



ORIGINAL ARTICLE

Preferred approach to performance improvement among stakeholders in the health insurance industry in Southwest Region of Nigeria: Implications for Universal Health Coverage

Adewole DA¹, Bello S², Adebowale SA²

¹ Department of Health Policy and Management, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria

² Department of Epidemiology and Medical Statistics, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria

Keywords

Performance;
Improvement;
Health
insurance;
Universal
health
coverage;
Training.

ABSTRACT

Background: Population coverage of the National Health Insurance Scheme (NHIS) of Nigeria is low. This study aimed to assess the capacity gaps of personnel in the health insurance industry in southwest Nigeria as well determined the approach to improvement.

Methods: This was a cross-sectional survey conducted in the health insurance industry in southwest Nigeria. Survey tool adapted was the World Health Organization adopted Hennessy-Hicks Training Needs Analysis Questionnaire with a set of 30 tasks which are important to the job performance of personnel in the health insurance industry. From the register made available by stakeholders, there were a total of 275 personnel in the industry in the zone. A total population of all available personnel in all the organizations were recruited into the study. Data analysis was done using the guideline provided in the Hennessy-Hicks Training Needs Analysis Questionnaire.

Results: Only 32 (13.7%) reported having a training background in health-related degrees, 119 (50.9%) had work-related (actuarial science) training while 148 (63.3%) has had a form of on-the-job actuarial science and related training. The training course approach was generally preferred to organisational change in all items.

Conclusion: This study showed that there were gaps in the capacity of personnel in the health insurance industry. Training course was the preferred approach to addressing these. While not neglecting organizational change, stakeholders in Nigeria and in similar settings are advised to pay more attention to personnel training to improve performance.

Correspondence to:

Dr. D. A. Adewole
Department of Health Policy and Management,
Faculty of Public Health,
College of Medicine,
University of Ibadan, Nigeria
Email: ayodadewole@yahoo.com

INTRODUCTION

Globally, the goal of stakeholders in health is to ensure health systems in different countries is strengthened and viable enough to achieve universal health coverage (UHC). This could be achieved by minimizing

inequitable access to quality health care among different socio-economic groups. ^{1, 2} Prepayment schemes for health care exists in diverse forms in different countries ³⁻⁷ and different from out-of-pocket method. Prepayment scheme has been shown to be a

reliable approach to achieving UHC and improve health outcomes where they exist.^{8, 9} In order to achieve UHC in Nigeria, prepayment method in health care in the form of a social health insurance scheme was established almost two decades ago. Since inception of the scheme, population coverage of the scheme has not gone beyond 6% at the most, health indices in the population have not improved, and some are getting worse.⁵

Successes in the population coverage in other climes with similar schemes have been reported.^{4, 6} In Asian countries such as South Korea and Thailand, results have established the possibility of achieving UHC in a reasonable period of time.⁸ Similar promising reports are available in Costa Rica in Latin America¹⁰ and in some smaller African countries such as Rwanda and Ghana with varying degrees of encouraging population coverage.^{6, 8} Saudi Arabia, United Arab Emirates and other countries in the Middle East showed similar outcomes though sometimes with mixed results.^{3, 11, 12} In western Europe with well-established prepayment schemes, transition to UHC in some of the countries varies between four decades to over a century in Luxemburg and Germany, respectively.¹⁰ However, irrespective of the different transition period to UHC in all these countries, better population health indices are common to them compared to what exists in the majority of the sub-Saharan Africa (SSA) with a predominant out-of-pocket payment (OOP) method for health care. In the majority of the countries especially in the

SSA, reports have indicated inefficiently managed schemes as a result of weak technical capacity of the personnel directly involved. Coupled with this is the weak organizational capacities to manage the system. This has raised a concern in the sustainability of many of these schemes.^{8, 13}

