need FP or PNC. In view of this, and the rates of checking mentioned above, the key indicator selected for comparing changes following the introduction of the checklist was checking for 2 or more additional needs.

Table 6: Percentage of patients checked for additional needs: before and after introduction of the checklist in GoB and NGO clinics

Clinic	Before/ After	Number of Patients	% of patients checked for additional services			
			0 services	1 or more	2 or more	3 or more
GoB:		*Child Health*				
Intervention	Before	76	72.4	27.6	7.9	3.9
	After	69	68.1	31.9	18.8	2.9
Comparison	Before	73	72.6	27.4	2.7	0.0
	After	56	83.9	16.1	3.6	0.0
GoB:		*Reproductive Health*				
Intervention	Before	177	68.9	31.1	6.2	1.1
	After	181	58.6	41.4	16.0	3.9
Comparison	Before	165	82.4	17.6	0.6	0.0
	After	83	78.0	22.0	0.0	0.0
NGO:		*Child Health*				
Intervention	Before	86	9.3	90.7	83.7	67.4
	After	119	1.7	98.3	93.3	89.9
Comparison	Before	72	13.9	86.1	59.7	31.9
	After	78	3.8	96.2	73.1	44.9
NGO:		*Reproductive Health*				
Intervention	Before	231	10.4	89.6	58.9	32.9
	After	323	3.1	96.9	78.0	30.7
Comparison	Before	223	36.3	63.7	26.0	9.0
	After	314	8.9	91.1	43.6	22.0

Table 7: Percentage of all clients checked for 2 or more additional needs before and after the intervention in GoB and NGO clinics.

Clinic	% of clients checked for 2 or more additional needs			
	Before	After	Difference	95% confidence intervals
GoB:				
Intervention	6.7	16.8	+10.1	+6.7, +16.8
Comparison	1.3	1.4	+ 0.2	-8.2, +8.6
Difference	5.4	15.4	+9.9	+4.6, +15.2
NGO:				
Intervention	65.6	82.1	+16.5	+12.9, +20.3
Comparison	34.2	49.5	+15.3	+9.3, +21.2
Difference	31.4	32.6	+1.2	-5.5, +8.0

Figures 1 and 2 show the changes in rates of checking for checking for 2 or more additional service needs among clients attending for child health services, reproductive health services, and all types of service.

In the Government clinics there was an overall increase in checking for 2 or more additional needs, from 7% to 17% following the introduction of the checklist, and there continued to be virtually no checking in the comparison clinics. As mentioned, there was a much higher level of checking before the intervention in the NGO clinics (66% of all clients checked for 2 or more additional needs). A considerable increase (to 82%) was observed following the introduction of the checklist. However, there was also an increase in checking for 2 or more additional needs in the comparison clinics, from 34% to 50%.

To assess whether the increases in checking were statistically significant, and significantly greater in the intervention than in the comparison clinics, 95% confidence intervals were used, as shown in Table 7. The increase in checking in the Government intervention clinics was statistically significant, but there was no significant increase in the comparison clinics. The extra increase in checking in the intervention clinics (9.9%) was statistically significant based on the 95% CIs. The increase in checking in the NGO clinics was significant in both the intervention and comparison areas, but there was not a significantly greater increase in the intervention area.

6.4 Identification of additional needs

Figures 3 and 4 show the number of additional service needs identified in the intervention clinics in the 6-month study period (September 2002 – February 2003), based on monitoring data. Overall, 1087 additional needs were identified in the Government clinics, mostly for General Health (51.7%) and RTI services (31.4%). Many more clients attended the NGO clinics and 4,792 additional service needs were identified. The main services needed were again General Health (25.0%) and RTI (13.8%), but also FP (28.1%) and tetanus toxoid vaccination (17.7%).

The number of additional needs identified depends on the number of clients attending. Figures 5 and 6 show the number of additional needs identified per 100 services requested in Government and NGO intervention clinics. The most striking feature of the analysis is the very large number of RTI needs identified. For every 100 clients requesting RTI services, 314 other clients in the Government clinics were found to have RTI symptoms requiring advice or treatment, and 161 more in the NGO intervention clinics. Overall, 30% more needs were identified through checking in the NGO intervention clinics and 13% more in the Government clinics.

Figure 1: Percentage of clients checked for two or more additional needs in GoB clinics before and after the intervention

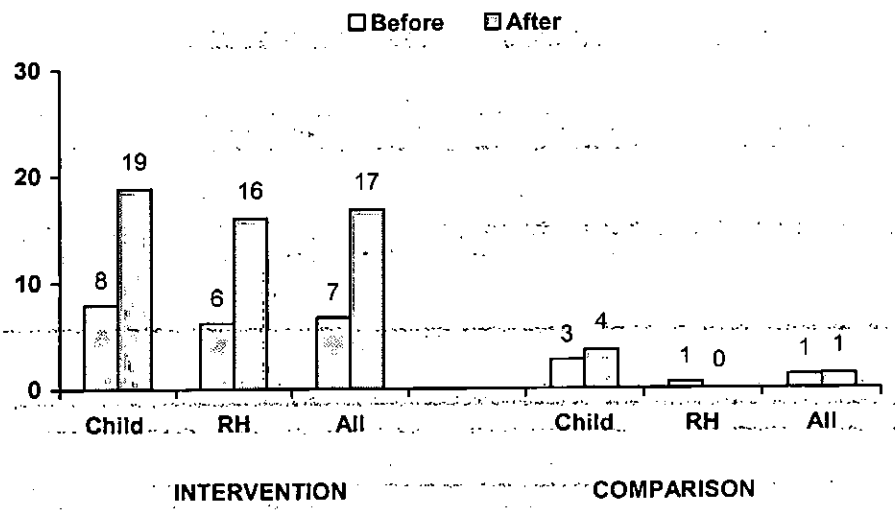


Figure 2: Percentage of clients checked for two or more additional needs in NGO clinics before and after the intervention

