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Journal Name:	Journal of Advances in Medicine and Medical Research
Manuscript Number:	**Ms_JAMMR_48040**
Title of the Manuscript:	**IMMUNIZATION STATUS OF COHORT OF CHILDREN VACCINATED AGAINST HEPATITIS B VIRUS IN EKITI STATE OVER TEN YEARS AFTER INCORPORATION INTO NATIONAL PROGRAM ON IMMUNIZATION.**
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline)

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PART 1: Review Comments

<table>
<tr><th></th><th>Reviewer's comment</th><th>Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</th></tr>
<tr><td><u>Compulsory</u> REVISION comments</td><td>

The Title is best written as "Immune Status".
Structure your Abstract: Introduction/Background, Aim, Methods, Results, Discussion, Conclusion. Similarly, your Manuscript-text with the same sub-headings.
Only use key-words found in #MESH.
Line 34 – 40: (The likelihood that hepatitis B will develop from an acute infection into a chronic infection depends on the age of the person infected. The younger a person is when infected with hepatitis B virus, the greater the chance of developing a chronic infection. Approximately 90% of infected infants will develop chronic infection. The risk goes down as a child gets older. Approximately 25%–50% of children infected between the ages of 1 and 5 years will develop chronic hepatitis B. By contrast, about 95% of adults recover completely and do not become chronically infected.) (https://www.cdc.gov/hepatitis/hbv/bfaq.htm?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fhepatitis%2Fb%2Fbfaq.htm)
Line 49 – 52: What is the "serologic evidence" implied here? An individual negative for HBsAg but positive for anti-HBs either has cleared an infection or has been vaccinated previously. Thus, anti-HBs antibody could be positive due to a past infection or past vaccination.
Line 63 – 68: What was the serological test done? As I had said earlier, an individual negative for HBsAg but positive for anti-HBs either has cleared an infection or has been vaccinated previously. Thus, anti-HBs antibody could be positive due to a past infection or past vaccination
Line 73 – 74: The phrase is not clear
What is the Aim of your Study? From your Results and Discussion, it appears the Aim of your Study is to determine the immune-status of cohort of children vaccinated against hepatitis b virus in ekiti state (over ten years after incorporation into national program on immunization).
Use subheadings in describing your Methodology in the manner me indicate.
What was the sample-size determined? Show under Methodology the formula used and the calculation done. Was sample-size from previous similar studies used? If yes, what was that sample-size, and provide the reference here in the text.
Blood collection: From what you list under first part of Results, there should be five tests: HBsAg, HBsAb, HBeAg, HBeAb and HBcAb
Statistical analysis: Briefly outline here all the statistical-tests done, any software used, and the p-value you set for significance-level
This Study should not have excluded those aged 1 – 5
Include the first paragraph of your Results also in your Methodology under the subheading of Study-area and Study-population
Line 131 – 133: From what you list under Methodology and here, there should be five tests: HBsAg, HBsAb, HBeAg, HBeAb and HBcAb

Table 2: Relationship between Respondents' Age and sex with Hepatitis B surface Antibodies detection.
<table>
<tr><th rowspan="2">Age group of respondents</th><th colspan="2">Hepatitis B surface Antibodies (HBsAb)</th><th rowspan="2">Total</th><th rowspan="2">Statistical test P=value</th></tr>
<tr><th>Neg</th><th>Pos</th></tr>
<tr><td>5 - 7.4yrs</td><td>248 (87.3%) (62.9%)</td><td>36 (17.1%) (76.6%)</td><td>284 (64.4%)</td><td rowspan="3">X^2=3.413
P=0.065</td></tr>
<tr><td>7.5 to 10yrs</td><td>146 (37.1%)</td><td>11 (22.4%)</td><td>157 (35.6%)</td></tr>
<tr><td>Total</td><td>394 (100.0%)</td><td>47 (100.0%)</td><td>441 (100.0%)</td></tr>
<tr><th>Sex</th><th colspan="2">Hepatitis B surface Antibodies (HBsAb)</th><th>Total</th><th>Statistical test P=value</th></tr>
</table>
</td><td></td></tr>
</table>

	Negative	Positive		
female	191 (88.4%)	25 (11.6%)	216 (100.0%)	X^2=0.373 P=0.541
male	203 (90.2%)	22 (9.8%)	225 (100.0%)	
Total	394 (89.3%)	47 (10.7%)	441 (100.0%)	

(Note the correction I have done on Age-group of Table2, and repeat similarly for gender. The cross-tabulation should total for Negative and Positive indicating 100% for the Total, and not totalled for the Age-groups as you have done.)

