A qualitative study of lay beliefs about influenza immunisation in older people

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ABSTRACT

Background

Although influenza immunisation is now recommended for all people aged 65 years and over in the UK, many people in that age group still remain unimmunised.

Aim

To investigate lay beliefs about influenza and influenza vaccine in older people to identify appropriate ways of promoting vaccine uptake.

Design

Qualitative study using narrative interviews.

Setting

Urban and rural communities in South Wales.

Method

Participants were 54 people aged 65 years and over who were interviewed in their own home. Of these, 11 were regularly immunised, 18 had consistently refused immunisation (refusers), 15 had defaulted (defaulters), five had never been offered immunisation, and five had recently been immunised for the first time.

Results

There was an overwhelming consensus among immunised and unimmunised individuals that they were not at risk from influenza. Even if they did catch influenza, they would not suffer from any serious consequences. Refusers and defaulters were more likely to believe that the influenza vaccine had serious side-effects, while the regularly immunised group were more likely to perceive the vaccine as effective. Multiple prompts from family, friends, or primary care staff were important triggers for receiving immunisation.

Conclusion

Many older people did not feel vulnerable to influenza, regardless of their age, and this influenced their views on the need for immunisation. Both refusers and defaulters overstated adverse effects from influenza vaccine so this is a potential target for an intervention. Individual prompts, particularly from GPs, seemed to be the most significant motivators to attend for immunisation.

Keywords

aged; influenza vaccine; patient acceptance of health care; qualitative research.

INTRODUCTION

Influenza is an important cause of morbidity and mortality, particularly in older people. Every year in the UK it causes over 10 000 hospital admissions and around 3000–4000 deaths.[1] Much of this is preventable. Studies show that influenza vaccine is effective and safe when given to older people and can reduce influenza-like illness by up to 55%, hospitalisations by up to 50%, and deaths by up to 70% depending on closeness of match between circulating virus and vaccine strains.[2,3] Since 2000, the UK has operated a policy of universal influenza immunisation for people aged 65 years and over and by the 2004–2005 influenza season, influenza vaccine uptake had reached a record level of 75% in England.[4] In spite of this, many people who could benefit do not get immunised and vaccine uptake remains suboptimal.[5,6]

The main barriers to improving influenza immunisation uptake in older people appear to be negative patient attitudes, beliefs of primary care providers, and a lack of organised approaches in general practice.[7–9] This information comes mainly from quantitative studies, but such studies often do not allow a detailed exploration of the beliefs and values that shape the attitudes of patients. Participants usually answer questions posed by the

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researchers rather than having the opportunity to describe issues that they consider to be most important. An in-depth, qualitative study of patient opinion was conducted to obtain a better understanding of lay knowledge and how it might be influenced and changed in ways that could help improve vaccine uptake.

How this fits in

The main barriers to influenza immunisation in older people appear to be negative patient perceptions and the lack of an organised approach in GP surgeries. Most previous studies have used a quantitative approach that does not allow in-depth exploration of the values and beliefs that shape patient attitudes. This qualitative study shows that health education messages about influenza immunisation need to challenge the perception that influenza carries no risk for healthy older people, but to avoid undermining older people's self image of being fit, strong, and healthy. Health professionals should also make greater use of personalised prompts and reminders in strategies to promote influenza vaccine uptake.

METHOD

Setting and participants

The study was carried out in the former Bro Taf Health Authority, South Wales. The area comprises the city of Cardiff (urban), surrounding wealthy rural areas (rural), and socially deprived former mining communities in the South Wales valleys (semi-urban). Participants were aged 65 years and over living in the community. Sampling was purposeful in that it set out to interview people from a mix of urban, semi-urban, and rural areas and with a variety of views and experiences of influenza immunisation. The sampling frame was responders to a previous postal survey of knowledge, attitudes and beliefs about influenza and self-reported influenza immunisation status in older people in South Wales.[10] This survey was based on an age-stratified random sample of 2600 people drawn from the Health Authority's family health (population) register, and had a response rate of 58%.

