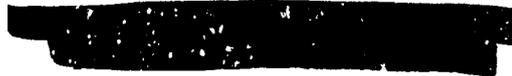


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OPERATIONAL BARRIERS TO IMPLEMENTING A DOMICILIARY INJECTABLE
CONTRACEPTIVE PROGRAMME IN RURAL BANGLADESH

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EXECUTIVE SUMMARY

This paper draws from experience of an experimental domiciliary injectable programme initiated by the MCH-FP Extension Project, a collaborative venture of the Ministry of Health and Population Control and the International Centre for Diarrhoeal Disease Research, Bangladesh. It identifies major operational barriers encountered by the government field workers (FWAs) in their household canvassing approach to delivering injectable contraceptives, and in strategies empirically tested to overcome these problems.

Derived from this experiment recommendations for the Ministry of Health and Population Control are:

1. The MOHPC should carefully field test injectable strategies in a variety of settings, however, before embarking on a national domiciliary programme. Our observation of the problems with the existing programme point to a need for a comprehensive training programme in injectable programme management for MOs and FPOs before further changes are es may be feasible in the future, if requisite training and supervision are developed.

The MOHPC should carefully field test injectable strategies in a variety of settings, however, before embarking on a national domiciliary programme. Our observation of the problems with the existing programme point to a need for a comprehensive training programme in injectable programme management for MOs and FPOs before further changes are introduced. Field sites where carefully conducted injectable programmes exist can serve as demonstration areas for orienting FPOs and MOs to practical programme needs.

2. Supervision of FWAs should be made by medically trained personnel.

At present the administrative links between the FWV and FWA are weak. An injectable programme requires strong links between field and paramedical staff to insure that minor medical problems are understood and dealt with by all programme staff. False symptoms of pregnancy can arise, for example, leading clients to request unnecessary MRs. Medical staff must screen such requests, FWVs must anticipate such problems, and FWAs must be trained to alert women before they accept of all possible side effects, including minor effects that could cause major psychological problems and false rumors.

Administrative links could be achieved by improving recording systems so that workers carry a register with them that monitors all contraceptive use and client problems longitudinally; and by establishing regular monthly

supervisory meetings in which such records would be the focus of discussion and action. Moreover, clear definition of the supervisory role of the FWV in side-effect management is needed so that FWAs do not view their roles as being independent of the paramedical duties of the FWV.

In a clinic-based injectable programme, women due for injections typically fail to come to the FWC on their due date. Medical supervision is thus greatly diminished if the method is restricted to clinic clients only. Outreach by FWAs is much needed to insure that injections are administered when they are due; clinic based services by FWVs are needed to insure that the highest standards of field sterile techniques and counselling are applied; along with back-up and care for patients referred with problems. But this system of outreach and referral that is so essential in a well functioning injectable programme, is impossible if the injection cycle requires a more frequent visitation schedule than is possible with the prevailing worker density.

If the number of FWAs were 9 or 10 per union, permitting monthly visitation, the prospects for successfully launching a field injectable programme would be greatly improved.

3. Supply lines for injectables plus the appropriate peripherals could be improved by providing them in one package; to include both the injectables and the accessories. In the present system, an upazila official must be highly motivated to organize all the components of an injectable programme because they come from different sources (DD's store, and H&FWC Contingency Fund).

Alternative possibilities exist for improving the logistics for the programme at upazila level:

-The best option would be to supply disposable needles and syringes to all FWAs involved in the injectable programme.

-A second option is to install functioning autoclaves at each H&FWC to sterilize the used needles and syringes. The FWAs can transport these supplies between the H&FWC and the FWA.

-A third option would be to increase the supply of needles and syringes for each FWA to insure a monthly supply. Sterilization could then be provided at the UHC.

4. DMPA is far more appropriate for Government workers to distribute than Noristerat because of the three month work cycle for FWAs in Government areas.

