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ABSTRACT

Births attended by skilled birth attendants and/or those at medical facilities are significantly associated with better birth outcomes, including reduced maternal mortality. Nkoranza is a rural district in Ghana with a population estimated at 128,000 in 2000. The Catholic Diocese of Sunyani launched the Nkoranza Community Health Plan (NCHP) in 1992. The plan was a response to the inability of district residents to pay for their health care, especially hospitalization, following the introduction of the cash-and-carry system into Ghana's health sector in the late 1980s. For some time, women in Nkoranza have sought to have normal deliveries covered by the plan. The Sunyani Diocese health system and hospital administrators were interested in expanding the plan's benefits package to include this service. They were unsure, however, of the impact of such a benefit on premiums and enrollment and were concerned about creating demand for inpatient deliveries that could not be met in the present facility. The Commercial Market Strategies project provided technical assistance to NCHP to assess the cost of introducing a normal birth-delivery benefit and the willingness of consumers to pay for the increased premium to cover the expanded benefits package. Ninety-six percent of currently enrolled women surveyed in Ghana's Nkoranza district were willing to pay higher insurance premiums for expanded birth-delivery benefits.

KEY WORDS

Willingness to pay, childbirth, delivery, health insurance, private sector, Ghana, USAID, Commercial Market Strategies project.

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in a Community-Based Health Insurance Plan

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1 Introduction

INTRODUCTION

Nkoranza is a rural district in the Brong Ahafo region of western Ghana. The Catholic Diocese of Sunyani started the Nkoranza Community Health Plan (NCHP) over a decade ago. The plan was a response to the inability of district residents to effectively finance their health care, especially hospitalization, following the introduction of the cash-and-carry system into Ghana's health sector in the late 1980s. The NCHP provides prepaid health insurance coverage for inpatient services at the Nkoranza Hospital, which is the major provider of inpatient services in the district. The NCHP also covers limited services available only at the regional referral hospital and outpatient treatment of dog bites and snakebites. An independent board now runs the NCHP, but it is still closely tied to the Diocese of Sunyani.

Approximately 48,000 of the 130,000 district residents were members of the NCHP in 2001. Annual premiums, set in fall 2001, were 15,900 cedis for existing members and 17,900 cedis for newly enrolled members.[1] (Rounded fees of 16,000 and 18,000 were used in the survey, discussed later in this report.)

For some time, women in Nkoranza have sought to have normal deliveries covered by the plan. The NCHP currently covers Caesarian sections, but pays nothing toward normal deliveries, in or out of the hospital. The NCHP is considering the inclusion of a normal delivery benefit for several reasons. Births attended by skilled birth attendants and/or those at medical facilities are significantly associated with better birth outcomes, including reduced maternal mortality. In addition, women with high-risk pregnancies may avoid delivering in the hospital because the cost of a normal delivery is three to five times higher than a delivery by a traditional birth attendant or in a clinic. The inclusion of a benefit for this common need also might attract more families to the plan, broadening the risk pool and increasing its sustainability.

An analysis developed elsewhere estimates that the cost of adding this benefit would range from 737 to 2,819 cedis per enrollee per year. The amount required to cover the cost of the additional benefit depends on the copayment charged, the change in the total number of enrollees, and any change in the extent to which women expecting to have more children preferentially enroll in the NCHP.

To help the NCHP board decide whether to offer the normal delivery benefit, the Commercial Market Strategies (CMS) project and Research International (RI) estimated the potential market response to the new benefit and an associated increase in annual premium cost. CMS and RI conducted a survey to determine whether women are willing to pay the increased premium necessary to cover the expanded benefits package. The research team interviewed both current enrollees to determine whether they would drop out and those who are not enrolled to determine whether they would be attracted by the new benefit. This report presents the survey results and the estimated potential market response.

IMPLEMENTATION OF THE WILLINGNESS-TO-PAY SURVEY

CMS and RI fielded a survey that used a willingness-to-pay technique that has been widely used in health policy development and the environmental field. The basic technique comprises three steps.

1. The surveyor carefully describes the service or product that is under examination. The description of the service or product must be sufficiently detailed so that the interviewee can make a monetary valuation of it. The exact descriptions used in this survey are reproduced immediately preceding the analysis in the Willingness to Pay for the Nkoranza Community Health Plan section.

2. The surveyor asks the interviewee if she is willing to pay a certain stated price for the service or product.[2] If the respondent says "yes," the surveyor asks her if she would pay a higher stated price. If the respondent says "no" to the first question, the surveyor asks her if she will pay a lower stated price. An independent assessment had been made of how much the additional premium would need to be for full cost recovery of the new service; the

1 On July 1, 2002, US$1 exchanged for 8,451 Ghanaian cedis, according to the currency converter at www.oanda.com/convert/classic.

