

Pharmacist-led flu vaccination services in community pharmacy: Experiences and Benefits

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ABSTRACT

Influenza is a common cause of hospital admission and considers a major problem worldwide. Although several individuals recover without major complications, the flu virus is responsible for substantially reduced productivity and a high economic burden. Given the availability of many vaccines worldwide for a wide range of infectious diseases, vaccinations are still not fully utilized. Traditional vaccination service includes family physicians and nurses; nevertheless, community pharmacist-led flu vaccination has become more commonly used to increase vaccination coverage. There are several examples worldwide where community pharmacies take part in the flu vaccination services. These examples consider a model for other countries to initiate a community pharmacist-led flu vaccination service. This review aims to demonstrate the success of community pharmacy flu vaccination service and its impact on raising vaccination rates. Experiences of some countries provide evidence of the benefit to both the patient and the healthcare system.

Keywords: Community pharmacist; Implementation; Influenza; Vaccination.

Introduction

Health is very important to us ^[1]. Quality of life is the general well-being of individuals and communities, outlining negative and positive aspects of life ^[2]. Influenza (known as flu) consider one of the most prevalent communicable diseases across the world, with 10% of adults and 30% of pediatrics being infected annually worldwide. The extent of the influenza virus-associated morbidity and mortality presents a significant risk to public health. Even though several individuals affected recover without major complications, the flu virus is responsible for

substantially reduced productivity and high medical costs.

Severe infection, hospitalization, and mortality happen mostly in high-risk people such as pediatrics, pregnant women, immunocompromised people, healthcare professionals, home care residents, and elderly ^[3].

The WHO recommends vaccinating high-risk populations against the influenza virus; these populations include children 6–59 months, adults with chronic diseases, pregnant women, healthcare professionals, and the elderly ^[4]. The WHO also recommends that a minimum of 75% of people who are ≥ 65 years should be vaccinated every year ^[5]. Flu vaccines are suggested every year for every person aged ≥ 6 months. The flu vaccine is 40%-60% effective and aids to avoid millions of illness cases and sever complications annually. The flu vaccine has been proven to be helpful for both patients and healthcare organizations, decreasing cost, hospital admissions, and mortality. There is an urgent need to identify ways that improve flu vaccination rates.

Given the availability of many vaccines worldwide for a wide variety of infectious diseases, vaccinations are not fully utilized

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globally^[6]. Successfulness of vaccination programs depends on overcoming several factors which consider as challenges and barriers. These factors include epidemiological, economic, biological, logistic, and social^[7]. Such barriers considerably influence the rate of vaccine utilization by the general population and accordingly the prevalence and incidence of vaccine - avoidable disease and the achievement of both local and global vaccination aims to eliminate vaccine- avoidable diseases. The challenges and barriers need to be recognized to tailor and establish strategies and policies to enhance vaccination uptakes, thus decreasing morbidity and mortality related to the vaccine-avoidable diseases^[8].

Strategies to improve vaccination rates involved encouraging general health practices to enhance access, and including weekend appointments^[9]. Community pharmacies have been utilized as another provider of flu vaccination and it has been identified to improve vaccination rates and meet population requirements^[10]. From the literature, it is evident that vaccinations are administered safely by community pharmacists^[11, 12].

