Background

- Common childhood disease
- 5-15 million cases/yr
- 12-24 million cases/year among children
- Majority of deaths in children under 5 years
- Estimated 2.5-4.0 million cases/year
- 40-90% of U.S. population
- 1-2 million cases/year

Influenza-Associated Myositis (IAM)

- Events & sequelae of complicated influenza among school-aged children
- Five admissions/admission
- Children known to have been exposed
- Children known to have been infected

Objectives of Three-Phase Investigation

- Part 1: Health Department Surveillance
- Part 2: Health Department Surveillance
- Part 3: Health Department Surveillance

Methods

- Data collection
- Data analysis
- Description
- Data analysis
- Data analysis
- Data analysis
- Data analysis

Results

- Influenza Virus
- N0. (%) Rapid Test Viral Culture Viral Antigen Characterization
- Suspect (n) 4 (21)
- Probable (n) 2 (10)
- Confirmed (n) 1 (5)

Suspect IAM Case Definition

- Defined as a case of influenza with symptoms of muscle weakness or myalgia, and concurrent elevation of serum creatine kinase (CK) above 1000 U/L

Probable IAM Case Definition

- Defined as a case of influenza with symptoms of muscle weakness or myalgia, with concurrent elevation of serum creatine kinase (CK) above 1000 U/L

Part 2: Estimated IAM Incidence by Retrospective Hospital Discharge Data Review

- Influenza Season Activity Date Ranges and Weekly Dates

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- Influenza Season Activity Date Ranges and Weekly Dates

- Estimated incidence of confirmed, probable, and suspect IAM cases per 100,000 population

- Estimated incidence of confirmed, probable, and suspect IAM cases per 100,000 population

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Discussion

- 2001–02 through 2005–06
- 2006–07
- 2007–08
- 2008–09
- 2009–10
- 2010–11
- 2011–12

Conclusion

- An IAM epidemic occurred during 2006–07 influenza season
- Children with influenza-associated myositis are at increased risk of hospitalization

Recommendations

- Include IAM in differential diagnosis for child aged <18 years experiencing myalgia or myositis, particularly if accompanied by fever or respiratory symptoms
- Conduct appropriate laboratory testing for influenza and elevated CK
- Treat aggressively for complications
- Communicate findings with colleagues and public health officials

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Appendix

- List of affected children and families for contact information.