



ACCEPTANCE OF HEPATITIS B VACCINE AMONG HEALTH CARE WORKERS IN ONDO STATE

Olofin-Samuel Mary Ayodeji^{1*}, Aina Modupe Aduke (Ph.D.)²,

Ogidan Oluwakemi Christie (Ph.D.)³, Ayedun Tosin Olusola⁴,

Gentry Oluwabukola Ayo⁵, Adeagbo Omolola Yinka⁶, and Oyolola Victoria Ifeoluwa⁷

^{1,3,4,5}Department of Nursing, Faculty of Basic Medical Sciences, Ekiti State University,
Nigeria.

²Faculty of Nursing Sciences, Thomas Adewumi University, Oko, Kwara State.

⁶Department of Public Health, Osun State Ministry of Health, Osogbo.

⁷General Hospital, Ipe-Akoko, Ondo State.

*Corresponding Author's Email: ayodeji.epebinu@eksu.edu.ng

Cite this article:

Olofin-Samuel M. A., Aina M. A., Ogidan O. C., Ayedun T. O., Gentry O. A., Adeagbo O. Y., Oyolola V. I. (2024), Acceptance of Hepatitis B Vaccine Among Health Care Workers in Ondo State. African Journal of Health, Nursing and Midwifery 7(2), 93-104. DOI: 10.52589/AJHNM-QI5A42RK

Manuscript History

Received: 30 Jan 2024

Accepted: 17 Apr 2024

Published: 7 Jun 2024

Copyright © 2024 The Author(s).

This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

ABSTRACT: *Hepatitis-B Virus is a prevalent blood-borne disease that can be spread through occupational exposures. This study examines the acceptance of the Hepatitis B vaccine among healthcare workers in Akoko Senatorial District, Ondo State. This study utilised a cross-sectional descriptive research methodology to assess the adoption of the hepatitis B vaccine among healthcare workers in the Akoko senatorial district of Ondo state. The sample size was calculated using the Taro Yamane formula, resulting in 226. The participants were chosen from each of the research locations using convenience sampling technique. The data was gathered over a period of four weeks. The instrument used for data collection was a self-developed questionnaire. Only 218 questionnaires were completed accurately and were suitable for analysis. The data was analysed using Statistical Package for Social Sciences (SPSS) version 25. The hypothesis was tested using Pearson Product Moment Correlation at 0.05 level of significance. It was revealed that majority of the respondents had a strong grasp of important elements of Hepatitis B. Only 36 respondents has a positive and open attitude toward accepting the hepatitis B vaccine among this segment of the surveyed population. The listed factors influencing acceptance were vaccine accessibility, poor attitudes among vaccinators, crowded vaccination centers, and inadequate staff orientation. The findings also revealed a non-significant relationship between knowledge levels and vaccine acceptance. This implies that while knowledge is essential, it may not singularly drive vaccine acceptance, pointing to the need for comprehensive interventions. It is therefore recommended that Healthcare institutions and policymakers should work on optimizing the accessibility of vaccination services.*

KEYWORDS: Hepatitis B Vaccine, Acceptance, Healthcare workers.



INTRODUCTION

Health care personnel face a higher risk of accidental needle stick injuries (NSI) and exposure to blood borne infections due to their work environment. Hepatitis-B Virus is a prevalent blood-borne disease that can be spread through occupational exposures (Mohammadi et al., 2017). Hepatitis-B Virus (HBV) has a higher transmission potential in the workplace compared to other blood-borne pathogens including Human Immunodeficiency Virus (HIV) and Hepatitis-C Virus (HCV) due to similar modes of transmission (Anusha & Rashmi, 2018). According to a 2015 study by the World Health Organisation (WHO), the annual projected percentage of healthcare workers globally exposed to Hepatitis-B Virus (HBV) is 5.9%. Health workers must possess sufficient information about universal safety precautions due to their heightened susceptibility to acquiring illnesses (WHO, 2015).

