**Influenza-associated Medical Visits Prevented by Influenza Vaccination in Young Children in Thailand, 2012–2014**

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**Supplemental table 1:** Predominant circulating influenza viruses and effectiveness of influenza vaccination among young children in Thailand, 2012-2014

|  |  |  |  |
| --- | --- | --- | --- |
| Year | Predominant influenza virus in circulation | Vaccine effectiveness  (95% CI) \* | Vaccine composition [1-3] |
| 2012 | Mixed: B and A(H1N1) | 64% (12%, 85%) | A(H1N1): A/California/7/2009-like  A(H3N2): A/Perth/16/2009-like  B: B/Brisbane/60/2008-like (Victoria lineage) |
| 2013 | A(H3N2) | 64% (21%, 84%) | A(H1N1): A/California/7/2009-like  A(H3N2): A/Victoria/361/2011-like  B: B/Wisconsin/1/2010-like (Yamagata lineage) |
| 2014 | Mixed: B (Yamagata) and A(H3N2) | 26% (-47%, 63%) | A(H1N1): A/California/7/2009-like  A(H3N2): A/Texas/50/2012-like †  B: B/Massachusetts/2/2012-like (Yamagata lineage) |

\*95% confidence intervals (CI). In 2012, vaccine effectiveness against medically attended influenza, of any type as either an outpatient or admitted to the hospital, was estimated among children aged 6–36 months who were fully vaccinated with influenza vaccine [4]. In 2013 and 2014, vaccine effectiveness against medically attended influenza, of any type as either an outpatient or admitted to the hospital, was estimated among children aged 7–60 months who were fully vaccinated with influenza vaccine [5].

† In 2014, the A/Texas/50/2012-like H3N2 virus was antigenically like the cell-propagated prototype A/Victoria/362/2011 virus included in the 2013 Southern Hemisphere influenza vaccines [3].

**Supplemental table 2:** Incidence of medically-attended influenza and number of influenza-associated medical visits that occurred without vaccination by year and severity of illness for children aged 6–59 months, Thailand, 2012–2014

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Outpatient medical visits | | Hospitalizations | | Overall | |
| Year | Incidence in the unvaccinated (per 1,000 child-years, 95% UI\*) | Estimated burden without vaccination (95% UI) | Incidence in the unvaccinated (per 1,000 child-years, 95% UI) | Estimated burden without vaccination (95% UI) | Incidence in the unvaccinated (per 1,000 child-years, 95% UI) | Estimated burden without vaccination (95% UI) |
| Aged 6-35 months | |  |  |  |  |  |
| 2012 | 78.2 (53.0, 106.0) | 155,587 (105,397, 210,795) | 12.6 (2.5, 25.2) | 25,095 (5,019, 50,189) | 90.8 (63.1, 121.1) | 180,681 (125,473, 240,908) |
| 2013 | 104.4 (75.5, 135.5) | 204,568 (147,985, 265,503) | 8.9 (2.2, 17.8) | 17,410 (4,353, 34,820) | 113.3 (82.2, 146.6) | 221,978 (161,043, 287,266) |
| 2014 | 42.6 (16.0, 74.6) | 83,026 (31,135, 145,296) | 5.3 (0.0, 16.0) | 10,378 (0, 31,135) | 47.9 (21.3, 79.9) | 93,404 (41,513, 155,674) |
| Aged 36-59 months | |  |  |  |  |  |
| 2012 | 81.3 (27.1, 149.1) | 129,398 (43,133, 237,230) | 27.1 (0.0, 67.8) | 43,133 (0, 107,832) | 108.4 (40.7, 189.7) | 172,531 (64,699, 301,930) |
| 2013 | 95.8 (43.6, 156.8) | 150,206 (68,275, 245,791) | 0.0 (0.0, 0.0) | 0 (0, 0) | 95.8 (43.6, 156.8) | 150,206 (68,275, 245,791) |
| 2014 | 41.2 (0.0, 96.0) | 64,132 (0, 149,641) | 0.0 (0.0, 0.0) | 0 (0, 0) | 41.2 (0.0, 96.0) | 64,132 (0, 149,641) |
| Overall |  |  |  |  |  |  |
| 2012 | 78.7 (55.3, 104.2) | 281,796 (198,019, 373,190) | 14.9 (4.3, 27.6) | 53,313 (15,232, 99,010) | 93.6 (68.1, 121.2) | 335,109 (243,716, 434,119) |
| 2013 | 102.7 (77.9, 129.2) | 362,074 (274,677, 455,870) | 7.1 (1.8, 14.2) | 24,971 (6,243, 49,941) | 109.7 (83.2, 138.1) | 387,045 (293,405, 486,927) |
| 2014 | 42.2 (19.2, 69.1) | 148,006 (67,276, 242,192) | 3.8 (0.0, 11.5) | 13,455 (0, 40,365) | 46.0 (23.0, 72.9) | 161,461 (80,731, 255,647) |

\* 95% uncertainty intervals (UI) estimated from 5,000 Monte Carlo simulations.