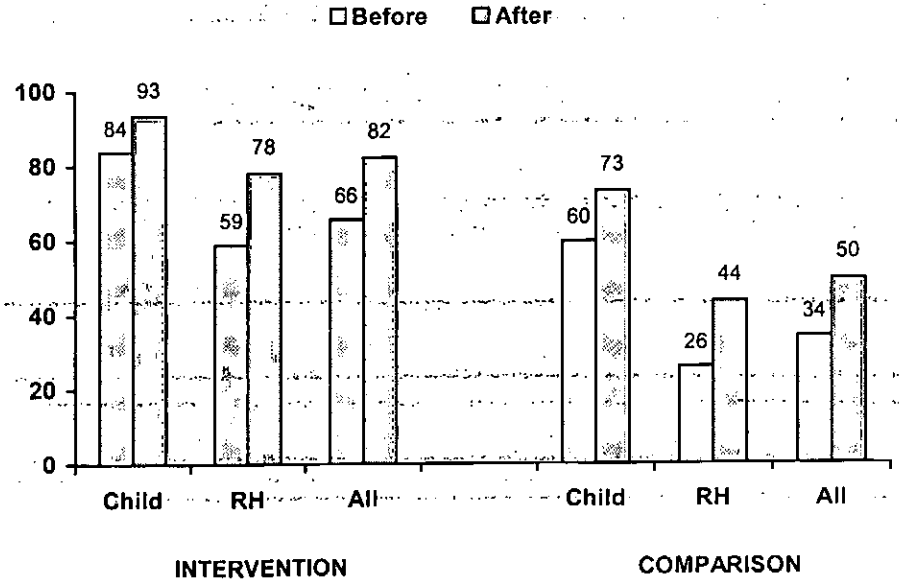


Figure 3: Number of additional needs identified in GoB intervention clinics: September 2002 – February 2003

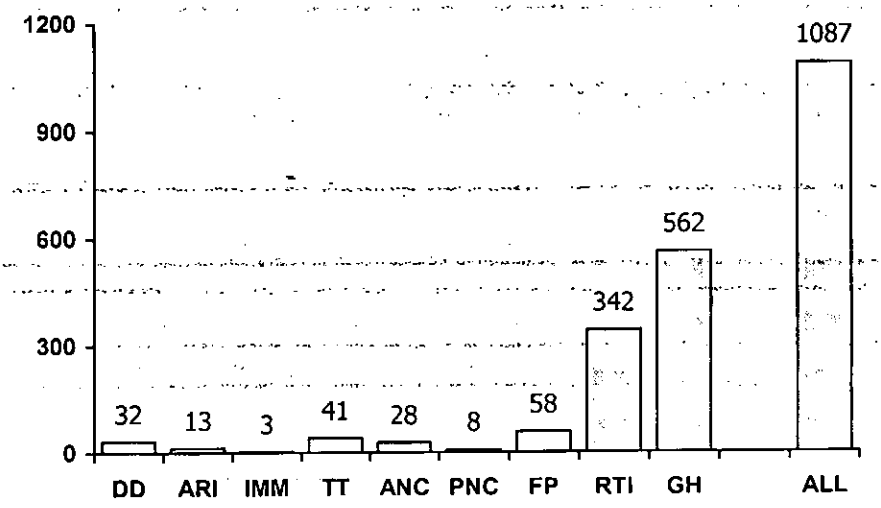


Figure 4: Number of additional needs identified in NGO intervention clinics: September 2002 – February 2003

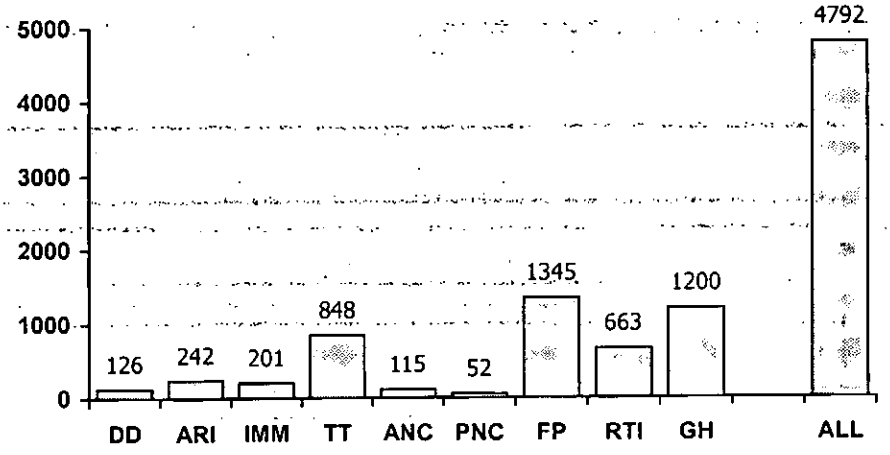


Figure 5: Additional needs identified per 100 services requested in GoB intervention clinics: September 2002 – February 2003

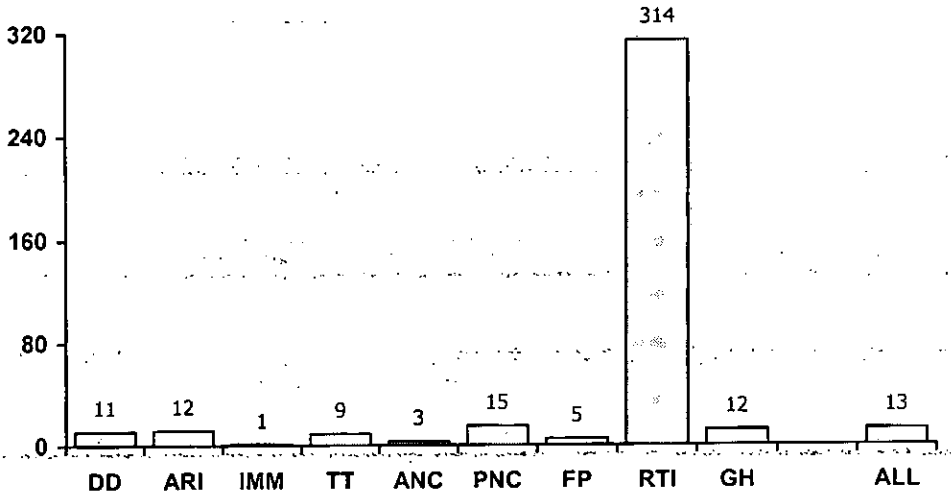
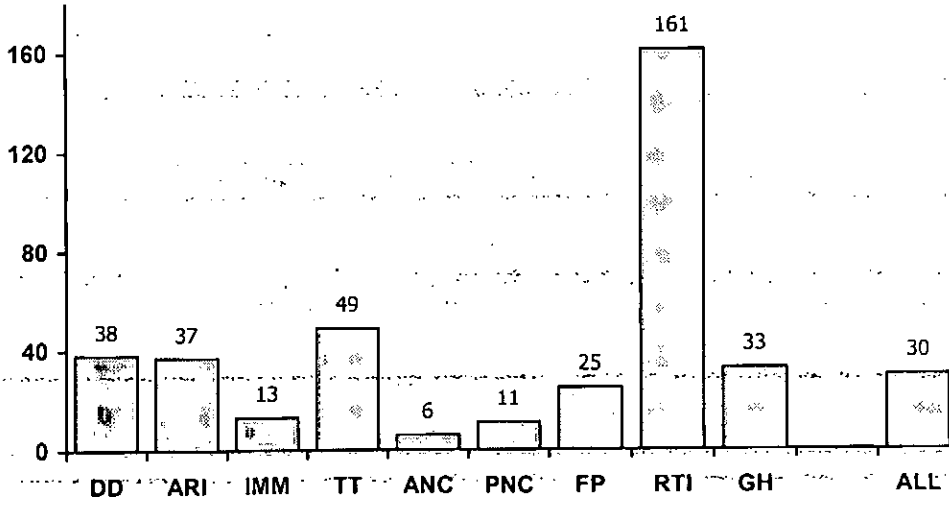


