You Just Have To Ask

Coproduction of Primary Healthcare in Ghana and Nigeria

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ABSTRACT *The urgent need to improve the quality of healthcare provision in developing countries such as Nigeria and Ghana is caused in part by inadequate financial support for Primary Health Centres. This article investigates whether coproduction by involving citizens, and asking citizens for their involvement, could provide a solution. The findings show that part of the solution to improving healthcare outcomes in these countries lies in the practice of collective coproduction in primary healthcare services, and that asking citizens directly to make a contribution does indeed play a role. The outcomes are based on a survey among the populations and in-depth interviews with healthcare professionals in Ghana and Nigeria.*

Keywords: Coproduction, improvement initiatives, healthcare delivery, health professionals, citizen participation, developing countries.

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Introduction

Mainly due to structural poverty, public expenditure per capita on healthcare in developing countries such as Ghana and Nigeria is much lower than in developed countries, even though healthcare problems in these countries far exceed those in developed countries (Mangai 2016). Many recommendations for improving healthcare in countries such as Ghana and Nigeria have been proposed (World Bank 2013). For instance, arguments are often made for greater decentralization, the involvement of the private sector, and the improvement of the physical capital, infrastructure, ICT, planning, the regulatory capacity and health financing. However, such 'administrative' reforms overlook an alternative solution that is increasingly common in developed countries: the possibility of improvements through coproduction. In developed countries, it is becoming almost common practice for public sector professionals and citizens to coproduce public services such as care services, community policing and refuse collection, as a way of improving the efficiency and effectiveness of service delivery (Vamstad 2012; Vennik et al. 2016; Bovaird and Loeffler 2013; Bovaird 2007).

Since the focus of this study is coproduction and its effect on improving healthcare services and outcomes, Loeffler and Bovaird (2016:1006) provides a definition that is useful for our purposes in this research. Coproduction involves "professionals and citizens making better use of each other's assets, resources and contributions to achieve better outcomes or improved efficiency"

Bovaird et al. (2015) include the active participation of citizens and professionals in a service that implies a significant contribution to outcomes. Accepting greater responsibility on health outcomes by individuals and communities through active participation usually results in health benefits and improved quality of life (Vennik et al. 2016; Coulter et al. 2008). It can result in tailored-made solutions to user needs, thereby leading to greater user satisfaction, creating a sense of community with regard to the ownership of services, increasing the efficiency of services, building confidence, and improving the acceptability and good usage of public resources (Vennik et al. 2016; Bovaird et al. 2015; Bovaird, 2007). The outcomes of empirical research in Europe suggest that involving patients can be part of the solution to achieving better healthcare outcomes, especially if the patients are enabled to (i) understand the causes of their illness, (ii) protect their health by taking the necessary steps (iii) manage chronic disease (iv) participate in choosing the treatment for their illness. Patient involvement in healthcare delivery can lead to greater satisfaction, better experiences, and improved well-being. (Coulter et al. 2008:11; Vennik et al. 2016). The experiences of users and providers of healthcare are both considered useful in improving healthcare (Coulter et al. 2008:9).

But is such coproduction only feasible in developed countries or could service delivery in developing countries also benefit from this idea? As early as 20 years ago, Ostrom suggested the latter. According to her, the "coproduction of many goods and services, normally considered to be public goods, by government agencies and citizens organised into polycentric systems is crucial for achieving higher levels of welfare in developing countries, particularly for those who are poor" (Ostrom 1996:1083).

The key question is whether the conditions in developing countries are indeed favourable and what it would take to induce citizens to coproduce healthcare services. One might expect patients to be willing to participate in service delivery, especially in the light of cultural aspects and financial needs. Regarding cultural aspects, coproduction has been shown to be feasible and successful in developed countries, which are often highly individualised societies (Brandsen and Honingh 2016). The chances of success for coproduction in Africa could be even higher, since these countries are generally considered to be characterised by a higher degree of collectivism (Ostrom 1996; Hofstede 2001) and coproduction requires a certain degree of cultural collectivism. Regarding financial needs, expenditure on healthcare in Ghana and Nigeria in 2014 was US$58 and US$118 per capita, respectively, equating to only 0.5-1% of healthcare expenditure in the USA in the same year (WHO, 2016), and the governments of Ghana and Nigeria are struggling to fulfil their obligations regarding public spending on healthcare (Uzochukwu et al. 2015; Russell 2008). This implies that alternative ways to make healthcare work – such as coproduction – are needed.

The research that this article reports on was conducted in Ghana and Nigeria in the spring of 2016 and concerns the opinions and experiences of health professionals in relation to the merits of coproduction in healthcare and of service users regarding their ability and willingness to contribute their resources to improving primary healthcare. It will examine how coproduction works in the practice of primary health centres (PHCs) in rural Nigeria and Ghana, and whether people are actually investing their time and resources to coproduce rural health services, whether coproduction could be an innovative way of improving healthcare services and outcomes in rural Nigeria and Ghana, and what is needed to make this approach work in such developing countries. Despite a significant degree of willingness on the part of the citizens to coproduce healthcare and professionals who are inclined to involve citizens, the number of people actually involved in coproduction varies. The research question underlying this research is therefore: 'To what extent are health professionals and citizens willing to collaborate to improve rural health care in developing countries such as Ghana and Nigeria? Which factors enhance this willingness? Are there contextual differences in coproduction within these developing countries and between developed countries?