HBV infection is prevalent in Nigeria according to a study conducted among blood donors, pregnant women, and HIV-infected patients. The study showed a prevalence of HBsAg carriers ranging from 9% to 39% (Emechebe, et al., 2019). The risk of healthcare staff in Nigeria being exposed to HBV in the workplace remains considerable (Ogoina, et al., 2022). Although healthcare staff in Nigeria and some other African nations have a high risk of exposure to HBV due to its prevalence, there is a low vaccination coverage among them. Several investigations on specific health care workers in Nigeria have shown poor rates of HBV vaccination coverage ranging from 20% to 50% (Ibekwe et al, 2019; Fausi et al, 2020). According to a cross-sectional survey at the University of Nigeria Teaching Hospital in Enugu, just 22.4% of healthcare professionals have been vaccinated against hepatitis B (Ibekwe et al, 2019). The dropout rate among Nigerian healthcare workers appears to be comparable to that of other African countries, with variations observed between different regions. In studies conducted in Lagos and Enugu, Nigeria, 54% and 22.4% of participants received the hepatitis B vaccine, with only 16.4% and 3.7% respectively receiving a full dosage (Ibekwe, et al., 2019; Fausi, et al., 2020). Higher coverage rates indicate single dosage uptake rates of 64.5% and 70.2%, with completion rates of 36.2% and 59.4%, respectively (Abiola, et al., 2018).

Health care professionals are frequently at risk of contracting hepatitis B from exposure to patients' blood and bodily fluids. An unvaccinated individual has a 6% to 30% chance of contracting the virus when exposed to HBV contaminated blood or body fluids, as stated by Abiola et al. (2018). HBV infection can be mostly prevented with immunisation. The vaccination provides protection against HBV infection in 90%-100% of those who have adequate antibody responses. Although the HBV vaccine has been available since 1982 and is known to be safe, efficacious, and well accepted, its use among healthcare workers in impoverished countries is minimal (Ziglam et al., 2013). An investigation into the reason for the poor acceptance of hepatitis B vaccination in Nigeria indicates that it may not be only due to lack of information about the hepatitis B vaccine, healthcare workers in Nigeria have a very high degree of awareness regarding the hepatitis B vaccine, as reported by Adekanle et al. (2021). Paradoxically, despite a significant level of awareness, there is poor acceptance among healthcare workers in Nigeria. This study aims to determine the factors influencing the acceptance level of the hepatitis B vaccine among healthcare personnel in Akoko senatorial district, Ondo State



Specifically, this study;

1. assessed the knowledge of Health care workers in Akoko senatorial district regarding Hepatitis-B Virus infection;
2. determined the acceptance level of hepatitis B vaccine among health care workers in Akoko senatorial district;
3. identified factors influencing the acceptance level of hepatitis B vaccine among health care workers in Akoko senatorial district.

The following research questions raised were answered in the study;

1. What is the knowledge of Health care workers in Akoko senatorial district regarding Hepatitis-B Virus infection?
2. What is the acceptance level of hepatitis B vaccine among health care workers in Akoko senatorial district?
3. What are the factors influencing the acceptance level of hepatitis B vaccine among health care workers in Akoko senatorial district.

Only one hypothesis was raised;

Ho1: There is no significant relationship between the knowledge about Hepatitis-B virus infection and HCW acceptance level of hepatitis B vaccine

