Supplementary Table 2. Summary of studies published from neighboring countries to Bahrain and worldwide

Country	Study	Study period	Data source	Vaccine program (start date)	Reported cases/ Population	Key age group (yr)	Incidence outcome (yr)	Reduction (%)	Seasonal peak	Healthcare utilization, severity
Bahrain (Present study)	Mohamed et al, 2026	2010–2024	National mandatory surveillance data, Public Health Directorate	2-Dose program (May 2015)	16,598/total population	5–9	251.8/105 (2015) to 28.5/105 (2024)	88.7	April	98% in PHC, 0.1% hospitalizations (non-vaccinated)
Saudi Arabia, Eastern province	Al-Tawfiq et al.[14] 2013	1994–2011	Saudi Aramco Medical Services Organization surveillance data	Introduction (1998); mandatory (2008)	19,577/≈350,000	5–9	739.8/105 (1994) to 88.1/105 (2011)	88.1	Spring (March–May)	NR
Saudi Arabia, southern region	Saleh & Al Moghazy[13] 2014	2007–2012	Armed Forces Hospital of Southern Region	National vaccination context	2,515/hospital surveillance	5–14	754 (2007) to 227 (2012)	69.9	March & April	NR
Qatar	Bibi et al.[26] 2023	2017-2019	Primary Health Care Corporation electronic database	2 Doses, introduction (2002); mandatory (2007)	862/total population	1–5	NR	1 dose: 56 2 doses: 87	NR	NR
Kuwait	Al-Ayyadhi et al.[23] 2024	2011–2022	Public Health Directorate	2 Doses, private sector voluntary (2005) then mandatory (2017)	19,558/total population	1–7	111.8 (2011) to 7.5 (2022)	93.3	April–June	97% hospitalization decline (47.3/105 to 3.4/105)
Israel	Fallach et al.[22] 2025	2003–2020	Maccabi Healthcare Services database	2 Dose UVV (2008)	NR/2.6 million members	1–7	1269.8/105 to 409.6/105	67.1	Seasonal peaks (unspecified)	51% reduction in direct medical costs
United States	Guris et al.[24] 2008	1995–2005	Active surveillance	1-Dose childhood program during study period	Antelope Valley: 13,315/≈350,000 West Philadelphia: 3,921/≈280,000	1–9	Antelope Valley: 10.3 to 1.1/1,000; West Philadelphia: 4.1 to 0.4/1,000	89.8; 90.4	NR	NR
United States	Marin et al.[25] 2022	1990–2019	National inpatient sample & national mortality data	1-Dose program (1995); 2 dose-program (2007)	111,065 Estimated varicella hospitalizations	<20	NR	NR	NR	94% decline in hospitalizations & 97% decline in deaths
Italy, Liguria	Piazza et al.[15] 2021	2010–2017	Pediatric ED & hospital discharge records	Regional UVV (2015)	2,239 pediatric ED accesses or hospitalizations	0–3	218.58//105 (2013) to 127.46 (2017)	41.7	Spring (February–May)	225 Hospitalizations, 192 complicated cases

NR, not reported; UVV, universal varicella vaccination; PHC, primary healthcare; ED, Emergency Department.