

Supplementary file 1 – Additional tables and figures

Investigators: DJ Muscatello, KJ Bein, MM Dinh.

Emergency Department demand associated with seasonal influenza, 2010 through 2014, New South Wales, Australia. Western Pacific Surveillance and Response Journal 2017.

Contents

Supplementary file 1 – Additional tables and figures	1
Table S1. Estimated annual rate per 100 000 population of influenza-attributable Emergency Department visits, by diagnosis category, age and year, NSW, 2010-2014.....	2
Table S2. Estimated annual rate per 100 000 population of influenza-attributable non-admitted Emergency Department visits, by diagnosis category, age and year, NSW, 2010-2014	3
Table S3. Estimated annual number of influenza-attributable emergency department visits, by diagnosis category, age and year, NSW, 2010-2014	4
Table S4. Estimated annual number of influenza-attributable non-admitted emergency department visits, by diagnosis category, age and year, NSW, 2010-2014.....	5
Table S5. Average annual estimated influenza-attributable proportion of visits, by diagnosis category and age, NSW, 2010-2014.....	6
Table S6. Results of sensitivity analysis - estimated annual rate of influenza-attributable injury emergency department visits, by age and year, NSW, 2010-2014.	7
Table S7. Number and proportion of influenza types and subtypes isolated by National Influenza Centres, by year, Australia, 2010 to 2014	7
Figure S1. Observed and estimated emergency department visit rates/100,000 population/week for respiratory problems, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.	8
Figure S2. Observed and estimated emergency department visit rates/100,000 population/week for infection, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.....	9
Figure S3. Observed and estimated emergency department visit rates/100,000 population/week for cardiovascular problems, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.	10
Figure S4. Observed and estimated all-cause emergency department visit rates/100,000 population/week, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.....	11

Table S1. Estimated annual rate per 100 000 population of influenza-attributable Emergency Department visits, by diagnosis category, age and year, NSW, 2010-2014

Clinical category	Age group (years)	Year									
		2010		2011		2012		2013		2014	
		Rate	(99.9% CI)	Rate	(99.9% CI)	Rate	(99.9% CI)	Rate	(99.9% CI)	Rate	(99.9% CI)
Respiratory	0-4	332.3	(-193.4, 858.0)	357.2	(-69.4, 783.8)	939.0	(559.4, 1318.7)	231.5	(-128.0, 591.0)	150.5	(-174.1, 475.0)
	5-14	127.8	(-25.2, 280.8)	52.6	(-71.1, 176.3)	142.4	(32.2, 252.6)	203.4	(98.9, 307.9)	188.7	(94.4, 283.0)
	15-49	-12.4	(-41.1, 16.3)	65.6	(42.4, 88.9)	130.1	(109.3, 150.8)	106.2	(86.6, 125.9)	101.8	(84.0, 119.5)
	50-64	46.5	(5.2, 87.9)	34.7	(1.4, 68.1)	169.5	(139.7, 199.2)	122.2	(93.9, 150.4)	102.0	(76.6, 127.5)
	65-84	-24.4	(-103.9, 55.2)	32.5	(-31.7, 96.7)	468.2	(411.1, 525.4)	163.3	(109.1, 217.5)	261.6	(212.7, 310.6)
	≥85	-351.7	(-622.2, -81.2)	-456.7	(-674.8, -238.5)	987.7	(793.4, 1181.9)	362.5	(178.0, 547.0)	501.1	(334.7, 667.4)
	All-ages	30.3	(-34.0, 94.5)	62.9	(11.0, 114.9)	252.6	(206.3, 298.9)	142.0	(98.1, 185.9)	145.2	(105.6, 184.9)
Infection	0-4	316.6	(89.8, 543.3)	132.7	(-51.3, 316.7)	821.6	(657.8, 985.4)	231.3	(76.2, 386.3)	435.6	(295.6, 575.7)
	5-14	159.0	(99.0, 219.1)	55.3	(6.8, 103.9)	149.5	(106.3, 192.8)	193.5	(152.5, 234.5)	163.2	(126.2, 200.2)
	15-49	38.9	(19.6, 58.1)	53.4	(37.8, 69.0)	72.8	(58.9, 86.6)	51.2	(38.1, 64.4)	73.1	(61.2, 85.0)
	50-64	8.2	(-12.3, 28.6)	4.0	(-12.5, 20.5)	50.5	(35.8, 65.2)	26.0	(12.1, 40.0)	47.7	(35.1, 60.2)
	65-84	-3.8	(-35.1, 27.5)	-11.6	(-36.9, 13.7)	76.3	(53.8, 98.8)	15.2	(-6.2, 36.5)	51.9	(32.6, 71.1)
	≥85	-43.5	(-151.4, 64.4)	-85.3	(-172.3, 1.7)	155.5	(78.0, 232.9)	10.9	(-62.7, 84.5)	72.0	(5.7, 138.4)
	All-ages	59.7	(33.5, 86.0)	38.9	(17.6, 60.1)	129.5	(110.6, 148.4)	70.3	(52.4, 88.3)	100.2	(84.0, 116.4)
Cardiovascular	0-4	-17.3	(-35.2, 0.6)	-2.2	(-16.7, 12.3)	0.0	(-12.9, 12.9)	-16.8	(-29.0, -4.6)	1.6	(-9.4, 12.7)
	5-14	8.6	(-10.1, 27.2)	11.4	(-3.7, 26.5)	-11.7	(-25.1, 1.8)	14.2	(1.4, 26.9)	17.1	(5.6, 28.6)
	15-49	-21.8	(-50.1, 6.4)	10.4	(-12.5, 33.3)	-10.8	(-31.1, 9.6)	28.7	(9.4, 48.1)	12.5	(-4.9, 29.9)
	50-64	-37.2	(-92.8, 18.4)	14.9	(-30.0, 59.8)	-18.4	(-58.4, 21.6)	32.7	(-5.2, 70.6)	22.7	(-11.5, 56.9)
	65-84	-28.3	(-130.8, 74.1)	83.4	(0.7, 166.2)	39.9	(-33.7, 113.6)	25.0	(-44.9, 94.9)	39.9	(-23.2, 102.9)
	≥85	-348.1	(-662.2, -34.1)	433.0	(179.8, 686.3)	-74.1	(-299.7, 151.4)	-38.4	(-252.6, 175.7)	85.7	(-107.4, 278.8)
	All-ages	-27.5	(-57.1, 2.2)	27.9	(3.9, 51.9)	-6.2	(-27.6, 15.2)	22.8	(2.5, 43.1)	19.4	(1.2, 37.7)
All-cause	0-4	1901.8	(761.1, 3042.6)	696.6	(-229.1, 1622.2)	2368.0	(1544.1, 3191.8)	799.9	(19.7, 1580.0)	586.2	(-118.1, 1290.5)
	5-14	920.8	(390.9, 1450.7)	258.3	(-170.2, 686.7)	-372.5	(-754.2, 9.2)	937.8	(575.9, 1299.7)	418.8	(92.2, 745.4)
	15-49	91.5	(-204.2, 387.2)	329.1	(89.7, 568.5)	28.8	(-184.4, 242.1)	300.1	(97.9, 502.3)	247.1	(64.6, 429.5)
	50-64	224.7	(-22.2, 471.6)	84.2	(-115.1, 283.4)	105.7	(-71.8, 283.2)	246.5	(78.2, 414.8)	91.7	(-60.1, 243.6)
	65-84	280.0	(-87.1, 647.1)	116.5	(-180.0, 413.0)	638.1	(374.2, 901.9)	238.9	(-11.5, 489.3)	333.4	(107.5, 559.3)
	≥85	-603.1	(-1603.4, 397.2)	-376.9	(-1183.7, 429.9)	1778.4	(1060.0, 2496.9)	363.9	(-318.3, 1046.1)	756.3	(141.1, 1371.4)
	All-ages	347.6	(56.5, 638.6)	258.7	(23.2, 494.7)	261.0	(51.3, 470.7)	394.5	(195.7, 593.3)	283.4	(104.0, 462.8)