METHODOLOGY

This study utilised a cross-sectional descriptive research methodology to assess the adoption of the hepatitis B vaccine among healthcare workers in the Akoko senatorial district of Ondo state. The study took place in the Akoko senatorial district of Ondo state, which includes Akoko North East, Akoko North West, Akoko South East, and Akoko South West. Only two hospitals, State Specialist Hospital (SSH) Ikare-Akoko and General Hospital (GH) Iwaro-oka Akoko, were chosen as the target setting through simple random sampling. SSH Ikare-Akoko employs approximately 302 healthcare workers, whilst GH Iwaro-oka Akoko has around 218 healthcare workers. The sample size was calculated using the Taro Yamane formula, resulting in 226 participants. The participants were chosen from each of the research locations using convenience sampling method. Data was gathered using a questionnaire that was created specifically for this study. It was verified by public health nurses and an expert in test and measurement. The content was revised when required to align with the study's objectives. Only participants who gave their agreement were permitted to take part in the study, and the data was gathered over a period of four weeks. Only 218 questionnaires were completed accurately and were suitable for analysis. The data was gathered and analysed descriptively with frequencies, percentages and mean and processed with the Statistical Package for Social Sciences (SPSS) version 25. The hypotheses was tested using Pearson Product Moment Correlation analysis at a significance threshold of $p < 0.05$



RESULTS

Descriptive Analysis of Research Questions

Research Question 1: What is the knowledge of Health care workers in Akoko senatorial district regarding Hepatitis-B Virus infection?

Table 1: Knowledge regarding Hepatitis-B Virus infection N= 218

S/N	ITEMS	Correct (%)	Incorrect (%)	Mean	S.D.
1.	Hepatitis B infection can be prevented by vaccination	192 (88.1)	26 (11.9)	0.88	0.32
2.	Hepatitis B virus can be found in semen or vaginal fluids of the infected person	178 (81.7)	40 (18.3)	0.82	0.39
3.	One can get hepatitis B infection through needle stick injury	179 (82.1)	39 (17.9)	0.82	0.38
4.	Every person infected by hepatitis can develop acute hepatitis immediately	192 (88.1)	26 (11.9)	0.88	0.32
5.	All patients' blood and bodily fluid can be infectious?	182 (83.5)	36 (16.5)	0.83	0.37
6.	Chronic Hepatitis-B infection leads to liver cancer	179 (82.1)	39 (17.9)	0.82	0.38
7.	HBV is more infectious than HIV	197 (90.4)	21 (9.6)	0.90	0.29
8.	Hepatitis B infected person may be asymptomatic for a long time	189 (86.7)	29 (13.3)	0.87	0.34
9.	One is supposed to first screen for HBV before vaccination is done	181 (83.0)	37 (17.0)	0.83	0.38

Table 1 offers a detailed summary of the respondents' understanding of Hepatitis-B Virus (HBV) infection, categorised by accurate and inaccurate replies to different issues. The data includes feedback from 218 individuals in total. Only 88.1% (192 respondents) correctly identified that Hepatitis B infection can be prevented with vaccination, while 11.9% (26 individuals) gave an inaccurate response. Furthermore, 81.7% (178 individuals) correctly recognised that HBV can be present in the semen or vaginal fluids of infected individuals, while 18.3% (40 individuals) provided an incorrect answer.

Additionally, 90.4% (197) accurately identified HBV as more infectious than HIV, whereas just 9.6% (21) gave an inaccurate answer. The data indicates a high level of knowledge on the connection between chronic Hepatitis-B infection and liver cancer, with 82.1% (179) giving accurate answers. The mean values for each topic constantly range from 0.82 to 0.90, demonstrating a significant consensus in knowledge among the respondents. The low standard deviations indicate a consistent level of understanding among the examined group.

To summarize the level of knowledge regarding Hepatitis-B Virus infection, the below classification was used as stated in table 2

**Table 2: Summary of the level of knowledge regarding Hepatitis-B Virus infection**

Level	Frequency	Percent
Poor (0 – 4)	24	11.01
Average (5 -6)	47	21.56
Good (7 – 8)	147	67.43
Total	218	100.0

Table 2 provides a summary of the respondents' knowledge on Hepatitis-B Virus (HBV) infection, classifying them into three levels: Poor, Average, and Good. 67.43% (147) respondents are classified as "Good" in terms of their knowledge about HBV infection. This indicates that majority of the respondents had a strong grasp of important elements of Hepatitis B. Approximately 21.56% (47) respondents are classified as possessing an "Average" level of knowledge. This suggests a moderate level of comprehension regarding HBV infection within this group. Conversely, 11.01% (24) respondents are in the "Poor" category, signifying a lesser level of understanding about Hepatitis-B Virus illness.

