

University of Groningen

## Does Health Insurance Premium Exemption Policy for Older People Increase Access to Health Care? Evidence from Ghana

Duku, Stephen Kwasi Opuku; van Dullemen, Caroline Elisabeth; Fenenga, Christine

*Published in:*  
Journal of Aging and Social Policy

*DOI:*  
[10.1080/08959420.2015.1056650](https://doi.org/10.1080/08959420.2015.1056650)

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2015

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Duku, S. K. O., van Dullemen, C. E., & Fenenga, C. (2015). Does Health Insurance Premium Exemption Policy for Older People Increase Access to Health Care? Evidence from Ghana. *Journal of Aging and Social Policy*, 27(4), 331-347. <https://doi.org/10.1080/08959420.2015.1056650>

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

## **Does Health Insurance Premium Exemption Policy for Older People Increase Access to Health Care? Evidence from Ghana**

STEPHEN KWASI OPUKU DUKU, MBA, MSc

*PhD Candidate, VU Amsterdam, and the Amsterdam Institute for Global Health and Development, Amsterdam, The Netherlands, and University of Ghana, Accra, Ghana*

CAROLINE ELISABETH VAN DULLEMEN, MSc

*PhD Candidate, VU Amsterdam, Amsterdam, The Netherlands*

CHRISTINE FENENGA, MPH, PhD

*Post-Doctoral Researcher, Population Research Centre, University of Groningen, Groningen, and the Amsterdam Institute for Global Health and Development, Amsterdam, The Netherlands, and University of Ghana, Accra, Ghana*

*Aging in Sub-Saharan Africa causes major challenges for policy makers in social protection. Our study focuses on Ghana, one of the few Sub-Saharan African countries that passed a National Policy on Aging in 2010. Ghana is also one of the first Sub-Saharan African countries that launched a National Health Insurance Scheme (NHIS; NHIS Act 650, 2003) with the aim to improve access to quality health care for all citizens, and as such can be considered as a means of poverty reduction. Our study assesses whether premium exemption policy under the NHIS that grants non-payments of annual health insurance premiums for older people increases access to health care. We assessed differences in enrollment coverage among four different age groups (18–49, 50–59, 60–69, and 70+). We found higher enrollment for the 70+ and 60–69 age groups. The likelihood of enrollment was 2.7 and 1.7 times higher for the 70+ and 60–69 age groups, respectively.*

---

Received June 16, 2014; revised October 12, 2014; accepted November 15, 2014.

Address correspondence to Caroline Elisabeth van Dullemen, MSc, VU Amsterdam, De Boelelaan 1081, 1081 HV Amsterdam, The Netherlands. E-mail: [cvdullemen@worldgranny.nl](mailto:cvdullemen@worldgranny.nl)

Color versions of one or more of the figures in the article can be found online at [www.tandfonline.com/wasp](http://www.tandfonline.com/wasp).

*Our results suggest the NHIS exemption policy increases insurance coverage of the aged and their utilization of health care services.*

*KEYWORDS* aging population, determinants of enrollment, Ghana, health insurance, health policy

## INTRODUCTION

Worldwide socioeconomic developments have resulted in positive and improved health outcomes: More children survive, fertility falls, and longevity increases, reinforcing development (World Health Organization [WHO], 2012a). However, of the 42 major countries in Sub-Saharan Africa (SSA), only four are upper-middle-income economies, and six are middle-lower-income countries. Also, the impact of the HIV/AIDS epidemic is still visible in the demographic pyramid of the region. In spite of these facts, many parts of Africa are steadily aging as life expectancy increases and fertility is on the decline. It is estimated that by 2050, most countries in Africa will have doubled their aging populations (Apt, 2000). Debate on health policies focused on aging people in Africa has intensified, in particular with respect to their vulnerability to chronic diseases and their limited access to health services. As people, women in particular, live longer, they risk chronic poverty, which increases their need for health care. In Ghana, the difference in life expectancy between men and women is about 5 years.

Across the world, health insurance is understood as a health policy that serves to protect households from the direct financial consequences of health care and therefore as a way of poverty alleviation (Asante & Aikins, 2008; Blanchet, Fink, & Osei-Akoto, 2012; Sulzbach, Garshong, & Owusu-Banahene, 2005). In a study conducted by the World Health Organization (WHO) in Ghana, India, and Tanzania on global aging and adult health, they found 11% of the population in Ghana to be aged 50 years and older in 2005 (Kowal et al., 2010). Five years later, in 2012, this percentage increased to 11.7%. Life expectancy at birth has also increased from an average 59.5 years in 2008 to 61.4 years in 2012 (Central Intelligence Agency, 2012). In light of these trends, understanding the health situation of older people is important. Kowal mentions recent studies showing that the effects of healthy lifestyles on subsequent disability among older people are large, particularly regular exercise and the absence of smoking. In general, expected health patterns had a gender dimension—better health for men than for women—and a socioeconomic dimension—better health for individuals with higher education and income levels.

