COVID-19 vaccines: Thromboembolic events with thrombocytopenia

CHM 4th April (data lock 31st March)

Medicines & Healthcare products Regulatory Agency

Background

Ongoing, detailed review of reports of very rare events of thromboembolic events (including CVST and other events) with concurrent thrombocytopenia.

Assessment of Yellow Card Scheme reports against a case definition developed with independent expert advice.

Latest consideration at CHM and Vaccine Benefit Risk Expert Working Group (EWG) meetings

- 27 March: CHM meeting
- 31 March: Vaccine Benefit Risk EWG meeting
- 01 April: CHM meeting

Summary of case reports (DLP: 31 Mar 2021)

91 cases in total. 23 Fatalities including unlikely.

80 confirmed, probable or possible

Age range for all reports (including unlikely)

Age range (years)	Number of cases	Number of fatal cases
15-19	3	2
20-24	6	3
25-29	4	0
30-34	12	5
35-39	6	2
40-44	0	0
45-49	10	2
50-54	5	2
55-59	12	1
60-64	8	1
65-69	6	2
70-74	4	1
75-79	2	0
Unknown	13	2
	91	23

Lowest Platelet Counts stratified by age (excl. Unlikely)

	Lowest Platelet counts (no. fatal cases)					
Age range (years)	<50	50-99	<100*	100-150	Unknown	Total
15-19	1 (1)	-	-	-	2 (1)	3 (2)
20-24	2 (1)	1 (0)	-	-	2 (1)	5 (2)
25-29	2 (0)	1 (0)	-	1(0)	-	4 (0)
30-34	6 (3)	2 (1)	-		2 (0)	10 (4)
35-39	3 (1)	-	1 (0)	-	2 (1)	6 (2)
40-44	-	-	-	-	-	0
45-49	6 (1)	3 (1)			1(0)	10 (2)
50-54	2 (1)	1 (0)	-	-	-	3 (1)
55-59	7 (1)	1 (0)	-	-	1 (0)	9 (1)
60-64	3 (0)	1(1)	-	-	3 (0)	7 (1)
65-69	2 (1)	1 (0)	1 (1)		2 (0)	6 (2)
70-74	3 (0)	-	-	1 (1)	-	4 (1)
75-79	-	1 (0)	-	-	-	1(0)
Unknown	3 (0)	-	-	-	9 (2)	12(2)
	40 (10)	12 (3)	2 (1)	2 (1)	24 (5)	80 (20)

Comparative exposure data – AZ 1st doses

Age group	Estimated number of first AZ doses in UK (1,000,000s)	%
15-19 years	[redacted]	[redacted]
20-24 years	[redacted]	[redacted]
25-29 years	[redacted]	[redacted]
30-34 years	[redacted]	[redacted]
35-39 years	[redacted]	[redacted]
40-44 years	[redacted]	[redacted]
45-49 years	[redacted]	[redacted]

Age group	Estimated number of first AZ doses in UK (1,000,000s)	%
50-54 years	[redacted]	[redacted]
55-59 years	[redacted]	[redacted]
60-64 years	[redacted]	[redacted]
65-69 years	[redacted]	[redacted]
70-74 years	[redacted]	[redacted]
75-79 years	[redacted]	[redacted]
80+ years	[redacted]	[redacted]

(data lock 31st March)

Incidence rate – further analysis of CVST (and CVST + other TE)

Age group	Estimated number of first doses in UK (1,000,000s)	Total number of cases	Case incidence rate (per 1 million doses)	Exc. unlikely cases	Case incidence rate (per 1 million doses)	Number of fatal cases (inc. unlikely)	Fatal incidence rate (per 1 million doses)
Total	20.2	50*	2.5 (1.8,3.3)	45*	2.2 (1.6,3.0)	18**	0.9 (0.5,1.4)

* Includes 7 – unknown age

** Includes 2 – unknown age

Age group	Estimated number of first doses in UK (1,000,000s)	Total number of cases	Case incidence rate (per 1 million doses)	Exc. unlikely cases	Case incidence rate (per 1 million doses)	Number of fatal cases (inc. unlikely)	Fatal incidence rate (per 1 million doses)
Total	20.2	89*	4.4 (3.5,5.4)	80*	4.0 (3.2,4.9)	23**	1.1 (0.,1.7)

* Includes 12 – unknown age

** Includes 2 – unknown age

To note: An additional 2 cases – criteria not met (1 CVST, 1 other TE)

(data lock 31st March)

Incidence rate – further analysis of CVST - <50 years

Age group	Estimated number of first doses in UK (1,000,000s)	Total number of cases	Case incidence rate (per 1 million doses)	Exc. unlikely cases	Case incidence rate (per 1 million doses)	Number of fatal cases (inc. unlikely)	Fatal incidence rate (per 1 million doses)
15-19 years	[redacted]	3	[redacted]	3	[redacted]	2	[redacted]
20-24 years	[redacted]	4	[redacted]	3	[redacted]	3	[redacted]
25-29 years	[redacted]	3	[redacted]	3	[redacted]	0	[redacted]
30-34 years	[redacted]	9	[redacted]	8	[redacted]	5	[redacted]
35-39 years	[redacted]	1	[redacted]	1	[redacted]	0	[redacted]
40-44 years	[redacted]	0	[redacted]	0	[redacted]	0	[redacted]
45-49 years	[redacted]	6	[redacted]	6	[redacted]	1	[redacted]

(data lock 31st March)

