Table 1 Prevalence of HBsAg and anti-HBs in children and young adults after universal vaccination in selected regions (Adopted from Zhao et al., 2020)

Region	Initiation of Universal vaccination	Study period	Age (Y)	No	HBsAg+(%)	Anti-HBs+(%)
Alaska, USA	April 1983	12/1993–1/1994	2–5	121	0 (0)	30/120 (25.0)
			6–10	150	0 (0)	56/146 (38.4)
			11–15	118	9 (7.6)	68/87 (78.2)
			16–20	60	11 (18.3)	28/30 (93.3)
			21–25	62	13 (21.0)	17/21 (81.0)
			26–30	92	20 (21.7)	19/20 (95.0)
Taiwan	1986	1/1/2014–12/31/2014	<1–29	3299	17 (0.52)	1564 (47.4)
Singapore	1987	8/2008–7/2010	1–6	400	0 (0)	255 (63.8)
			7–12	400	1 (0.30)	131 (32.8)
			13–17	400	3 (0.75)	94 (23.5)
China	2002	9/2006–10/2006	1–<5	13276	-1	-71.2
			5–<10	11909	-1.4	-55.5
			10–<15	11844	-3.2	-57.5
		10/2014–12/2014	>0.6–3	1270	2 (0.16)	1210 (95.3)
			4–6	822	3 (0.36)	733 (89.2)
			7–9	752	1 (0.13)	662 (88.0)
			10–12	598	6 (1.00)	504 (84.3)
			1–4	12681	-0.3	-71.6
			5–14	9738	-0.9	-52.9
			15–29	9294	-4.4	-56.9

Table caption: Table 1 shows the prevalence of Hepatitis B surface antigen (HBsAg) and anti-Hepatitis B surface antibody (anti-HBs) in children and young adults after the implementation of universal vaccination in different regions. The data indicate that universal vaccination has significantly reduced the HBsAg positivity rates in Alaska, Taiwan, Singapore, and China, especially among children. However, HBsAg positivity rates tend to increase with age, particularly in Alaska. On the other hand, the anti-HBs positivity rates improve with age, reflecting good long-term immunity. Data from Taiwan and China show that after universal vaccination, the HBsAg positivity rates remain low, especially in children, with almost zero positivity. These results demonstrate the significant effectiveness of universal vaccination in controlling the spread of the Hepatitis B virus (Adopted from Zhao et al., 2020)