WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Utilization of National Health Insurance Scheme among Adult Patients at Kalindawalo General Hospital of Petauke District, Zambia

Ng'onya Munanakoy[1], Dr. Ruth Wahila[2], Dr. Brenda Sianchapa[3]

[1] Research Scholar, [2,3]Supervisors
MSc in Public Health Nursing

ABSTRACT

This study assessed the utilization of the National Health Insurance Scheme (NHIS) among adult patients at Kalindawalo General Hospital in Petauke District, Zambia. The results revealed that 58.9% of respondents were not utilizing NHIS, indicating significant gaps in uptake despite the scheme's availability. Statistical analysis identified age ($p = 0.000$) and geographical accessibility as key determinants of NHIS utilization. Patients residing closer to health facilities were three times more likely to utilize NHIS services (AOR: 3.00; 95% CI: 1.50 – 11.00, $p = 0.045$). Additionally, perceived need significantly influenced NHIS uptake, as individuals with a greater awareness of their healthcare needs were five times more likely to use NHIS (AOR: 5.00). However, 56% of respondents had negative perceptions of NHIS, which may further discourage enrollment and utilization. These findings highlight the need for targeted interventions to improve NHIS participation. Strengthening healthcare infrastructure, enhancing community awareness programs, and addressing affordability through subsidies and flexible payment options could boost NHIS uptake. Additionally, improving service quality and public trust in NHIS is crucial for increasing enrollment and sustained utilization. Future research should assess the long-term impact of NHIS on health outcomes and explore innovative strategies to make health insurance more accessible, affordable, and effective in Zambia.

1.1 Implications of this study to Public Health Nursing

Nursing Practice

The result of this study highlight the need for nurses to play an active role in educating patients about the National Health Insurance Scheme (NHIS). Nurses should ensure that patients understand the benefits of enrolling in NHIS and how to effectively utilize the services it provides. Additionally, nurses should advocate for policies that address accessibility issues, ensuring that NHIS benefits are equitably distributed across different patient demographics.

Nursing Education

Incorporating health insurance literacy into nursing curricula is essential for preparing future nurses to educate and guide patients in utilizing NHIS. Training programs should emphasize the role of nurses in facilitating access to healthcare through NHIS and addressing misconceptions about the scheme. Continuing education programs should also be implemented to keep nurses updated on changes in NHIS policies and procedures.

Nursing Administration

Hospital administrators should ensure that NHIS processes are streamlined to improve patient experiences. This includes reducing bureaucratic barriers that discourage utilization and ensuring that NHIS services are accessible within hospitals. Nursing administrators should also collaborate with policymakers to address gaps in service delivery and advocate for improved NHIS coverage for essential health services.

Nursing Research

Further research is needed to explore the long-term impact of NHIS utilization on patient health outcomes and healthcare system efficiency. Future studies should focus on identifying specific barriers to NHIS enrollment and developing targeted interventions to improve its uptake. Additionally, research should investigate the role of healthcare workers in influencing patients' decisions to utilize NHIS services.

1.0 Introduction

This study investigates the utilization of the national health insurance scheme (NHIS) among adult patients at Kalindawalo General Hospital in Petauke District of Zambia. Understanding the utilization of the NHIS among adult patients provides insights into the level of healthcare access. By investigating

utilization patterns, policymakers can address barriers to access and ensure equitable distribution of health services. The study will be conducted in Petauke, Zambia, at Kalindawalo General Hospital.

National health insurance refers to an insurance scheme that covers the entire population and is usually established by national legislation (Adebiyi & Adeniji, 2021). This scheme is recognized to be a powerful method to achieve universal health service coverage with sufficient financial protection against healthcare costs. It is one of the solutions proposed by the World Health Organization (WHO) to improve universal health coverage, but few low-income countries have been able to mount mandated funding solutions for universal health coverage (Carrin, et al., 2020). The adaption of the Sustainable Development Goals (SDGs) by the United Nations Assembly explicitly included the Universal Health Care (UHC) goal under SDG 3.8 stating "Achieve Universal Health Coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all" (UN, 2020). Many countries that subscribe to the SDGs have committed to ensuring access to basic health services for their citizens. Health insurance has been considered and promoted as the major financing mechanism to improve access to health services, as well as to provide financial risk protection (Wang, et al., 2022).

Some countries have implemented or expanded coverage of health insurance schemes as the primary conduit for reaching universal health coverage. Evidence from developing countries suggests that health insurance coverage is associated with higher rates of healthcare utilization (Fagan & Dutta, 2018). There are different types of health insurance; they can be broadly divided into private and public insurance based on the source of funding (Adebiyi & Adeniji, 2021). In public insurance, funds are paid by the government from general taxes or hypothecated taxes, this source of funding for health care helps to improve access and promote equity. Available funds in public health insurance are often not enough and need to be supplemented by funds from private insurance. Private health funds are paid directly to the fund managers and consist of non-profit and for-profit plans and community health insurance schemes. Private coverage, when managed well helps to improve access and equity, especially in developing countries, and reduces large out-of-pocket expenses for healthcare (Kaabi, et al., 2022). They serve as a useful source of supplementary insurance to provide coverage for health services not covered by publicly funded schemes (Adebiyi & Adeniji, 2021). It can therefore be noted that patients who utilize any of the two insurance schemes will have similar benefits. The use of National Health Insurance Schemes (NHIS) is undoubtedly expected to be acceptable to all citizens.