Older people are more prone to chronic diseases (the United Nations use the term “noncommunicable diseases”) such as heart disease, stroke,

visual impairment, hearing loss, and dementia, which lead to reduced capacities to earn incomes. Besides that, there is a need for other types of treatments and geriatrics health staff. It is also evident that uninsured older people may be particularly at risk for adverse health outcomes. In short, the shift poses challenges to the country's health system, which is insufficiently adapted to the needs of the aged (Aboagye, Agyemang, & Tjerbo, 2013; Aboderin, 2008; Aboderin & Ferreira, 2008; Apt, 1993; Exavery, 2010; National Population Council, 2007; WHO, 2012b).

Our study focuses on Ghana, one of the few SSA countries that received cabinet approval for a National Policy on Aging in 2010. This policy captures the social welfare, health, and human rights, among other privileges, of older people in society. Since 2013, the Global Age Watch Index (GAWI) has been publishing income and health situations of older people in 96 countries. Ghana ranks 81 on GAWI and 77 on the specific health status. In general, African countries have low GAWI values, a reflection of the low priority given to aging issues on domestic policy agendas in most African countries (HelpAge International, 2014). Lagomarsino, Garabrant, Adyas, Muga, and Ottoo (2012) analyzed nine low-income and lower-middle-income countries in Africa and Asia that have implemented national health insurance reforms designed to move toward universal health coverage; Ghana was one of those countries. The authors identified some common patterns, such as use of tax revenues to subsidize target populations, steps toward broader risk pools, and emphasis on the purchase of services through demand-side financing mechanisms. They noted substantial variations in format and direction.

Ghana is also one of the first SSA countries that launched a National Health Insurance Scheme (NHIS Act 650, 2003), with the aim to improve access to quality health care for all citizens, including the most vulnerable. By 2011, the cumulative uptake in Ghana's NHIS was close to 70% of the population. However, active users of the insurance reached just 33% (National Health Insurance Authority, 2011). Empirical evidence shows regional differences in enrollment, and enrollment among the poor is low (Asante & Aikins, 2008; Dixon, Tenkorang, & Luginaah, 2011; Jehu Appiah et al., 2011; Mills et al., 2012). The premium exemption policy under the NHIS refers to the categories of persons who do not have to pay the annual insurance premiums by virtue of their ages, types of care needed, being indigent, or being Social Security and National Insurance Trust (SSNIT) pensioners or SSNIT contributors. The exemption policy of the NHIS provides exemptions on premium payment for children younger than 18 years who are SSNIT contributors, SSNIT pensioners, people aged 70 years and older, indigents, pregnant women, and Livelihood Empowerment Against Poverty (LEAP) beneficiaries. Although all of these groups are exempted from premium payment, only the pregnant women, LEAP beneficiaries, and indigents are exempted from payment of processing fees as well. The others must pay a small *processing fee* before they are enrolled under the NHIS. The

exemption policy was implemented to encourage vulnerable groups to enroll and renew; however, retention is a main concern to the NHIS. All over the world, health insurance exemptions are inherently difficult to design and implement; few countries have successfully implemented effective exemption mechanisms (Bennett & Gilson, 2001). The success of such exemption mechanisms to a very large extent depends on the context-specific issues of the design and implementation of the entire social health insurance financing mechanism. Successful exemption policies received high priority from both politicians and technocrats, had clear guidelines and eligibility criteria, were effectively communicated to health workers and the general population, and ensured that non-poor groups did not abuse the policy (Bennett & Gilson, 2001; Ekman, 2004; Fenenga et al., 2014; Gilson et al., 2000; Gilson, Russell, & Rauyajin et al., 1998; Jui-Fen & Hasiao, 2003; Kutzin, 2001; Sheikh et al., 2011).

As the fertility transition advances and the population in Ghana ages, the health sector has to anticipate the changing demand for health care. The purpose of our study is to explore whether the exemption policy actually increases enrollment for elders significantly and whether this results in an increase in their utilization of health care. We hypothesize that the age groups 60–69 and 70+ have significantly higher enrollment coverage than the 18–49 age group. We further hypothesize that there is a significantly positive relationship between the insured in age groups 60–69 and 70+ and health services utilization. Last, we expect to find age group differences in the determinants of enrollment in health insurance, such as gender and membership of social networks in Ghana.

## DATA AND METHODS

This study uses primary data from the “Towards a Client-Oriented Health Insurance Scheme in Ghana” Project (COHEiSION project). Both qualitative and quantitative methodologies were employed in the data collections in 2011 and 2012. The qualitative method preceded the quantitative method. For the qualitative method, individual in-depth interviews and focus group discussions were conducted among 22 health care providers, 16 NHIS staff, and 223 clients at the national, regional, district, and community levels of the health insurance and health care delivery system to identify the barriers to enrollment in the NHIS in the Western and the Greater Accra Regions in Ghana. The qualitative findings were used to obtain an emic perspective (a native point of view) of people’s opinions. This allowed a better understanding of their behavior and decision making in the local context. In addition, qualitative data informed and grounded the questions in the household survey questionnaire and helped with the interpretation of the quantitative findings. For the quantitative method, data were collected

from 1,920 randomly selected households living within a 10-km radius of 64 selected primary health care facilities in the two project regions. Respondents were sampled through a multistage sampling strategy where the 64 clusters of primary health care facilities were first selected on the basis of their ownership (public/private), location (rural/urban), and NHIS accreditation quality scores. Subsequently, 30 households were randomly sampled from within a radius of 10 km around each selected primary health care facility. In total, data on 7,097 individuals dwelling in the sampled households involving their sociodemographics, social capital and social schemas, employment status, health status and health care utilization behavior, NHIS enrollment status, perceived quality of health care services, perceived quality of NHIS services, consumption expenditure patterns, and dwelling characteristics were collected. This paper provides analysis of 4,214 individuals aged 18 years and older from the household survey.