Notes: CI=confidence interval. Statistically significant positive results are shown in **bold**. Statistically significant negative results are *italicised*.

Table S2. Estimated annual rate per 100 000 population of influenza-attributable *non-admitted* Emergency Department visits, by diagnosis category, age and year, NSW, 2010-2014

Clinical category	Age group (years)	Year									
		2010		2011		2012		2013		2014	
		Rate	(99.9% CI)	Rate	(99.9% CI)	Rate	(99.9% CI)	Rate	(99.9% CI)	Rate	(99.9% CI)
Respiratory	0-4	337.3	(-51.3 to 725.9)	226.3	(-89.0 to 541.7)	847.1	<i>(566.5 to 1127.8)</i>	290.9	<i>(25.1 to 556.7)</i>	246.1	<i>(6.2 to 486.1)</i>
	5-14	143.0	(25.0 to 260.9)	66.2	(-29.1 to 161.6)	176.8	(91.9 to 261.8)	203.4	(122.9 to 284.0)	190.5	(117.8 to 263.2)
	15-49	-10.6	(-35.6 to 14.5)	65.0	(44.7 to 85.3)	110.4	(92.4 to 128.5)	82.1	(65.0 to 99.3)	87.7	(72.2 to 103.1)
	50-64	43.1	(12.9 to 73.2)	22.1	(-2.2 to 46.4)	91.7	(70.0 to 113.3)	68.5	(48.0 to 89.0)	67.7	(49.2 to 86.2)
	65-84	15.7	(-30.5 to 61.9)	-14.0	(-51.3 to 23.3)	176.2	(143.0 to 209.4)	64.8	(33.3 to 96.3)	112.0	(83.6 to 140.5)
	≥85	-35.7	(-149.4 to 78.0)	-	<i>(-247.0 to -63.5)</i>	194.4	(112.7 to 276.0)	21.3	(-56.2 to 98.9)	113.8	(43.9 to 183.7)
	All-ages	43.7	(-4.9 to 92.4)	53.5	(14.2 to 92.9)	173.7	(138.7 to 208.8)	104.7	(71.4 to 137.9)	110.7	(80.7 to 140.6)
Infection	0-4	324.6	(125.8 to 523.4)	128.9	(-32.4 to 290.2)	697.9	(554.4 to 841.5)	201.9	(65.9 to 337.8)	372.8	(250.1 to 495.6)
	5-14	152.0	(97.7 to 206.3)	52.6	(8.6 to 96.5)	135.0	(95.8 to 174.1)	171.5	(134.4 to 208.6)	147.2	(113.7 to 180.7)
	15-49	34.9	(18.7 to 51.2)	51.6	(38.4 to 64.8)	69.6	(57.9 to 81.3)	46.9	(35.8 to 58.0)	63.6	(53.5 to 73.6)
	50-64	11.9	(-3.8 to 27.5)	3.3	(-9.3 to 16.0)	35.0	(23.8 to 46.3)	25.6	(14.9 to 36.3)	32.1	(22.4 to 41.7)
	65-84	20.5	(2.8 to 38.1)	-1.8	(-16.0 to 12.5)	12.0	(-0.6 to 24.7)	12.9	(0.8 to 24.9)	26.1	(15.2 to 36.9)
	≥85	-26.5	(-73.4 to 20.3)	-76.4	(-114.2 to -38.6)	-10.3	(-44.0 to 23.4)	15.1	(-16.7 to 46.9)	1.2	(-27.6 to 30.0)
	All-ages	61.5	(38.8 to 84.2)	38.7	(20.4 to 57.1)	103.6	(87.3 to 120.0)	63.3	(47.8 to 78.8)	81.9	(67.9 to 95.9)
Cardiovascular	0-4	-6.2	(-21.0 to 8.6)	-5.4	(-17.4 to 6.6)	3.6	(-7.1 to 14.3)	<i>-11.1</i>	<i>(-21.2 to -1.0)</i>	1.7	(-7.5 to 10.8)
	5-14	7.5	(-9.4 to 24.4)	6.4	(-7.3 to 20.0)	-11.3	(-23.5 to 0.9)	14.5	(2.9 to 26.0)	14.5	(4.1 to 25.0)
	15-49	-15.7	(-36.8 to 5.5)	12.3	(-4.8 to 29.4)	-1.4	(-16.7 to 13.8)	30.8	(16.3 to 45.2)	15.7	(2.6 to 28.7)
	50-64	-1.7	(-36.9 to 33.5)	4.9	(-23.5 to 33.3)	20.8	(-4.5 to 46.1)	18.1	(-5.9 to 42.1)	27.9	(6.3 to 49.6)
	65-84	-4.2	(-57.3 to 49.0)	64.0	(21.0 to 106.9)	2.7	(-35.5 to 40.9)	17.8	(-18.4 to 54.1)	31.2	(-1.5 to 63.9)
	≥85	-25.3	(-156.3 to 105.7)	226.4	(120.7 to 332.1)	<i>-116.2</i>	<i>(-210.2 to -22.1)</i>	0.0	(-89.4 to 89.3)	60.9	(-19.7 to 141.4)
	All-ages	-8.4	(-25.8 to 9.1)	19.7	(5.6 to 33.8)	0.0	(-12.6 to 12.6)	21.4	(9.4 to 33.3)	19.9	(9.2 to 30.7)
All-cause	0-4	1800.5	(817.0 to 2783.9)	529.7	(-268.3 to 1327.7)	2126.5	(1416.3 to 2836.8)	859.0	(186.5 to 1531.6)	663.9	(56.7 to 1271.1)
	5-14	867.4	(385.7 to 1349.1)	259.7	(-129.7 to 649.1)	-245.6	(-592.6 to 101.3)	892.6	(563.7 to 1221.6)	399.9	(103.1 to 696.8)
	15-49	93.8	(-169.7 to 357.3)	312.7	(99.3 to 526.0)	86.6	(-103.4 to 276.6)	299.1	(118.9 to 479.3)	259.5	(96.8 to 422.1)
	50-64	265.3	(50.3 to 480.4)	59.5	(-114.1 to 233.0)	153.7	(-1.0 to 308.3)	181.8	(35.2 to 328.4)	84.6	(-47.6 to 216.9)
	65-84	368.9	(82.9 to 654.9)	80.6	(-150.4 to 311.6)	242.4	(36.8 to 447.9)	127.7	(-67.4 to 322.8)	167.1	(-8.9 to 343.1)
	≥85	498.8	(-28.5 to 1026.2)	-	<i>(-895.0 to -44.3)</i>	232.3	(-146.5 to 611.0)	-26.8	(-386.4 to 332.9)	288.9	(-35.4 to 613.3)
	All-ages	374.6	(112.7 to 636.5)	229.2	(17.3 to 441.0)	215.1	(26.5 to 403.8)	357.9	(179.0 to 536.8)	258.9	(97.5 to 420.3)

Notes: CI=confidence interval. Statistically significant positive results are shown in **bold**. Statistically significant negative results are *italicised*.