Figure 6: Additional needs identified per 100 services requested in NGO intervention clinics: September 2002 – February 2003



6.5 Addressing additional needs identified

To assess how much of the additional need for services was actually met, data from the exit surveys was analysed. Figures 7 and 8 show changes in the appropriate indicator, the percentage of additional needs met, for Government and NGO clinics, respectively. Since most clients received at least advice or information, only the "hard indicator" for needs met was used (clients treated at the clinic or referred).

In the Government intervention clinics, there was an increase in additional service needs met, from 4.6% to 14.0%, following the introduction of the checklist. There was very little change in the comparison clinics, with very few of the identified additional needs being met at the beginning and end of the study period. In the NGO intervention clinics there was a very large increase in the proportion of identified additional needs that were met, from 24.3% to 80.3% following the intervention. There was also an increase in the comparison clinics from 9.7% to 27.0%. Table 8 shows the 95% confidence intervals on the differences in these proportions. The difference in the percentage of identified additional needs that were met, before and after the intervention in the Government clinics was statistically significant based on 95% confidence intervals. This was also a significantly greater increase than in the comparison area. In the NGO clinics, the improvement in meeting additional needs was also significantly greater in the intervention than in the comparison clinics.

Table 8: Percentage of additional needs that were met before and after the intervention in GoB and NGO clinics

Clinic	% of additional needs met			
	Before	After	Difference	95% confidence intervals
GoB:				
Intervention	4.6	14.0	+9.4	+4.7, +14.1
Comparison	2.3	0.0	-2.3	-4.4, -0.3
Difference	2.3	14.0	+11.7	+8.2, +15.4
NGO:				
Intervention	24.3	80.3	+56.0	+47.0, +64.9
Comparison	9.7	27.0	+17.3	+8.6, +25.9
Difference	14.6	52.3	+38.7	+32.8, +44.6

6.6 Referral accomplishment

The data in Tables 9 and 10 show that most referrals resulted in additional needs being met. The service providers in the GoB intervention clinics referred a total 64 clients from mid-September 2002 to February 2003 (Table 9). Of the 64 clients, the majority (66%) was referred from SC/EPI clinics followed by CC (19%) and UHFWC (16%). Most of the clients (89%) were referred to GoB clinics (SC/EPI, FWC or UHC) and the rest (11%) to private clinics. Almost half (44%) of clients were referred for ANC including pregnancy complication, followed by FP (20%). During monitoring of referred clients, it was found that most (83%) of the clients went to the facilities and received the additional service. A few clients who did not go for the service were hoping to go soon, while a few did not get the service due to non-availability of drugs.

