

Operations Research on ESP Delivery

Addressing Missed Opportunities for Service Provisions in Primary Healthcare 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
GH	General Health
GoB	Government of Bangladesh
HA	Health Assistant
HPSP	Health and Population Sector Programme
ICDDR,B	International Centre for Diarrhoeal Disease Research, Bangladesh
ICPD	International Conference on Population and Development
MO	Medical Officer
MO-MCH	Medical Officer-Maternal and Child Health
MoHFW	Ministry of Health and Family Welfare
MWRA	Married Women of Reproductive Age
NGO	Non-governmental Organization
NIPHP	National Integrated Population and Health Programme
NSDP	NGO Service Delivery Program
PHC	Primary Healthcare
PNC	Postnatal Care
PSTC	Population Services and Training Centre
RTI	Reproductive Tract Infection
SACMO	Sub-Assistant Community Medical Officer
SP	Service Promoter
SSP	Senior Service Promoter
TT	Tetanus Toxoid
UFHP	Urban Family Health Partnership
UHC	Upazila Health Complex
UHFWC	Union Health and Family Welfare Centre
UMIS	Unified Management Information System
USAID	United States Agency for International Development

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Executive Summary

Introduction

Following the 1994 International Conference on Population and Development (ICPD) in Cairo, emphasis was given on providing a broader range of services in a package to minimize costs. In 1998, the Government of Bangladesh (GoB) adopted an integrated package of health and family-planning services under the Health and Population Sector Programme (HPSP). A similar integrated approach was adopted in 1997 in the NGO sector under the National Integrated Population and Health Programme (NIPHP), funded by the United States Agency for International Development (USAID). By the end of 2000, it became apparent that there were major barriers to increasing the use of this essential services package (ESP) and addressing unmet needs for services.

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

Objectives

The study was carried out to:

- a. assess the current practices and barriers to identify unmet health needs and address missed opportunities for service provisions in the ESP clinics;
- b. test a screening tool as a strategy for identifying unmet health and family-planning needs of clients and tap missed opportunities in the ESP clinics; and
- c. translate unmet needs into met needs by addressing missed opportunities in the ESP clinics through provision of services, information, counselling, and referral.

Methods

The study was conducted in collaboration with the Ministry of Health and Family Welfare and the NGO Service Delivery Programme. The intervention was carried out in the government clinics in Mirsarai union (Chittagong district) and in the clinics in Dhum union (Chittagong district) as comparison sites. The clinics in Sherpur municipality (Type C), run by Malancha, a non-governmental organization (NGO), supported by the NGO Service Delivery Program (NSDP), were selected as NGO intervention sites, while the clinics in Kishoregonj municipality (Type C), run by the Population Services and Training Centre (PSTC), were selected as comparison sites. The study included all the static and satellite clinics in these areas. The study activities

were conducted in 4 stages: (a) a baseline assessment; (b) the preparation stage in which an algorithm-based screening tool was developed; (c) the intervention stage in which the tool was field-tested and introduced in the intervention clinics; and (d) evaluation of the intervention.

Intervention strategies

The intervention strategies included:

- a. Screening of all clients at selected clinics for additional service needs using a screening tool;
- b. Addressing of additional needs identified among clients by providing services, information/advice, or referral;
- c. Following up of referral cases at home to assess compliance; and
- d. Monitoring of the intervention activities.

Evaluation

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

Data were collected through: (a) observations of client-provider interactions, (b) in-depth interviews with providers, (c) review of records and reports, (d) observations of the time spent on checking, (e) review of service-delivery arrangements for using the screening tool, (f) views of clients assessed through exit-interviews, and (g) follow-up interviews with all referred clients at their house.

Results

Providers' knowledge and experience of checking

Before the intervention, the government service providers were unaware of the concept of missed opportunities for service provision and additional needs of clients. The NGO service providers understood the concept as providing more services to clients to increase the client:service ratio. After the intervention, the service providers considered the screening tool to be useful for systematic checking, which required only about 4-5 minutes extra time. The providers reported some constraints to identifying additional needs, including (a) lack of any screening tool to identify missed opportunities in the government 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) additional money clients had to have with them to pay fees for additional services; (e) time constraints for clients; and (f) heavy client flow in peak hours (10 am to 12 noon).

Checking for additional needs

The key indicator selected for comparing changes in the amount of checking before and after the introduction of the screening tool 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 interval) and significantly greater compared to the comparison clinics where virtually there was no checking. In the NGO clinics, there was a much higher level of checking before the intervention. Nevertheless, the proportion of clients checked for 2 or more additional needs increased significantly from 66% to 82%. It also increased from 34% to 50% in the comparison clinics. The increase in the intervention clinics was, therefore, not significantly greater compared to that 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.

Identification of additional needs

Overall, 1,087 additional needs--mostly for general health (51.7%) and reproductive tract infection (RTI) services (31.4%)--were identified in the government clinics in the intervention period (September 2002-February 2003). 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 had RTI symptoms requiring attention in the government intervention clinics and 161 in the NGO intervention clinics. For all types of services, the use of the screening tool resulted in the identification of 13 additional needs per 100 services requested in the government area and 30 per 100 in the NGO area.

Addressing of additional needs identified

After the introduction of the screening tool in the government intervention clinics, results of exit-interviews showed that there was an increase from 4.6% to 14.0% in the proportion of additional needs that were met. There was a 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 screening tool. The increase was statistically significant in both government and NGO intervention clinics and significantly greater than any increase in the comparison clinics.

Referral accomplishments

The definition of needs met was a service provided at the clinic or a referral that was made. In the government intervention clinics, 64 clients were referred for additional needs in the intervention period. Of these, 44% were referred for antenatal care (ANC), including pregnancy complications, followed by FP (20%). Follow-up of referred clients in the home revealed that 83% went to the appropriate facility and received additional services. In the NGO clinics, 134 cases were referred during the intervention

period. Most 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 government referral clinics.

Change in overall service provision

The amount of additional service provision resulting from identifying and addressing additional service needs increased in both government and NGO areas after the introduction of systematic checking. In the government intervention clinics, before the intervention, 3 additional services were provided as a result of checking per 100 services requested compared to 10 per 100 services requested following the introduction of the screening tool. There was negligible additional service provision at the beginning and at the end of the study period in the comparison clinics. In the NGO intervention clinics, before the intervention, 12 additional services were provided as a result of checking per 100 services requested compared to 28 per 100 requested after the introduction of the screening tool. There was a small increase in the comparison clinics, from 5 per 100 services requested to 10. These increases in the government and NGO intervention clinics were statistically significant and significantly greater than the increases in the comparison clinics.

Conclusions

The study evaluated a screening tool developed for identifying additional services needed by clients attending the ESP clinics and their family members other than the services requested. The study found positive changes in the practice of providers over the study period. The providers reported that the tool was user-friendly, not time-consuming, and helped improve client-provider interactions and satisfaction. The providers, however, made some useful observations on constraints, including client flow in peak hours, which inhibited thorough use of the screening tool, the need to minimize record-keeping, the problem of clients having to have more money than anticipated to pay for additional services in the 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 should be addressed to ensure maximum effect of the screening tool in the primary healthcare setting in Bangladesh. The acceptability to providers of the screening tool was encouraging, and its effectiveness was clearly demonstrated through a significant increase in checking and identifying additional needs. The significant increase in the proportion of additional needs met at the clinics is probably attributable to the intervention. The increase in services provided during one clinic visit was considerable, and it is again probably attributable to systematic checking and the greater attention to meeting additional needs. These findings suggest that the introduction of a screening tool more widely in primary healthcare facilities in Bangladesh could significantly increase the coverage of child and reproductive health services.

Introduction

Following the 1994 International Conference on Population and Development (ICPD) in Cairo, emphasis was given on providing a broader range of primary healthcare (PHC) services in a package to minimize costs through shared use of inputs [1]. Clustering services can improve cost effectiveness through synergy 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, more than a list of services, can be a vehicle for orienting demand and improving referral [2].