Research Question 2: What is the acceptance level of hepatitis B vaccine among health care workers in Akoko senatorial district?

Table 3: Acceptance of hepatitis B vaccine among respondents N= 218

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1.	I am willing to receive HBV vaccination once offered chance	5 (2.3)	77 (35.3)	121 (55.5)	15 (6.9)	2.33	0.64
2.	I am aware of where to get hepatitis B vaccination	8 (3.7)	80 (36.7)	115 (52.8)	15 (6.9)	2.37	0.67
3.	I will take the vaccine later because of fear of injection pain	32 (14.7)	103 (47.2)	76 (34.9)	7 (3.2)	2.73	0.75
4.	I can secure time to go for HBV vaccination	32 (14.7)	102 (46.8)	77 (35.3)	7 (3.2)	2.73	0.75
5.	I am willing to pay for HBV vaccination if need arises	8 (3.7)	81 (37.2)	114 (52.3)	15 (6.9)	2.38	0.67
6.	I will receive health education on HBV vaccination	32 (14.7)	102 (46.6)	77 (35.3)	7 (3.2)	2.73	0.75

Key: (SA) *Strongly Agree*, (A) *Agree*, (D) *Disagree*, (SD) *Strongly Disagree*

Table 3 presents a detailed summary of the 218 respondents' acceptance of the hepatitis B vaccine. Only 2.3% (5) strongly agree to receive the HBV vaccination, 35.3% (77) agree, 55.5% (121) disagree, and 6.9% (15) strongly disagree. When asked about where to get hepatitis B vaccination, 41.4% (88) agreed, 52.8% (115) disagree while 6.9% (15) strongly disagree. Concerns about injection pain are evident in responses to the phrase "I will delay getting the vaccine due to fear of injection pain." Only 14.7% (32) strongly agree, 47.2% (103) agree, 34.9% (76) disagree, while 3.2% (7) strongly disagree. Consistent trends are



seen in reactions to topics such as allocating time for vaccination, readiness to cover vaccine costs, and the acceptance of health education on HBV vaccination.

Overall, the data highlights varied attitudes and factors considered by the respondents in relation to hepatitis B vaccine. Although many of them demonstrate willingness and awareness, concerns around injection pain and time constraints are significant, offering vital information for healthcare communication and education tactics.

To summarize the acceptance level of hepatitis B among respondents, the following method was used

Scores from 0 - 15 Low Acceptance

16 - 20 Moderate Acceptance

21 – 24 High Acceptance

Table 4: Summary of acceptance level of hepatitis B

Level	Frequency	Percent
Low	99	45.41
Moderate	83	38.07
High	36	16.51
Total	218	100.0

Table 4 offers a concise summary of the acceptance levels of the hepatitis B vaccine among the 218 respondents, categorizing them into three distinct levels: Low, Moderate, and High. The majority 45.41% (99) of the respondents fall into the "Low" acceptance level category. This suggests that a significant portion of the respondents may harbor reservations or concerns regarding the acceptance of the hepatitis B vaccine. In the "Moderate" acceptance level category, there were 38.07% (83) respondents. This implies a mixed or moderate attitude toward hepatitis B vaccination among this group. Only few, 16.51% (36) falls within the "High" acceptance level category. This indicates a positive and open attitude toward accepting the hepatitis B vaccine among this segment of the surveyed population.

Research Question 3: What are the factors influencing the acceptance level of hepatitis B vaccine among health care workers in Akoko senatorial district?

