

Supply-level measures to increase uptake of family planning services in Niger: the effectiveness of improving responsiveness

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Summary

OBJECTIVE To show that low-cost attitudinal, structural and procedural changes aimed at improving responsiveness to patients have the potential to increase uptake of family planning (FP) even among populations considered reluctant to do so by health personnel.

METHODS Intervention study with before–after comparison of contraceptive acceptance, couple-years of protection (CYP) and an ‘index of contraceptive uptake’ (IUC) in rural health centres in Niger. The intervention consists of a package of instructions to actively propose family planning, integrated within curative and under-fives consultations, coupled with measures to increase the health centres’ responsiveness to their clients.

RESULTS Implementation of the intervention package was followed by marked increases in family planning uptake.

CONCLUSION Health services in Niger present an untapped potential for improving family planning through low-cost supply-side measures.

keywords family planning, integration, Niger, performance, quality of care, responsiveness, utilization

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Introduction

Niger is a very poor country, ranked at the bottom of the Human Development Index. It is a place where the demographic transition has hardly begun. Surveys show that the total fertility rate has remained stable over the last few years (7.37 in 1992, 7.5 in 1998), as has the 30-month interval between two births (Kourguéni *et al.* 1993; Attama *et al.* 1999). They have been at these levels since 1955 (Anonymous 1994).

At 4.4%, use of family planning (FP) services is very low, despite the considerable efforts made by the Ministry of Health and development agencies (Attama *et al.* 1999). With a child mortality of 303/1000 live births, more than 85% of women without any formal education and problematical communication on family planning between spouses (Attama *et al.* 1999), a poor country such as Niger is bound to a low contraceptive prevalence (Gage 1995; Shapiro & Tambahe 1997; Kirk & Pillet 1998). With mostly male professional staff in health centres, taboos on the discussion of family

planning and sexuality are unlikely to be overcome easily.

Nevertheless, the Demographic and Health Surveys of 1992 and 1998 suggest that family planning services are widely welcomed despite conservative interpretations of family planning by religious leaders (Kourguéni *et al.* 1993; Attama *et al.* 1999). Birth spacing – a precursor of the willingness to limit the number of children altogether (Nazzar *et al.* 1995) – is valued by most tribes in Niger, as evidenced by specific words to indicate the illness of women ‘who suffer from short birth intervals’ (*rurutsa* in Hausa or *nasua* in Zarma language; M. White-Kaba, socio-linguist, personal communication). Thirty-four per cent of men and 29% of women in Niger indicate their willingness to use family planning in the future; and most would like to start it in the near future. Actual use of all modern methods is limited to 5% (Attama *et al.* 1999), indicating that religious conservatism might not be the most important limiting factor to contraceptive use. Traditional religion can even be a vehicle for innovation and positive attitude towards family planning (Binka *et al.*

1995). The cultural barriers against the use of family planning in Niger are very real, but certainly not absolute.

Obviously, accessibility is a constraint. More than three-quarters of the population have to travel more than 5 km to reach a health centre. Distance is a well-known and obvious barrier for using any health service, especially for preventive care (Pust 1985; Van Lerberghe & Pangu 1988; Steele *et al.* 1999; Speizer & Bollen 2000). That it also plays a role for family planning appears confirmed by the near doubling of countrywide utilization rates over the last years, from 2.3% of eligible women in 1992 to 4.4% in 1998, in the wake of a programme of establishing new rural health centres launched in 1995.

Besides cultural and distance barriers, there are other 'supply side' factors that hamper uptake of family planning services, particularly in the way services are proposed to women who attend health centres. Health staff can influence such supply-side factors much more easily than it can overcome distance or cultural barriers. This paper reports on attempts to overcome some of these within-service barriers to the uptake of FP methods. It shows how a few low-cost measures were able to double family planning performances almost immediately.

