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Evaluating the Effects of the National Health Insurance Act in Ghana: Baseline Report

Executive Summary *December 2005*

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Executive Summary

This report provides baseline data on health care seeking behavior and out-of-pocket expenditures prior to the implementation of the National Health Insurance Scheme (NHIS) in Ghana. At the same time, the study provides insights on the effects of enrollment in community-based health insurance (CBHI) schemes on utilization and payment for health care. CBHI schemes increased dramatically in Ghana during the 1990s, largely as a mechanism for avoiding potentially catastrophic health care expenditures associated with the ‘cash-and-carry’ system of user fees at point of service. The development of these separate community-based initiatives was altered by the passage of the National Health Insurance Act 650 (HI Act) in 2003, which requires the establishment of district-wide insurance schemes as part of the new NHIS. The government of Ghana enacted this law to assure equitable and universal access for all its residents, replacing fee for service with a prepayment mechanism. Some of the existing CBHI schemes have decided to transform their structures and policies to meet the new NHIS requirements, while others have opted to cease to exist. The current report seeks to contribute to the limited body of knowledge of the effects of insurance membership on utilization and affordability of health care.

Methods

The study design is a before and after impact evaluation. Given the decentralized focus of the NHIS, the evaluation concentrates on the effects of insurance enrollment in six districts in Ghana. The study districts were selected based on wealth designation (deprived and less deprived) and existence of a CBHI scheme. Two districts with existing CBHI schemes were included: Nkoranza and Kwahu South. The other four districts included in the study are: Ahanta West, Ajumako, Offinso, and Savelugu/Nanton. Each represents a different region of the country. In light of time and budgetary restraints, patient exit interviews were conducted in public and private health facilities in all six districts, whereas a representative household survey was conducted in a sub-sample (two) of the districts: Nkoranza and Offinso.

In both districts, multistage cluster sampling was used to select the households. Household samples were selected proportionate to size (i.e., the number of households in a given municipality). Different methods were utilized in the two districts, since Nkoranza had an existing CBHI scheme, and equal sample sizes of insured and uninsured households were desired. Data on membership by municipality was obtained from the Nkoranza scheme manager, which informed the sample selection (and the use of a filter question regarding insurance enrollment).

For the household survey, household heads were asked to list all regular household members, and then identify any members who met the eligibility requirements: 1) ill or injured in the past 15 days; 2) delivered a child in the past 12 months; or 3) hospitalized in the past 12 months. Interviews were then conducted with all eligible respondents. For the patient exit survey, patients were recruited upon discharge from sampled inpatient or outpatient facilities to participate in the study. Both surveys followed the same protocol for eligible minors, whereas the child’s caretaker was asked to respond on behalf of the child. Broadly, the questionnaires captured information on treatment seeking, type of

health facility, service intensity, out-of-pocket expenditures, and patient satisfaction, in addition to household characteristics.

Data collection for both surveys was carried out between September and November 2004. The household survey resulted in a total sample of 1,808 households: 1,307 from Nkoranza and 501 from Offinso. A total of 1,318 respondents were obtained for the patient exit survey.

While both surveys captured information on household characteristics (e.g., household size, water source, type of cooking fuel, electricity, ownership of goods, etc), only the household survey collected data on the head of the household (e.g., age, gender, education, and occupation). As such, the household survey permits analysis at the household and individual levels, whereas the patient exit survey only allows the individual (patient) level. For all analyses of household insurance status, the status of the household is determined by whether or not the head of household is enrolled.

Overview of Existing CBHI Schemes

Two of the study districts had existing CBHI schemes at the time of the survey: Nkoranza and Kwahu South. Nkoranza was one of the first CBHI initiatives, dating back to 1992, whereas Kwahu South began operations in 2001. Generally speaking, both schemes primarily offered coverage for inpatient care at a participating mission hospital. Both schemes encouraged enrollment of all family members to ward against adverse selection. Annual premiums ranged from 25,000 to 40,000 cedis per person.

Results

Enrollment in Insurance

Comparison of household characteristics by CBHI status (currently enrolled, formerly enrolled, and never enrolled) reveals that the currently and formerly enrolled households appear very similar, whereas the never-enrolled group is notably different. Never-enrolled households are smaller, less educated, and are less likely to be headed by a female. An exception is that 47 percent of currently enrolled households are in the top two wealth quintiles, compared to 38 percent and 34 percent respectively for the other two groups, and 35 percent for Offinso households. However, a regression analysis on the determinants of household enrollment among Nkoranza households did not find wealth as a significant predictor. Instead, older age (50+) and female gender were strong predictors of enrollment, as were employment and secondary or higher education of the household head. A similar regression predicting individual membership for both household and patient exit respondents did find wealth as a significant factor. For both surveys, individuals from the top two wealth quintiles were significantly more likely to be enrolled. Other important determinants of membership for both surveys included older age of individual and higher education, whereas the household data also revealed female gender and older age of household head as significant predictors.

