

1 **Original research paper**

2 **HEALTH SERVICES UTILIZATION PATTERNS AMONG ENROLLEES OF THE**
3 **NATIONAL HEALTH INSURANCE SCHEME AT A TERTIARY HEALTH FACILITY**
4 **IN FCT - ABUJA, NIGERIA.**

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7 **ABSTRACT**

8 **Background:** Enrollees of the National Health Insurance Scheme (NHIS) utilize
9 healthcare services at various accredited healthcare facilities; the scheme
10 **having being** established to provide accessible, affordable and qualitative
11 healthcare to the Nigerian population.

Comment [K2]: Meaning?

12 **Objective:** This study assessed the types of health services utilized and
13 perception of patients towards the NHIS in a tertiary hospital in FCT-Abuja,
14 Nigeria.

15 **Methodology:** A cross-sectional study of 305 NHIS enrollees selected by
16 systematic random sampling was done at the General Outpatient Clinic,
17 University of Abuja Teaching Hospital, Gwagwalada, FCT-Abuja, Nigeria.
18 Participants' sociodemographic variables, reasons for hospital choice, utilization
19 and perceptions about NHIS services were assessed. Data were analyzed with
20 IBM SPSS Statistics 20.0.

21 **Results:** Majority 204 (66.9%) of the respondents were principal enrollees, 93
22 (30.5) were spouses and 8(2.6%) were extra-dependants, 157 (51.5%) had been

23 enrolled for more than 5 years, and availability of specialist doctors was the
24 main reason most patients 198 (64.9%) chose to access care at the hospital.

25 An average of 4 services were utilized by the respondents, with outpatient care
26 and laboratory services being the most utilized services. Majority 208 (68.2%)
27 stated that health insurance positively influences prompt health seeking
28 behaviour, while 182 (59.7%) felt that NHIS gives access to quality health
29 services.

30 **Conclusion:** The study revealed the types of healthcare services utilized and
31 the perception of NHIS beneficiaries towards the scheme. While continuous
32 advocacy and sustained efforts towards improved services and coverage
33 expansion should be intensified, further studies considering patients and
34 healthcare providers' perspectives and other associated factors are
35 recommended.

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37 **Word Count: 250**

38 **Key words:** Health; Insurance; Services; Quality; Utilization; Perception,
39 Nigeria.

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INTRODUCTION

The Alma-Ata Declaration of 1978 emerged as a major milestone of the twentieth century in the field of public health, and strongly reaffirms that health is a fundamental human right, and the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector. ¹ One common strategy adopted by governments of many countries towards improving access to affordable and essential health care services and attainment of universal health coverage is health insurance; which is a social security system that guarantees the provision of needed health services to persons on the payment of token contributions at regular intervals.

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The National Health Insurance Scheme (NHIS) in Nigeria was officially launched on June 2005 by the Federal Government of Nigeria with the objective of

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69 providing accessible, affordable and qualitative healthcare for all Nigerians, and
70 with a commitment to securing universal coverage and improving the health
71 status of Nigerians. ⁵

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72 The services provided under the NHIS include; out-patient care and in-patient
73 care (hospital admission), prescribed drugs, diagnostic tests, maternity care,
74 immunization, health and family planning education, eye and dental care,
75 primary care and referral services, and consultation/treatment by medical
76 specialists at secondary or tertiary levels depending on the nature and severity
77 of the illness ⁵

78 NHIS beneficiaries access care at the various accredited healthcare facilities
79 under the scheme and healthcare utilization studies have been done by some
80 researchers with various levels of utilization ^{6 -10} and mixed perceptions about
81 the scheme. ⁸⁻¹²

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82 Health Care Utilization is often defined as the quantity of health care services
83 used. ⁶ It refers to the population's use of health care services available to them
84 for the purpose of preventing and curing health problems, promoting
85 maintenance of health and well-being, or obtaining information about their
86 health. ⁷ Utilization of health services is usually influenced by various

87 factors which include; self-rated health status and healthcare needs, users'
88 perception and satisfaction with services, distance and accessibility, level of
89 education, gender and socioeconomic status. ^{13, 14} Patients also usually have

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90 reasons for where (healthcare facilities) they choose to access care and utilize
91 services. ^{12, 15, 16}

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92 This study assessed the types of health services utilized, reasons for choice of
93 where to utilize services and patients' perceptions of patients towards the NHIS
94 National Health Insurance Scheme in a tertiary hospital in FCT-Abuja, Nigeria.
95 Findings from this study ~~will~~ provide evidence-based data and contribute to the
96 literature on the utilization of health services by patients under the NHIS
97 National Health Insurance Scheme. It ~~will~~ also provides evidence for the
98 improvement of service quality in the study setting.

