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Vaccination services through community pharmacy: a literature review

Authors: Mary Francis, Public Health Specialist

Anne Hinchliffe, Consultant in Pharmaceutical Public Health

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Purpose and Summary of Document:

To undertake a review of the literature on the role of community pharmacy in the delivery of vaccinations.

Vaccination services have been available from pharmacies in the United States for over a decade and private vaccination services are already offered by a number of UK pharmacies. Seasonal flu vaccination is the service most frequently provided.

Pharmacies are visited by both unwell and healthy people of all ages and social groups. In addition to the pharmacist's role in providing public health advice and signposting patients to vaccination services, the administration of vaccinations at community pharmacies has the potential to further increase vaccine uptake. Patients appreciate the increased convenience of community pharmacy provision of vaccination services and are satisfied with the quality of the service.

Work Plan reference: HS17

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1 Key Messages

- Private vaccination services are already provided from many community pharmacies in the UK. NHS funded vaccination services are available through community pharmacy in parts of England and Scotland.
- Community pharmacy vaccination programmes began in the United States in the 1990s and since 2009 all fifty states have allowed pharmacist vaccination services.
- The vaccination services most frequently available through community pharmacy are seasonal flu and travel vaccines, although HPV, occupational health and Hepatitis A and B vaccines are also offered in some areas.
- When patients are vaccinated at a community pharmacy, appropriate and timely communication must occur between health professionals in order to protect patient safety.
- Community pharmacies are visited by both unwell and healthy people of all ages and social groups. They are ideally placed to deliver a primary care-based vaccination service.
- Public health is an essential service in the community pharmacy contractual framework. The activities of pharmacists in Wales are monitored by their professional regulator and the local health board to ensure patients receive high quality, safe services.
- Community pharmacies offer convenient locations, the availability of a healthcare professional without an appointment and extended evening and weekend opening hours.
- The administration of vaccinations in community pharmacies has the potential to increase the number of at risk individuals being vaccinated. This will improve the health of the population and support health boards meet the relevant Annual Operating Framework (AOF) targets.
- The evidence base for community pharmacy vaccination services is based on observational studies. No higher level studies were found.
- Further evidence, which could not be gleaned from a literature search, may be available from direct contact with community pharmacies providing private vaccination services and primary care organisations already commissioning an enhanced pharmacy service for vaccinations.

2 Introduction

In 2009, the Minister for Health and Social Services set up a task and finish group to look at pharmaceutical services in Wales with a particular focus on how community pharmacy could play a greater role in delivering high quality health care to people in Wales.

A report¹ published by the group identified ways to improve use of current resources and one of the recommendations was to investigate and pilot the provision of vaccinations through pharmacies.

Increasing immunisation rates in Wales is a priority task identified in the 2010/11 annual operating framework (AOF).²

This literature review examines the evidence for vaccination through community pharmacies.

3 Background

3.1 Community pharmacy in Wales

Wales has a network of over 700 community pharmacies who receive approximately 35,000 visits a day.³ Their convenient locations, extended opening hours and easy access to a qualified pharmacist⁽¹⁾ make community pharmacy well placed to offer health services in line with Welsh Assembly Government policy to provide safe, effective health services close to the centre of a community.⁴

Community pharmacies in England and Wales provide pharmaceutical services to the NHS in accordance with the community pharmacy contractual framework.⁵ In order to provide NHS services the pharmacy must be included in the pharmaceutical list which is managed by the local health board. Community pharmacies in the UK can be single-owned, part of a chain or supermarket-based.

Pharmacists must ensure adequate clinical governance arrangements are in place and the health board should monitor that appropriate standards are being met. Most pharmacies now have a private consultation area.

The contractual framework identifies services which must be provided by every pharmacy i.e. essential services, and makes provision for the commissioning of other services i.e. enhanced services, according to local

(¹) Qualification as a pharmacist takes 5 years. (4 year pharmacy degree course + 1 year pre-registration work experience).

need. Additional fees are payable to pharmacies providing enhanced services and these are subject to negotiation between the relevant parties, as is the service specification. Further information is available in Appendix 1.