Table S3. Estimated annual number of influenza-attributable emergency department visits, by diagnosis category, age and year, NSW, 2010-2014

Clinical category	Age group (years)	Year									
		2010		2011		2012		2013		2014	
		Number	(99.9% CI)	Number	(99.9% CI)	Number	(99.9% CI)	Number	(99.9% CI)	Number	(99.9% CI)
Respiratory	0-4	1576	(-917, 4069)	1691	(-328, 3711)	4508	(2685, 6330)	1127	(-623, 2876)	736	(-852, 2324)
	5-14	1133	(-223, 2490)	470	(-635, 1576)	1283	(290, 2276)	1854	(901, 2806)	1742	(872, 2613)
	15-49	-431	(-1431, 569)	2287	(1476, 3098)	4557	(3831, 5284)	3750	(3056, 4443)	3630	(2997, 4262)
	50-64	600	(66, 1133)	458	(18, 898)	2262	(1865, 2659)	1654	(1272, 2036)	1402	(1052, 1751)
	65-84	-215	(-915, 486)	295	(-288, 878)	4408	(3870, 4946)	1589	(1061, 2116)	2622	(2132, 3112)
	≥85	-475	(-841, -110)	-643	(-951, -336)	1447	(1162, 1731)	553	(272, 834)	794	(531, 1058)
	All-ages	2162	(-2431, 6754)	4544	(790, 8297)	18461	(15078, 21845)	10518	(7266, 13770)	10912	(7935, 13889)
Infection	0-4	1501	(426, 2577)	628	(-243, 1499)	3944	(3158, 4730)	1126	(371, 1880)	2131	(1446, 2816)
	5-14	1410	(878, 1942)	494	(60, 929)	1347	(957, 1737)	1763	(1389, 2137)	1507	(1165, 1849)
	15-49	1352	(682, 2022)	1860	(1316, 2403)	2549	(2062, 3036)	1808	(1343, 2273)	2606	(2182, 3030)
	50-64	105	(-158, 369)	52	(-165, 270)	673	(477, 870)	353	(164, 541)	655	(482, 827)
	65-84	-34	(-309, 242)	-105	(-335, 124)	719	(507, 930)	148	(-60, 355)	520	(327, 713)
	≥85	-59	(-205, 87)	-120	(-243, 2)	228	(114, 341)	17	(-96, 129)	114	(9, 219)
	All-ages	4269	(2393, 6145)	2806	(1273, 4340)	9461	(8079, 10843)	5211	(3882, 6539)	7531	(6315, 8747)
Cardiovascular	0-4	-82	(-167, 3)	-10	(-79, 58)	0	(-62, 62)	-82	(-141, -22)	8	(-46, 62)
	5-14	76	(-90, 241)	102	(-33, 237)	-105	(-226, 16)	129	(13, 245)	158	(51, 264)
	15-49	-759	(-1742, 224)	363	(-434, 1160)	-377	(-1091, 337)	1015	(333, 1697)	446	(-176, 1068)
	50-64	-480	(-1197, 237)	197	(-395, 788)	-246	(-779, 288)	443	(-71, 956)	312	(-158, 781)
	65-84	-250	(-1152, 653)	758	(6, 1509)	376	(-317, 1069)	243	(-437, 923)	400	(-232, 1032)
	≥85	-470	(-895, -46)	610	(253, 967)	-109	(-439, 222)	-59	(-385, 268)	136	(-170, 442)
	All-ages	-1963	(-4082, 157)	2015	(283, 3748)	-452	(-2013, 1110)	1689	(188, 3190)	1461	(87, 2835)
All-cause	0-4	9019	(3609, 14429)	3298	(-1085, 7680)	11367	(7412, 15322)	3893	(96, 7690)	2868	(-578, 6314)
	5-14	8163	(3465, 12861)	2309	(-1521, 6139)	-3356	(-6795, 83)	8546	(5248, 11844)	3867	(851, 6882)
	15-49	3182	(-7103, 13468)	11468	(3126, 19810)	1010	(-6461, 8481)	10593	(3457, 17729)	8811	(2303, 15319)
	50-64	2897	(-286, 6080)	1109	(-1516, 3735)	1410	(-959, 3779)	3339	(1059, 5618)	1260	(-825, 3346)
	65-84	2467	(-767, 5700)	1058	(-1634, 3750)	6007	(3523, 8491)	2324	(-112, 4760)	3341	(1077, 5605)
	≥85	-815	(-2166, 537)	-531	(-1668, 606)	2605	(1553, 3657)	555	(-486, 1596)	1199	(224, 2174)
	All-ages	24832	(4038, 45626)	18672	(1678, 35666)	19072	(3751, 34392)	29222	(14496, 43948)	21295	(7815, 34775)

Notes: CI=confidence interval. Statistically significant positive results are shown in **bold**. Statistically significant negative results are *italicised*.

Table S4. Estimated annual number of influenza-attributable *non-admitted* emergency department visits, by diagnosis category, age and year, NSW, 2010-2014