Experience of vaccination services in community pharmacy

Till the mid of 20th century, pharmacists were seen restricted to the compounding and dispensing areas^[13]. Pharmacy and Pharmacists play an essential part of well-being and health care^[14]. Flu vaccines have traditionally been provided by family physicians; nevertheless, since the 1990s community pharmacists have been delivering vaccination services in many countries such as United Kingdom (UK), the US, Canada, and Portugal^[15]. In the UK, Flu vaccination services have been expanded through locally assigned services. In 2015, the national health service (NHS) stated its plan to commissioned a national NHS flu vaccination service provided by the community pharmacies^[16]. One service indicated that pharmacy has delivered one in ten of all flu vaccines and approximately three in ten of vaccines for people under 65 years old and with comorbidities^[17]. Another example of service that was in London, showed that for those who are 65 years and older, 11% of all vaccination was provided by the pharmacy service^[18]. As a result of the service provided by community pharmacy, it was shown that more people engaged and benefit from the service. Therefore, the NHS recommends the flu vaccine service provided by the community in the following years^[16]. In the US, pharmacists led vaccination service has been expanded rapidly in the past 20 years to include all 50 states, with more than 320,000 pharmacists have been qualified to provide vaccines^[19, 20]. A study in the US compared the administration of flu vaccine in a single-day versus every day in community pharmacies stated an eightfold rise in the number of flu vaccines provided by pharmacists every day in comparison to nurses who provided flu vaccination on a single day^[21]. Pharmacy delivered flu vaccination services have also grown in Canada. In 2012, as a plan to enhance the utilization of flu vaccines, the Universal Influenza Immunization Program (UIIP)

allowed qualified pharmacists to provide flu vaccines for those aged 5 years and older. During the 2012/13 season, more than 250,000 vaccines were provided by pharmacists which were more than double the government's target (Papastergiou et al., 2014). Following two influenza seasons, after the establishment of pharmacists provides flu vaccinations, there was a net increase of 450,000 in flu vaccination^[22]. A review of patients receiving flu vaccines through pharmacy service showed that 47% were considered as at high risk^[23]. In Portugal, flu vaccination service provides by pharmacy was introduced in the 2008 season. Initially 60% of the pharmacies offering the service with more than 126,000 vaccines being provided. Of these vaccines, 65% were for patients aged 65 and over. The utilization of patients aged 65 and over was increased by 6.5% between 2008 and 2009. From the second year, community pharmacy considers the most provider for the flu vaccine^[24].

Community pharmacy and the vaccination rate

From the literature, it is shown that pharmacy vaccination services can increase the utilization of vaccines compared to traditional care^[25]. Pharmacists led Flu vaccine service to become popular and studies showed that vaccination rates improved. Community pharmacy is easily accessible to the patient due to the convenient location and working time and walk-in service which makes it a considerable place to deliver vaccination service^[26, 27]. This type of service can overcome some of the barriers like those who live in a rural area and hard to reach groups^[28]. Also, providing flu vaccine in the pharmacy increases patient preference and convenience, letting them get vaccinated at a convenient time. Moreover, pharmacists play a major role in enhancing the utilization of vaccination and promoting patient knowledge and awareness about the importance of vaccination^[29].

Access is a vital influence for getting vaccinated and patients believe that flu vaccination provided by the pharmacy is easy to get. Studies showed that between 6.2% to 23% of those who get the flu vaccine through the pharmacy service mentioned that they would not get the vaccine without the availability of the pharmacy vaccination service^[30-32]. Also, studies showed that the pharmacy vaccination service did not decrease the number of people getting vaccinated by other vaccination services^[30].

Vaccination services in community pharmacy and patient satisfaction

Reaching goals for vaccination utilization depends on the vaccination of new patients, and with the introduction of the pharmacy to assist other healthcare professionals to reach this aim, patients should be satisfied with this type of vaccination service. Assessments of community pharmacy-led flu vaccination services have stated positive patient experiences of this type of service. Patients showed that they are satisfied with the community pharmacy as vaccination service providers pharmacists as the service evaluations indicated satisfaction ranging from 92% to 98%^[23, 26]. Recommending such service to others is a key indicator that patients are satisfied with the

services. A service evaluation indicated that 98% of vaccinated patients recommend this service to others^[33]. Community pharmacies can deliver complimentary compared to the other standard services for flu vaccinations. A common justification for choosing the pharmacy as a provider for flu vaccination was that the patient was unable to go to their family physician. In a survey, 71% mentioned this as the justification^[34]. In one study of patients who were eligible for getting a free vaccination on the standard service, 50% decided to pay for a private flu vaccination service rather than going to their family physician^[11].