2 The questions were posed as "yes" or "no" questions, for example, "Suppose that the cost of the insurance scheme increased to 17,000 cedis; would you continue to enroll in the insurance scheme?"

predetermined price points that were queried were determined as a function of this assessment.

3. If the interviewee says "no" to all of the price points posed, the surveyor will ask why she is unwilling to pay.

The Appendix discusses the technical details of the field implementation by RI.

ROBUSTNESS OF RESULTS

RI interviewed 400 women who are currently enrolled and 400 women who are not currently enrolled in the NCHP (see the Appendix for details of the sampling strategy). For analysis purposes, we believe that these are separate populations. For a 95 percent confidence level and a yes/no question where about 90 percent of the population responded "yes," the confidence interval is +/- 3 percent for each of the subpopulations (enrolled and unenrolled). For a 95 percent confidence level and a yes/no question where about 50 percent of the population responded "yes," the confidence interval is +/- 5 percent.

A more important issue concerns the reliability of women's responses. First, there is potentially a tendency for women to respond "yes" reflexively to the willingness-to-pay questions for the sake of politeness or courtesy (i.e., courtesy bias). We do not believe that this was a problem with our survey, as a significant proportion of the women answered "no" to some of the willingness-to-pay questions posed.

A second issue is whether the surveyed women understood the questions. We believe that the women who are currently enrolled in the plan understood our questions well. These women volunteered that they knew of the plan and were enrolled. Presumably, they also would know about the contents of the current benefits package and the copayment schedule. We are less certain about the knowledge of women who are not currently enrolled in the plan. Space and time did not allow us to completely describe to them the nature of health insurance or the complete package of benefits offered in the NCHP. We therefore recommend that the reader put less confidence in the willingness-to-pay results for the women who are not currently enrolled in the NCHP.

A third issue is whether we interviewed the correct people for the survey. Our working assumption was that since women are those most affected by whether the plan includes normal delivery services, they are the correct people to survey. We asked a few questions in the survey about who pays for health services and health insurance in the household (see Table 1). The information is separated out by those who are currently enrolled in the NCHP and those who are not, as well as by those women who are married and those who are not. In more than 80 percent of the married households, the husband pays for the majority of health services. This holds in both the enrolled and unenrolled groups. Therefore, our results for married women will hold to the extent that women are able to influence the decision of their husbands to purchase or not purchase NCHP coverage, or to the extent that the husbands' decisions coincide with those of their spouses. About three-quarters of the women interviewed were married.

Unmarried women are much more likely to pay for their health services and health insurance. More than two-thirds of unmarried women pay for the majority of their health services, and more than three-quarters pay for their health insurance. About one-fourth of the women interviewed were unmarried.

STANDARD OF LIVING INDEX

A concern of this report is whether poorer women would be less likely to be willing to pay for expanded maternity benefits. We created a Standard of Living Index (SLI) for this report, based on ownership of household assets and amenities. Using the values calculated for the index, we separated women into five categories (or quintiles), each containing approximately the same number of women.

Table 1. Who pays for health services and health insurance within the household (percent)

	Married women		Unmarried women*	
Who pays for the majority of health services	**Currently enrolled**	**Unenrolled**	**Currently enrolled**	**Unenrolled**
Woman	12.5	17.8	66.7	70.9
Husband	84.2	80.5	6.3	7.8
Other**	3.3	1.7	28.0	21.3
Who pays for health insurance				
Woman	26.3	—	78.1	—
Husband	70.4	—	1.0	—
Other**	3.3	—	20.9	—
Number of observations	**304**	**297**	**96**	**103**

* *The unmarried women category includes those who are single, separated, divorced, and widowed.*

** *For married women, "other" consists primarily of employers; for single women, "other" consists primarily of parents; for separated, divorced, and widowed women, "other" consists primarily of children.*

2 Willingness to Pay for the Nkoranza Community Health Plan

WILLINGNESS TO PAY FOR THE NKORANZA COMMUNITY HEALTH PLAN

WILLINGNESS TO PAY AMONG CURRENT ENROLLEES

To assess women's willingness to pay more for expanded delivery services, the following scenario was posed to current NCHP enrollees:

- Membership in the Nkoranza health plan includes any required inpatient care at the hospital, including necessary tests and drugs. C-sections are covered by the plan, but normal deliveries are not part of the plan. The plan also contributes towards inpatient care at the provincial hospital if that is needed. Current annual fees for the Nkoranza plan are 16,000 cedis per year for those who held a policy last year and 18,000 cedis for new enrollees. At present, the plan does not include any copayment by the patient.

- The plan is considering adding a benefit that would cover part of the fees charged for normal delivery at a hospital. As mentioned earlier, normal deliveries at the hospital or by a traditional birth attendant or clinic are currently not part of the plan. Hospital charges for a normal delivery are between 80,000 and 100,000 cedis. If normal delivery were covered under the plan, the participant would be responsible for a copayment of 30,000 cedis for a normal delivery at a hospital and partial payment for traditional birth attendants and clinics. In order to introduce the normal delivery benefit, the annual premium would have to be increased.