The researchers planned to continue interviewing until no new themes emerged. Previous experience suggested that this would require about 50 interviewees. Individuals were categorised on the basis of immunisation status reported in the postal survey to include: around 20 participants who had been offered immunisation in the past but refused (refusers), around 10 immunised during the last two influenza seasons (immunised), around 10 immunised previously but who subsequently defaulted (defaulters), and around 10 who had never been offered immunisation (never immunised). Current immunisation status was confirmed at the time of recruitment. The latter category was subsequently subdivided into those never immunised and those immunised for the first time during the previous season (first timers).

Selection and recruitment

Names of patients were randomly selected from each category using computer-generated random numbers. A letter was first sent to the patient's GP requesting permission to contact the patient for interview. Upon confirmation, the GP was asked to forward a study information pack to the patient. The research nurse contacted patients as soon as they returned the consent form to arrange an interview. Replacements were sought if GP permission was not obtained, the patient failed to respond to the invitation, declined interview, or immunisation status had changed. Recruitment of refusers and defaulters was particularly difficult. Consequently, several general practices participating in a parallel study of health worker attitudes to influenza immunisation were approached and asked to assist by identifying older patients who had never had influenza vaccine. They recruited these patients either by issuing study packs during consultation or by an invitation letter.

Interviews

Participants were interviewed at home between January and December 2002 by a nurse with training and experience in qualitative research methods (HP). The purpose of the interview was explained, and consent to record the interview on audiotape was confirmed for all participants. Interviewees were told that information provided by them would not be reported to their GP and that they were free to terminate the interview at any time. An interview guide was developed which was based on themes used in the previous survey, described in published literature, or identified in pilot interviews with older people. It covered the following themes: risk of catching influenza, severity of influenza, efficacy and safety of influenza vaccine, self-assessment of health status, and the process of getting immunised, including the role of prompts from family, friends, and health workers. Interviews explored the beliefs, views, and attitudes of the interviewee, paying particular attention to apparent inconsistencies in responses and their relation to the individual's immunisation status. Interviews lasted between 30 and 60 minutes.

Data analysis

Interviews were fully transcribed and the data were analysed systematically and comprehensively to generate hypotheses for further study using a

modified form of analytic induction.[11] This approach emphasises hypothesis testing, as well as close examination of negative or contrary instances, and allows hypotheses to emerge from the data (in that sense it is 'grounded'), while aiming for conclusions that are generalisable to the study population. Themes that emerged were examined with respect to immunisation status. Transcripts were used to identify key concepts and themes independently.

In this way a frame of 'open coding' was adopted.[12] Emerging themes were discussed with the whole research team, and a decision-making table was used to determine how many interviewees matched each theme. This helped the team to get a sense of the 'spread' and strength of the theme and to identify outliers. This process also allowed the team to decide the point at which saturation of themes had occurred and further recruitment was then stopped. The key themes were used as nodes within a qualitative software package (QSR NUD*IST 6, Sage Publications, London). Iterative analysis was employed to organise the data for between-case, and within-case analysis, thus ensuring a rigorous assessment of emergent hypotheses.

RESULTS

In total, 54 older people were interviewed (27 aged 65–74 years, 27 aged ≥75 years). Seven patients were recruited directly by general practices, and the remainder were survey responders. Participants were categorised by immunisation status for the purpose of further analysis (Table 1).

Lay views about the risk of influenza

Not personally at risk. Nearly all responders said that they did not feel at risk of catching influenza. They also believed that even if they did contract influenza, they would not suffer any serious consequences:

> *'But, I don't feel I personally, am necessarily at risk* [of catching influenza].*'* (ID21, defaulter)

> *'If I had influenza, well, I'd lay 10 to 1 I'd get over it. You know, it wouldn't kill me … because physically, I'm fairly strong ... yes and healthy.'* (ID54, never immunised)

Ageist attitudes. Many patients did not think of themselves as being old:

> *'Well I don't think of myself as old. I think 80 now is old … The fact that you retire about 65 doesn't mean to say you are old.'* (ID54, refuser, aged 76 years)

Some responders suggested that health professionals had an ageist attitude in wanting to vaccinate everyone aged 65 years and over against influenza:

> *'Well I think if over 65s are perfectly healthy, I don't see why they have to feel that they have to have it. I mean it's up to people, individuals if you do, but I don't think that simply because you're at a certain age you must have it.'* (ID54, refuser)