This research is relevant because despite many reports on the challenges faced in the health system in developing countries such as Ghana and Nigeria, the claim made by Ostrom 20 years ago that coproduction may represent a relevant option for improving service delivery in the context of developing countries, has to our knowledge not yet resulted in scholarly research into coproduction in developing countries and how this practice could be made more widespread. No research in Africa has been conducted to validate Ostrom's claim, especially within the primary healthcare sector in Nigeria and Ghana. This article intends to fill part of this gap.

The article is structured as follows. First, an overview of theoretical knowledge of the merits of coproduction, the conditions under which it is likely to emerge and the conditions under which it is likely to be effective and beneficial to healthcare delivery. Subsequently, a description of the research methods used is provided, the respondents and the questions asked, followed by the outcomes of our research that firstly elaborate on the issues and structures of the healthcare systems in Ghana and Nigeria. Next, focusing on the expected merits of

coproduction, the needed contextual conditions for coproduction to be effective and the inclination to participate in such coproduction. Finally, there will be a discussion about the merits of coproduction based on the views of the stakeholders, providing an answer to the research questions presented above.

Coproduction and Healthcare

In the scholarly literature, the concept of coproduction primarily relates to the involvement of various level of actors - citizens, consumers, service users, clients, customers, "regular producers" - in different phases of public service cycle -commissioning, planning, designing, delivery, implementation, assessment (Nabatchi et al. 2017; Bovaird 2007; Bovaird and Loeffler 2012; Pestoff 2006; Brandsen and Honingh 2016;). In defining coproduction, some authors focus on the relationship and role of citizens - who are also referred to as "lay actors" (Nabatchi et al. 2017:769) and professionals also known as "regular producers" (Bovaird 2007; Alford 2009; Brudney and England 1983; Lelieveldt et al. 2009). Some authors emphasize citizen' involvement in the planning, commissioning, delivery, design, and, or assessment of public services (Ostrom 1996; Bovaird and Loeffler 2012; Pestoff 2006; Whitaker 1980; Weick 1995; van Eijk and Steen 2014). While others focused on the institutionalization of coproduction (Joshi and Moore 2006). The numerous definitions of coproduction left a vacuum in the consolidation of the conceptual meaning of coproduction. However, coproduction literature is becoming wealthier now. The works of Brandsen and Honingh 2016 and Nabatchi et al. 2017 addressed the disharmony in the conceptualisation and definition of coproduction in especially, public administration discipline.

Nabatchi et al. 2017 generated a 3 by 4 typology of coproduction to explain the 'co' and 'production' sides of coproduction, as the two terms are often the point of confusion in the varying definition of coproduction in public administration. The typology describes the three levels of collaboration in coproduction (individual, group and collective) level and the four phases of the service cycle (commissioning, design, delivery and assessment). The matrix drew various examples of the level of coproduction and phase of service cycle; including health care – i.e the collaboration between a doctor and a patient (Nabatchi et al 2017:773).

The application of coproduction in the field of health care is growing in increasingly proportion of other policy fields (Vennik et al. 2016). The traditional model of healthcare delivery was structured, such that health professionals were exclusively designing and providing health services, while patients are passive recipients (Boivin 2012; Farr 2012). This culture gradually erodes as the need for personalized care, demographic changes, high medical cost, increased population, insufficient health personnel and increased health needs is soaring (Boivin 2012; Dunston et al. 2009; Needham 2011; Greenhalgh et al. 2011; Pestoff 2008; Joshi and Moore 2006; Slay and Stephens 2013). These challenges are changing the focus of healthcare policy in the direction of coproduction. The normative idea is that both the personalized and collective health needs of the people can be enhanced through responsive and inclusive healthcare provision (Hyde and Davies 2004). Healthcare consumers and patients are no more view as mere recipients, but as co-deliverers and co-producers.

Nowadays, in order to provide high quality healthcare, improve patient's medical experience, increase organisational efficiency and effectiveness, the active role of a patient/service user is sorted (Alford 2009; Vennik et al. 2016; Hyde and Davies 2004; Greenhalgh et al 2011; Dunston et al. 2009; Needham 2011). These improvements are achievable when patients/service users are stimulated to provide feedback about their experiences with health services and provision (Vennik et al. 2016; van Eijk and Steen 2014). In their study, Vennik et al. 2016 investigates how various health products or services can be co-design by both medical professionals and patients - to increase care quality in Dutch hospitals. Their analysis also include the factors that influence medical professionals to be involved in coproduction. The outcome of their analysis shows that Dutch hospitals are motivated to coproduce healthcare with the patients believing that such practices can improve the care quality of patients - although the professionals feared, the patients can underrate their expertise. Their findings also indicate that the hospital organisational goal - in the context of a competitive market-oriented health system is better achieve when patient involvement is prioritise. Similarly, Bate and Robert (2006) framework of coproduction is focused on patient experienced-based co-designing - a case in point that encourage the collaboration of patients and professionals to redesign health services and product. Van Eijk and Steen (2014) investigated some of the drivers of coproduction of healthcare among patients and health personnel. They found that personal social drivers and inclination to improve healthcare for the generality of the public are the motives for coproduction. A similar motive for the coproduction of healthcare is that people in the same cohort of certain health conditions will very much be involved in specialised coproductive activities since they might have lived with that condition for a long time. This collaborative care management strategy has been embrace in many quarters and often structured as a peer support network (Social Care Institute for Excellence 2013; Slay and Stephens 2013).