Figure 7: Percentage of identified additional needs met at GoB clinics

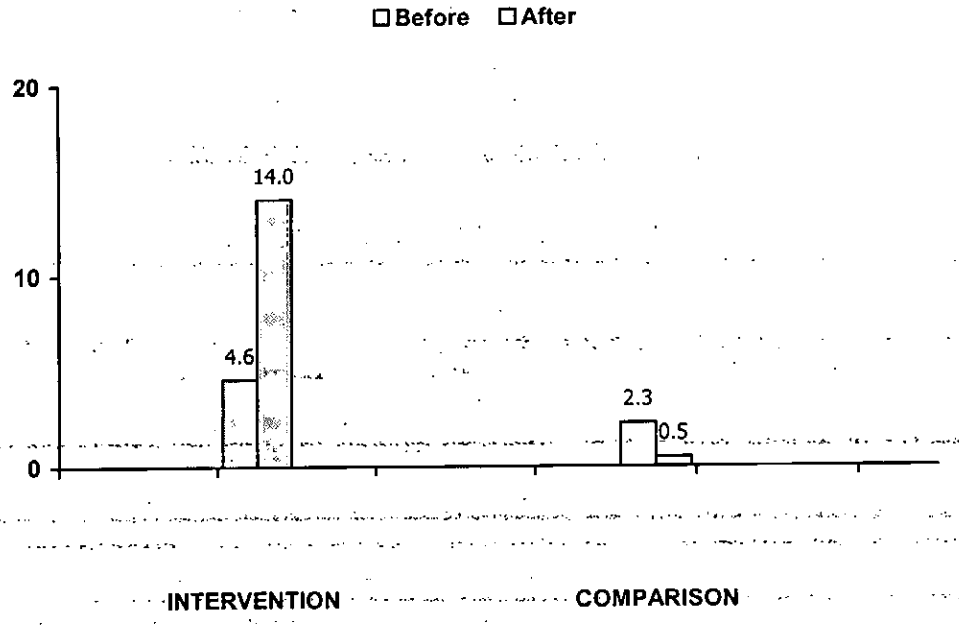


Figure 8: Percentage of identified additional needs met at NGO clinics

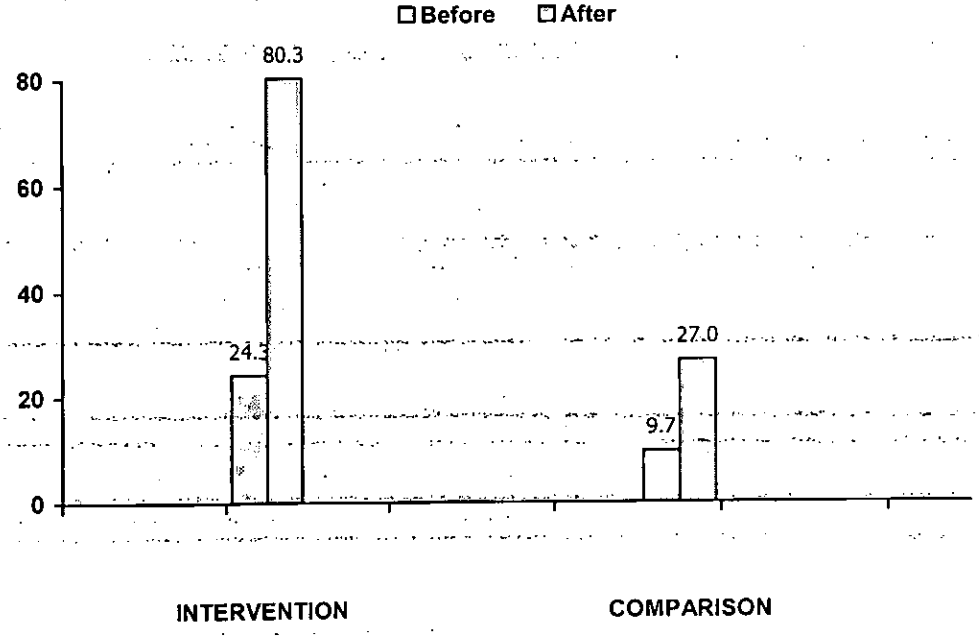


Table 9: Number of referrals and number complying: GoB intervention clinics

Type of referred case	No of Cases referred from: (September 2002-February 2003)				Referred to:		Service received		Reason for not receiving service
	Total	CC	SC/ EPI	FWC	GoB	Private /NGO Clinics	Yes	No	
EPI	1	1	-	-		-	-	-	Clients could not be traced Client ignored Client intends to go soon Will attend later Drugs not Available
DD	0	0	-	-	0	-	-	-	
ARI	6	2	4	0	4	2	5	1	
TT	2	0	0	2	2	0	2		
ANC	28	7	15	6	26	2	23	5	
PNC	3	1	2	-	2	1	3	-	
FP	13	1	12	-	13	0	13	-	
RTI	3	-	2	1	1	2	2	1	
GH	8	-	7	1	8	-	5	3	
Total	64 (100%)	12 (19%	42 (66%)	10 (16%)	59 (89%)	5 (11%)	54 (83%)	10 (16%)	

A total of 134 cases were referred from the NGO clinics during the intervention period (Table 10). Most of the cases were referred from satellite clinics (94%), and most were for TT vaccination (49%) and child immunization (14%). Slightly more of these cases were referred to NGO static clinics than to GoB clinics. Seventy-two percent of the NGO referrals eventually received services, compared with 83% of the GoB referrals. Those who did not receive services, reported on follow up that the main reasons were monetary problems, lack of interest, long distance to referral place, sickness or other constraint in the family.

Table 10: Number of referrals and number complying: NGO intervention clinics

Types of referred services	No. of cases referred (September 2002-February 2003)			Referred to		Serviced received		Reason for not receiving service
	Total	Static	Satellite	GOB	NGO static	Yes	No	
EPI	19	-	19	1	18	17	2	Monetary problems Lack of interest Far distance Family constraints Other sickness
DD	-	-	-					
ARI	5	2	3	5		2	3	
TT	65	-	65	31	34	57	8	
ANC	9	-	9	5	4	5	4	
PNC	2	-	2	-	2	2	0	
FP	-	-	-					
RTI	3	-	3	-	3	2	1	
GH	31	6	25	15	16	11	20	
Total	134 (100%)	8 (6%)	126 (94%)	57 (43%)	77 (57%)	96 (72%)	38 (28%)	

6.7 Change in overall service provision through use of checklist

Figures 9 and 10 show the increase in service provision from identifying and addressing additional service needs. In the Government intervention clinics, 2.8% more services were provided as a result of checking before the intervention and 9.9% following the introduction of the checklist. There was negligible additional service provision at the beginning and end of the study period in the comparison clinics. In the NGO intervention clinics, 11.6% more services were provided as a result of checking before the intervention and 27.8% after introduction of the checklist. There was a smaller increase in the comparison clinics, from 5.3% to 10.0%.

Table 11 shows the 95% confidence intervals on the changes in overall service provision. The increase in overall service provision in the Government intervention clinics was significant, and significantly greater than in the comparison clinics. In the NGO clinics, the improvement in overall service provision was significant in both the intervention and comparison areas. The confidence intervals on the differences did not overlap, indicating that the improvement in the intervention clinics was significantly greater than in the comparison clinics.

Table 11: Additional needs met per 100 services requested before and after the intervention in GoB and NGO clinics

Clinic	Additional needs met per 100 requested			
	Before	After	Difference	95% confidence intervals
GoB:				
Intervention	2.8	9.9	+7.1	+3.9, +10.4
Comparison	1.2	0.4	-0.8	-2.0, +0.4
Difference	1.6	9.5	+7.9	+5.2, +11.4i
NGO:				
Intervention	11.6	27.8	+16.2	+10.8, +21.5
Comparison	5.3	10.0	+4.7	+0.7, +8.6
Difference	6.3	17.8	+11.5	+7.1, +15.9

Figure 9: Additional needs met per 100 services requested In GoB clinics before and after the intervention

