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Research Article

Knowledge, Attitude, and Practices of Clinical Students at The Copperbelt University, School of Medicine Towards Hepatitis B Vaccination

Mtonga Vake*
School of Medicine Ndola Campus, The Copperbelt University, Zambia

***Corresponding author:** **Mtonga Vake**
School of Medicine Ndola Campus, The Copperbelt University, Zambia.
Tel: +260 955 800 892
Email: vakemtonga14@gmail.com

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Summary

Background and Aim: Hepatitis B virus infection is one of the most serious occupational related diseases that has public health impact. The vaccine that protects against Hepatitis B infection is available to all age groups and is known to be effective in the prevention of Hepatitis B. However, few people are aware of the vaccine including risk groups such as clinical students. This study was carried out to assess knowledge, attitude, and practices of clinical students at the Copperbelt University, School of Medicine towards Hepatitis B vaccination.

Methodology: This research utilized the cross-sectional descriptive study design. All the 150 students from fourth, fifth, to sixth year were enrolled. A structured, self-administered questionnaire was used for data collection and results were analyzed using SPSS.

Results: Majority (88%) of the participants showed good knowledge where the sixth-year students had more knowledgeable than fourth- and fifth-year students. Almost all the students (97.6%) knew that a virus causes Hepatitis B infection. Most students knew the various modes of transmission although very few (15.3%) knew correctly the treatment for acute Hepatitis B. About 91.3% knew that a safe and effective vaccine is available though only 27% knew for how long the vaccine can protect. Students showed a good attitude (82%) towards hepatitis B vaccination. However, the practice was poor as only 14 (9.4%) students were vaccinated. The students that did not receive the vaccine gave the reason of the vaccine not being availability and mostly attributed to lack of deliberate programs both from the school and the hospital to vaccinate all clinical students.

Conclusion: The participants had good knowledge and good attitude but the practice was poor towards hepatitis B vaccination. Hence, there is need to equip all students, especially clinical students, with correct and adequate information preventive measures on blood-borne viruses such as HBV through vaccination which will eventually translate into good practice of hepatitis B vaccination. A well understood and easily accessible vaccination program should be made available at all health training institutions.

Abbreviations: AIDS: Acquired Immune Deficiency Syndrome; ART: Anti-Retroviral Therapy; BDS: Bachelor of Dental Surgery; HBV: Hepatitis B Virus; HCW: Health Care Workers; HCV: Hepatitis C Virus; HIV: Human Immune-Deficiency Virus; MBChB: Bachelor of Medicine, Bachelor Surgery; TDRC: Tropical Diseases Research Centre; WHO: World Health Organization; ZCE: Zambia Code of Ethics

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Introduction

Background Information

Globally, over 500 million people are infected with hepatotropic viruses and are at a considerable risk of getting complications due to hepatocellular carcinoma [16]. According to WHO (2017) records, about 780 000 people die every year from Hepatitis B and its complications. Sub-Sahara Africa is in the medium to high endemic area which chances of about 70% of the population getting infected with HBV before 40years [13]. The prevalence of HBV infection in Zambia is about 5.6% in the 15-59 years' population and 7.1% in HIV positive individuals [19].

Hepatitis B virus is transmitted through contact with fluids such as vaginal secretions, semen, and blood [32]. High risk activities that potentiate the transmission include needle sharing, unprotected sexual activity, blood transfusions, and organ transplant. [14]. Another high-risk activity is during child birth where a pregnant mother can transmit the infection during childbirth [15]. However, the infection cannot becannot be transmitted by handshakes, kissing, sharing of food, coughing, or breastfeeding [4].

To prevent HBV, WHO (2017) recommends primary prevention such as getting vaccinated against Hepatitis B, Information Education and Communication (IEC) on blood-borne viruses, screening of blood products, strengthening safe injection practices by HCWs. Secondary prevention includes early case finding and treatment in order to prevent the infection from transmitting in the communities (Lucas and Gilles, 2014). Management of Hepatitis B is generally symptomatic treatment whereas chronic infection is treated with antivirals such as entecavir, tenofovir, lamivudine, and other drugs such as Interferon Alpha among others (Lok, 2014). In end stage liver disease, liver transplant is the only hope for patients [34].