Different nations of the world have diverse levels of utilization of health insurance. Available literature shows that utilization levels are high in developed nations but are still low in developing nations (Smith, et al., 2022). In the United States of America, Private Health Insurance (PHI) is a significant source of healthcare financing and is responsible for around 35% of aggregate health expenses. Public use represents 44.9% while Out-of-Pocket (OOP) use is at 13.5%.6. There is a tax-based method in the United Kingdom that gives general health care through the nation's National Health Service (NHS) which covers 86% of general health expenses, while PHI represents 2.9% and OOP represents 11.1% (Boyle, *et al*., 2024). Access to healthcare is considered an important determinant in assessing equity in healthcare delivery. Ideally, the use of healthcare services reflects the need for care; however, that is not always possible for several reasons. In Low-and-Middle-income countries (LMICs), healthcare utilization is influenced by demand and supply-side constraints (Wagstaff, et al., 2019). In some instances, utilization is determined solely by the ability to pay or out-of-pocket (OOP) payments rather than the need for care. This situation can gradually impose heavy financial burdens on individuals as well as on households and consequently can lead to catastrophic healthcare expenditure (CHE) and economic impoverishment (Hasan, et al., 2022)

1.2 Research Questions

1. What is the level of NHIS utilization coverage among adult patients at Kalindawalo General Hospital in Petauke?
2. What are the socio-demographic characteristics of adult patients utilising NHIS at Kalindawalo General Hospital, Petauke?
3. What influence does geographical accessibility to the health facility have on the utilization of NHIS by patients at Kalindawalo General Hospital, Petauke?
4. What are the perceived needs for the utilization of NHIS by patients at Kalindawalo General Hospital, Petauke?

1.2 Research Hypothesis

Null hypothesis (H_0): There is no significant association between the utilization of the NHIS and the following associated factors among adult patients at Kalindawalo General Hospital in Petauke district.

a) Sociodemographic characteristics of adult patients

b) Geographical accessibility to the health facility

c) Perceived needs of utilization of NHIS

2.0 Methods

2.1 Study Design

A quantitative cross-sectional analytical study design was adopted in this study. This study design was selected because it was useful in collecting data at a particular point in time thus giving a snapshot of the utilization of NHIS at KGH. Conducting this study at a single point in time established foundational knowledge on the utilization of NHIS and associated factors. The primary goal of a analytical study was to describe the statistical association between dependent and independent variables.

2.2 Study setting

The study was conducted at Kalindawalo General Hospital (KGH) in Petauke district of Eastern province of Zambia. The facility is 9km northwest of Petauke district with coordinates latitude: 14.300014° South and longitude: 31.3987° East along Great East road. It is urban hospital that offer various services to patients of different age groups such as treatment with chemotherapy, radiotherapy, patient screening, laboratory, and follow-up care among others. It is also a referral hospital for various healthcare facilities including Kalindawalo Clinic, Petauke Urban Clinic, Petauke District Hospital, and Minga Hospital. This facility was selected because it offers a wide range of NHIMA services, benefiting a large rural community.This therefore prompted the need to establish the factors that could be influencing the utilisation of NHIS at KGH.

2.3 Study Population

The study population included all patients attending Kalindawalo General Hospital in Petauke District, Zambia.

2.3.1 Target Population

The target population consisted of all adult patients (18 years and above) seeking for Outpatient Department (OPD) services at Kalindawalo General Hospital in Petauke District, Zambia.

2.3.2 Accessible Population

The accessible population were all adult patients (18 years and above) who sought for OPD services at Kalindawalo General Hospital during the study period and consented to participate in the study.

2.4 Sample Size Determination

Kalindawalo General Hospital has recorded a high number of adult patients accessing services with only a few utilizing services using NHIS. (*see Table 1*). As of 2023, 23433 adult patients were recorded at the Outpatient Department (OPD) but only 1783 accessed health services using NHIS (KGH, 2024). The sample size was determined using Slovin's formula (Kangwagye et al., 2023). This formula was applied because it provides a reliable method for determining an appropriate sample size while accounting for a desired margin of error. The sample formula used was;

$$n = \frac{N}{1 + N(e)2}$$

Where;

- n is the estimated sample size
- N is the adult population of 480 expected in a month
- e is the margin error or absolute precision which is 0.05.

Therefore,

$n = \frac{N}{1+N(e)2} = \frac{480}{1+480\,(0.05)2}$ = 218 + 10% markup value = **241** adult patients were selected

2.5 Sampling Technique

The study used systematic sampling to select the participants. A sampling interval of every 2nd adult patient who comes to OPD for healthcare services was selected in the study while the first patient was selected randomly on the first day of data collection. This was conducted by selecting individuals at regular intervals from the sampling frame. Since the population was estimated at 480 per month and the sample size of participants was 240, the sampling fraction was calculated as 240/480 = 1/2. Subsequently, every 2nd adult patient was picked for the study. Systematic sampling was chosen for this study because it ensures a structured and unbiased selection of participants while maintaining a representative sample of the population. Selecting every 2nd

adult patient, the study achieved an even distribution of participants over the data collection period, reducing selection bias and ensuring a more efficient sampling process.