Table 5: Factors influencing the acceptance level of hepatitis B vaccine among respondents N= 218

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1.	Health facility offers free vaccination services to health care workers	7 (3.2)	86 (39.4)	110 (50.5)	15 (6.9)	2.39	0.66
2.	Health facility have HBV vaccines	13 (6.0)	117 (53.7)	88 (40.4)	0	2.66	0.59
3.	Attitude of vaccinators are	1	137	11	69	2.32	0.93



	poor	(0.5)	(62.8)	(5.0)	(31.7)		
4.	There is no idea of where to get HBV vaccination from	0	163 (74.8)	0	55 (25.2)	2.49	0.87
5.	There is no proper orientation of newly employed staff towards vaccination	13 (6.0)	117 (53.7)	88 (40.4)	0	2.66	0.59
6.	The vaccination office is not always opened	55 (25.2)	163 (74.8)	0	0	3.25	0.44
7.	There is much crowd at the vaccination centre hence it waste time.	14 (6.4)	204 (93.6)	0	0	3.06	0.25

Key: (SA) Strongly Agree, (A) Agree, (D) Disagree, (SD) Strongly Disagree

Table 5 explores the factors impacting the participants' views on vaccination. Only 50.5% (110) disagreed whereas 42.6% (93) agreed that health facilities provide free immunisation services to healthcare personnel. About 59.7% (130) of the respondents agreed that HBV vaccines are available in health facilities, whereas 40.4% (88) disagreed. Majority 74.8% (163) agreed that there is uncertainty about where to obtain HBV immunisation, whereas 25.2% (55) disagreed. Regarding the orientation of newly hired workers on vaccination, 59.7% (130 participants) either strongly agreed or agreed that there is inadequate orientation. Regarding the accessibility of vaccination offices, all the individuals agreed. Finally, 93.6% of respondents (204) agreed that crowded vaccination centres and the accompanying time wasting were a significant issue.

The findings emphasise various elements that affect acceptability, such as worries regarding vaccinators' attitudes, knowledge of vaccination sites, orientation and facility accessibility challenges, and perceived inefficiencies in the vaccination procedure. Addressing these particular concerns could be crucial in enhancing the overall level of acceptance among the studied population.

Test of Hypotheses

H₀₁: There is no significant relationship between the knowledge about Hepatitis-B virus infection and HCW acceptance level of hepatitis B vaccine

Table 6: Pearson Correlation between

		Knowledge	Acceptance Level
Knowledge	Pearson Correlation	1	.048
	Sig. (2-tailed)		.719
	N	218	218
Acceptance Level	Pearson Correlation	.048	1
	Sig. (2-tailed)	.719	
	N	218	218

The data in Table 6 showed that there was no statistically significant correlation between the level of knowledge regarding Hepatitis-B virus infection and healthcare workers' acceptance of the hepatitis B vaccine ($r = .048$, $p = .719$). The hypothesis that there is no significant



association between healthcare workers' knowledge of Hepatitis-B virus infection and their acceptance level of the hepatitis B vaccine is confirmed.

DISCUSSION

The results showed that a significant proportion of participants, 67.43%, were classified as "Good," aligning with previous research by Ogundele et al. (2017) that emphasised the beneficial effects of health education initiatives. Several research (Ogoina et al., 2020; Musa et al., 2018) have highlighted the importance of health education in enhancing knowledge levels. The present results support this idea, indicating that carefully planned programmes might result in positive results. Respondents in the "Average" category (21.56%) reflect a common phenomena discussed in literature (Mingtao et al., 2016), suggesting that general awareness campaigns can be beneficial but there is still potential for enhancement, particularly in specialised knowledge areas. This emphasises the necessity for persistent, focused initiatives to tackle intricate elements of HBV infection, promoting an ongoing educational process within the community.