The most effective way of prevention of Hepatitis B is through vaccination and especially in the high-risk populations such as HCWs and clinical students [2]. In Zambia, the control strategies have focused on blood blank screening and childhood vaccination leaving the adult population at an increased risk [26]. The country has made progress in addressing the burden of HBV infection by including the hepatitis treatment in the HIV treatment guidelines. However, no measures have been put that address the single HBV infections [24]. Furthermore, the vaccine in Zambian hospitals is hardly accessible and adults or health practitioners who wish to be vaccinated must take it upon themselves to buy or wait until it is accessible from the hospitals.

Because medical students face the threat of percutaneous injuries during their clinical rotations [21], their knowledge and attitude towards the already available Hepatitis B vaccination becomes very cardinal in prevention of the infection [15]. There are several studies that have been done on hepatitis B infection itself but there are few studies that have focused on vaccination as the most effective way of preventing the infection especially among health workers and clinical students who are at great risk of this disease. Further, few studies have been done locally that have aimed at assessing the knowledge, attitude, and practice of clinical students towards Hepatitis B vaccination. Therefore, this study focused on assessing the knowledge, attitude, and practices of clinical students at the Copperbelt University, School of Medicine towards Hepatitis B vaccination seeing that they are at high risk.

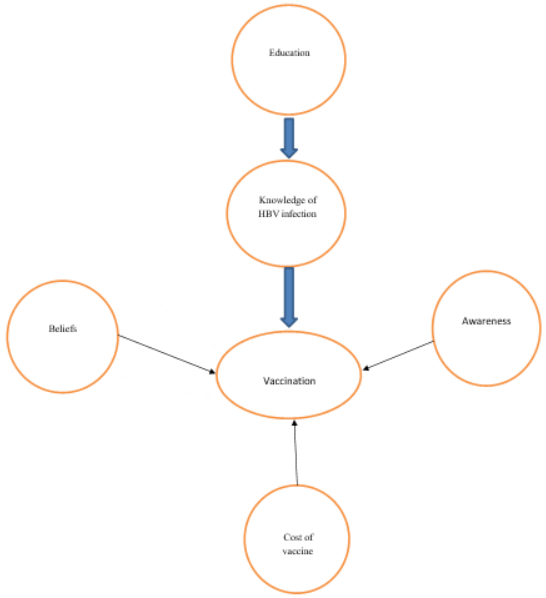

Figure 1: Conceptual framework.

Statement of the Problem

Hepatitis B is a serious and fatal pandemic affecting every age. However, people most likely to acquire the virus are babies immediately after birth and health workers due to its mode of transmission. Student doctors and nurses are also at high risk of acquiring this virus if not vaccinated against it. Being found in the hospital puts students at a greater risk of getting infected especially those doing their clinical rotations. Therefore, it is essential for students to be knowledgeable about hepatitis B, how to prevent themselves from acquiring the virus, as well as the vaccination program. Not only should students be aware of hepatitis B, they must be vaccinated to prevent themselves from acquiring the virus while being found in the hospital. The Copperbelt University, school of medicine, is every year increasing the number of students proceeding to their clinical years. Because of this, it is necessary for students to be aware of the risks they are to encounter while doing their clinical rotations in the hospital, this includes Hepatitis B, and know the preventive measures, and be vaccinated against the disease.

Justification of the Problem

The Copperbelt University, School of Medicine has opened the doors for many school leavers to study various health programs at the institution. However, students are at increased risk of hospital acquired infections such as Hepatitis B during their clinical practice. In Zambia, immunization program is only targeted at children who are 6 weeks of age and leaves the adult population and other high-risk populations at risk [12]. It is therefore very important for clinical students at the Copperbelt University to be knowledgeable, have a good attitude towards vaccination, and ultimately get vaccinated. This study was conducted to help the school and other relevant stakeholders to know the status of students concerning Hepatitis B vaccination.

