

Real-Time Assessment of 2009–2010 Influenza Vaccine Use Among Practicing Pediatricians

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Introduction

- Limited data are available on the use of influenza vaccines by pediatricians in the United States.
- Previous studies have evaluated influenza vaccinations with survey data or retrospectively with claims data.
- No studies have prospectively quantified influenza vaccination in US pediatricians' offices.

Objective

- To describe influenza vaccine use in a geographically representative sample of US pediatric offices during the 2009–2010 influenza season compared with the 2007–2009 seasons

Methods

- A prospective, observational study was conducted during the 2007–2008, 2008–2009, and 2009–2010 influenza seasons, at 42, 84, and 93 US outpatient pediatric offices, respectively.
- Offices were recruited from a random sample of US licensed pediatricians.
- Primary inclusion criteria included the provision of on-site influenza vaccinations and accurate assessment of patient population by age.
- Hospital-based offices were excluded.
- Influenza vaccinations were prospectively captured (via hand tally) by age group, Vaccines for Children (VFC) status, and vaccine type semimonthly. In 2009–2010, trivalent seasonal and monovalent pandemic H1N1 vaccinations were tracked separately.
- Vaccinations at other sites (eg, schools) were not tracked.
- Vaccine supply and demand was not assessed.

Results

- By August 15, 2009, 42% of the pediatric offices in the study were administering seasonal vaccines compared with 20% and 4% of offices in 2008–2009 and 2007–2008, respectively (Figure 1).
- By September 30, 88% (2009–2010), 79% (2008–2009) and 71% (2007–2008) of pediatric offices were administering seasonal vaccine.
- Similar to the 2007–2009 seasons, initial administration of seasonal VFC vaccine was delayed by 2–4 weeks relative to non-VFC vaccines.

- For 2009–2010, the mean total doses of seasonal influenza vaccine administered per office through January 31 (n=1215) was greater than the previous 2 seasons (2008–2009, n=1081; 2007–2008, n=1091; Figure 2)
- For H1N1 vaccinations in 2009, by October 15 and 31, 32% and 67% of offices were administering H1N1 vaccines. By November 15 and 30, 78% and 85% of offices were administering (Figure 3).
- Approximately 95% of offices administered H1N1 vaccines at some point during the season.
- The method of vaccination varied by age.
- The majority of children 6–23 months of age were vaccinated using an injectable prefilled syringe compared with vaccine from a multidose vial (Figure 4).
- Among children 2–18 years of age, there was a progressive increase in the use of the intranasal vaccine for seasonal influenza (Figure 5).
- There was a positive correlation between the number of doses of H1N1 administered per office and the number of seasonal vaccine doses delivered per office (Figure 6).

Figure 1. Percentage of Offices Administering Seasonal Vaccines by Date in Each Season

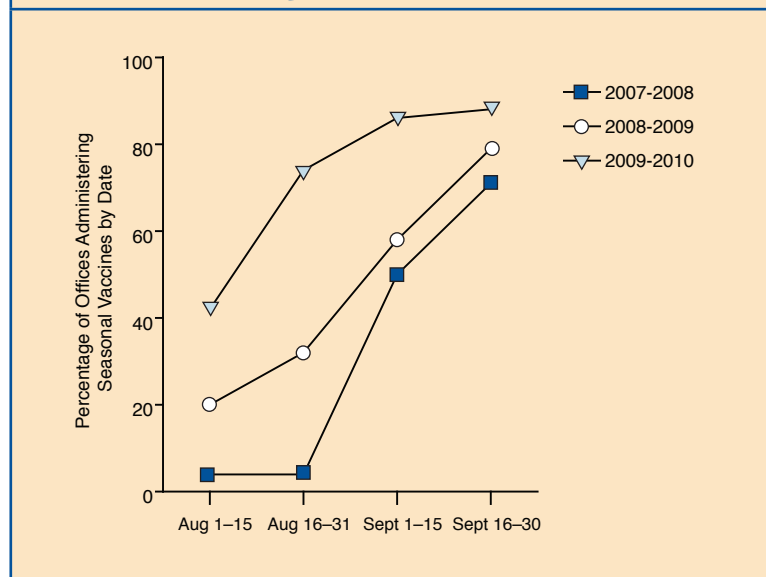


Figure 2. Mean Number of Vaccinations per Office Each Season (Through January 31)

