Overview of VE after one dose and before the 2nd dose of COVID19 vaccine

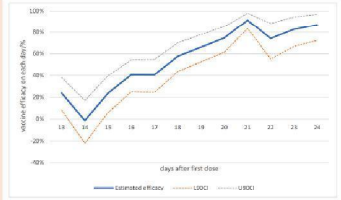
Green shaded rows	Observational study
Yellow shaded rows	Trial
Orange shaded rows	Other/not sure

Source	Vaccine	Notes	VE against COVID19 (95%CI)		VE against severe COVID19 (95%CI)	
Peer reviewed			*Time period*	*VE (95% CI)*	*Time period*	*VE (95% CI)*
Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine. Polack et al. 2020	Pfizer	2nd dose administered/planned 3 weeks after first dose, RCT, phase III	After dose 1 to before dose 2	52.4 (29.5, 68.4)	After dose 1 to before dose 2	100.0 (-51.1, 100.0)
			VE			
Preprints			*Time period*	*VE against documented infection (95% CI)*	*VE for symptomatic COVID-19 (95% CI)*	*VE against hospitalization (95% CI)*	*VE against severe disease (95% CI)*	*VE against death from COVI-19 (95%CI)*	*VE against asymptomatic infection proxy (95%CI)*
BNT162b2 mRNA Covid-19 Vaccine in a Nationwide Mass Vaccination Setting Dagan N et al. 24 Feb 2021	Pfizer	Data form Israel (N=596,618) , vaccinated matched to unvaccinated controls, Estimated effectiveness in specific subpopulations assessed for documented infection and symptomatic covid-19 was consistent across age groups, with potentially slightly lower effectiveness in	Day 14 to 20 after the first dose	46% (40-51)	57% (50-63)	74% (56-86)	62% (39-80)	72% (19-100)	52% (41-60)

		persons with multiple coexisting conditions. Asymptomatic proxy = SARS-CoV-2 infection without documented symptoms (i.e. may include mild symptoms).							
			VE (1-HR) against symptomatic or asymptomatic infection, full cohort			**VE (1-HR) against symptomatic or asymptomatic infection (95% CI), negative cohort (no infection before dose 1)**			
			Time period, study population	*VE (S [statistically significant], NS [statistically non-significant])*		*Time period, study population*		*VE (S [statistically significant], NS [statistically non-significant])*	
Effectiveness of BNT162b2 mRNA vaccine against infection and VOCID-19 vaccine coverage in healthcare workers in England, multicenter prospectvie cohort study (the SIREN study). Hall VJ et al 22Feb2021	Pfizer	England, Health care workers (N>23,000), undergoing regular asymptomatic testing, dominant circulation variant was B1.1.7, prospective. VEs estimated based on graphs. The specific HRs are provided in supplemental material but cannot be found online (yet?).	*0-3 days after dose 1*	*±40 (S)*		*0-3 days after dose 1*		*±40 (S)*	
			4-6 days after dose 1	*±3 (NS)*		*4-6 days after dose 1*		*± 3 (NS)*	
			7-9 days after dose 1	*±10 (NS)*		*7-9 days after dose 1*		*±10 (NS)*	
			10-13 days after dose 1	*±30 (S)*		*10-13 days after dose 1*		*±30 (S)*	

			14-20 days after dose 1	*±57 (NS)*	*14-20 days after dose 1*	*±55 (S)*
			VE against COVID19-related hospitalization			
			Time period	*VE (95% CI) Pfizer vaccine*	*VE (95% CI) AstraZeneca vaccine*	*VE (95% CI) both*
Effectiveness of first dose of COVID-19 vaccines against hospital admissions in Scotland: national prospective cohort study of 5.4 million people. Vasileiou et al. 2021	Pfizer & AstraZeneca	Phase IV, 'real-world' effect, covering ±99% of Scotland's adult population (N=5.4 million), lab confirmed SARS-CoV-2 infection or clinical diagnosis of COVID-19 at hospitalization, prospective	1-13 days post-vaccination	38% (28 to 47)	70% (63 to 76)	47% (39 to 53)
			14-20 days post-vaccination	60% (50 to 68)	74% (66 to 81)	60% (52 to 66)
			21-27 days post-vaccination	72% (62 to 79)	84% (72 to 90)	70% (62 to 77)
			28-34 days post-vaccination	85% (76 to 91)	94% (73 to 99)	84% (74 to 90)
			35-41 days post-vaccination	68% (53 to 79)	NA	61% (42 to 74)
			42+ days post-vaccination	64% (49 to 75)	NA	58% (39 to 70)
			Aged 18-64 yr			
			Time period	*VE (95% CI) Pfizer vaccine*	*VE (95% CI) AstraZeneca vaccine*	*VE (95% CI) both*
			1-13 days post-vaccination			-36% (-63 to -14)
			14-20 days post-			33% (12 to 49)

