

Canadian Sentinel Practitioner Surveillance Network (SPSN) influenza vaccine effectiveness estimates % (95% CI), 2004-05 to 2023-24 seasons

Season (number of participants)	Influenza Type/Subtype				
	Any Influenza Type/Subtype	Type A	A/H1N1	A/H3N2	Type B
2004-05¹ (131)	40 (-75, 80)	-	-	-	-
2005-06² (442)	61 (26, 79)	70 (29, 87)	-	70 (29, 87)	48 (-21, 77)
2006-07³ (841)	46 (17, 65)	49 (20, 68)	92 (34, 99)	41 (6, 63)	12 (-134, 67)
2007-08⁴ (1425)	60 (45, 71)	64 (47, 75)	69 (44, 83)	57 (32, 73)	55 (32, 70)
2008-09⁵ (1529)	56 (41, 67)	59 (42, 71)	68 (45, 81)	55 (33, 70)	56 (31, 72)
2009-10⁶ (552)	93 (69, 98)	93 (69, 98)	93 (69, 98)	-	-
2010-11⁷ (1718)	37 (17, 52)	43 (21, 59)	59 (14, 80)	39 (14, 57)	25 (-18, 52)
2011-12⁸ (1507)	59 (43, 70)	69 (48, 81)	80 (52, 92)	51 (10, 73)	51 (26, 67)
2012-13⁹ (1501)	50 (33, 63)	45 (24, 60)	59 (16, 80)	41 (17, 59)	68 (44, 82)
2013-14¹⁰ (1700)	68 (58, 76)	66 (52, 76)	71 (58, 80)	-	72 (55, 82)
2014-15¹¹ (1929)	9 (-14, 27)	-13 (-45, 12)	-	-17 (-50, 9)	45 (18, 64)
2015-16¹² (2007)	46 (32, 57)	44 (27, 57)	43 (25, 57)	-	50 (31, 63)
2016-17¹³ (932)	44 (30, 55)	36 (18, 50)	-	36 (18, 50)	72 (52, 84)
2017-18¹⁴ (3475)	37 (26, 47)	23 (5, 37)	58 (29, 75)	14 (-8, 31)	46 (34, 56)
2018-19¹⁵ (3034)	56 (47, 64)	55 (45, 63)	67 (58, 75)	17 (-13, 39)	72 (27, 89)
2019-20¹⁶ (4633)	53 (45, 60)	44 (32, 54)	43 (30, 54)	50 (26, 66)	65 (56, 73)
2020-21¹⁷	Due to absence of influenza circulation in BC during the COVID-19 pandemic, vaccine effectiveness evaluation could not be performed				
2021-22¹⁸ (327)	36 (-38, 71)	-	-	36 ^a (-38, 71)	-
2022-23¹⁹ (1451)	54 (38, 66)	-	-	54 (38, 66)	-
2023-24^b (6634)	51 (43, 58)	46 (37, 54)	50 (39, 59)	32 (10, 49)	63 (48, 74)

Since the 2004-05 influenza season, the Canadian SPSN has assessed influenza vaccine effectiveness (VE) by influenza type and/or subtype where possible. To facilitate cross-season comparisons, VE estimates against influenza viruses are displayed by season in the figure below.

^a Estimated during atypical late-season A(H3N2) wave following relaxation of COVID-19 pandemic restrictions, March-July 2022