Following this description, women were asked if they were willing to pay 1,000 cedis more (a total of 17,000 cedis), 2,000 cedis more (a total of 18,000 cedis), and 3,000 cedis more (a total of 19,000 cedis) for the expanded benefit.

Table 2 shows that more than 90 percent of women who are currently enrolled were willing to pay an additional 3,000 cedis (a total premium of 19,000 cedis) for expanded delivery services. Only 4 percent were not willing to pay even 1,000 cedis more.

In summary, our analysis reveals that less than 10 percent of the currently enrolled women would drop out of the NCHP if the premium is increased by 3,000 cedis. Less than 5 percent of the current enrollees would drop out if the premium is increased by 1,000 cedis.

WILLINGNESS TO PAY AMONG THE UNENROLLED

Before asking women who are not enrolled in the NCHP about their willingness to pay, we asked the women if they were interested in the plan as it is currently structured (without the normal delivery services). Table 3 shows that almost 71 percent of the currently unenrolled women were interested in the plan as it is currently configured.

Table 4 shows the inducements that currently unenrolled women say would attract them to join the plan. For brevity's sake, we have included only the top five. Reduced fees would by far be the greatest inducement, with more than half of the women saying this would attract them to the plan. Twenty percent of all unenrolled women cited the inclusion of normal delivery services as an inducement to join the plan. Among the unenrolled women saying that they would like to participate in the plan, 20.5 percent said the inclusion

Table 2. Willingness to pay for expanded delivery services among current enrollees

	Percent
Unwilling to pay more	4.0
Willing to pay no more than 17,000	1.8
Willing to pay no more than 18,000	3.0
Willing to pay no more than 19,000	91.3
Number of observations	**400**

Table 3. Interest in the current NCHP among those who are not currently enrolled

	Percent
Interested	70.8
Not interested	21.5
Don't know	7.8
Number of observations	**400**

Table 4. Changes to the NCHP that would induce currently unenrolled women to join (percent)

	Those who expressed interest	Those who did not express interest (either said "no" or "don't know")	All currently unenrolled women
Reduced fees	55.1	56.4	55.5
Outpatient services included	26.9	17.1	24.0
One policy to cover entire family	18.4	24.8	20.3
Cover normal delivery services	20.5	18.8	20.0
Policy immediately effective	14.5	7.7	12.5
Need more information	12.4	7.7	11.0
Number of observations	**283**	**117**	**400**

Table 5. Willingness to pay for the NCHP with expanded delivery services among currently unenrolled women (percent)

	All unenrolled women	Those who expressed interest without expanded delivery services	Those who did not express interest without expanded delivery services	Those who were interested and saw normal delivery services as an inducement
Not willing to pay 19,000	20.8	4.9	59.0	3.4
Willing to pay no more than 19,000	2.5	2.1	3.4	1.7
Willing to pay no more than 20,000	9.5	7.4	14.5	5.2
Willing to pay 21,000	67.3	85.5	23.1	89.7
Number of observations	**400**	**283**	**117**	**58**

of a delivery benefit would attract them to the plan. Combining the results of Tables 3 and 4, 14.5 percent (70.8 percent x 20.5 percent) of the currently unenrolled women were interested in the plan and would see normal delivery services as an inducement to join.

Table 5 presents the percentages of currently unenrolled women who are willing to pay various amounts for the expanded NCHP benefits package. The first column presents results for all unenrolled women. The second and third columns present results according to whether the women did or did not express interest in the NCHP without the expanded delivery services. The fourth column presents willingness to pay among the women who were interested in joining the NCHP and saw the inclusion of normal delivery services as an inducement to join.

More than two-thirds of all women who are not currently enrolled in the NCHP would be willing to pay a total of 21,000 cedis for the NCHP with expanded delivery services. An additional 12 percent would be willing to pay a premium of no more than 19,000 or 20,000 cedis.

How do these women view the expanded delivery services in the context of the NCHP? In the second column, we see that only 4.9 percent of the women who expressed an interest in the unexpanded benefits package were unwilling to pay at least 19,000 cedis for the expanded package. On the other hand, in column three, we see that 41 percent (100 – 59.0) of the women who were not interested in the current package were willing to pay for the package including delivery services.[3] This is clear evidence that the package with expanded delivery services is more marketable.

3 We note here that relatively large numbers of these women are willing to say "no." In the Introduction, we alluded to the possibility that our results could be put into question because of respondents' tendency to reply "yes" to any and all questions. Here we see that although it may be a problem, it isn't an overwhelming problem.

Finally, the last column of the table shows willingness to pay among the group who would be a prime target for the expanded plan: the women who would like to join the plan and see normal delivery services as an inducement to enroll. Almost 90 percent of this population would be willing to pay a total premium of 21,000 cedis for the plan.