Also, 11.01% of respondents categorised as "Poor" highlights knowledge gaps among the respondents. This discovery is consistent with previous research (Lin et al., 2017) that supports the need to identify and focus on specific knowledge gaps to improve the impact of health education initiatives. Comprehending the nature of these gaps is essential for customising interventions to enhance knowledge levels in specific areas where individuals may lack information. These findings have implications for public health policy that are consistent with literature promoting evidence-based interventions. Continuous monitoring of knowledge levels, together with focused interventions, is crucial for the effectiveness of public health projects. It is essential to sustain efforts to guarantee that knowledge enhancement is continuous, as highlighted in the literature.

The results showed that 45.41% of respondents are categorised as having a "Low" acceptability level, indicating a considerable amount of vaccine reluctance among the studied population. The literature on vaccination hesitation, as discussed by LeFevre (2015), highlights the complex character of this problem, which is shaped by variables like distrust in vaccine safety, worries about adverse effects, and cultural or religious convictions. It is essential to comprehend the precise factors causing low acceptance in order to create focused solutions to tackle reluctance. Within the "Moderate" acceptability level category, which accounts for 38.07% of respondents, there is evidence of a mixed or ambivalent attitude towards hepatitis B vaccine. This is consistent with the findings in the literature by Khan et al. (2020), which acknowledges vaccination adoption as a continuum affected by various factors like information availability, communication tactics, and perceived risks and advantages. Adapting communication tactics to target the concerns of individuals in the moderate acceptance category may play a key role in promoting a positive change (Khan et al., 2020).

The result further showed that 16.51% of the respondents are classified in the "High" acceptance level group. This demographic displays a favourable and receptive stance towards receiving the hepatitis B vaccine. Within the literature on vaccine acceptability, this is consistent with research (Khan, et al., 2020) emphasising the significance of promoting



positive attitudes via efficient communication, establishing trust in healthcare systems, and highlighting the advantages of vaccination.

The findings have significant implications for public health interventions. Individuals with low acceptance may benefit from specialised communication tactics that address specific problems and provide correct information. Furthermore, attempting to comprehend and interact with persons in the moderate acceptance group can assist in customising solutions efficiently. The segment with high acceptance serves as a basis for promoting immunisation in the broader population through positive message and lobbying.

The results showed a significant discrepancy (50.5%) in opinions on whether healthcare facilities provide complimentary immunisation services to healthcare personnel. This is consistent with the literature of Kalagara et al. (2019) which highlights financial obstacles as a major factor affecting vaccine adoption. Strategies to improve vaccine acceptability may be more effective if they address financial issues, including offering subsidised or free vaccination services. The 40.4% discrepancy regarding the availability of HBV vaccines at health facilities indicates possible obstacles in vaccine accessibility. This aligns with the literature (Kalagara et al., 2019) emphasising the significance of vaccination availability as a crucial element in vaccine uptake. Ensuring a steady and readily available supply of vaccines is essential for increasing acceptance rates in the community.

The substantial consensus (62.8%) on the sense of negative sentiments among vaccinators is a worrisome discovery. Research by Fatusi et al. (2020) has highlighted that healthcare provider attitudes play a crucial role in determining vaccine adoption. Improving vaccination acceptability can be achieved by implementing training programmes and enhancing communication between healthcare practitioners and recipients. The high level of consensus (93.6%) about crowded vaccination sites and time inefficiency underscores logistical obstacles that could deter people from receiving the vaccine. Research (Fatusi et al., 2020; Adekanle et al., 2019) indicates that easy access to vaccination services increases acceptance. Strategies like improving vaccination centre efficiency and introducing appointment procedures could help address these issues. The high level of agreement (74.8%) about the absence of orientation for new employees highlights the significance of thorough training programmes. Adekanle et al. (2019) literature indicates that receiving adequate education and training might boost trust in vaccine recommendations, leading to higher acceptance rates. Ensuring healthcare workers are knowledgeable and competent in handling patient concerns will improve overall vaccine adoption.