Clinical category	Age group (years)	Year									
		2010		2011		2012		2013		2014	
		Number	(99.9% CI)	Number	(99.9% CI)	Number	(99.9% CI)	Number	(99.9% CI)	Number	(99.9% CI)
Respiratory	0-4	1600	(-243 to 3443)	1071	(-421 to 2564)	4067	(2719 to 5414)	1416	(122 to 2709)	1204	(30 to 2378)
	5-14	1268	(222 to 2313)	592	(-260 to 1445)	1593	(828 to 2359)	1854	(1120 to 2588)	1759	(1088 to 2430)
	15-49	-368	(-1239 to 503)	2265	(1559 to 2972)	3868	(3236 to 4501)	2899	(2295 to 3504)	3127	(2576 to 3678)
	50-64	555	(167 to 943)	291	(-29 to 612)	1224	(935 to 1513)	927	(649 to 1205)	930	(675 to 1184)
	65-84	139	(-268 to 546)	-127	(-466 to 212)	1658	(1346 to 1971)	631	(324 to 937)	1123	(838 to 1408)
	≥85	-48	(-202 to 105)	-219	<i>(-348 to -90)</i>	285	(165 to 404)	32	(-86 to 151)	180	(70 to 291)
	All-ages	3124	(-351 to 6599)	3864	(1024 to 6704)	12694	(10134 to 15255)	7752	(5291 to 10213)	8315	(6062 to 10567)
Infection	0-4	1540	(597 to 2482)	610	(-154 to 1374)	3350	(2661 to 4040)	983	(321 to 1644)	1824	(1224 to 2425)
	5-14	1348	(866 to 1829)	470	(77 to 862)	1216	(863 to 1569)	1563	(1225 to 1901)	1359	(1050 to 1668)
	15-49	1215	(650 to 1781)	1798	(1339 to 2257)	2438	(2027 to 2849)	1654	(1262 to 2047)	2267	(1909 to 2625)
	50-64	153	(-49 to 355)	44	(-123 to 210)	467	(317 to 618)	346	(202 to 491)	440	(308 to 573)
	65-84	180	(25 to 335)	-16	(-145 to 113)	113	(-6 to 233)	125	(8 to 242)	261	(152 to 370)
	≥85	-36	(-99 to 27)	-108	(-161 to -54)	-15	(-64 to 34)	23	(-26 to 72)	2	(-44 to 48)
	All-ages	4393	(2770 to 6016)	2796	(1470 to 4123)	7572	(6376 to 8768)	4689	(3540 to 5839)	6152	(5100 to 7204)
Cardiovascular	0-4	-29	(-99 to 41)	-26	(-83 to 31)	17	(-34 to 68)	-54	<i>(-103 to -5)</i>	8	(-37 to 53)
	5-14	67	(-84 to 217)	57	(-66 to 179)	-102	(-212 to 8)	132	(26 to 237)	134	(38 to 230)
	15-49	-545	(-1281 to 190)	428	(-169 to 1024)	-49	(-583 to 485)	1086	(575 to 1596)	559	(94 to 1025)
	50-64	-21	(-475 to 432)	65	(-309 to 439)	278	(-60 to 616)	245	(-79 to 570)	384	(86 to 681)
	65-84	-37	(-505 to 432)	581	(191 to 971)	25	(-334 to 385)	173	(-179 to 526)	312	(-15 to 640)
	≥85	-34	(-211 to 143)	319	(170 to 468)	-170	<i>(-308 to -32)</i>	0	(-136 to 136)	96	(-31 to 224)
	All-ages	-599	(-1846 to 648)	1421	(401 to 2440)	1	(-918 to 920)	1583	(700 to 2466)	1496	(688 to 2305)
All-cause	0-4	8539	(3875 to 13202)	2508	(-1270 to 6286)	10208	(6799 to 13618)	4181	(908 to 7454)	3248	(278 to 6219)
	5-14	7690	(3420 to 11960)	2322	(-1160 to 5803)	-2213	(-5339 to 913)	8134	(5136 to 11132)	3692	(951 to 6433)
	15-49	3263	(-5902 to 12429)	10894	(3460 to 18328)	3035	(-3623 to 9692)	10556	(4197 to 16915)	9253	(3454 to 15053)
	50-64	3421	(648 to 6194)	784	(-1504 to 3071)	2051	(-13 to 4114)	2462	(477 to 4448)	1163	(-654 to 2980)
	65-84	3250	(730 to 5769)	731	(-1366 to 2829)	2282	(347 to 4217)	1243	(-655 to 3140)	1675	(-89 to 3439)
	≥85	674	(-39 to 1386)	-662	<i>(-1261 to -62)</i>	340	(-215 to 895)	-41	(-589 to 508)	458	(-56 to 972)
	All-ages	26761	(8050 to 45473)	16541	(1249 to 31833)	15721	(1935 to 29507)	26510	(13258 to 39761)	19452	(7322 to 31582)

Notes: CI=confidence interval. Statistically significant positive results are shown in **bold**. Statistically significant negative results are *italicised*.

Table S5. Average annual estimated influenza-attributable proportion of visits, by diagnosis category and age, NSW, 2010-2014

Outcome	Age group (years)	% of total visits	% of non-admitted visits
Respiratory	All-age	4.7	5.6
	0-4	1.5	2.9
	5-14	5.0	8.7
	15-49	7.4	8.1
	50-64	6.1	6.6
	65-84	4.6	5.9
	≥85	2.3	1.9
Infection	All-age	6.7	8.4
	0-4	5.1	5.5
	5-14	12.4	13.6
	15-49	8.5	10.5
	50-64	4.4	6.6
	65-84	2.6	4.5
	≥85	2.3	-5.0
Cardiovascular	All-age	0.6	1.1
	0-4	-1.8	-1.9
	5-14	1.7	1.8
	15-49	0.4	0.9
	50-64	0.0	0.4
	65-84	0.3	0.6
	≥85	0.1	0.9
All-cause	All-age	1.1	1.3
	0-4	1.9	2.4
	5-14	1.9	2.1
	15-49	0.7	0.8
	50-64	0.2	0.6
	65-84	0.5	0.7
	≥85	0.7	-0.4

Note: Non-statistically significant estimates were set to zero before averaging.

