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General practitioners' challenges during the 2009/A/H1N1 vaccination campaigns in Australia, Israel and England: a qualitative study

Background

The 2009/A/H1N1 influenza vaccination campaign was managed mainly by general practitioners (GPs); however, little is known about the challenges GPs encountered during the vaccination campaign.

Aim

To analyse the challenges GPs encountered during the 2009/A/H1N1 vaccination campaign.

Method

In-depth, semi-structured qualitative interviews were conducted with GPs in Australia, Israel and England, and subjected to thematic analysis.

Results

GPs experienced different levels of autonomy when organising vaccinations in clinics. Their significant role was the provision of advice about the vaccine to the patients. This role was challenged by the necessity to provide the advice as a response to the anti-vaccination messages in the media and because GPs harboured doubts about mass vaccination policies.

Discussion

It is important that GPs accept the rationale behind vaccination campaigns and should be given accurate information about the vaccine before the campaign commences. Trustful, two-way channels for communication between GPs and public health authorities should also be established.

Keywords

influenza vaccine; pandemic; mass vaccination; H1N1 virus; primary health care; qualitative research

Vaccination is considered to be the most effective measure against an influenza pandemic.¹ Varied models of engaging GPs in vaccine provision during the 2009/A/H1N1 pandemic in different countries present an excellent opportunity to investigate possible challenges that these approaches may impose on the ability of general practitioners (GPs) to participate effectively in mass vaccination campaigns

Rapid development of a vaccine for a potential pandemic threat is a top priority in pre-pandemic preparedness.² When the influenza pandemic 2009/A/H1N1 struck, the World Health Organization encouraged vaccine development and production.³ Despite the achievements of rapid development and production of safe, licensed vaccines, the mass vaccination campaigns struggled against the public perception and the vaccine uptake was low.^{4,5} The influenza pandemic 2009/A/H1N1 was managed mainly in primary care⁶ and GPs in many countries were involved in the pandemic vaccine provision. However, surprisingly little is known about the challenges GPs encountered during the 2009/A/H1N1 vaccination campaign.

This study analysed the involvement of GPs in the 2009/A/H1N1 vaccination campaigns in Australia, Israel and England, and provides insight into the challenges they encountered and the lessons learned. Some common and distinct features in the health systems of these three countries made this comparison possible and useful.

Details concerning the organisation of primary care and the role GPs in the three countries played during the 2009/A/H1N1 pandemic are published elsewhere.⁷

Vaccination policies in the three countries^{8–11} are summarised in *Table 1*.

Method

This is a qualitative descriptive study¹² that investigated the experience of GPs during the 2009/A/H1N1 pandemic in Australia, Israel and England. Face-to-face, in-depth, semi-structured interviews with GPs were conducted with the aim to understand the experience from the GPs' own perspectives.¹³ The sampling strategy was directed towards recruitment of 'information-rich' cases:¹⁴

- GPs who practised in areas with substantial 2009/A/H1N1 activity and/or started to consult the 2009/A/H1N1 patients early in the pandemic outbreak
- GPs who were more involved in implementing practice policy (for example, GPs who directed the response of their practice to the pandemic).

Chosen practitioners were sent a personal invitation and an explanatory statement by e-mail. Sixty-five practitioners in total completed interviews across the three sites (*Table 2*).

The data were transcribed verbatim and analysed thematically to provide a detailed account of the themes. The issue of vaccination emerged as a data-rich theme and it was decided to explore this topic separately.

Results

Characteristics of the study sample are presented in *Table 2*. Three categories related to the GPs' challenges during the 2009/A/H1N1 vaccination campaign were identified: organization of vaccination to ensure wide coverage of the population, insufficient and conflicting information, and disagreement about vaccination policies.

Organisation of vaccination to ensure the wide coverage of the population

GPs in Australia indicated that they had autonomy to plan the vaccination program within their clinics. Many vaccinated patients opportunistically, but examples of clinics running immunisation days were common, especially in big clinics: "either we did it opportunistically when they came in for a consultation, or if they rang then we said, 'Look we're having these special flu vaccination sessions where you just come in ... and have your flu vaccine'" (M13).

Usually, Australian GPs relied on patients being informed about the vaccination campaign by the media, but some contacted their patients directly. The reasons for organising vaccination clinics included lack of time during regular consultations, financial benefits and the fact that unwell patients who came for consultations could not be vaccinated, either because they were currently infected or because other acute health problems had to be managed: "...if you think you're going to do it as part of a consultation, you won't do it. One, you'll forget; two, there's not enough time ... it's (vaccination sessions) smart from a business point of view" (M1). "...a lot of people who go through general practice are going because they've got a problem at the time and ... the vaccination thing is not on their mind then..." (M(p)2).

