



Nurses' Knowledge and Practices on Influenza Vaccination for Pregnant Women

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Influenza poses significant health risks to pregnant women, leading to increased morbidity and mortality rates compared to the general population. Despite the proven efficacy of the influenza vaccine in mitigating these risks, vaccination rates among pregnant women remain suboptimal. This study examines nurses' knowledge and attitudes regarding influenza vaccination for pregnant women within the AL-Zubair primary health sector in Basrah, Iraq, addressing the gap in understanding healthcare providers' roles in promoting vaccination. Prior research has highlighted the need for enhanced education and communication strategies among healthcare workers to improve vaccination uptake, yet specific data on nurses' knowledge in this context are limited. The study aims to assess nurses' knowledge, attitudes, and practices regarding influenza vaccination for pregnant women. Among the 88 surveyed nurses, a majority demonstrated adequate knowledge and favorable attitudes towards vaccination, with significant gaps in awareness regarding the consequences of influenza for newborns. Notably, 51.1% acknowledged the vaccine's utility in protecting pregnant women. This research provides crucial insights into the educational needs of nurses, which are essential for fostering effective patient education strategies. The findings underscore the importance of targeted educational interventions to enhance nurses' understanding of influenza vaccination, ultimately aiming to improve vaccination rates among pregnant women and reduce associated health risks.

Keywords : *Influenza, vaccination, pregnant women, nurses, knowledge.*

INTRODUCTION

Influenza exposure is common; it affects between 5 and 20 percent of the general population, with pregnant women making up 11 percent of those affected (Fiore et al., 2009), when compared to the general population, pregnant women have traditionally experienced substantially higher rates of morbidity and mortality during influenza pandemics in the 20th century (Reid, 2005), and 5 Pregnant women died from influenza and pneumonia at rates two to three times greater than those of non-pregnant women during the 1918 and 1957 outbreaks, which made them the leading cause of maternal deaths. Similar to pandemic influenza, seasonal influenza infections cause pregnant women to have disproportionately high morbidity. Pregnant women experience higher rates of respiratory, febrile, and cardiovascular morbidity during seasonal influenza epidemics, according to numerous reports (Fiore et al., 2009).

Perinatal influenza infection may potentially have a connection to adverse pregnancy outcomes such as preterm birth, fetal distress, and cesarean delivery (Cox et al., 2006). These results were confirmed in 2009. Pregnant women were four times more likely to be hospitalized, to suffer a major illness, and to pass away from a serious influenza infection during the H1N1 influenza pandemic (Miller et al., 2010). The best preventative measure against influenza illness during pregnancy is the influenza vaccination. The influenza vaccine's immunogenicity during pregnancy is supported by serologic research (Englund et al., 1993).

The best preventative measure against influenza illness during pregnancy is the influenza vaccination. The influenza vaccine's immunogenicity during pregnancy is supported by serologic research. Since 1957, expectant mothers have been administered the inactivated influenza vaccine. Numerous studies have shown the safety of the vaccine, and the benefits of maternal immunization for the neonate, considering its economic viability at disease incidence levels that are in line with intermittent pandemics as well as seasonal influenza epidemics. Regardless of gestational age, the American College of Gynecologists and Obstetricians (ACOG) and the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention (CDC) have advised yearly vaccination for all women who are pregnant or plan to become pregnant during influenza season since 24 (Bartolo et al., 2020)

METHODOLOGY

A non-probability purposive sample of (88) nurses in the AL-Zubair primary health sector in Al-Basrah Governorate. Eight primary health centers (Aleshia' Health Center, Al-Mirbad Health Center, Al-Batin Health Center, Al-Ainsar Health Center, Al-Shaebia Health Center, Al-Aqil Health Center, Al-Hassan Al-Bassari Health Center, Al-Rahimih health center and khatwat Al-Amam Ali health center). The study period was extended from 2 February 2023 to the 29 of April 2024. The following components made up the apparatus that the researchers conceived and built after studying pertinent literature and earlier

research. Section 1: Features related to society and demography: Socio-demographic characteristics, such as age, gender, years of job experience, years of work with vaccinations, and sources' awareness of vaccinations, are examples of demographic data. Part two: assess knowledge of vaccination of percipients. Instruments were used to It consists the questionnaire comprised nine closed-ended single-choice questions. Participation in the study was voluntary. That is optional, and the participant must choose the correct answer from among the choices. Three: attitude and practices about vaccination of percipients. Items related to practices consisted of (15) items regarding influenza vaccine.