### Empirical Estimation

To study the differences in enrollment and some demographic characteristics of interest of the four age groups in our sample of 4,214 individuals of 18 years and older, we performed bivariate cross-tabulation between sociodemographic characteristics and enrollment status for individuals in the 18–49, 50–59, 60–69, and 70+ age group subsamples. To test our hypothesis, we employed multivariate logistic regression analysis on the pooled sample. Current enrollments in any health insurance scheme were used as dependent variables of interest for the multivariate regression estimation. (Besides the NHIS, Ghana has few smaller private health insurance schemes, counting for 0.1 % of the health insured population in the country.) This was measured with a dichotomous variable equal to 1 if the individual is currently enrolled in any type of health insurance at the time of interview, 0 if otherwise. The four age groups, 18–49, 50–59, 60–69, and 70+, were our main independent variables, with the 18–49 as the reference group. We controlled for sex, marital status, health status, membership of network, health care utilization, and wealth quintiles in the estimation. All statistical analyses were performed using STATA version 12.0.

## RESULTS AND DISCUSSION

The main objective of Ghana's NHIS exemption policy is to increase access to insurance and provide free health care for people older than age 70 and for SSNIT pensioners older than age 60. This article presents and discusses scientific evidence that this policy has a significantly positive effect on insurance enrollment and utilization of health care by older people. However, despite the identified increase in enrollment and utilization, many eligible

older people in these age groups remain uninsured. Some recommendations for health policy are therefore provided.

### Demographic Characteristics and Current Health Insurance Enrollment

Table 1 presents the demographic characteristics of respondents in the four age groups. There were more women in all age groups. Most of the respondents in the 70+ age group (51.3%) were widow(er)s. The 70+ age group utilizes health services more than all the other age groups. Approximately 48% and 9% utilized health services between 1–5 and 6–10 times, respectively, in the 6 months prior to the survey.

There was very little difference in the proportion of respondents in the five wealth quintiles for all the four age groups. While the majority of the 70+ (62.8%) age group was currently enrolled in health insurance, only 32.4% of the 18–49 age group had insurance enrollment. Of those enrolled, more than 90% of the 70+ age group were exempted from premium payment, and an even higher proportion of 97% got their enrollment through the 70 years and older exemption category.

The bivariate analysis of some demographic characteristics and current health insurance status of respondents in the four age groups are presented in Appendix 1. There was no statistically significant difference between the insurance status of men and women in the 70+ age group, but that of the 18–49 age group was statistically significant at the 5% level ( $p = .00$ ). We found more men (67.1%) were enrolled in the 70+ age group than women, compared to more women (43.5%) in the 18–48 age group. The gender differences in enrollment are significant in the 18–49 age group but not in older age groups. This might be explained by the reproductive age of women and the exemption from payment of premiums and registration fees by pregnant women in this group. Several studies have shown increases in enrollment among women as a result of the introduction of premium and registration fee exemption policy for pregnant women (Aryeetey et al., 2013; Witter, Garshong, & Ridde, 2013). Similarly, the effect of social capital, which, according to various researchers (Donfouet & Mahieu, 2012; Zhang, Wang, Wang, & Hsiao, 2006), is positively associated with utilization of health care services and use of the community-based insurance scheme, shows a significant positive association with enrollment in the 18–49 age group. However, the positive association gets less strong after 50 years. This could be explained by older people becoming less mobile with age and less engaging in group and network activities. This reduced the effect of social capital in the community on older people's decision to enroll in the scheme. A further exploration and understanding of the types and densities of the networks for older people in this context could help to determine how certain social relations can overcome existing enrollment barriers.

**TABLE 1** Characteristics of Respondents in Four Age Groups

Variable	18–49 Age Group <i>N</i> = 3,281	50–59 Age Group <i>N</i> = 451	60–69 Age Group <i>N</i> = 283	70+ Age Group <i>N</i> = 199
Sex				
Male	42.9%	46.1%	49.8%	42.3%
Female	57.1%	53.9%	50.2%	57.3%
Marital status				
Never married	42.8%	4.3%	4.6%	3.5%
Married	42.5%	70.7%	58.9%	33.2%
Divorced/separated	6.3%	12.2%	10.6%	9.6%
Widow(er)	1.6%	10.4%	25.2%	51.3%
Living together	6.9%	2.2%	0.7%	2.5%
Wealth quintile				
Poorest	15.6%	17.5%	15.3%	16.2%
Poor	17.9%	16.2%	16.4%	15.7%
Average	19.1%	20.0%	21.2%	22.2%
Rich	22.6%	21.6%	25.2%	23.2%
Richest	24.9%	24.7%	21.9%	22.7%
Health status				
Poor health	2.1%	4.3%	11.4%	15.7%
Average health	6.3%	12.3%	16.4%	30.9%
Good health	91.6%	83.4%	72.2%	53.3%
Health care utilization				
Utilization 0	71.9%	65.6%	56.5%	42.7%
Utilization 1–5	26.6%	31.9%	40.6%	47.7%
Utilization 6–10	0.9%	2.0%	1.8%	9.1%
Utilization > 10	0.3%	0.4%	1.1%	0.5%
Health insurance enrollment				
Currently insured	38.60%	44.80%	51.90%	62.80%
Currently not insured	51.40%	55.20%	48.10%	37.20%
Previously insured	30.90%	34.50%	40.40%	51.40%
Never insured	69.10%	65.50%	59.60%	48.60%
Premium Exemption				
Exempted	22.7%	19.8%	75.5%	90.4%
Not exempted	77.3%	80.2%	24.5%	9.6%
Reason for exemption				
Aged 70+	0.0%	0.0%	0.0%	97.4%
Younger than 18	13.5%	0.0%	0.0%	0.0%
Pregnant woman	28.9%	0.0%	0.0%	0.0%
SSNIT contributor	57.1%	97.5%	100.0%	2.6%
Indigent	0.7%	2.5%	0.0%	0.0%