Contraception in rural Niger

In Ouallam district, with a population estimated around 250 000, access is even more difficult than in the rest of the country. Only one-fifth of the population live within 5 km from a health service. In the mid-1990s, FP utilization rates were about 1% (Anonymous 1996). Access was a problem, but there were evident within-service barriers to uptake of FP as well, such as the menstruation barrier (Stanback *et al.* 1997). Women who were not menstruating at the time of consultation would be denied a family planning prescription, and sent back, most of the time even without condoms. Given the enormous distances women often have to travel on foot to reach health services – they prefer to take advantage of opportunities such as market days to consult for preventive care – they are unlikely to present again after such experiences.

Secondly, women who opted for oral contraceptives were routinely scheduled for a revisit after 1 month; they received only one cycle on the first visit. Although this seemed acceptable for women living very close to the health centre, for the vast majority the effort to revisit the centre was simply too much. Nearly 100% of newly recruited women would abandon contraceptive use after the first month. Counter-productivity from too many routine revisits has been illustrated also for acceptance and use of intra-uterine devices (IUDs) in other settings (Janowitz *et al.* 1994). In a focus group discussion with health centre staff of Ouallam

district, one of the health workers was defending the policy of one-cycle supply at first visit with the words: 'But doctor, those women understand nothing.' Only three of 12 staff members present were prepared to reformulate this statement in more relative terms.

Interaction between health personnel and potential clients shows a remarkable lack of empathy – and clients are apparently used to this situation. Two typical incidents illustrate this. In one, two women presented at a health centre at 10 a.m., after a 2-hour walk. The last patient had already left. They asked the nurse for family planning. The nurse politely answered that the family planning clinic was at 3.30 p.m. The women did not seem bothered, sat down on the bench and waited until the afternoon. No other patient came to see the nurse in the meantime.

In another incident three women asked for family planning services during the under-fives' clinic, at the morning session of an outreach clinic. The health worker was too busy and kindly asked the women to wait until the afternoon. In the afternoon, the nurse started with antenatal consultations. The three women politely waited until 6 p.m. When her turn finally came, the nurse asked each woman whether she was menstruating: none was. The nurse kindly recommended that they come (HC) to the health centre – at a few hours' walking distance – when they were menstruating.

The intervention package

In 1999, a package of new operational instructions was formulated to make the family planning consultations more client-friendly and responsive to the patients. The package included procedural, structural and attitudinal changes (Table 1). Procedures were made more flexible. Non-menstruating women would no longer be refused contraceptives and the strict schedules for repeat visits relaxed. Women were to receive three cycles of oral contraceptives at the first visit, with the message to come back whenever they felt they had a problem and if possible sometime during the second cycle as a routine visit. Women could come for a subsequent revisit at any time, and would get their supply of contraceptives topped up to 6 months. This would allow them to present at the service at flexible intervals of several months.

Secondly, family planning services were integrated: special family planning clinics were abolished, and staff was instructed to make contraceptives available during any working session, be it curative consultation, under-fives' clinic or post-natal care.

Lastly, health staff were asked to propose family planning to all eligible women presenting to the health centre rather than wait until women had the courage to

Table 1 The package introduced to improve responsiveness of family planning services

Structural	Abolish special family planning (FP) clinics. Integrate FP services into other regular health centre (HC) activities
Attitudinal	Active proposal of FP in all encounters with eligible women, even without request. Specifically: Propose FP during under-fives' clinics: from the first moment child and mother are presenting and every 6 months afterwards; in every case of malnutrition Propose FP during antenatal care clinic: systematically at each antenatal visit, at each post-natal visit, and to every woman with an identified risk during pregnancy or delivery Propose FP during curative consultation to every breastfeeding woman, to every mother of a malnourished child or a severely ill child after remission, and to mothers with previous twin pregnancies, STD or history of pathological delivery
Procedural	Provide six cycles of oral contraceptives at a time Re-provide women every time they present and not only at the end of the last cycle Also provide non-menstruating women with contraceptives, with appropriate explanations Provide 3–6 cycles at the first visit but ask women for a routine visit after they have finished the first cycle or at any time they perceive problems

initiate the subject. They were asked to improve communication; ways to engage in a respectful dialogue on the subject were discussed. This type of discussion was quite new for the staff, and they were generally skeptical about the feasibility and possible results of such a change in attitude. They also showed concern about the additional workload this new approach would entail. They became enthusiastic only after the first positive results and the discussions during supervision of the activity.