Under the Health and Population Sector Programme, which began in 1998, the Government of Bangladesh (GoB) aimed at providing an essential 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, meeting 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, each serving a population of about 6000 rural people [3]. A similar integrated approach was adopted earlier in 1997 in the NGO sector, under the National Integrated Population and Health Programme (NIPHP), funded by the United States Agency for International Development (USAID).

By the end of 2000, it became apparent that there were major barriers to increasing the use of health services. An annual programme review in 2002 found that the proportion of the population using government ESP services remained low at 14% [4]. This raised questions about whether offering services was sufficient to improve the use of clinics, and whether all the needs of clients were being met during a single visit. This study focused on the latter question and evaluated an intervention to identify and meet additional needs of clients attending clinics. The intervention, funded by USAID, was carried out from September 2002 to March 2003 at the government clinics in two unions of Mirsarai upazila of Chittagong district and at NGO clinics in Sherpur and Kishoregonj municipal areas.

Background

Missed opportunities and unmet needs

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 terms unmet need for the client and missed opportunity for the provider are clearly inter-linked. The concept of unmet need was based on the view that the “Government goals for family planning services should be defined in terms of unmet needs for

information and services” [1]. Unmet need was considered to be the number of people, or the percentage of the population, who need to use a service, but for various reasons, including lack of access to information or services, is not currently using that service. Missed opportunity was, therefore, defined as an occasion that offered a chance for a beneficial activity to occur (service provision, information, etc.) but was overlooked [5].

Additional needs for ESP services

According to the World Bank, about one-third of the total disease burden in developing countries among women aged 15-44 years is linked to health problems relating to pregnancy, childbirth, abortion, and reproductive tract infections (RTIs). Available data for South Asia show that women and their families have many unmet health needs for services relating to these conditions. There is, therefore, an urgent need to develop strategies to address these unmet health needs [6].

While lack of awareness on the part of clients represents an important barrier to improving service use, 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 to stand-alone services. Only 15-30% of additional provider time was required (7).

Lack of systematic screening to identify healthcare needs of clients is an important weakness in most integrated health and family-planning programmes. A study in Guatemala found that 29% of women attending health centres did not know that family planning was available, and 11% were not aware of well baby services [7]. In Bangladesh, a survey found that many women interviewed at home were not aware of services provided at satellite clinics (14%), Union Health and Family Welfare Centres (UHFWCs) (29%), or Upazila Health Complexes (UHCs) (30%) [8]. In Guatemala, a study of 167 women visiting health centres for non-FP services, only one received a family-planning appointment during her visit. Similarly, many women in Mexican health centres were found to have unmet need for counselling on breastfeeding and on cervical and breast cancer screening. Situation analyses in Africa had indicated that the problem of inadequate screening for preventive services is not limited to Latin America [7].

In Bangladesh, the Demographic and Health Survey (BDHS) 1999-2000 estimated that 15% of married women of reproductive age (MWRA) had unmet need for family-planning services [9]. A further study estimated family-planning unmet need at 22.9% among married women, and 90% of them live in rural areas [10]. A recent study using exit-interviews revealed substantial unmet health need among clients at NGO clinics of 6 municipal areas of the country under the Urban Family Health Partnership (UFHP) [11]. Almost one-quarter of children aged less than 2 years had unmet need for immunization; almost two-fifths of children aged less than 5 years had unmet need for the treatment of diarrhoeal diseases and two-fifths for the treatment of

acute respiratory infection (ARI); and 26% of MWRAs needed FP, 11% antenatal care (ANC), 54% tetanus toxoid (TT) immunization, and 15% needed services for symptoms of reproductive tract infection/sexually transmitted disease (RTI/STD).

Findings from operations research conducted in an urban government PHC centre in Dhaka city demonstrated that there were opportunities for providing additional health services to 18% of clients screened during clinic attendance. Three-quarters of unmet health needs were among women of reproductive age: RTI/STD (21%), TT vaccination (21%), and FP (26%). The clinic providers used a screening algorithm to detect these needs. More than half of unmet needs could be addressed in this centre through an inter-provider referral and linkage system introduced in the study [12].

To improve child health, the sectoral programme in Bangladesh aimed to achieve more than 80% immunization coverage in infants by 2003. The target for ANC coverage of pregnant women was 65% by 2003 [4]. Integration of health and FP services at the upazila level and below was aimed at providing an increased range of services from the static clinics, but these alone could not guarantee increased use and coverage of ESP services. 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 that need [7]. Other family-health needs are likely to remain unmet unless clients are asked about additional service needs apart from 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 identifying the unmet service needs of clients and family members could lead to more efficient use of clinics. Checking for additional needs of clients, identifying them, and providing information on 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 health needs among clients at PHC facilities and their families.

Objectives

The objectives of the study were to:

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

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

Methods

Study design

The study adopted a “before and after” study design, monitoring indicators over time and documenting operational issues. Selected indicators were measured before and after the intervention both in intervention and comparison or control areas. Comparison of changes with a non-equivalent control area allowed the intervention specific changes to be estimated. The study was conducted in 4 stages: baseline assessment, preparation, intervention, and evaluation.

Study sites

The study was carried out in collaboration with the Ministry of Health and Family Welfare (MoHFW), Government of Bangladesh (GoB), and the NGO Service Delivery Programme-NSDP (formerly UFHP). Site selection was based on types of clinics, services available, and willingness of partners to participate in the study. The study was conducted in 2 government and 2 NSDP areas. Mirsarai union, under Mirsarai upazila of Chittagong district, was the government intervention area and Dhum union of Chittagong district the comparison area. Sherpur municipality (Type C), with clinics run by an NSDP-supported NGO, Malancha, was the NGO intervention area and, Kishoregonj municipality (Type C), with clinics run by the Population Services and Training Centre (PSTC) was selected for comparison. In both intervention and comparison areas, all the static and satellite clinics were included in the study.

Baseline assessment

In the first stage, a baseline assessment was conducted to understand the existing service-delivery mechanism, the extent of missed opportunities for service provision, current practices, and barriers to detecting and addressing unmet needs. The activities in the first stage were:

- Assessment of current practices for identifying additional service needs
- Assessment of knowledge of providers about missed opportunities
- Assessment of barriers to addressing missed opportunities
- Assessment of the extent of missed opportunities for providing selected health and FP services

Assessment of current practices to identify additional needs

Current practices for identifying additional needs were assessed by reviewing the existing tools used for checking in the clinics, observing client-provider interactions, and through in-depth interviews with all service providers. The assessment focused on what the providers actually did to identify additional service needs of clients requesting specific services, how, when, and whom they screened (using a screening tool or

verbally), and whether there were any gaps in practice which would lead to missed opportunities for service provision. All the providers in all tiers of the two study areas were observed while providing services, using a set of guidelines. About 400 observations in each site were carried out on provision of selected ESP services.

Assessment of knowledge of providers about additional needs

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

Assessment of barriers to identifying additional needs

To identify the barriers to detecting additional service needs, 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.

Assessment of extent of missed opportunities for service provision

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

Preparation

The activities in the second stage included:

- (a) Development of an algorithm-based screening tool
- (b) Orientation of supervisors on the intervention
- (c) Training of service providers

Development of an algorithm-based screening tool

The baseline findings were shared with the programme managers of government and NGO clinics, and several brain-storming sessions were held. The following options for a screening tool were considered:

- Using the Family Health Card (FHC) or ESP card as a screening tool
- Using the existing tool introduced by UFHP
- Development of a user-friendly screening tool

Use of FHC or ESP card as a screening tool: There was neither any existing tool for systematic checking nor any practice for addressing missed opportunities for service provision in the government clinics before the intervention. The FHC and ESP cards, which allow recording of different services offered, are extensive in size and content, but do not allow to include any algorithm. In the government areas, the card is distributed to clients, and hence its use during service-delivery is not ensured. In most places, the providers used many old formats [13]. Initially, 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 FHC. The ESP card used by NGO providers was even more comprehensive than FHC. The ESP card is a 3-fold sheet, with 8 different sections on different services to record details of history of clients and their family members. To use it as a 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 the providers were using the ESP card just for recording purposes while providing services.