RESULT AND DISCUSSION

Table 1. shows the distribution of the study sample based on sociodemographic factors.

Name PHC	F	%
Al-Shifa	32	36.4
Al-Mirbad PHC	1	1.1
Al-Batin PHC	8	9.1
Al-Ansar PHC	4	4.5
Al-Shaebia PHC	6	6.8
Al-Aqeel PHC	4	4.5
Al-Hassan Al-Bassari PHC	2	2.3
Al-Rahimah PHC	20	22.7
Khatwat Al-Amam AliHC	11	12.5
Total	88	100.0
Gender		
Male	14	15.9
Female	74	84.1
	88	100
Age groups		
20-25	5	5.7
26-30	11	12.5
31-35	15	17.0
36-40	15	17.0

≤41	42	47.7
Total	88	100.0
Mean ± SD =40.63 ±9.799		
Years of Experience		
1-5	10	11.4
6-10	11	12.5
11-15	17	19.3
16-20	15	17.0

≤21	35	39.8
	88	100
Experience Work with Vaccine		
1-5	52	59.1
6-10	15	17.0
11-15	16	18.2
16-20	3	3.4
≤21	2	2.3
	88	100.0
You have taken section courses on vaccination.		
Yes	45	51.3
No	43	48.7
Total	88	100

Table 2: Knowledge of influenza and vaccination among nurses during pregnancy.

Verbal's
1. Perception of the overall population's frequency of influenza

	F	%
Very rare □	5	5.7
Rare*	2	2.3
Common	51	58.0
Very common	30	34.1
	88	100.0
2. Influenza might cause the mother to experience severe problems.		
Yes*	71	80.7
No	10	11.4
I don't know	7	8.0
	88	100.0
3. A newborn who contracts influenza may experience severe consequences.		
Yes*	8	9.1
No	12	13.6
I don't know	68	77.3
	88	100.0
4. Immunization effectiveness in pregnant women		
contraindicated	14	15.9
Unnecessary	5	5.7
Might be useful*	24	27.3
Definitely useful*	45	51.1
	88	100.0
5. Vaccination advice for expectant mothers		
Either not required or advised	20	22.7
Obligatory □	16	18.2
Recommended* *	4	4.5
I don't know	48	54.5
	88	100.0
6. Previous influenza vaccination		

No	47	53.4
Yes, outside pregnancy	5	5.7
Yes, during a previous pregnancy	1	1.1
I don't know	35	39.8
	88	100.0
7. Informational sources regarding influenza immunization		
Healthcare professionals (as well as other sources, potentially) ^a	10	11.4
Other sources only (i.e. not healthcare professionals) ^b	73	83.0
	2	2.3
8. Mothers' perceived frequency of vaccine-related adverse effects.		
Very rare *	10	11.4
Rare	33	37.5
Common	18	20.5
Very common	27	30.7
	88	100.0
9. The perceived frequency with which infants experience negative vaccination reactions		
Very rare *	8	9.1
Rare	33	37.5
Common	28	31.8
Very common	19	21.6
	88	100.0

Table 3. Attitude and practices about vaccination of percipients.