Research works have shown that training programme in diverse forms is a veritable tool to build technical and managerial capacities of personnel in organizations¹⁴⁻¹⁶ especially when it is planned systematically with inputs from both the employees and the management and in line with organizations goals.^{17, 18} Trainings could also enhance cohesive team orientation among employees and between employees and management levels. Training not only enhances capacities, it also improves employees' creativity for better decision making and productivity, which ultimately improves organizational performance.^{19, 20} Training programmes could take the form of structured formal types linked with background educational qualifications, on-the-job non-structured types organized by and carried out during routine workplace activities among other types.^{21, 22}

Other means of improving workplace performance is through organizational changes, development or restructuring. According to Delma and Pekovic,²³ organizational changes is about dynamics of internal changes with regards to forms of governance and decision-making structure of the organization. Explicitly,

organizational changes have to do with change in distribution of power, skills, reallocation of responsibilities and, changes in relationship with external partners.^{13, 23} It has been debated that both organizational changes and training could enhance employee commitment with the organization and therefore increase labour (and organizational) productivity,^{19, 23} however, of the two approaches, training programmes has been cited to be the more relevant in improving organizational performance.¹⁴

Recently, the National Council on Health in Nigeria decentralized the social health insurance industry. With this development, the states are encouraged to establish State Supported Social Health Insurance Programme (SSHIP).²⁴ The structural and functional outlook of the SSHIP is similar to that of the NHIS, which is a platform to ensure that individuals and families have access to affordable health care services.⁵ The two schemes could exist side by side in a particular state, while interested enrollees could choose a preferred scheme as a platform to access health care services. Many research works that have been conducted on the health insurance industry in Nigeria have generally centred on factors related to the potential beneficiaries of the scheme, as well as factors and influence of the policies, the political and other contextual environment within which the scheme exists and operates in the country.²⁵⁻²⁷

However, the influence of the 'drivers' of the scheme with regards to technical,

administrative and other managerial capabilities to positively impact on the goals of the scheme have largely been neglected. This study aimed to assess the capacity gaps of the personnel in the health insurance industry in southwest Nigeria as well as determine strategies for improvement. The approach of this study was to assess the scheme from this less researched area. Assessing the challenges of the scheme from the perspective of those who are directly involved in the operations of the scheme is an opportunity for policy makers to view the challenges of the scheme from a new and different angle. This will add to what is already known and, thus better inform stakeholders on the possible methods for improving the performance of the scheme.

METHODOLOGY

This was a cross-sectional survey carried out among personnel of the NHIS, the Health Maintenance Organization (HMOs) and the SSHIP in the southwest of Nigeria. Nigeria is made up of six geo-political zones of Northcentral, Northeast, Northwest, Southeast, South-south and the Southwest. Each of the zones have varied number of states. The Southwest zone where this study was carried out has six states, namely; Ekiti, Lagos, Ogun, Ondo, Osun and Oyo. In Nigeria, social health insurance industry is a tri-partite arrangement of the NHIS, the HMOs and the health care providers. The NHIS is a parastatal of the Federal Ministry of Health and, it is responsible for the design of the

scheme, provides the policy direction and as well as perform supervisory roles over other stakeholders in the industry. The HMOs are private organizations and purchase health care services on behalf of the NHIS for the scheme enrollees and, also provides supervisory roles over the health care providers licensed to provide care in the scheme.⁵ While there was the presence of the NHIS (offices and personnel) in each of the six states of the Southwest geo-political zone, only four states (namely, Lagos, Ogun, Osun and Oyo) had an established functional SSHIP as of the time of data collection for this study. Data collection was carried out between November 2018 and February 2019.