Many interviewees indicated that despite the fact that, unlike the seasonal flu vaccine, the pandemic vaccine was free to all patients

and was delivered in multi-dose vials, the organisation of its provision was not substantially different from the provision of the seasonal vaccine.

In Israel, the population was mainly vaccinated by nurses at health maintenance organisations' clinics, but some private clinics offered vaccination as well. GPs were not responsible for inviting their patients to visit for vaccination: "they (the patients) could come straight to the nurse and get vaccinated. There was no need for referral (from GPs)" (I1).

In England, primary care clinics were expected to contact patients from at-risk groups who were eligible to be vaccinated and invite them for vaccination. This was usually done by administrative staff. Many GPs reported that special vaccination clinics were run at the practices, while some GPs vaccinated patients opportunistically: "they (patients) were all sent a letter, and we had specific clinics that were set up to do the vaccinations" (L10); "opportunistically, we'd see who was coming in for a diabetes check and if they needed an H1N1 vaccine I'd give it to them" (L19).

In Australia and Israel, the whole population was targeted. However, GPs believed that their ability to influence the vaccine uptake in the healthy young population was limited because this population rarely consults GPs. In addition, GPs indicated that it was difficult to bring up the vaccination issue during each consultation: "The group of 10–20-year-olds is hardly seen here (in primary care)" (I14); "For doctors to mention it to

every single patient that came in including all children... it just became unrealistic" (M(p)2).

On the other hand, GPs from the three countries stated that they were able to influence the decision of at-risk populations because they knew the patients who were at high risk of influenza complications and raised the vaccination issue during these patients' visits or invited them, as happened routinely in England and in selected cases in Israel and Australia: "often it was 'I'm here for my script', 'I'm here for my blood pressure check' and... would bring it up and say 'we're vaccinating people against swine flu, we're recommending it.'" (M10).

Insufficient and conflicting information

Despite the general information about the vaccine provided by the health authorities, GPs indicated that many patients wanted advice on whether they personally should be vaccinated. Many patients expected GPs to provide clarification about vaccine safety, which was questioned in anti-vaccination press reports, and wanted to know "whether what was published is true" (I11).

Many GPs, however, indicated that they did not have sufficient information about how the vaccine differed from the seasonal flu vaccine: "how many people has it been tried on?" (L1), "how many doses of the vaccine have been given already in the world?" (I15), and "what are the long-term consequences of having this vaccination?" (L9).

Table 1. Vaccination policies in Australia, Israel and England^{8–11}

	Australia	Israel	England
Vaccination stages	<ul style="list-style-type: none"> • 30.09.09 – all population ≥10 years • 04.12.09 – children 6 months–10 years added 	<ul style="list-style-type: none"> • 29.10.09 – clinical at-risk groups 3–65 years excluding pregnant women; health care workers; relatives and carers of at-risk groups 0–6 months • 13.12.09 – all population ≥6 months 	<ul style="list-style-type: none"> • 21.10.09 – clinical at-risk groups >6 months; health care workers; pregnant women; relatives and carers of immunocompromised individuals • 19.11.09 – healthy children 6 months–5 years
Cost for the vaccine	Free	Free	Free
Vaccine suppliers	Panvax: CSL (without adjuvant)	Pandemrix: GSK (with adjuvant) Focetria: Novartis (with adjuvant) Panenza – Sanofi-Pasteur (without adjuvant)	Pandemrix: GSK (with adjuvant) Celvapan: Baxter (without adjuvant)
Vaccine uptake	18% of total population of Australia	9% of total population of Israel	40% of clinical risk population >65 years 35% of clinical risk population <65 years

GPs in the three countries indicated there was "a lot of bad press" (L5) about the vaccine. They expressed the opinion that failure of the authorities to respond in a timely manner to the anti-vaccination messages might have had an adverse influence on seasonal vaccination campaigns and even on early childhood vaccinations as the trust in vaccination in general was eroded: "we have now got a higher level of resistance amongst parents about giving their kids vaccinations, which we believe they should have" (M20).

Some GPs admitted that anti-vaccination messages negatively influenced their own decision to be vaccinated: "all the time I got e-mails about how the vaccine is unsafe.... and at some stage my confidence in the vaccine was undermined" (I16).