The package was introduced through one 4-day training session for the health centre staff in May 1999. All health centres were visited by the supervisor prior to implementation of the package; in the three selected health centres the training was reinforced during monthly supervision visits. Health staff were requested to register the number of women to whom they proposed family planning, the number who accepted, and the number who were provided with FP methods. In case women declined the proposal, the reasons for refusal were registered.

The package was introduced in the whole district, but was closely followed up in three health centres: Mangaize (rural), Simiri (rural) and Ouallam (10 000 inhabitants, district capital). These three health centres were selected because of their volume of activity and all-year accessibility for supervisors. Otherwise they did not differ from the other health centres in the district that did not receive the same close follow-up.

Measures of effect

The effect of introducing this package was assessed in two ways. First, by comparing the number of new acceptors (NA), number of oral contraceptive cycles (OCC) distri-

buted and the number of progesterone injections (Inj) administered as well as the couple-years of protection (CYP) in the years before the package was introduced with the year following the introduction. Couple-years of protection figures are calculated on the basis of OCC and Inj only, assuming one CYP per 13 cycles of OCC or per four Inj. Utilization rates (CYP divided by the number of women in childbearing age) are not calculated because population figures are not reliable. This study does not look at condom use or traditional methods of contraception. IUD and implants are not available in rural areas in Niger.

Secondly, the study compares a composite 'index of uptake of contraception (IUC)' among health centre clients before and after the introduction of the package. The IUC is defined as the proportion of eligible women offered contraception times the proportion accepting the offer times the proportion actually provided with contraceptives. Assessment of IUC before the intervention was performed through a 1-week direct observation of consultations in the three health centres selected for close follow-up. After the intervention IUC was calculated using data registered and reported by the health staff, cross-checked by direct observation, 1 day per month per health centre, for 6 months.

The 1-year follow-up period started in July 1999, i.e. more than 1 month after the new instructions came into effect, so as to avoid biasing the results through inclusion of a peak of new acceptors immediately after the introduction of the new instructions.

Results

During direct observation of the three health centres before the intervention 277 eligible women consulted at the

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curative and under-fives' clinics. Family planning was proposed to 5.4%, 79.8% of whom accepted, of whom 20% received contraceptives immediately. This yields an uptake of contraceptive (UC)-index of 0.86%. In other words, less than 1% of eligible women presenting at the health centre for reasons other than family planning received contraceptives the same day.

After the intervention, reported IUCs increased markedly (Table 2, Figure 1), and 28.8% of 3953 eligible women were supplied. Cross-checking of the registration of the data used for calculating the UC-index with direct observation of 403 consultations of eligible women confirmed the order of magnitude of the reported data: a UC-index of 23.3% as per observation against 28.8% from the nurses' registration. The difference seems mainly because of a lower proportion of women to whom contraception was proposed under direct observation (77.4%) than according to the reports (99.2%).

Before the intervention, the numbers of new acceptors, of OCCs distributed and of progesterone Inj administered, were low and stable in all health centres (Table 3). They increased sharply after the intervention in the three health centres, and in the district as a whole. The yearly number of new acceptors went from an average of 522 per year

to 1509; the number of OCCs from a yearly average of 4224-9631 and the number of progesterone Inj from 857 to 1471. In the year after the intervention the number of NA increased by a factor of 4.5 in the three health centres (and three times for the district as a whole) compared with the years before, and without counting the initial catch-up peak in the month following the intervention. The evolution in the numbers of oral contraceptives, Inj and CYP was similar: a marked increase in the year after the intervention.

The increase is more pronounced in the three health centres that were closely supervised than in the rest of the district (and most in the district capital; Ouallam health centre (HC), where access is easier). A 38% and 55% of the increase of, respectively, oral contraceptives and injections district wide can be attributed to these three health centres (compared with the data of 1998), the balance coming from the other seven health centres that were not followed up actively. However, all health centres significantly increased FP utilization.