Table S6. Results of sensitivity analysis - estimated annual rate of influenza-attributable injury emergency department visits, by age and year, NSW, 2010-2014

Diagnosis	Age group (years)	Year									
		2010		2011		2012		2013		2014	
		Rate	(95% CI)	Rate	(95% CI)	Rate	(95% CI)	Rate	(95% CI)	Rate	(95% CI)
Injury	0-4	-13.9	(-185.6, 157.8)	-92.4	(-231.8, 46.9)	<i>-139.4</i>	<i>(-263.4, -15.4)</i>	42.5	(-74.9, 159.9)	<i>-250.5</i>	<i>(-356.5, -144.4)</i>
	5-14	156.2	(-83.3, 395.8)	<i>-152.1</i>	<i>(-345.8, 41.6)</i>	<i>-401.4</i>	<i>(-574.0, -228.9)</i>	208.5	(44.9, 372.2)	<i>-107.7</i>	<i>(-255.3, 40.0)</i>
	15-49	-19.9	(-129.3, 89.6)	64.1	(-24.5, 152.7)	<i>-105.8</i>	<i>(-184.7, -26.9)</i>	54.5	(-20.3, 129.3)	<i>-28.9</i>	<i>(-96.4, 38.7)</i>
	50-64	19.3	(-53.6, 92.3)	-3.6	(-62.5, 55.2)	<i>-75.8</i>	<i>(-128.2, -23.3)</i>	-18.7	(-68.4, 31.1)	<i>-53.0</i>	<i>(-97.8, -8.1)</i>
	65-84	65.1	(-35.2, 165.3)	18.5	(-62.5, 99.4)	<i>-86.7</i>	<i>(-158.7, -14.6)</i>	-51.7	(-120.0, 16.7)	<i>-23.4</i>	<i>(-85.1, 38.3)</i>
	≥85	126.8	(-220.2, 473.9)	19.2	(-260.7, 299.1)	194.3	(-55.0, 443.5)	-84.9	(-321.6, 151.7)	<i>-178.8</i>	<i>(-392.2, 34.7)</i>
	All-ages	22.7	(-69.8, 115.2)	7.9	(-66.9, 82.7)	<i>-130.5</i>	<i>(-197.1, -63.9)</i>	42.4	(-20.7, 105.6)	<i>-59.9</i>	<i>(-116.9, -2.9)</i>

Note: CI=confidence interval. Statistically significant positive results are shown in **bold**. Statistically significant negative results are *italicised*.

Table S7. Number and proportion of influenza types and subtypes isolated by National Influenza Centres, by year, Australia, 2010 to 2014

Year	Influenza type (subtype)									
	A (H1N1) pdm09		A(H3)		A (not subtyped)		B(Total)		Total	
	N	% in year	N	% in year	N	% in year	N	% in year	N	% in year
2010	646	51.6%	134	10.7%	12	1.0%	460	36.7%	1252	100.0%
2011	799	39.2%	808	39.6%	42	2.1%	390	19.1%	2039	100.0%
2012	101	2.1%	3147	65.6%	85	1.8%	1465	30.5%	4798	100.0%
2013	557	27.8%	1045	52.2%	32	1.6%	368	18.4%	2002	100.0%
2014	1700	49.0%	1124	32.4%	186	5.4%	462	13.3%	3472	100.0%

Source: World Health Organization. FluNet database. World Health Organization: Geneva. Available at: http://www.who.int/influenza/gisrs_laboratory/flunet/en/ [cited 12 Nov 2016]

Figure S1. Observed and estimated emergency department visit rates/100,000 population/week for respiratory problems, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.