From the register made available by individual stakeholders as of the time of the study, there were a total of forty-one (41) HMOs in the southwest out of which thirty two (32) could be traced. Five (5) of the six (6) states in the zone had established a SSHIP (Ondo State was yet to start). Among the stakeholders (NHIS, SSHIP and HMOs) in the zone, there was a total of 275 personnel in the industry. All were scheduled to be recruited into the study, thus, a total population of all available personnel was adopted. All personnel who consented in each of the organizations visited, were recruited and interviewed. Those who were on leave from work, those who declined to participate and those who were support staff such as in the transport section, house-keeping and security personnel were excluded. Invalid questionnaires were excluded. Data was

collected with the aid of the Hennessey-Hicks questionnaires which was self-administered. However, where an individual needed the assistance of the research assistants, such was provided. While majority of the questionnaires were collected same day after they were administered, a few others were collected some days after, at the request of respondents.

Data collection tool and technique for the assessment of item/task scores

The Hennessey-Hicks Training Needs Analysis Questionnaire has been adopted by the World Health Organization as a training assessment tool.²⁸⁻³¹ It has been used in previous similar studies conducted among health care workers in many countries in developed and developing countries.²⁸⁻³⁰ In most of these studies, this instrument has been modified to suit the study audience and objectives as it was also done in this study. The description of the tool in the study conducted among health care workers in St. Lucia by Gaspard and Yang in 2016,²⁹ was adapted for this study. The instrument is tailored for use specifically with health care teams, but can be adapted to meet the particular objectives of a clinical specialty, management or organization. The tool has been psychometrically tested for validity and reliability in previous studies.^{28, 30} Originally, the questionnaire has 30 items with an allowance for modification. Up to 8 of the 30 items can be replaced and an additional 10 items added without compromising its psychometric properties.

³¹ This rule was strictly adhered to in modifying the questionnaire to suit the study objective and the audience. The 30 tasks in the Basic Questionnaire belong to one of six super-ordinate categories: management/supervisory, administration, clinical/service delivery assessment, communication/teamwork, facility financial audit/assessment and facility infrastructure assessment tasks.

Scoring of Instrument and data analysis

Respondents rated each item in the tool along two seven-point scale for importance and performance. Each item was also scored on the seven-point scale regarding two approaches (organizational development and training) to addressing gaps identified. The ultimate outcome of the scoring was to derive needs gap, and also to assess which of the two approaches, training or organizational change, is perceived by respondents as a better means in bridging gaps identified. The gap identified was derived from a difference between two similar rating scales; one assessing respondents' perceived importance of each of the thirty (30) items/tasks and the other assessing respondents' perceived performance of each of the 30 items/tasks in their job. Thus, if the respondents rated an item/task higher in its importance to the job than they rated their own perceived performance of that item/task in their job, it would imply that there is a gap for that item/task to improve the task performance to match up with the importance of the task to the job. Similarly, regarding the approach

perceived to be better in bridging the gap to enhance performance on each item/task, two approaches were scored; one approach is the organizational development and the other is the training courses approach. Even though the instrument was quantitatively scored, the goal was to plot four bars for each of the 30 item/tasks. This enables an instant side-by-side qualitative visualization of the following: 1) perceived importance of the item/task to the job, 2) respondents' perception of their own personal performance on the item/task, 3) perceived ability of organizational development approach in bridging the gap, and 4) perceived ability of training courses approach in bridging the gap.

Thus, regarding training needs, respondents rated each item on two seven-point scale according to two criteria: how critical the task is to the successful performance of the respondent's job (importance rating criterion) and how well the respondent is currently performing the task (performance rating criterion). The ratings for the first criterion provide an overall occupational profile of the respondent's job, and those for the second criterion provide an index of the skill level or performance.²⁹ For all the respondents, and the basic 30-item questionnaire, average score for the following were calculated: the importance scores on each item (Rating A), the performance scores on each item (Rating B), the importance of organizational development in enhancing performance on each item (Rating C), and the importance of training courses in enhancing performance

on each item (Rating D). These average scores were then plotted on a graph. The vertical axis represent the 30 items, while the horizontal axis represents the scores from 1-7. Four distinct lines were derived on the graph for each of the 30 items, one representing the average importance score (Rating A), one the average performance score (Rating B), one the importance of organizational development in performance enhancement (Rating C), and one for the role of training courses in performance enhancement (Rating D). Gaps between the importance and performance scores which indicate the degree of training need for each of the items, as well as the importance of either organizational development or training course in enhancing tasks performance and thus how best to address the training requirement are displayed on the graph. The instrument is semi-opaque,³¹ meaning that the respondents are less likely to be able to distort their responses; therefore, the obtained data would more accurately reflect the gaps and the preferred approach to addressing them.