3.2 Vaccination programmes

Immunisation is considered one of the greatest achievements of the 20th century, significantly contributing to healthier, more productive, and longer lives by preventing life threatening diseases. The World Health Organization (WHO) estimates that vaccination prevents over 2.5 million child deaths each year worldwide.⁶

In Wales, the following vaccination programmes are available at NHS expense:

Childhood immunisation; a programme of vaccinations offered to children from birth through childhood and adolescence.

Seasonal influenza (flu); offered annually to people considered to be at increased risk from flu either due to their age or underlying medical conditions.

(People who do not meet the criteria for NHS provided seasonal flu vaccination may seek vaccination from a private service provider).

Other vaccines; offered to patients at increased risk of particular infections either due to underlying medical conditions, employment or lifestyle choices e.g. hepatitis B, pneumococcal vaccine.

Additionally, people visiting foreign countries may be advised to have particular vaccinations prior to travel, depending on the infectious diseases endemic in the country. The patient will need to pay for many of these as a private service.

Further information on vaccines and vaccination schedules is available in the *Green book*.⁷

The NHS Wales Annual Operating Framework (AOF) 2010/11 targets for vaccination programmes are provided in Appendix 2

4 Aim

To evaluate the published literature in relation to the delivery of vaccinations through community pharmacies.

5 Research questions

What is the evidence for community pharmacy delivery of vaccinations?

Can community pharmacy support delivery of vaccination programmes by increasing uptake in target populations?

What are the barriers and drivers to community pharmacy delivery of vaccinations?

Is community pharmacy delivery of vaccinations cost effective?

6 Search strategy

A scoping search was initially undertaken to refine the final search strategy. Search terms were kept broad to maximise retrieval of references and included the following; community pharmacy, community pharmacy services, pharmacies, pharmacist, vaccine, immunisation, vaccination, travel, schedule, child, children, adult, barriers, United Kingdom, Europe, international, data collection, outcomes, influence, effectiveness, general practitioner, delivery, access, flexibility, cost, benefit, quality of health, uptake, local health boards, primary care trusts.

Databases accessed: Medline, Embase, British Nursing Index, Cochrane Database of Systematic Reviews, Cochrane Central Register of Controlled Trials, Scottish Intercollegiate Guidelines Network, Cumulative Index to Nursing Allied Health, British Nursing Index and the Health Management Information Consortium databases.

In order to achieve production of the review within a limited timescale it was necessary to take a pragmatic approach when searching the vast amount of literature and evidence available on vaccinations and pharmacies to ensure the literature review remained focussed.

Other resources were used to identify grey literature on this topic.

As resources were limited, the literature review and appraisal was not subject to additional examination by separate reviewers.

Inclusion criteria

- Published between January 1999 and May 2010
- Key policy documents and guidelines

- Randomised controlled trials
- Systematic reviews
- Observational studies
- Papers in English or English translation only.

7 Results

The scoping search revealed a few good quality reports that included relevant reviews of information and literature on community pharmacies and vaccine administration. Secondary source documents were used to inform the present document, supplemented by appropriate evidence as identified through the literature searches.

7.1 Community pharmacy and vaccination

7.1.1 Community pharmacy as a provider of healthcare services

Boardman et al. undertook a population survey⁸ that included 10,000 adults above the age of 35 years. The study found that 76% women and 63% men had either collected medicine and/or asked for advice at a pharmacy in the previous month. These results were similar to those of the Welsh Health Survey which revealed that 69% adults had used a community pharmacy in the previous year and 36% had purchased a medicine in the previous four weeks.⁹ Boardman also noted that purchasers of OTC medication tended to be younger and from higher social classes whereas those who collected prescriptions were likely to be older. The study concluded that a broad range of ages and social classes visit pharmacies each month giving the opportunity for opportunistic public health initiatives to be delivered.

Compared with other healthcare providers community pharmacies offer extended opening hours, more convenient locations and access to professional knowledge and expertise without requiring an appointment. In Wales there are many areas both urban and rural where transport issues limit travel within the community¹⁰ and community pharmacies can improve access to health information and services.

7.1.2 Community pharmacy as a provider of vaccination services

Community pharmacy based vaccination services are not new. In the mid-nineties a pharmacy immunisation initiative was launched in California.¹¹ and schemes now operate in all fifty US states.¹² Community pharmacy vaccination services are also available in Canada¹³ and Portugal¹⁴.