**Supplemental table 3:** Estimated influenza-associated outpatient medical visits and hospitalizations prevented by influenza vaccination among children aged 6–59 months, Thailand, 2012–2014, by year with varying levels of influenza vaccine coverage

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Age group | Year | Vaccine coverage | Prevented outpatient visits (95% UI\*) | Prevented hospitalizations (95% UI) | Prevented medical visits  (outpatient or hospitalizations;  95% UI) |
| 6-35 months | 2012 | 1% | 961 (207, 1,568) | 146 (16, 341) | 1,117 (238, 1,773) |
|  |  | 20% | 19,227 (4,137, 31,352) | 2,921 (316, 6,816) | 22,343 (4,759, 35,466) |
|  |  | 50% | 48,067 (10,343, 78,380) | 7,302 (791, 17,040) | 55,857 (11,897, 88,664) |
|  | 2013 | 1% | 1,285 (405, 1,956) | 98 (4, 244) | 1,382 (444, 2,112) |
|  |  | 20% | 25,695 (8,101, 39,114) | 1,957 (75, 4,890) | 27,639 (8,889, 42,245) |
|  |  | 50% | 64,238 (20,252, 97,784) | 4,892 (189, 12,224) | 69,098 (22,222, 105,612) |
|  | 2014 | 1% | 190 (0, 662) | 1 (0, 136) | 218 (0, 740) |
|  |  | 20% | 3,805 (0, 13,244) | 23 (0, 2,720) | 4,351 (0, 14,804) |
|  |  | 50% | 9,513 (0, 33,110) | 59 (0, 6,799) | 10,879 (0, 37,011) |
| 36-59 months | 2012 | 1% | 760 (100, 1,717) | 233 (0, 768) | 1,010 (169, 2,136) |
|  |  | 20% | 15,199 (1,996, 34,340) | 4,654 (0, 15,359) | 20,198 (3,387, 42,721) |
|  |  | 50% | 37,997 (4,990, 85,851) | 11,635 (0, 38,399) | 50,495 (8,468, 106,803) |
|  | 2013 | 1% | 897 (233, 1,689) | -- | 902 (239, 1,719) |
|  |  | 20% | 17,936 (4,669, 33,771) | -- | 18,042 (4,776, 34,377) |
|  |  | 50% | 44,839 (11,672, 84,428) | -- | 45,105 (11,941, 85,941) |
|  | 2014 | 1% | 122 (0, 631) | -- | 118 (0, 615) |
|  |  | 20% | 2,444 (0, 12,622) | -- | 2,365 (0, 12,292) |
|  |  | 50% | 6,110 (0, 31,554) | -- | 5,913 (0, 30,730) |
| All children, aged 6-59 months | 2012 | 1% | 1,743 (370, 2,791) | 305 (50, 670) | 2,096 (461, 3,247) |
|  |  | 20% | 34,870 (7,402, 55,810) | 6,096 (1,008, 13,409) | 41,920 (9,220, 64,938) |
|  |  | 50% | 87,174 (18,504, 139,525) | 15,239 (2,521, 33,522) | 104,800 (23,051, 162,344) |
|  | 2013 | 1% | 2,267 (721, 3,395) | 141 (13, 355) | 2,430 (728, 3,600) |
|  |  | 20% | 45,344 (14,418, 67,890) | 2,817 (261, 7,095) | 48,599 (14,568, 72,001) |
|  |  | 50% | 113,360 (36,046, 169,726) | 7,042 (652, 17,737) | 121,498 (36,421, 180,003) |
|  | 2014 | 1% | 354 (0, 1,125) | 7 (0, 182) | 384 (0, 1,253) |
|  |  | 20% | 7,081 (0, 22,497) | 146 (0, 3,644) | 7,673 (0, 25,069) |
|  |  | 50% | 17,703 (0, 56,243) | 366 (0, 9,110) | 19,183 (0, 62,673) |

\* 95% uncertainty intervals (UI) estimated from 5,000 Monte Carlo simulations.

**Disclaimers**

The findings and conclusions in the report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention. Additionally, material has been reviewed by the Walter Reed Army Institute of Research. There is no objection to its presentation and/or publication. The opinions or assertions contained herein are the private views of the authors, and are not to be construed as official, or as reflecting true views of the Department of the Army or the Department of Defense.

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