While the above references relates to the coproduction of healthcare in developed countries, this study focused on the reasons both citizens and health professionals coproduce healthcare services in developing countries. So far, scholarly contributions on the coproduction of healthcare in developing countries is scarce, even though healthcare challenges in such countries far exceed that of the developed countries. The apriori expectation of the study is that there are high expectations in relation to a responsive and inclusive health services in developing countries, and for healthcare, coproduction implies the contributions of professional staff, patients, decision makers, citizens and the community to "core health services" or "complementary tasks" – i.e the activities that enhance the service process in some way (Brandsen and Honingh 2016). These contributions are expected to improved health outcomes and also, enhanced service efficiency and delivery (Alford 2009). Whether coproduction of healthcare will emerge depends on several conditions, however. It is expected that its success depend on the willingness of patients and health professionals to work together and the perception that the process may resolve existing problems in health care delivery in developing countries. In order to make it work, health professionals need to be convinced of the merits of coproduction and need to be positively inclined to involving citizens in their work (Vennik et al. 2016; Bovaird, 2007). On the other hand, citizens need to be willing to contribute to healthcare delivery, and there must be an apparent need to do

so as an alternative, for instance, to existing gaps and failures in service delivery in developing countries (Mangai 2016). Whether this is the case in the rural healthcare services in Ghana and Nigeria will be investigated in this study.

Methodology

This study was conducted in the spring of 2016 in order to enhance our understanding of the practice of coproduction and in what way it can lead to improved healthcare services at the local level of governance in Nigeria and Ghana. A semi-structured survey among service users/patients and in-depth interviews with health professionals (i.e. the officer-in-charge of the PHC and frontline workers) was conducted. PHCs are local public health clinics where the services of public health professionals are required.

The in-depth interviews were conducted in order to gain a better understanding of potential improvement initiatives through coproduction in rural healthcare in Nigeria and Ghana. This was achieved through face-to-face interaction with the respondents. The professionals interviews were transcribed verbatim and coded using a thematic approach.

Data for the survey on service users/patients were collected through the intercept approach. This means that data were gathered from outpatients who are waiting for a consultation with a frontline professional (such as a GP, nurse, community health worker or laboratory scientist). The oral interviews enabled the collection of data on the experiences, ideas and opinions of outpatients and health professionals on improvement initiatives and their perception of the contribution that citizens are willing to make to improve health services through coproduction in Nigeria and Ghana.

The service users/patients survey was conducted using semi-structured questions with some questions having pre-determined response categories. First a few background questions were asked regarding age, sex, socio-economic status et cetera. The interview continued by asking about the importance of the quality of the service for the respondent. This was done to demonstrate the relevance of the interview to the respondents. The challenges that they face in accessing healthcare services and who they think is responsible for the quality of the services rendered was the next theme of the survey. Then the questions relevant to this study were asked: whether the respondents were involved in the coproduction of healthcare services and how willing they would be to contribute their resources to collaborate with healthcare workers to improve health services.

Twelve health professionals were interviewed: two staff members each from 6 municipal PHCs in Nigeria and Ghana. A total of 180 service users/patients participated in the semi-structured survey interview. Of the 180 patients interviewed, 90 interviews were conducted in Nigeria and 90 in Ghana. Furthermore, 30 service users/patients were interviewed in each PHC with an equal number of respondents of each gender. The service users/patient (n=180) oral interviews were conducted among selected patients who were representative of the entire population in terms of their range of experiences and perspectives on improvement initiatives through coproduction. The only criterion was that the respondents had to be 18 years or older.

Table 1 A Summary of the Research Design

Aim	Type of data	Source of data	Method of data collection	Method of data analyses
Assess how improvement in health services and outcomes is realised through the mechanism of coproduction in rural PHCs in rural Nigeria and Ghana	Knowledge about collaboration of health workers and citizens to coproduce improved primary healthcare	12 health professionals in total for Ghana and Nigeria	In-depth interview	Verbatim transcription/ Coding - thematic analysis
Identify the level of citizens' involvement/willingness to be actively engaged in improving healthcare services (i.e. citizens input into healthcare outcomes)	Level of service users' involvement with healthcare services	1) 12 health professionals in total for Ghana and Nigeria (2) 180 patients in Ghana and Nigeria	In-depth interview and semi-structured interview	Verbatim transcription/ Coding - thematic analysis *Descriptive statistical analysis using SPSS

Outcomes

This section presents the findings of the citizen survey and the in-depth interviews conducted with health professionals in Nigeria and Ghana in the Spring of 2016. Before presenting these results, some background information on primary healthcare in rural areas in Nigeria and Ghana will be presented. Then, the outcomes of the quantitative analysis of the citizen survey and the outcomes of the qualitative analysis of the in-depth interviews conducted with health professionals will follow.

The context of primary health-care in Nigeria and Ghana

PHCs in Nigeria and Ghana are situated mainly in rural areas in order to provide health services to people who would not otherwise have access to these. One of the policies of the World Health Organization (WHO) states that such centres are essential to achieving "better health for all". A WHO report defines health systems such as PHC as *"all activities whose primary purpose is to promote, restore or maintain health"* (WHO, 2000:5).