Ethical approval for this study was obtained from the University of Ibadan/University College Hospital Ibadan Ethical Board Committee Nigeria, with approval number UI/EC/18/0653. Permission to conduct study was obtained from the NHIS, all the states SSHIP and the HMOs that participated in the study. Informed verbal consent was also obtained from individual study participants prior to data collection.

RESULTS

A total of 275 questionnaires were administered to eligible individuals, however, 234 eventually participated (response rate of 85.1%). Mean age of respondents was 37.1 ± 8.3 years. Participants between the age of 30 and 39, 104 (44.4%) were of the highest proportion. Male participants were more 125 (53.4%) than were females. Only 32 (13.7%) reported having a training background in health-related degrees, 119 (50.9%) had work-related (actuarial science) training, while 148 (63.3%) reported having had on-the-job actuarial science and training (Table 1).

Table 1: Socio-demographic Characteristics of Respondents

Characteristics	Frequency	Percent
(n=234)		
Age group (years)		
< 20	1	0.4
20 – 29	33	14.1
30 – 39	104	44.4
40 – 49	49	20.9
≥50	21	9.0
No response	26	11.1
Mean age = 37.11 ± 8.3 years		
Sex		
Male	125	53.4
Female	109	46.6
Academic qualification		
Health-related degree	32	13.7
Non-health related degrees	157	67.1
Others*	38	16.2
No response	7	3.0
Formal training in actuarial science		
Yes	119	50.9
No	115	49.2
On-the-job actuarial training		
Yes	148	63.3
No	86	36.8

Others* Ordinary National Diploma, Higher National Diploma, National College of Education certificates

In Figure 1, importance rating A was scored higher than the performance rating B for all 30 items. The importance rating score ranged from a low of 4.33/7 for the item

“assessing patients’ clinical needs” to a high of 6.52/7 for the item “using technical equipment, including computers” (Figure 1). Similarly, the performance rating score ranged from a low of 3.91/7 for the item “assess health care facilities for waste management” to a high of 6.21/7 for the item “using technical equipment, including computers.”

However, the difference between the importance rating and the performance rating (the training needs) was highest 0.89/7 for the item “assessing healthcare facilities for service delivery” and lowest 0.26/7 for the item “showing colleagues how to do things.” Thus, there was a training needs gap for all items. With regards to scoring of the preferred approach to enhance performance, the score on all items was higher for the importance of training courses compared to the importance of organizational development except for two items, “organizing your own time effectively” and “communicating with patients face-to-face” for which the reverse was the case.

DISCUSSION

In terms of population coverage, it is well-established that performance of the social health insurance scheme in Nigeria is poor, especially when compared with similar schemes in the West African region especially Ghana^{5, 6, 32} and elsewhere in Africa, such as in Rwanda, Kenya and Tanzania.⁸ Outside of Africa, UHC has been experienced in western European countries for example, Germany, Austria and Belgium although the transition period was much

longer when compared to Asian countries such as Republic of Korea, or Latin American countries such as Costa Rica.¹⁰ Contributory factors to the poor performance of the scheme in Nigeria have been researched from dimensions of policy and political organization of the country within which the scheme exists and operates^{25, 27} as well as other contextual factors that appears as constraints to its expansion.^{26, 33} These factors may not be sufficient to explain the sub-optimal performance of the scheme. Studies^{13, 19, 20, 23} have shown that organizational performance is analogous to employees’ performance which in itself is a function of the employees’ technical and administrative skills as well as other factors such as the quality of employees’ relationship among themselves and with the management level.

