Introduction: Covid-19 is a contagious virus that presents with a spectrum of acute symptoms ranging from upper respiratory tract infections, pyrexia and hepatocellular insults.The first FDA-approved Covid-19 vaccines, Pifzer-BioNTech and Moderna, operate via targeting viral mRNA, and exhibit high efficacy relative to vaccines conferring adaptive immunity through conventional means, including viral vectors (AstraZenica-Oxford) and inactivated viruses (Sinopharm). However, their most efficient use is currently being investigated based on vial concentration, dose and safety. Moreover, the optimal interval period between administering these vaccines' (post)secondary inoculations remains unclear as countries must choose between following the vaccination schedules of their denizens versus vaccinating more of their inhabitants and evaluating the non-maleficence ethical principle on those receiving the first dose.
This systematic review encompasses the current literature to estimate the most suitable time intervals for administering these vaccines in humans.

Materials/Methods:This longtudinal systematic review searched 7 published articles from NCBI, PubMed, BMJ, Databases to determine the impact of the time interval between administering consecutive Covid-19 vaccines relative to the effectiveness of establishing an acquired immunity. The formulated question using PICO was followed by inclusion and exclusion criteria for the studies.

Results:The published intervals between Covid-19 vaccine doses from FDA found to be ideal. 21days between Pifzer-BioNTech mRNA vaccine first and second dose is considered the shortest along with Sinopharm vaccine. AstraZenica-Oxford has the longest gap of 12weeks. The published studies didn't clarify the exact reason behind the disparity in time interval between Covid-19 vaccine doses and while Short delays in intervals are safe for long-term efficacy, there aren't enough evidence to support the prolonged delay.

Conclusion:A small deviation from the FDA recommended gap between doses is justified to provide immunity for larger proportion of vulnerable residents. However, the number of studies available is limited, more are needed to provide an end.

Vaccine type	Vaccine name	Developer	Clinical stage	Number of doses	Interval between doses	End of clinical trials, market stage
RNA vaccine	BNT162b1	Pifzer-BioNTech	3	2	28 days	21 days
RNA vaccine	mRNA-1273	Moderna	3	2	28 days	28 days
Inactivated viruse	Inactivated virus	Sinopharm	3	2	14days or 21 days	21 days
Viral vector	ChAdOx1 nCoV-19	AstraZenica-Oxford)	3	1	N/A	12 weeks