In Nigeria, there is a dual leadership at the PHC level: a supervisory councillor is responsible for the political leadership and a medical assistant is responsible for administrative matters. In Ghana, the Director of Regional Health Directorate oversees the local health centres politically, and an assistant physician and deputy are responsible for technical and administrative matters. They are referred to as the officer-in-charge in both countries. The officer-in-charge reports to the supervisory councillor or Directorate of Regional Health Services, as the case may be (Federal Ministry of Health 2004; Adeyemo 2005). The different sections of the

PHC are coordinated by employees with the appropriate specialisation. Nevertheless, the general quality of the service rendered is inadequate in both countries. (Abdulraheem et al. 2012; Drislane et al. 2014).

PHCs are usually staffed by community health workers, midwives, and nurses, and in rare cases physicians. This human resource structure is seen in both Nigeria and Ghana.

The adoption of PHCs in Nigeria as the foundation of Nigeria Health System was enshrined in the National Health Policy of 1988 (FMOH 2004; Aigbiremolen et al. 2014). This led to the evolution of PHCs in various development capacities. In 2010, the Federal Ministry of Health (FMOH) reported that over 85 percent of the health services in Nigeria are provided through PHCs. Nigerian PHCs are financed through budgetary allocations and out-of-pocket payments. The budgetary allocation of PHCs is the sole responsibility of local government authorities. Such responsibility has, however, stalled since the return of democracy in Nigeria in 1999 (Uzochuwu et al. 2015). The irregular and lack of financing of PHCs in Nigeria and Ghana can be traced to the unresponsiveness of government to healthcare requirements and corruption (Uzochuwu et al. 2015; Aigbiremolen et al. 2014). Funding for local government is disbursed by the federal government through the state government account. State government disbursements to local government covers the payment of salaries and overhead costs only, in most cases. This development has resulted in the neglect of funding for PHCs and, in turn, lower usage by the communities (Abdulraheem et al. 2012).

Because of government neglect, financing PHCs in Nigeria and Ghana is only possible through out-of-pocket payments, user fees and donor funding (Uzochuwu et al. 2015; Drislane et al. 2014). Uzochukwu et al. (2015:438) asserts that 90 percent of revenues for financing the health sector in Nigeria come from user fee payments, while 10 percent come from payments for medical products. The authors traced 69 percent of funding sources of the health sector in Nigeria to households, while the federal government, state government, local government, development aid and firms contribute only 12, 8, 4, 4 and 3 percent respectively. Health financing is thus a major challenge for health services in Nigeria and Ghana and user fees have become the dominant source of finance for healthcare. The consequence is that poor households are confronted with expensive health services to address *"poor health seeking behaviours"* (Uzochukwu et al. 2015:442).

In Ghana, healthcare is largely financed through the Ghana Health Insurance Scheme (GHIS). The GHIS was initially successful, but in recent years, health providers face non-payment of capitation, which is hindering the adequate provision of healthcare services (Drislane et al. 2014; Russell 2008). The success of the GHIS is also threatened by the non-remittance of funds from the government. Most Ghanaian health facilities, including PHCs, have resolved to finance their healthcare services from out-of-pocket payments and revenue accrued from the sale of drugs. The financial situation of PHCs in Ghana needs urgent attention from the government because it is undermining healthcare services and health outcomes (Russell 2008). Transportation and mobility are also a major constraint to the day-to-day running of PHCs in Ghana. There are not enough vehicles and motorcycles for community health outreach programmes, immunisation and mobilisation. Health professionals do not want to live and work in the rural areas because of poor remuneration, obsolete equipment, and lack of infrastructure. (Adulraheem et al. 2012; Iyun 1988*;* Abiodun et al. 2010).

The conclusion can only be that the healthcare in rural areas of Ghana and Nigeria leaves much to be desired and is facing huge challenges. This means that alternative ways must be found to deliver healthcare services, such as coproduction.

The willingness of citizens to coproduce and the current scale of coproduction

The aim of this study is to explore improvement initiatives in the practice of the coproduction of primary healthcare services among rural dwellers and health workers in Nigeria and Ghana. One of the questions asked was whether citizens in Ghana and Nigeria think they can make a meaningful contribution. The results are shown in table 2.

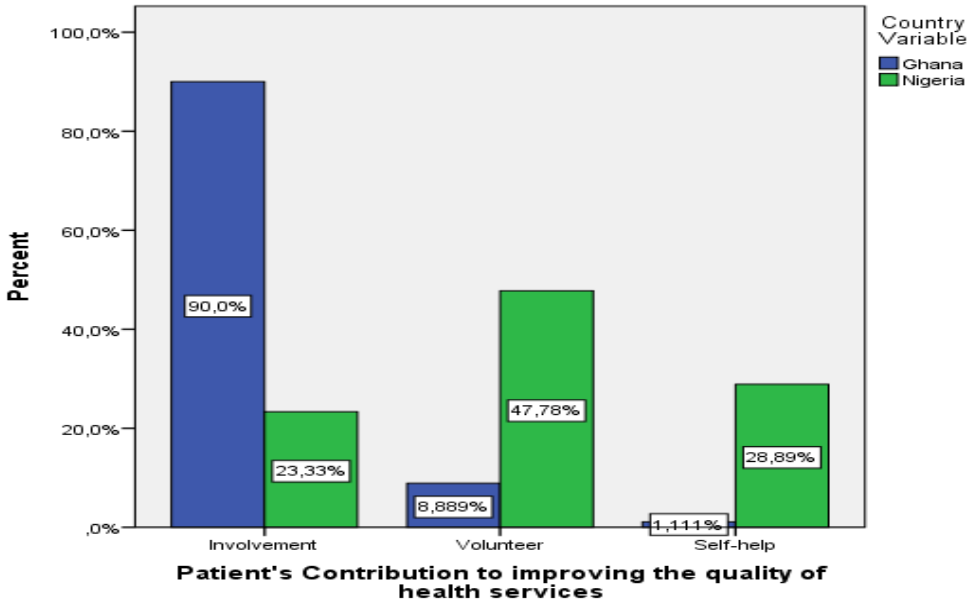
Table 2: Perceived citizens' contribution to improving rural health care services