			vaccination			
			21-27 days post-vaccination			56% (36 to 69)
			28-34 days post-vaccination			85% (68 to 93)
			35-41 days post-vaccination			43% (7 to 65)
			42+ days post-vaccination			51% (23 to 69)
			Aged 65-79 yr			
			Time period	*VE (95% CI) Pfizer vaccine*	*VE (95% CI) AstraZeneca vaccine*	*VE (95% CI) both*
			1-13 days post-vaccination			62% (47 to 72)
			14-20 days post-vaccination			59% (32 to 76)
			21-27 days post-vaccination			71% (31 to 88)
			28-34 days post-vaccination			79% (17 to 95)
			35-41 days post-vaccination			56% (-46 to 86)
			42+ days post-vaccination			8% (-105 to 59)
			Aged >80 yr			
			Time period	*VE (95% CI) Pfizer vaccine*	*VE (95% CI) AstraZeneca vaccine*	*VE (95% CI) both*
			1-13 days post-vaccination			67% (59 to 74)
			14-20 days post-vaccination			67% (57 to 75)
			21-27 days post-vaccination			75% (63 to 83)
			28-34 days post-			81% (65 to 90)

			vaccination			
			35-41 days post-vaccination			77% (48 to 90)
			42+ days post-vaccination			80% (49 to 92)
			VE against COVID19 (95%%CI)			
			Time period	*VE (95%CI)*	*Figure showing VE (95%CI) from day 13 to 24 after dose 1*	
Estimating the effectiveness of the Pfizer COVID-19 BNT162b2 vaccine after a single dose. A reanalysis of a study of "real-world" vaccination outcomes from Israel. Hunter et al. 3Feb2021	Pfizer	Reanalysis of study by Chodick et al. Israel. Expected number of infections based on observed infections day 0 to 12 after dose 1 compared to actual number of infections on day 13-24 after dose 1.	21 days after dose 1	91% (83, 98)	 Figure 3. Estimated vaccine effectiveness on each day from day 13 to 24 after a single dose with upper and lower 90% credible intervals.	
			Relative Risk Reduction (RRR) against COVID19 (95%CI)			
			Time period	*RRR (95% CI)*	*RRR (%) aged 16-60 yr*	*RRR (%) aged ≥60 yr*
The effectiveness of the first dose of BNT162b2 vaccine in reducing SARS-CoV-2 infection 13-24 days after immunization: real-world evidence. Chodick G et al. 29Jan2021.	Pfizer	Short term effectiveness against SARS-CoV-2 infection, retrospective, phase IV, 503,875 vaccinated individuals living in Israel, decrement in incidence was evident from day 18 after the first dose, subgroup analyses provided in figure 3, historical controls	13-24 days after dose 1 vs. 1-12 days after dose 1	51.4 (-7.2, 78.0)	44.5	50.2