Literature Review

Global Perspective: According to WHO (2012), approximately 600 000 people die every year as a result of hepatitis B. There has been a rise in the number of people who die every year due to hepatitis B and its consequences according to World Hepatitis Alliance (2016) from 600, 000 to about 1.4 million people per year. The prevalence of HBV is highest in Sub-Saharan Africa and East Asia where 5-10% of the adult population is chronically infected [31]. According to World Hepatitis Alliance (2016),

95% of people infected with viral hepatitis are unaware of their status.

Despite the endemicity of HBV in India, results obtained from a cross-sectional study conducted among undergraduate dental students of a Rural Dental College in India that assessed knowledge and awareness of HBV showed that 19% out of the 277 students had adequate knowledge about the HBV disease process [7]. Another study conducted by Patilet et al. (2016) where a cross sectional study was carried out on first year MB-ChB students of Shri B.M. Patil medical college concluded that half of the students were unaware of high risk of transmission to them. This poor outcome is due to lack of education and sensitization to students which would help students be aware of the HBV infection and get vaccinated against the infection.

A cross sectional study by Roya et al. (2016) was conducted to evaluate the knowledge, attitude, and practice of medical science students toward hepatitis B and C infections at Guilan University of Medical Sciences in USA. Results from the study concluded that the knowledge of medical students was insufficient especially in the methods of prevention and in the group of students that do not usually have close contact with patients. The study also stated that majority respondents were vaccinated against hepatitis B infection. Roya et al. (2016) also states on the attitude of students towards HBV that majority would rather have two gloves won when treating a bleeding patient with HBV. However, the study had some limitations in that students were given ideas about some statements hence self-reported responses may not reflect responders' actual attitudes.

In Pakistan, Razi et al (2015) conducted a cross sectional study that aimed at assessing knowledge and attitude of university students regarding Hepatitis B to compare knowledge and attitude scores between two different groups. The report by the survey showed moderate level of knowledge among university students regarding hepatitis B, but gaps in knowledge were identified which need to be strengthened in students especially in non-biological sciences group.

Ghahramani et al (2015) conducted a descriptive study that aimed at assessing the knowledge of students about Hepatitis B at Shiraz University of Medical Sciences. Results from the study showed that students had more knowledge about Hepatitis B prevention than about other aspects of the disease such as modes of transmission and symptoms. Results also show that there were statistically significant differences between the knowledge of Hepatitis by age, year of study and educational degree. It was concluded that the knowledge of students of medical sciences with respect to hepatitis was very weak. In comparison with the above studies, the study conducted by Roya (2016) showed that the most of correct answers were with the nature and transmission of the viruses but in the study by Ghahramani et al (2015), students' knowledge with respect to the prevention of disease was higher than other aspects while in the survey of Ahmadi et al (2015), the knowledge of health care workers about the nature of HBV infection was the lowest.

Regional Perspective: Sub-Saharan Africa falls in a medium to high endemic area for Hepatitis B infection with about 70 to 90% of the population getting infected before the age of 40years and 5 to 20% of people are HBV carriers [13]. A study on sero-epidemiology of HBV and HCV in the general population conducted in Ouagadougou, Burkina Faso showed that undergraduate students and informal workers were the most affected as opposed to those with higher level of education (Tao et al, 2014). The study reported that many people do not have information on the importance of vaccination as primary prevention against HBV.

Another cross-sectional descriptive study by Abiola (2014) on knowledge, attitude and practice of Hepatitis B vaccination among health workers at the Lagos State Accident and Emergency Centre, Toll-Gate, Alausa, Lagos State with 88 participants concluded that the respondents had good knowledge and good attitude but poor practice of hepatitis B vaccination. In this study, the sample size was small and cannot be concluded that most health care providers have adequate knowledge about hepatitis B, which is in contrast to a similar study done in South Africa where the minority (33.5%) had good knowledge [27]. Therefore, it is important that health workers including medical students be provided with adequate information on blood-borne viruses in order to reinforce the knowledge and attitude which will ultimately translate into a good practice of hepatitis B vaccination.