Resource Contribution	Responses (%) Ghana		Responses (%) Nigeria	
	Yes	No	Yes	No
Time	90	10	80	20
Income	32	68	30	70
Knowledge	27	73	33	67
Skill	24	76	57	43
Assets	40	60	67	33

Source: Field Survey, 2016

Table 2 presents the perceived willingness of citizens to contribute their resources (time, income, knowledge, skill and assets) to improve rural healthcare services. The results in table 2 show that rural residents of Nigeria and Ghana are willing to contribute to improving health services, although preferably by giving their time. At least 90% and 80% of rural Ghanaians and Nigerians respectively are willing to contribute their time to improve health services. Further questions about why they would be willing to give their time suggest that most rural dwellers are farmers and are free to organize their own working hours themselves, and that improving rural health services is a matter of priority to them, rather than a luxury.

Figure 1: Citizens' current contribution to improving rural health services



Despite the resemblance in the willingness to coproduce in both countries, the citizen survey showed that while 90% of Ghanaians are already actively involved in the coproduction of rural health services, this figure is much lower in Nigeria at 23% (see figure 1). The findings revealed that rural Ghanaians are involved on a weekly basis in communal activities that involve citizens in sanitising their local PHC, providing labour during the construction of the health facility or helping with renovation and other unskilled work required at the PHC. There is a formal arrangement between the health workers and the citizens in relation to cleaning the PHCs every week in Ghana. On days when the PHC has no running water, the citizens fetch water for the use at the PHC. During construction and renovation work, the citizens assist by providing labour.

The higher level of involvement in the coproduction of health services by rural Ghanaians than rural Nigerians could possibly be explained by different opinions about who or what to blame for failing health services at the PHCs. If people take the opinion that government is to blame for failing services, they might not be willing to step in and help, because the government is responsible for providing services in a better way. However, this opinion was not prevalent because in both countries, the large majority of citizens are of the opinion that the government is to blame for the failures and inadequate services. Another explanation could be that the medical staff in the PHCs in Ghana are different to Nigeria because in Ghana citizens' involvement is appreciated more than in Nigeria. The next section presents the results of the interviews conducted with the professionals, which will help to ascertain whether this is indeed the case.

Health professionals' opinions regarding the desirability of coproduction

This section addresses the opinions of the healthcare professionals working in PHCs in Ghana and Nigeria, on the desirability of involving citizens in their work. The work itself includes in and out-patient care, child and maternal care, family planning, immunisation and public healthcare (public education). Beyond the services provided in these PHCs, health workers are involved in outreach work in their surrounding communities, schools, churches and mosques concerning health education on a number of issues that are crucial to public health in that community. They educate the community about impending outbreaks of disease such as cholera, cerebrospinal meningitis or chicken pox. They also do household visits to review cases of defaulters (mostly TB patients) and to identify patients with signs and symptoms of a communicable disease. A front-line worker from PHC 'A' in Ghana said:

> *We give health talks to the community such as schools, churches, and mosques. We educate them on how to prevent teenage pregnancies and unwanted pregnancies. We also talk about how to improve personal and environmental hygiene… after giving a health talk, some teenagers will approach me wanting to ask a question. After a little chat with them, if it is necessary, I take a urine sample from them for a pregnancy test. If I find out that the person is pregnant, I advise her to keep the pregnancy and try to provide exclusive antenatal care. At least 20 cases of teenage pregnancies were discovered last year because of the health talks.*

Another front-line worker at PHC 'C' in Nigeria explained:

> *We do household visitations to tell the community about the services we offer. We do a follow-up on people that are supposed to come for immunisation. We trace them to come in order to reduce the dropout rate… we go for health outreach visits with our HIV kits to test for HIV in the community… The awareness that we are creating during our household visitations has increased turnout for antenatal and malaria cases. We now see more patients coming to access our services.*

The professionals aim to improve preventive medical care since curative medicine is expensive, unaffordable and most often unavailable at the rural PHCs. The health professionals were asked about the challenges confronting their health centres. The challenges mentioned include inadequate staffing, lack of staff accommodation, lack of up-to-date equipment for their laboratories, lack of mobility and inadequate funding. Healthcare workers in Nigeria were somewhat more optimistic about delivering better healthcare outcomes than those in Ghana. This was because of the World Bank intervention programme – Performance-Based Finance (PBF), which is operational in Nigeria. PBF is a World Bank results-based funding scheme for improving healthcare in a number of PHCs in Nigeria, to help them improve their services and infrastructures. The professionals attested to the deplorable state of their PHCs prior to the introduction of the World Bank intervention. The PBF intervention has contributed to an increase in the turnout of patients to the PHCs, according to the six health professionals interviewed in Nigeria. The health workers were appreciative of PBF,

particularly because the government no longer funds the PHCs. They were excited about the availability of drugs and other equipment to run their services. The officer-in-charge in PHC 'B' in Nigeria attested that:

> *"If it wasn't for the PBF funding that is supporting us now, we would not have felt the presence of the government for over four years in this PHC. We are more confident in what the community and other external organisations can do than the government. With government, you keep sending requests until you are red in the fact… Government has not paid our salary for the past seven months now. It is the funding from PBF that helps to improve healthcare services in this PHC and also augmenting our salary. The politicians only come to us during their election campaigns with many promises on improving healthcare. They do not keep those promises after they get into power.*

Health workers in Ghana also complained about the lack of funding from the government, i.e. the GHIS Scheme. They depend on user fees to run their services. A health worker from PHC 'A' corroborates the challenges of Ghana PHCs, as follows:

> *We have a problem with the health insurance because they pay our claims very late. We submit claims and sometimes we get paid very late or not at all. The health insurance owes this PHC a huge amount of money. For instance, the last payment we received was in May 2015 and we are now in March 2016. The lack of finances makes our work difficult. The funds could be used to expand this facility and other projects. We are now immune to these problems and challenges, but we hope things will get better… Also we are raising another structure to expand this PHC through our internally generated fund and support from the community. The community has assured us that they will support the project. They gave us 10 bags of cement recently, but as far as this building is concerned the government has not done anything to support us. We have made an effort to contact the government but all our efforts just end up in promises that are not fulfilled.*

When health professionals were asked what they think really needs improvement, some of the issues raised were: accommodation problem, inadequate funding, insufficient staff capacity, non-availability of an ambulance, epileptic power and water supply to their health facilities. The lack of accommodation means that there is an undesirable situation that health workers live an average of two hours' drive by car from their workplace. Proximity to the workplace has discouraged night duty shifts in local PHCs and affects healthcare provision at night. The twelve professionals interviewed admitted to being overburdened with work due to inadequate staffing, with professionals often multitasking to compensate for the shortage of staff.

According to the health professionals, improvement initiatives were often the product of support from the community and external donors. All the PHCs have benefitted from support from at least one NGO. This support includes: free family planning, provision of long-lasting insecticide-treated mosquito nets to prevent pregnant women from malaria infection. Apart from the provision of equipment and family planning support from NGOs, individuals in the community have also provided equipment. These efforts have resulted in some notable health

outcomes, including: (i) more successful treatment of tuberculosis cases; (ii) lower number of unwanted pregnancies; (iii) reduction in malaria cases; (iv) more referral cases; and (v) higher turnout of patients to the PHCs. A front-line worker in PHC 'C' in Ghana substantiates some of the improved health outcomes as follows:

> *This community is prone to tuberculosis. Therefore, during our home visits, we carry out checks to identify those who have been coughing for over two weeks. Identification is possible through our interaction in such cases. Sometimes when a person coughs when we visit them, we ask the person when he/she started coughing and how long he/she has been coughing… From there we give the person a form to go for laboratory test… We have treated a number of patients who have confirmed positive to tuberculosis and HIV through our interaction.*

Evidence from the interviews shows that in both Nigeria and Ghana, there is some support for improving the quality of PHCs through individual donations, community effort, and external donor organisations.

A crucial aspect for this article is that health professionals were asked whether citizens (patients) could contribute to improving healthcare services, their answers show that there is 100% acceptance from the health professionals that citizens can, and do, contribute to improving healthcare outcomes in both Ghana and Nigeria. The health workers were all willing to collaborate with citizens to produce better healthcare services. For instance, the officer-in-charge of PHC 'A' in Ghana said:

> *We collaborate with successful cases of family planning, tuberculosis and referrals to treat new cases. Due to the misconception, that family planning is bad and that it can cause heart disease, barrenness etc., we use family planning clients who have experienced the service successfully to help us to enlighten the community… Previously we did not have a laboratory. Now that we have a laboratory, it is difficult to explain to the patients that they need a laboratory test before being treated. We use patients who have gone through laboratory test to educate others on the need to run a test before patients can be diagnosed and treated.*

All the health workers in this study were of the opinion that if citizens contribute to the services they are providing, this can make a significant difference to the improvement of the health-care services. The professionals and citizens were collaborating to improve health services through communal labour. As already explained, the communal labour involves citizens' participation in cleaning local PHCs weekly. The citizens also contribute to providing labour during a construction project. Communal labour was only practised in Ghana.

In Ghana, health professionals usually organise the so-called Durbar every three months – a formal meeting for all community members to discuss the developments and challenges of health centres in Ghana. Durbar involves raising funds for the purchase of equipment, ambulance, and infrastructural development, as well as informing and educating communities about any impending outbreak of disease. Another form of collaboration in Ghana is the use of community-based volunteers. This was emphasized by the officer-in-charge in PHC 'B' in Ghana:

We usually invite the community health committee to this PHC for a meeting to discuss how to address the hospital's difficulties and challenges. The health committee members are representatives from the surrounding area. During the meeting, we ask the committee about complaints regarding the medical services that they are receiving. We discuss these issues together and raise solutions to the challenges.