Incidence rate – further analysis of CVST – 50+ years

Age group	Estimated number of first doses in UK (1,000,000s)	Total number of cases	Case incidence rate (per 1 million doses)	Exc. unlikely cases	Case incidence rate (per 1 million doses)	Number of fatal cases (inc. unlikely)	Fatal incidence rate (per 1 million doses)
50-54 years	[redacted]	2	[redacted]	1	[redacted]	1	[redacted]
55-59 years	[redacted]	9	[redacted]	7	[redacted]	1	[redacted]
60-64 years	[redacted]	1	[redacted]	1	[redacted]	1	[redacted]
65-69 years	[redacted]	3	[redacted]	3	[redacted]	2	[redacted]
70-74 years	[redacted]	1	[redacted]	1	[redacted]	0	[redacted]
75-79 years	[redacted]	1	[redacted]	1	[redacted]	0	[redacted]

(data lock 31st March)

Incidence rate – further analysis of CVST + other TE - <50 years

Age group	Estimated number of first doses in UK (1,000,000s)	Total number of cases	Case incidence rate (per 1 million doses)	Exc. unlikely cases	Case incidence rate (per 1 million doses)	Number of fatal cases (inc. unlikely)	Fatal incidence rate (per 1 million doses)
15-19 years	[redacted]	3	[redacted]	3	[redacted]	1	[redacted]
20-24 years	[redacted]	6	[redacted]	5	[redacted]	3	[redacted]
25-29 years	[redacted]	4	[redacted]	4	[redacted]	0	[redacted]
30-34 years	[redacted]	12	[redacted]	10	[redacted]	5	[redacted]
35-39 years	[redacted]	6	[redacted]	6	[redacted]	2	[redacted]
40-44 years	[redacted]	0	[redacted]	0	[redacted]	0	[redacted]
45-49 years	[redacted]	10	[redacted]	10	[redacted]	2	[redacted]

(data lock 31st March)

Incidence rate – further analysis of CVST + other TE – 50+ years

Age group	Estimated number of first doses in UK (1,000,000s)	Total number of cases	Case incidence rate (per 1 million doses)	Exc. unlikely cases	Case incidence rate (per 1 million doses)	Number of fatal cases (inc. unlikely)	Fatal incidence rate (per 1 million doses)
50-54 years	[redacted]	5	[redacted]	3	[redacted]	2	[redacted]
55-59 years	[redacted]	11	[redacted]	9	[redacted]	1	[redacted]
60-64 years	[redacted]	8	[redacted]	7	[redacted]	1	[redacted]
65-69 years	[redacted]	6	[redacted]	6	[redacted]	2	[redacted]
70-74 years	[redacted]	4	[redacted]	4	[redacted]	1	[redacted]
75-79 years	[redacted]	2	[redacted]	1	[redacted]	0	[redacted]

(data lock 31st March)

OFF-SEN

Benefit calculations: approach

Vaccine effectiveness estimates:

- Against being a **case** (any case, and a long COVID case) = [redacted]
- Against **hospitalisation** = [redacted]
- Against **ICU/HDU admission** = [redacted]
- Against **death** = [redacted]

[redacted]

OFF-SEN

Cases and long COVID

Age band	NNV case (VE=60%)	NNV long COVID case* (VE=60%)	Cases prevented per million	Long COVID cases prevented per million
[redacted]				

Benefits and risks (CVST + other TE)

Age group	Hospitalisations prevented (per 1 million doses)	ICU/HDU prevented (per 1 million doses)	Case incidence rate (per 1 million doses)	Mortality prevented (per 1 million courses)	Fatal incidence rate (per 1 million doses)
15-19 years	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
20-24 years			[redacted]	[redacted]	[redacted]
25-29 years	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
30-34 years			[redacted]	[redacted]	[redacted]
35-39 years			[redacted]	[redacted]	[redacted]
40-44 years			[redacted]	[redacted]	[redacted]
45-49 years	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

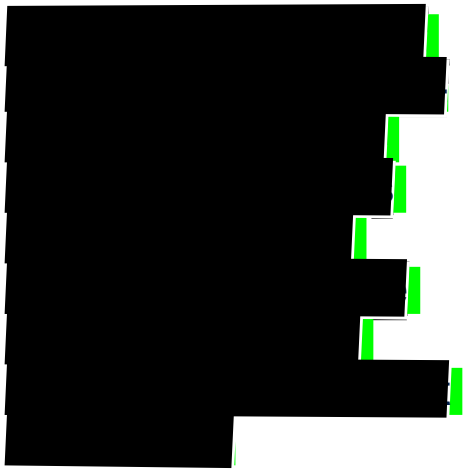
(data lock 31st March)

Benefits and risks (CVST + other TE)

Age group	Hospitalisations prevented (per 1 million doses)	ICU/HDU prevented (per 1 million doses)	Case incidence rate (per 1 million doses)	Mortality prevented (per 1 million courses)	Fatal incidence rate (per 1 million doses)
15-19 years	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
20-24 years			[redacted]	[redacted]	[redacted]
25-29 years	[redacted]	[redacted]		[redacted]	
30-34 years			[redacted]	[redacted]	[redacted]
35-39 years				[redacted]	
40-44 years			[redacted]	[redacted]	[redacted]
45-49 years	[redacted]	[redacted]		[redacted]	

(data lock 31st March)

Modelling ([redacted] –



Questions to the CHM

1. Based on the evidence presented does the CHM consider the benefit:risk remains favourable for patients older than 40 years of age ?
2. Does the CHM consider there might be an increased risk for the second dose of the vaccine?
3. Does the CHM consider there to be sufficient evidence to advise on the risk in pregnant women?
4. Does the CHM consider there might be a risk in children associated with the vaccine with regards to the ongoing trials for AZ vaccine in patients aged 6 to less than 18 years?
5. Does the CHM have further comments on the benefit risk information to be provided to vaccine recipients ?