In the data by Abdnur (2016) on assessment of knowledge, attitudes and practices toward prevention of hepatitis B virus infection among students of medicine and health sciences in Northwest Ethiopia concluded that trainees (students) in the health profession are at a very high risk of contracting HBV infection during their training owing to low HBV vaccine uptake rate and high rate of accidental exposure to blood. Thus, it is recommended that all students in the health care profession be vaccinated prior to their entry into professional practices.

National Perspective: In Zambia, HBV infection is borderline intermediate/ high endemicty [1] and according to WHO (2016), 6-8% of the estimated population may be chronically infected with HBV. Mkandawire et al (2013), commenting on HBV infection, attributed the considerably low levels of awareness and knowledge to lack of public emphasis given to HBV infection as compared to that given to HIV/AIDS. In the study by Phiri (2015) on the prevention of hepatitis B in Zambia, concluded that there is lack of knowledge and awareness of HBV infection among many Zambians. In another exploratory study by Mungandi et al (2017) on Hepatitis B vaccination coverage and the determinants of vaccination among health care workers in selected health facilities in Lusaka district, findings of the research suggested that there is indeed a low number (64/331, 19%) of HCWs vaccinated against hepatitis B in Lusaka district, Zambia. However, this study had limitations in that information on whether a HCW knew their hepatitis B status was also not collected. Hence, research on a similar study must be conducted and must include health science students as well.

Very few studies have been done to ascertain the level of knowledge, the attitude, and practices that health science students that are doing clinical rotations in the Zambian Hospitals have towards of Hepatitis B vaccination. Therefore, this study will focus on filling in the gap of information to ascertain the knowledge, attitude, and practices of medical students at the Copperbelt University, School of Medicine towards Hepatitis B vaccination and give recommendations to the school and national policy makers according to the findings from the study.

Objectives

- General ObjectTo determine the knowledge, attitude, and practice of students doing clinical rotations at the Copperbelt University, School of Medicine towards Hepatitis B vaccination.

Specific Objectives

- To determine the level of knowledge that clinical students at the Copperbelt University, School of Medicine h a v e at have on Hepatitis B vaccination.
- To identify the variations in the number of clinical students who get vaccinated over the years.
- To determine the attitude towards vaccination of Hepatitis B among students doing clinical rotations at the Copperbelt University, School of Medicine.
- To assess the practices of clinical students at the Copperbelt University, School of Medicine towards Hepatitis B vaccination.

Study Question/Hypothesis

What is the knowledge, attitude, and practices of students doing clinical rotations at the Copperbelt University, school of medicine towards hepatitis B vaccination?

Measurements

The operational definitions that have framed and guided this research includes:

Knowledge of Hepatitis B vaccination: This when a respondent has the correct understanding of Hepatitis B vaccination which includes the route, accessibility, availability, and adverse effects from the vaccine.

Attitude towards Hepatitis B vaccination: This includes views and beliefs on the benefits and risks of Hepatitis B vaccination.

Practice of Hepatitis B vaccination: This includes actions of respondents towards prevention of hepatitis B. These include vaccination against HBV

Measurement

Variable		Grade
Knowledge	>15 correct answers <15 correct answers	Good Poor
Attitude	>9 points ≤9 points	Positive attitude Negative attitude
Practice	Yes No	Vaccinated Not vaccinated

Conceptual/Theoretical Framework

Figure 1

Methodology

Study Setting (Site)

This study was conducted at Ndola Teaching Hospital, in Ndola District, Copperbelt province, Zambia. The hospital is the highest referral hospital on the Copperbelt province as well as the Northern part of Zambia and also the second highest health institution in the country. The hospital receives several health science training students that do their clinical rotations from the hospital. Amongst these are Copperbelt University, School of Medicine students in clinical years.