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

Development of a user-friendly screening tool: The managers agreed that a new screening tool was required which should 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 requested service
- Not time-consuming
- Not costly and easily replicable

The study tools were developed based on the experiences from earlier studies on missed opportunities conducted by FHRP [11,12] and pre-tested. 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 2 columns side by side (Annexure 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 the government and NGO clinics. It was subsequently developed for multipurpose use in the NGO clinics during the intervention period.

Orientation of supervisors on intervention

To create a supportive environment for the providers, sessions were arranged for the supervisors and managers to orient them how to carry out the intervention activities and who would do what. In the government settings, sessions were arranged for the Line Director of 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 (UFPO) of the intervention area. In the NGO settings, sessions were arranged for the UFHP Chief of Party, Liaison NGO Officer, Project Director, and local NGO managers of Malancha and PSTC.

Training of service providers of government and UFHP clinics

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

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

Intervention

Overall strategy

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

The intervention strategies included:

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

Screening for additional needs

The use of the screening tool started from 15 September 2002 in the NGO clinics and from 22 September in the government clinics, and the study lasted until February 2003. Screening involved checking for additional needs of clients and other family members. At the government clinics, the main users of the screening tool were FWAs together with HAs at CC and FWV and SACMO at UHFWC. The client flow at the NGO intervention static clinic necessitated first contact being with the counsellor, who was responsible for appraising the client about the service required, providing the encounter form, collecting revenues, and channelling clients to the appropriate provider. The NGO static clinic has a 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 screening tool. However, all service promoters, counsellors, and MO were included while imparting training on use of the screening tool.

Checking consisted of following the screening tool and asking simple questions about particular needs. For diarrhoeal disease (DD), ARI, and immunization of children, the accompanying adult was asked whether their children had any need for these services, and whether they were under treatment. If necessary they were advised to have the required service. For ANC, PNC, TT, and FP, women were asked about the use of these 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.

Addressing of additional needs

Information on addressing needs was obtained from monitoring data, service statistics, and exit-interviews with clients. Through exit-interviews with clients, 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 CC and UHFWC, there was an internal referral system between HA and FWA/FWV and between FWV and SACMO. A temporary mark in the registers 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.

Following-up of referral cases

Initially, it was decided to follow up 10% of all referral cases at home to ascertain whether the clients attended a referral facility and the additional needs were met. However, there were only a few referrals from the government 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 for collecting follow-up information. The format contained the name of client, address, purpose of referral, place of referral, and result (service received, or not, and why not). Identification and accomplishment information was collected from clinics. In the government clinics, all the administrative information came from the UMIS Form 1 and 2, which contained a separate column for referral information. In both the areas, the researchers followed up referral cases at their home during routine field visits and noted the referral status.

Monitoring of the intervention activities

Monitoring of the intervention was carried out in the government 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 referred cases
- Quarterly follow-up of all referral cases at their homes to ascertain compliance
- Incorporating any lessons learned on an ongoing basis
- Review of service records to assess the use 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. The NSDP clinics do not have any patient register for daily recording of services. In the monthly reviews and discussions with the 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 government clinics, the providers use a daily service register (UMIS). They 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 were collected each month for analysis and review of progress. In the government areas, a laminated tool was provided to each service provider for repeated use as a screening tool and for recording the outcome in the service register. It was intended that the tool should be easily replicable for use by all providers, both in terms of cost and speed of production (Annexures 2,3, and 4).

Evaluation methods

Evaluation strategy and objectives

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

- How much use of the screening tool increased checking for additional needs
- How much more additional need was identified using the screening tool
- How much of the identified additional need was met
- How much systematic checking increased overall service provision
- How much of the referral was accomplished
- What changes there were in knowledge and practice of providers

Indicators

Based on the indicators, the effectiveness of the screening tool was evaluated to check, identify, and address additional needs of clients, and also changes in terms of providers' knowledge, practice, time required, and user-friendliness of the tool were assessed. The evaluation also assessed other determinants of missed opportunities for service provision, such as providers' time to use the tool, knowledge of clients on availability of services, and views of clients on clinic services.

Selected services

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 (RTIs)
 - Family planning (FP)
- Child health (CH) services indicators
 - Expanded programme on immunization (EPI)
 - Diarrhoeal disease (DD)
 - Acute respiratory infection (ARI)

Indicators

The effectiveness of using the screening tool was evaluated in terms of changes in the extent of checking and 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 needs identified per 100 requested services
- Addressing additional needs
 - Number of additional needs 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 relating to service-delivery were monitored:

- Knowledge and views of providers
 - Knowledge of providers about additional needs
 - Practice of providers on checking for additional needs
 - Perceived barriers and suggestions to overcome them
- Knowledge and views of clients
 - Knowledge of clients about services
 - Views of clients on clinic services

Data sources

Data were collected through:

- Observations of client-provider interactions using an observation checklist
- In-depth interviews with providers using guidelines
- Review of records and reports using formatted checklists and forms
- Follow-up interviews with all referred clients at their homes using a structured questionnaire
- Observations of the time spent using the checklist for 52 of observed clients (18 clients of NGO clinics and 34 of government clinics), using a standard time and motion instrument. One observer made all the observations in all the clinics
- Review of service-delivery arrangements using a service-delivery checklist
- Views of clients assessed through exit-interviews using a structured questionnaire.

In addition to regular monitoring of the intervention activities, several measures were taken to reduce bias of measurements. These are given below.

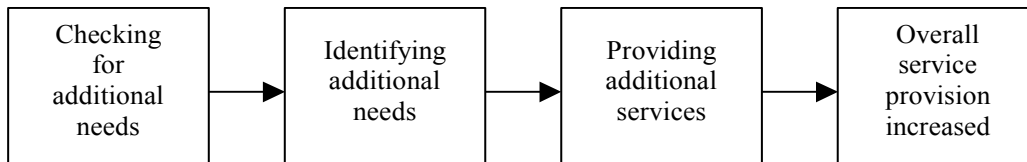
- The instruments were identical and standardized for observations before and after the intervention
- Same observers, used for the both periods, were not aware of the intervention and comparison areas
- Extensive training was given to the observers
- Observation was done on a sub-sample in the presence of senior staff
- Discrepancies in the questionnaire guidelines were rechecked regularly and corrected.

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 384 would give a precision of $\pm 5\%$ on an estimated prevalence of 50% [14]. Consecutive clients were selected in each intervention and comparison area in proportion to the type of service requested to ensure a representative sample. Clients unwilling to participate in the survey were excluded.

Framework for data analysis

Data were analyzed according to the analytical framework shown below for assessment of the key indicators before and after the introduction of systematic checking.



The indicators were compared in the intervention and comparison areas at the beginning and at the end of the study period. The statistical significance of changes was assessed based on 95% confidence interval on the difference between proportions. The extent to which changes were intervention-related was assessed based on the change in the intervention area minus the change in the comparison area. In addition, data were analyzed on knowledge of providers and barriers to identify additional needs and experience of using the screening tool.

Results

Characteristics of clients and knowledge about clinics

Characteristics of clients

Table 1 shows the characteristics of clients interviewed on exit from the clinic. Most clients were women of reproductive age. The differences in characteristics in different samples were generally not significant based on 95% confidence interval. There were a few exceptions, when comparing the NGO clients in the baseline and endline samples: mean length of residency (13.7 vs 10.0 years) and monthly income (Taka 5,530 vs Taka 3,665) in the intervention clinics, and length of residency (12.7 vs 9.3 years) and schooling (4.8 vs 6.0 years) in the comparison clinics. There were also significant differences among the government clients in the intervention and comparison areas: mean age at baseline (28.4 vs 32.2 years) and endline (29.9 vs 33.1 years), and length of residency at baseline (13.0 vs 18.7 years) and endline (14.1 vs 21.5 years). None of these differences is likely to affect conclusions about the effectiveness of the screening tool.