The results showed that respondents generally had a high degree of understanding about HBV infection. The accurate answers varied from 81.7% to 90.4%, and the average scores for each item were consistently high, ranging from 0.82 to 0.90. Regarding the acceptance of the hepatitis B vaccine, most respondents were willing to receive it, but worries regarding injection pain and time available for vaccination were significant. Table 5 shows that 45.41% of respondents had a "Low" acceptance level, 38.07% had a "Moderate" acceptance level, and 16.51% had a "High" acceptance level regarding the hepatitis B vaccine.

The findings also highlighted issues such as free vaccination services, vaccine availability, negative attitudes among vaccinators, lack of understanding about vaccination locations, and overcrowded vaccination centres as factors affecting vaccine uptake. The criteria offer detailed insights into how the examined population makes decisions about vaccines. The



study's findings indicate the necessity of implementing focused interventions to improve awareness levels, tackle particular concerns affecting vaccine acceptability, and customise tactics to the many factors impacting vaccination decisions among the assessed population.

CONCLUSION

The findings revealed a generally commendable understanding of Hepatitis-B Virus (HBV) infection among the surveyed population, with a significant majority falling into the "Good" knowledge category. This underscores the success of existing health education efforts in equipping healthcare professionals with crucial information about HBV. Despite the high knowledge levels, the study identifies challenges in vaccine acceptance. A substantial portion of respondents expresses low or moderate acceptance levels, with concerns ranging from financial considerations to logistical issues, such as crowded vaccination centers. These findings highlight the importance of not only disseminating information but also addressing specific barriers that may hinder vaccine acceptance.

The factors influencing acceptance, including concerns about the attitudes of vaccinators, lack of awareness of vaccination locations, and perceived inefficiencies in the vaccination process, call for targeted interventions. Strategies aimed at improving healthcare provider communication, optimizing vaccination center operations, and providing comprehensive staff orientation can play a pivotal role in addressing these concerns.

RECOMMENDATIONS

1. Healthcare institutions should collaborate with public health authorities and educational institutions to establish and maintain extensive health education programmes. The programmes should prioritise informing healthcare workers on the newest discoveries in Hepatitis B, correcting common misconceptions, and reinforcing critical facts.
2. Public health authorities and healthcare institutions should create specific interventions for those with a "Moderate" degree of acceptance. The interventions should target individual issues and offer customised information to boost their confidence and readiness to get the hepatitis B vaccine.
3. Healthcare facilities should establish training programmes and efforts focused on enhancing the attitudes of vaccinators. This may involve communication training, empathy-building activities, and establishing a supportive vaccination setting. Supervisors and administrators should proactively interact with vaccinators to tackle problems and encourage a constructive attitude.
4. Healthcare facilities should give first importance to creating and executing thorough orientation programmes for newly hired staff. This should involve educating new staff members about vaccination practices, highlighting the significance of immunisation, and addressing any concerns or misconceptions they may have.



5. Professional healthcare associations should partner with public health agencies to share information, resources, and best practices around Hepatitis B. These partnerships can help create guidelines, toolkits, and training materials that meet the specific needs and priorities of healthcare workers.