Disagreement about vaccination policies

Despite many GPs stating that they were impressed by the speed with which the vaccine was produced and delivered to clinics and that it was provided free of charge in the three countries, many indicated that "there was disagreement within the profession" (M12) about the mass vaccination policies.

Some GPs expressed reservations about the safety, effectiveness and necessity of the 2009/A/H1N1 vaccine, despite many expressing support for seasonal flu vaccinations.

All GPs who expressed concerns about the safety of the vaccine (two in Australia, two in Israel and six in England) were unwilling to have the vaccine themselves and generally

found it problematic to advise their patients on vaccinations despite the guidelines from the health authorities: "GPs were pivotal in how they sold it to their patients, and one of the problems was that, as a GP, I really wasn't convinced of the safety profile of the vaccine" (L1).

Many interviewees reported that patients wanted to know if their doctor had been vaccinated. While some GPs defined self-vaccination as "a social responsibility" (L17), others indicated their reservations about the vaccine were an obstacle in providing positive advice: "I think sometimes the patients would be picking up that I wasn't 100% sure and then decided ... to hold off giving their child the vaccine" (L1).

Table 2. Recruitment and sample characteristics

Place of data collection	Australia (Melbourne)	Israel (Different cities in central Israel)	England (London)
Abbreviation in data presentation	M, M(p) for pilots	I	L
Ethics approval	Monash University Ethics Committee (reference number 2010000308)	Hadassah Hospital Ethics Committee (reference number 0130-10-HMO)	South West London Research Ethics Service; NHS Lambeth and Southwark (reference number 10/H0803/97)
Recruitment	Via the School of Primary Health Care at Monash Univ. research links with the Divisions of General Practice in Melbourne	Via research links of Hadassah Hospital with the Organization of Family Practitioners and the Organization of Child Practitioners in Israel	Via Kings College research links with GPs of Lambeth and Southwark Primary Care Trusts (PCTs)
Time of data collection	June, August and September 2010	July 2010	July 2010
Number of interviewees	25 (Five pilots with GPs working at the School of Primary Health Care at Monash University; 20 main interviews)	20 (17 GPs, 3 primary care paediatricians)	20
Gender:	• Male • Female	12 8	8 12
Age (years):	• <30 • 30–39 • 40–49 • 50–59 • 60–69	— 1 5 15 4	2 12 3 3 —
Vaccination status of GPs:	• Yes • No • Not available]	22 3 —	15 4 1

GPs who believed the vaccine was safe, but expressed lack of confidence in its effectiveness and necessity, usually based their argument on the burden of the disease in the community not being different from seasonal flu, so the benefits from vaccination would not outweigh the risks, however mild. In Australia, the additional argument raised against vaccination was that the influenza season had passed by the time the vaccine became available.

In Australia and Israel, despite the policy approach to vaccinate the entire population, GPs who harboured doubts about the effectiveness and necessity of the vaccine felt that it was reasonable to recommend vaccination only to patients whom they saw as "at-risk particularly" (M(p)1). Out of 25 GPs interviewed in Australia, 10 advised vaccination to at-risk groups only and one did not advise vaccination at all. In Israel, nine of the 20 advised only 'at-risk' groups to be vaccinated and two did not recommend vaccination to any patients: "We certainly are very strong believers in the normal seasonal flu vaccine. All the doctors here and all the staff have that here every year. But the swine flu vaccine had no proven efficacy" (M12); "I usually advised to give (the vaccine) to at-risk group, but not to everyone" (I17).

Discussion

Our results have demonstrated that the level of GP involvement in the organisation of the vaccination campaign and provision of the vaccine varied in the three countries. While Australian GPs had a high level of autonomy to decide how to organise vaccination in their clinics, the organisational process was guided by the national and local health authorities in Israel and England. These differences are consistent with the nature of the Australian primary care system: Australian GPs are mostly self-employed and run their practices as small businesses.¹⁵ Although GPs in Australia did not indicate that they experienced particular difficulties with organisation of the pandemic vaccination, they emphasised that their arrangement was not different from usual seasonal vaccination. If a situation were to arise that necessitated delivery of mass vaccination against a more virulent virus, this may present a real operational challenge for Australian GPs and more coordination would be needed at state and national levels.