Client characteristics	Intervention				Comparison			
	Mean (95% CI)	Before	Mean (95% CI)	After	Mean (95% CI)	Before	Mean (95% CI)	After
Government		(n=429)		(n=423)		(n=433)		(n=283)
Age (years)	28.4	(27.5-29.3)	29.9	(28.9-30.9)	32.2	(31.1-33.3)	33.1	(31.5-34.7)
Education (years)	3.2	(2.8-3.6)	3.3	(2.9-3.7)	3.1	(2.8-3.4)	3.9	(3.4-4.4)
Residency (years)	13.0	(12.0-14.0)	14.1	(12.9-15.3)	18.7	(17.3-20.1)	21.5	(19.6-23.4)
Distance from home (km)	1.5	(1.4-1.6)	1.6	(1.5-1.7)	1.1	(1.1-1.1)	1.1	(1.1-1.1)
Monthly income (Taka)	4629	(4265-4993)	5120	(4682-5558)	4502	(4197-4807)	4909	(4369-5449)
NGO		(n=380)		(n=425)		(n=300)		(n=379)
Age (years)	26.4	(25.5-27.3)	25.6	(24.8-26.4)	26.6	(25.8-27.4)	25.5	(24.8-26.2)
Education (years)	4.5	(4.0-5.0)	4.9	(0.7-9.1)	4.8	(4.3-5.3)	6.0	(5.6-6.4)
Residency (years)	13.7	(12.6-14.8)	10.0	(9.2-10.8)	12.7	(11.6-13.8)	9.3	(8.5-10.1)
Distance from home (km)	1.4	(1.3-1.5)	1.3	(1.2-1.4)	1.1	(1.1-1.1)	1.1	(1.1-1.1)
Monthly income (Taka)	5530	(4957-6103)	3665	(3469-3861)	6484	(5428-7540)	5300	(4826-5774)

Knowledge of clients about services

Knowledge of clients about the availability of different services is likely to be an important determinant of use of services. In the intervention areas at baseline, family-planning services were the best known among both government (79.9%) and NGO clients (64.5%). The majority of the government clients were also aware of services for general health (78.1%) and antenatal care (66.7%), while the proportions were lower among NGO clients (39.2% and 46.3%). However, less than 15% of the government and NGO clients knew about the availability of PNC, RTI, ARI, and diarrhoeal disease services.

Knowledge of providers and experience of checking

Before the intervention, the government providers were unaware of the concept of missed opportunities for service provision. The 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. After the intervention, the providers considered the screening tool to be useful for systematic checking, which required little extra time. The average time required by all types of providers in all the areas was about 4-5 minutes, based on observations of 18 NGO and 34 government clinic clients. The providers reported a similar time in in-depth interviews. There were some time constraints during peak hours for client flow, but these related to provision of requested services rather than the screening process.

Tables 2 and 3 summarize the experience of providers before and after using the screening tool. Knowledge was assessed based on 3 basic questions. Before training, it was assumed as partial and superficial in the government clinics, with some knowledge of additional needs in the NGO clinics. Knowledge was assessed subsequently as some, acceptable, or more when the providers had received orientation or organized training.

The main barriers to identifying additional needs reported by the providers were: (a) absence of any tool to identify missed opportunities in the government 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 clients; and (f) heavy client flow in peak hours (10 am to 12 noon) which posed problems for using the screening tool. No solutions to these problems were implemented during the study.

Table 2. Knowledge and experience of government providers before and after using the screening tool		
Issue	Government clinics: findings from in-depth interviews	
	Before	After
Knowledge of providers	Partial and superficial “I give services for which the clients come, and I refer when I fail, but 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 the screening tool in most cases or sometimes checked from memory (e.g. in peak hours)

Table 2. (contd.)

Table 2. (contd.)		
Issue	Government clinics: findings from in-depth interviews	
	Before	After
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 displayed on a wall

Table 3. Knowledge and experience of NGO providers before and after using the screening tool		
Issue	NGO clinics: findings from in-depth interviews with providers	
	Before	After
Knowledge of providers	Some knowledge of additional needs	More knowledge of additional needs “A more comprehensive approach for checking”
Reported practice	Using flow chart infrequently Sometimes checking from memory	Using the screening tool in a 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

Checking for additional needs

Did the screening tool increase the amount of checking?

Checking of clients for 0, 1, 2, 3, or more additional service need(s) was observed and recorded. Table 4 shows that the rates of checking for additional needs increased following the introduction of the screening tool. However, rates also increased in the comparison clinics, and there was a considerable amount of checking in the NGO clinics before the screening tool 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 in the comparison clinics.

Checking for at least one additional need is part of the NGOs protocol for some services, for example, checking for RTI symptoms among FP clients and status of tetanus toxoid immunization for ANC attendees. On the other hand, checking for 3 or more additional service needs 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 screening tool was checking for 2 or more additional needs.

Table 4. Percentage of patients checked for additional needs before and after introduction of screening tool in government and NGO clinics						
Clinic	Before/ after	Number of patients	% of patients checked for additional services			
			0 service	1 or more	2 or more	3 or more
Government		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
Government		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 5. Percentage of clients checked for two or more additional needs before and after intervention in government and NGO clinics				
Clinic	% of clients checked for 2 or more additional needs			
	Before	After	Difference	95% confidence interval
Government				
Intervention	6.7	16.8	+10.1	+4.5, +15.6
Comparison	1.3	1.4	+ 0.2	-2.3, +2.6
Difference	5.4	15.4	+9.9	+4.6, +15.2
NGO				
Intervention	65.6	82.1	+16.5	+10.2, +22.8
Comparison	34.2	49.5	+15.3	+7.9, +22.6
Difference	31.4	32.6	+1.2	-5.5, +8.0

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

In the government clinics, an overall increase was observed in checking for 2 or more additional needs, from 7% to 17% of clients, following the introduction of the screening tool, and there continued to be virtually no checking in the comparison clinics (Table 5). As mentioned, there was a much higher level of checking before the intervention in the NGO clinics, i.e. 66% of all clients were checked for 2 or more additional needs. A considerable increase (to 82%) was observed following the introduction of the screening tool. However, there was also an increase in checking for 2 or more additional needs in the comparison clinics, from 34% to 50% of clients.

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 (Table 5). The increase in checking in the government intervention clinics was statistically significant, and there was no significant increase in the comparison clinics. The additional increase in checking in the intervention clinics (9.9%) was statistically significant based on the 95% confidence intervals. The increase in checking in the NGO clinics was significant in both intervention and comparison areas, and there was no significantly greater increase in the intervention area.

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, 1,087 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 clinics. Figures 5 and 6 show the number of additional needs identified per 100 services requested in the government and NGO intervention clinics. The most striking feature of analysis is the very large number of RTI needs identified. For every 100 clients requesting RTI services, 314 other clients in the government clinics had RTI symptoms requiring advice or treatment, and 161 more in the NGO intervention clinics. For all types of services, use of the screening tool resulted in 13 additional needs identified per 100 services requested in the government clinics, and 30 per 100 services requested in the NGO clinics.