Note. Source: COHEiSION Project baseline survey of total *N* = 4,214 individuals aged 18 years and older.

In contrast, while we found the difference in insurance status between the different marital status categories of the 70+ age group to be statistically significant at the 10% level ( $p = .096$ ), that of the 18–49 age group was not significant. Approximately 90% of the divorced/separated were enrolled in the 70+ age group, compared to only 33% in the 18–49 age group. We also found the difference between the insurance status and the various categories



of health services utilization rates to be statistically significant at the 1% level for the 18–49 age group ( $p = .00$ ), but not for the 70+ age group.

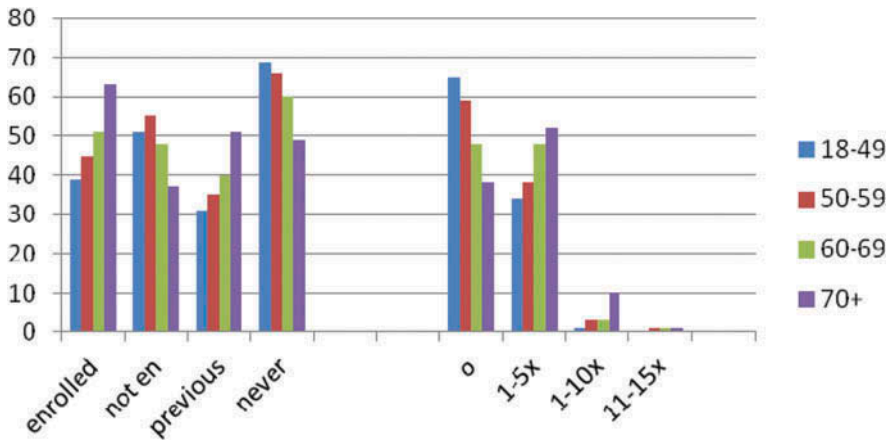
### Reasons for Not Enrolling in Health Insurance Scheme

We found evidence that suggests that the level of awareness about the exemption policy in the 70+ age group is not optimal, as shown in Table 2. A minimal percentage (approximately 3%) of the uninsured in the 70+ age group indicated they had never heard of the NHIS, while 8.60% indicated they could afford the premium. An even higher proportion (45.3%) of the 60–69 age group indicated they could afford the premium. We found that the proportion of uninsured who indicated that they have no confidence in the scheme increases with age, with the 70+ age group having the highest proportion of 45.7%. Figure 1 presents enrollment and utilization per age category. According to Fenenga, Alhassan-Kaba, and colleagues (forthcoming), low confidence is partly based on disparities in explanatory models between health care clients and health care providers. Their sociocultural beliefs and notions on illness, the need for care, the quality of health care, and health insurance services differ, easily leading to miscommunication, misunderstanding, and low trust. In particular in the older age groups, traditional cultural beliefs can be stronger and disparities between their explanatory models and those of professionals more pronounced. Further study into low confidence levels among this age group can help to explain and resolve low uptake.

**TABLE 2** Reasons for Never Enrolling in Any Health Insurance Scheme

Variable	18–49 Age Group Never Enrolled ( $N = 1,344$ )	50–59 Age Group Never Enrolled ( $N = 154$ )	60–69 Age Group Never Enrolled ( $N = 75$ )	70+ Age Group Never Enrolled ( $N = 35$ )
Cannot afford premium	37.30%	38.30%	45.30%	8.60%
Never heard of the NHIS	0.70%	0.00%	0.00%	2.90%
Covered by employer	3.20%	1.90%	2.70%	8.60%
Mostly healthy, do not need the NHIS	23.70%	22.70%	17.30%	14.30%
No scheme in my area	0.70%	0.70%	0.00%	0.00%
No confidence in the scheme	20.10%	20.80%	30.70%	45.70%
Registration point too far	2.80%	1.30%	1.30%	<b>0.00%</b>
Have private health insurance	0.20%	0.00%	0.00%	0.00%
Other reasons	11.40%	14.30%	2.70%	20.00%

Source: COHEiSION Project baseline survey of Total  $N = 4,214$  individuals aged 18 years and older.



**FIGURE 1** Enrollment status by age group. The four columns on the left show enrollment per age category (enrolled, not enrolled, previous, and never). The four columns on the right show health care utilization per age category (0 times, 1 to 5 times, 1 to 10 times, and 11 to 15 times).