One interesting finding of this study is that the differences in the organisation of the vaccination campaigns in the three countries seemed to be relatively unimportant in determining the ability of GPs to contribute to the success of a mass vaccination campaign. The opinion of GPs was that their influence during the campaign was limited to advising patients who consult routinely, usually those with chronic diseases, rather than those presenting with an acute problem. Nevertheless, the role of GPs in advising their patients was perceived by the health authorities as important in the three countries and GPs were given directives to advise their patients on the pandemic vaccine.^{16–18}

Indeed, GPs in this study indicated that the provision of professional advice and information about the vaccine to patients was their most significant and time-consuming role during the pandemic vaccination. The importance of this role was also emphasised in recent studies that reported the weightiness of GPs' advice to patients in the process of deciding whether or not to be vaccinated against the 2009/A/H1N1.^{19,20} However, while performing this role, GPs encountered serious challenges.

The major challenge for the GPs was to provide advice in response to the anti-vaccination messages in the media that they felt undermined their professional authority. Traditionally, patients have seen their doctor as the ultimate source of reliable information regarding their health; however, broad and speedy access to internet-based medical information during the past decade has presented patients with conflicting clinical advice.²¹ During the pandemic vaccination in 2009, patients tried to resolve this conflict by seeking GPs' advice; however, many GPs in this study indicated that they had no better sources of information than their patients did and indicated that they themselves were influenced by the mass media and found it difficult to reconcile conflicting information. Difficulty in dealing with conflicting or insufficient information about the vaccine was also reported by health care workers (HCWs) in general.²²

Second, despite GPs being involved in the provision of advice and information during the vaccination campaign, many GPs disagreed with the health authorities regarding the policy of mass vaccination. Even though GPs in this study did not

express adherence to conspiracy theories about the vaccine, as did for example, HCWs in Turkey,²³ many questioned the necessity and effectiveness of mass vaccination and, to a lesser extent, the safety of the vaccine.

Notably, in this study, English GPs seemed to be less supportive of the vaccination campaign than their counterparts in Australia and Israel. This was evident from the higher numbers of English GPs who declined vaccination and were not comfortable recommending the vaccine to patients. A higher proportion of doctors from the UK were aged 39 years or younger, whereas there was a greater representation of doctors aged 40–69 years in Australia and Israel. Although the difference in age was not tested for statistical significance, other quantitative studies have shown that younger age in HCW was also associated with lower vaccination rates.^{24,25}

Having to deliver what was perceived to be an unconvincing public health policy created difficulties for GPs as they had to weigh up the directive to vaccinate, the safety of their patients and the potential benefits of herd immunity at the community level. Similar concerns were faced by GPs in Japan where the personal experiences of GPs with the A/H1N1/2009 virus tended to influence the advice given on vaccination.²⁰ While there is an established literature related to the duty to treat in the context of an influenza pandemic,²⁶ and an ongoing discussion concerning the possibility of establishing mandatory HCW vaccination for influenza,²⁷ the question of GP duty to follow public health policy for mass vaccination has not received due attention. GPs in our study usually resolved this dilemma by exercising their clinical autonomy and advising patients who, in their opinion, would personally benefit from vaccination, even if the official guidelines explicitly advocated wider distribution of the vaccine. Considerations at the public health level that took into account the importance of lowering the disease transmission were not usually raised.

Strength and limitations of the study

The scope of the study necessitated conducting face-to-face interviews in three different countries. Strict time limitation during recruitment and interviewing presented a major logistic

difficulty. This may have limited the potential pool of interviewees, and may have affected the quality of the sample.

In particular, the demographic characteristics of the sample (*Table 2*) show that the age and gender distribution of the groups from the three countries was uneven. It is possible that the older and predominantly male sample in Australia provided different insights on the situation, compared with the younger and predominantly female sample in England.

Nevertheless, the interviews provide rich qualitative data about GPs' challenges during the 2009/A/H1N1 vaccination in three different health care systems. The fact that overarching themes relevant to GPs from all three countries were found enhances the credibility of the findings. The results may inform future policy in mass vaccination planning.

Conclusion

The 2009/A/H1N1 vaccination experience has provided an important opportunity to research GP involvement in vaccination campaigns during pandemics. The lesson learned is that the readiness of GPs to support pandemic vaccination policies should not be assumed.

The roles of GPs in a vaccination campaign may be challenged by anti-vaccination messages in the media and GPs may harbour doubts about mass vaccination policies. Without the opportunity for two-way communication with public health authorities, GPs may revert to their professional autonomy and be unwilling to follow official guidelines.

It is important to ensure that GPs accept the rationale and logic behind vaccination campaigns. This can be achieved by public health authorities providing GPs with accurate and comprehensive professional information about the vaccine before the vaccination campaign commences, establishing trustworthy two-way channels of communication between GPs and the authorities, and engaging GPs in pre-vaccination planning.

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