Study Population

This study targeted medical students from the Copperbelt University, School of Medicine doing clinical rotations at Ndola Teaching Hospital. These students are from 4th year to 6th year that were willing to take part in the study.

Study Design

This was a cross-sectional study design on clinical students at the Copperbelt University, School of medicine aimed at assessing the knowledge and attitude, and practice towards Hepatitis B vaccine using quantitative analysis. A self-structured questionnaire using google doc was used for data collection. The questions were designed to fulfil the study objectives.

Sample Size

The sample size was determined using the EPI Info statistical programme software version

7.1.3.3. The following formula was used:

$$sample\ size = n/1 - (\frac{n}{population})|$$

A sample size of 150 was calculated and used. This number was divided amongst all the three intakes as follows; 50 students from 4th year, 50 from 5th year, and 50 from 6th year.

Sampling Method

Simple random sampling was used as the sampling method. Students that were in 4th year to 6th year were sent the google link for the google doc having the questions. Randomly, students that fit the inclusion criteria and were willing to participate proceeded to respond to the questions.

Inclusion and Exclusion Criteria

To yield accurate results from the study, the inclusion criteria included the following:

1. Any student who had been in school for more than one academic term.
2. The student must be a clinical student in the school of medicine.

The exclusion criteria will include the following:

1. Any student who was too ill to participate in the study.
2. Any student who for a religious reason or sociocultural reason was not allowed to participate.
3. If the participation of the student interfered with academic work.

Data Collection

Participants who met the inclusion criteria were sent the link for the google doc that had the questionnaire. Students that could not have access to the link due to technical challenges were handled the hard copy of questionnaire using simple random sampling. The questionnaire that was used is provided in the appendix of this document.

Data Management

The data collecting instrument was a structured interview developed by the researcher. After data collection, raw data was edited for completeness and consistency, it was categorised and coded. The EPI Info software version 7.1.3.3 statistical package was used to analyse data.

Data Entry and Analysis

For data analysis, the software used was EPI Info software

version 7.1.3.3 statistical package. Double entry of data was done to minimize on errors. There was verification of returned questionnaires by respondents and data collected was properly arranged. Descriptive statistics for the prevalence and quantitative variables was used. The parameters looked at being were gender, program of study, year of study, knowledge of HBV, attitude, and vaccination practices.

Ethical Considerations

Ethical approval was obtained from the Tropical Diseases Research Centre (TDRC) Ethics Review Committee at Ndola Teaching Hospital in order to ensure that the research is in line with the Zambian Code of Ethics (ZCE) with respect to Justice, Beneficence, Non-maleficence, and Autonomy. There was respect for human rights and that participants were willing to withdraw at any time during the process of data collection.

Benefits of participation: There was no immediate benefits for participating. However, results from this study may be many valuable in future.

Risks and discomforts: No risks and discomforts were associated with participation in this study. Participation only requested for few minutes.

Protection of confidentiality: Records were kept confidential. Identity was not revealed in any report that might result from this study.

Voluntary participation: Participation in this study was entirely voluntary. Participants had the right to choose not to participate in this study and consent of participation was to be withdrawn at any time without any effect.

Study Limitations

Limitations to this study was that the sample size was small to establish a conclusion of the general population from the results. In addition, the study only focused on MBChB and BDS students leaving out Bachelor of Biomedical Sciences students that also can be at risk as they handle different types of samples in the laboratories. Despite the above shortcomings, the above study is useful as it has provided valuable baseline information on the study topic.

Results

Table 1 shows socio-demographics characteristics of clinical students at the Copperbelt University, School of Medicine. Majority of participants were males (87%), most common age group was 21-25years (88%), and there was an equal distribution amongst the three intakes (50%) each which gives a 100% response rate. Most participants were from Bachelor of Medicine and Surgery program (74%), and majority of participants are not currently in employment (93.3%).