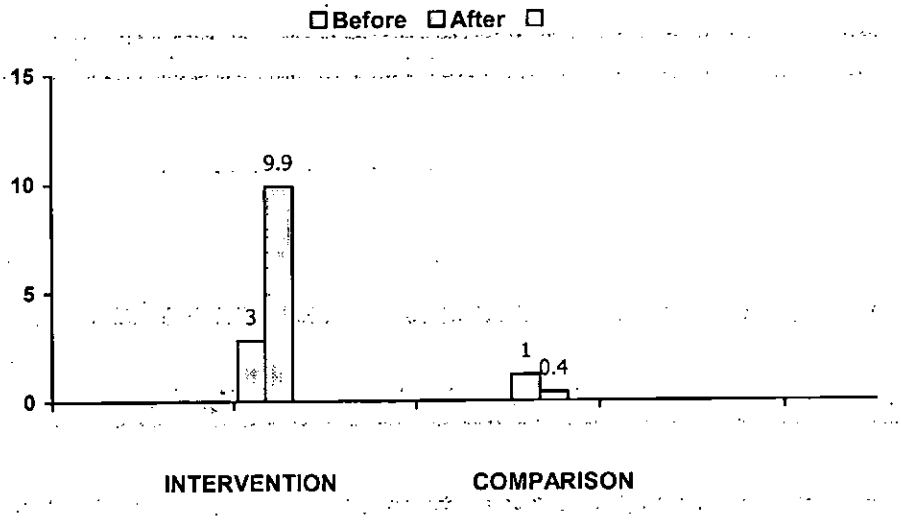
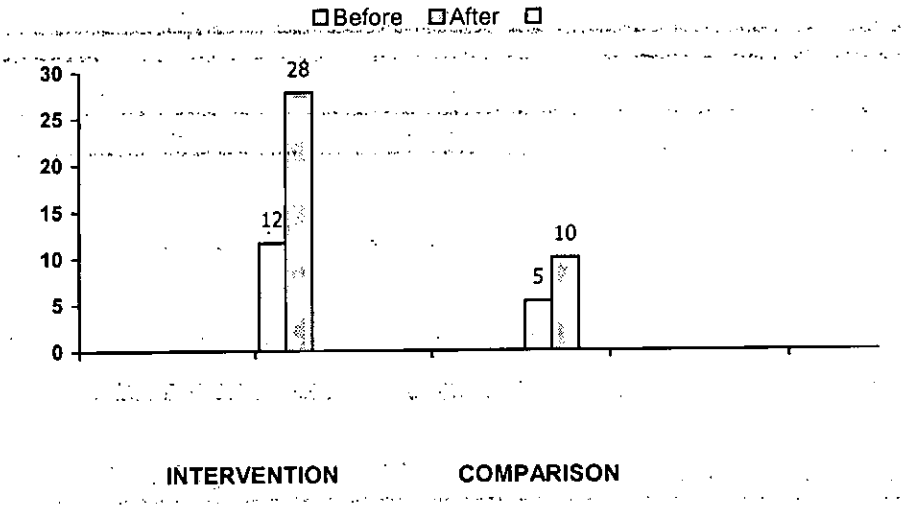


Figure 10: Additional needs met per 100 services requested in NGO clinics before and after the intervention



7. Discussion

From a programmatic point of view, it should be more efficient and cost effective to provide multiple services on a single client visit, rather than provide the services on separate visits. Physical integration of health and family planning services at primary health care level can contribute to this, but does not ensure that all the needs of clients will be met. Earlier studies have shown that clients usually attend a clinic to request one particular service and they may be unaware of other needs they have or that the relevant services are available. Previous studies have indicated that a service delivery strategy should include a mechanism for systematic checking of clients to optimize service provision and address unmet needs. This study set out to develop a screening tool suitable for use in primary health care clinics in Bangladesh and to evaluate its use. It has confirmed the findings of earlier studies with regard to the feasibility and effectiveness of using a screening tool to identify additional service needs of clients. The study has taken evaluation of the approach significantly further in demonstrating a broader impact on service provision through systematic checking.

Studies in Guatemala, Peru and Mexico [11,18], focused on unmet need for reproductive health services. The checklists targeted only women of reproductive age, to offer them services available at the clinic. The former Rural Service Delivery Programme (RSDP) attempted to promote multiple service provision at its clinics through counseling, packaging of services, and community-based behaviour change communication (BCC), which met with some success [19]. The intervention reported here went beyond reproductive health needs and the needs of clients themselves, to check for additional primary health care needs of accompanying persons and all children under five years of age in the family. In this way, the intervention has extended the concept of one-stop shopping for services envisaged under HPSP [5]. Again, earlier studies checked for additional needs, offered multiple services, and considered changes before and after a clinic intervention. This study included comparison areas where systematic checking was not introduced. However, the sites were purposively selected for feasibility of introducing the intervention. Some checking for additional need was already being conducted, particularly in the NGO clinics, while the intervention clinics were already higher performing than the comparison clinics in Government and NGO areas. Despite this limitation, which restricted the power of the study to detect significant changes, the results confirm the effectiveness of systematic checking. Use of the screening tool led to more thorough checking, identification of many more additional reproductive and child health needs, and provision of more services in relation to one clinic visit. There are, however, some further considerations before any recommendation can be made about scaling up the intervention.

Systematic use of the screening tool brought with it important changes in provider behaviour and service delivery. Encouraging results had already been reported from Guatemala where a systematic approach resulted in 24% more screening, following training for providers [9], and in Dhaka where routine checking on up to 90% of clients was achieved in an urban ESP clinic [15]. In the current study, there was a statistically significant increase in the proportion of clients checked for two or more additional needs

in the Government intervention clinics, from a very low level of 6.7% to 16.8%. The much higher baseline level of checking in the NGO intervention clinics, and the higher performance than in the comparison areas, to some extent limited the power of the study to identify significant changes. Nevertheless, it did lead to demonstration that an increase in checking could also be achieved from a high baseline level. The increase in checking for two or more additional needs in the NGO intervention clinics from 65.6% to 82.1% was statistically significant, while checking for at least one additional need increased from 89.9% to 97.3%. These changes were not only significant quantitatively, but also in terms of the broader service reach of the checking instrument. The checking encompassed not only the client, but other accompanying persons and children at home.