Barriers such as “never heard about the NHIS” or “cannot afford premium” could be explained as inadequate information on the exemption policy or the NHIS in general to these groups of people. Indeed, the percentage of respondents who indicated “lack of confidence in the scheme” as a reason for not enrolling increases with age and accounts for over 45% in the 70+ group. This might be the result of a combination of factors related to the services of the NHIS as well as the services of health care providers. The so called vertical social capital or trust relations between people in the community and formal institutions, such as the health care provider and health insurer, diminishes when people’s perceptions to benefiting from the scheme reduces. Previous experience of poor quality, health staffs favoring uninsured, or inconsistencies in provided benefit packages were found to reduce people’s interest and trust in services (Fenenga, Nketiah-Amponsah, et al., [forthcoming](#)). Also, other studies have pointed to these and a variety of other barriers to enrollment (Aryeetey et al., [2013](#); Jehu-Appiah et al., [2011](#)).

### Effect of Gender Differences

We also looked at the differences between the enrollment of older men and women. In a study by Dixon et al. ([2014](#)) that focused on gender inequalities within Ghana’s NHIS, they found that women with unreliable incomes who reported being food-insecure and living with young children were more likely to drop out of insurance. In contrast, men were more likely to drop out for being unsatisfied with services provided. Since older people in general

and women in particular make more use of health services, one would predict that the enrollment would be significantly higher. However, we see the contrary. In the two oldest age groups, we found that men are more enrolled than women. In the 70+ group, 67.1% of the men and 59.7% of the women are insured. This can be attributed to the *level of education*. More highly educated people are more likely to enroll. This is a stronger feature than the fact that women use health care more often. There is a strong correlation between longevity and education (Rogot & National Institutes of Health, 1988). Therefore, this finding is interesting with respect to the situation of older people. It could suggest that the relatively low level of education of older people (Table 1) leads to a lower level of enrollment, than when the older Ghanaians of today were better educated. It also may suggest that in the future, with the rising levels of education, more people will enroll. A second explanation might be related to financial constraints such as paying an entrance fee or transportation costs.

### Effect of Exemption Policy on Health Insurance Enrollment

The results of the logistic regression analysis of the effect of the premium exemption policy on health insurance enrollment of older people are presented in Table 3.

We found the odds of enrolling in health insurance to be significantly higher in the older age groups (60–69 and 70+ years) than the two younger age groups. The 70+ and 60–69 age groups were 2.7 and 1.7 times, respectively, more likely to enroll than the 18–49 age group. The difference in enrollment between the 60–69 age group and the 70+ age group reveal the effect of the policy for SSNIT pensioners, who are exempted from the age of 60, and the larger group exempted at 70+. Thus, non-SSNIT pensioners aged 60 and older still have to pay premiums until age 70 years when they qualify for the 70+ premium exemption.

We also found that women and never-married individuals were 1.4 and 1.3 times more likely to enroll than men and married couples, respectively. Appendix 1 shows that the majority of women (74.3%) have no formal education compared to 25.7% of the men. This could also be a possible explanation to the low level of enrollment among women in the 70+ age group. Individuals with poor health status were significantly more likely (OR = 1.0) to enroll in health insurance than those in good health (OR = 0.6).

We further found that people who do not belong to community groups or networks were 0.7 times less likely to enroll than those who do belong to groups or networks. Individuals who utilize health services more frequently had a *significantly* higher likelihood of enrollment. We found those who utilized health services 6–10 and 1–5 times in the 6 months prior to the survey were 2.1 and 1.7 times, respectively, more likely to enroll in health insurance

**TABLE 3** Effect of Exemption Policy on Health Insurance Enrollment

Category	Odds Ratio (95% Confidence Interval)	Standard Error
Age (18–49 years)		
50–59 Years	1.18	0.13
60–69 Years	1.68***	0.24
70+ Years	2.72***	0.51
Sex (male)		
Female	1.41***	0.09
Marital status (married)		
Never married	1.23**	0.09
Divorced/separated	0.93	0.13
Widow(-er)	0.82	0.14
Living together	1.11	0.17
Health status (poor health)		
Average health	0.59*	0.13
Good health	0.60**	0.11
Group/association (member)		
Not member	0.71***	0.05
Health care utilization (no utilization)		
Utilization 1–5	1.70***	0.13
Utilization 6–10	2.10**	0.66
Utilization 11–15	0.68	0.39
Wealth quintile (poorest)		
Poor	1.36**	0.15
Average	1.48***	0.16
Rich	1.41**	0.15
Richest	1.90***	0.20
Constant	0.59*	0.13

*Note.* Source: COHEiSION Project baseline survey of  $N = 3,951$  individuals aged 18 years and older. Reference categories in parentheses.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ . Pseudo  $R^2 = 0.046$ , Pearson chi-square = .000, Log Pseudo likelihood Ratio =  $-2554.85$ .

than those who did not utilize health services within that time period. Again, as shown in Appendix 2, 66.7% and 100% of the insured in the 60–69 and 70+ age groups, respectively, utilized health services more than 10 times in the 6 months prior to the survey. This suggests that the exemption policy has a positive effect on the utilization of health care services by older people. Wealthy individuals were significantly more likely to enroll than the poor. Those in the richest quintile were 1.7 times more likely to enroll than those in the poorest quintile.