This study assessed training needs regarding skills relevant to delivering organizational goals. It should be noted that generally, the magnitude of the training needs for each of these items were very low. However, indication for training need for the items still exists. Almost all the items/tasks required employees to be trained in order to bridge the gaps identified. It is also instructive to note that majority of the study participants did not have the requisite training background to function in the workplace.

Worse still, many of them appeared to have attended on-the-job training programmes much less.

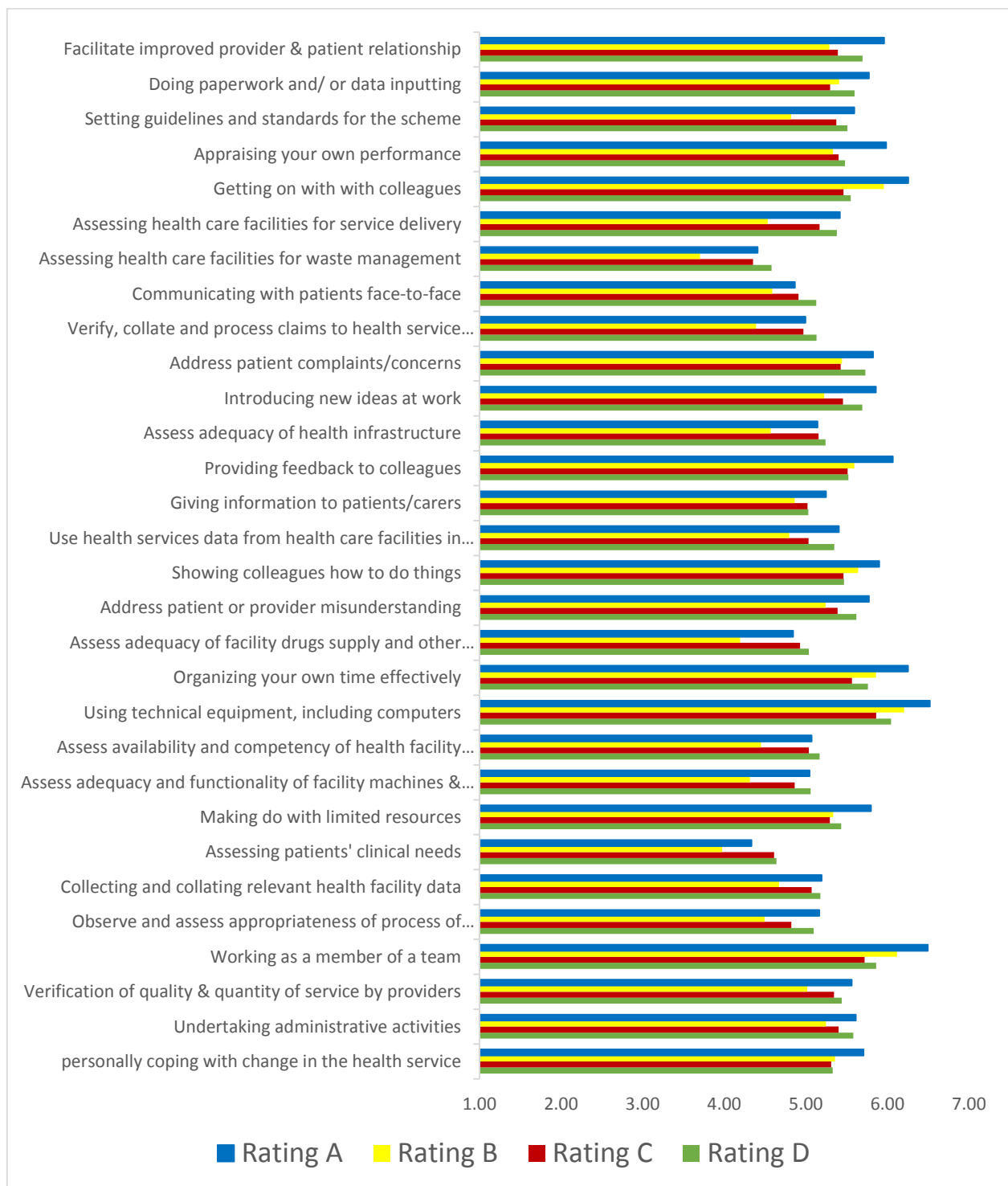


Figure 1: Average training needs and preferred intervention item by item

This is despite well-known positive impact of training programmes on employees and organizational productivity and performance, especially on-the-job trainings. ²¹ Stakeholders in the health insurance industry in Nigeria should make the need for training programmes a priority

to enhance employees' capacity in order to improve the performance of the scheme. Trainees would gain technical and managerial skills as well as creativity and better decision making skills which could reposition the scheme for better performance. In this, on-the-job training

programmes has been reported in research works to be more effective and cost-efficient,^{21, 22} and thus, this training format is more suggested. It is recommended that training programmes should be planned and be systematic with input of the employees. Not only will this enhance employees skill acquisition, it will also engender a sense of ownership of the training among employees, increase job satisfaction and improve individual as well as organizational productivity and performance.^{18, 22}

It is worth noting that majority of the study participants were young adults. Studies have shown that this age group is open to learning new skills and ready to adapt to reforms.