Non NHS vaccination services are widely available from community pharmacies in the UK. For example, Boots has more than 200 stores offering vaccination¹⁵ and staff in 300 Lloyds pharmacies are trained to administer vaccines.¹⁶ Vaccinations are also available from many of the supermarket housed pharmacies e.g. Tesco, Asda, Morrisons as well as from independent and small chain pharmacies. Seasonal flu vaccination is the vaccine most frequently offered and customers are usually charged between £8 and £15 for the service. Some pharmacies offer vaccination against cervical cancer although this is more expensive at £300-400 for a course of three injections. Travel vaccinations are also available at some pharmacies and costs vary according to the vaccine(s) required.

A USA report¹⁷ on the integration of non-traditional immunisation programs (including pharmacy) within an existing healthcare infrastructure concluded that the provision of immunisations outside the traditional places could increase vaccine coverage rates and decrease vaccine-preventable diseases among adults. A workshop was undertaken to gain a better understanding of programmes that offered vaccines to adults in non-traditional settings and identify potential benefits and challenges associated with administering vaccines in non-traditional settings. Over 100 participants were involved and the following benefits were identified; improved access, convenience, reduced cost (for the patient) and increased awareness of vaccination programmes secondary to service advertisements. The challenges noted were; adverse reactions to vaccines, record keeping, liability of healthcare providers, legal regulations, integration of all vaccination services and the quality of services provided.

A systematic review of international peer-reviewed literature in relation to the contribution of community pharmacy to improve public health in the UK and internationally was undertaken by Anderson et al.¹⁸ The aim of the review was to summarise and evaluate research covering the period 1990-2007. Of 196 papers reviewed, seven related to immunisation. The authors concluded:

- Immunisation services can be provided safely through community pharmacy¹⁹
- Pharmacy patient medication records are effective in identifying and flagging at risk clients to be invited for immunisation and can increase the percentage of target group immunised^{20,21}
- User satisfaction with pharmacy-based immunisation is high²²
- Support for non-physician delivered immunisation is greater for adult than for child immunisation²³

7.1.3 Patient preference for community pharmacy vaccination services

The pharmaceutical distribution firm AAH reported headline figures from a survey of 1000 patients who had received flu vaccination at a community pharmacy. Three-quarters (76%) patients said they had chosen the pharmacy because it was more convenient, either due to the location or the pharmacy's opening hours.²⁴ (No abstract or full report was available to evaluate the quality of the study).

A study by Ndiaye et al.²⁵ in West Virginia, USA concluded that convenience of location and opening times were the most influential factors in mothers' preferences for their children to be vaccinated at the pharmacy. Limitations included the low number of cases and that much of the study was dependent on questionnaire responses.

An Irish study²⁶ concluded that pharmacy vaccination clinics had several potential benefits compared with alternatives including; longer opening hours, ease of accessibility, more frequent contact with the population supporting opportunistic vaccination, and minimal capital outlay required to implement programme across existing pharmacy networks.

7.1.4 Community pharmacy and the childhood vaccination programme

The UK childhood immunisation programme is well established and aims to vaccinate children at specific times from birth, through childhood and adolescence. In 2009, NICE published public health guidance focussing on reducing differences in the uptake of immunisations among children and young people.²⁷ Although pharmacies had little mention a number of the recommendations made were relevant to pharmacies, for example

- Improve access to immunisation services for those with transport, language or communication difficulties for example walk in vaccination clinics, services offering extended hours.
- Consider using pharmacies to promote and disseminate accurate, up-to-date information on childhood immunisation.
- Encourage and enable private providers to give the relevant GP practice or PCT details of all vaccinations administered so they can be recorded in the appropriate information system.
- Ensure all staff involved in immunisation services are appropriately trained including the ability to answer questions about different vaccinations.

- Ensure health professionals who deliver vaccinations have received training that complies with the National minimum standard for immunisation training.

A paper by Samad et al.²⁸ and cited by NICE, highlighted different influencing factors where children are not vaccinated at all, compared with children who are partially vaccinated. Beliefs about vaccination dominate the decision whether to have a child immunised or not, whereas convenience and the practicalities of getting to the service provider appear more influential for those whose children remain partially immunised.

In preparing its public health guidance NICE identified gaps in the evidence base and made recommendations for further research. The following are of relevance when considering community pharmacy vaccination services:

- What are the most effective and cost effective ways of modifying services to increase vaccine uptake among children and young people?
- What are the most effective and cost effective ways of providing parents of children and young people with information to encourage timely immunisation?