### Study Limitations

The NHIS exemption policy includes a number of groups benefitting from reduced cost or nonpayment of insurance premiums. Whereas these groups are well defined, some groups apparently overlap. One can be formally employed and pregnant, rightfully benefitting exemption in both categories.

## POLICY IMPLICATIONS

We started the research with the theoretical assumption that premium exemption would lead to almost full enrollment and therefore almost maximum access to health care. In general, our results suggest that the NHIS exemption policy actually does increase insurance coverage for and the utilization of health care services by the aged. However, by focusing on the reasons older people do not enroll in NHIS, we concluded that there are serious barriers. Therefore, in terms of policy implications, we see these options for policy improvements:

1. Some older people still consider participating in the scheme too costly. This might be due to the registration processing fees, which are determined by the District Scheme offices of the NHIS and vary across the 155 districts in the country. This fee must be paid by all age groups.
2. The relatively low level of education of older people (Table 1) leads to a lower level of enrollment.
3. The largest proportion (45%) of older people in the 70+ age group mentioned that they “have no confidence in the scheme” as the main reason for not enrolling. This could be a result of a combination of factors related to the services of the NHIS as well as the health care services of clinics. Other studies have indicated these as barriers to enrollment (Aryeetey et al., 2013; Jehu-Appiah et al., 2011).

To ensure the success of the exemption policy, there is the need for a closer look at barriers to enrollment as presented in Table 3. One differentiation to anticipate is that of *premium* and *registration fees*. The latter might still constitute a financial barrier for those older people not in the indigent group. We recommend as the next policy step that these exempted groups should also be exempted from payment of registration fees.

Furthermore, we recommend more emphasis be laid on informing the target group with effective communication geared toward older people, women in particular, and their levels of education and understanding.

Barriers such as “never heard about the NHIS” or “cannot afford premium” could be a result of inadequate information on the exemption policy or the NHIS. However, it could also be a result of a combination of factors related to the services of the NHIS as well as the health care services of clinics. Therefore, further investigation is necessary to contextualize these findings to determine policies to address the specific health care needs of the rapidly aging Ghanaian population.

## CONCLUSIONS

Our main research question was the following: Does a health insurance premium exemption policy for older people increase access to health care? By assessing differences and determinants of enrollment in the NHIS in Ghana among different age groups, we found a significant increase in the likelihood of enrollment. Compared to the younger age groups, this likelihood was 2.7 and 1.7 times higher for the 70+ and 60–69 age groups, respectively. Also the utilization of health care showed positive and significant increase with age.

Reasons for not enrolling could be explained as inadequate information on the exemption policy or the NHIS in general. The requirement for other exempted categories apart from the 70+ age group and indigents to pay registration fees will need further policy intervention. Our findings were quite similar to those mentioned in the research of Parmar et al. (2014), who found that with respect to enrollment of older people in social health protection programs in West Africa, social exclusion plays a significant part.

In general, we conclude that the health insurance premium exemption policy for older people is an important contribution to better health care for all. However, from the results of our research, further investigation is necessary to differentiate the effects of the different exemption categories under the NHIS. Further research is also required to determine the appropriate policies to address the specific health care needs of the rapidly aging Ghanaian population.

## REFERENCES

- Aboagye, E., Agyemang, O. S., & Tjerbo, T. (2013). Elderly demand for family-based care and support: Evidence from a social intervention strategy. *Global Journal of Health Science*, 6(2), 94–104. doi:10.5539/gjhs.v6n2p94
- Aboderin, I. (2010). Understanding and advancing the health of older populations in Sub-Saharan Africa: Policy perspectives and evidence needs. *Public Health Reviews*, 32(2), 357–376.
- Aboderin, I., & Ferreira, M. (2008). Linking ageing to development agendas in Sub-Saharan Africa: Challenges and approaches. *Population Ageing*, 1(1), 51–73. doi:10.1007/s12062-009-9002-8
- Apt, N. A. (1993). Care of the elderly in Ghana: An emerging issue. *Journal of Cross-Cultural Gerontology*, 8(4), 301–312. doi:10.1007/BF00972559
- Apt, N. A. (2000). *Rapid urbanization and living arrangements of older persons in Africa*. New York, NY: United Nations Department of Economic and Social Affairs.
- Aryeetey, G. C., Jehu-Appiah, C., Kotoh, A. M., Spaan, E., Arhinful, D. K., Baltussen, R. . . . Agyepong, A. (2013). Community concepts of poverty: An application to premium exemptions in Ghana's national health insurance scheme. *Globalization and Health*, 9, 12. doi:10.1186/1744-8603-9-12

