



Association of COVID-19 vs Influenza with Risk of Arterial and Venous Thrombotic Events Among Hospitalized Patients

Reagan-Udall Foundation COVID-19 Evidence Accelerator

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Specific Aim

Aim 1: 90-day absolute risk of **ATE** and **VTE** in patients initially diagnosed with COVID-19 in hospital during two periods:

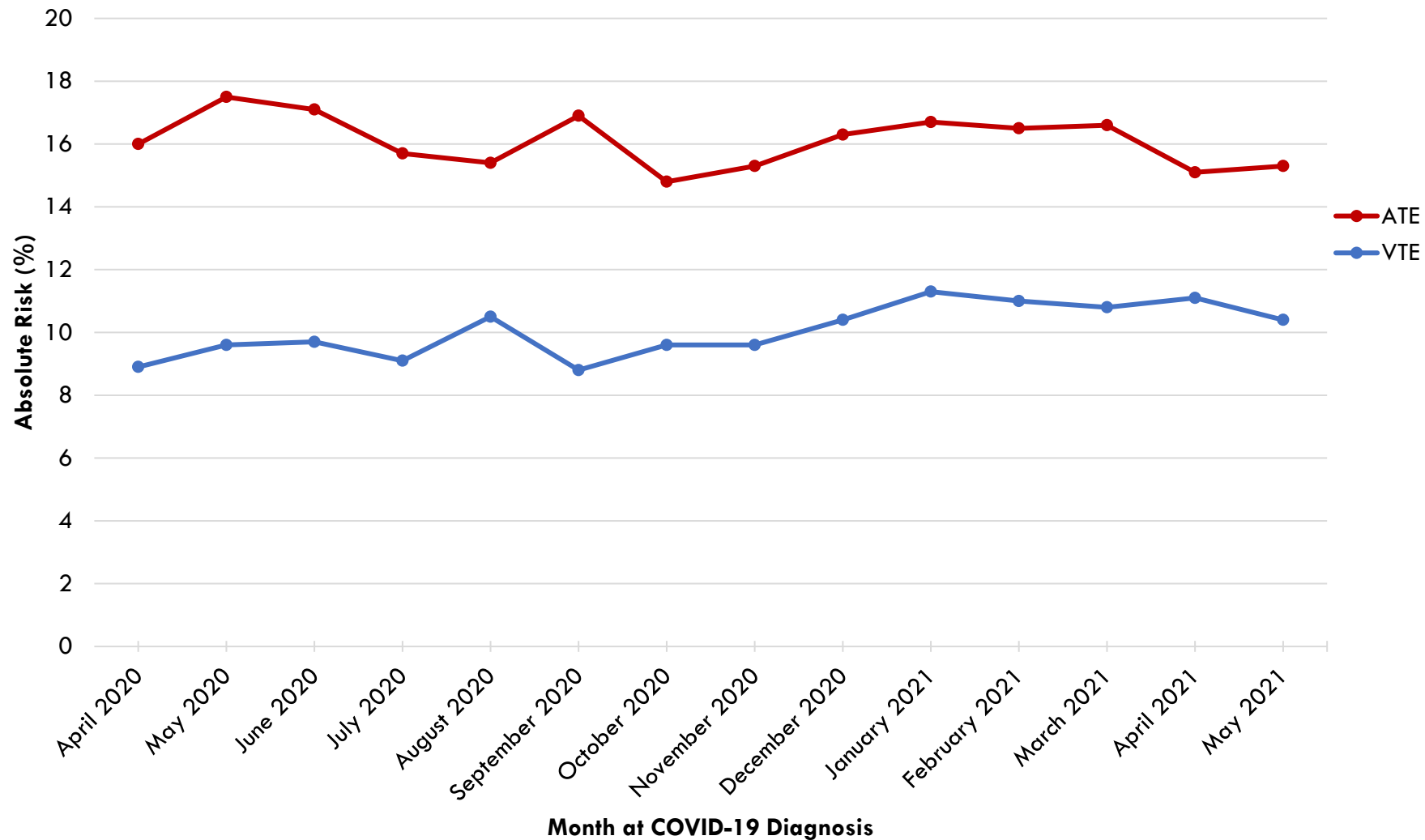
- Period 1: COVID-19 vaccines unavailable (Apr 2020 - Nov 2020)
- Period 2: COVID-19 vaccines available (Dec 2020 - May 2021)

Assessed if risk of events during each period differed from risk in patients diagnosed with influenza in hospital (Oct 2018 - Apr 2019)

90-Day Absolute Risk of **ATE** and **VTE** for Patients Hospitalized With COVID-19 vs. Influenza

Outcome	COVID-19 Period 1 Cohort (Apr 1, 2020-Nov 30, 2020)			COVID-19 Period 2 Cohort (Dec 1, 2020-May 31, 2021)			Influenza Cohort (Oct 1, 2018-Apr 30, 2019)		
	No. Patients	No. Events	Absolute Risk (%)	No. Patients	No. Events	Absolute Risk (%)	No. Patients	No. Events	Absolute Risk (%)
ATE	41,443	6,559	15.8	44,194	7,202	16.3	8,269	1,190	14.4
VTE	41,443	3,917	9.5	44,194	4,799	10.9	8,269	440	5.3

90-Day Absolute Risk of **ATE** and **VTE** by Month of Hospitalization With COVID-19



HRs for 90-Day **ATE** Among Patients Hospitalized With COVID-19 vs. Influenza

Cohort	COVID-19 Period 1 Cohort (Apr 1, 2020-Nov 30, 2020)			COVID-19 Period 2 Cohort (Dec 1, 2020-May 31, 2021)		
	No. Patients	No. Events	Weighted Hazard Ratio* (95% CI)	No. Patients	No. Events	Weighted Hazard Ratio* (95% CI)
Overall						
COVID-19	41,443	6,559	1.04 (0.97-1.11)	44,194	7,202	1.07 (1.00-1.14)
Influenza	8,269	1,190		8,269	1,190	
All-cause 30-day mortality after inpatient ATE event						
COVID-19	6,559	1,482	3.45 (2.68-4.45)	7,202	1,618	3.45 (2.69-4.44)
Influenza	1,190	94		1,190	94	

* HRs calculated after adjustment for Data Partner and propensity score fine stratification with stratum-specific weighting.

HRs for 90-Day **VTE** Among Patients Hospitalized With COVID-19 vs. Influenza

Cohort	COVID-19 Period 1 Cohort (Apr 1, 2020-Nov 30, 2020)			COVID-19 Period 2 Cohort (Dec 1, 2020-May 31, 2021)		
	No. Patients	No. Events	Weighted Hazard Ratio* (95% CI)	No. Patients	No. Events	Weighted Hazard Ratio* (95% CI)
Overall						
COVID-19	41,443	3,917	1.60 (1.43-1.79)	44,194	4,799	1.89 (1.68-2.12)
Influenza	8,269	440		8,269	440	
All-cause 30-day mortality after inpatient VTE event						
COVID-19	3,917	714	2.96 (1.84-4.76)	4,799	985	3.80 (2.41-6.00)
Influenza	440	24		440	24	

* HRs calculated after adjustment for Data Partner and propensity score fine stratification with stratum-specific weighting.

Conclusions

- Among patients with COVID-19, risk of **ATE** and **VTE** were similar across the study periods
- 90-day risk of **VTE** higher for pts hospitalized with COVID-19 vs. influenza
 - **Apr 2020-Nov 2020**: COVID-19 vaccines unavailable
 - **Dec 2020-May 2021**: COVID-19 vaccines available
- COVID-19 not associated with higher 90-day risk of **ATE** vs. influenza

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