^b Publication pending

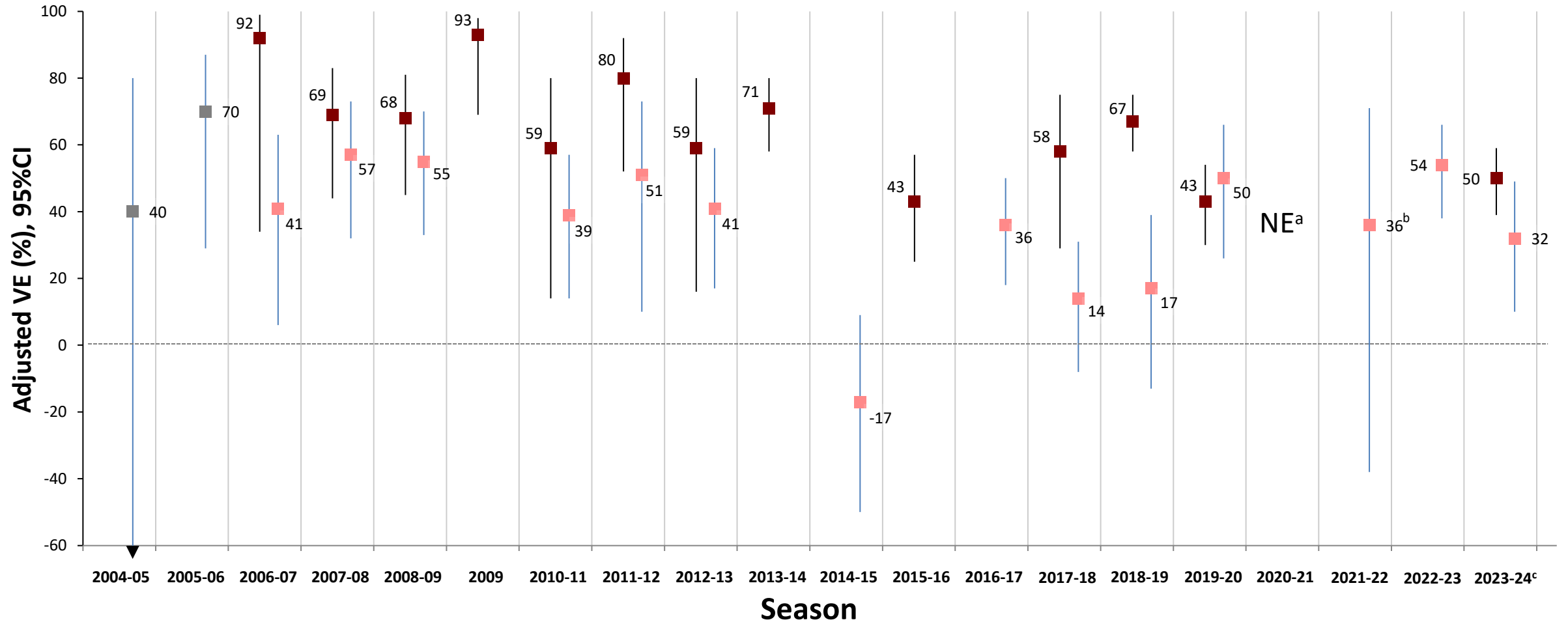
References:

1. Skowronski DM et al. **Can Commun Dis Rep**. 2005;31:181-91: www.phac-aspc.gc.ca/publicat/ccdr-rmtc/05vol31/dr3118-eng.php
2. Skowronski DM et al. **Vaccine**. 2007;25(15):2842-51: www.sciencedirect.com/science/article/pii/S0264410X06011054
3. Skowronski DM et al. **J Infect Dis**. 2009;199:168-79: jid.oxfordjournals.org/content/199/2/168.full
4. Janjua NZ et al. **J Infect Dis**. 2012;205:1858-68: jid.oxfordjournals.org/content/205/12/1858.long
5. Skowronski DM et al. **PLoS Med**. 2010;7(4):e1000258: www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000258
6. Skowronski DM et al. **British Medical Journal**. 2011;342:c7297. Doi:10.1136/bmj.c7297: www.bmj.com/content/342/bmj.c7297?view=long&pmid=21292718
7. Skowronski DM et al. **Clinical Infect Dis**. 2012;55:332-42: cid.oxfordjournals.org/content/55/3/332.long
8. Skowronski DM et al. **J Infect Dis**. 2014; 210:126-37: jid.oxfordjournals.org/content/210/1/126.long
9. Skowronski DM et al. **PLOS ONE**. 2014;9(3):e92153: www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0092153
 - a. For mid-season estimate, see: Skowronski DM et al. **Euro Surveill**. 2013;18(5):pii=20394: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20394
10. Skowronski DM et al. **J Infect Dis**. 2015;212(5):726-39: academic.oup.com/jid/article-lookup/doi/10.1093/infdis/jiv177
 - b. For mid-season estimate, see: Skowronski DM et al. **Euro Surveill**. 2014;19(5):pii=20690: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20690
11. Skowronski DM et al. **Clinical Infect Dis**. 2016;63(1):21-32: cid.oxfordjournals.org/content/63/1/21.long
 - c. For mid-season estimate, see: Skowronski DM et al. **Euro Surveill**. 2015 Jan 29;20(4): pii 21022: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21022
12. Skowronski DM et al. **J Infect Dis**. 2017; 12:1487-1500: <https://academic.oup.com/jid/advance-article/doi/10.1093/infdis/jix526/4356858>
 - d. For mid-season estimate, see: Chambers C et al. **Euro Surveill**. 2016;21(11):pii=30168: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21415
13. Skowronski DM et al. **J Infect Dis**. 2020;225(8):1387-1398: <https://doi.org/10.1093/infdis/jiaa138>
 - e. For mid-season estimate, see: Skowronski DM et al. **Euro Surveill**. 2017;22(6):pii=30460: www.eurosurveillance.org/ViewArticle.aspx?ArticleId=22714
14. Skowronski DM et al. **J Infect Dis**. 2020;225(8):1387-1398: <https://doi.org/10.1093/infdis/jiaa138>
 - f. For mid-season estimates, see: Skowronski DM et al. **Euro Surveill**. 2018;23(5):pii=18-00035: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2018.23.5.18-00035>
15. Leir S, et al. **OPTIONS X for the Control of Influenza Conference**. August 2019 [manuscript in preparation]
 - g. For mid-season estimates, see: Skowronski DM et al. **Euro Surveill**. 2019;24(4):pii=1900055: <https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2019.24.4.1900055>
16. Skowronski DM, et al. **I-MOVE Meeting**. Sept 2020 [manuscript in preparation]
 - h. Skowronski DM, et al. **Euro Surveill**. 2020;25(7):pii=2000103. <https://doi.org/10.2807/1560-7917.ES.2020.25.7.2000103>
17. BC Centre for Disease Control. 2020-2021: Influenza Bulletin Week 17. May 2021. [http://www.bccdc.ca/resource-gallery/Documents/Statistics and Research/Statistics and Reports/Epid/Influenza and Respiratory/2020-2021/Week 17 BC Influenza Surveillance Bulletin 2020-21.pdf](http://www.bccdc.ca/resource-gallery/Documents/Statistics%20and%20Research/Statistics%20and%20Reports/Epid/Influenza%20and%20Respiratory/2020-2021/Week%2017%20BC%20Influenza%20Surveillance%20Bulletin%2020-21.pdf)
18. Kim S, et al. **Euro Surveill**. 2022;27(38):pii=2200720. <https://doi.org/10.2807/1560-7917.ES.2022.27.38.2200720>
19. Skowronski DM, et al. **Euro Surveill**. 2023;28(5):pii=2300043. <https://doi.org/10.2807/1560-7917.ES.2023.28.5.2300043>

SPSN VE estimates by influenza A subtype, 2004-05 to 2023-24 seasons



■ A(H1N1): seasonal (pre-2009) or pandemic (2009 +)
 ■ A(H3N2)



^aNot estimable (NE) due to lack of influenza circulation during COVID-19 pandemic and associated restrictions

^bEstimated during atypical late-season A(H3N2) wave following relaxation of COVID-19 pandemic restrictions, March-July 2022

^cPublication pending