^{34, 35} This attribute can serve as an advantage that could be harnessed in the industry for training and especially areas that will require technical skills or innovative reforms to reposition the NHIS for an improved performance. Organizational development was rated lower than training programmes in this study to effect the necessary improvement in the health insurance industry in Nigeria. This is in consonance with the work of Antonioli and colleagues in Italy.¹⁴ In the study, Antonioli and colleagues reported that training programme is more effective than organizational changes to improving performance at workplaces. Although, this study did not explore the form of organizational changes required to effect performance improvement strategies in the health insurance industry in Nigeria, however, it is known that strategies for improving organizational performance plans

does not rely on training programmes alone but on other strategies such as organizational changes among others.

It is therefore advocated that studies to unravel the organizational structure in the health insurance industry are conducted. Findings should inform stakeholders in the industry and assist in planning for organizational changes for improvement. The 30-item tasks in the instrument adapted for this study clearly demonstrated the areas of training needs for employees in the Nigerian health insurance industry. Thus, these areas could be ranked and prioritized for targeted interventions and judicious resource allocation. However, the same could not be said of the organizational structures that need to be changed. We accept this as a limitation.

Conclusion: This study shows that there are gaps in the capacity of personnel in the health insurance industry. Training course was the preferred approach to addressing these. While not neglecting organizational change, stakeholders in Nigeria and in similar settings are advised to pay more attention to personnel training to improve performance in health insurance industry.

Acknowledgment: Authors wish to appreciate all study participants from the participating health maintenance organizations, the state social health insurance agencies in the six states of the southwest region and staff of the National Health Insurance Scheme in the southwest of Nigeria.

