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## Increasing uptake of seasonal and pandemic influenza vaccination amongst healthcare workers: a rapid review

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### About the research

The health of workers in healthcare services is important for their own wellbeing, and is also critical to ensure that services can be maintained. This is even more important during times of extreme pressure on staff and services, such as during high winter demand or times of pandemic.

While influenza vaccination is recommended by most professional bodies, research studies have reported that only around 15 to 30% of healthcare workers are vaccinated.

The purpose of this rapid review was to look for and summarise research on the effectiveness of interventions to increase the uptake of influenza vaccination amongst healthcare staff. We aimed to identify factors which influence staff decision-making about vaccination, and to examine whether there was variation between times of pandemic versus seasonal influenza.

We looked for studies published since 2010, which were carried out in high and middle income countries. Any studies which reported research data were eligible for inclusion.

### Implications

- Programmes should consist of multiple strands, including increasing ease of access to vaccination, and addressing knowledge and understandings of vaccination safety and efficacy, levels of personal risk, risk to others, and staff as sources of transmission.
- Information campaigns should be specifically tailored for healthcare worker audiences rather than duplicating messages intended for the general public, and should have an emphasis on the evidence underpinning vaccination.
- There is a need to consider the clarity of vaccination policies within organisations. Managerial support, organisational culture, involvement of staff and leadership are important.
- Most interventions to increase uptake tend to have small to moderate effectiveness. Mandatory actions substantially increase vaccination, but there are acceptability and ethical considerations which require further discussion and debate within healthcare and wider society.
- Female staff, and the nursing profession are less likely to take up vaccination. The involvement of these staff groups in developing interventions and policies may enable exploration and addressing of individual barriers.
- During pandemics easy access to vaccination, and evidence-based messaging are of increased importance.



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## Key findings

We identified 13 other reviews which reported evidence relating to influenza vaccination of staff. Two of these related specifically to times of influenza pandemic. The oldest review was published in 2010 and the most recent in 2018. In addition to examining these reviews, we screened the abstracts of 84 individual research studies for any additional findings of note, and to ensure that recent evidence was included. Few studies used the highest quality designs (comparing groups who received an intervention with those who did not) and many used self-reported questionnaires to collect data. Nearly half of the studies were carried out in North America.

The literature was in agreement that the uptake of vaccination was influenced by personal perceptions and the ease of accessing vaccination. Individual characteristics of a healthcare worker (such as gender and profession) were associated with vaccination status.

There was consensus in the literature that interventions with multiple components are more effective than those with single elements. The diagram below illustrates how the different elements of interventions act on the factors influencing individual decision-making.

The literature highlighted the distinction between voluntary and mandatory actions. Interventions using voluntary components reported small to moderate effectiveness (typically rates increased to around 50% of staff being vaccinated). Actions such as mandatory vaccination or formal opt out procedures were more effective, with uptake rates as high as 97%. These actions pose ethical dilemmas regarding individual choice and potential stigmatising which require debate.

There was evidence that rates of vaccination during pandemic differ little from seasonal uptake, and may even be lower. It was suggested that attention to evidence-based information and ease of access to vaccination was of increased importance during times of pandemic.

The literature suggested a need for further research on infection transmission routes in healthcare settings, including staff to patient infection. This is important to inform evidence-based policies and societal debate. There is a need for greater understanding regarding the optimal combination of intervention components, and exploration of differences in uptake between hospital and community settings.

Factors influencing vaccination uptake and components of interventions

