# Health Care Providers Knowledge towards Tetanus Immunization at Primary Health Care Centers in Babylon Province/Iraq

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#### Abstract

It is a serious bacterial infection, caused by a bacterium known as Clostridium tetani (Clostridium tetani). The infection with tetanus, occurs through the entry of the Clostridium tetanus bacteria into the body through the contaminated wounds. These bacteria secrete their toxins that affect the brain and nervous system, causing stiffness or stiffness in the body. body muscles. The study aims to assess health care providers' knowledge towards tetanus immunization; and determine the relationship between knowledge and related factors. Methodology: A non-probability (systematic sample) of 100 subject were selected throughout the use of non probability sampling approach and analyzed through the application of descriptive and inferential statistical data analysis approach that includes, frequencies, percentages; and Chi-squared test". Results: "Recent results indicate that most of participants were young male graduated diploma work less than 5 years without training. According to analysis mean of score, findings that majority of 63% were poor knowledge, the education level, years of employment and training sessions have been significant relation with those knowledge at p-value <0.05. Conclusion: More years of experience in training the staff on immunization by local officials help raising professionals' health workers knowledge and practice. Provide the health resources and exploiting young energies of nurses which indeed helps to develop their knowledge and practice.

Key-wards: Knowledge, Health Care Providers, Tetanus.

### INTRODUCTION

Tetanus vaccine, also known as tetanus toxoid (TT), is a toxoid vaccine used to prevent tetanus. During childhood, five doses are recommended, with a sixth given during adolescence <sup>[1]</sup>. After three doses, almost everyone is initially immune, but additional doses every ten years are recommended to maintain immunity <sup>[2]</sup>. A booster shot should be given within 48 hours of an injury to people whose immunization is out of date <sup>[3]</sup>. For people with high-risk injuries who are not fully immunized, tetanus antitoxin may also be recommended <sup>[1]</sup>. Confirming that pregnant women are up to date on tetanus immunization during each pregnancy can prevent both maternal and neonatal tetanus <sup>[4]</sup>. The vaccine is very safe, including during pregnancy and in those with HIV/AIDS <sup>[1]</sup>. Redness and pain at the site of injection occur in between 25% and 85% of people. Fever, feeling tired, and minor muscle pain occurs in less than 10% of people. Severe allergic reactions occur in less than one in 100,000 people <sup>[5]</sup>.

Tetanus infection has remained a major health problem in the third world countries despite the availability and accessibility of effective antibodies as vaccines <sup>[6]</sup>. It is a life-threatening non-communicable disease caused by toxins produced by the bacterium, Clostridium tetani which could exist anywhere. Its spores are found in the soil and dust of most countries <sup>[7]</sup>. Therefore, thus aimed at assessment of knowledge about tetanus immunization among health care provides at primary health care centers and determine the relationship of demographic factors related to knowledge.

#### METHODOLOGY

The study was conducted using descriptive quantitative assessment approach using the tools that have been questionnaire to explore the knowledge related to tetanus immunization among health care providers in primary health care centers.

### **Study instruments**

A constructed questionnaire measures the health care providers their knowledge. This questionnaire was a developed as a screening tool to detect those likely to have or not have knowledge. The questionnaire was used as a data collection tool that included the following:

"Health care providers demographic information"

"Knowledge questionnaire related to tetanus immunization"

By a "systematic random sample" of (100) subject is selected throughout the use of non probability sampling approach. The study sample is distributed throughout two primary health care sectors includes (Hill first and second).

Data was collected through the use of a questionnaire and self-report of the health care providers. The researcher introduced himself to the participants and explained the purpose of the study in order to get oral agreement. The questionnaire fills out an answer by the participants (providers).

Through the used SPSS-ver.20 in order to analyze and evaluate the study data is used for statistical data analysis approach using. Methodology of statistical data used descriptive analysis to describe the study variables: frequencies and percentages; and Chi-square test. They  $\chi^2 obs. < \chi^2 crit. =$  insignificantly

They  $\chi^2 obs. > \chi^2 crit. =$  significantly

### RESULTS

Descriptive Statistic Nurses Demographic Variables



Figure 1: Participants Age







Figure 3: Participants Education



Figure 4: Participants Years of Experience



Figure 5: Participants Training Sessions



Figure 6: The Overall Assessment of Health Care Providers Knowledge

|        |             | Knowledge |         |     | Tata | 4       |                                |        |
|--------|-------------|-----------|---------|-----|------|---------|--------------------------------|--------|
| Age    | Rating      | Poo       | Moderat | Goo | 1012 | d.<br>f | Sig.                           |        |
|        |             | r         | e       | d   | 1    | 1       |                                |        |
|        | 20-29 years | 37        | 21      | 1   | 59   |         | $\chi^2$ obs.=                 |        |
|        | 30-39 years | 14        | 6       | 2   | 22   | 6       | 4.707                          | N<br>S |
|        | 40-49 years | 7         | 4       | 1   | 12   |         | $\chi^2$ crit.=                |        |
|        | 50 and      | 5         | 1       | 1   | 7    |         | 12.592                         |        |
|        | older       | 3         |         |     |      |         | P-                             |        |
|        | Total       | 63        | 32      | 5   | 100  |         | value=0.582                    |        |
| Gender | Male        | 33        | 18      | 3   | 54   |         | $\chi^2$ obs.=0.20             |        |
|        | Female      | 30        | 14      | 2   | 46   | 2       | 4                              | Ν      |
|        | Total       | 63        | 32      | 5   | 100  | 2       | χ <sup>2</sup> crit.=<br>5.991 | S      |