Outpatient Care

Outpatient findings are derived from household members who had recently been ill or injured and patients exiting from selected outpatient health facilities. Respondents in this group most frequently cited malaria and aches and pains as reasons for seeking health care, either from the informal or formal sector. Respiratory problems and diarrhea were also common ailments. The majority of respondents for both surveys were female. A substantial proportion of respondents used

medication in their home and/or sought care from an informal source, such as a chemical seller. Whereas there were no strong patterns in determining informal care seeking, insurance membership significantly predicted care seeking from a formal health facility, as did seriousness of the affliction. Wealth and female gender were marginally significant. Nearly all respondents who sought formal care received a consultation, but lab tests and x-rays were much less common. The majority of these respondents also received a drug prescription, and most filled the complete prescription at the facility where they received care. Overall patient satisfaction was very high, ranging from 85 percent to 94 percent for “Very Satisfied.” However, insured respondents from both surveys were significantly more likely than uninsured to report they were “Not Satisfied” with the care they received.

Total expenditures for outpatient care (including informal care and transportation costs) were uniform across the surveys, ranging from 22,000 to 29,000 Ghanaian cedis. No differences in payments between insured and uninsured respondents were apparent. This finding is not surprising, as coverage of outpatient services was limited for both insurance schemes included in the study.

Inpatient Care

Inpatient findings are based on household members who were hospitalized in the past year, and inpatients discharged from one of the selected hospitals during the study period. Malaria was the most frequently cited reason for hospitalization. Reproductive health, surgery, and respiratory problems were also reported with some frequency. Again, the majority of respondents were women. Insured inpatients from both surveys spent a median of five nights in the hospital, compared to seven nights for uninsured in the household survey, and four nights for uninsured in the patient exit survey. The surveys found evidence of hospitals detaining inpatients due to inability to pay their bill. While this was not a problem for insured patients, a significant number of uninsured patients were affected by this practice (20 percent and 15 percent of uninsured in the household and patient exit surveys, respectively). This was primarily an issue in mission hospitals, and resulted in patients staying an additional three nights on average. Contrary to the outpatient findings, insured patients were significantly more likely to report satisfaction with the inpatient care they received than were uninsured.

Whereas insurance membership had little effect on out-of-pocket payments for outpatient care, enrollment in insurance resulted in lower payments for inpatient care. For both surveys, uninsured respondents living in districts with CBHIs paid the most for inpatient care. Insured household respondents paid an average of 59,000 cedis, compared to 491,000 cedis for uninsured patients. The differential between insured and uninsured respondents in the patient exit survey was even greater – the average payment for insured patients was 15,000 cedis, compared to 349,000 cedis for uninsured patients. A regression analysis on determinants of affordability indicates that insurance enrollment is the most important factor in being able to afford inpatient care. Another key factor for the patient exit sample was mission facility, whereas for the household survey wealth and older age of household head predicted ability to afford inpatient care.

Maternity Care

Results on maternity care utilization and payments are drawn from prenatal care and delivery patients leaving selected health facilities, and from women identified in the household survey as having given birth in the past year. The majority of women in both samples received at least four prenatal consultations, the standard of care for Ghana. Most women received prenatal care from a nurse or midwife, and insured women more frequently sought this care from the private rather than the public sector. Among women in the household survey, one-third delivered at home, although this was less common among insured women. The majority of women (80 percent) had a delivery

attended by nurses or midwives, although insured women were significantly more likely to deliver with a physician. The most obvious difference in delivery patterns among insured and uninsured women was the rate of caesarean deliveries – insured women in Nkoranza had twice the rate of caesareans than uninsured women in the same district, and five times the rate of Offinso women. The household survey permits a regression on the predictors of delivery at a modern health care facility. Insurance enrollment was not found to significantly predict modern delivery, although number of prenatal visits and wealth (top wealth quintile) were significant factors of delivery at a health facility. Women in the peak childbearing years (25-34) were less likely to deliver in a facility, which is not surprising as this age group faces the lowest childbearing risk.