> *'I mean there used to be a terrible thing years ago if you were over 65, you didn't go into a normal ward, you had to go into a geriatric ward. You could be a healthy 65, you could be a very ill 40. But if you were 65, you were something that had to be set apart. I have never believed in that ever; and now I'm gone 65, I don't believe in it at all.'* (ID43, defaulter)

Several expressed a belief that, despite their age, they had a healthy constitution and only people with chronic illness were really at risk:

> *'If you are 65 and you are healthy, you've had no serious physical harm to you and you're mentally all right, then I reckon that you can cope probably with it as well as a youngster.'* (ID43, defaulter)

Diligent self-care. Another common belief was that diligent self-care and good nutrition protected against infection:

> *'And I think the reason why I've had so few*

Table 1. Participants by influenza immunisation status.

Immunisation status	*n*
Immunised Immunised for the two seasons before the interview (2000/2001 and 2001/2002)	10
Refuser Offered immunisation but has always refused it	18
Defaulter Immunised in the past but has relapsed (had at least one immunisation before 2001–2002 but not immunised in 2000/2001 and/or 2001/2002)	16
First timer Immunised in 2001/2002 for the first time	5
Never immunised Never been offered influenza immunisation	5
Total	54

bouts of influenza is because of the way I eat. I don't go in for fast foods. I cook every day.' (ID5, refuser)

Some individuals had their own theories about preventing illness, such as taking a night-time drink of whisky.

Avoidance strategies. Several participants felt they would not catch influenza as they believed that they never came into contact with ill people, either because they did not frequent crowded places like bingo halls or theatres, or because they deliberately avoided people with a cold:

'I mean if you take care of yourself. I don't go out in the pouring rain and if the influenza is about, I just try to stay away from people.' (ID26, immunised)

One interviewee felt she lived in a healthy place with plenty of fresh air so would not catch influenza in her neighbourhood.

Immunity and invincibility. Many patients, particularly refusers and, to a lesser extent, defaulters said that they felt 'immune' to the virus, either because they had already suffered with influenza or because they were not susceptible:

'I'm nearly 87. I've had influenza four times in my life. And I think I've developed a sort of immunity. And I don't want to spoil that immunity. And that is why I don't have an injection.' (ID5, refuser)

'I've always considered myself to be someone who didn't get colds and things like that.' (ID32, defaulter)

A few individuals held idiosyncratic beliefs about immunity to influenza. One person thought she was protected because she took warfarin tablets and another said that a bout of shingles several years ago had created antibodies to ward off most illnesses. Interviewees who thought they were immune to influenza generally had never been immunised against it.

Indifference. Some patients felt indifferent about influenza and indicated that they simply did not worry about it, were fatalistic, or did not want to live forever anyway.

'Well I've never had a influenza jab and I'm nearly 88 and I think it's a bit late in life to be worrying about it now, don't you?' (ID15, never immunised)

Factors influencing the decision not to have the influenza vaccine

Refusers and defaulters often mentioned vaccine side-effects and were worried that it would make them ill. Two said that they experienced worse influenza the year they were immunised and therefore felt the vaccine did not work. By contrast, interviewees who were regularly immunised seldom described any problems after immunisation. Refusers were specifically asked what it was that put them off having the influenza vaccine.

Vaccine has side-effects. Six defaulters said the vaccine made them very ill or gave them various side-effects and three said it gave them influenza, although responders did not distinguish between symptoms of colds and influenza. Six said they would never get immunised again, mostly because of previous side-effects:

'… I've heard so many people being bad [ill] *after it …'* (ID49, refuser)

'Well, 48 hours after the injection, I had a bad stomach … I was in bed 6 weeks.' (ID50, defaulter)

Vaccine is ineffective. Several believed that the vaccine was ineffective, either because it contained last year's influenza strain or because there were too many different strains:

'Well, the winter I had the "flu" jab I had three, about three, really nasty bouts of "flu" …' (ID25, defaulter)

'I see no reason why they want to give me the jab of the "flu" that's part of an attenuated bug from last year … I mean it's one behind all the time. It's a bug that's behind.' (ID4, refuser)

'I don't think it gives you overall protection.' (ID16, refuser)

Dislike or distrust of health services. Some mentioned dislike or distrust of health services:

'I don't like doctors and hospitals all that much …' (ID16, refuser)

'I'm an ostrich to be perfectly honest. I don't want to go to the surgery. I hate taking tablets …' (ID44, refuser)

'The doctors are experimenting ...' (ID49, refuser)

Inconvenience. Defaulters were asked why they stopped having the vaccine. Some cited inconvenience:

'I had bronchitis and was too ill to go to the surgery for a vaccine.' (ID32, defaulter)

'It wasn't convenient last year to have it because my wife was ill.' (ID43, refuser)

'I was away travelling at the time ...' (ID21, defaulter)

Motivation for having the influenza vaccine

Among first timers, two said they had the vaccine because they had recently experienced a bad bout of influenza. One also mentioned that there were posters everywhere at the surgery and she was asked if she wanted the vaccine. Another first timer indicated that it was his wife, a former nurse, who advised him to be immunised, and that when he attended the surgery for a prescription there was a poster giving details of the influenza immunisation clinic. He called in, didn't have to wait, and was immunised straight away. Another first timer said that she had the vaccine because her children urged her to get immunised. She happened to visit the surgery during the vaccine season and her doctor asked her to have the vaccine because she was at risk, and reassured her that it would not give her influenza. Reasons for being regularly immunised were varied but usually amounted to a combination of prompts (Box 1). Prompting by the GP was most frequently mentioned, followed by advertisements in the surgery and self-prompting, for example by making a diary entry.

Box 1. Prompts and motivators for influenza immunisation.

- An advertisement in the surgery (ID6)
- An advertisement on the television; prompt by son who takes patient to surgery; doctor also mentioned influenza vaccine (ID26)
- Prompts by GP and by son who telephones the surgery for the district nurse to visit (ID22)
- Prompt by practice nurse; reminder by receptionist; self-prompt in diary (ID17)
- Prompt by a good friend; self-prompt in notebook; reminder letter from the surgery (ID13)
- An advertisement in the surgery; no waiting involved; took the opportunity because it was available (ID30)
- Prompt by GP who gives the vaccine opportunistically (ID8)
- Poster at the surgery; self-prompts and prompts by friends (ID7)
- Prompts from children and from sister; good explanation from GP (ID41)
- Self-prompt in diary (ID2)

Prompts for refusers, defaulters, and those not offered vaccine

As prompting appears to be a complex process, a more in-depth analysis was carried out to investigate differences in the experience of immunised and unimmunised responders. Refusers were asked if they had ever been prompted and what specific factors would encourage them to receive immunisation. The most frequently cited information source was the television. Most recalled prompts from the GP, posters in the surgery, letters from the surgery, and prompting by family or friends. Some mentioned prompts by the practice nurse, practice manager, or receptionist, or a note on repeat prescriptions. Several said that they needed more in-depth information on influenza and the influenza vaccine, and that current health promotion material did not contain enough factual information. When asked what would encourage them to have the vaccine, four people mentioned a specific request from the doctor, five said having a severe bout of influenza or cold, and three indicated that if the doctor reassured them that the vaccine covered all influenza strains then they would get immunised:

'If someone could really persuade me that it would be absolutely necessary in my personal case ... then I would have it.' (ID19, refuser)

'The only thing that would make me have the "flu" jab is if somebody in the medical profession could say one hundred per cent if you have this "flu" jab, you will not get the "flu".' (ID46, refuser)

It was difficult to identify what might prompt defaulters to have the vaccine because there was some mixing up between what prompted them to originally get immunised and what influenced the subsequent decision to default. Six people said they would resume immunisation if personally advised to do so by a health professional and three said they would be immunised if they were not away on holiday or ill at the time.

'You have to believe that if someone like the doctor, and they know me reasonably well, says "Pete, you should", then I would be silly not to listen.' (ID43, defaulter)

Participants who had never been offered

immunisation said that they knew about influenza vaccine from the media or from general conversation. Most of them said that they would consider immunisation. Two said that they would have the vaccine if recommended by the doctor, two said they would consider it if they had chest problems, and one said he would have the vaccination if he heard there was an epidemic.