Fig. 1. Percentage of clients checked for two or more additional needs in government clinics before and after intervention

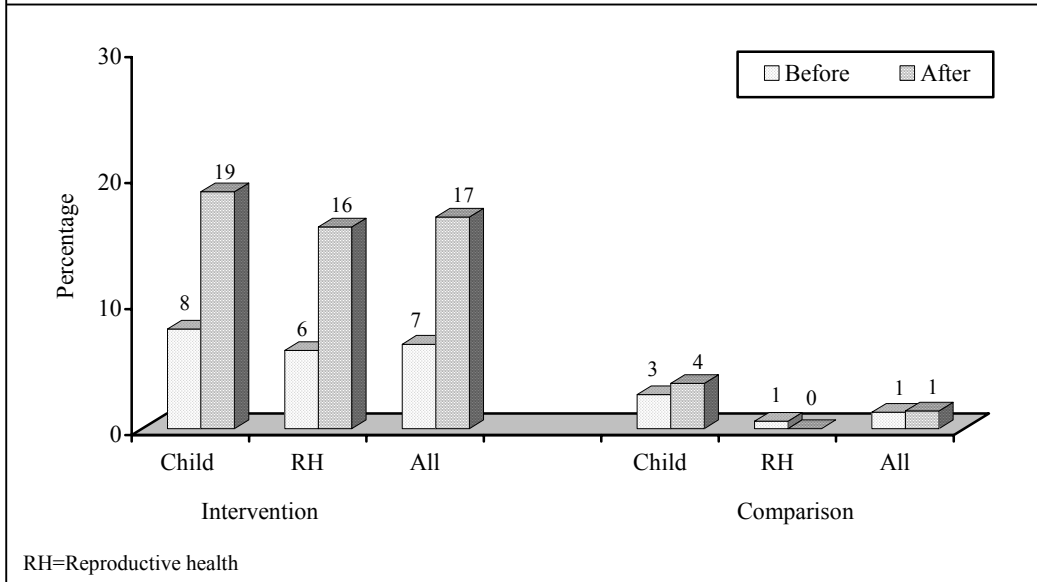


Fig. 2. Percentage of clients checked for two or more additional needs in NGO clinics before and after intervention

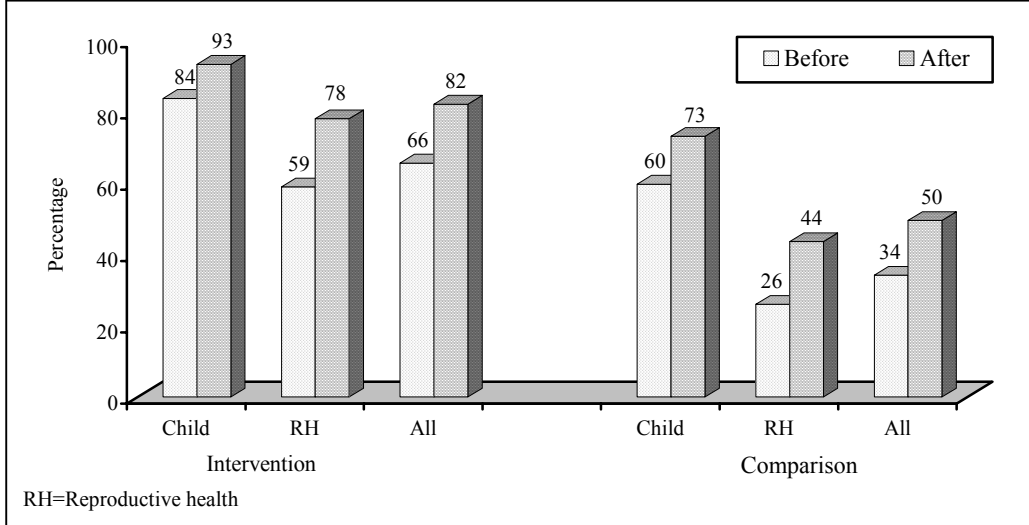


Fig. 3. Number of additional needs identified in government intervention clinics: September 2002-February 2003

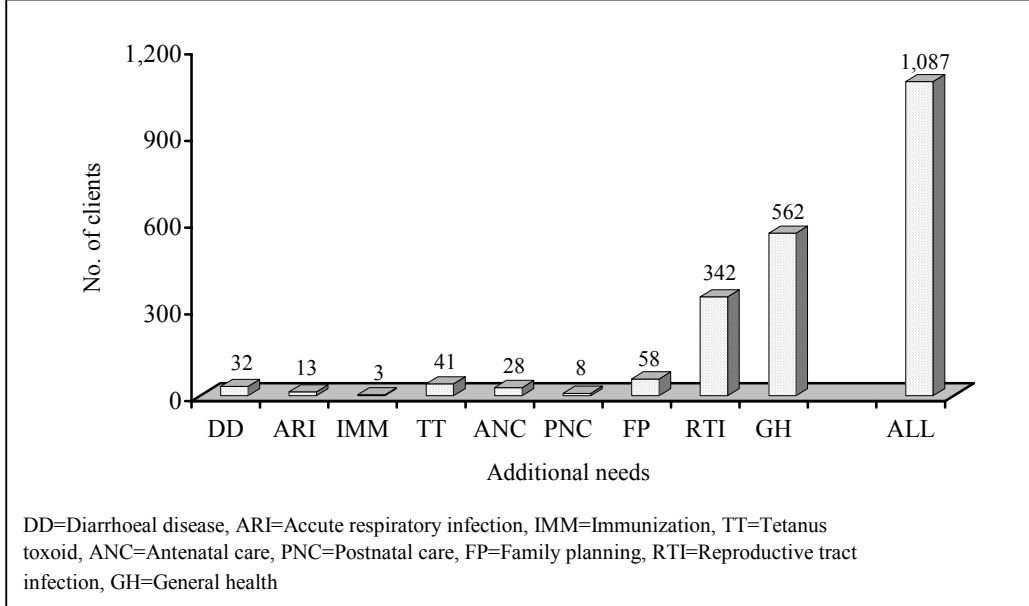
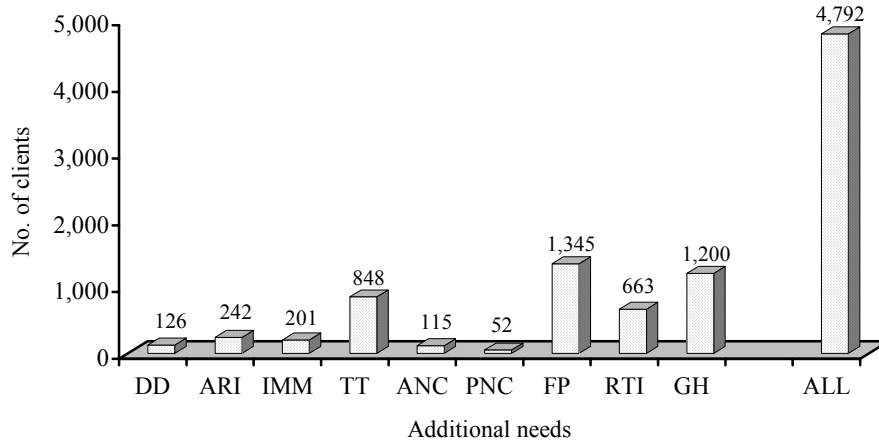
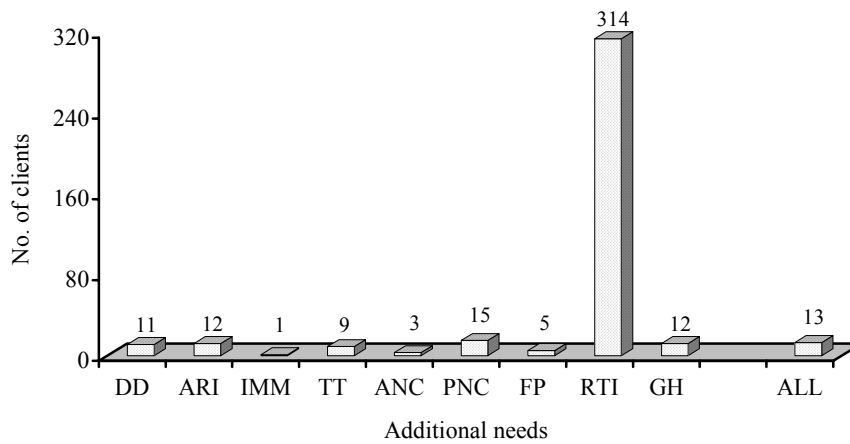


Fig. 4. Number of additional needs identified in NGO intervention clinics: September 2002-February 2003