Accessibility and convenience are all justifications for choosing the pharmacy as a provider for flu vaccination. Similar justifications were acknowledged where 98% of patients were satisfied with the waiting period and 99% with the opening hours^[33]. These prove the positive experiences with community pharmacy as a provider for flu vaccinations with the majority of patients.

Vaccine uptake-Saudi Arabia experience

Similar to most of the countries, the vaccination rate in Saudi Arabia consider lower than the aimed targets, which highlights the need to improve the service^[35].

In Saudi Arabia, vaccine coverage considers low and higher rates are seen in healthcare workers, elderly people, and patients with comorbidities. The influenza surveillance program was developed in hospitals and health care centers. To increase the coverage of flu vaccination, a 3phase strategic plan was launched in 2014 aiming to achieve 30% coverage of vaccination among the high-risk population in 5 years' time frame. Moreover, the public and community were made aware of the flu and the flu vaccination is sponsored by the ministry of health (MOH)^[36]. In 2019, Saudi (MOH) introduced the mobile flu vaccination service. This service can be requested via the ride-hailing application on smartphones. After requesting the service, a nurse will be transported to the person chosen location either homes or workplaces. The result of this service in terms of vaccination uptake still not published. Considering other examples worldwide it is proven that pharmacy-led flu vaccination service could be easily accessible that this service^[37].

Currently, Pharmacists in Saudi Arabia are not allowed to provide vaccines. Authorizing pharmacists led vaccination service still controversial. Nevertheless, the MOH has considered expansion and authorization in the role of pharmacists in immunization services. Still, it is unclear when this service will be implemented. Balkhi et al., Conducted a study to explore the community pharmacist readiness to deliver vaccination service in Saudi Arabia and identified that of the 139 community pharmacists, 55% stated their readiness to provide vaccines and develop a vaccination service^[29].

Conclusion

Governments need new approaches secondary to traditional flu vaccination services to reach flu vaccination targets. Pharmacies consider convenient and easy to reach the place. Possibly as a consequence of this, the role of pharmacy has been extended to include vaccination services. Several examples showed successful community pharmacists led flu vaccination services in terms of improvements in vaccination rates, delivery rates, and patient experience, which supported the flu vaccination services by community pharmacies.

Conflict of interest

The author has no conflicts of interest relevant to this article

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References

1. Hanawi SA, Saat NZ, Zulkafly M, Hazlenah H, Taibukahn NH, Yoganathan D, Abdul Rahim NN, Mohd Bashid NA, Abdul Aziz FA, Low FJ. Impact of a Healthy Lifestyle on the Psychological Well-being of University Students. *International Journal of Pharmaceutical Research & Allied Sciences*. 2020 Apr 1;9(2).
2. Zahra NA. Low Back Pain, Disability and Quality of Life among Health Care Workers. *International Journal of Pharmaceutical Research & Allied Sciences*. 2020 Apr 1;9(2).
3. Singh T, Taitel M, Loy D, Smith-Ray R. Estimating the Effect of a National Pharmacy-Led Influenza Vaccination Voucher Program on Morbidity, Mortality, and Costs. *Journal of Managed Care & Specialty Pharmacy*. 2020 Jan;26(1):42-7.
4. World Health Organization Vaccines against influenza WHO position paper – November 2012. *Releve epidemiologique hebdomadaire/Section d'hygiene du Secretariat de la Societe des Nations = Weekly epidemiological record/Health Section of the Secretariat of the League of Nations*. 2012;87:461–476.
5. World Health Organization. Prevention and control of influenza pandemics and annual epidemics (WHO, Geneva, Switzerland) 56th World Health Assembly, 2003.
6. Doherty M, Buchy P, Standaert B, Giaquinto C, Prado-Cohrs D. Vaccine impact: benefits for human health. *Vaccine*. 2016 Dec 20;34(52):6707-14.
7. Glatman-Freedman A, Nichols K. The effect of social determinants on immunization programs. *Human vaccines & immunotherapeutics*. 2012 Mar 13;8(3):293-301.

