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Indirect, out-of-pocket and medical costs from influenza-related illness in young children

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Abstract

Background

Studies have documented direct medical costs of influenza-related illness in young children, however little is known about the out-of-pocket and indirect costs (e.g., missed work time) incurred by caregivers of children with medically attended influenza.

Objective

To determine the indirect, out-of-pocket (OOP), and direct medical costs of laboratory-confirmed medically attended influenza illness among young children.

Methods

Using a population-based surveillance network, we evaluated a representative group of

children aged <5 years with laboratory-confirmed, medically attended influenza during the 2003–2004 season. Children hospitalized or seen in emergency department (ED) or outpatient settings in surveillance counties with laboratory-confirmed influenza were identified and data were collected from medical records, accounting databases, and follow-up interviews with caregivers. Outcome measures included work time missed, OOP expenses (e.g., over-the-counter medicines, travel expenses), and direct medical costs. Costs were estimated (in 2009 US Dollars) and comparisons were made among children with and without high risk conditions for influenza-related complications.

Results

Data were obtained from 67 inpatients, 121 ED patients and 92 outpatients with laboratory-confirmed influenza. Caregivers of hospitalized children missed an average of 73 work hours (estimated cost \$1456); caregivers of children seen in the ED and outpatient clinics missed 19 (\$383) and 11 work hours (\$222), respectively. Average OOP expenses were \$178, \$125 and \$52 for inpatients, ED-patients and outpatients, respectively. OOP and indirect costs were similar between those with and without high risk conditions ($p > 0.10$). Medical costs totaled \$3990 for inpatients and \$730 for ED-patients.

Conclusions

Out-of-pocket and indirect costs of laboratory-confirmed and medically attended influenza in young children are substantial and support the benefits of vaccination.

Highlights

- Unique cost analyses of laboratory-confirmed influenza illnesses in young children.
- Data on caregivers' work time lost, out-of-pocket and medical costs were collected.
- Analyses segregate patients by level of medical care sought and complication risk.
- Estimates of caregivers' work time lost and out-of-pocket expenses were sizable.
- These estimates were substantially higher than those assumed in other studies.



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Abbreviations

OOP, out-of-pocket costs; ED, emergency department; NVSN, New Vaccine

Keywords

Influenza; Children; Out-of-pocket cost; Indirect cost

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¹ For the New Vaccine Surveillance Network (NVSN). See [Appendix A](#).

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