	Items	Mean	
1	Is the flu vaccine a live vaccine?	1.6	H
2	Are there preservatives in the vaccine?	1.7	H
3	Should all pregnant women get the flu vaccine?	1.5	M

4	You can get the flu from the vaccine	1.3	L
5	Vaccination is recommended by the Ministry of Health	1.9	H
6	Pregnant women with egg allergy can be vaccinated with the vaccine	1.4	L
7	Vaccination protects women during and after pregnancy	1.8	H
8	The flu vaccine reduces the chance of getting whooping cough	1.2	L
9	Influenza vaccination does not protect against COVID-19	1.4	M
10	The flu vaccine has many side effects for pregnant women	1.5	M
11	Taking the flu vaccine during pregnancy helps reduce the risk of the baby getting the flu during the first six months of his life	1.7	H
12	Compared to non-pregnant women, pregnant women experience more severe influenza.	1.5	M
13	There is no demand for pregnant women to take the flu vaccine	1.7	H
14	There is fear in the community about the demand for the flu vaccine	1.5	M
15	The vaccine should be taken in the second trimester of pregnancy to be more beneficial for the mother	1.7	H

Discussion Sociodemographic Characteristics of the Study Sample

Among the study participants were 88 from the healthcare sector in Zubair. The participants' features and demographics are displayed in Table 1. The present of the highest percentage of Al Shifa Health Center employees was about (36.4%) and the majority of the participants were women, (84.1%) within the highest percentage (47.7%) of the age groups ≤ 41 of the participants within Mean \pm SD = 40.63 \pm 9.799, and they have the highest percentage of 39.8 years of service within the ≤ 21 years of service. They have an actual service in the field of vaccines, and the highest percentage was about 59.1, and within years (1-5, 51.3 of them had taken the influenza vaccine in the past.

Eight focus groups with registered nurses (RNs) were held by Willis and Wortley (Emiko Petrosky et al., 2015) to investigate the attitudes and views of RNs toward influenza vaccination. Using its database, a professional focus group facility in Birmingham, Alabama, and Detroit, Michigan recruited 34 registered nurses (RNs) from primarily urban settings. In every city, focus groups with two vaccinated and two unvaccinated registered nurses were held. According to data analysis, nurses who had received vaccinations appeared to know more about the flu and its risk factors than nurses who had not. Both nurses who had received vaccinations and those who had not stated that if they had received greater education and

information regarding influenza and the vaccine, they would be able to encourage vaccination among their patients more successfully.

Discussion of nursing staff level of awareness on the flu and the pregnancy-related vaccine:

The table shows the knowledge scale for questions that include grades from 1 to 10. According to the second question, the correct answer was yes*, and the answer rate was (80.7%), which is the highest answer. As for question No. (3), the correct answer was yes*, but the answer was much less than that. (9.1%) and the highest incorrect answer was (I don't know) and it was (77.3%). As for the fourth question, the answer is correct. It may be useful* and certainly useful* and the answer was (27.3%). (51.1%) is considered the highest percentage. The answer to question number (5) was (mandatory*, desirable*), and the response rates were low (18.2%), (4.5%), while the highest percentage was (I do not). 'I don't know). As for question No. 6, the highest answer was (53.4). %), and for the seventh question, the highest response was to other sources. The study's findings are in line with this one

(General knowledge of vaccination impacts the work of nurses and midwives Cyprus's desire to receive the COVID-19 vaccination: a cross-sectional national study). 437 persons in all answered the survey. For me, there were 7% midwives and 93% nurses. Sixty-three percent of individuals had a good understanding of vaccinations, compared to 30.7% with moderate knowledge and 2.1% with low knowledge. The majority of participants concurred that vaccinations protect both the individual and others around them (80.5%) and that epidemics can spread quickly when the majority of individuals are not vaccinated (74%) (Fakonti et al., 2022)

Discussion Attitude and practices about vaccination of percipients

Items 1, 2, 5, 7, 11, 13, and 15 had high attendance, items 3, 9, 10, 12, and 14 had medium attendance, while items 4, 6, and 8 had poor attendance. The findings of this investigation align with the findings of Influenza vaccination coverage for healthcare professionals in a community hospital in Qatar (2011–2012 and 2012–2013 seasons) studied at The Cuban Hospital, IN Qatar. While 80% is sufficient to lower transmission to a safe level within healthcare facilities, 100% immunization rates are recommended for healthcare workers (Picazo et al., 2012). By 2010, the US Department of Health and Human Services aimed to achieve a 60% influenza vaccination rate among healthcare workers (Quan et al., 2012). By 2020, the department set a higher goal of 90%.