8. Poudel A, Lau ET, Deldot M, Campbell C, Waite NM, Nissen LM. Pharmacist role in vaccination: Evidence and challenges. *Vaccine*. 2019 Sep 20;37(40):5939-45.
9. Dexter LJ, Teare MD, Dexter M, Siriwardena AN, Read RC. Strategies to increase influenza vaccination rates: outcomes of a nationwide cross-sectional survey of UK general practice. *BMJ open*. 2012 Jan 1;2(3).
10. Warner JG, Portlock J, Smith J, Rutter P. Increasing seasonal influenza vaccination uptake using community pharmacies: experience from the Isle of Wight, England. *International Journal of Pharmacy Practice*. 2013 Dec;21(6):362-7.
11. Anderson C, Thornley T. "It's easier in pharmacy": why some patients prefer to pay for flu jabs rather than use the National Health Service. *BMC health services research*. 2014 Dec 1;14(1):35.
12. Todd A, Copeland A, Husband A, Kasim A, Bamba C. The positive pharmacy care law: an area-level analysis of the relationship between community pharmacy distribution, urbanity and social deprivation in England. *BMJ open*. 2014 Aug 1;4(8).
13. Sundus A, Ismail NE, Gnanasan S. Exploration of healthcare practitioner's perception regarding pharmacist's role in cancer palliative care, Malaysia. *Pharmacophore*. 2018 Jul 1;9(4):1-7.
14. Sergeevna SM, Efimovna LE. Improving Training of Pharmaceutical Specialists for Consultation in Pharmacy Organizations Using Interactive Forms of Education. *Pharmacophore*. 2020 Mar 1;11(2).
15. Francis M, Hinchliffe A, Wales NH. Vaccination services through community pharmacy. Public Health Wales NHS Trust, Wales: NHS Wales. 2010 Aug 17.
16. NHS. NHS England to recommission flu vaccinations in community pharmacies for 2016/17. Available at: <https://www.england.nhs.uk/2016/05/recommission/>
17. LLP, P. H. P. Isle of Wight community pharmacy seasonal flu vaccination. End of service evaluation report for the NHS service including cohort analysis and patient-reported outcomes, 2011. Available at: http://archive.psn.org.uk/data/files/seasonal_flu_community_pharmacy_service_report_2010__v1.4c__final.pdf.
18. Ward L, Draper J. A review of the factors involved in older people's decision making with regard to influenza vaccination: a literature review. *Journal of clinical nursing*. 2008 Jan;17(1):5-16.
19. Schmit CD, Penn MS. Expanding state laws and a growing role for pharmacists in vaccination services. *Journal of the American Pharmacists Association*. 2017 Nov 1;57(6):661-9.
20. Westrick SC, Patterson BJ, Kader MS, Rashid S, Buck PO, Rothholz MC. National survey of pharmacy-based immunization services. *Vaccine*. 2018 Sep 5;36(37):5657-64.
21. Grabenstein JD. Daily versus single-day offering of influenza vaccine in community pharmacies. *Journal of the American Pharmacists Association*. 2009 Sep 1;49(5):628-31.
22. O'Reilly DJ, Blackhouse G, Burns S, Bowen JM, Burke N, Mehlretter J, Waite NM, Houle SK. Economic analysis of pharmacist-administered influenza vaccines in Ontario, Canada. *ClinicoEconomics and Outcomes Research: CEOR*. 2018;10:655.
23. Papastergiou J, Folkins C, Li W, Zervas J. Community pharmacist-administered influenza immunization improves patient access to vaccination. *Canadian Pharmacists Journal/Revue des Pharmaciens du Canada*. 2014 Nov;147(6):359-65.
24. INSA National Institute of Health. Report ECOS InfluenzaSeason 2007/8, 2008/9, 2009/10, 2010/11, 2011/12 and 2012/13; 2010 [Available from: <http://www.insa.pt/sites/INSA/Portugues/PublicacoesRepositorio/Paginas/PublicacoesRepositorioINSA.aspx>].
25. Isenor JE, Edwards NT, Alia TA, Slayter KL, MacDougall DM, McNeil SA, Bowles SK. Impact of pharmacists as immunizers on vaccination rates: a systematic review and meta-analysis. *Vaccine*. 2016 Nov 11;34(47):5708-23.
26. Taitel M, Cohen E, Terranova B, Baloun L, Kirkham H, Duncan I, Pegus C. Pharmacists as immunization providers: patient attitudes and perceptions. *Pharmacy Times*. 2011 Aug 6;77(9):60.
27. Goad JA, Taitel MS, Fensterheim LE, Cannon AE. Vaccinations administered during off-clinic hours at a national community pharmacy: implications for increasing patient access and convenience. *The Annals of Family Medicine*. 2013 Sep 1;11(5):429-36.
28. Usami T, Hashiguchi M, Kouhara T, Ishii A, Nagata T, Mochizuki M. Impact of community pharmacists advocating immunization on influenza vaccination rates among the elderly. *Yakugaku Zasshi*. 2009 Sep 1;129(9):1063-8.
29. Balkhi B, Aljadhey H, Mahmoud MA, Alrasheed M, Pont LG, Mekonnen AB, Alhawassi TM. Readiness and willingness to provide immunization services: a survey of community pharmacists in Riyadh, Saudi Arabia. *Safety in Health*. 2018 Dec 1;4(1):1.
30. European Pharmacists Forum. the role of pharmacy in supporting the public's health. An EPF white paper and call to action. 2015 https://ec.europa.eu/eip/ageing/library/white-paper-role-pharmacy-supporting-publics-health_en
31. Hampshire and Isle of Wight Local Pharmaceutical Committee. Isle of Wight community pharmacy seasonal flu vaccination. End of service evaluation report for NHS service including cohort analysis and patient-reported outcomes. 2011. <http://www.hampshirelpc.org.uk/node/372>
32. Reilly P, Ryder S. Evaluation of a pharmacy-based winter flu vaccination service. Poster session presented at the