In Nigeria, the situation is somewhat different, because these interactions are institutionalized. Health professionals not only collaborate with citizens in general, but also with ward health committees in order to improve health services in their community. The committee liaises with health professionals to build infrastructure. They are among the signatories to the community health development bank account of PBF intervention funds, and also part of the health education and outreach team of the PHCs. These joint partnerships have increased accountability and local governance in the PHCs studied in Nigeria. The coproduction process was enhanced partly due to negligence on the part of local government authority in providing an enabling environment for efficient health services. Negligence on the part of the government is part of the reason why health professionals prefer to seek collaboration with local citizens and the local community rather than with the government. Health professionals seek support from the committees to improve their services in the field of immunisation, enlightenment campaigns, community surveillance for the outbreak of communicable diseases and health education. Effective communication regarding better health services is done through sharing of mobile phone number - Some community members with access to mobility volunteered to give their mobile numbers to the PHCs staff so that they can be used in the event of emergencies or night-time referrals. The mobile numbers of taxi drivers who are community members were also saved by health professionals especially for referrals.

This section shows that there are similarities between Ghana and Nigeria in that in both countries health workers value coproduction with citizens highly. The major difference is that in Ghana health workers talk to citizens directly, while in Nigeria this process is institutionalized through the ward health committees. Talking directly to citizens or only to the committees could be the variable that explains the variance in the coproduction of healthcare in Ghana and Nigeria.

This notion was tested by relating the actual coproduction of citizens to whether they were actually asked to be involved. A linear regression of the dyadic variable *'Has anyone ever asked you to contribute to an aspect of the service you are receiving?'* for the survey item *'Roughly how much time are you willing to spend to be involved with neighbours or healthcare agencies to improve health care services in your area?'* results in a standardized beta of .80 ($p<0.000$), which suggests that this is a strong explanatory variable for the actual time that people devote to coproducing healthcare, and that the impact of all other potential variables are not significant. It implies that the institutional setting of the interaction between PHCs and population, either direct through the Durbar meetings that take place in Ghana, or indirectly through the ward health committees that take place in Nigeria, makes a significant difference in the extent to which citizens are involved in coproduction.

When asked directly for support and involvement, citizens make more time to become involved. If they are not asked directly for a contribution, they are unlikely to provide it.

Discussion

The research conducted on the interaction between health professionals and patients-citizens in the coproduction of primary health services and how this may lead to improvement in healthcare services and outcomes has hitherto mainly been conducted in the context of developed societies (Alford 2009; Bate and Robert 2006; Adams 2011; Vennik et al. 2016; van Eijk and Steen 2014; Pestoff 2006). While coproduction in developed countries is a matter of citizen participation, democracy and a tool with which to enhance health systems in a broader sense, this dimension seems to be lacking in the coproduction studied in Nigeria and Ghana. In Western countries, healthcare systems generally work well, so involving patients/citizens in the coproduction of healthcare serves other purposes than just making up for a lack of resources (Vennik et al. 2016; Coulter et al. 2008:11; WHO 2008). Vennik et al. (2016) have explored the involvement of patients in some Dutch hospitals and found that patient's suggestions regarding quality improvements at the hospital were already known. However, the process of coproducing healthcare contributes to quality improvements in other ways. In these Dutch hospitals, health professionals' motivation to coproduce health care tends to be related to organizational, market, and care quality.

In Nigeria and Ghana, health professionals find themselves forced to ask for community involvement as a matter of survival and necessity rather than as a matter of self-expression (Joshi and Moore, 2004). This has resulted in an alternative interpretation of the coproduction in developing countries. Contextual factors, political issues, demographic changes, personalized care and advancements in knowledge and technology may play a major role in the huge differences seen in coproduction across continents (Boivin 2012; Dunston et al. 2009; Greenhalgh et al 2011; Pestoff 2006; Joshi and Moore 2006; Needham 2011; Slay and Stephens 2013).

In Ghana and Nigeria, an institutional conformity to coproduction was found mainly because of political and logistics reasons. Whereas Bovaird 2007:855 disagrees by asserting, that coproduction must be "government attempting to dump its difficult problems on users and communities". Joshi and Moore, 2004, corroborated some of the reasons for coproduction found in this study. Joshi and Moore's study (2004:40) finds that some of the "unorthodox organisational arrangements" of public service delivery by traditional institutions in developing countries are inspired by challenges such as logistics and governance issues, and in this study, the coproduction of primary healthcare has uncovered a similar situation. Joshi and Moore (2004) find that the institutionalization of coproduction where citizens' resource contributions are needed for road transport in Ghana is mainly a result of these challenges.

In the same vein, this study has found that there is a widespread and organised process of coproduction in primary healthcare in rural Nigeria and Ghana, especially in Ghana, and that the willingness of citizens and the inclination of health workers to involve citizens is substantial in both countries, as is the need for such coproduction because of the challenges faced by those countries' healthcare systems. Local governments'

reluctance to support PHCs has forced health professionals to look for alternative ways of improving healthcare services and outcomes, and the solution has been found in coproduction: the engagement of individuals, communities and external donors. The basic capacity of the PHCs in Nigeria is supported by external donors, who provide the PHCs with a basis on which to work.

The main difference between Ghana and Nigeria is that in Ghana citizens are approached directly and asked to contribute, while in Nigeria health workers talk mainly to ward committees and individual citizens are not asked directly to contribute. This makes all the difference, as a simple linear regression has shown: asking people to contribute to improving healthcare is directly linked to whether they actually do this.