The increases in FP uptake are already visible in the figures for the period 7/98-6/99. The package was introduced in May 1999 and became effective in June 1999. This resulted in a peak of uptake during this 1 month that

Table 2 Uptake of contraceptives among health centre clients in the year following the intervention. Total (range) for three health centres

	Proportion proposed (%)	Proportion accepted (%) [extremes (%)]	Proportion supplied (%) [extremes (%)]	IUC: proportion effective uptake among eligible health centre clients (%)
Under-fives clinic (N = 3092)	99.4	43.6 (38.6-60.1)	62.0 (54.7-71.3)	26.9
Curative services (N = 861)	98.4	57.4 (41.9-69.9)	62.4 (60.7-64.3)	35.2
Total (N = 3953)	99.2	46.7 (39.2-61.7)	62.1 (55.4-67.4)	28.8 (21.6-39.8)

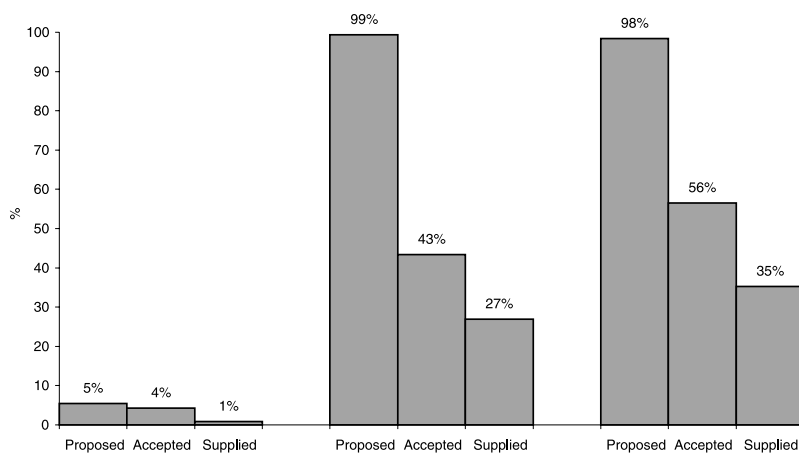


Figure 1 Uptake of contraception before and after the intervention. Data from three health centres. Left: before the intervention; middle: under-fives' clinic after intervention; right: curative care clinic after intervention.

Table 3 Contraception before and after the intervention

		Year 1 (7/95-6/96)	Year 2 (7/96-6/97)	Year 3 (7/97-6/98)	Year 4 7/98-6/99* Intervention 5-6/99	Year 5 (7/99-6/00)	Ratio (Year 5/year 1)
NA	Ouallam HC	89	116	121	286	396	4.4
	Mangaize HC	48	47	35	282	261	5.4
	Simiri HC	72	118	119	242	277	3.8
	Total district	568	508	489	1496	1509	2.7
OC	Ouallam HC	1437	2125	1832	2136	2574	1.8
	Mangaize HC	327	198	411	1127	1270	3.9
	Simiri HC	768	749	676	1168	1128	1.5
	Total district	3960	4419	4294	7810	9631	2.4
Inj	Ouallam HC	276	382	398	418	542	2.0
	Mangaize HC	35	46	44	95	89	2.5
	Simiri HC	85	88	70	146	170	2.0
	Total district	729	897	944	1274	1471	2.0
CYP	Ouallam HC	169	256	240	269	334	2.0
	Mangaize HC	36	27	43	110	120	3.3
	Simiri HC	80	80	69	127	130	1.6
	Total district	487	564	566	920	1109	2.3

NA: New acceptors; OC: Oral contraceptive; Inj: Injections; CYP: Couple-years of protection; HC: Health centre.

*: includes the peak in uptake in June 99, at the beginning of the intervention.

was so important as to overshadow quarterly figures in the post-intervention period (Figure 2). Although levelling off after the initial peak, uptake remains higher than before. The initial peak is of operational importance because it represents a high initial workload. In Ouallam HC, where staff were more reluctant to apply the new instructions for fear of the extra workload, the initial peak of NA was spread over a longer period.