DISCUSSION

Summary of main findings

This study describes the lay beliefs of older people about influenza vaccine. Distinct differences were found between the categories of people interviewed according to interview status. Most interviewees did not feel at risk from serious complications of influenza and several refusers objected to being offered the vaccine simply based on their age. Many people considered themselves, for a variety of reasons, to be 'immune', particularly refusers and, to a lesser extent, defaulters. Some of the views expressed about self-protection, for example by avoiding crowds, were in keeping with accepted strategies for avoiding infection, but others were idiosyncratic. Refusers and defaulters were also much more likely to describe previous negative experiences with influenza vaccine or perceive that it had serious side-effects, and to express scepticism about its efficacy. Several of them expressed a need for more in-depth information about influenza and the influenza vaccine. Refusers and defaulters would consider a change of mind if prompted directly by their GP or if they felt susceptible or imminently likely to catch influenza.

Strengths and limitations of the study

The study purposefully sampled, based on previous quantitative work,[10] patients with a wide range of experiences of and attitudes to the vaccine. Details of non-responders were not collected so it was not possible to assess the impact that decisions not to participate may have had on study findings. It is also possible that patients rationalised their reasons for refusing immunisation after the event. Therefore, some caution is needed when drawing conclusions, particularly those based on views of refusers or defaulters.

Comparison with existing literature

In previous studies, patients' beliefs about influenza, vaccine safety, and efficacy appear to heavily influence the decision to be immunised.[10,13,14] Many patients seem to believe that influenza is not serious or that they personally are not at risk,[15,16] and this results in refusing immunisation.[16] Confidence in vaccine safety is crucial for uptake. Many patients think that vaccine causes serious pain or influenza,[7,17] and these beliefs are reinforced by the views of family and friends.[16] Patients are most likely to be immunised if they perceive themselves to be susceptible to influenza,[15] if they believe the vaccine to be safe and effective,[16] if personally recommended to do so by a doctor,[14] or a mail or telephone reminder from the primary care team.[18,19]

The findings illustrate how patients behave in the same way towards influenza immunisation as to many other decisions about preventive care. For example, key factors that influence parents' decisions about measles, mumps, and rubella immunisation for their children include beliefs about the risks and benefits of the vaccine compared with contracting the disease, and confidence in the advice of health professionals.[20,21] However, some aspects of decision making are specific to influenza in older people. One prominent theme was that of ageism. Many interviewees said that they did not think of themselves as old, either because they had a strong constitution or were in good health. Some resented the implication that older people were more vulnerable or required influenza immunisation simply because of their age. Many patients thought they were not susceptible to illness, perhaps reflecting the use of the term 'flu' by lay people to describe a variety of mild respiratory illnesses. The same confusion influenced perceptions of vaccine side-effects and, as influenza immunisation is required every year, this is particularly important in determining patients' responses to future offers of vaccination.

Implications for future research and clinical practice

This study suggests that the lay beliefs of older people are important in their decision to have influenza immunisation. The perception that the health risk of contracting influenza is low needs to be challenged by health workers and health education programmes for older people. Perceptions of risk from influenza are likely to undergo changes, particularly with the recent advent of avian influenza and fears of an imminent influenza pandemic. The evidence of these perceptions is anecdotal and this merits further study.

Programmes that promote influenza immunisation need to consider wide variations in lay beliefs, many of which may appear to health workers to be illogical, idiosyncratic, or counterintuitive. It could be beneficial to explore whether 'system values' can be adapted to work alongside 'patient values', rather than override them.

Of particular importance are those beliefs or factors that influence personal perception of risk. In

this study, ageism emerged as a key issue, particularly for healthy older people. Promoting vaccination to an older group because they are more vulnerable to influenza may interfere with their self-image of remaining fit and strong as they age. Health promotion materials for older people should acknowledge this to avoid unintended negative consequences. Within the surgery, the offer of vaccine should, as far as possible, be tailored to the individual patient's understanding and beliefs, and emphasise the risk from influenza, even if patients are in good health. There is a need to test the value of personal interventions by practice staff compared with general publicity material, particularly for patients who have refused immunisation or defaulted. Further studies should concentrate on developing effective interventions to promote influenza vaccine uptake, including educational initiatives with practice staff and greater use of prompt and reminder systems.

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Ethics committee

The study was approved by the Bro Taf local research ethics committee (01/4043)

Competing interests

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