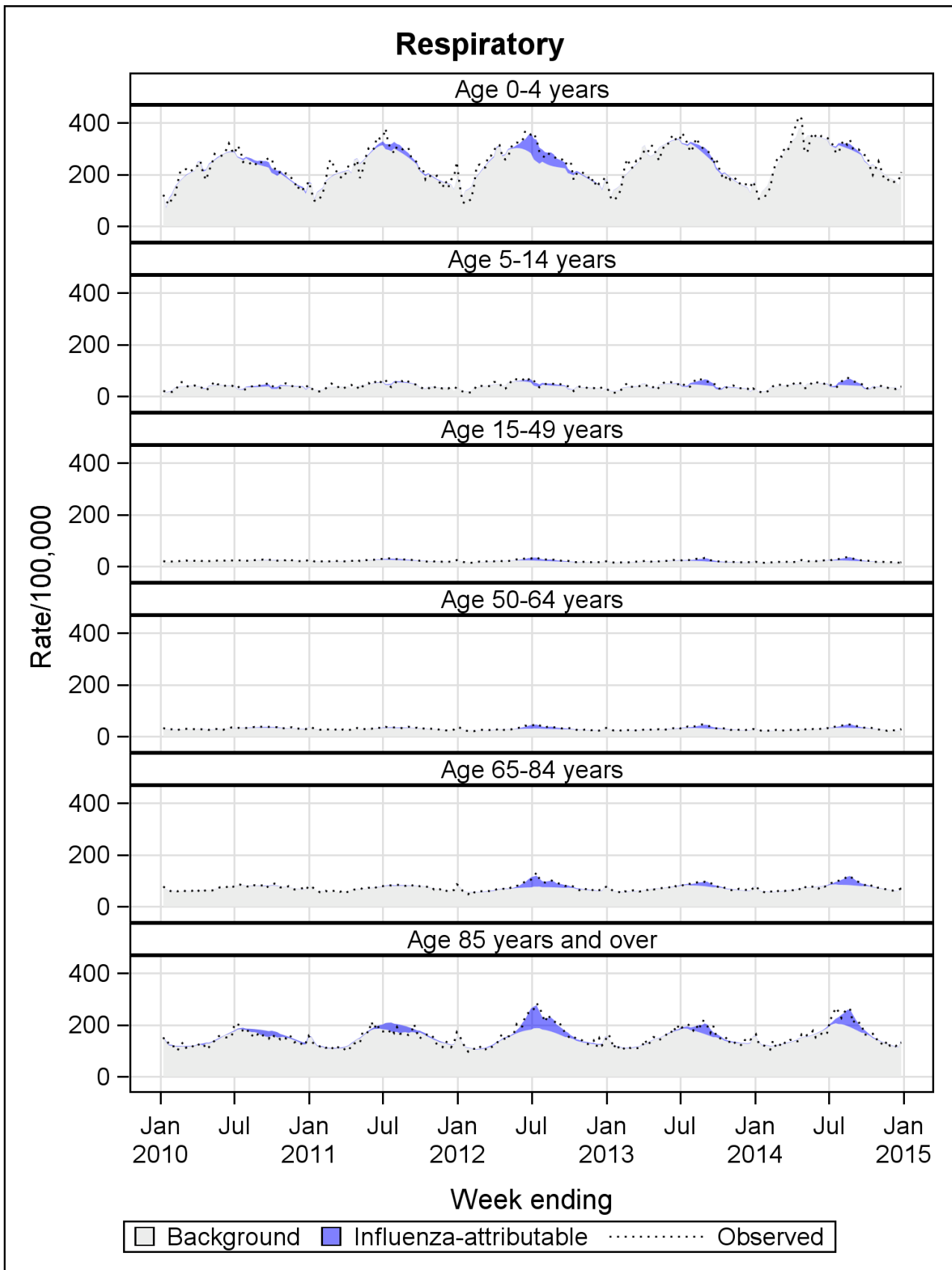


Figure S2. Observed and estimated emergency department visit rates/100,000 population/week for infection, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.