In the event that both injectables are available to supply to DD(FP)s, it is recommended that only one type of injectable be provided to a district on a continuous basis. Switching clients between the two injectables, as could easily happen if both injectables are available at an upazila, has not been

researched and would require a clinical trial. Also, each injectable has requirements unique peripherals (i.e. gauge of needles).

A. INTRODUCTION:

Long acting injectable progestins are used in family planning programmes in approximately 100 countries.¹ In Bangladesh, the progestin, Depot Medroxy Progesterone Acetate (DMPA) known as "Depo Provera," was introduced in the mid-1970's through both government and private clinics.² Since then its usage as a clinic-based contraceptive has shown much promise. More recently, a second progestin, Norethisterone enanthate, commonly known as "Noristerat," was introduced through clinics with similar success. However, a systematic attempt to deliver injectables to the home via village level government workers has not been reported. Domiciliary programmes have been limited to a few special non-governmental projects. This paper identifies problems encountered in implementing injectables in rural Bangladesh in a field trial conducted by government workers using a household canvassing approach to service delivery.

Since 1982, the MCH-FP Extension Project, a collaborative venture of the Ministry of Health and Population Control and the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), has been functioning in two upazilas of Bangladesh, Abhoynagar of Jessore district and Sirajganj of Sirajganj district. The project's major objective is to test the transferability of innovations found successful in special projects to the service system of the government health and family planning programme.

Injectables in general have been found very acceptable by eligible women in Bangladesh. Studies from many countries have shown between 25-75 percent of eligible women would accept injectables if given a choice of contraceptives.³ In-depth sample surveys carried out in the upazilas of Abhoynagar and Munshigonj have shown that 25-35% of all non-users would use injectables if they were readily available.⁴ This demand is translated into action in projects where injectables are available. The Matlab MCH-FP Project had a 14.1 percent contraceptive use prevalence rate of injectables in 1983. The following proportion of contraceptive use may be accorded to injectables among the methods provided by special projects in Bangladesh: Mohammadpur Model Clinic - 24.4 percent in 1983; Christian Health Care Project - 14.8 percent in 1982; and the Matlab MCH-FP Project - 36.6 percent in 1983.

B. IMPLEMENTATION:

The high injectable use prevalence in the Matlab MCH-FP Project has been achieved through its programme of home injections. Female village workers recruited on the basis of

their being married, contracepting, and with at least 6 years of education, administer the injectables. These female village workers were trained formally for one month on administration, contraindications and side effect management of all contraceptives, and subsequently on a phased basis for a variety of MCH services. Each worker covers a population of approximately 1200 in or near her own village, visiting each household once every two weeks. Medical problems arising from any method are referred to the paramedic, the Family Welfare Visitor (FWV), located at the subcentre clinic of that union or to the female physician at the Matlab hospital. Any technical or medical problems, field logistical (e.g. inadequate supply) and community problems (e.g. adverse rumors), are discussed at biweekly subcentre meetings; where the twenty female workers from one union compare their field performance, discuss motivational approaches, and receive their supplies from their immediate supervisors, the FWV and a male Senior Health Assistant. They also prepare a tour schedule with the FWV to visit clients experiencing unpleasant contraceptive side effects or village women who are borderline in their decision to accept contraceptives.

The female village workers in the Matlab Project are comparable to the Family Welfare Assistants (FWA) in the government programme. FWAs are locally recruited women, they are trained initially for one week, who are married but not necessarily contracepting. Their educational requirement is higher than that of the Matlab field worker. However, the population they cover is at least five to six times that of a Matlab worker. Whereas the work cycle in Matlab is two weeks, experience with the Extension Project suggests that three months or more is required for the FWA to complete one round of household visits. Referrals can be made to government clinics at the union or upazila level, but this is rarely observed. Monthly meetings of workers and their supervisors at the Upazila Health Complex give the FWAs the opportunity to collect their salaries and supplies. However, this assembly of approximately 80 workers limits opportunity for interaction, and makes indepth discussion of field problems impossible.