2.6 Inclusion and Exclusion Criteria

2.6.1 Inclusion Criteria

All adult patients accessing healthcare services through OPD at KGH during the period for data collection were included in the study. The study included patients who had accessed the facility at least three times, as they were more likely to have encountered NHIMA services. Furthermore, patients referred to KGH were included included in the study as they were within the same socio-cultural environment as those from Kalindawalo district.

2.6.2 Exclusion Criteria

Eligible participants meeting the inclusion criteria but were critically ill or faced with complicated medical conditions were excluded from the study.

2.7 Date Collection Tool and Technique

2.7.1 Data Collection Tool

Data was collected within a month and a semi-structured interview schedule with both closed and few open-ended questions were utilized. The interview schedule was formulated by the researcher in line with the study objectives. The interview schedule was structured in English and translated into Nyanja to allow for clear interaction with the respondents who were unable to understand the English language, the data collection tool was peer reviewed by the superviour. The tool has four sections: section A demographic characteristics, utilization of NHIS, geographical accessibility, perceived need for NHIS. After data collection, the interview schedules in the local language were back-translated into the English language.

2.7.2 Data Collection Technique

Participants were recruited using systematic sampling, where every 2nd adult patient accessing the facility for the third or more time was approached and invited to participate in the study. Upon identifying a potential participant, the researcher greeted them warmly, introduced themselves, and briefly explained the purpose of the study. They then obtained verbal consent, ensuring that the participant understood the voluntary nature of their participation and the confidentiality of their responses.

Once consent was obtained, the interview commenced in a quiet and comfortable setting within the facility. The researcher or research assistant guided the conversation using a semi-structured interview schedule, asking both closed and a few open-ended questions. Participants were given sufficient time to respond, and polite probing techniques were used whenever they lost track of a question or required clarification.

Each interview lasted approximately 20 minutes. At the conclusion, the researcher expressed gratitude to the participant, thanked them for their time, and reassured them that their responses would be kept confidential. The completed interview guides were then securely stored by the researcher to maintain data integrity and confidentiality.

2.8 Validity and Reliability

2.8.1 Validity

To ensure that the research findings are accurate, reliable, and applicable. The various forms of validity were considered in this study. (i) Internal validity – the degree to which the study accurately established a cause-and-effect relationship between the NHIS and the outcomes measured among adult patients. This helped to attribute observed differences in outcomes specifically to the NHIS. Additionally, this helped to identify and control confounding variables (e.g., socioeconomic status, pre-existing health conditions) that might influence the outcomes. Secondly external validity - the generalizability of the study findings to other populations and settings. To ensure that the sample of adult patients is representative of the broader population the study utilized a probability sampling method thus eliminating selection bias. Thirdly is construct validity which focuses on the degree to which the study accurately measures the theoretical concepts it intends to measure. Data collection tools for the study were structured according to the operational definitions and validated through piloting. Furthermore, the study ensured content validity by covering all aspects of NHIS relevant to the study setting and population.

2.8.2 Reliability

To ensure the reliability of the study findings, the data collection tool was pre-tested before the main study to ensure consistency in the results obtained. During the pilot study, participants were asked if there are any questions they do not understand. This allowed for adjustments to the data collection tool to ensure the appropriateness of questions and practicality of the tool concerning the available data. In addition, the use of systematic sampling made the study less prone to selection bias, thus making the findings more reliable. In addition, privacy was maintained during the interviews to enhance honest responses.

2.9 Data Management and Storage

In achieving data integrity and confidentiality, all collected information was carefully managed and securely stored. After each interview, the researcher reviewed the responses for completeness and clarity before securely storing the completed interview guides. Each survey question was assigned a unique variable name. Categorical responses (Yes/No, Male/Female) were coded numerically (1 = Yes, 2 = No). For Likert-scale questions, numerical values were assigned to represent levels of agreement (e.g., 1 = Strongly Disagree, 5 = Strongly Agree). The physical copies of the interview schedules were kept in a locked cabinet accessible only to the researcher.

For digital storage, the data was transcribed and entered into a password-protected computer to prevent unauthorized access. Backup copies were stored on an encrypted external drive to safeguard against data loss. No identifying information was recorded to maintain participant anonymity. The data will be retained for a specified period, after which it will be securely disposed of in accordance with ethical research guidelines.

2.10 Data Analysis

Statistical Package for Social Sciences (SPSS) version 26 was used to analysis the data. Descriptive and inferential statistics in SPSS were used to assess the utilization of NHIS. After the analysis of collected data, for data visualization, frequencies and percentages tables were used. Furthermore, the Chi-square and Fisher's Exact tests were used to establish the association between the independent variables. Fisher's Exact Test assumes that the data is categorical, the observations are independent, and the sample size is small, particularly when the expected frequency in any cell of the contingency table is less than five. On the other hand, the Chi-Square Test assumes that the data is categorical, the observations are independent, and the sample size is sufficiently large, with expected frequencies of at least five in all cells. Both tests require random sampling to ensure the validity of statistical inferences.

The statistical significance was declared significant at the *P*-value <0.05. Additionally, binary logistic regression analysis was applied to identify predictors of NHIS utilization by calculating odds ratios (OR) with 95% confidence intervals (CI), allowing the determination of the likelihood of utilization based on independent variables. This structured approach provided a comprehensive and insightful overview of the factors influencing the utilization.