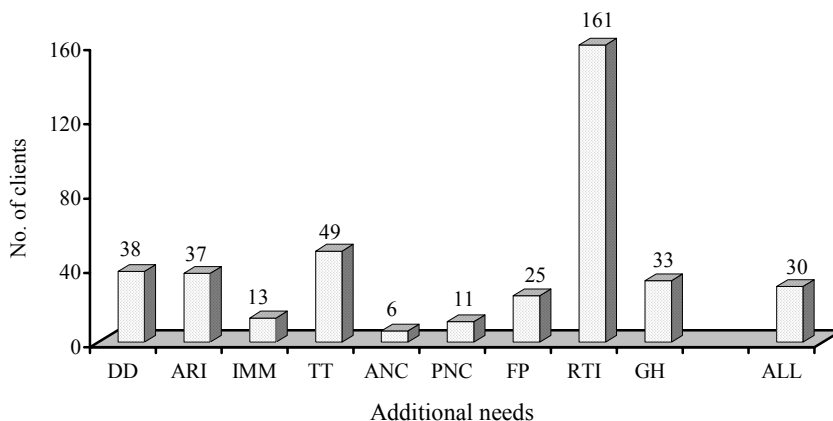
DD=Diarrhoeal disease, ARI=Accute respiratory infection, IMM=Immunization, TT=Tetanus toxoid, ANC=Antenatal care, PNC=Postnatal care, FP=Family planning, RTI=Reproductive tract infection, GH=General health

Fig. 5. Additional needs identified per 100 services requested in government intervention clinics: September 2002-February 2003



DD=Diarrhoeal disease, ARI=Accute respiratory infection, IMM=Immunization, TT=Tetanus toxoid, ANC=Antenatal care, PNC=Postnatal care, FP=Family planning, RTI=Reproductive tract infection, GH=General health

Fig. 6. Additional needs identified per 100 services requested in NGO intervention clinics: September 2002-February 2003



DD=Diarrhoeal disease, ARI=Accute respiratory infection, IMM=Immunization, TT=Tetanus toxoid, ANC=Antenatal care, PNC=Postnatal care, FP=Family planning, RTI=Reproductive tract infection, GH=General health

Addressing of additional needs

To assess how much of the additional needs for services was actually met, data from the exit surveys were analyzed. Figures 7 and 8 show the changes in the appropriate indicator, and the percentage of additional needs met for the 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 clinics, there was an increase in additional service needs met, from 4.6% to 14.0%, following the introduction of the screening tool. There was a very little change in the comparison clinics, with very few identified additional needs met at the beginning and at the end of the study period. In the NGO 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 6 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 compared to that 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 6. Percentage of additional needs met before and after intervention in government and NGO clinics				
Clinic	% of additional needs met			
	Before	After	Difference	95% confidence interval
Government				
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

Referral accomplishments

Data in Tables 7 and 8 show that most referrals resulted in additional needs being met. The service providers in the government intervention clinics referred 64 clients from mid-September 2002 to February 2003 (Table 7). Of the 64 clients, 66% were referred from the SC/EPI clinics, followed by CC (19%) and UHFWC (16%). Most (89%) clients were referred to the government clinics (SC/EPI, FWC, or UHC) and the remainder (11%) to the private clinics. Almost half (44%) of the clients were referred for ANC, including pregnancy complications, followed by FP (20%). Occasional absence of FWV resulted in some referrals of ANC. During monitoring of the referred clients, it was found that 83% 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.

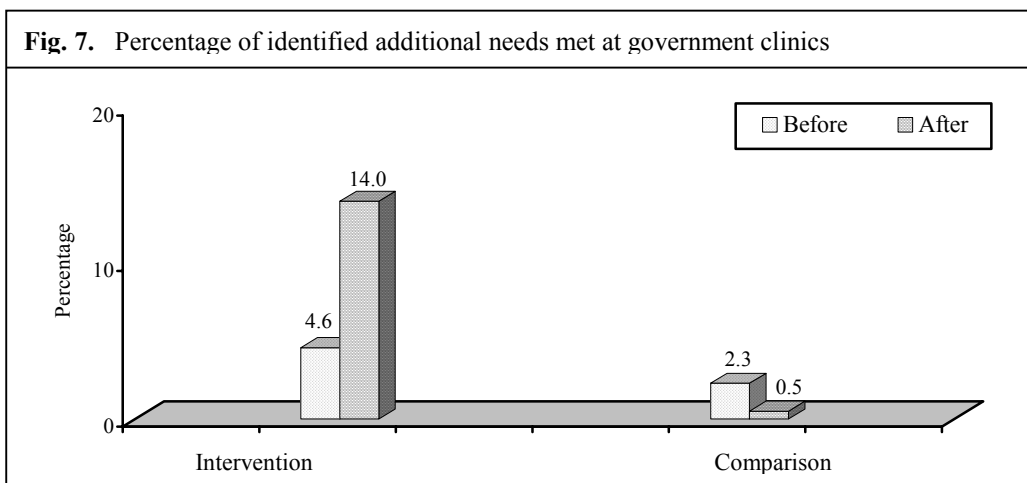


Fig. 8. Percentage of identified additional needs met at NGO clinics

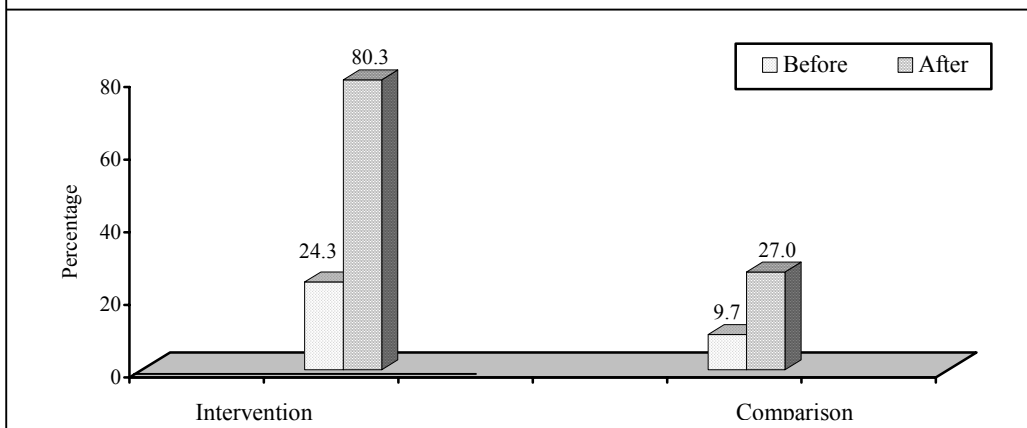


Table 7. Number of referrals and number complying: government intervention clinics

Type of referred case	Number of cases referred by facility (September 2002-February 2003)				Referred to facility		Services received		Reason for not receiving service
	Total	CC	SC/ EPI	FWC	Government	Private/ NGO clinics	Yes	No	
EPI	1	1	-	-	-	-	-	-	Clients could not be traced
DD	0	0	-	-	0	-	-	-	Client ignored
ARI	6	2	4	0	4	2	5	1	Client intends to go soon
TT	2	0	0	2	2	0	2	-	Will attend later
ANC	28	7	15	6	26	2	23	5	Drugs not available
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%)	

During the intervention period, 134 cases were referred from the NGO clinics (Table 8). Most (94%) cases were referred from the satellite clinics, and 49% were for TT vaccination and 14% for child immunization. Slightly more of these cases were referred to the NGO static clinics than to the government clinics. Seventy-two percent of the NGO referrals eventually received services compared to 83% of the government 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 facility, sickness, or other constraint in the family.

Table 8. Number of referrals and number complying: NGO intervention clinics

Type of referred service	Number of cases referred by facility (September 2002-February 2003)			Referred to facility		Serviced received		Reason for not receiving service
	Total	Static	Satellite	Government	NGO static	Yes	No	
EPI	19	-	19	1	18	17	2	Monetary problems
DD	-	-	-					
ARI	5	2	3	5	-	2	3	Lack of interest
TT	65	-	65	31	34	57	8	Far distance
ANC	9	-	9	5	4	5	4	Family constraints
PNC	2	-	2	-	2	2	0	Other sickness
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%)	

Change in overall service provision through use of screening tool

Figures 9 and 10 show the increase in service provision from identifying and addressing additional service needs. In the government intervention clinics, 3 additional services were provided per 100 services requested as a result of checking before the intervention and 10 per 100 services following the introduction of the screening tool. There was negligible additional service provision at the beginning and at the end of the study period in the comparison clinics. In the NGO intervention clinics, 12 additional services were provided per 100 services requested before the intervention and 28 per 100 services after the introduction of the screening tool. There was a smaller increase in the comparison clinics, from 5 to 10 additional services per 100 services requested.