No papers reported on community pharmacy involvement in childhood vaccination programmes in the UK or Europe.

Pilisuk et al. presented the results of a survey²⁹ of pharmacist immunisation service co-ordinators to understand the scope of pharmacist-administered vaccination services undertaken within eight chain pharmacies in California representing more than 2,500 store locations state-wide. Of the participating pharmacies all eight chains administered vaccines to adults whilst four chains also vaccinated adolescents and pre-teenagers above nine years of age. All eight offered flu vaccination and seven of the eight pharmacies offered additional vaccinations throughout the year. All participating pharmacies informed the patient's physician about the immunisations administered and gave the patient a printed record of the vaccines they had received. Survey respondents indicated an interest in improving communication with the medical community and collaborative efforts in working on patient awareness. The cost of immunisations was perceived as a barrier to greater utilisation as patients were required to pay for the service themselves.

7.1.5 Community pharmacy and seasonal flu vaccination

Older people are more likely to need prescribed medicines and are frequent users of community pharmacies. Many older people value the

social aspect of visiting their local pharmacy which provides not only a commercial transaction but may also contribute to a feeling of wellbeing of the older person.

A quantitative study³⁰ of over 5,000 community-dwelling adults aged over 65 years of age, living in Canada, identified positive predictive factors for flu vaccination uptake that included increasing age, marital status, having attained a higher education, smokers, alcohol consumers and co-morbid illness.

Telford and Rogers³¹ conducted in-depth interviews with twenty patients, aged over 75 years, registered with an inner city general practice in England. The answers from the ten patients who had accepted flu vaccination were compared with those from the ten who had not. The decision whether to accept or refuse the vaccine was influenced by trust or mistrust of modern medicine, prior experience of vaccination and perceived risk from flu. Newly acquired lay experience and personal perceived risk from flu were the most important catalysts for change.

A literature review (1996-2005) was undertaken by Ward and Draper to understand the factors involved in older people's decision making with regard to flu vaccination.³² The authors found that in addition to demographic factors, prior experience, concerns about the vaccine, perceived risk and advice and information were all relevant. They concluded that the promotion of person-centred ways of working that value the health beliefs, attitudes, perceptions and subjective experiences of older people was likely to be more successful during individual encounters designed to promote acceptance.

In an attempt to improve uptake of flu vaccination, City and Hackney PCT introduced an enhanced pharmacy service allowing pharmacists to administer flu vaccine to people either over 65 years of age, or under 65 years and in an at-risk group.³³ The service was set up in 2005 to assist GPs who were struggling to reach their flu immunisation targets and has grown over the years with 32 pharmacies currently offering the service. In 2005 the PCT had an uptake rate of 59% overall. By 2008, this had increased to 76% for patients over 65 year olds and 67% for patients under 65 and at risk. The PCT considered that widening the range of venues where people could be vaccinated had been central to this improvement. The total number of vaccinations delivered through community pharmacy was not reported. The pharmacists encouraged patients to be vaccinated at their GP practice with the pharmacy service as an alternative for those unlikely to attend the surgery. Pharmacists used opportunistic visits for over-the-counter medication, prescriptions or other services to offer the vaccinations. Vaccination at the pharmacy was usually by booked appointment although if the pharmacy had capacity a walk-in service could be offered. Following immunisation the pharmacist completed an online form that was forwarded to the patient's GP to ensure

they were fully informed of the vaccination having taken place and to avoid duplication. Pharmacists were supplied with vaccine from the PCT and paid a £7.80 administration fee (2009/10). [Personal communication Barhaya S. 6 July 2010]. Patient feedback was positive and local GPs showed enthusiasm for the scheme as it helped them achieve their immunisation targets.

In 2002, a pilot study of a flu vaccination service was instigated at one pharmacy in Aberdeen.³⁴ The study aims were;

- to increase the uptake of flu immunisation targeting patients under 65 years of age in at-risk groups
- to increase patient choice
- to develop and evaluate a new model for administering flu vaccine through community pharmacy.