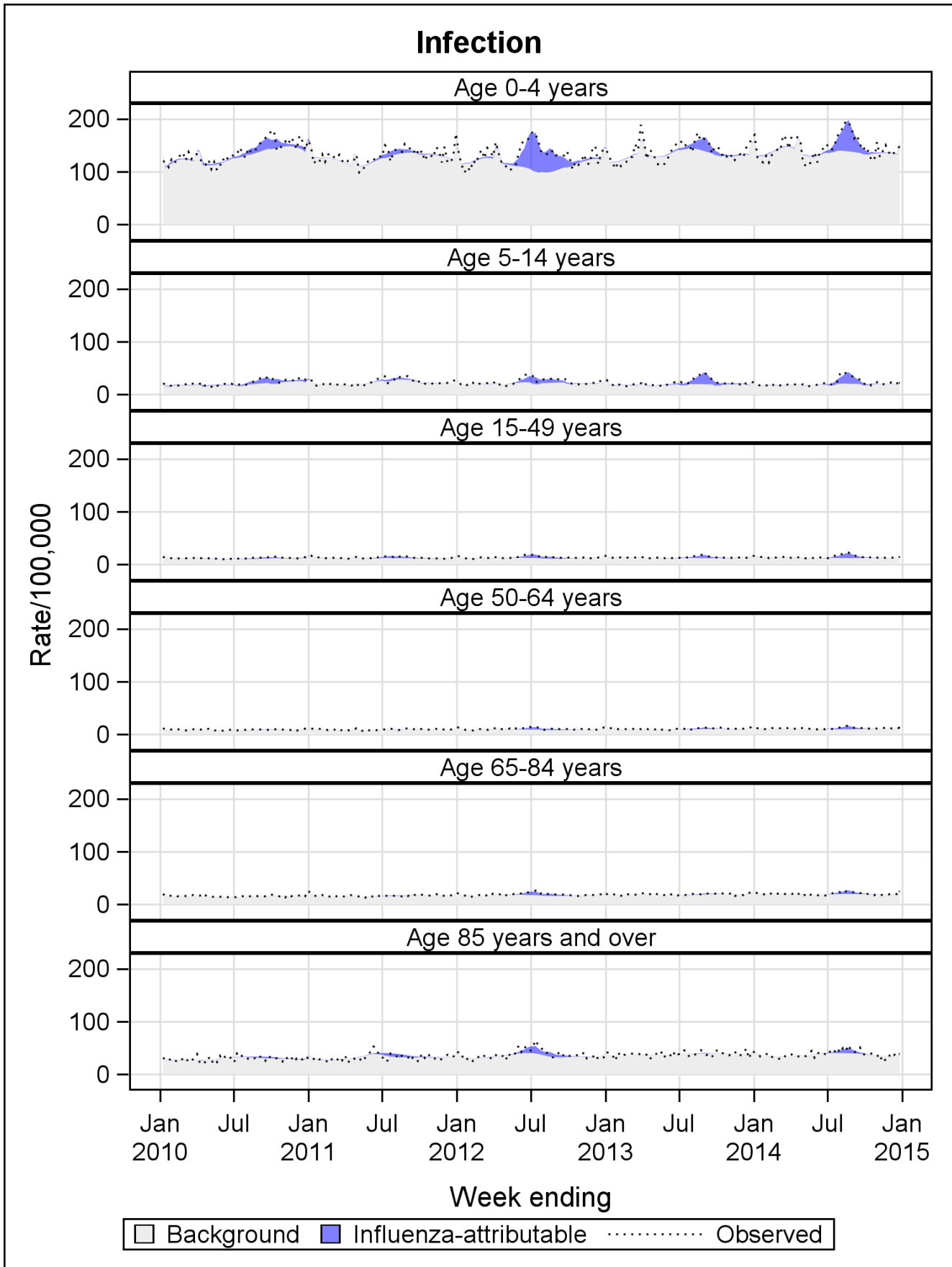


Figure S3. Observed and estimated emergency department visit rates/100,000 population/week for cardiovascular problems, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.