Fig. 9. Additional needs met per 100 services requested in government clinics before and after intervention of screening tool

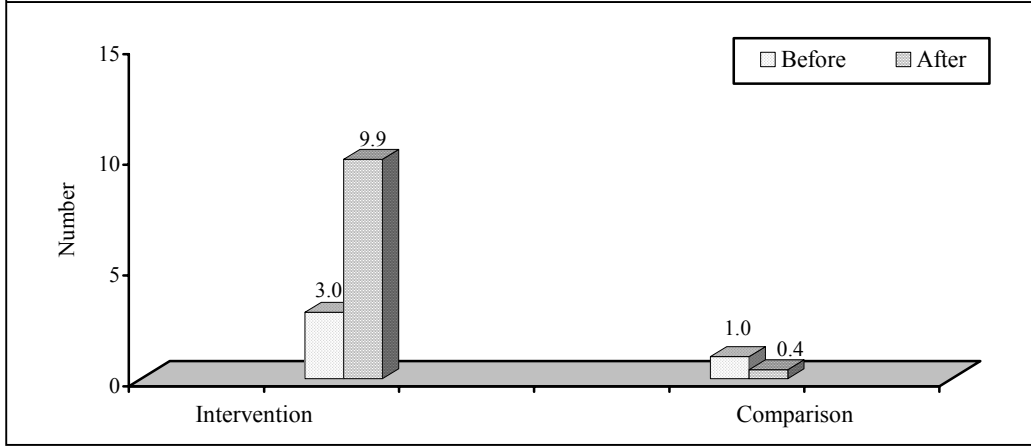


Fig. 10. Additional needs met per 100 services requested in NGO clinics before and after intervention of screening tool

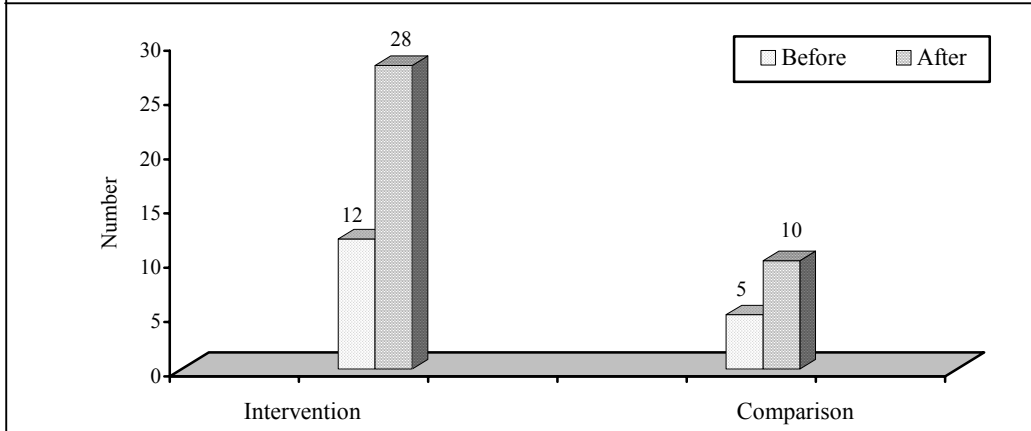


Table 9 shows the 95% confidence intervals on the changes in overall service provision. The increase in overall service provision in the government intervention clinics was significant and significantly greater than that in the comparison clinics. In the NGO clinics, the improvement in overall service provision was significant in both 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 that in the comparison clinics.

Table 9. Additional needs met per 100 services requested before and after intervention of screening tool in government and NGO clinics				
Clinic	Additional needs met per 100 requested			
	Before	After	Difference	95% confidence interval
Government				
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

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 providing services on separate visits. Physical integration of health and family-planning services at the primary healthcare level can contribute to this, but does not ensure that all the needs of clients will be met. Earlier studies showed that clients usually attend a clinic to request one particular service, and they may be unaware of other needs they have, or even that the relevant services are available [7]. 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 [12]. This study was set out to develop a screening tool suitable for use in primary healthcare 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 [12]. The study has extended the strategy significantly further in demonstrating a broader impact on service provision through systematic checking.

Many studies have been undertaken to address additional needs of clients with different outcomes. Studies in Guatemala, Peru, and Mexico focused on unmet need for reproductive health services [7,15]. The screening tools targeted only women of reproductive age to offer them services that were available at the clinic. The former Rural Service Delivery Programme (RSDP) attempted to promote multiple service provision at its clinics through counselling, packaging of services, and community-based behaviour change communication (BCC), which met some success [16]. The intervention reported here went beyond reproductive health needs and needs of clients themselves to check for additional primary healthcare needs of accompanying persons and of all children aged less than 5 years in the family. In this way, the intervention has extended the concept of one-stop shopping for services envisaged under HPSP [3].

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. The sites were purposively selected for feasibility of introducing the intervention. Some checking for additional needs was already being conducted, particularly in the NGO clinics, while the intervention clinics were already performing higher than the comparison clinics, in the 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. The 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.

The 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 of providers [7], and in Dhaka where routine checking on up to 90% of clients was achieved in an urban ESP clinic [12]. In the present 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 6.7% to 16.8%. Although the much higher baseline level of checking in the NGO intervention clinics and the higher performance than in the comparison areas limited the power of the study to identify significant changes, it demonstrated that an increase in checking could 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 screening tool. The checking encompassed not only clients, but also 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. The use of the screening tool resulted in 13 additional needs identified per 100 requested services in the government clinics and 30 per 100 requested in the NGO intervention clinics. Much of this was due to additional needs for RTI/STD services identified by asking clients about symptoms when they came to the clinic for some other services. The monitoring data showed that, for every 100 clients who attended the government intervention clinics for RTI/STD services, 314 other clients, attending for some other services, had RTI/STD symptoms requiring attention. The figure was 161 for clients attending the NGO clinics. This result generally confirmed the World Bank reports of high unmet need for RTI in developing countries [6], and the findings of previous studies on unmet needs in Bangladesh [11,12]. 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 practised in the NGO clinics for some time. It is important to note that most additional needs identified through checking could actually be addressed at the clinics without referral.

The introduction of systematic checking was also associated with other improvements in provider's practice. In addition to more consistent checking and a higher rate of identification of additional needs, there was also a higher proportion of additional needs met, which is probably attributable to the intervention. For the government clinics, the study produced significant results since there was virtually no provision for additional needs at the beginning or at the 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 screening tool 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 screening tool for reproductive health service needs. This resulted in 13% and 64% more services provided during the first and the second visit respectively [15]. The study attributed the increase in provision of clinic services to the improved knowledge of clients as a result of self-screening. In the present study, it was noted that knowledge of clients 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.

In Peru, the increase in service provision 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 present 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 the 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 as a result, some additional needs may not have been addressed.

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 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 referrals resulted in clients who received the required service: 83% of clients referred from the government clinics received services and 72% from the 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 should be considered in relation to the service inputs required. A major cost element in primary healthcare delivery is the providers' time. Providers may already be performing many duties, and identification of additional needs of clients, with an obligation to address them, will place an additional burden on them. To some extent, this study assumed that the providers had time and capacity to implement screening and deal with the additional service needs. Application of the screening tool required only 4-5 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 screening tool at these times. Heavy client flow during peak hours had affected screening in previous studies [12,17]. Making appointments for clients to address their additional needs has been tried with mixed results in an urban setting [17], but this was not tried in the present study. Some clients did not have time to wait for additional service, particularly during peak hours (10 am to 12 noon). New strategies can be tried to overcome these problems in the local context where different preferences for clinic attendance times may prevail.

As mentioned, there were some limitations of the study that may have reduced the observed impact of the intervention, such as high baseline level of checking in the NGO area. Several other changes that occurred during the intervention period should be borne in mind when interpreting 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 NGO. In contrast to the comparison area, there was also no medical officer in the NGO intervention area. The comparison clinics were revitalized after a change in 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 [7,12,15], while in this study it was extended to outreach centres using the lowest cadres of health workers. To optimize the statistical significance of the findings of this study, analysis was mostly conducted on aggregated data for the 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 the static clinics compared to the 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 medical officer. It was possible for the existing staff to identify additional needs of EPI and tetanus toxoid vaccination 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 facility.