In addition to demonstrating improvements in the extent of checking, the study has confirmed the high level of unmet need, and the possibility of identifying this through more systematic checking. Using the checklist resulted in 13% more needs being identified in the Government clinics and a 30% more in the NGO intervention clinics. Much of this was due to additional needs for RTI/STD services being identified by asking clients about symptoms when they came to the clinic for some other service. When analyzed in terms of additional needs identified per 100 requested services, the results revealed a high level of unmet need. The monitoring data showed that for every 100 clients who attended Government intervention clinics for RTI/STD services, 161 other clients, attending for some other service, had RTI/STD symptoms requiring attention. The figure was even higher (314) for clients attending NGO clinics. This result confirmed the World Bank reports of high unmet need for RTI in developing countries generally [8], and the findings from previous studies of unmet need in Bangladesh [14, 15]. The definition of RTI/STD need and the syndromic approach adopted in this study to identify additional needs could be refined, although it has been practiced in the NGO clinics for some time. It is important to note that most of the additional needs identified through checking could actually be addressed at the clinics.

The introduction of systematic checking was also associated with other improvements in provider practice. In addition to more consistent checking and a higher rate of identification of unmet needs, there was also a higher proportion of additional needs being met, which is probably attributable to the intervention. For the Government clinics, the study produced very clear-cut results since there was virtually no provision for additional needs at the beginning or end of the intervention period in the comparison area. Provision for additional needs (% of additional needs met) increased significantly from 4.6% to 14.0% in the intervention clinics where the checklist had been introduced. Provision for additional needs increased considerably in the NGO intervention clinics, from 24.3% to 80.3%, which was significantly more than the increase in the comparison clinics. A considerable increase had been observed in Peru (INPPARES) using a self-screening checklist for reproductive health service needs. This resulted in 13% and 64% more services being provided during first and second visit, respectively [18]. The study attributed the increase in provision of clinic services to the improved knowledge of clients as a result of self-screening. In the current study, it was noted that clients' knowledge about the availability of services improved in both Government and NGO clinics following the intervention. However, it was not possible to ascertain how much this contributed to the increased service provision at the intervention clinics.

The increase in service provision in Peru also resulted in increased revenue for the clinic. Neither revenue generation, nor use of services by the same client over time was measured in the current study in Bangladesh. However, it was recognized that user fees could pose a problem for clients. Government clinic services are intended to be free, but clients in NGO clinics usually have to pay for services and hence for additional services provided as a result of checking and identifying additional needs. In some cases, clients had only brought sufficient money for the service they initially came for, and could not pay for the additional services. The study had no particular policy on this and some additional needs may not have been addressed as result of this.

Meeting additional needs was assessed in this study in terms of services being provided at the clinic or referral of clients. Since most clients received at least information or advice, this "hard" indicator was preferable. Even so, its ability to detect met need was conditional on referrals actually resulting in met need. The study followed up all referral cases in the intervention period to ascertain the outcomes. This confirmed that most of the referrals resulted in the client receiving the required service: 83% of clients referred from Government clinics received services and 72% from NGO clinics. It is not known whether the intervention itself had any influence on this outcome. However, mechanisms for monitoring referral compliance will need to be in place if the intervention is to be more widely used.

An important finding of the study is that overall service provision increased significantly following the intervention. This needs to be considered in relation to the service inputs required. A major cost element in primary health care delivery is the providers' time. Providers may already be performing many duties and identification of additional client needs, with an obligation to address them, will place additional burdens on them. To some extent this study assumed that providers had spare capacity to implement screening and deal with the additional service needs. Application of the screening tool was reported to require only about 3-4 minutes for each client, irrespective of the type of service requested. Some difficulties were encountered at peak hours of client flow, when many clients were waiting for consultation. Some providers acknowledged that they resorted to checking from memory rather than actually using the checklist at these times. Heavy client flow during peak hours had affected screening in previous studies [15,20]. Making appointments for clients to address their additional needs has been tried with mixed results in an urban setting [20], but this was not tried in the current study. In some cases, the client did not have time to wait for the additional service, particularly in the peak hours (10 am to 12 pm). New strategies can be tried to overcome these problems in the local context where different preferences for clinic attendance times may prevail.

Several other changes that occurred during the intervention period should be borne in mind when considering the results. The providers in the Government clinics were uncertain of whether integrated service delivery would continue. One of the community clinics in the intervention area was closed down and there was continuously a shortage of medicines and other supplies throughout the study period. This may have had a negative effect on the practice of providers, in terms of screening and subsequently providing services for additional needs. Similarly, in the NGO clinics there was uncertainty throughout the period of the intervention concerning the funding mechanism for the NGO. In contrast with the comparison area, there was also no medical officer in the NGO intervention area. The comparison clinics were revitalized after a change of

controlling authority, which resulted in many supervisory visits and much training. Again these factors may have had some influence on the power of the study to detect changes in the intervention area, which were significantly greater than in the comparison area.

Algorithm-based screening had, hitherto, only been tried in central clinics [9,11,15,18], while in this study it was extended to out-reach centers using the lowest cadres of health workers. In order to optimize the statistical significance of the findings of this study, most of the analysis has been conducted on aggregated data for intervention and comparison areas, rather than for individual clinics or types of requested service. Further analysis might reveal whether there was any significant difference in performance following the introduction of the screening tool in static compared with satellite clinics, although the study was not designed to have the statistical power for this. In programmatic terms, the intervention did not require specialized personnel, such as a medical officer. It was possible for the existing staff to identify additional EPI and tetanus toxoid vaccination needs in the NGO satellite clinics, and many FP and ANC needs in the Government satellite clinics. These additional needs were ultimately met through referral to a higher level NGO static clinic or Government center.

Finally, the intervention convinced both providers and service managers of the feasibility and value of using a screening tool. The simple checklist was found to contribute to improving providers' practice through more systematic checking, identifying needs and providing services in primary health care settings. It required only two days training and some minimal costs for printing the tool, and it can be produced in a reusable form. Furthermore, the tool was found to be user friendly by all types of provider. They were able to identify all types of additional health needs, including those which might be considered sensitive to reveal, such as RTI/STD symptoms. The needs of clients themselves, accompanying persons and children under five years not attending the clinic, could all be identified.

8. Conclusions

The study developed a strategy and evaluated a screening tool to identify additional services needed by clients attending ESP clinics and their family members, other than the services requested. The study found positive changes in knowledge and practice among all types of provider over the study period; and their reported experience of the screening tool confirmed the feasibility of introducing it in different settings. The providers reported the tool was user friendly, less time consuming than unsystematic checking, and it helped to improve client-provider interaction and satisfaction through establishing a dialogue. Once introduced the benefits of using the checklist extended beyond checking and identifying additional needs. Providers and program managers appreciated the effectiveness of the approach in helping to meet those additional needs and have an impact on overall service provision.