COMPARISON OF THOSE WILLING TO PAY WITH THOSE WHO ARE NOT

In this section, we compare those who are willing to pay for the expanded NCHP benefits package with those who are not willing to pay. For the sake of simplicity, we consider any woman who says that she is willing to pay at least 19,000 cedis for the plan as being willing to pay.

The first and fourth columns of Table 6 are the profiles of the women who are currently enrolled and not enrolled, respectively. The profiles of these two groups are substantially the same except for socioeconomic status and age.[4] Forty-seven percent of the women currently enrolled in the NCHP come from the upper two quintiles of the SLI, whereas only 33 percent of the women not currently enrolled are from the upper two quintiles.[5] The women currently enrolled appear to be slightly better educated on average.

In contrast, differences between those who are willing to pay for the expanded services and those who are not are more marked. Women who are willing to pay are younger and more likely to be married. Among those who are currently enrolled, the women who are willing to pay are more likely to want more children and are wealthier.[6] Among those who are not currently enrolled, those willing to pay are better educated and less likely to be in the two poorest quintiles of the SLI. Interestingly, among those who are not currently enrolled, there is not a large difference in the share who would like to have more children. This may indicate that the women actually were answering the question, "Are you willing to pay for the insurance plan?" rather than, "Are you willing to pay for an insurance plan that includes expanded birth-delivery services?" Program managers may want to view these numbers as indicative of how much they can expand their markets.

ADVERSE SELECTION: ARE WOMEN WHO WANT MORE CHILDREN MORE LIKELY TO ENROLL OR AGREE TO A HIGHER PREMIUM FOR EXPANDED DELIVERY SERVICES?

A concern when adding delivery services to a health plan is whether the new benefit will attract a large proportion of women planning to have babies, or whether the higher premium will deter women who are not planning to have children. In either case, there is cause for concern because a large change in the percentage of women having children under the plan will affect the cost per enrollee.

Table 7 separates the sampled population into four groups. First, currently enrolled women are separated from women who are not enrolled. Second, these two groups are broken into two segments: those who want more children and those who don't want more children. Among currently enrolled women, we see that less than 3 percent of those who want more children would drop out of the plan if there was a premium increase. However, about 6 percent of those who don't want children would drop out. While this is a large difference in relative terms, in absolute terms it would not cause a major change in the demographics of the insured population. Currently, about 64 percent of the enrolled women would like to have more children. If the premium was increased by 3,000 cedis, we estimate that the percentage of enrollees who wanted to have more children would be approximately 65 percent — virtually the same as the current percentage and a statistically insignificant change.

Among the unenrolled women who are not willing to pay 19,000, the difference between the percentage of those who want more children and those who don't is similarly small. If all of the women who say they are willing to pay a total premium of 21,000 for the

4 The difference in the age structure is statistically significant, according to a chi-square test. Women who are currently enrolled are more likely to be in the oldest age group. However, the pattern of age difference across the groups is somewhat erratic. The two groups have similar percentages of women ages 18 to 24 and 30 to 34, but dissimilar percentages of women ages 25 to 29 and 35 to 39.

5 See the Introduction for a brief description of the SLI.

6 Only 16 women who are currently enrolled responded that they were not willing to pay more for the expanded package.

Table 6. Profiles of current and potential NCHP enrollees by willingness to pay the higher premium (percent)

	Currently enrolled women			Women not currently enrolled		
	All women	Willing to pay	Not willing to pay*	All women	Willing to pay	Not willing to pay
Age						
18–24	26.0	26.3	(18.8)	24.8	24.3	26.5
25–29	24.0	25.0	(0.0)	31.8	33.8	24.1
30–34	21.3	20.3	(43.8)	22.3	21.5	25.3
35–39	28.8	28.4	(37.5)	21.3	20.5	24.1
Marital status						
Single	17.0	17.2	(12.5)	15.8	14.8	19.3
Married	76.0	76.8	(56.3)	74.3	76.7	65.1
Separated, divorced, widowed	7.0	6.0	(31.3)	10.0	8.5	15.7
Those who want more children						
	64.0	64.8	(43.8)	63.0	63.4	61.4
Level of education						
No formal schooling	24.3	24.2	(25.0)	32.8	30.0	43.4
Primary school	20.5	20.3	(25.0)	18.5	18.6	18.1
Secondary school	44.3	44.3	(43.8)	41.5	45.1	27.7
More than secondary school	11.0	11.2	(6.3)	7.3	6.3	10.8
SLI quintile						
Very Poor	15.0	14.6	(25.0)	28.3	27.4	31.3
Poor	17.0	16.9	(18.8)	20.3	18.6	26.5
Middle Class	21.0	20.8	(25.0)	19.0	21.5	9.6
Upper Middle	21.8	21.9	(18.8)	18.0	19.2	13.3
Wealthy	25.3	25.8	(12.5)	14.5	13.2	19.3
Number of observations	**400**	**384**	**16**	**400**	**317**	**83**