Patients were recruited in two ways, by self-referral and by active targeting of 'at-risk' patients based on the patient's current prescription. Patients were allocated appointment times to be given their vaccine. Eleven two-hour sessions were held over a four week period, on Monday and Wednesday lunchtimes and Saturday mornings. A total of 56 patients were immunised and all completed a questionnaire to determine their opinion of the pharmacy service. Almost all (55/56) thought the injection was administered well and the pharmacist was professional (54/56). Seventy-three percent (41/56) chose the pharmacy because it was a convenient location and 54% (30/56) because the times were convenient. Ten patients said they would not have had the vaccination if it had not been offered by the pharmacist. All patients said they would use the pharmacy to receive other vaccinations if offered in the future. A second questionnaire was sent to the GP of each vaccinated patient. Although two-thirds (16/24) said they would support the scheme again the following year, less than one-third (29%) were in favour of pharmacist vaccination of over 65's. The reason for this was not explored but earlier in the paper the authors highlighted a clash of financial interest between GPs and pharmacists providing vaccination in this age group. (At the time of the study payments were not available to GPs to immunise under 65 at risk patients but GPs were paid for immunising those over 65 years)

Following on from the success of the pilot, the health board decided to roll out the service across Grampian²². All 123 pharmacies were given the opportunity to take part in the scheme and expressions of interest were received from 10 pharmacies situated in a mixture of rural and urban locations. Patients were recruited the same way as in the pilot study and in addition pharmacists could provide immunisation on a private fee basis to patients not eligible under the NHS criteria. Patients were encouraged to go to their GP for immunisation and only attend the pharmacy service as a second line option. This was to reduce conflict with GPs over

vaccination payments. Every patient vaccinated under the scheme during its second year was asked to complete a patient acceptability questionnaire during his or her 10-minute wait following vaccination. As in the pilot study high levels of patient satisfaction were reported, only one (1/898) said they wouldn't use the pharmacy for other vaccinations. Thirty-seven percent (335/898) said they would not have had the vaccine if it had not been offered by the pharmacy. The majority of patients vaccinated (803/898) were not eligible under the NHS criteria and paid for the service themselves. Of those meeting the NHS at-risk criteria, almost two thirds had respiratory disease (61/95), 23% (22/95) were carers and 20% (19/95) had diabetes. Patients were asked why they chose to come to the community pharmacy. In most cases it was because they were not eligible for immunisation at NHS expense. Other patients highlighted the greater convenience of the pharmacy service and avoiding the need to take time off work to be vaccinated. There was no separate analysis of questionnaires from patients who were eligible under the NHS criteria and those that were not. The scheme has now been expanded to cover other pharmacies in the Grampian region and in 2007/08 seventeen pharmacies provided flu vaccinations to the community.

Grabenstein et al.²¹ sought to determine the effect of pharmacist vaccinators located at community pharmacies on vaccine uptake rates. Pharmacy records were used to identify patients either aged over 65 years or under 65 years and with a risk factor necessitating flu vaccination. The study included 4,403 subjects, 2,211 from urban Washington and 2,192 from urban Oregon. In each group approximately half the subjects were aged over 65 years, (1,110 [Washington] and 1,120 [Oregon]). Pharmacists in Washington were permitted under state regulations to administer vaccines, whereas at the time, those in Oregon could not. Patients were mailed a survey and the information provided used to calculate changes in vaccination uptake between 1998 and 1999. In both the over 65 years and under 65 years groups there was an increase in the proportion vaccinated in Washington (4.7% and 9.2% respectively), whereas in Oregon there was no change in uptake amongst over 65 year olds and a reduction in those under 65 years (0.0% and -1.4% respectively).

These findings are supported by another American study, Steyer et al.³⁵ Following secondary analysis of the Behavioural Risk Factor Surveillance System from 1995 to 1999 Steyer reported that individuals aged 65 years and older who lived in states where pharmacists could provide vaccines had significantly higher ($p < 0.01$) flu vaccination rates than individuals of this age who resided in states where pharmacists could not administer vaccines.

Bowles et al.³⁶ reported the findings of a pilot study in Nova Scotia, Canada, to increase flu immunisation uptake. Flu clinics were introduced into 42 pharmacies with registered nursing staff administering all

immunisations. A total of 2828 flu vaccinations were administered averaging 67 per clinic. One in five people reported not having been previously immunised. Eighty percent of the attendees reported that pharmacy-based clinics were their preferred site for receiving immunisations, the most frequent reasons cited included; convenience, less waiting times, not having to make an appointment and ease of parking. The authors concluded that flu immunisations clinics based in community pharmacies can increase awareness and access to vaccinations for some high-risk patients and enhance immunisation uptake.