- International Pharmaceutical Federation (FIP) annual congress. 31 Aug-5 Sept 2013; Dublin, Ireland
33. Horta MR, Costa S, Mendes Z, Mendes T, Santos C. Immunization delivery: a new service provided in Portuguese pharmacies part2: first nationwide influenza immunization campaign [poster]. In: 69th International Congress of International Pharmaceutical Federation (FIP). 2009.
34. Pinnacle Health Partnership LLP. Seasonal influenza vaccination 2011/12. Isle of Wight community pharmacy end of service report; 2012 [Available from [http://archive.psn.org.uk/services/db/docs/766/Seasonal Flu Community Pharmacy Service Report 2011 v1 4.pdf](http://archive.psn.org.uk/services/db/docs/766/Seasonal%20Flu%20Community%20Pharmacy%20Service%20Report%202011%20v1%204.pdf)]
35. Ministry of Health (2018) Statistical Yearbook. Available at: <https://www.moh.gov.sa/en/ministry/statistics/book/pages/default.aspx>.
36. Al Awaidi S, Abusrewil S, AbuHasan M, Akcay M, Aksakal FN, Bashir U, Elahmer O, Esteghamati A, Gahwagi M, Mirza YK, Grasso C. Influenza vaccination situation in Middle-East and North Africa countries: Report of the 7th MENA Influenza Stakeholders Network (MENA-ISON). *Journal of infection and public health*. 2018 Nov 1;11(6):845-50.
37. Ministry of health (2019) MOH News. MOH Launches Flu Vaccination Service at Homes. Available at: <https://www.moh.gov.sa/en/Ministry/MediaCenter/News/Pages/News-2019-11-17-001.aspx> [Accessed 26 May 2020].