* *Parentheses indicate that calculations are based on very small sample sizes.*

Table 7. Comparison of willingness to pay between women who want more children and those who do not (percent)

	Currently enrolled women		Women not currently enrolled	
	Want more children	**Don't want more children**	**Want more children**	**Don't want more children**
Not willing to pay 19,000	2.7	6.3	20.2	21.6
Willing to pay 19,000	1.2	2.8	1.6	4.1
Willing to pay 20,000	3.1	2.8	9.9	8.8
Willing to pay 21,000	93.0	88.2	68.3	65.5
Number of observations	**256**	**144**	**252**	**148**

Table 8. Reasons for not being willing to pay (percent)*

	Currently enrolled women**	All unenrolled women
Costs too much	(88.9)	71.7
I am not sick	(0.0)	6.4
Doesn't cover needed services	(22.2)	9.0
Spouse needs to help make decision	(0.0)	1.3
Need package to cover entire family	(0.0)	1.3
Number of observations	**9**	**78**

* *Parentheses indicate that calculations are based on very small sample sizes.*

** *Columns add to more than 100 percent because multiple responses are possible.*

expanded benefits package actually enrolled, the percent of women in the plan who want more children would be 65 percent, again a very small difference from the plan's current composition.[7]

REASONS FOR BEING UNWILLING TO PAY

After asking women if they were willing to pay, or pay more, for normal delivery services, we asked those who were unwilling to pay why they were unwilling. The most common reason cited for both enrolled and unenrolled women was that the cost was too high. The second most cited reason was that the plan didn't cover needed services (see Table 8).

After asking the women their reasons for not being willing to pay for the plan with expanded benefits, the surveyors posed a second scenario to the women:

- An alternative mechanism for adding the normal delivery benefit would be to not require a copayment for the normal delivery. In other words, all hospital charges for a normal delivery — between 80,000 and 100,000 cedis — or a flat payment for delivery to a traditional birth attendant or a clinic would be covered by the plan. You would have no out-of-pocket expenses for the delivery at the hospital, but in the case of a TBA [traditional birth attendant] or clinic, you may be required to make a payment of some form. In order to introduce the normal delivery benefit, the annual premium would have to be increased.

This alternative scenario differs in one important respect: There is no longer a copayment required for hospital-based delivery services. Table 9 presents the results of the responses to this alternative scenario by the enrollment status of the women who were unwilling to pay. The majority of women were still unwilling to pay for the insurance.

In summary, our results indicate that it would not be productive to try making the expanded benefits package more appealing by eliminating the copayment. First, as illustrated in Table 2, less than 10 percent of currently enrolled women would refuse to pay a premium of 21,000 cedis. Second, among the small number of those unwilling to pay for the expanded benefits, less than half would change their mind if the copayment were eliminated.

7 We repeated this entire analysis using an alternative measure of likelihood of using maternity services: whether a woman wanted to have another child within two years. Approximately 35 percent of current enrollees want to have a child within two years. Repeating the previous willingness-to-pay analysis, we predicted that after the benefit was added, 36 percent of the enrollees would want a child within two years — once again, a negligible change.

Table 9. Willingness to pay for the expanded NCHP without a copayment for normal delivery services among women who were unwilling to pay for the expanded NCHP with a required copayment (percent)

	Currently enrolled women*	All unenrolled women
Not willing to pay 17,000/19,000**	(55.6)	66.7
Willing to pay 17,000/19,000**	(0.0)	0.0
Willing to pay 18,000/20,000**	(0.0)	15.4
Willing to pay 19,000/21,000**	(44.4)	17.9
Number of observations	**9**	**78**

* *Parentheses indicate that calculations are based on very small sample sizes.*

** *Lower price corresponds to currently enrolled women; higher price corresponds to unenrolled women.*

3 Marketing the Nkoranza Community Health Plan

MARKETING THE NKORANZA COMMUNITY HEALTH PLAN

In the previous section, we saw that nearly 80 percent of the women currently unenrolled in the NCHP would be willing to pay a premium of 19,000 cedis or more for the expanded package of services. Presumably, many of them also would say that they are willing to pay for the NCHP as it is currently configured. But saying that you are willing to pay for something is not the same as actually purchasing it. Conversion of this stated willingness to pay into actual enrollment will require additional marketing by the plan administrators.

This section contains analyses of several questions contained in the survey that may provide helpful insight for future NCHP marketing efforts. The tables that follow analyze the population by whether the woman is currently enrolled or not enrolled in the NCHP (first and second columns) and, among those who are not enrolled, by whether they are willing or not willing to pay at least 19,000 cedis for the expanded benefits package (third and fourth columns).