7.1.6 Community pharmacy and travel vaccinations

Hind et al. undertook a needs assessment³⁷ for a travel vaccine service within the Grampian locality. The study used a questionnaire survey of potential travellers recruited from community pharmacies and the regional travel clinic. Questionnaire responses highlighted that nearly 75% of respondents agreed or strongly agreed that community pharmacy would provide a convenient location from which to obtain travel services and 70% felt they could provide a one-stop shop for travel medicine services.

In 2006 Grampian health board piloted a travel immunisation service in two local community pharmacies.³⁸ One of the participating pharmacies had already been providing flu vaccinations for over 5 years so the provision of travel vaccines was a natural extension to the vaccination service it already provided. Evaluation of the pilot highlighted that it was well accepted and questionnaire respondents found the service to be convenient in both time and location, met their needs and would use the service again. A weakness of the study was its size as only two pharmacies were involved and only 137 patients were seen in the pilot study period. The pharmacists involved in the pilot study remained enthusiastic following its completion and wished to continue providing travel immunisations, as they felt it met the needs of the community.

Since 2008, private based health clinics issuing malaria prophylaxis and immunisations have been in place at Sainsbury, Lloyds and Superdrug.

Gatewood et al.³⁹ described the procedure for implementing a comprehensive pre-travel health programme in a USA supermarket chain pharmacy. The evaluation which involved 20 pharmacies in West Virginia, between 2000 and 2008, showed on average over 1000 patients accessed the service each year and approximately 1,900 vaccinations were administered. The authors concluded that a comprehensive pre-travel programme in a supermarket pharmacy is successful and provides another option for travellers seeking pre-travel healthcare.

Hess et al.⁴⁰ investigated the acceptance rates of travel related vaccine and medication recommendations in a pharmacist-run travel health clinic located in an independent community pharmacy in California, USA. In a

sample of 283 patients there was 85% overall patient acceptance of pharmacist made recommendations and this ranged from 67% for polio to 97% for yellow fever. A subsample of patients (n=82) completing a patient satisfaction survey found that 96% of patients were satisfied with their overall visit. The authors concluded that the high rate of patient acceptance and satisfaction with the clinic supports the adoption of pharmacists as non-traditional providers of health services. However, the low response rate to the patient satisfaction survey (29%) is a limitation of the study.

7.2 Barriers and drivers

7.2.1 Barriers

A survey to explore barriers between GPs and community pharmacists⁴¹ identified a number of perceived barriers that limited inter-professional collaboration. The study population included GPs and community pharmacists from three locality areas of a health and social services board in Northern Ireland. The shopkeeper or specialist retailer image of community pharmacists and conflict between business and health permeated GP discussions and accounted for some of their concerns in relation to rights to prescribe and extended services involvement. Community pharmacists felt these views hindered their position in the healthcare provider hierarchy. GPs did not identify access to a pharmacist as a problem, but the pharmacists reported greater difficulty due to the gatekeeper role of the practice receptionists. Interestingly the GPs identified limited opening hours of the pharmacy as a constraint for patients whereas community pharmacies generally operate extended hours (including weekends) in comparison with GP practices.

The job of a community pharmacist is demanding, dealing with prescriptions, over the counter purchases and advice requests. This has led to questions as to whether community pharmacy has the capacity to deliver additional services, such as vaccination. The administration of immunisations would require appropriate time to be set aside to advise and support the patient being vaccinated. This new role would need to be built into the pharmacy schedule, and may require additional staff to be available at times when the vaccination service is provided. [Personal correspondence Hind C and Barhaya S 6 July 2010].

A UK survey of patients found that patients had concerns about pharmacist expertise, confidentiality and privacy and the lack of space in some pharmacies.⁴² Following changes to the community pharmacy contractual framework in 2005, most pharmacies now have a private consultation area but lack of space, building restrictions on some old buildings and design of the pharmacy have prevented some pharmacists from modifying their premises.