Table 1: Frequency distribution of student's characteristics.

Variable		N (150)	%
Gender	Male	87	58
	Female	63	42
Age	16-20	1	0.7
	21-25	88	58.7
	26-30	54	36.0
	>30	7	4.7
Year	4th Year	50	33.3
	5th Year	50	33.3
	6th Year	50	33.3
Program	Bachelor of Medicine and Surgery	111	74
	Bachelor of Dental Surgery	39	26
Employment status	Yes	10	6.7
	No	140	93.3

Table 2: Frequency distribution of student knowledge about hepatitis B vaccination.

Variable	Correct Response Frequency	
	(n=150)	%
What causes Hepatitis B infection	146	97.6
Hepatitis B can be acquired at the same time with HIV	136	90.7
Rate of transmission of hepatitis B is higher than HIV	115	76.7
Hepatitis B cannot be transmitted during child birth	115	76.7
Hepatitis B can be transmitted through kissing	52	34.7
Hepatitis B can be transmitted through coughing	97	64.7
Cannot be transmitted through blood transfusion	124	82.7
Cannot be transmitted through breast feeding	45	30.0
Hepatitis B carriers cannot transmit the infection	136	90.7
Can be spread through open wound or cut	142	94.7
What is the treatment for acute Hepatitis B	23	15.3
A safe and effective vaccine is available	137	91.3
The vaccine can protect up to 15 years	41	27.3
The vaccine is readily available in hospitals	86	57.3
The vaccine can protect against HIV	111	74.0

Table 3: Year cross tabulation with knowledge score.

Count		Knowledge		
		Good (%)	Poor (%)	Total
Year	4th year	37(74)	13(72.2)	50
	5th year	47(94)	3(16.7)	50
	6th year	48(96)	2(11.1)	50
Total		132(88)	18(12.0)	150
		P=0.001		

Table 4: Program Cross tabulation with knowledge score.

Count		Knowledge		
		Good (%)	Poor (%)	
Program	MBChB	99(89.2)	12(66.7)	**111**
	BDS	33(84.6)	6(33.3)	**39**
Total		132(88)	18(12.0)	**150**
		P≤0.01		

Knowledge of Hepatitis B and its Vaccination

Majority (88%) of the total (150) respondents had a good knowledge of Hepatitis B and its vaccination despite having some gaps. Sixth Year students presented to be more knowledgeable than the rest of the intakes and students doing Medicine and Surgery also showed to have very good knowledge. 97.6%, knew correctly that Hepatitis B is caused by a virus and 90.7% knew that it can be acquired at the same time with HIV. Although 76.7% knew that it can be transmitted through child birth from mother-to-child, only 34.7% knew that it cannot be transmitted through kissing or that chances are very minimal. Very few (30%) students also knew correctly that it cannot be transmitted through breast feeding and also 15.3% knew correctly the treatment for acute Hepatitis B. Most students (91.3%) also knew that a safe and effective vaccine is available though only 27% knew for how long the vaccine can protect. 74% of students also knew that the Hepatitis B vaccine cannot protect against HIV and 57% said the vaccine is readily available in hospitals.

Table 5: Frequency distribution of student's attitude of towards Hepatitis B Vaccination.

Questions		n=150	(%)
HCW that have tested positive for HBV should not attend topatients.	Agree	117	78
	Disagree	3	2
	Not sure	30	20
Would you be comfortable to treat a Hepatitis B patient	Agree	53	35.3
	Disagree	42	28
	Not sure	55	36
Would you prefer to double glove when treating a Hepatitis Bpatient	Agree	132	88
	Disagree	0	0
	Not sure	18	12
The possibility of acquiring the infection at work is low	Agree	0	0
	Disagree	137	91.3
	Not sure	13	8.6
Change of gloves on different patients is a waste of time	Agree	0	0
	Disagree	139	92.7
	Not sure	11	7.3
All patients should be tested before receiving treatment	Agree	87	58
	Disagree	36	24
	Not sure	27	18
Following infection control prevention protect me from gettingthe virus at work	Agree	142	94.7
	Disagree	0	0
	Not sure	8	5.3
Vaccination should be made compulsory to all HCW andclinical students	Agree	144	96
	Disagree	0	0
	Not sure	6	4
Vaccination should be based on willingness and not compulsory	Agree	10	6.6
	Disagree	109	72.7
	Not sure	31	20.6

Table 6: Attitude score Cross tabulation with Year of study.

