Table S1. Detailed methodology characteristics of the studies included in the meta-analysis

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| **Study** | **Study design** | **Study period** | **Inclusion criteria** | **Exclusion criteria** | **Primary outcome(s)** | **Findings** |
| Ahn et al., 2021 | observational study used a prospective citywide OHCA registry. | Study period spanned 2 months, starting from February 18, 2020, when the first COVID-19 case was detected in Daegu. The control period spanned from February 18, 2019 to April 17, 2019 | All adults (aged 18 years or older) presenting with OHCA, with presumed cardiac etiology, during the control and study periods | Patients who did not receive resuscitation attempts by EMS, arrests that were witnessed by EMTs, and patients who did not receive resuscitation attempts from the in-hospital medical team owing to a dead on arrival (DOA) status after arriving at the ED | Good neurologic outcome, while the secondary outcome was survival to hospital discharge. | During the COVID-19 pandemic, the response and on-scene times were longer, and good neurologic outcome was significantly lower than that in the control period. |
| Lim et al., 2022 | Prospective, multi-centre registry. | 1 January to 30 June in 2019 and 2020 | Adult OHCA (!18 years old) cases where a call was made to the Singapore Civil Defence Force (SCDF) call centrer. | EMS-witnessed OHCAs and OHCAs with ongoing bystander CPR at time of call. | The presence of barriers to DA-CPR. | Barriers to DA-CPR were encountered more frequently during the COVID-19 pandemic but did not affect callers’ willingness to perform DA-CPR. Distancing measures led to more residential arrests with increases in certain barriers, highlighting opportunities for public education and intervention. |
| Liu et al., 2023 | Retrospective observational epidemiological study. | Group 1 was 2018–2019, before the pandemic, and Group 2 was 2020–2021. | All OHCA adult patients. | OHCA patients aged <20 years, with effective orders of do-not-resuscitate (DNR) without transfer to the hospital for any reason, and with trauma. | ROSC noted during resuscitation and continued ROSC ≥ 24 h. Survival on discharge and discharge with favorable neurological status (Glasgow Coma Scale ≥ 13) were the secondary outcomes. | Patients’ ages and OHCA locations were also discovered to be independently related to survival results. The overall impact of longer EMS rescue times on survival outcomes during the pandemic was not significant, with an exception of the specific group that experienced prolonged rescue times (total EMS time > 21 min). |
| Park et al., 2023 | Cross-sectional study | 2017 to 2019 (Pre-COVID-19 set) and validated it using patients from 2020 (post-COVID-19 set) . | EMS-treated OHCA patients whose cardiac arrest had not been witnessed by EMS providers from 2017 to 2020. | OHCA occurred between January and February in both pre-COVID-19 and post-COVID-19. Patients were also excluded if they had missing or invalid information regarding EMS response time (the time between EMS call and EMS arrival at the scene), EMS scene time (the time interval between EMS arrival on the scene and its departure), first recorded rhythm, or variables pertaining to the time of post-resuscitation care. | Survival to discharge | The effort to create a rapid response system for OHCA patients could have priority for the recovery of survival outcomes in OHCA patients in the post-COVID-19 period. Further studies to recover survival outcomes of OHCA are warranted. |
| Ristau et al., 2022 | Epidemiological cross-sectional study | Non-pandemic period (01.03.2018–28.02.2019); Pandemic period (01.03.2020–28.02.2021) | All cases of OHCA from the two comparison periods in EMS with high data quality. | Not meet inclusion criterias. | Survival to discharge | Survival after OHCA significantly decreased while the bystander resuscitation rate remained stable. However, longer EMS arrival times and fewer cases of witnessed OHCA may have contributed to poorer survival. |
| Tanaka et al., 2023 | Population-based nationwide observational study | 1 January 2017 and 31 December 2020 | OHCA cases | EMS-witnessed cases and cases without any prehospital resuscitation efforts. | Neurologically favourable 1-month (1-M) survival (cerebral performance category = 1 or 2); The secondary outcomes were the rate of bystander CPR, defibrillation by a bystander using PAD, dispatcher-assisted (DA)-CPR attempts, and 1-M survival. | The COVID-19 pandemic increased the bystander CPR rate in association with enhanced DA-CPR attempts and improved the out- comes of elderly patients with OHCAs. |

*Legend: CPR = cardiopulmonary resuscitation; DA-CPR = dispatcher assist cardiopulmonary resuscitation; ED = emergency department; EMS = emergency medical service; OHCA = out-of-hospital cardiac arrest; ROSC = return of spontaneous circulation*