16. **Line 176: Discuss this under Methodology also**
17. **Line 185 – 192: List the rates experienced in these countries, along with the relevant studies, and not just provide the references here. Discuss in greater detail. Is there not any other similar studies done in Nigeria? If such is the vaccine-failure rate, what is the incidence of HBV in this age-group in your State, and how does this incidence compare with various Nigerian-states, besides various countries and regions? You state in your Abstract "All subjects were negative for HBsAg, HBeAg, HBeAB and HBcAb". Don't you find your results very unusual that only 10.7% of your subjects were HBsAb positive yet none were HBsAg positive till the age 10? (Most vaccines are given in three doses over a course of months. A protective response to the vaccine is defined as an anti-HBs antibody concentration of at least 10 mIU/ml in the recipient's serum. The vaccine is more effective in children and 95 percent of those vaccinated have protective levels of antibody. This drops to around 90% at 40 years of age and to around 75 percent in those over 60 years. The protection afforded by vaccination is long lasting even after antibody levels fall below 10 mIU/ml. Lee, Chuanfang; Gong, Yan; Brok, Jesper; Boxall, Elizabeth H; Gluud, Christian (19 April 2006). "Hepatitis B immunisation for newborn infants of hepatitis B surface antigen-positive mothers". Cochrane Database of Systematic Reviews (2): CD004790. doi:10.1002/14651858.CD004790.pub2. PMID 16625613.)**
18. **Line 220 – 223: Who are you quoting? Besides, the sentence is not relevant to your Study, since you do not state in your Methods whether you either include or exclude these group of children.**
19. **Conclusion and Recommendations: Discuss alongside that the WHO till date does not recommend routine booster dose. See below.**
20. **Study Limitations are conventionally discussed under Method, and not at the end of the Manuscript**
21. **WHO (2018): https://www.who.int/news-room/fact-sheets/detail/hepatitis-b The hepatitis B vaccine is the mainstay of hepatitis B prevention. WHO recommends that all infants receive the hepatitis B vaccine as soon as possible after birth, preferably within 24 hours. The low incidence of chronic HBV infection in children under 5 years of age at present can be attributed to the widespread use of hepatitis B vaccine. Worldwide, in 2015, the estimated prevalence of HBV infection in this age group was about 1.3%, compared with about 4.7% in the pre-vaccination era. The birth dose should be followed by 2 or 3 doses to complete the primary series. In most cases, 1 of the following 2 options is considered appropriate:**

    a 3-dose schedule of hepatitis B vaccine, with the first dose (monovalent) being given at birth and the second and third (monovalent or combined vaccine) given at the same time as the first and third doses of diphtheria, pertussis (whooping cough), and tetanus – (DTP) vaccine; or
    a 4-dose schedule, where a monovalent birth dose is followed by three monovalent or combined vaccine doses, usually given with other routine infant vaccines.
    The complete vaccine series induces protective antibody levels in more than 95% of infants, children and young adults. Protection lasts at least 20 years and is probably lifelong. Thus, WHO does not recommend booster vaccination for persons who have completed the 3 dose vaccination schedule.
    All children and adolescents younger than 18 years-old and not previously vaccinated should receive the vaccine if they live in countries where there is low or intermediate endemicity. In those settings it is possible that more people in high-risk groups may acquire the infection and they should also be vaccinated. They include:
    - **people who frequently require blood or blood products, dialysis patients, recipients of solid organ transplantations;**
    - **people interned in prisons;**
    - **persons who inject drugs;**
    - **household and sexual contacts of people with chronic HBV infection;**
    - **people with multiple sexual partners;**

	• **healthcare workers and others who may be exposed to blood and blood products through their work; and** • **travellers who have not completed their hepatitis B vaccination series, who should be offered the vaccine before leaving for endemic areas.** **The vaccine has an excellent record of safety and effectiveness. Since 1982, over 1 billion doses of hepatitis B vaccine have been used worldwide. In many countries where between 8–15% of children used to become chronically infected with the hepatitis B virus, vaccination has reduced the rate of chronic infection to less than 1% among immunized children.** **In 2015, global coverage with the third dose of hepatitis B vaccine reached 84%, and global coverage with the birth dose of hepatitis B vaccine was 39%.**	
Minor REVISION comments	Avoid Font-change in the Manuscript-text Line 136: Table 2, and not Table 3 Remaining minor revision comments are as in the corrected manuscript attached.	
Optional/General comments		

PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	***Meer Ahmad A. Mydin Meera***
Department, University & Country	***MAHSA University, Malaysia***