3.0 Results

As the studu we on there are a lot of findings which were found:

3.1 Socio-Demographic Profile of Respondents

Socio-demographic characteristics of the respondents is presented to provide context for the subsequent discussion of NHIS utilization in chapter five. These characteristics which include age, gender, marital status, education level, source of income help to identify associations between demographic factors and NHIS utilization among respondents.

3.1.1 Socio-Demographic Profile of Respondents

In this section, the socio-demographic characteristics of the respondents is presented to provide context for the subsequent discussion of NHIS utilization in chapter five. These characteristics which include age, gender, marital status, education level, source of income help to identify associations between demographic factors and NHIS utilization among respondents.

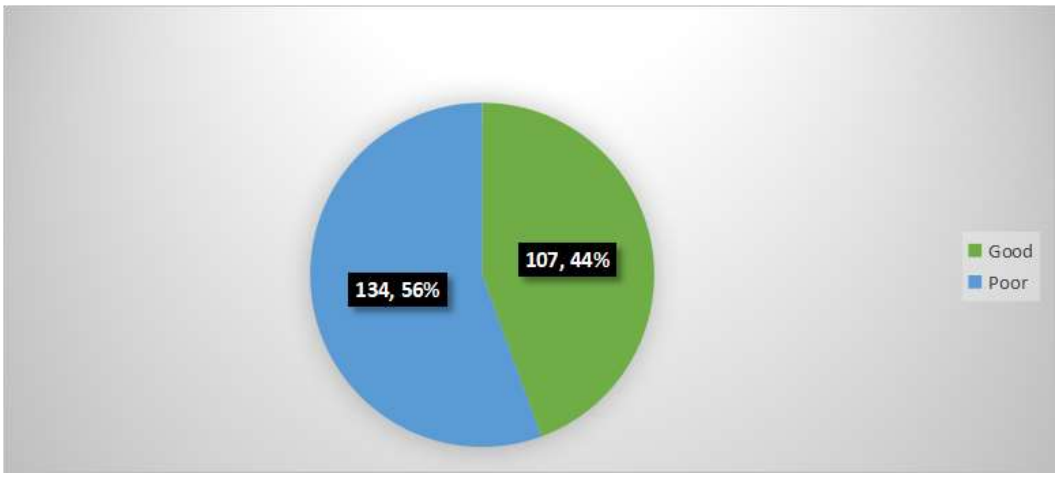
The demographic distribution of respondents, as presented in Table 1, indicates that the majority (88.4%) of respondents were aged between 18 and 35 years. A fairly balanced gender distribution was observed, with females comprising 53.1% of the respondents. Over half (56.0%) of the respondents reported being single. Respondents had varied levels of education, with the largest proportion (44.0%) having attained tertiary education. Employment status, (43.2%) of respondents were employed. All respondents (100%) stated that they were Christians.

3.2 Utilization of the National Health Insurance Scheme

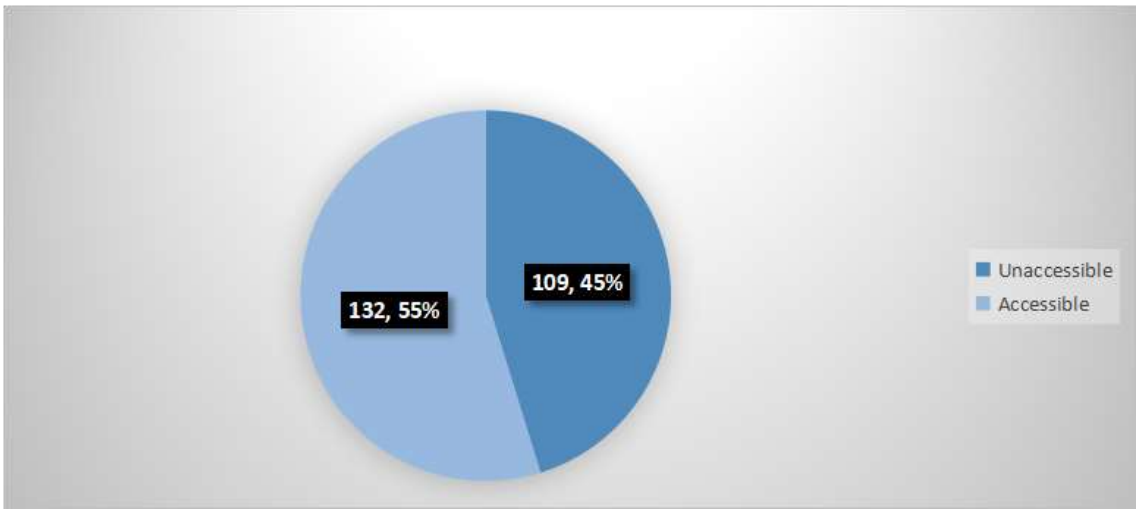
This section assesses the utilization of NHIS among respondents, various parameters such as membership of medical insurance scheme, type of scheme, frequency of scheme utilization were used and question responses were categorized as yes or no type. Utilization of the NHIS was also validated by frequency of service use and, self-reported utilization patterns

3.2.1 Geographical accessibility to health facility

This section assesses geographical accessibility to health facilities, focusing on the distance patients live from the facility and the ease of transportation to and from the facility. The data was collected using structured questions regarding the proximity of patients' homes to the health facility and their transportation experiences. Table 4 presents the distribution of responses, providing insight into the level of accessibility to healthcare services for patients.