In late 1983, FWAs in Abhoynagar were given classroom and practical training by ICDDR,B staff and upazila health and family planning officials on selection of women appropriate for injectables, injection techniques and management of side effects. Home injections by FWAs began after training, with government agreement.

After training, the acceptance of injectables in the first complete round of households was high, as can be seen in Table 1. Among new contraceptive acceptors, a large proportion (between 22 to 53%) chose injectables. Several reasons could account for this high acceptability of injectables when provided by field workers: a single

injection protects for a relatively long period, is given at home in keeping with Bangladeshi customs, and administration of injectables bears no relation with the timing of coitus. Injectables are appropriate for lactating mothers as progestins do not suppress lactation. Also, it is believed culturally that an 'injection' works better than other forms of medication. Although studies of use-effectiveness of injectables suggest that minor menstrual side-effects are common, these problems pose no threat to health and can be managed effectively by trained village workers. Thus injectable contraceptives can be a safe, effective and popular method if carefully administered.⁵

Table 1: Acceptance of injectables in one three month period in three Abhoynagar unions, by percentage of new acceptors, total acceptors and eligible couples.

Name of Union	New Acceptors (%)	Total Acceptors (%)	Eligible Couple (%)
Mohakal	21.9	3.1	0.8
Rajghat	27.3	1.8	0.6
Paira*	52.9	13.6	3.9

Note: FWAs of this union were accompanied by Matlab village workers in this work cycle.

C. PROBLEMS ENCOUNTERED IN THE GOVERNMENT DOMICILIARY INJECTABLE PROGRAMME:

1. Supplies:

The injectable supply is inadequate and irregular. Abhoynagar officials determine the number of vials of Depo Provera necessary for annual coverage of their eligible couple population. Although this was requested of the Deputy Director (FP), and the DD in turn requested it of TEMO, the DD was allotted a small portion of these supplies and Abhoynagar officials received only 50 vials after 3 months. This covered the present acceptors for three months but did not allow for programme expansion. The time lag between ordering and receipt of supplies is long and inconsistent. In the present system, a good management system is required at upazila level to ensure an adequate and continuous supply to meet the needs of acceptors. To organize for programme expansion requires a highly motivated force at upazila level. At present

there is nothing inherent in the system to reward such initiatives.

Peripheral supplies for the injectable programme must be gathered through different sources: Needles, syringes and autoclaves can be indented from TEMO; cotton and spirit may be available at the UHC; and soap, kerosene, a stove, and linen may be obtained from the FPO through HFWC contingency funds. Because supplies come from a variety of sources, the process of preparing for an injectable programme is all the more difficult and time consuming. Again, an organizing capability at the upazila level is presently required.

Specific types of injectables provided by the DD may change. In Abhoynagar, Noristerat was provided for the first round of injectables and Depo Provera for the second. No research has been reported on the effects of switching clients between injectables, and the Extension Project is not set up to do this. The Christian Health Care Project (CHCP) has observed no adverse effects in switching from Depo Provera to Noristerat, but systematic study is needed before large scale programmes are launched in which switching from one type to another is common. Moreover, switching between the two injectables necessitates some change in the peripheral supplies: the needles needed for Noristerat and Depo Provera differ. This was not realized by the Deputy Director or TEMO, and only small gauge needles were provided for Noristerat, a very viscous solution.

The two injectables also have different regimens: Noristerat is injected every two months for the first six months followed by a three month regimen, while DMPA is injected every three months. FWAs must be well trained to distinguish the two and administer each at the appropriate time.

The supply of needles and syringes is inadequate. Every injection should be made with a sterilized needle and syringe. In Abhoynagar, none of the H\FWCs has the equipment necessary for sterilization, so used needles and syringes must be sent frequently to the UHC. The FWAs report to the UHC only once a month, and may not live in a place convenient to visit the UHC more often. No provision is made to transport the needles and syringes between FWAs and the UHC on a frequent basis.