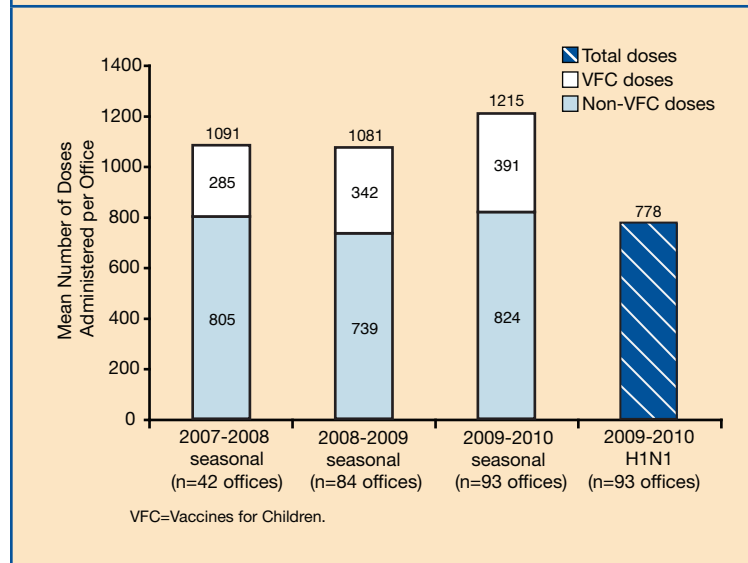


Figure 3. Timing of Vaccinations Each Season

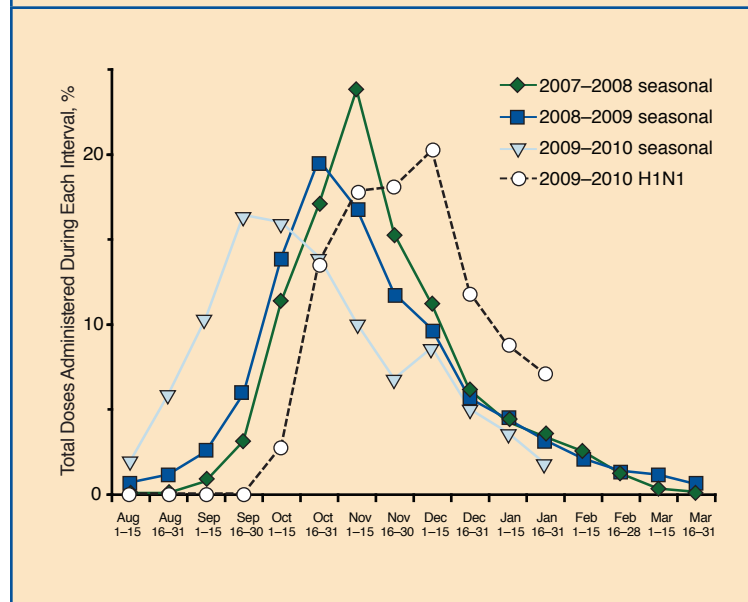


Figure 4. Children Aged 6–23 mos: Vaccination by Type by Season

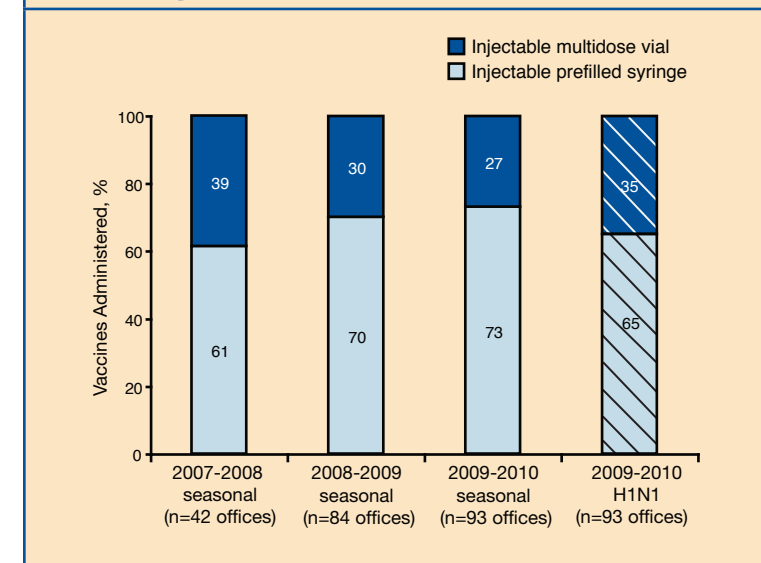


Figure 5. Children Aged 2–18 y: Vaccination by Type by Season

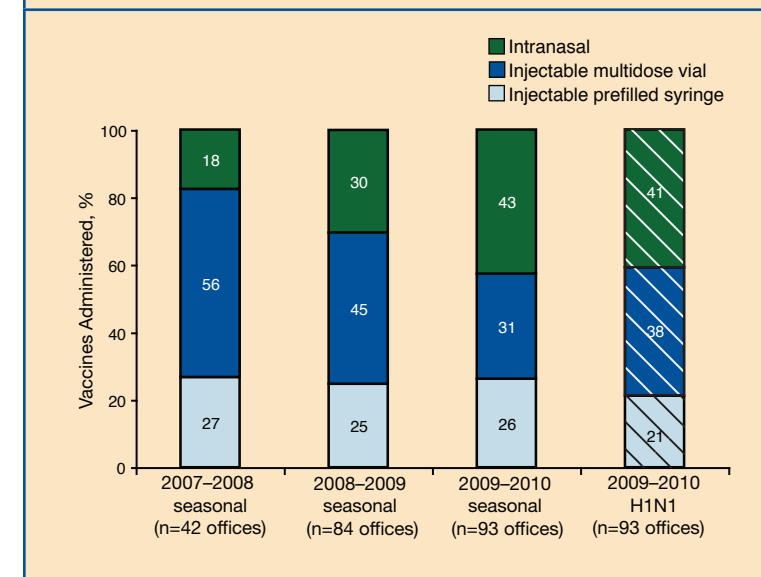
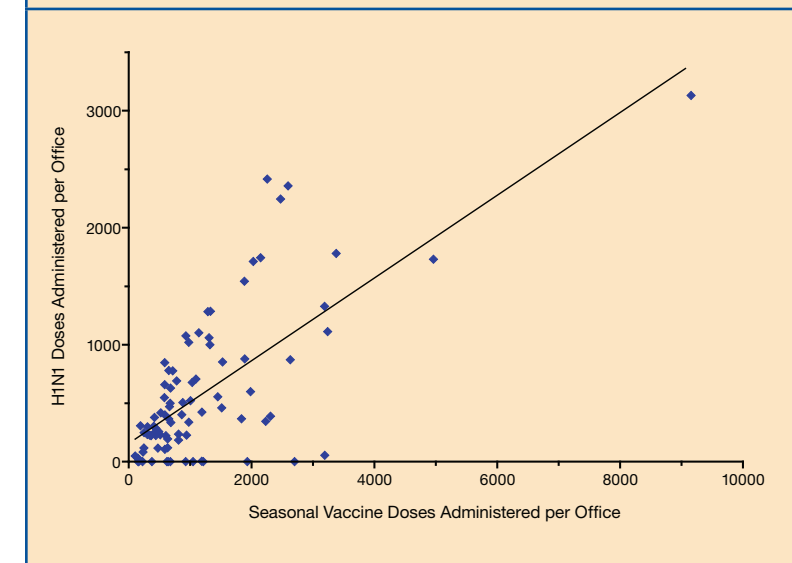


Figure 6. Correlation of Pandemic H1N1 and Seasonal Influenza Vaccine Doses Administered



Conclusions

- In response to the 2009 H1N1 pandemic, in-office pediatric seasonal influenza vaccination was administered earlier in 2009 than during the previous 2 seasons, potentially accelerating an already-present trend toward increased vaccination in August and September.
- In 2009–2010, pediatric offices on average administered more seasonal vaccines than during prior seasons.
- In 2009–2010, most pediatric offices were administering H1N1 vaccinations by late October, and at some point during the season more than 95% administered H1N1 vaccines.
- The office capacity to administer H1N1 vaccinations correlated with the office's existing capability to deliver seasonal influenza vaccinations.
- The increase in H1N1 vaccinations appeared to correlate with a decline in seasonal vaccinations.

This study was sponsored by MedImmune.