Geographical accessibility of health facility (n=241)



Perception of National Health Insurance Scheme

4.0 Discussions

This study assessed the utilization of the National Health Insurance Scheme (NHIS) among adult patients at Kalindawalo General Hospital in Petauke District, Zambia. The results revealed that 58.9% of respondents were not utilizing NHIS, indicating significant gaps in uptake despite the scheme's availability. Statistical analysis identified age ($p = 0.000$) and geographical accessibility as key determinants of NHIS utilization. Patients residing closer to health facilities were three times more likely to utilize NHIS services (AOR: 3.00; 95% CI: 1.50 – 11.00, $p = 0.045$). Additionally, perceived need significantly influenced NHIS uptake, as individuals with a greater awareness of their healthcare needs were five times more likely to use NHIS (AOR: 5.00). However, 56% of respondents had negative perceptions of NHIS, which may further discourage enrollment and utilization. These findings highlight the need for targeted interventions to improve NHIS participation. Strengthening healthcare infrastructure, enhancing community awareness programs, and addressing affordability through subsidies and flexible payment options could boost NHIS uptake. Additionally, improving service quality and public trust in NHIS is crucial for increasing enrollment and sustained utilization. Future research should assess the long-term impact of NHIS on health outcomes and explore innovative strategies to make health insurance more accessible, affordable, and effective in Zambia.

4.6 Implications of this study to Public Health Nursing

4.6.1 Nursing Practice

The result of this study highlight the need for nurses to play an active role in educating patients about the National Health Insurance Scheme (NHIS). Nurses should ensure that patients understand the benefits of enrolling in NHIS and how to effectively utilize the services it provides. Additionally, nurses should advocate for policies that address accessibility issues, ensuring that NHIS benefits are equitably distributed across different patient demographics.

4.6.2 Nursing Education

Incorporating health insurance literacy into nursing curricula is essential for preparing future nurses to educate and guide patients in utilizing NHIS. Training programs should emphasize the role of nurses in facilitating access to healthcare through NHIS and addressing misconceptions about the scheme. Continuing education programs should also be implemented to keep nurses updated on changes in NHIS policies and procedures.

4.6.3 Nursing Administration

Hospital administrators should ensure that NHIS processes are streamlined to improve patient experiences. This includes reducing bureaucratic barriers that discourage utilization and ensuring that NHIS services are accessible within hospitals. Nursing administrators should also collaborate with policymakers to address gaps in service delivery and advocate for improved NHIS coverage for essential health services.

4.6. Nursing Research

Further research is needed to explore the long-term impact of NHIS utilization on patient health outcomes and healthcare system efficiency. Future studies should focus on identifying specific barriers to NHIS enrollment and developing targeted interventions to improve its uptake. Additionally, research should investigate the role of healthcare workers in influencing patients' decisions to utilize NHIS services.

4.7 Recommendations

4.8 To the Ministry of Health (MoH)

To improve both enrollment and utilization rates, it is crucial for the Ministry of Health to strengthen National Health Insurance Scheme (NHIS) awareness campaigns. Additionally, addressing barriers to NHIS utilization, such as accessibility issues and bureaucratic inefficiencies, should be a priority. Furthermore, it is essential to ensure that NHIS coverage is expanded to include a broader range of essential health services.

4.9 To Kalindawalo General Hospital Management

To improve NHIS service delivery, it is necessary to ensure the efficient processing of insurance claims and provide better patient support. Healthcare workers should also be trained to assist patients in navigating the NHIS enrollment and utilization procedures. Additionally, hospital infrastructure should be enhanced to accommodate the increasing number of NHIS beneficiaries.

4.10 To the Community Leaders of Kalindawalo

There is a need to advocate for NHIS enrollment within communities to increase awareness and participation. Additionally, collaboration with healthcare providers is essential to address community-specific challenges that affect NHIS utilization. Organizing community engagement programs will also help educate residents on the benefits of NHIS.

4.11 To the National Health Insurance Management Authority (NHIMA)

It is important to improve NHIS policies in order to make healthcare services more accessible to rural and underserved populations. Collaborating with healthcare providers is also crucial to ensure timely reimbursement and efficient service delivery. Additionally, conducting periodic evaluations of NHIS performance and making necessary adjustments will help enhance its effectiveness.

4.12 To Other Relevant Organizations

Non-governmental organizations (NGOs) and stakeholders in healthcare should actively support initiatives that promote NHIS awareness and accessibility. Employers should encourage their employees to enroll in NHIS and provide the necessary support for its utilization. Furthermore, research institutions should conduct further studies to improve NHIS policies and implementation strategies.