Presumably, those who say that they are willing to pay would be the easiest to enroll in the plan. Women who say that they are willing to pay already are convinced of the value of the insurance plan — perhaps all they need is the opportunity to join — whereas those not willing to pay have hesitations about the value of the plan.

CURRENT HEALTH CARE PURCHASING BEHAVIOR

The survey asked all women where family members seek treatment when they are ill. Table 10 presents results for these sources of health care. The most popular source for treatment for all groups is Nkoranza Hospital. However, the women who are enrolled in the NCHP are almost twice as likely to use the Nkoranza Hospital as women who are not enrolled. Women who are not enrolled are slightly more likely to use health centers and drugstores. The unenrolled women are almost four times more likely to use the Techiman Holy Family Hospital.

The large number of unenrolled women who use the Nkoranza Hospital indicates that marketing the NCHP to uninsured people who use the hospital could be an effective way to increase enrollment. For example, the hospital staff could offer all patients exiting the facility the opportunity to join the plan. Second, as the unenrolled were much more likely to use the Techiman facility, Nkoranza Hospital may be able to attract more clients by differentiating itself from the Techiman facility and by making Nkoranza Hospital and the NCHP better known to Techiman clients.

Further analysis of Table 10 shows that for the most part, those who were not willing to pay frequented modern health facilities in the same proportion as those who were willing to pay. However, those who were not willing to pay were more likely to use traditional

Table 10. Sources of treatment when family members are ill (percent)*

		Women not currently enrolled in the NCHP		
	All women currently enrolled	**All women not currently enrolled**	**Willing to pay for expanded benefits**	**Not willing to pay for expanded benefits**
Nkoranza Hospital	92.8	51.5	51.4	51.8
Health center	40.5	47.3	47.6	45.8
Drugstore	12.8	18.8	18.0	21.7
Techiman Holy Family Hospital	5.3	20.3	20.2	20.5
Traditional healer	1.3	3.5	1.3	12.0
Community health worker	0.8	3.5	2.5	7.2
Other	12.8	16.0	15.5	18.1
Number of observations	**400**	**400**	**317**	**83**

* *Columns add to more than 100 percent because multiple responses are possible.*

healers and depend upon the services of community health workers. It may be that these women are not yet convinced of the value of modern health facilities, or it may be a question of access, as these women may be more likely to live in areas of Nkoranza that are far away from modern health facilities.

For future marketing efforts, it is also important to understand who pays for health services within the family. Table 11 presents tabulations of who pays for health services in families where the interviewed woman was married. In each category, the husband pays for the majority of health services in about 80 percent of the families. Thus, although the added benefits are targeted to women, husbands will need to be considered as well in marketing efforts.

Table 12 is the same as Table 11 except that it presents the results for unmarried women. Between 67 percent and 80 percent of unmarried women pay for the majority of health services themselves. The parents of unmarried women also pay the majority of health expenditures for a significant share of women. Among the women who are not willing to pay for expanded benefits, almost 80 percent pay for the majority of health services themselves.

MEDIA HABITS

The NCHP administrators also need to think about how to reach target populations with their marketing efforts. Media is one possibility. Table 13 shows the percentages of women across the various enrollment categories who have heard messages concerning the NCHP, as well women's opinions about the credibility of various media.

All current enrollees have heard media messages of one type or another. More than 90 percent of unenrolled women have heard such messages, with little difference between the women who are willing to pay and those who are not. Media sources differ considerably across the groups. Currently enrolled women are much more likely to have heard radio messages.

There are clear differences between those who say that they are willing to pay and those who are not. The women who are willing to pay are more likely to have heard the messages from family, friends, health workers, and insurance staff, while more than three-quarters of the women who are not willing to pay heard messages from public announcements or an information van.

Radio is considered the most credible source of information by all groups. Among unenrolled women who are willing to pay, health workers and public announcements are the second and third most credible sources of information. Among unenrolled women who are not willing to pay, family, friends, and health workers are the next most credible sources of information.

Table 14 presents the frequency with which women listen to radio or watch television. In general, the women who already are enrolled in the NCHP access these media more often than those who are not enrolled. Radio is accessed much more frequently than television for all groups. The unenrolled women who are willing to pay listen to radio more often than those who are not willing to pay.

In terms of actual listening/viewing behavior, there is little difference between enrolled and unenrolled women and between women willing to pay and those who are not (see Table 15). About half of the women say that Classic FM is the station with the most listened to program, and about one-third say that Asta FM is the station with the most listened to program. GTV is overwhelmingly the television station with the most watched programs.