Conflict of interest: Authors declare no conflict of interest

REFERENCES

1. Davis A, Walker DG. On the Path to UHC - Global Evidence Must Go Local to Be Useful Comment on "Disease Control Priorities Third Edition Is Published: A Theory of Change Is Needed for Translating Evidence to Health Policy." *Int J Health Policy Manag.* 2018 Dec; 8(3): 181-183
2. Watkins DA, Jamison DT, Mills T, Atun T, Danforth K, Glassman A, et al. Universal Health Coverage and Essential Packages of Care. In: rd, Jamison DT, Gelband H, Horton S, Jha P, Laxminarayan R, et al., editors. *Disease Control Priorities: Improving Health and Reducing Poverty.* Washington (DC): The International Bank for Reconstruction and Development / The World Bank. (c) 2018 International Bank for Reconstruction and Development / The World Bank.; 2017
3. Al-Hanawi MK, Vaidya K, Alsharqi O, Onwujekwe O. Investigating the Willingness to Pay for a Contributory National Health Insurance Scheme in Saudi Arabia: A Cross-sectional Stated Preference Approach. *Appl Health Econ Health Policy.* 2018 Apr; 16(2): 259-271
4. Atun R, de Andrade LO, Almeida G, Cotlear D, Dmytraczenko T, Frenz P, et al. Health-system reform and universal health coverage in Latin America. *Lancet.* 2015 March; 385(9974): 1230-1247
5. Federal Ministry of Health Nigeria. *Strategic Review of Nigeria's National Health Insurance Scheme.* Abuja Nigeria; 2014
6. Nsiah-Boateng E, Aikins M. Trends and characteristics of enrolment in the National Health Insurance Scheme in Ghana: a quantitative analysis of longitudinal data. *Glob Health Res Policy.* 2018 Nov; 3: 32
7. Workie NW, Shroff E, A SY, Nguyen SN, Karamagi H. Who Needs Big Health Sector Reforms Anyway? Seychelles' Road to UHC Provides Lessons for Sub-Saharan Africa and Island Nations. *Health Syst Reform.* 2018; 4(4): 362-371
8. Chuma J, Mulupi S, McIntyre D. Providing financial protection and funding health service benefits for the informal sector: Evidence from sub-Saharan Africa. London, UK: KEMRI—Wellcome Trust Research Programme, University of Cape Town. 2013. [Cited June 7, 2019] Available from: <https://resyst.lshtm.ac.uk//Providing%20financial%20protection%20and%20funding>
9. Pandey A, Clarke L, Dandona L, Ploubidis GB. Inequity in out-of-pocket payments for hospitalisation in India: Evidence from the National Sample Surveys, 1995-2014. *Soc Sci Med.* 2018 March; 201: 136-147
10. Carrin G, James C. Social health insurance: key factors affecting the

- transition towards universal coverage. *Int Soc Secur Rev.* 2005 Jan; 58(1): 45-64
11. Blair I, Sharif A. Health and health systems performance in the United Arab Emirates. *World Hosp Health Serv.* 2013; 49(4): 12-17
 12. Koornneef E, Robben P, Blair I. Progress and outcomes of health systems reform in the United Arab Emirates: a systematic review. *BMC Health Serv Res.* 2017 Sep; 17(1): 672
 13. Mills A, Bennett S. Lessons on the sustainability of health care funding from low-and middle -income countries. In: Mossialos E, Dixon A, Figueras J, Kutzin J, (Eds). *Funding health care: options for Europe.* Buckingham-Philadelphia: Open University Press; 2002. 206-225
 14. Antonioli D, Mazzanti M, Pini P. Productivity, innovation strategies and industrial relations in SMEs. Empirical evidence for a local production system in northern Italy. *Int Rev Appl Econ.* 2010 Jul ; 24(4): 453-482
 15. Colombo E, Stanca L. The impact of training on productivity: evidence from a panel of Italian firms. *Int J Manpow.* 2014 Oct; 35(8): 1140-1158
 16. Picchio M, Van Ours JC. Retaining through training even for older workers. *Econ Educ Rev.* 2013 Feb; 32: 29-48
 17. Abdel-All M, Putica B, Praveen D, Abimbola S, Joshi R. Effectiveness of community health worker training programmes for cardiovascular disease management in low-income and middle-income countries: a systematic review. *BMJ Open.* 2017 Nov; 7(11): e015529. doi: 10.1136/bmjopen-2016-015529
 18. Antonioli D, Mazzanti M. Techno-organisational strategies, environmental innovations and economic performances. Micro-evidence from an SME-based industrial district. *J Innov Econ Manag.* 2009; (1): 145-168
 19. Pang L. The training and creativity of professional chefs: Stoking the imagination in global gastronomic discourse. *Appetite.* 2017 Dec; 119: 48-53 doi: 10.1016/j.appet.2017.08.014
 20. Prabhakar GV, Brnia RW. Ambulatory Health Care Staffs' Perception of the influence of Training on Performance. *Eur J Train Dev.* 2016 May; 3: 17-36
 21. Khan RAG, Khan FA, Khan MA. Impact of training and development on organizational performance. *Glob J Manage Bus Res.* 2011 Jul; 11(7): 62-68
 22. Laing IF. The impact of training and development on worker performance and productivity in public sector organizations: A case study of Ghana Ports and Harbours Authority 2009. MBA Thesis, Kwame Nkrumah University of Science and Technology. 2009. [Cited July 17, 2019] Available from: URL: <http://ir.knust.edu.gh/handle/123456789/628>
 23. Delmas MA, Pekovic S. Environmental standards and labor productivity:

- Understanding the mechanisms that sustain sustainability. *J Organ Behav.* 2013 Feb; 34(2): 230-252
24. National Council on Health Nigeria. Memorandum of the Honourable Minister of Health on the implementation of the State Supported Health Insurance Schemes. Abuja, Nigeria; 2015. [Cited July 3, 2019] Available from: https://www.nhis.gov.ng/file/.../State_supported_Health_Insurance_Schemes.pdf
 25. Adewole DA. The impact of political institution and structure on health policy making and implementation: Nigeria as a case study. *Afr J Med Med Sci.* 2015 March; 44(1): 101-105
 26. Adewole DA, Adebayo AM, Udeh EI, Shaahu VN, Dairo MD. Payment for Health Care and Perception of the National Health Insurance Scheme in a Rural Southwest Nigeria. *Am J Trop Med Hyg.* 2015 Sep; 93(3): 648-654
 27. Onoka C, Onwujekwe O, Uzochukwu B, Ezumah N. Promoting universal financial protection: constraints and enabling factors in scaling-up coverage with social health insurance in Nigeria. *Health Res Policy Syst.* 2013 Jun; 11: 20
 28. Bannon M, Carter Y, Barwell F, Hicks C. Perceptions held by general practitioners in England regarding their training needs in child abuse and neglect. *Child Abuse Rev.* 1999 Jul; 8(4): 276-283
 29. Gaspard J, Yang CM. Training needs assessment of health care professionals in a developing country: the example of Saint Lucia. *BMC Med Educ.* 2016 Apr; 16:112. doi: 10.1186/s12909-016-0638-9
 30. Hennessy D, Hicks C, Koesno H. The training and development needs of midwives in Indonesia: paper 2 of 3. *Hum Resour Health.* 2006 Apr; 4: 9
 31. Hicks C, Hennessy D. Hennessy-Hicks Training Needs Analysis Questionnaire and Manual; 2011 [cited June 20, 2019] Available from: URL: http://www.who.int/workforcealliance/knowledge/resources/hennessyhicks_trainingneedsquest/en/
 32. Odeyemi I, Nixon J. Assessing equity in health care through the national health insurance schemes of Nigeria and Ghana: a review-based comparative analysis. *Int J Equity Health.* 2013 Jan; 12: 9
 33. Odeyemi I. Community-based health insurance programmes and the national health insurance scheme of Nigeria: challenges to uptake and integration. *Int J Equity Health.* 2014 Feb; 13: 20
 34. Czaja SJ, Sharit J, Ownby R, Roth DL, Nair S. Examining age differences in performance of a complex information search and retrieval task. *Psychology and aging.* 2001 Dec; 16(4): 564
 35. Rogers WA, Fisk AD. Human factors, applied cognition, and aging. In: FIM Craik, TA. Salthouse (Eds.), *The handbook of aging and cognition.* Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers. 2000. 559-591