Enhanced pharmacy services in Wales are subject to local agreement with the LHBs. A study of primary care trust (PCT) pharmacists in England⁴³ identified factors they considered to be barriers and drivers to the commissioning of community services. Access to funding and reconfiguration, ability to recruit staff, capacity, training availability and GP support were recognised as barriers to commissioning.

The study in Grampian³⁴ designed to increase flu vaccination rates identified two barriers, both related to GP funding. Where GPs received payment for administering flu vaccines, the GPs were unhappy to relinquish this income opportunity to community pharmacists. Conversely, the health board was reluctant to fund community pharmacists to provide a service which supported GPs achieve vaccination targets when an incentive scheme was also in place whereby the GP practice received a bonus payment for reaching those targets. [Personal communication Hind C 6 July 2010].

Pharmacist education and training is currently commissioned by the Welsh Committee for Professional Development of Pharmacy (WCPDP) and financed directly by WAG. All community pharmacists who wish to provide a vaccination service will need to have achieved accredited status including locum pharmacists.

7.2.2 Drivers

The AOF² acts as a driver and catalyst for the development of services in Wales as a key planning tool for all NHS services. The AOF contains a number of programmes and targets to be delivered within a specified timescale and in 2010/2011 includes a specific immunisation target, namely, AOF Target 2, for LHBs to achieve and maintain stated uptake rates of seasonal flu (75%), childhood (95%) and Human Papilloma Virus (HPV) (90%) vaccinations.

The community pharmacy contractual framework⁵ offers some degree of flexibility and choice to meet the needs of local populations. Pharmacists are well trained professionals who demonstrate expert knowledge, skills and capabilities. The provision of enhanced services could offer a degree of professional satisfaction for the pharmacist in addition to delivering a service that is able to meet the needs of the community. The ease of location and convenience of opening hours means that community pharmacies are well placed to provide vaccinations to their local population. A survey of members of the UK Patients Association⁴² identified current community pharmacy service provision and components for future consideration. The main conclusions from the survey were that patients are willing to seek a wide range of services from pharmacies if these services are seen to be integrated with GP services and pharmacists want more resources to be put into pharmacy services to enable them to make a stronger contribution to primary care.

7.3 Cost effectiveness

No studies were found examining the cost effectiveness of vaccination from community pharmacy compared with other providers. The Grampian study³⁴ showed that some patients are willing to pay for vaccination services. In City and Hackney PCT³³ community pharmacists were paid the same administration fee as GPs for administering the vaccine and therefore it is assumed that the introduction of vaccination services from community pharmacy was cost neutral. Vaccination is considered highly cost effective compared with dealing with the complications of the disease. If, as is suggested by studies cited earlier in this literature review, availability of vaccination through community pharmacy led to an increase in vaccine rates amongst target groups, this could result in overall savings for NHS Wales. The magnitude of these savings has not been quantified.

8 Conclusions

A number of observational studies, both within the UK and further afield have demonstrated that community pharmacy can contribute to increasing vaccination uptake in at risk groups. The majority of studies focused on flu vaccination although other vaccinations were included in some studies. Community pharmacy offers additional outlets and extended hours which can complement vaccination services offered by traditional providers. Already a number of community pharmacies in the UK offer private vaccination services and the fact that patients are willing to pay for these services is a positive indicator that vaccination services would be acceptable to NHS patients.

9 Acknowledgment

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Appendix 1: Community pharmacy services as outlined in the community pharmacy contractual framework for Wales

Essential Tier (mandatory)	Advanced Tier (optional)	Enhanced Tier (optional- for local commissioning) Examples:
Dispensing Repeat dispensing Disposal of unwanted medicines Support for self-care Signposting Healthy lifestyle promotion Clinical governance	Medicines Use Review Appliance Use Review	Needle and syringe exchange service Supervised methadone Emergency hormonal contraception Advice to care homes

11 Appendix 2: NHS Wales annual operating framework 2010/2011

AOF TARGET 2

Programme Area: Public Health

AOF 2	LHBs to achieve and maintain: <ul style="list-style-type: none">• Uptake rates of 95% for all childhood vaccinations (including MMR) in each Unitary Authority• An uptake rate of 90% for the routine HPV vaccination of girls aged 12 to 13 years old in each Unitary Authority area• An uptake rate of 75% for seasonal influenza vaccinations in people aged 65 and over and for those younger people in at risk groups in each Unitary Authority area.
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