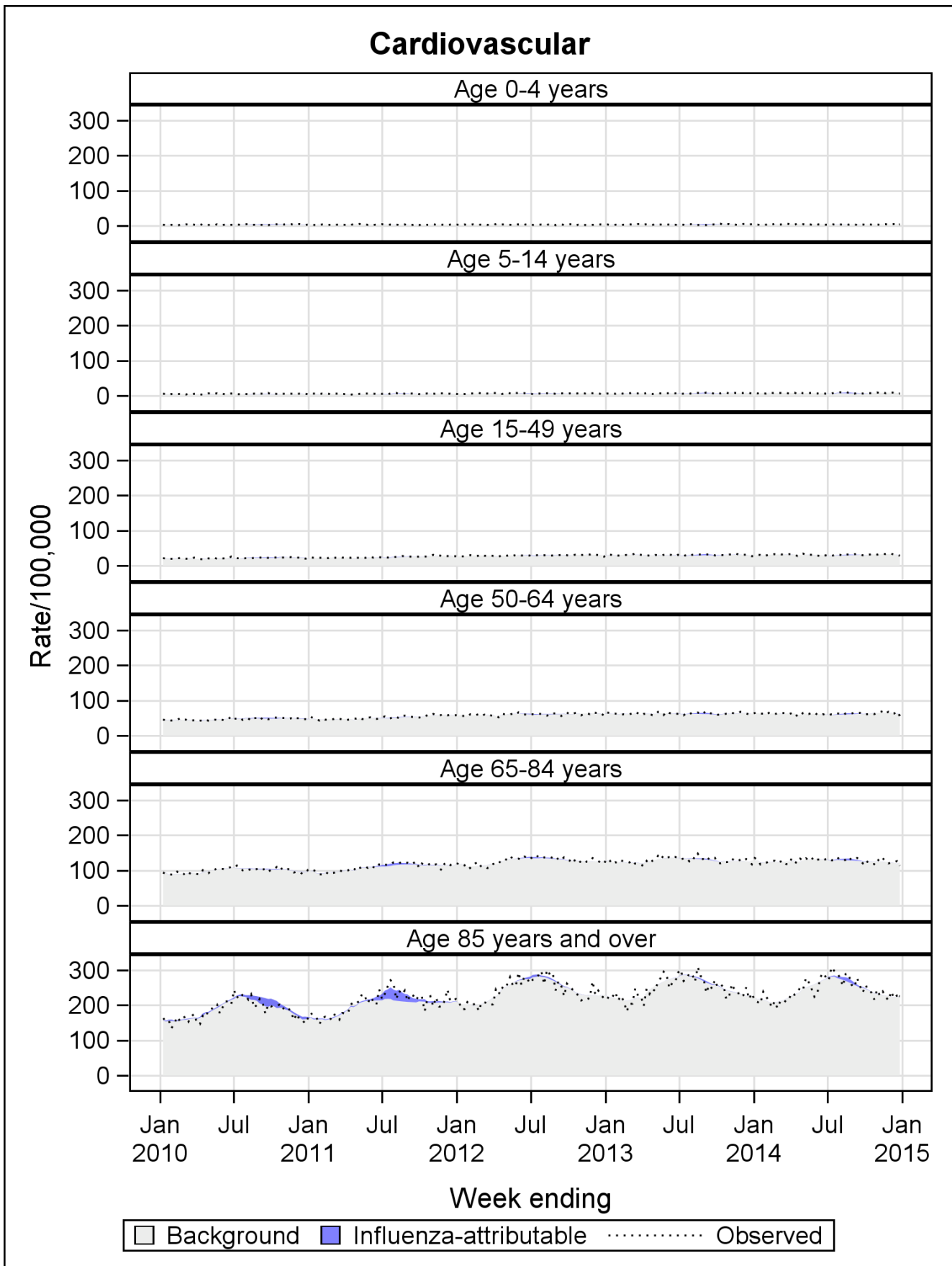


Figure S4. Observed and estimated all-cause emergency department visit rates/100,000 population/week, by age and influenza-attributable and non-influenza-attributable (background) visits, NSW, 2010-2014.