Finally, the intervention convinced both providers and service managers of the feasibility and value of using a screening tool. The simple screening tool contributed to improving providers' practice through more systematic checking, identifying more needs, and providing more services on one client visit to primary healthcare facilities. It required only two days' training and some minimal costs for printing the tool, which can be produced in a reusable form. Furthermore, the tool was found to be user-

friendly by all types of providers. They were able to identify all types of additional health needs, including those, which might be considered to be sensitive to reveal, such as RTI/STD symptoms. The needs of clients themselves, accompanying persons, and children aged less than 5 years not attending the clinic could all be identified.

Conclusions

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

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

The study has shown that the introduction of a screening tool/checklist was acceptable to the providers and clients, and 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 performing high. The study demonstrated improvements from using the tool in both high- and low-performing settings. The results suggest that the introduction of a screening tool more widely in the primary healthcare clinics in Bangladesh would be feasible and could significantly increase the coverage of child and reproductive health services.

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Annexure 1

General characteristics of the study area clinics and providers

Table 1. Characteristics of government clinics					
Intervention			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		Client flow	50-60/day	
CC	1	HA-1 FWA-1	CC	2	HA-2 FWA-2
Client flow	20/day		Client flow	20/day	
Combined/ Satellite Clinics	8/month	HA-1 FWA-1 FWV-1	Combined/ Satellite Clinics	8/month	HA-1 FWA-1 FWV-1
Client flow	60-70/satellite		Client flow	60-70/satellite	

Table 2. Characteristics of NGO clinics					
Intervention			Comparison		
Type of clinic	Number	Manpower	Type of clinic	Number	Manpower
Static	1	Medical Officer-1 Clinic Manager-1 Paramedic-1 Counsellor-1 Sr. Service Promoter-1	Static	1	Medical Officer-1 Clinic Manager-1 Paramedic-1 Counsellor-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 the government areas, the clinics were at union and below level. These include Union Health And Family Welfare Centre (UHFWC), 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 the 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 every week. The service providers in the static clinics include one Medical Officer, Paramedics, one Counsellor, and one senior service promotor, and in satellite clinics one FWV/Paramedics and one service promotor. All the selected 8 health and family-planning services were provided from these centres.

The screening tool in Bangla

বাড়তি সেবা চাহিদা নির্ণয় প্রক্রিয়া

সম্বিত স্বাস্থ্য ও পরিবার পরিকল্পনা কার্যক্রমের আওতায় একই কেন্দ্র থেকে সকল অত্যাবশ্যকীয় সেবা দেওয়ার ব্যবস্থা রয়েছে। কাষ্টমারকে কাংখিত সেবা দেওয়ার পাশাপাশি বাড়তি চাহিদা নির্ণয় ও প্রদানে নিচের ছকটি সহায়তা প্রদান করবে। কিভাবে কাংখিত সেবা প্রদানের পাশাপাশি বাড়তি সেবা নির্ণয় করবেন তা নিম্নে বর্ণনা করা হলো।

প্রথমে কাষ্টমারের সাথে কুশল বিনিময় করুন। যে সেবার জন্য এসেছেন তা প্রদান করুন। অতপরঃ বাড়তি চাহিদা আছে কিনা তা নির্ণয় করুন। বাড়তি চাহিদা নির্ণীত হলে প্রয়োজনীয় সেবা দিন, রেফার করুন অথবা যথোপযুক্ত তথ্য প্রদান করুন এবং উক্ত সেবার বাম দিকের বক্সে সেবা দিয়ে থাকলে টিক (✓), যদি রেফার করে থাকেন সেক্ষেত্রে ক্রস (x) দিন এবং উপদেশ/আলোচনা করে থাকেন সে ক্ষেত্রে তারকা (*) চিহ্ন দিন। এছাড়া বাড়ীতে অবস্থানরত ৫ বৎসর বা তার কম বয়সী শিশুর ক্ষেত্রে যদি টিকা/ডায়রিয়া/এআরআই সংক্রান্ত উপদেশ দিয়ে থাকেন তাহলে উক্ত সেবার বামদিকের বক্সটি (O) বৃত্তাকার করুন।

কাষ্টমার যে কারণে এসেছেন

সম্ভাব্য বাড়তি সেবাসমূহ

১. শিশুর টিকার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	শিশু : <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> এএনসি <input type="checkbox"/> পিএনসি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা
২. শিশুর ডায়রিয়ার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> এএনসি <input type="checkbox"/> পিএনসি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা
৩. শিশুর এআরআই-র জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> সাধারণ সেবা প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> এএনসি <input type="checkbox"/> পিএনসি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা
৪. টিটি টিকার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	প্রাপ্তবয়স্ক : <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> এএনসি <input type="checkbox"/> পিএনসি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা
৫. গর্ভকালীন পরিচর্যার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা
৬. গর্ভোত্তর পরিচর্যার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা
৭. পরিবার পরিকল্পনার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা
৮. আরটিআই/এসটিডি জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> এএনসি <input type="checkbox"/> পিএনসি <input type="checkbox"/> সাধারণ সেবা শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা
৯. সাধারণ সেবার জন্য সেবা দিন এবং ডানদিকের বক্সে বর্ণিত বাড়তি চাহিদা নির্ণয় করুন	প্রাপ্তবয়স্ক : <input type="checkbox"/> টিটি <input type="checkbox"/> পরিবার পরিকল্পনা <input type="checkbox"/> এএনসি <input type="checkbox"/> পিএনসি <input type="checkbox"/> আরটিআই/এসটিডি <input type="checkbox"/> সাধারণ সেবা শিশু : <input type="checkbox"/> টিকা <input type="checkbox"/> ডায়রিয়া <input type="checkbox"/> এআরআই <input type="checkbox"/> সাধারণ সেবা

ক্রমিকের যেসব সেবা পাওয়া যায় তা কাষ্টমারকে জানান এবং এই ছকটির সাহায্যে কাষ্টমারের বাড়তি চাহিদা নির্ণয় করুন।

The screening tool in English

Checking Additional Needs

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 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 only information/discussion is made. Put (O) if information/advices given for children ☐ 5 years at home.

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

☛ Inform client about other available services and check for additional needs using this checklist.

This is a translated copy from the original in Bangla

Possible modified screening tool

CHECKLIST FOR SERVICES NEEDED			
Service provided <input type="checkbox"/> Advice/information * Referred <input type="checkbox"/> Family member at home needs service <input type="checkbox"/>			
CLIENT NUMBER	CLIENT	REQUESTED SERVICE(s)	ADDITIONAL NEEDS
	Child	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH
	Adult	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH
	Child	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH
	Adult	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH
	Child	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH
	Adult	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH
	Child	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH
	Adult	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH
	Child	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH	<input type="checkbox"/> EPI <input type="checkbox"/> DD <input type="checkbox"/> ARI <input type="checkbox"/> GH
	Adult	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH	<input type="checkbox"/> TT <input type="checkbox"/> FP <input type="checkbox"/> ANC <input type="checkbox"/> PNC <input type="checkbox"/> RTI/STD <input type="checkbox"/> GH

Intervention activities: March 2002-March 2003

No.	Activities	2002										2003			Output
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
	Phase 1														
1	Site selection and sensitization of GOVERNMENT and NIPHP partners	Done													Finalized sites
2	Staff recruitment, training		Done												Staff deployed
3	Preparation of study instruments (Guidelines, questionnaire, etc.)		Done												Study tools developed
4	Baseline data collection			Started	Continued	Continued	Done								Baseline information collected
5	Data analysis and sharing with GOVERNMENT, NIPHP partners, and donors					Started	Done								Interest group meeting held
	Phase 2														
1	Development of a screening tool						Done								Screening tool developed
2	Development of guideline/manual for using the tool						Done								Guidelines 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