4.13 Plan for dissemination and utilization of results

The dissemination of research results from the study on the National Health Insurance Scheme (NHIS) among adult patients are shared through multiple channels to ensure a broad reach and impact. The results will be shared through a summary report and face-to-face presentation with staff and management at Kalindawalo General Hospital as a key healthcare provider in the region, and a summary report provides hospital administrators and staff with insights into the utilization of NHIS and associated factors of NHIS based on the results, the hospital can implement awareness campaigns to educate patients about NHIMA benefits, improve patient engagement by addressing misconceptions, and streamline service delivery to enhance efficiency. Additionally, hospital staff can use the result to advocate for policy adjustments, improve NHIMA enrollment procedures, and ensure that services under the scheme are more accessible and user-friendly for the community. Detailed reports and stakeholder meetings will be held with NHIMA in collaboration with MoH

to inform policy adjustments and strategic planning. A stakeholder meeting will facilitate direct interaction with NHIMA officials, allowing for in-depth discussions and immediate feedback on the study's implications.

The ministry responsible for national health policy will be availed with the study result through a policy brief and an executive summary report. This ensures that the study's outcomes contribute to national health policy development and refinement.

Additionally, the result of the study will be disseminated through publication in reputable journals (research articles) and conference presentations. Possible Journals will include BMC Health Services Research, Health Policy and Planning, and International Journal of Health Economics and Management where as Possible Conferences will include symposiums organized by the African Forum for Research and Education in Health, the National Health Research Authority and Zambia National Public Health Institute among others. Publishing in reputable journals and presenting at conferences disseminates the research results to the global academic community, fostering scholarly discussion and encouraging further research. These platforms ensure that the study contributes to the broader body of knowledge on health insurance systems.

The community from Kalindawalo will remained informed through community meetings and informational brochures. Engaging directly with the community and patient groups ensures that the end beneficiaries of NHIS are informed about the findings. Community meetings provide a forum for discussion, while informational brochures offer a tangible reference for patients, enhancing their understanding and engagement with NHIS. 6.0

The study examined the utilization of the National Health Insurance Scheme (NHIS) in Zambia, focusing on sociodemographic characteristics, geographical accessibility, and perceived need for healthcare.

Key Takeaways

1. Low NHIS utilization: Despite its potential benefits, NHIS utilization remains low, particularly among young adults.

2. Geographical accessibility: Distance to health facilities and ease of access significantly influence NHIS utilization.

3.Perceived need: Individuals with a strong perceived need for healthcare are more likely to use NHIS.

Implications

1. Policy interventions: Targeted interventions, such as youth-oriented awareness campaigns and flexible contribution options, are needed to improve NHIS uptake.

2. Healthcare infrastructure: Improving healthcare infrastructure, particularly in rural areas, is crucial for enhancing geographical accessibility.

3. Public awareness: Enhancing public awareness and understanding of NHIS benefits is essential for increasing utilization.

REFERENCE

Adongo, W.B. and Asaarik, M.J. (2019). Health Seeking Behaviors and Utilization of Healthcare Services among Rural Dwellers in Under-Resourced Communities in Ghana. International Journal of Caring Sciences, 11(2).

Adebiyi, O. and Adeniji, F. (2021). Factors Affecting Utilization of the National Health Insurance Scheme by Federal Civil Servants in Rivers State, Nigeria. Volume 58, p. 1–8.

Aggarwal, R. and Ranganathan, P. (2019). Study designs: Part 2–descriptive studies. Perspectives in clinical research, 10(1), 34-36. [Available at: https://doi.org/10.4103/picr.PICR_154_18].

AHRQ. (2022). Elements of Access to Health Care | Agency for Healthcare Research and Quality. [Available at: https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/access/elements.html].

Akweongo, P., Aikins, M., Wyss, K., Salari, P., and Tediosi, F. (2021). Insured clients out-of-pocket payments for health care under the national health insurance scheme in Ghana. BMC Health Services Research. 21(440). [Available at: https://doi.org/10.1186/s12913-021-06401-8].

Alkhawaldeh, A., ALBashtawy, M., Rayan, A., Abdalrahim, A., Musa, A., Eshah, N., Abu Khait, A., Qaddumi, J., Khraisat, O. and ALBashtawy, S. (2023). Application and Use of Andersen's Behavioral Model as Theoretical Framework: A Systematic Literature Review from 2012–2021. Iran J Public Health. 52, 1346–1354. [Available at: https://doi.org/10.18502/ijph.v52i7.13236].

Badu, E., Agyei-baffour, P., Acheampong, I., Opoku, M., and Addai-Donkor, A. (2018). Perceived satisfaction with health services under National Health Insurance Scheme: Clients' perspectives. International Journal of Health Planning and Management 34. [Available at: https://doi.org/10.1002/hpm.2711].

Boyle, S., Appleby, J. and Harrison, A. (2024). A Rapid View of Access to Care. The King's Fund. [Online]

Available at: www.kingsfund.org.uk/current_projects/gp_inquiry/dimensions_of_care/access_to_care.html. [Accessed 3 September 2017].

Carrasquillo, O. (2013). Health Care Utilization in Gellman, M.D., Turner, J.R. (Eds.), Encyclopedia of Behavioral Medicine. Springer, New York, NY, pp. 909–910. [Available at: https://doi.org/10.1007/978-1-4419-1005-9_885].

Cabanes, A., Kapambwe, S., Citonje-Msadabwe, S., Parham, G.P., Lishimpi, K., Cruz, T.A. and Shastri, S. (2019). Challenges, opportunities, and priorities for advancing breast cancer control in Zambia: a consultative meeting on breast cancer control. Journal of Global Oncology, 5, pp.1-7.