2. Supervision:

Injectable programmes require medical back-up and supervision to manage any side effects and complications.

Although no serious medical problems have been reported in the seven year Matlab MCH-FP Programme or in the ten

years of the Mohammadpur Model Clinic or CHCF programmes, frequent visits and check-ups by medical persons give assurance to clients and increase the worker's credibility in the eyes of the community. Gonoshastha Kendro did report several cases of heavy bleeding requiring hospitalization linked with injectables⁶. Medical judgement is necessary regarding continuation of injectables in cases where such problems are encountered. However, the only medically trained personnel in the Population Wing, the MO(MCH-FP) and the FWV, are not in a position to supervise the FWA's work, which is relegated to male workers with no medical background.

3. Follow-up:

Injectables must be given in a specific regimen. For injectables, the problem is not pushing the first injection but maintaining subsequent doses on schedule and following up any side effects or complications. A home injection scheme whereby workers go to acceptors' homes should ensure better follow-up of clients than clinic-based distribution, where client contact is dependant on client motivation. However, FWA work cycles do not necessarily coincide with the time appropriate for the first injection (within five days of menstruation), or following due dates. Hence, the Abhoynagar home injectable programme may demand that a FWA break her routine to provide the next injection. The frequency of breaking workcycles is higher with Noristerat because of the shorter interim periods between initial injections. A two week follow-up to examine for side effects would be useful after the first injection, but impossible for FWAs because of their large working area.

4. Leave coverage:

No arrangements are made in the government system to cover for workers on leave.

Home injection programmes require regular visits by FWAs to ensure continuity of adoption and regular reinjections at the appropriate time. However, there is no back-up system for the FWA if she is on leave, (e.g. maternity leave). It is also found that the FWA's immediate supervisor, the FPA, is not always aware that she has been granted leave and hence he cannot make necessary arrangements to have other workers cover her clients.

5. Motivation of FWAs:

The target and compensation scheme that exists for tubectomy and the Copper-T is not appropriate for injectables. Targets and compensation for other methods detract from worker interest in injectables. If a FWA must break a work cycle to give the next injection to an

acceptor, as is the case for both injectables but more frequently for Noristerat, she will not be inclined to motivate a client for injectables. The compensation money she receives for CuT or sterilization acceptors acts as a disincentive for her to encourage use of injectables.

It is important to note, however, that client fees for injectables is not appropriate because a client eager to receive payment would receive multiple injections, unaware of the side-effects arising from an overdose, and possibly concealing the previous injections and due dates from a service worker. No fees should be paid to injectable acceptors, but possibly worker incentives to compensate for household coverage (irrespective of methods) would be workable. This requires careful field trials, however.

6. Record keeping System:

No system is in place whereby a FWA knows the due date for the next injection for an acceptor, or even when it is appropriate to give a new client her first injection. Information of clients' status is vital for a successful injectable programme. There is no systematic method of collection of longitudinal data that can be utilized by workers to remind them of the status of clients, nor is any attempt made to encourage workers to utilize the data collected during visits. FWAs do not know why they fill up forms as they pass them on to higher officials, and have no feedback. Record keeping requirements are now being investigated in the Extension Project. This issue will be the subject of a future report.

7. Training:

Field level workers are 'not trained for injectable contraceptives. Since 1980, three courses on integrated services have been given. None addressed the technical aspect of injectables or how to manage their side effects and complications. Both FWVs' and FWAs' present knowledge about injectables is inadequate, so they are fearful to even give the injections. Training for a domiciliary injectable programme requires a demonstration area where workers can actually give injections and identify the peripheral problems associated with them.

D. THE PROGRAMME IN ABHOYNAGAR:

Some of these operational problems have been resolved through strategies worked out by a joint implementation committee composed of upazila level health and family planning officials and ICDDR,B staff.