Count		Year			
		4th year (%)	5th year (%)	6th year (%)	
Attitude	Good	32(64)	43(86%)	48(96)	123(82)
	Poor	18(36)	7(14)	2(4)	27(18)
Total		50	50	50	150
		P<0.01			

Table 7: Practices towards Hepatitis B vaccination.

		n=150	%
Would you be willing to get vaccinated	Agree	143	95.3
	Disagree	0	0
	Not sure	7	4.6
Have you been vaccinated against Hepatitis B virus	Yes	14	9.3
	No	136	90.6
Reasons for not getting vaccinated against Hepatitis B	No enough funds	27	18
	Waiting for school to come up with a program	66	44
	Waiting for hospital toprovide vaccines	48	32
	Already vaccinated	6	4
	Not interested	3	2

Attitude of respondents toward Hepatitis B Vaccination

Student's attitude towards hepatitis B vaccine was generally good (82%) with sixth year students having a higher knowledge (32%) than the rest of the intakes. 78% agreed that HCW that have tested positive for Hepatitis B should not attend to patients, 35.3% would be comfortable to treat Hepatitis B patients, 88% prefer to double glove when treating Hepatitis B patients, 91% disagreed that the possibility of acquiring the infection from work is low, 92% also disagreed that change of gloves on different patients is a waste of time, 56% agreed that all patients should be tested for Hepatitis B before receiving treatment, 94% agreed also that following infection prevention will protect one from getting the virus at work, 96% agreed that vaccination should be made compulsory to all HCW, while 72.7% disagreed that vaccination should be based on willingness and not compulsory.

Table 8: Vaccination status Cross tabulation with Program.

		Program		Total
		MBChB	BDS	
Vaccination status	yes	12(10.8%)	2(10.5%)	14
	no	99	37	136
Total		111	39	150
		p = 0.11		

Table 9: Vaccination status Cross tabulation with Year of study.

		Year			Total
		4th year	5th year	6th year	
Vaccination status	yes	6(12%)	1(02%)	7(14%)	14
	no	44	49	43	136
Total		50	50	50	150
		p = 0.17			

Practices towards Hepatitis B vaccination

95.3% of the students were willing to get vaccinated against Hepatitis B. However, majority (90.6%) of the students have not been vaccinated and this is because about 44% have been waiting for the school to come up with a vaccination program. Table 8 shows a relationship between vaccination status and the program of study with a p=0.11. Table 9 shows the relationship between vaccination status and the years of study. 14% of the vaccinated students were sixth years. The table shows a p value of p=0.17.

Discussion

Hepatitis B Virus (HBV) infection in the health sector is a universal public health burden. The risk of occupational exposure to HBV among health care workers is a major concern, especially among students in the health profession [1]. This study shed some light on the knowledge, attitude, and practices of Hepatitis B vaccination among clinical students at the Copperbelt University, School of Medicine. The study found that most students (88%) had good knowledge of Hepatitis B vaccination similar to another study done in South Western Nigeria where results showed that 70.2% also had good knowledge of hepatitis B vaccination [2]. This is however in contrast to the results from a similar study done in South Africa where the 33.5% had good knowledge [27]. In our study, sixth year students had the highest knowledge score of 96% compared to other intakes, while fourth year students had the lowest (74%). Both MBChB students (89.2%) and BDS students (84.6%) showed a higher knowledge score.