While results on prenatal payments mirror those for outpatient care, delivery payments are more in line with inpatient expenditures. Prenatal care payment data is only available for the household survey. Insurance enrollment does not offer protection against higher prenatal payments, as insured women in Nkoranza paid significantly more for prenatal care than did their uninsured counterparts. However, women in Offinso paid the most for prenatal consultations. Comparing average prenatal and delivery payments among women in the household sample, insured women paid much less for delivery care, 71,000 cedis, compared to 178,000 cedis for uninsured women in Nkoranza, and nearly 200,000 cedis for women in Offinso. Insured women in the patient exit survey also paid significantly less than their uninsured counterparts. The regression results support these findings, showing that insurance membership offers significant protection for women in both surveys.

Discussion and Implications

The report presents important findings on the effects of insurance enrollment on access to and costs of health care, which have potential implications for the NHIS in Ghana. One concern often raised in connection with prepayment schemes is whether or not the premiums are affordable to the target population. The data from this study offers arguments for and against the premiums set by the government of Ghana for the NHIS. A few findings signal potential problems with the government-established premium of 72,000 cedis per adult. The NHIS premium structure requires that household adults pay this amount, and all dependents within the household will be covered. Thus for a family of five with two parents, the annual premium would be 144,000 cedis, falling between the annual total of 125,000 for the Nkoranza scheme and 200,000 cedis for the Okwahuman scheme. Referring specifically to Nkoranza, the household data revealed that half of currently uninsured households were previously enrolled in the scheme. Nearly 80 percent of formerly insured households cited expensive premiums as the reason for ending their membership. And among households that have never enrolled, 60 percent cited the same reason for not enrolling, indicating inability to afford premiums that were lower than those proposed under the NHIS. Also, regression analysis of individual predictors of enrollment found wealth to be a significant factor, suggesting that families with fewer resources would be less likely to join a prepayment scheme.

However, the results also lend support to the established premium structure and rates, perhaps more convincingly than arguments against them. First, although some families in Nkoranza indicated they could not afford the somewhat lower premiums for that CBHI scheme, larger families would benefit from the NHIS structure, as regardless of the number of dependents, the total family cost would be the same (i.e., 144,000 cedis). Second, the NHIS offers more comprehensive benefits, including outpatient curative care and normal delivery care, which make it a better value for families. Third, reviewing average payments made by uninsured patients for inpatient and delivery care, which ranged from 125,000 to 490,000 cedis per episode/event, the cost of 144,000 cedis for an entire family seems quite reasonable. While exemption policies and practices may need to be flexible to

respond to the needs of a given community, the NHIS premium structure and rates seem to be within reach of the majority of Ghanaians.

Another potential side-effect of prepayment schemes is adverse selection, or the practice of individuals at higher risk for health services enrolling at a disproportionate rate to individuals at lower risk. The study revealed some evidence of adverse selection, in that older individuals and women between 25 and 49 were more likely to be insured in Nkoranza, whereas children under 5 were less likely to be insured. This signals a pattern of higher-risk (less healthy) individuals enrolling in the insurance scheme. Given the national scope of the NHIS and its goal of universal enrollment and coverage, adverse selection should not pose a problem in the longer term. However, given the slow and uneven uptake of enrollment in the NHIS thus far, the effects of adverse selection may be more prominent in the near term.

Enrollment in insurance sometimes results in altered behavior, such as utilizing unnecessary medical care, a concept known as moral hazard. The results of the study found scant evidence of moral hazard, with the best example being the high rate of caesarean delivery among insured women in Nkoranza (15 percent). Whereas uninsured women were more likely to deliver at home, insured women were 2-5 times more likely to have a caesarean delivery. The fact that normal deliveries were not a covered benefit of the Nkoranza CBHI scheme, whereas caesarean deliveries were, appears to have influenced the high rate of surgical deliveries for insured women. However, by covering preventive and primary health care including normal deliveries, the NHIS should be able to minimize overuse of expensive medical interventions.

Results of this study largely demonstrate that enrollment in insurance does offer household income protection for more serious health issues. Whereas no effect was evident of insurance protecting respondents from having to pay for outpatient care, this was true of inpatient care. Uninsured household respondents paid nearly 10 times more for inpatient care than did insured respondents, whereas uninsured patient exit respondents paid 13 to 23 times more than their insured counterparts. Findings for maternity care payments were similar – insured household respondents paid 2.5 times less for delivery care than did uninsured women and insured patient exit respondents paid 3–5 times less than uninsured respondents.

Pending available funding, the authors recommend another round of surveys be conducted in the study districts to monitor progress and evaluate the impact of implementing national health insurance in Ghana.