Reasons for refusing the proposal

Health staff were asked to note the reasons given for rejecting proposed contraception. Nineteen per cent wanted to first ask the opinion of the husband and another 6% assumed that the husband would refuse anyway; 22% preferred natural birth spacing through breastfeeding; 14% refused family planning because of religious reasons and fear of side-effects such as sterility; 4% lacked all information about family planning and in 10% of cases, the reasons were ill-defined. Twenty-five per cent of women felt no need for contraception as their husband had left for the coast in search of work and would be absent for a long period of time. This happens often in Niger; using contraception during the husband's absence would not be socially acceptable. This makes continuation rates an inappropriate indicator of contraceptive uptake in Niger.

Discussion

Niger's health policy prescribes integration of family planning services in general outpatient activities. The UC-index prior to the intervention described here shows that this clearly is not the case. The marked increases after introduction of the package, in the health centres under study, and also in those where the only intervention consisted of the initial training session and the set of instructions, reveals a large amount of unmet demand, even among users of services.

On the whole, the package was well accepted by staff, although there was some initial resistance to some aspects. Lifting the menstruation requirement was difficult, partially because pregnancy checklists were not introduced (Stanback *et al.* 1999). Some were reluctant to accept that contraception can be started during postpartum amenorrhoea. Many refused to comply with the delivery of 3-6 cycles at a time, including for the first consultation. Apparently they were reluctant to implement an experimental instruction that had no official sanction and ran contrary to their 'medical' belief in the dangers of prescribing a 6-month supply without a control visit. Furthermore, in Niger drug supplies often run out, and at times stock protection seems to become more important to the nurse than supplying them to clients.

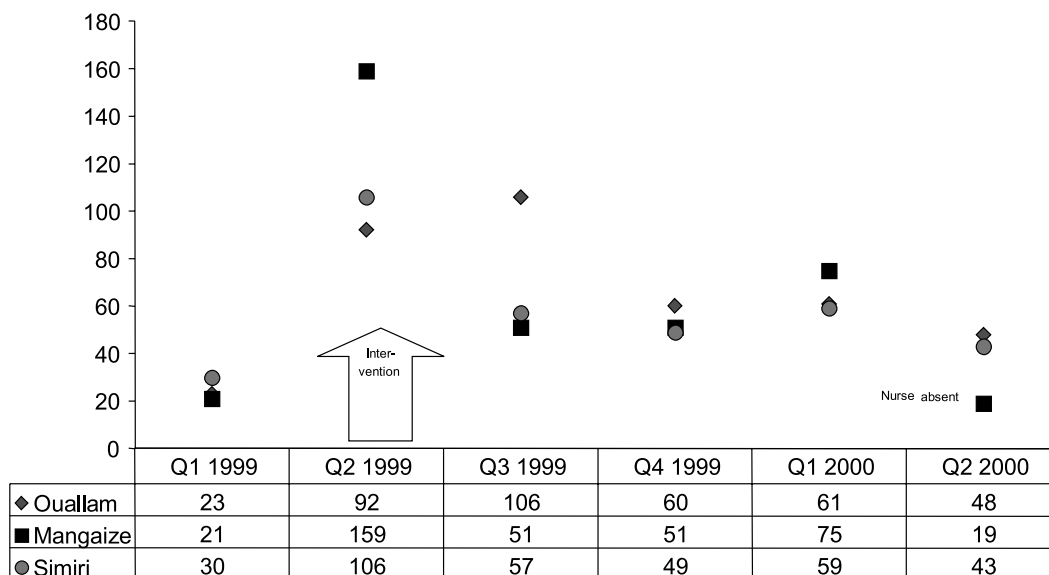
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Figure 2 Quarterly numbers of new acceptors in 1999 and first two quarters of 2000, showing the initial peak with implementation of the package as of June 1999. The low figure for Mangaize health centre during the second quarter of 2000 is because of a prolonged absence of the nurse.

Proposing contraception to health centre clients does not seem to be a problem. Staff were wary of the extra work this would represent, but realized that this would stabilize as the pool of eligible new candidates for contraception would diminish, and that it is much less than the workload of training for and following-up community-based distribution of contraceptives.