Conclusion

This article has contributed to the rare scholarly works on potential of coproduction in primary healthcare services in developing countries such as Ghana and Nigeria and found that in Ghana the engagement of service users and other stakeholders in healthcare improvement is already widespread, while this is less common in Nigeria. The main research question was *to what extent are health professionals and citizens willing to collaborate to improve rural healthcare in Ghana and Nigeria and what differences are within and between countries?* In both countries, PHCs in rural areas face a lack of (financial) support from the government and are therefore in need of alternative ways of providing health services. At the same time, there is a significant degree of willingness among the population of both countries to support PHCs and coproduce healthcare. Worthy of note is that the drivers for coproducing healthcare in developed countries vary with those found in the developing countries studied in this article. Social personal drivers, demographic changes, innovative transfiguration and personalized care are mainly the motivation for coproduction in developed countries (Alford 2009; Boivin 2012; Dunston et al. 2009; Greenhalgh et al 2011; Pestoff 2008; Slay and Stephens 2013; Needham 2011; van Eijk and Steen 2014; Vennik et al. 2016). The contextual variation in the above drivers of coproduction is also the reason coproduction practice and application could differ across and within countries - and in different policy areas.

Also, in both countries, health professionals are positively inclined to involving local people in providing healthcare. This is the case because coproduction is an effective and efficient alternative means of providing health services, as seen in both countries in the reduction in the number of snake bikes around the PHCs facilities due to the weekly sanitation of the surrounding area by citizens, the reduction in the mortality rate due to improved communication between local citizens and health workers using mobile telephones, increases in the uptake of family planning, and an increased focus on preventive rather than curative medical care through household visits, health education, and outreach programmes. Of course, there are still numerous challenges to overcome, such as the declining control over the services by health professionals and the possibility that government may view coproduction as an argument for further reducing funding for health services. The health outcomes enumerated here is embedded in Loeffler and Bovaird (2016) definition of coproduction that was

earlier adopted in this study. Such contributions are more or less "complementary tasks" as the are mainly coproductive activities that support the healthcare service process in some way (Brandsen and Honingh 2016)

Although all these processes of coproduction and the role of both professionals and service users are important in explaining the potential of coproduction (Vennik et al 2016; Bovaird 2007; van Eijk and Steen 2014), they do not explain why people in rural areas of Ghana devote more time to supporting health centres than in Nigeria. Neither is this explained by their opinions regarding the causes of failing healthcare. In both countries, the national and local governments are blamed to the same extent (Mangai 2016).

What makes the decisive difference is that in Ghana people are asked directly by healthcare workers to contribute and get involved, while this is not the case in Nigeria. Citizens themselves confirm this as those that are not involved in coproduction also say that they have never been asked to do so, while nearly all of those people who do coproduce also say they were asked to make a contribution. This is related to the way interaction between health centres and the population is institutionalized (Joshi and Moore, 2004), which is quite different in Ghana with its Durbar meetings that involve all citizens, and in Nigeria where the interaction is between health workers and ward committees consisting only of a small number of the citizen representatives. The involvement of all citizens in Ghana is a typology of coproduction that is collective in nature (Nabatchi et al. 2017). Nabatchi et al (2017), describes this type of typology in their study. The study distinguishes between individual, group and collective coproduction. In collective coproduction, coproductive activities benefit the community (Batalden et al 2015; Brudney and England 1983; Bovaird 2007; van Eijk and Steen 2014; Social Care Institute for Excellence 2013) rather than an individual benefitting from a personalized care (Needham 2011; Greenhalgh et al. 2011)

Particularly in Ghana, health professionals seek support from the citizens to improve their services in the areas of environmental sanitation, immunisation, educational campaigns, community monitoring for the outbreak of communicable diseases and health education. Such coproduction was not found in rural Nigeria because health professionals do not ask people to help coproduce healthcare services. If rural Nigerians were asked to contribute, the result could be an improvement in the healthcare services in that country. At the same time, however, it is important not to underestimate the contribution of the ward committees in Nigeria to helping to create infrastructure, acting as signatories to the community health development bank account, and working as part of the health education and outreach team of the PHCs. These activities have resulted in increased action regarding preventive care, rather than focusing solely on curative medical care that is rarely available. However, the research indicates that rural residents in Nigeria would be willing to coproduce rural health services if they were asked. It seems that health professionals in rural Nigeria 'just have to ask' if they want to engage and work with local citizens to coproduce healthcare.

In both Nigeria and Ghana, coproduction is highly likely to play a (potential) role in improving healthcare, because citizens are willing to coproduce healthcare when asked. Indeed, this study foresee that coproduction in healthcare could become a widespread practice in many of the developing countries that are struggling to

improve healthcare, but professionals need to take the initiative in order to benefit from the willingness and ability of citizens to coproduce.

This study concluded that there are significant variations in the coproduction of healthcare in developed and developing countries as uniquely enumerated, and that citizens in developing countries are willing to become involved if only they are asked to do so. The idea that health professionals may call upon the public for assistance is promising since service users are contributing their time and resources to improving healthcare. The most surprising finding was that in Ghana a large part of the citizens were involved in running the primary health centres. The local residents in Ghana do all kind of chores and jobs (like fetching water, catching snakes, distributing medicine in distant villages and cleaning up the premises) whereas the local residents in Nigeria are much less involved and much less called upon. The professionals in Ghana are inclined to ask the local residents for assistance, whereas the Nigerian health professionals keep the citizens more at a distance and are more inclined to do job themselves.

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