Other/news items						
			VE (1-OR) against symptomatic disease			
			Time period	*VE (95% CI)*		
PHE monitoring of the early impact and effectiveness of COVID-19 vaccination in England. 22Feb2021	Pfizer	Aged >80 yr, VE estimates from routinely collected data, matched to NIMS population. Using the calculated odds ratios, the number of cases expected on each day after vaccination was then estimated assuming the vaccine had no effect, whilst allowing for increasing vaccination coverage and follow up over time.	0-3 days after dose 1	30 (23, 37)		
			4-6 days after dose 1	14 (5-23)		
			7-9 days after dose 1	-2 (-12, 8)		
			10-13 days after dose 1	18 (10, 25)		
			14-20 days after dose 1	38 (32, 44)		
			21-27 days after dose 1	47 (39, 55)		
			>=28 days after dose 1	57 (48, 63)		
			Adjusted Rate Reduction (ARR) against symptomatic COVID19 (95%CI)		**Adjusted Rate Reduction (ARR) against SARS-CoV-2 positivity (95%CI)**	
			Time period	*ARR (95% CI)*	*Time period*	*ARR (95% CI)*
Early rate reductions of SARS-CoV-2 infection and COVID-19 in BNT162b2 vaccine recipients. Correspondence. Amit et al. 18Feb 2021	Pfizer	Date from Israel, Health Care Workers (N=), retrospective, vaccinated vs. unvaccinated	*1-14 days after dose 1*	47% (17 to 66)	*1-14 days after dose 1*	30% (2 to 50)
			15-28 days after dose 1	85% (71 to 92)	*15-28 days after dose 1*	75% (72 to 84)

			VE against COVID19 (95%CI)			
			Time period	*VE (95% CI)*		
Annex A: Report to JCVI on estimated efficacy of a single dose of Pfizer BioNTech (BNT162b2 mRNA) vaccine and of a single dose of ChAdOx1 vaccine (AZD1222). Public Health England. ...Jan2021?	Pfizer	15-28 days post dose 1 includes a time period in which the 2nd dose may be administered but in which no effect of this dose is expected yet. "The Pfizer estimates were verbally given by PHE during discussion and were based on data previously provided to the sub-committee" -> not sure where these numbers come from, i.e. observational or trial data results.	15-21 days post dose 1	89% (52- 97)		
			22-28 days post dose 1	92% (65- 98)		
			15-28 days post dose 1	91% (74- 97)		

			VE against COVID19 (95%CI)		VE against severe COVID19 (95%CI)	
			Time period	*VE (95% CI)*	*Time period*	*VE (95% CI)*
FDA Emergency Use Authorization for an Unapproved Product Review Memorandum	Moderna	Among those who received one dose of the vaccine at the time of the interim analysis, N=2075, non-random samples, 2nd dose administered/planned 3 weeks after first dose, phase III	After dose 1	80.2 (55.2, 92.5)	After dose 1	42.6 (-300.8, 94.8)
			After dose 1 to 14 days	50.8 (-53.6, 86.6)		

			after dose 1			
			>14 days after dose 1	92.1 (68.8, 99.1)		
			VE against COVID19 (95%CI)			
			Time period	*VE (95% CI)*		
Public Assessment Report of the EMA	AstraZeneca	2nd dose administered between 4 and 12 weeks after the first, first dose could be low dose (LD, part of UK participants) or standard dose (SD), phase III	Post dose 1 to before dose 2	42.8 (20.3, 59.0)		
			Post dose 1 + 21 days to before dose 2	73.0 (48.9, 85.8)		
			Post dose 1 + 21 days to before dose 2, **SD recipients only**	71.30 (49.02, 83.84)		
			≥ 22 days post Dose 1 - Week 4	100 (60.55, NE)		
			≥ 22 days post Dose 1 – Week 6	87.25 (57.32, 96.19)		
			≥ 22 days post Dose 1 – Week 12	76.38 (52.86, 88.17)		
			≥ 22 days post Dose 1 – Week 14	77.19 (56.03, 88.16)		
			≥ 22 days post Dose 1 – Dose 2	73.21 (51.67, 85.15)		
			VE against COVID19 (95%CI)		**VE against severe COVID19 (95%CI)**	
			Time period	*VE (95% CI)*	*Time period*	*VE (95% CI)*
FDA Emergency Use Authorization for an	Pfizer	Same VEs as reported in paper of Polack et al.	After dose 1 to before dose 2	52.4 (29.5, 68.4)	After dose 1 to before dose 2	100.0 (-51.5, 100.0)

Unapproved Product Review Memorandum						