REFERENCES

- Abiola, A., Omoyeni, O.E. & Akodu, B.A. (2019). Knowledge, attitude and practice of hepatitis B vaccination among health workers at the Lagos State accident and emergency centre, Toll-Gate, Alausa, Lagos State. *West Afr J Med.* 32(4), 257-62
- Adekanle, O., Ndububa, D. A., Olowookere, S. A., Ijarotimi, O., & Ijadunola, K. T.(2019). Knowledge of Hepatitis B Virus Infection, Immunization with Hepatitis B Vaccine, Risk Perception, and Challenges to Control Hepatitis among Hospital Workers in a Nigerian Tertiary Hospital. *West Afr J Med.* 2(4), 157-62
- Anusha, R. & Rashmi, K. (2018). Factors Influencing Observation of Standard Precautions among Nursing Staff in Tertiary Care Setting in Mangalore. *International Journal of Community Medicine and Public Health*, 5(1), 377-381.
- Emechebe, G., Emodi, I., & Ikenuna, A. (2019). Hepatitis B virus infection in Nigeria-A review. *Niger Med J.* 50, 18–22.
- Fatusi, A.O.A., Esimai, A.O., Onayade, A.A., Ojo, O.S.O., Fatusi, O.A. & Esimai, A.O. (2020) Acceptance of hepatitis B vaccine by workers in a Nigerian teaching hospital. *East African Medical Journal.* 7(11), 608–12.
- Ibekwe, R.C. & Ibeziako, N. (2019). Hepatitis B vaccination status among health workers in Enugu, Nigeria. *Niger J Clin Pract.* 9(1), 7-10.
- Kalagara, P., Srinivas, R., Vinayaraj, E., & Dass, M. (2019). A Study on Awareness, Occupational Risk Perception & Level of Vaccination against Hepatitis-B among Medical & Nursing Students in Tertiary Care Hospital, Hyderabad. *International Journal of Research in Medical Sciences*, 3(3), 583-587
- Khan, N., Sheikh, M., Khalid, M., Siddiqui, S., & Merchant, A. (2020). Effect of gender and age on the knowledge, attitude and practice regarding Hepatitis B and C and vaccination status of Hepatitis B among medical students of Karachi, Pakistan. *JPMA. The Journal of the Pakistan Medical Association*, 60, 450-455.
- LeFevre, M. (2015). Screening for Hepatitis B Virus Infection in Non-pregnant Adolescents and Adults: U.S. Preventive Services Task Force Recommendation Statement". *Annals of Internal Medicine*, 161 (1), 58–66.
- Lin, P., Tsai, Y., Chen, W. & Huang, S. (2017). Prevalence, Characteristics, and Work-related Risk Factors of Low Back Pain among Hospital Nurses in Taiwan: a Cross-sectional Survey. *Int J Occup Med Environ Heal*, 25, 41–50
- Mingtao, Q., Xuyao, W., Hualian, W., Xiaoli, Y., Dan, L., Zhixia, J., and Lezhi Li (2016). Influencing Factors on use of Standard Precautions against Occupational Exposures to



Blood and Body Fluids among Nurses in China. *Int J Clin Exp Med.*, 8(12), 22450–22459

Mohammadi, N., Allami, A., and Malek, M. (2017). Percutaneous Exposure Incidents in Nurses: Knowledge, Practice and Exposure to Hepatitis B Infection: Percutaneous Exposure Incidents in Nurses. *Hepat Mon.*, 11, 186–190.

Musa, B.M., Bussell, S., Borodo, M.M., Femi O.L., & Samaila, A.A. (2018). Prevalence of hepatitis B virus infection in Nigeria, 2000-2013: A systematic review and meta-analysis. *Nigerian Journal of Clinical Practice.* 18, 163–72.

Ogoina, D., Pondei, K., Adetunji, B., Chima, G., Isichei, C. & Gidado, S. (2020). Prevalence of Hepatitis B Vaccination among Health Care Workers in Nigeria in 2001-2012. *The International Occupational Health Journal.* 5(1), 56-65

Ogundele, O., Funmito, F., Adegoke, A., Olorunsola, A., & Omotosho, O. (2017). Perceived Risk, Willingness for Vaccination and Uptake of Hepatitis B Vaccine among Health Care Workers of a Specialist Hospital in Nigeria. *Public Health Research*, 3(3), 100-105.

World Health Organization (2015). Hepatitis B Fact sheet N^o204. Retrieved on 11th of July from <http://www.who.int/mediacentre/factsheets/fs204/en/&hl=en-NG&tg=2053&pt=228>

Ziglam, H., El-Hattab, M., Shingheer, N., Zorgani, A., & Elahmer, O. (2013). Hepatitis B vaccination status among healthcare workers in a tertiary care hospital in Tripoli, Libya. *Journal of Infection and Public Health*, 6(4), 246-251. doi:<https://doi.org/10.1016/j.jiph.2013.02.001>