- Asante, F., & Aikins, M., (2008). *Does the NHIS cover the poor?* Danida Health Sector Support Office paper. Accra, Ghana: Danida.
- Bennett, S., & Gilson, L. (2001). *Health financing: Designing and implementing pro-poor policies*. The DFID Health Systems Resource Center. Retrieved from <http://www.healthsystemsrc.org>
- Blanchet, N. J., Fink, G., & Osei-Akoto, I. (2012). The effect of Ghana's National Health Insurance Scheme on health care utilisation. *Ghana Medical Journal*, 46(2), 76–84. Ghana Medical Association
- Central Intelligence Agency (CIA). (2012). *World factbook*. Retrieved from <http://www.cia.gov/library/publications>.
- Dixon, J., Luginaah, I. N., & Mkandawire, P. (2014). Gendered inequalities within Ghana's National Health Insurance Scheme: Are poor women being penalized with a late renewal policy?. *Journal of Health Care for the Poor and Underserved*, 25(3), 1005–1020. doi:10.1353/hpu.2014.0122
- Dixon, J., Tenkorang, E. Y., & Luginaah, I. (2011). Ghana's National Health Insurance Scheme: Helping the poor or leaving them behind? *Environment and Planning C: Government and Policy*, 29(6), 1102–1115. doi:10.1068/c1119r
- Donfouet, H., & Mahieu, P. (2012). Community-based health insurance and social capital: A review. *Health Economics Review*, 2, 1–5. doi:10.1186/2191-1991-2-5
- Ekman, B. (2004). Community-based health insurance in low-income countries: A systematic review of the evidence. *Health Policy and Planning: A Journal on Health in Development*, 19(5), 249–270. doi:10.1093/heapol/czh031
- Exavery, A. (2010). *Determinants of health care utilisation among the elderly population in rural Ghana*. Faculty of Health Science, Johannesburg, University of Witwatersrand.
- Fenenga, C. J., Alhassan-Kaba, R., Duku, S., Janssens, W., & Hutter, I. (forthcoming). *Disparities between explanatory models of health clients, health care providers, and health insurer*.
- Fenenga, C. J., Boahene, K., Arhinful, D., Rinke De Wit, T. R., & Hutter, I. (2014). Do prevailing theories sufficiently explain perceptions and health-seeking behavior of Ghanaians? *The International Journal of Health Planning and Management*, 29(1), 26–42. doi:10.1002/hpm.v29.1
- Fenenga, C. J., Nketiah-Amponsah, E., Ogink, A., Arhinful, D. K., Poortinga, W., & Hutter, I. (forthcoming). *Social capital and active membership in the Ghana National Health Insurance Scheme*.
- Gilson, L., Kalyalya, D., Kuchler, F., Lake, S., Oranga, H., & Ouendo, M. (2000). The equity impacts of community financing activities in three African countries. *The International Journal of Health Planning and Management*, 15(4), 291–317. doi:10.1002/(ISSN)1099-1751
- Gilson, L., Russell, S., & Rauyajin, O., Boonchote, T., Pasandhanathorn, V., Chaisenee, P., . . . Nuan-anam Tantgate, N. (1998). *Exempting the poor: A review and evaluation of the low income card scheme in Thailand*. PHP Department Publication No 30. London, UK: London School of Hygiene and Tropical Medicine.
- HelpAge International. (2014). *Global Age Watch index*. Retrieved from <http://www.helpage.org/global-agewatch/population-ageing-data/country-ageing-data/?country=Ghana>

- Jehu-Appiah, C., Aryeetey, G., Spaan, E., Hoop, T., Agyepong, I., & Baltussen, R. (2011). Equity aspects of the National Health Insurance Scheme in Ghana: Who is enrolling, who is not and why? *Social Science & Medicine*, *72*, 157–165. doi:10.1016/j.socscimed.2010.10.025
- Jui-Fen, R., & Hasiao, L. W. C. (2003). Does universal health insurance Make health care unaffordable? Lessons from Taiwan. *Health Affairs*, *22*, 77–88. doi:10.1377/hlthaff.22.3.77
- Kowal, P., Kahn, K., Ng, N., Naidoo, N., Abdullah, S., Bawah, A. . . . Tollman, S. M. (2010). Ageing and adult health status in eight lower-income countries: The INDEPTH WHO-SAGE collaboration. *Umeå Universitet, Epidemiologi Och Global Hälsa*.
- Kutzin, J. (2001). A descriptive framework for country-level analysis of health care financing arrangements. *Health Policy*, *56*(3), 171–204. doi:10.1016/S0168-8510(00)00149-4
- Lagomarsino, G., Garabrant, A., Adyas, A., Muga, R., & Otoo, N. (2012). Moving towards universal health coverage: Health insurance reforms in nine developing countries in Africa and Asia. *The Lancet*, *380*, 933–943. doi:10.1016/S0140-6736(12)61147-7
- Mills, A., Ataguba, J. E., Akazili, J., Borghi, B., Garshong, B., Makawia, S. . . . McIntyre, D. (2012). Equity in financing and use of health care in Ghana, South Africa and Tanzania: Implications for paths to universal coverage. *The Lancet*, *380*, 126–133. doi:10.1016/S0140-6736(12)60357-2
- National Health Insurance Authority. (2011). *NHIS annual report*. Accra, Ghana, Author.
- National Population Council. (2007). *Ghana Country Report on the implementation of the Madrid International Plan of Action on Ageing*. Accra, Ghana: N. P. Council: Accra.
- Parmar, D., Williams, G., Dkhimi, F., Ndiaye, A., Asante, F. A., Arhinful, D. K., & Mladovsky, P. (2014). Enrolment of older people in social health protection programs in West Africa—Does social exclusion play a part? *Social Science & Medicine*, *119*, 36–44. doi:10.1016/j.socscimed.2014.08.011
- Rogot, E. & National Institutes of Health (United States.). (1988). *A mortality study of one million persons by demographic, social and economic factors: 1979-1981 follow-up: U.S. National Longitudinal Mortality Study*. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health.
- Sheikh, K., Gilson, L., Agyepong, I. A., Hanson, K., Ssengooba, F., & Bennett, S. (2011). Building the field of health policy and systems research: Framing the questions. *Plos Medicine*, *8*, e1001073. doi:10.1371/journal.pmed.1001073
- Sulzbach, S., Garshong, B., & Owusu-Banahene, G. (2005). *Effects of the National Health Insurance Act in Ghana: Baseline report*. Bethesda, MD: Partners for Health Reformplus. Abt Associates Inc.
- World Health Organization (WHO). (2012a). *Good health adds life to years. Global brief for world health day 2012* (pp. 1–26). Geneva, Switzerland: Author.
- World Health Organization (WHO). (2012b). *World health statistics 2012*. Global Health Indicators part III. Geneva, Switzerland: Author.