1. Supplies:

The Family Planning Assistant (FPA) transports the limited supply of needles and syringes between the FWAs and the UHC for sterilization. He carries the injectables from the FPO's office to the H&FWC and from there they are distributed to the FWAs. This is a short term solution; an adequate supply of the appropriate needles and syringes should be provided and sterilization of these should be made possible at all H&FWCs. Linen is purchased from the FPO's contingency fund to wrap up the sterilized needles and syringes for transport. Spirit and cotton are also procured from the DD's office.

2. Supervision:

The FPA collects the names and addresses of injectable acceptors from the FWAs along with initial injection dates and due dates. He provides this list weekly to the FWV who is to visit acceptors from her satellite clinic when convenient. FWAs instruct clients to visit the H&FWC or satellite clinic if they experience working side effects. It is also the FPA's responsibility to remind the FWA when she must provide the next injection to an acceptor.

3. Follow-up:

The regimen for Depo Provera is once every three months. This time period coincides more closely with the FWA's work cycle than Noristerat's regimen of two month cycles for the first four injections and three month cycles thereafter. The Noristerat regimen is unworkable in a field programme unless the workers can visit households monthly in order to maintain the individuals requiring an injection at two or three month intervals. From an operational perspective DMPA is far easier to manage in a rural area. Women of methods, are good candidates for future sterilization or CuT insertion. Also in the monthly H&FWC meetings the upazila officials support their efforts to give injectables.

4. Leave Coverage:

FWA leave requests are being made through the FPA to upazila officials. Therefore the FPA can inform the FWV if an acceptor is in need of an injectable during a FWA's absence. She is then to follow-up.

5. Motivation:

Workers are motivated to provide injectables by being reminded that clients attracted to the contraceptive pool, irrespective of methods, are good candidates for future sterilization or CuT insertion. Also in the

monthly H&FWC meetings the upazila officials support their efforts to give injectables.

6. Record-Keeping:

A record keeping book has been developed for FWAs to carry with them, so that they are aware of the status of each client over time. During her visit, a FWA notes down the following information of the client: Name, age, menstrual status, parity, age of last child, current status of pregnancy, breast feeding, date of starting a family planning method, any side effects, management of side effects, and the due date for next injection. A summary statement at the back of the book gives the worker a clear picture of contraceptive use which can be used easily to calculate the prevalence rate of contraceptives at any point in time.

7. Training:

Training has been provided to FWVs and FWAs in injection techniques, the standard of logistics required for sterilization, the selection of clients, and the management of side effects. FPA, AHI and FWW have been trained in all aspects of injectable programme management, except practical training in giving the injection.

Several problems remain in our field trial however:

The uncertainty of an adequate and timely supply of injectables and the requisite peripherals requires constant attention from the upazila level officials, especially the MO(MCH-FP) and the FPO. Special instructions and training in managing the field injection programme is much needed.

Supervision of FWAs should be provided by the MO(MCH-FP) and FWV. Detailed instructions on how to supervise the programme are much needed.

As the Government is supplying both Depo Provera and Noristerat, the issue of switching requires careful clinical studies and field research. A well controlled clinical trial should be done to elucidate the ensuing problems, if any exist, and possible solutions. In the absence of such research it seems advisable to limit districts to one or the other injectable, but not to supply both in an area simultaneously.

FOOTNOTES

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GLOSSARY

- CHCP = Christian Health Care Project
- DD = Deputy Director
- DMPA = Depot Medroxy Progesterone Acetate
- FPO = Family Planning Officer
- FPA = Family Planning Assistant
- FWA = Family Welfare Assistant
- FWV = Family Welfare Visitor
- H&FWC = Health and Family Welfare Centre
- MCH-FP = Maternal, Child Health and Family Planning
- MO(MCH-FP) = Medical Officer, (Maternal Child Health and
Family Planning)
- TEMO = Technical Equipment Maintenance Organization
- UHC = Upazila Health Complex