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102 **METHODOLOGY**

103 A descriptive cross-sectional study was conducted at the University of Abuja
104 Teaching hospital, a tertiary health facility and NHIS accredited healthcare
105 provider located in Gwagwalada, Abuja-FCT, Nigeria. The study population
106 included NHIS patients attending the General Outpatient Clinic of the hospital
107 in July 2018, with a sample size of 305 selected by systematic random
108 sampling. The study employed a structured interviewer-administered
109 questionnaire, which captured information on sociodemographic variables,
110 reasons for healthcare facility choice, health services utilization and perception
111 towards the NHIS ational Health Insurance Scheme. Adult patients (≥ 18 years)
112 who affirmed they had accessed care in the hospital at least two different times
113 and consented to participate were included in the study.

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114 The data were analyzed using IBM SPSS Statistics 20.0. Frequency tables and
115 **crostss tabulations** was generated and Chi-square test was **used** to determine
116 associations between the variables, with the level of significance set at $p < 0.05$.
117 Ethical approval for the study was obtained from the Ethical Committee of
118 University of Abuja Teaching Hospital. Participation was fully voluntary,
119 confidential and anonymous.

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126 **RESULTS**

127 The mean age of the respondents was 36 ± 10.2 years, with age ranging from 20
128 to 74 years. One hundred and thirty-three (43.6%) of the respondents were
129 males and 172 (56.4%) females, with a male: female ratio of 1:1.3. Most, 220
130 (72.1%) were married, while 82 (26.9%) were single. Majority, 241 (79.0%)
131 reported having a post-secondary/ tertiary education, while 50 (16.4%) had
132 secondary education. About two-third 204 (66.9%) were principal enrollees,
133 while 93 (30.5) were spouses and 8(2.6%) were extra-dependants. Majority, 262
134 (85.9%) registered with the hospital as their primary healthcare provider, while
135 43 (14.1%) were referred to the hospital from other healthcare facilities.

136 Regarding the duration of enrolment on the NHIS ~~ational Health Insurance~~

137 Scheme; about half, 157 (51.5%) of the respondents had been enrolled for more
138 than 5 years, 85 (27.9%) were between 3 to 5 years, while 63 (20.6%) had an
139 enrolment of 2 years and below. [Table 1]

140 Availability of specialist doctors was the main reason why about two-thirds 198
141 (64.9%) of the respondents chose to access care and utilize services at the
142 hospital, 125 (41.0%) was based on of the provision of quality services, while
143 116 (38.0%) made their choices because of the hospital location and
144 accessibility [Table 2]

145 There were various services provided in the hospital. An average number of 4
146 services were utilized by the respondents and all used outpatient care. Majority,
147 273 (89.5%) had laboratory tests done, 83 (27.2%) reported of having done
148 radiological investigations, 57 (17.0%) had been admitted in the hospital before,
149 48 (15.7%) had accessed obstetrics and gynecological services, while 36 (11.8%)
150 had undergone surgeries. [Table 3]

151 There were no statistically significant differences in services utilization
152 regarding age, sex, marital status, education, insurance status and duration of
153 enrollment on NHIS with p values of: 0.938, 0.797, 0.941, 0.788, 0.132 & 0.134
154 respectively. [Table 4].

155 About two-thirds 208 (68.2%) stated that health insurance influences people to
156 seek for health care promptly when they are sick, 182 (59.7%) opined that the
157 NHIS gives access to quality health services, 189 (62.0%) indicated that they
158 will recommend the NHIS to others and 216 (70.8%) mentioned that they will
159 recommend the hospital to others. [Table 5]

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172 **DISCUSSION**

173 The age range of the participants was from 20 -74 years, with majority (67.5%)
174 below 40 years connoting that majority of the participants were in their active
175 working years; this is however not unusual, as the majority of the study
176 participants were government civil/public servants. Also more than half (56.4%)
177 of the respondents were females and the majority (79.0%) had post-
178 secondary/tertiary education which is similar to studies in Ile-Ife and Ibadan.
179 ^{17, 18}

180 Majority, (66.9%) of the respondents were principal enrollees. A principal
181 enrollee is a civil/public servant or an employee of the private sector, who is the