Providers also offered useful observations on particular constraints, which can be addressed if use of the screening tool is scaled up in Bangladesh. Constraints included client flow in peak hours, clients themselves not having time for additional services, the problem of clients needing more money with them to pay for additional services, the need to have supplies/services available to treat additional problems identified, and the

importance of ensuring that referral is accomplished. Among other programmatic issues, the importance of supervision was recognised, and the need for support for the intervention at policy level. Bearing in mind the negligible provider time required for checking, the method of using the tool as a separate sheet for each client (NGO clinics) or a reusable format (GoB clinics) could be modified. It may also be possible to further simplify the tool, while increasing its capacity to collect useful data (see Annex 4). The recurring production costs would also need to be considered before scaling up the intervention.

Despite the limitations of the study in terms of selection of intervention sites, it has shown that the introduction of a checklist was acceptable to providers and clients, it significantly increased the amount of checking for additional needs, identification of needs, and meeting those additional needs. The overall improvement in service provision relating to one clinic visit, which resulted from identification of additional needs and addressing them was statistically significant and considerable. The results might have been even more significant if the intervention areas had not already been relatively high performing. However, the study has demonstrated improvements from using the tool in both high and low performing settings. The results suggest that introducing a screening tool more widely in primary health care clinics in Bangladesh would be feasible and could significantly increase coverage of child and reproductive health services.

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Annex 1: General characteristics of the study area clinics, providers and clients.

Table 1: Characteristics of GOB Clinics

GOB Intervention			GOB Comparison		
Type of clinic	Number	Manpower	Type of clinic	Number	Manpower
UHFWC	1	FWV-1 SACMO-1	UHFWC	1	FWV-1 SACMO-1
Client flow	50-60/day		50-60/day		
CC	1	HA-1 FWA-1	CC	2	HA-1 FWA-1
Client flow	20/day		20/day		
Satellite Clinics	8 per month	HA-1 FWA-1 FWV-1	Satellite Clinics	8 per month	HA-1 FWA-1 FWV-1
Client flow	60-70/satellite		60-70/satellite		

Table 2: Characteristics of NGO Clinics

NGO Intervention			NGO Comparison		
Type of clinic	Number	Manpower	Type of clinic	Number	Manpower
Static	1	Clinic Manager-1 Paramedic-1 Counselor-1 Sr. Service Promoter-1	Static	1	Clinic Manager-1 Paramedic-1 Counselor-1 Sr. Service Promoter-1
Client flow	50-60/day		Client flow	30/day	
Satellite Clinics	4 spots /day	Paramedic-4 Service Promoter- 4	Satellite Clinics	2 spots /day	Paramedic-2 Service Promoter- 2
Client flow	20-30/satellite		Client flow	20/satellite	

In GoB areas the clinics were at Union and below level. These include the Union Health And Family Welfare Centre (UH&FWC), Community Clinic (CC) and satellite clinics. At UH&FWC the service providers are Sub-Assistant Community Medical Officer (SACMO) and Family Welfare Visitor (FWV). At CC, Health Assistant (HA), Family Welfare Assistant (FWA) and FWV provide services and at satellite Clinics, FWV, HA and FWA provide services. All the selected 8 health and family planning services are provided from these centres except management and treatment of RTI/STD.

The service delivery system in NSDP areas consists of a static clinic and several satellite clinics in a semi-urban area. Usually 3-4 satellite teams work under one static clinic and one satellite team organizes 4-6 satellite clinics. The service providers in the static clinics were a Medical Officer, FWV/Paramedics and Counselor and in satellite clinics one FWV/ Paramedics and one service promoter. All the selected 8 health and family planning services were provided from these centres.

Annex 2: The screening tool in Bangla

বাড়তি সেবা চাহিদা নির্ণয় প্রক্রিয়া

সমন্বিত স্বাস্থ্য ও পরিবার পরিকল্পনা কার্যক্রমের আওতায় একই কেন্দ্র থেকে সকল অত্যাবশ্যকীয় সেবা দেবার ব্যবস্থা রয়েছে। কাষ্টমারকে বাঞ্ছিত সেবা দেয়ার পাশাপাশি বাড়তি চাহিদা নির্ণয় ও প্রদানে নীচের ছকটি সহায়তা প্রদান করবে। কিভাবে বাঞ্ছিত সেবা প্রদানের পাশাপাশি বাড়তি সেবা নির্ণয় করবেন তা নিচে বর্ণনা করা হলো।

প্রথমে কাষ্টমারের সাথে কুশল বিনিময় করুন। যে সেবার জন্য এসেছেন তা প্রদান করুন। অতঃপর বাড়তি চাহিদা আছে কিনা তা নির্ণয় করুন। বাড়তি চাহিদা নির্ণীত হলে প্রয়োজনীয় সেবা দিন, রেফার করুন অথবা যথোপযুক্ত তথ্য প্রদান করুন এবং উক্ত সেবার ঘর নিজের হাতে সেবা দিয়ে থাকলে টিক (✓), যদি রেফার করে থাকেন সেক্ষেত্রে ক্রস (X) দিন এবং উপদেশ/আলোচনা করে থাকেন সে ক্ষেত্রে তারকা (★) চিহ্ন দিন। এছাড়া বাড়িতে অবস্থানরত ৫ বৎসর বা তার কম বয়সী শিশুর ক্ষেত্রে যদি টিকা/ডায়রিয়া/এআরআই ইত্যাদি উপদেশ দিয়ে থাকেন তাহলে উক্ত সেবার বাক্সটির চারদিকে গোল (O) চিহ্ন করুন।