CONCLUSION

In conclusion, this study underscores the critical role of nurses in promoting influenza vaccination among pregnant women, revealing that while the majority possess adequate knowledge and favorable attitudes towards the vaccine, significant gaps remain, particularly concerning the implications of influenza on newborn health. The findings indicate a pressing need for targeted educational interventions to enhance nurses' understanding and to effectively communicate the importance of vaccination to expectant mothers. Furthermore, the data suggest that improving nurses' awareness and education can positively influence vaccination uptake, thereby reducing morbidity and mortality associated with influenza during pregnancy. Future research should explore the development and implementation of comprehensive training programs for nursing staff, as well as strategies to address misinformation and apprehensions surrounding vaccination in the community, thereby facilitating higher vaccination rates among this vulnerable population.

Recommendations

- 1-There is a need to dedicate more time to the issue of influenza training nursing staff and promoting vaccination against influenza Specifically during epidemic covered 19.
- 2-Visiting educational programs for health aids that can enable the pregnant mother to take every vaccination for her safety and the safety of her child.

REFERENCES

- Fiore, A. E., Shay, D. K., Broder, K., et al. (2009). Prevention and control of seasonal influenza with vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recommendations and Reports*, 58(1), 1-52.
- Reid, A. (2005). The effects of the 1918-1919 influenza pandemic on infant and child health in Derbyshire. *Medical History*, 49(1), 29-54.
- Cox, S., Posner, S. F., McPheeters, M., Jamieson, D. J., Kourtis, A. P., & Meikle, S. (2006). Hospitalizations with respiratory illness among pregnant women during influenza season. *American Journal of Obstetrics and Gynecology*, 107(5), 1315-1322.
- Miller, A. C., Safi, F., Hussain, S., Subramanian, R. A., Elamin, E. M., & Sinert, R. (2010). Novel influenza A (H1N1) virus among gravid admissions. *Archives of Internal Medicine*, 170(10), 868-873.
- Englund, J. A., Mbawuike, I. N., Hammil, H., Holleman, M. C., Baxter, B. D., & Glezen, W. P. (1993). Maternal immunization with influenza or tetanus toxoid vaccine for passive antibody protection in young infants. *Journal of Infectious Diseases*, 168(3), 647-656.
- Bartolo, S., Mancel, O., Deliege, E., Carpentier, S., Dessein, R., Faure, K., & Subtil, D. (2020).

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- Determinants of pregnant women's knowledge about influenza and the influenza vaccine: A large, single-center cohort study. *PLoS ONE*, 15(7), e0236793. <https://doi.org/10.1371/journal.pone.0236793>
- Emiko Petrosky, MD, Joseph A. Bocchini Jr, MD., et al. (2015). Use of 9-valent human papillomavirus (HPV) vaccine: Updated HPV vaccination recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*, 64(11), 303.
- Fakonti, G., Kyprianidou, M., Iordanou, S., Toumbis, G., & Giannakou, K. (2022). General vaccination knowledge influences nurses' and midwives' COVID-19 vaccination intention in Cyprus: A nationwide cross-sectional study. *Human Vaccines & Immunotherapeutics*, 18(1), 1-9. <https://doi.org/10.1080/21645515.2021.2016008>
- Picazo, M. M., Alonso, J., Aristegui, J. M., Bayas, J., Sanz, P., & del Amo, et al. (2012). Consenso sobre la vacunación frente a la gripe en el personal sanitario. *Revista Española de Quimioterapia*, 25(3), 226-339.
- Quan, K., Tehrani, D. M., Dickey, L., Spiritus, E., Hizon, D., et al. (2012). Voluntary mandatory evolution of strategies and attitudes toward influenza vaccination of healthcare personnel.