182 main contributor of health insurance premium, and on behalf of whom the
183 other members of the family (dependants) are enrolled and entitled to health
184 insurance cover.⁵ The principal enrollees, being civil/public servants are likely
185 to be more educated and also enlightened about the scheme through
186 interactions with colleagues, the HMOs and NHIS ¹². This may account for the
187 higher healthcare utilization, with some studies having reported a positive
188 relationship between the level of education and health seeking behaviour as
189 well as health care utilization.^{19 - 22}

190 A very small fraction (2.6%) of the respondents were extra-dependants.
191 Principal enrollees are entitled to register a spouse, and four biological children
192 below the age of 18 years as dependants under the NHIS. However, more
193 dependants (additional spouses and children below or above 18 years etc.) can
194 be covered upon the payment of additional contributions by the principal
195 enrollee; these are referred to extra-dependants.⁵ The addition of extra-
196 dependants provided a window of opportunity to NHIS principal beneficiaries to
197 enroll their biological family members who are not entitled to cover. NHIS also
198 has the Vital Contributors Social Health Insurance Scheme (VCSHIP),⁵ designed
199 to cover the healthcare needs of people who are not ordinarily entitled to NHIS
200 (i.e. self-employed persons, artisans, traders, farmers and other people in the
201 informal sector, retirees, legal immigrants and all interested individuals)
202 without any form of discrimination upon the payment of the statutory
203 premium.

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204 The respondents' duration of enrolment of is a pointer to the registration of new
205 beneficiaries under the NHIS. This study found that most beneficiaries have
206 been enrolled for more than five years, with a minority newly registered in the
207 past two years, which is similar to the findings of Ehiosun in Abuja, who
208 reported that most NHIS beneficiaries were registered during the inception of
209 the scheme; with the majority enrolled above 5 years and less than 10% newly
210 registered within the past one year. ²³ The NHIS in the past few years has
211 migrated from manual registration of new enrollees undertaken by the NHIS,
212 HMOs and MDAs to the more reliable electronic direct data capture method,
213 which is currently being handled only by the NHIS; however the response of the
214 NHIS to organizations/employees and prospective enrollees seeking to be
215 enrolled needs to be improved and the registration procedure reviewed to
216 enhance speedy enrollments.

217 The reduction in new registrations could also be attributed to the level of
218 employment in the country. Unemployment in Nigeria may be attributed to the
219 population growth without the corresponding job opportunities, a freeze in
220 employment in many public and private sector institutions and continued
221 job losses in the manufacturing and oil sectors, in addition to insecurity with
222 the attendant loss of lives, destruction of infrastructure and internal
223 displacement.²⁴

224 Availability of specialist doctors and provision of quality services were the two
225 foremost reasons why the respondents chose the hospital. These findings are
226 comparable to that of Keffi, North Central Nigeria ¹² and not unusual as the

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227 health care facility is a government teaching hospital, with a lot of medical
228 specialists involved in training of medical students, resident doctors and other
229 healthcare specialists.

230 Apart from outpatient care, the most utilized services was laboratory
231 investigations (conducted on blood, urine, stool, tissue etc.). In contemporary
232 medical practice, clinical laboratory has been essential to patient care and
233 diagnosis.²⁵ Laboratory investigations aid physicians to make appropriate
234 evidence-based diagnosis and decisions, and has become indispensable for
235 diagnosing and monitoring disease, providing prognoses and predicting
236 treatment responses.²⁶ Respondents also reported that they have utilized
237 services such as: radiology investigations, hospital admissions, obstetrics and
238 gynaecological services, surgeries, eye and dental care, and physiotherapy.

239 Evidences from previous studies showed that patients complain more about the
240 quality of the provided services than the exclusion of some services,^{23, 27-29}
241 hence while consultations are ongoing for the inclusion of excluded services in
242 the benefit package, concerted efforts should be sustained towards the delivery
243 of improved and quality health services.

244 Majority of the respondents stated that health insurance has a positive
245 influence on people's health seeking behaviour, making them to seek for health
246 care promptly when sick, which is similar to the findings in India and Ghana,^{30,}

247 ³¹ It has also been reported that health insurance increases services utilization
248 and uninsured people are less likely to utilize healthcare services,^{10, 32-34} and
249 that people without health insurance are more likely to delay seeking care than

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250 the insured leading to reduced access to care and poorer medical outcomes. ^{35,}

251 ³⁶

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253 CONCLUSION

254 In conclusion, the study revealed the services utilization by beneficiaries under
255 the ~~NHIS ational Health Insurance Scheme~~ in this tertiary health facility, from
256 the perspective of the patient and showed a substantial utilization of various
257 healthcare services. While continuous advocacy and sustained efforts towards
258 improved services and coverage expansion should be intensified, further studies
259 considering patients and healthcare providers' perspectives and other
260 associated factors are recommended.