In our current study, it was also found that very few (15.3%) knew correctly the treatment for acute Hepatitis B infection. This was in contrast with findings in accordance with the study from Ethiopia by Abdnur et al. (2016) which reported that 52.4% of students knew the correct treatment for HBV and another by Mohammed et al. (2016) which showed 55%. From these results, it can be seen that there is need to continue providing information on Hepatitis B infection.

Our study also shows that 91.3% knew that a safe and ef-

fective vaccine was available similar to a Pakistan study which indicated that 85% of the respondents were aware of availability of a safe and effective vaccine for hepatitis B [24]. However, our study shows that only 27% knew correctly that the vaccine can protect against Hepatitis B up to 15 years. The findings are in accordance with the study in Pakistan, which showed that knowledge regarding vaccine for hepatitis B was not satisfactory among the study groups [4]. This indicates the need to alleviate the gaps in knowledge.

Most (82%) of the students in our study had good attitude towards hepatitis B vaccination with sixth year students scoring the highest (96%), followed by fifth years (86%), and lastly fourth years (64%). These results are similar to the findings in Southern Nigeria where almost all the respondents (93.4%) who were aware of the existence of hepatitis B vaccine had good attitude towards it and considered it necessary to receive hepatitis B vaccine [2].

In our study, 78% agreed that HCW that have tested positive for HBV should not attend to patients. Results also show that only 35.5% of the respondents would be comfortable to treat a hepatitis B patient. This is in contrast to the study from Saudi Arabia by Ali et al. (2017) that showed that 50% of the respondents were comfortable to take care of people with HBV.

Our results also show that 57.5% of the respondents agreed that all patients should be tested for Hepatitis before receiving treatment similar to the results from the study by Ali et al. (2017) that showed a percentage of 58% of respondents with the same thought. Our study also shows that 96% of the respondents agreed that vaccination should be compulsory for all HCW and clinical students. The Ethiopian study by Aboila et al. (2014) shows similar results with 95.2% recommending that hepatitis B vaccination should be made compulsory for all health workers, this is higher than 84.3% of the respondents in an Egyptian study who recommended that the vaccine should be obligatory for all medical personnel [11].

Despite students from this study showing good knowledge and attitude towards Hepatitis B vaccination, it is disappointing that only a few (9.3%) have been vaccinated. From the few, sixth years were vaccinated more (14%), followed by fifth years (2%), and lastly fourth years (12%). In the same line, results by Abiola et al. (2014) also shows that few (15.5%) of the respondents had a good level of practice of hepatitis B vaccination. These finding are in contrast to the one conducted in Ekurhuruleni Metro, South Africa, where 71.2% had good practices towards HBV prevention which included exposure avoidance, vaccination and PEP (Moghimi et al., 2015). In another study in Southern Nigeria, 70.2% of students had received hepatitis B vaccine [30].

Even though our results show that very few were vaccinated, 95.3% of the respondents were willing to get vaccinated. It was also noted that 44% were waiting for the school program for hepatitis B vaccination, 32% were waiting for the hospital to provide vaccines. This might clarify the discrepancies between good knowledge and attitude to the poor practices of hepatitis B vaccination perceived among the respondents in this study.

Conclusion

In conclusion, this study has demonstrated that the respondents had a good level of knowledge, good attitude, but poor practices of hepatitis B vaccination. The poor practices were attributed to non-availability of the vaccine mainly due to lack of deliberate programs both by the school and the hospital to vaccinate all clinical students.

Recommendations

From this study, the following recommendations have been made;

1. To improve knowledge, attitude and practice of the all-health care workers, as well as students, through health education campaigns and seminars.

2. Prevention programs about HBV should be instituted and the existing ones must be strengthened, and health education settings should be more specific and clearer for students.

3. The school should have a program that should ensure that students are vaccinated as they do their clinical rotations.

4. Hospitals should ensure that students are safe as they spend time in various departments.

5. Adequate support from the Ministry of Health is advocated for.

6. More studies to be done in Zambia targeting health science students to assess knowledge, attitude, and practices towards Hepatitis B vaccination.

Author Statements

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