Carrin, G., Waelkens, M. P. and Criel, B. (2020). Community-based health insurance in developing countries: a study of its contribution to the performance of health financing systems. Tropical Medicine and International Health, 8(10), p. 799–811.

De Allegri, M. (2019). Community health insurance in sub-Saharan Africa: What operational difficulties hamper its successful development?. Tropical Medicine & International Health, 5(14), pp. 586-596.

Dekker, M., abd Wilms, A. (2010). Health Insurance and Other Risk-Coping Strategies in Uganda: The Case of Microcare Insurance Ltd. World Development 38, 369–378. [Available at: https://doi.org/10.1016/j.worlddev.2009.09.004].

Degu, G. and Yigzaw, T. (2006). Research Methodology. s.l.:Ethiopia Public Health Training Initiative.

Erlangga, D., Suhrcke, M., Ali, S. and Bloor, K. (2019). The impact of public health insurance on health care utilisation, financial protection and health status in low- and middle-income countries: A systematic review. PLOS ONE. 14, e0219731. [Available at: https://doi.org/10.1371/journal.pone.0219731].

Evans, M.V., Andréambeloson, T., Randriamihaja, M., Ihantamalala, F., Cordier, L., Cowley, G., Finnegan, K., Hanitriniaina, F., Miller, A.C., Ralantomalala, L.M., Randriamahasoa, A., Razafinjato, B., Razanahanitriniaina, E., Rakotonanahary, R.J.L., Andriamiandra, I.J., Bonds, M.H., and Garchitorena, A. (2022). Geographic barriers to care persist at the community healthcare level: Evidence from rural Madagascar. PLOS Glob Public Health. 2, e0001028. [Available at: https://doi.org/10.1371/journal.pgph.0001028].

Fagan, R. T. and Dutta, A. (2018). Is Health Insurance Coverage Associated with Improved Family Planning Access? A Review of Household Survey Data from Seven FP2020 Countries. Washington DC: Health Policy Plus.

Gabrysch, S., Cousens, S., Cox, J., Campbell, O. (2010). The influence of distance and level of care on health facility delivery in rural Zambia: A study linking national data in a Geographic Information System. Gesundheitswesen. (72). [Available at: https://doi.org/10.1055/s-0030-1266179].

Geferso , A. T. and Sharo, S. B. (2022). Community-Based Health Insurance Utilization and Its Associated Factors among Rural Households in Akaki District, Oromia, Ethiopia. Advances in Public Health, pp. 1-12.

GRZ. (2018). The National Health Insurance Act, 2018, Lusaka: Government Printers.

Hallal, P. (2014). Level of Education, in Michalos, A.C. Encyclopedia of Quality of Life and Well-Being Research. Springer Netherlands, Dordrecht, pp.3543–3544. https://doi.org/10.1007/978-94-007-0753-5_1629

Hasan, M.Z., Ahmed, M.W., Mehdi, G.G., Khan, J.A., Islam, Z., Chowdhury, M.E. and Ahmed, S., 2022. Factors affecting the healthcare utilization from Shasthyo Suroksha Karmasuchi scheme among the below-poverty-line population in one subdistrict in Bangladesh: a cross-sectional study. BMC Health Services Research, 22(1), p.885.

Howell, P. (2020). Marital Status Influence on Satisfaction/Happiness, in Maggino, F. Encyclopedia of Quality of Life and Well-Being Research. Springer International Publishing, Cham, pp.1–5. [Available at: https://doi.org/10.1007/978-3-319-69909-7_1730-2].

Jutting, J. P. (2024). Do community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal. World Development, 2(32), pp. 273-288.

Kaabi, S., Varughese, B. and Singh, R. (2022). Public and Private Healthcare System in Terms of both Quality and Cost: Review. Journal of Clinical and Diagnostic Research, 1 August, 16(8), pp. 01-08.

Kanmiki, E.W., Bawah, A.A., Akazili, J., Agorinyah, I., Awoonor-Williams, J.K., Phillips, J.F. and Kassak, K.M. (2019). Unawareness of health insurance expiration status among women of reproductive age in Northern Ghana: implications for achieving universal health coverage. Journal of Health, Population and Nutrition, 38, pp.1-12.

Kangwagye, P., Bright, L.W., Atukunda, G., Basaza, R. and Bajunirwe, F. (2023). Utilization of health insurance by patients with diabetes or hypertension in urban hospitals in Mbarara, Uganda. PLOS Glob Public Health 3, e0000501. [Available at:: https://doi.org/10.1371/journal.pgph.0000501].

Kukla, M., McKay, N., Rheingans, R., Harman, J., Schumacher, J., Kotloff, K.L., Levine, M.M., Breiman, R., Farag, T., Walker, D., Nasrin, D., Omore, R., O'Reilly, C. and Mintz, E. (2017). The effect of costs on Kenyan households' demand for medical care: why time and distance matter. Health Policy and Planning. 32, 1397–1406.

Masiye, F. and Kaonga, O. (2016). Determinants of Healthcare Utilisation and Out-of-Pocket Payments in the Context of Free Public Primary Healthcare in Zambia. Int J Health Policy Manag 5, 693–703. [Available at: https://doi.org/10.15171/ijhpm.2016.65].