Comment [K23]: See K19 and K20!!

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262 COMPETING INTEREST

263 The authors declare no conflicts of interest or competing interests associated
264 with this manuscript.

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404 **Table 1: Socio-demographic Characteristics of Respondents**

Variables	Frequency (n=305)	Percent
Age group (years)		
< 30	102	33.4
30-39	104	34.1
40-49	68	22.3
50-59	23	7.5
≥ 60	8	2.6
<i>Mean: 36 ± 10.2</i>		
Sex		
Male	133	43.6
Female	172	56.4
Marital Status		
Single	82	26.9
Married	220	72.1
Divorced	2	0.7
Widowed	1	0.3
Level of education		
Primary	14	4.6
Secondary	50	16.4
Post-Secondary/Tertiary	241	79.0
Insurance Status		
Principal Beneficiary	204	66.9
Spouse	93	30.5
Extra-dependant	8	2.6
Relationship with Healthcare Facility		
Primary Provider	262	85.9
Secondary Provider	43	14.1
Duration of enrollment on NHIS (years)		
< 1	14	4.6
1 – 2	49	16.1
3 – 5	85	27.9
>5	157	51.5

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408 **Table 2: Reasons for choosing Hospital**

Variables	Frequency (n=305)	Percent (%)
Hospital location and Accessibility	116	38.0
Quality services	125	41.0
Availability of 24- hour services	58	19.0
Prompt attention	25	8.2
Availability of specialist doctors	198	64.9
Clean hospital environment	37	12.1
Affordable cost	74	23.3
Referred for specialist care	63	20.7

409 **Multiple response*

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411 **Table 3: Services Utilization**

Variables	Frequency (n=305)	Percent (%)
Outpatient care	305	100.0
Hospital Admission	57	17.0
Surgery	36	11.8
O&G/Maternity services	48	15.7
Dental care	21	6.9
Eye care	29	9.5
Laboratory services	273	89.5
Radiology	83	27.2
Physiotherapy	8	2.6

412 **Multiple response*

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423 **Table 4: Services Utilization by socio-demographic characteristics**

Variables	Number (types) of Services Utilized				
Age group (years)	1 - 2	3 - 5	≥ 5	X²	P-value
< 30	75(24.6)	17(5.8)	4(1.3)	2.94	0.938
30-39	79(25.9)	26(8.5)	5(1.6)		
40-49	50(16.4)	15(4.9)	3(1.0)		
50-59	19(6.2)	4(1.3)	0(0)		
≥ 60	6(2.0)	2(0.6)	0(0)		
Sex					
Male	101(33.1)	26(8.5)	6(2.0)	0.45	0.797
Female	128(42.0)	38(12.5)	6(2.0)		
Marital Status					
Single	63(20.7)	15(4.9)	3(1.0)	1.75	0.941
Married	163(53.4)	49(16.1)	9(3.0)		
Divorced	2(0.7)	0(0)	0(0)		
Widowed	1(0.3)	0(0)	0(0)		
Education					
Primary	10(3.3)	3(1.0)	1(0.3)	1.71	0.788
Secondary	36(11.8)	13(4.3)	1(0.3)		
Post-Secondary/Tertiary	183(60.0)	48(15.7)	10(3.3)		
Insurance Status					
Principal Beneficiary	159(52.1)	38(12.5)	7(2.3)	7.07	0.132
Spouse	62(20.3)	23(7.5)	3(1.0)		
Extra-dependant	8(2.6)	3(1.0)	2(0.7)		
Duration of enrollment on NHIS (years)					
< 1	12(3.9)	2(0.7)	0(0)	9.78	0.134
1 – 2	42(13.8)	6(2.0)	1(0.3)		
3 – 5	61(20.0)	23(7.5)	2(0.7)		
>5	114(37.4)	33(10.8)	9(3.0)		
Total	229(75.1)	64(21.0)	12(4.0)		

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430 **Table 5: Perceptions of NHIS and hospital services**

VARIABLE	Frequency (n=305)		
	Agree (%)	Disagree (%)	Neutral (%)
Health insurance influences people to seek healthcare promptly	208 (68.2%)	51 (16.7%)	46 (15.1%)
NHIS gives access to quality healthcare Services	182 (59.7%)	72 (23.6%)	51 (16.7%)
I will recommend NHIS to others	189 (62.0%)	73 (23.9%)	43 (14.1%)
I will recommend the hospital to others	216 (70.8%)	30 (9.8%)	59 (19.3%)

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UNDER PEER REVIEW