কাষ্টমার যে কারণে এসেছেন	সম্ভাব্য বাড়তি সেবাসমূহ
১. শিশুর টিকার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	শিশুঃ → ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ পরিবার পরিকল্পনা ☐ এএনসি ☐ পিএনসি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা
২. শিশুর ডায়রিয়ার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	শিশুঃ → ☐ টিকা ☐ এআরআই ☐ সাধারণ সেবা প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ পরিবার পরিকল্পনা ☐ এএনসি ☐ পিএনসি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা
৩. শিশুর এআরআই-র জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ সাধারণ সেবা প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ পরিবার পরিকল্পনা ☐ এএনসি ☐ পিএনসি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা
৪. টিটি টিকার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	প্রাপ্তবয়স্কঃ → ☐ পরিবার পরিকল্পনা ☐ এএনসি ☐ পিএনসি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা
৫. গর্ভকালীন পরিচর্যার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা
৬. গর্ভোত্তর পরিচর্যার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ পরিবার পরিকল্পনা ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা
৭. পরিবার পরিকল্পনার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা
৮. আরটিআই/এসটিডি জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ পরিবার পরিকল্পনা ☐ এএনসি ☐ পিএনসি ☐ সাধারণ সেবা শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা
৯. সাধারণ সেবার জন্যঃ *সেবা দিন এবং ডানদিকের ঘরে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন*	প্রাপ্তবয়স্কঃ → ☐ টিটি ☐ পরিবার পরিকল্পনা ☐ এএনসি ☐ পিএনসি ☐ আরটিআই/এসটিডি ☐ সাধারণ সেবা শিশুঃ → ☐ টিকা ☐ ডায়রিয়া ☐ এআরআই ☐ সাধারণ সেবা

- *ক্লিনিকে যেসব সেবা পাওয়া যায় তা কাষ্টমারকে জানান।*
- *প্রথমে এই ছকটির সাহায্যে কাষ্টমারের বাড়তি চাহিদা নির্ণয় করুন। এরপর অপর পৃষ্ঠায় মুদ্রিত এনকাউন্টার ফরমটি পূরণ করুন।*

Annex 3: The screening tool in English

Team ➲ □ A, □ B, □ C, □D

Checking Additional Needs

Date ...../ ...../03, Sl No.....
Sex ➲ □ M □ F

This centre provides all essential health and family planning services. The following checklist will assist provider to identify additional health and family planning needs of client. Please follow the instructions below:

Instructions for provider

Greet clients cordially, provide requested service and check additional needs by using this checklist. Provide additional services if detected and tick ( ) the box on the left side of that service, put cross (X) if referred or put (*) mark if information /discussion is only made.

Requested Services	Possible Additional Needs		
1. EPI *Provide service and check for any additional need mentioned in the right side box*	Child ☑ ▮ DD Adult ☑ ▮ TT ▮ PNC	▮ ARI ▮ FP ▮ RTI/STD	▮ GH ▮ ANC ▮ GH
2. DD *Provide service and check for any additional need mentioned in the right side box*	Child ☑ □ EPI Adult ☑ □ TT □ PNC	□ ARI □ FP □ RTI/STD	□ GH □ ANC □ GH
3. ARI *Provide service and check for any additional need mentioned in the right side box*	Child ☑ ▮ EPI Adult ☑ ▮ TT ▮ PNC	▮ DDI ▮ FP ▮ RTI/STD	▮ GH ▮ ANC ▮ GH
4. TT *Provide service and check for any additional need mentioned in the right side box*	Adult ☑ □ FP □ RTI/STD Child ☑ □ EPI	□ ANC □ GH □ DD	□ PNC □ ARI □ GH
5. ANC *Provide service and check for any additional need mentioned in the right side box*	Adult ☑ ▮ TT Child ☑ ▮ EPI	▮ RTI/STD ▮ DD	▮ GH ▮ ARI ▮ GH
6. PNC *Provide service and check for any additional need mentioned in the right side box*	Adult ☑ □ TT □ GH Child ☑ □ EPI	□ FP □ DDI	□ RTI/STD □ ARI □ GH
7.FP *Provide service and check for any additional need mentioned in the right side box*	Adult ☑ ▮ TT Child ☑ ▮ EPI	▮ RTI/STD ▮ DDI	▮ GH ▮ ARII ▮ GH
8. RTI/STD *Provide service and check for any additional need mentioned in the right side box*	Adult ☑ □ TT □ PNC Child ☑ □ EPI	□ FP □ GH □ DD	□ ANC □ ARI □ GH
9. GH *Provide service and check for any additional need mentioned in the right side box*	Adult ☑ ▮ TT ▮ PNC Child ☑ ▮ EPI	▮ FP ▮ RTI/STD ▮ DD	▮ ANC ▮ ARI ▮ GH

☺ *Inform client about other available services*
☺ *First check for additional needs by using this checklist, then fill up the encounter form overleaf*

☺ This is a translated copy from the original in Bangla

Annex 4: Possible modified screening tool

CHECKLIST FOR SERVICES NEEDED			
Service provided √ Advice/information * Referred x Family member at home needs service 0			
CLIENT NUMBER	**CLIENT**	**REQUESTED SERVICE(s)**	**ADDITIONAL NEEDS**
	Child Adult	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH
	Child Adult	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH
	Child Adult	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH
	Child Adult	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH
	Child Adult	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH	☐ EPI ☐ DD ☐ ARI ☐ GH ☐ TT ☐ FP ☐ ANC ☐ PNC ☐ RTI/STD ☐ GH

Annex 5: Schedule of activities

INTERVENTION ACTIVITIES: MARCH 2002-MARCH 2003

#	Activities	2002										2003			Output
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
	Phase 1														
1	Site selection & Sensitization of GOB and NIPHP partners	Done													Finalized sites
2	Staff recruitment, Training		Done												Staff deployed
3	Preparation of study instruments (Guideline, Questionnaire etc.)		Done												Study tools Developed
4	Baseline data collection			Started	Continued	Continued	Done								Baseline information collected
5	Data analysis and sharing with GOB, NIPHP partners and donors					Started	Done								Interest group meeting hold
	Phase 2														
1	Development of a screening tool						Done								Screening tool developed
2	Development of guideline/Manual for using the tool						Done								Guideline and manuals developed
3	Training of providers						Done								Training given
4	Testing of the tool							Started	Continued	Continued	Continued	Continued	Done		Intervention started
5	Monitoring of the intervention							Started	Continued	Continued	Continued	Continued	Done		Progress monitored
6	Follow up of referrals								Started	Continued	Continued	Continued	Done		Referrals followed up
7	Evaluation of intervention											Started	Continued	Done	Results disseminated