The acceptance rates vary between health centres. This reflects differences in sensitivity of the proposal itself, but may also be related to the quality of communication between the health care worker and the potential client. The proposal can be more or less convincing for the women, depending on the quality of communication and the personal conviction of the individual health worker. Ouallam HC scores the least for both curative service and under-fives' clinic with acceptance rates of, respectively, 41.9% and 38.6% only. The staff attributes this to the high workload. Women indicate the desire to get pregnant again as the most important reason to refuse the proposal. Other reasons indicated by women are: uncertainty about the opinion of their husband; still breastfeeding; not becoming pregnant too early anyway and the absence of the husband (during the dry season many migrate to neighbouring countries looking for seasonal work).

Acceptance of proposed contraception is followed by immediate supply in only 62.1% of cases, again the lowest in Ouallam, with 54.7%. Some of the women are apparently referred to another consultation to get their supply, workload again being indicated as the main reason. No

figures are available about how many women effectively return to the health centre. Nevertheless, this rate of immediate supply represents a considerable increase compared with the 20% of the initial situation.

Effective uptake of family planning among health centre clients increased from 1% to 28.8% after introduction of the active proposal with more client-friendly procedures. Even considering that the uptake would level off somewhat after the initial phase, and taking into account that without the close follow-up in the three health centres the effect might have been less pronounced, this shows the extent of the untapped implicit demand at general consultations. Family planning utilization might easily increase in Niger from the actual 4.4–8% by simply changing the operational instructions for health centre staff, even if one takes into account their low motivation and poor follow-up by supervisors.

The new approach does not put an additional strain on the already very scarce financial resources of the system. The marginal cost of obtaining these results is negligible. They compare particularly well with the training, follow-up and replacement costs of community-based distribution strategies, which are especially in the difficult operational circumstances of low population density areas (Katz *et al.* 1998; Routh *et al.* 2001).

There is scope for further increase in responsiveness. The quality of communication is known to be an important determinant of family planning use (Simmons & Elias 1994). The alarmist and medicalizing focus on possible

side-effects of contraceptives, the requirement to give exhaustive information on all methods (including on those only available in the capital, at more than 48 h travel), the time-consuming filling out of administrative forms, are aspects that could be improved on through a more flexible and open dialogue with women, driven by the client's agenda rather than by strict bureaucratic instructions. Apart from being more responsive, it would encourage the staff to deliver family planning services immediately, without being put off by the whole work package. Less rigid timetables and instructions might also improve case holding, by making it easier for women to comply with the health centre's requirements.

But even with its limited intervention package our study illustrates how important supply-side barriers to uptake of family planning services can be (Magnani *et al.* 1999). This is all the more relevant as these barriers are much more amenable to change through short-term intervention than, e.g. cultural barriers that can only change gradually over a longer period of time. Many women welcomed proposed contraception and less than one in five who turned it down did so because contraception as such was unacceptable either to herself or her husband. This supports the interpretation that perceived quality and responsiveness of the services are more important determinants of contraceptive uptake than the so-called cultural barriers. In Niger the potential increase in uptake through increasing responsiveness of HC staff is such that one would have to take care to provide for enough supplies of contraceptives to deal with the increased demand.

Contraceptive uptake does not guarantee continuation. Continuation data are not readily available – the initiative is too recent for such data to be really meaningful – and would be difficult to interpret given the high frequency of prolonged absence of the husbands for migrant work. But one could reasonably assume that increased responsiveness and better communication would improve continuation rates as well as uptake.

Integrating FP services and breaking down medical and cultural barriers will not raise the low utilization rates for FP in Niger completely. Although over the last 5 years important efforts have been made to bring health services closer to the population, coverage remains low. The enormous distances and the low population density are important constraints and call for more investments and additional financial resources. The first priority remains, however, to make existing services and programmes perform well. Improving the responsiveness of family planning activities through integration, active proposal and client-friendly procedures definitely has potential as a low-cost, effective way of improving family planning uptake.

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