Table 11. Person who pays for the majority of health services in the family, married women (percent)

		Women not currently enrolled in the NCHP		
	All women currently enrolled	**All women not currently enrolled**	**Willing to pay for expanded benefits**	**Not willing to pay for expanded benefits**
Myself	12.5	17.8	17.7	18.5
My husband	84.2	80.5	80.7	79.6
My employer	0	0	0	0
Parents	3.0	1.7	1.6	1.9
Other	0.3	0.0	0.0	0.0
Number of observations	**304**	**297**	**243**	**54**

Table 12. Person who pays for the majority of health services in the family, unmarried women (percent)*

		Women not currently enrolled in the NCHP		
	All women currently enrolled	**All women not currently enrolled**	**Willing to pay for expanded benefits**	**Not willing to pay for expanded benefits**
Myself	66.7	70.9	67.6	79.3
My husband	6.3	7.8	8.1	6.9
My employer	—	1.0	—	3.4
Parents	26.0	16.5	18.9	10.3
Other	1.0	3.9	5.4	0.0
Number of observations	**96**	**103**	**74**	**29**

* *The unmarried women category includes those who are single, separated, divorced, and widowed.*

Table 13. Women who have heard messages concerning the NCHP (percent)

		Women not currently enrolled in the NCHP		
	All women currently enrolled	**All women not currently enrolled**	**Willing to pay for expanded benefits**	**Not willing to pay for expanded benefits**
Have heard media messages				
	100.0	90.8	91.5	88.0
Source of messages				
Radio	59.0	43.5	43.2	44.6
Television	3.0	3.5	2.8	6.0
Family/friends	22.3	20.8	22.4	14.5
Health workers	20.0	20.8	23.3	10.8
Insurance staff	13.0	23.0	27.4	6.0
Public announcements/ information van	64.5	47.8	40.4	75.9
Most credible source of information				
Radio	50.5	46.3	49.2	34.9
Family/friends	7.3	11.0	8.2	21.7
Health workers	19.0	15.5	15.1	16.9
Insurance staff	8.5	6.0	5.7	7.2
Public announcements	10.5	13.8	13.9	13.3
Number of observations	**400**	**400**	**317**	**83**

Table 14. Frequency of media access (percent)

		Women not currently enrolled in the NCHP		
	All women currently enrolled	**All women not currently enrolled**	**Willing to pay for expanded benefits**	**Not willing to pay for expanded benefits**
Listen to radio				
Every day	71.3	63.0	65.0	55.4
At least once a week	15.8	15.8	16.1	14.5
Less than once a week or never	13.0	21.3	18.9	30.1
Watch television				
Every day	23.0	16.8	14.8	24.1
At least once a week	22.3	22.8	23.3	20.5
Less than once a week or never	54.8	60.5	61.8	55.4
Number of observations	**400**	**400**	**317**	**83**

Table 15. Radio and television stations playing most frequently listened to or watched programs (percent)

		Women not currently enrolled in the NCHP		
	All women currently enrolled	**All women not currently enrolled**	**Willing to pay for expanded benefits**	**Not willing to pay for expanded benefits**
Radio station playing most frequently listened to program				
Bar	7.1	11.8	11.2	14.5
Classic FM	54.9	52.9	53.8	49.1
Asta FM	34.5	32.7	33.5	29.1
Other or don't know	3.5	2.6	1.6	7.3
Number of observations	**339**	**306**	**251**	**55**
Television station playing most frequently watched program				
GTV	93.8	95.0	95.1	94.9
METRO TV	0.9	0.6	0.7	—
TV3	5.2	4.4	4.2	5.1
Number of observations	**201**	**181**	**142**	**39**

4 Summary and Conclusion

SUMMARY AND CONCLUSION

An independent research team made a high-end estimate that the NCHP would need to increase its premium by 2,819 cedis to cover normal delivery services. Our results show that less than 10 percent (8.7 percent) of the plan's current enrollees would disenroll if the premium increased by 3,000 cedis.

Among women who are not enrolled, the most likely candidates for enrollment are women who say that they would like to participate and who see a normal delivery benefit as an inducement to enroll. These women constitute 14.5 percent of the unenrolled population of women. Almost 90 percent of them would be willing to pay a premium of 21,000 cedis (the current new enrollment fee of 18,000 cedis plus 3,000 for the additional benefits). Among all women who are not currently enrolled in the NCHP, 67.3 percent said that they would be willing to pay 21,000 cedis for an insurance plan that included a benefit for normal delivery services.

Because the scenario presented to the women who were surveyed included a copayment for normal delivery services, we also looked at willingness to pay for a plan that did not include a copayment. There appears to be little added interest in enrollment when the copayment is eliminated.

A potential concern for the plan directors is that the expanded benefits would disproportionately attract women who want to have children or deter those who do not. Our analysis showed that the number of women in the plan who wanted more children would increase only by about 1 percent, from 64 percent to 65 percent. However, it is important to note that we did not analyze whether women would have more children in response to the new benefit.