| <b>T</b> 11 <b>A G C C C C C C C C C C</b> |            | TT 1 1 1 1          | D 1.          | <b>C1</b>       |
|--|------------|---------------------|---------------|-----------------|
| Table 2: Statistical Relationsh            | in between | Knowledge then      | · Demographic | Characteristics |
| ruoie 2. statistical restations            |            | i into o loage alen | Demographie   | Characteristics |

|                           |             |    |    | 1 |     |   |                      |   |
|---------------------------|-------------|----|----|---|-----|---|----------------------|---|
|                           |             |    |    |   |     |   | P-                   |   |
|                           |             |    |    |   |     |   | value=0.903          |   |
| Educational<br>Attainment | Diploma     | 30 | 21 | 3 | 54  | 4 | $\chi^2$ obs.=       | S |
|                           | Bachelor    | 32 | 11 | 1 | 44  |   | 12.092               |   |
|                           | Master      | 1  | 0  | 1 | 2   |   | $\chi^2$ crit.=      |   |
|                           |             |    |    |   |     | • | 9.488                | 5 |
|                           | Total       | 63 | 32 | 5 | 100 |   | P-                   |   |
|                           |             |    |    |   |     |   | value=0.017          |   |
| Years of Experience       | <10 Years   | 33 | 18 | 1 | 52  |   | χ <sup>2</sup> obs.= |   |
|                           | 10-19 Years | 20 | 8  | 0 | 28  | 4 | 12.478               | S |
|                           | 20-29 Years | 10 | 6  | 4 | 20  |   | $\chi^2$ crit.=      |   |
|                           |             |    |    |   |     | • | 9.488                | 5 |
|                           | Total       | 63 | 32 | 5 | 100 |   | P-                   |   |
|                           |             |    |    |   |     |   | value=0.014          |   |
| Training Sessions         | No trained  | 48 | 16 | 1 | 65  | 6 | $\chi^2$ obs.=       | S |
|                           | 1 session   | 10 | 10 | 2 | 22  |   | 14.170               |   |
|                           | 2 sessions  | 1  | 2  | 0 | 3   |   | $\chi^2$ crit.=      |   |
|                           | >2sessions  | 4  | 4  | 2 | 10  |   | 12.592               |   |
|                           | Total       | 63 | 32 | 5 | 100 |   | P-                   |   |
|                           |             |    |    | 5 |     |   | value=0.028          |   |

''χ<sup>2</sup>obs.= Chi-square observer, χ<sup>2</sup>crit.= Chi-square critical, Df= Degree of freedom, Pvalue= Probability value, S= significant, NS= non significant, S= significant, HS= high significant''.

Findings demonstrated that health care age and gender were insignificant relationship with their gender at p-value >0.05 and  $\chi^2 obs > \chi^2 crit$ . The education, years of experience and training sessions have been significant associated with health care providers knowledge at p-value <0.05 and  $\chi^2 obs < \chi^2 crit$ .

#### DISCUSSION

Our findings indicate that the age of the study participants ranged from 20-29. On the other hand, result takes place because when the health care providers are young they will have a greater desire to develop their information than the health care providers who are included in higher age group. There were somewhat more male nurses were dominate, they were interested in participating in the study.

Concerning job variables, most of study sample were diploma graduate and have less than 5 years of experience without training. These findings come because the primary health care centers were totally depends on those who graduated from diploma.

Health Care Provides Knowledge

According to the analysis mean of score and standard deviation, our findings showed that majority of knowledge were recorded a low level, due to lack to holding of training workshops and the lack of health resources in the health center led to a failure to develop their knowledge

The knowledge of tetanus immunization for adults was poor among all categories of health care providers, but only 75% of doctors and 51.1 % of nursing personnel correctly knew the immunization schedule against tetanus in children. There is a need to upgrade the level of knowledge among health care providers so as to ensure that schedules of tetanus are followed properly and unnecessary repeated immunizations are avoided and the same knowledge is passed on to the general public also <sup>[8]</sup>.

There is a need to upgrade the level of knowledge among health care providers so as to ensure that schedules of tetanus are followed properly and unnecessary repeated immunizations are avoided and the same knowledge is passed on to the general public also <sup>[9]</sup>. A cross-sectional survey in peri-urban Karachi, Pakistan, confirmed that Low coverage of TT vaccine is largely influenced by poor knowledge <sup>[10]</sup>.

Relationship between Knowledge their Demographic Characteristics

Findings demonstrated that health care age and gender were insignificant relationship with their gender at p-value >0.05 and  $\chi^2 \text{ obs} > \chi^2 \text{ crit}$ . The education, years of experience and training sessions have been significant associated with health care providers knowledge at p-value <0.05 and  $\chi^2 \text{ obs} < \chi^2 \text{ crit}$ . Our findings come in the same line with Findings from Antenatal Clinic Attendees. Results depicts that health care provides were high immunization knowledge associated with education and years of employment <sup>[11]</sup>.

### CONCLUSION

More years of experience in training the staff on immunization by local officials help raising professionals' health workers knowledge and practice. Provide the health resources and exploiting young energies of nurses which indeed helps to develop their knowledge and practice.

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