- Witter, S., Garshong, B., & Ridde, V. (2013). An explanatory study of the policy process and early implementation of the Free NHIS coverage for pregnant women in Ghana. *International Journal of Equity in Health* 2013, 12, 13.
- Zhang, L., Wang, H., Wang, L., & Hsiao, W. (2006). Social capital and farmers' willingness to join a newly established community-based health insurance in rural China. *Health Policy*, 76, 233–242. doi:10.1016/j.healthpol.2005.06.001

#### APPENDIX 1 Educational Level and Sex of 70+ Age Group

Educational Level	Sex		
	Female No. (%)	Male No. (%)	Total No. (%)
Basic	28 (42.4%)	38 (57.6%)	66 (100%)
Secondary	4 (66.7%)	2 (33.3%)	6 (100%)
Tertiary	7 (28.0%)	18 (72.0%)	25 (100%)
Post-tertiary	0 (0.0%)	1 (100%)	1 (100%)
None	75 (74.3%)	26 (25.7%)	101 (100%)
Total	114 (57.3%)	85 (42.7%)	199 (100%)

*Note.* Source: COHEiSION Project baseline survey of  $N = 199$  individuals aged 70 years and older.  
No. = Number of respondents.

**APPENDIX 2** Bivariate Analysis of Demographic Characteristics of Interest and Current Health Insurance Enrollment

Variable	18–49 Age Group				50–59 Age Group				60–69 Age Group				70+ Age Group			
	Mean	Uninsured	Insured	$\chi^2$ <i>p</i> value	Mean	Uninsured	Insured	$\chi^2$ <i>p</i> value	Mean	Uninsured	Insured	$\chi^2$ <i>p</i> value	Mean	Uninsured	Insured	$\chi^2$ <i>p</i> value
Sex																
Male	42.9%	67.8%	32.2%	.000	46.1%	56.7%	43.3%	.459	50.2%	47.9%	52.1%	.947	42.7%	32.9%	67.1%	.228
Female	57.1%	56.5%	43.5%		53.9%	53.9%	46.1%		49.8%	48.2%	51.8%		57.3%	40.4%	59.7%	
Membership of Networks																
Member	25.5%	52.5%	47.5%	.000	30.4%	51.8%	48.2%	.467	27.9%	37.9%	62.0%	.460	26.6%	45.3%	54.7%	.187
Nonmember	74.5%	64.3%	35.7%		69.6%	56.7%	43.3%		72.1%	51.9%	48.0%		73.4%	34.3%	65.7%	
Health care utilization																
Utilization 0	71.9%	65.1%	34.9%	.000	65.6%	59.8%	40.2%	.059	56.5%	56.3%	43.8%	.024	42.7%	44.7%	55.3%	.234
Utilization 1–5	26.6%	51.8%	48.3%		31.9%	47.2%	52.8%		40.6%	38.3%	61.7%		47.7%	31.6%	68.4%	
Utilization 6–10	0.9%	35.7%	64.3%		2.0%	33.3%	66.7%		1.8%	20.0%	80.0%		9.1%	33.3%	66.7%	
Utilization >10	0.3%	100.0%	0.0%		0.4%	50.0%	50.0%		1.1%	33.3%	66.7%		0.5%	0.0%	100.0%	
Premium exemption																
Exempted	22.7%	1.4%	100.0%	.000	19.8%	0.0%	100.0%		75.5%	0.0%	100.0%		90.4%	0.0%	100.0%	
Not exempted	77.3%	0.0%	98.6%		80.2%	0.0%	100.0%		24.5%	0.0%	100.0%		9.6%	0.0%	100.0%	
Reason for exemption																
Aged 70+	0.0%	0.0%	0.0%	.000	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		97.4%	0.0%	100.0%	
Younger than 18	13.5%	10.3%	89.7%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0	
Pregnant woman	28.9%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0	
SSNIT Contributor	57.1%	0.0%	0.0%		97.5%	0.0%	100.0%		100.0%	0.0%	100.0%		2.6%	0.0%	100.0%	
Indigent	0.7%	0.0%	0.0%		2.5%	0.0%	100.0%		0.0%	0.0%	0.0%		0.0%	0.0%	0.0	

Note. Source: COHEISION Project baseline survey of total  $N = 4,214$  individuals aged 18 years and older.