Appendix

APPENDIX

SURVEY DETAILS

SAMPLING PROCEDURE

We used a multi-stage random sampling plan to select 800 respondents. The sample selection followed the design below:

- selection of Census Enumeration Areas (sampling points)
- selection of residential structures/houses
- selection of households
- selection of respondents

SELECTION OF CENSUS ENUMERATION AREAS: The list of all Census Enumeration Areas (EAs) in the research area (Nkoranza district) was obtained from the Ghana Statistical Service. The EA was the primary sampling unit. Based on the initial sample size of 800 and working on the basis of 16 interviews per sampling point, 50 EAs were selected randomly using a computer-generated set of random numbers.

SELECTION OF RESIDENTIAL STRUCTURES/HOUSES: Before the start of data collection, each selected EA was mapped on a form for selecting residential structures/houses. The map indicated all of the structures in that EA. All residential structures were numbered, starting from 1 and ending with the last structure.

The selection of residential structures/houses was made using computer-generated sets of random numbers. The residential structure/house whose ID number coincided with the first random number on the list of random numbers was selected. When the first random number did not coincide with an ID number, we continued with the next random number until we got to the random number that coincided with an ID number. This became the first house selected. The procedure was repeated until 16 houses were chosen in that EA.

SELECTION OF HOUSEHOLDS: We chose one household in each selected structure. When only one household resided in the structure, that household qualified automatically for inclusion in the sample. In the cases where more than one household lived in the house/compound, a Household Selection Form was used to select one household from the lot.

For households in a structure, the interviewer drew a map of the structure, and all households were numbered on this map, starting from 1 and continuing consecutively until each household had a number. When this was completed, one household was chosen using another set of computer-generated random numbers. The household whose ID number corresponded with the first number in the random list was the one selected. When the first random number did not coincide with an ID number, the interviewer continued with the next random number until she found a random number that coincided with a household's ID number. This became the selected household.

SELECTION OF RESPONDENTS: The interviewer interviewed the female head of each selected household. In cases where a correct respondent was not available, two more attempts were made to contact her. When these also failed, the same procedure outlined above was followed to select another household from a different house.

INTERVIEWER IDENTIFICATION AND TRAINING

IDENTIFICATION AND SELECTION OF INTERVIEWERS: Twenty-five females from RI's pool of experienced interviewers in the Brong Ahafo and Ashanti regions were selected to conduct the interviews. All of them spoke Akan (the major local language in the research area) and had at least one year of experience conducting interviews.

TRAINING OF INTERVIEWERS: RI organized a three-day training session for the interviewers from July 22 to July 24, 2002. A two-person team comprising the managing director and a research executive conducted the training. The team was assisted by the five female supervisors who were trained at the questionnaire pretest stage.

On the first day of training, fieldworkers were taken through the study background and objectives, as well as sample selection procedures, interviewing techniques, and a thorough review of the English version of the questionnaire. During the second day, the Akan translation of the questionnaire was reviewed, after which the interviewers carried out role-play/round robin practice interviews. Each interviewer conducted a portion of the interview and recorded responses. On the final day of training, the interviewers put the sampling procedures into practice, after which each of them conducted two trial interviews. After a debriefing session, the training ended. One trained interviewer was, however, dropped from the team because of ill health.

DESCRIPTION OF DATA COLLECTION PROCESS

Data collection began on July 25, 2002, and ended on August 3, 2002. Nearly all of the interviews were conducted in Akan. The field team (supervisors and interviewers) worked in teams: Four were made up of a supervisor and five interviewers, while the last had a supervisor and four interviewers.

Different teams worked in different EAs. Within the mapped EA, the supervisor followed the sampling plan to select the houses in which interviews were to be conducted and assigned the interviewers as such. Inside a selected house, the interviewer also followed the sampling plan, selected the respondent, and administered the questionnaire, scheduling appointments or making callbacks where necessary. The supervisor edited completed questionnaires and verified the work of the interviewers by sitting in on some interviews or making back checks. The research executive was also with the team throughout the period, coordinating fieldwork and carrying out the field audit.

To ensure that high-quality data were obtained from the field, RI subjected fieldwork to the following levels of supervisory action:

- all questionnaires completed each day were checked that same day to facilitate contacting respondents again when necessary
- to ensure that all instructions in the sampling specifications and questionnaire were followed, 13 percent of the interviews conducted by each interviewer were accompanied
- to ascertain that the interviews were actually done and ensure that this validation was correct, 35 percent of the interviews conducted by each interviewer were back-checked
- as part of the field audit, 17 percent of the questionnaires from each supervisor's area of responsibility that had undergone a type of supervisory action were checked by the research executive

QUESTIONNAIRE

CMS and RI agreed upon the final questionnaire that was used in collecting data for this study.

DATA PROCESSING

At the end of fieldwork, all completed questionnaires were sent to the RI office in Accra for final editing, coding, and data entry. RI used the following routine data handling procedures:

- data capture and verification of input
- logical computerized checking of all data
- data cleaning by fixing all logical or fieldwork errors

Subsequently, RI prepared frequency distributions of all questions.

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