Mazimba, Z., Muwowo, E. C., Chilufya, M. K. & Malan, M. (2023). The National Health Insurance Scheme (NHIS) and the Attainment of Universal Health Coverage in Zambia. Public Health Bul, 4(1), pp. 53-56.

Mekuria, G.A. and Ali, E. (2023). The financial burden of out-of-pocket payments on medicines among households in Ethiopia: analysis of trends and contributing factors. BMC Public Health. 23, 808. [Available at: https://doi.org/10.1186/s12889-023-15751-3].

Naoki, I. (2023). Universal Health Coverage for Inclusive and Sustainable Development: Lessons from Japan, Washington DC: World Bank.

NHIMA (2018). Background: National Health Insurance Scheme. [Online] Available at: https://www.nhima.co.zm/about/background. [Accessed 2 February 2024].

NHIS. (2018). 1. Short title and Commencement 2. Interpretation 3. Application and power of exemption. Lusaka: Government of Zambia.

OPD Register KGH. (2023). Kalindawalo NHIMA clients serviced in 2022 to 2023, Petauke: Kalindawalo General Hospital.

OPD Register KGH. (2023). Outpatient department patients record, Petauke: MOH: KGH.

PMRC. (2018). National Health Insurance – BLOG – PMRC. [Available at: https://pmrczambia.com/national-health-insurance-blog/].

Sanghi, S. (2022). Age as a site of law's meaning-making practices. Jindal Global Law Review 13, 221–229. [Available at: https://doi.org/10.1007/s41020-022-00185-6].

Smith, S., Newhouse, J. P. and Freeland, M. (2019). Income, insurance, and technology: why does health spending outpace economic growth? Health Affairs, 28(5), pp. 1276-1284.

SoleimanvandiAzar, N., Kamal, S.H.M., Sajjadi, H., Harouni, G.G., Karimi, S.E., Djalalinia, S. and Forouzan, A.S. (2020). Determinants of outpatient health service utilization according to Andersen's Behavioral Model: A systematic scoping review. Iranian Journal of Medical Sciences, 45(6), p.405.

Sinjela, K.M., Simangolwa, W.M.W., Hehman, L., Kamanga, M., Mwambazi, W.K., and Sundewall, J. (2022). Exploring for-profit healthcare providers' perceptions of inclusion in the Zambia National Health Insurance Scheme: A qualitative content analysis. PLOS ONE. 17, e0268940. [Available at: https://doi.org/10.1371/journal.pone.0268940].

Tijdens, K. (2016). Database of employment status + explanatory note. [Available at: https://doi.org/10.13140/RG.2.2.27972.58240].

Tilahun, H., Atnafu, D.D., Asrade, G., Minyihun, A. and Alemu, Y.M. (2018). Factors for healthcare utilization and effect of mutual health insurance on healthcare utilization in rural communities of South Achefer Woreda, North West, Ethiopia. Health economics review, 8, pp.1-7.

UN. (2020). Transforming Our World: The 2030 Agenda for Sustainable Development. Resolution Adopted by the General Assembly on 25 September, New York: United Nations.

UNICEF. (2021). Health Budget Brief. s.l.: United Nations Children's Fund.

USEPA. (2017). Health Status. [Available at: https://www.epa.gov/report-environment/health-status].

Wagstaff, A., Paci, P. and Doorslaer, V. E. (2019). On the measurement of inequalities in health. Soc Sci Med, Issue 33, p. 545–57.

Wang, H. (2022). Health insurance handbook: how to make it work. World Bank, Volume 219.

Wang, H., Switlick, K., Ortiz, C., Zurita, B. and Connor, C. (2012). Health insurance handbook: how to make it work (Vol. 219). World Bank Publications.

WHO. (2018). WHO Health systems financing: the path to universal coverage, Geneva: The World Health Organization.

WHO. (2021). Universal Health Coverage (UHC). [Online]

Available at: https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc) [Accessed 20 July 2021].

WHO. (2022). Gender and health. [Available at: https://www.who.int/health-topics/gender].

Witter, S. and Garshong, B. (2009). Something old or something new? Social health insurance in Ghana. BMC Int Health Hum Rights. 9, 20. [Available at: https://doi.org/10.1186/1472-698X-9-20].

Wuur, M. M., Duodu, D. A. and Tarkang, E. E. (2022). Factors that influence breast cancer screening among women of reproductive age in the Nandom Municipality, Ghana. BMC Women's Health, 22(359), pp. 1-8Wyk, D. van, Dippenaar, M. (2017). A critical analysis of the meaning of the term 'income' in Sections 7(2) to 7(8) of the Income Tax Act No. 58 of 1962. South African Journal of Economic and Management Sciences. 20, 9.

Yiğitalp, G., Bayram Değer, V. and Çifçi, S. (2021). Health literacy, health perception and related factors among different ethnic groups: a cross-sectional study in southeastern Turkey. BMC Public Health. 21, 1109. [Available at: https://doi.org/10.1186/s12889-021-11119-7].

Zambia Statistics Agency. (2012). Living Conditions Monitoring Survey Report 2010, Lusaka: Zambia Statistics Agency.

Zyaambo, C., Siziya, S. and Fylkesnes, K. (2012). Health status and socio-economic factors associated with health facility utilization in rural and urban areas in Zambia. BMC Health Services Research. 12, 389. [Available at: https://doi.org/10.1186/1472-6963-12-389].