Evaluation of the impact of the Herpes Zoster vaccination programme in England five years following its introduction in September 2013

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INTRODUCTION

Shingles is caused by the reactivation of latent varicella zoster virus infection with incidence increasing with age. A vaccination programme was introduced in England in September 2013, targeting 70-79 year olds, with the goal of reducing postherpetic neuralgia (PHN) a painful and distressing condition. A vaccine was offered to adults aged 70 (routine cohort) and 78-79 years (catch-up).

The study assessed the impact of this vaccination programme on GP consultations and hospital admissions.

RESULTS

Vaccine uptake based on GP consultations was similar to the national uptake, achieving 60-65% coverage and subsequent increase to over 75%. The catch-up cohorts reached 60-65% uptake.

Coverage was similar for males and females for the routine programme. For the catch-up cohorts coverage was initially 6% higher in males, although this difference reduced to 2% by the most recent catch-up. Coverage varied by 10% across the four regions.

The unadjusted rates show evidence of lower incidence in the vaccine eligible cohorts across all years. However, there were higher rates in females; outside London and increases with age.

Cumulative uptake, observed and predicted cases and relative incidence estimates from the fitted models are summarised for zoster (Fig 1) and PHN (Fig 2).

We also observed 47% and 38% reduction in PHN incidence across routine and catch-up cohorts.

This would be equivalent to reduction in PHN episodes of 0.6-0.7/1000 person years - vaccine effectiveness of approximately 75% for the routine cohorts and 66% for the catch-up cohorts.

Region, month and gender were not confounders. No significant interactions were identified.

It is of interest to note that in the first cohorts targeted incidence of herpes zoster and PHN remains low, demonstrating little evidence of waning. This evidence is particularly strong for the first catch-up cohort whom were no longer eligible for vaccination after age 79.

In that study the vaccine effectiveness (VE) was estimated 64% (95%CI = 60-68%) against incident zoster and 81% (95%CI = 61-91%) against PHN, with very similar VE estimates in the routine and catch-up cohorts and with some evidence of waning.

CONCLUSIONS

This study provides continued evidence of a population impact of the herpes zoster vaccination programme on herpes zoster and PHN amongst older adults in England.

The reduction translates to approximately 38,000 fewer zoster presentations and 8,100 fewer PHN episodes amongst the 4.5 million individuals, eligible for vaccination between 2013-2018.

This is in the context of an increasing incidence of zoster over time, reflecting changes in population demographics and similar to trends observed in other countries.

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REFERENCES

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