Background and Objectives

- Limited data exist regarding influenza vaccination (IV) programs in the pediatric emergency department (ED) setting.
- The primary objective of the study was to compare parental intent to vaccinate against influenza with actual receipt of IV during the 2013-2014 season.
- Secondary aims included: 1) To describe anticipated barriers to child IV as perceived by the parent, and 2) To determine parent willingness to vaccinate their child for IV in the pediatric ED.

Methods

- A structured interview (25 questions) was conducted with parents of children aged 6 months to 17 years, evaluated in the ED in the summer of 2013. Many survey questions were selected from national cross-sectional studies. 1,2
- Exclusion criteria: high acuity triage score, temperature ≥ 103°F in last 24 hours, history of severe egg or IV allergy, evaluation for non-accidental trauma.
- Demographic and visit data, IV history for the 2013-2014 season, and intent to receive IV during the 2013-2014 season.
- Barriers to obtaining IV and willingness to receive IV at a similar ED visit in the future were also recorded.
- Follow-up surveys were completed via phone in March 2014 to assess receipt of IV for the 2013-2014 season.
- Data were analyzed using standard descriptive statistics.
- Children at high risk for influenza complications were identified using CDC criteria (age < 5 years, chronic health condition).

Results

- Respondent and Child Characteristics (Initial Survey, n=285)
  - Parent
  - Mother: 245 (87)
  - Other: 40 (13)
  - Type:
    - Male: 115 (41)
    - Female: 170 (60)
    - Caucasian/white: 142 (50)
    - Black: 31 (11)
    - Other: 12 (4)
  - Education:
    - Less than high school: 45 (16)
    - High school graduate: 81 (28)
    - Some education beyond high school (e.g. college, trade school): 159 (56)
  - Others in Household:
    - No income/works: 8 (3)
    - At least 1 other adult: 197 (69)
    - No other children: 65 (23)
    - At least 1 other child: 220 (77)
  - Type of Insurance:
    - Government insurance: 206 (72)
    - Private insurance: 69 (24)
    - Uninsured/self-pay: 9 (3)

- Characteristics of Unvaccinated Children at Follow-up (n=99)
  - Asthma or Chronic Health Condition: 3 (3)
  - Current asthma: 19 (19)
  - Other chronic health condition: 13 (13)
  - Both: 4 (4)
  - High Risk for Complications of Influenza: 9 (9)
  - Current asthma and/or other chronic health condition: 22 (22)
  - Age ≤ 5 years: 18 (18)
  - Both: 13 (13)
  - Barriers to Receipt of IV: 9 (9)
    - Now: 7 (7)
    - Transportation: 7 (7)
    - Barriers with clinic/office: 7 (7)
    - Other/refused to answer: 6 (6)
  - Diagnosis of Flu or Flu-like Illness (2013-2014 Season): 11 (11)
    - Yes: 4 (4)
    - No: 6 (6)
    - No/refused to answer: 2 (2)
  - Return Visit(s) to ED September 2013-March 2014: 11 (11)
    - None: 6 (6)
    - 1: 12 (12)
    - 2 or more: 33 (33)

Reasons for Not Vaccinating Child

- Season 2012-2013 Season No Vaccine (n=168) 2013-2014 Season No Vaccine (n=98) 2013-2014 Season No Vaccine, + Intent* (n=65) p (%)
- Concerns about side effects/sickness 27 (31) 37 (38) 21 (32)
- Didn’t remember/think about it/have time 21 (24) 16 (16) 13 (20)
- Vaccination is not needed 16 (18) 13 (33) 7 (11)
- Vaccine unavailable/failed to get it but couldn’t/unsure where to go 9 (10) 3 (3) 3 (5)
- Think vaccines do not work/skepticism 4 (5) 6 (6) 2 (3)
- Vaccine costs too much 0 (0) 5 (5) 5 (8)
- Other 8 (9) 7 (7) 6 (9)
- Don’t know/refused 3 (3) 11 (11) 8 (12)

- Among participants who indicated probable/definite plans to vaccinate this year but did not obtain IV on follow-up survey.

Summary of Results

- In the initial survey, fifteen children (5%) were too young to have received IV in the prior season. Of the remaining 64% (95% confidence interval: 59%, 70%) reported receiving ≥ 1 dose of IV in the past year.
- Children with any current chronic medical condition were more likely to report IV in the prior influenza season (77% vs 60%, p<0.005), but were not more likely to report receipt of IV at follow up (75% vs 51%, p=0.34).
- 224 (79%) participating families completed follow-up: 112 reported their child received IV (50%), 4 (6%) didn’t know.
- Although 85% of parents in the original survey reported they would probably or definitely vaccinate their child prior to the upcoming influenza season, 37% of those with intent did not receive IV (p=0.001).
- 83% initially reported willingness to receive IV at a future ED visit; 55% of those unvaccinated at follow-up also reported willingness. Intent was consistent in both surveys (Spearman Rho=0.62).
- Children at high risk for complications of flu were more likely to have at least one repeat visit to the ED during influenza season (68% of return visits).
- Parents of 56% of unvaccinated high risk children indicated they would probably or definitely give IV to their child at a future ED visit.

Conclusions

- Influenza immunization rates for children are lower than desired.
- Therefore, our data support an IV program in the pediatric ED.
- Many families who intend to vaccinate children with IV do not obtain it, but report willingness to receive IV in the ED setting.
- Patients at high risk for complications of influenza are more likely to intend to receive IV, visit the ED frequently and would likely benefit from routine IV administration in the ED.
- Parents are often concerned about side effects of influenza immunization. To impact vaccination rates, providers should target education in this area and systematically remind families to receive IV.

References


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