

Impact of COVID-19 pandemic on national cataract surgical rate: An interrupted time-series analysis

Wong Wen Jun¹, Lim Wei Yin¹, Leong Chin Tho¹, Hwong Wen Yea¹, Salowi Mohamad Aziz²

¹Institute for Clinical Research, ²Selayang Hospital

ABSTRACT

Introduction: Elective surgeries were suspended during the national lockdown implemented in March 2020 to curb the spread of the COVID-19 pandemic. Our study aimed to assess the impact of COVID-19 pandemic on national cataract surgical rates. **Methods:** We conducted an interrupted time series analysis of cataract surgeries from 2017 to 2021 in Malaysia to evaluate the change in cataract surgical rates before and after the lockdown. Incidence rate ratios were estimated using a seasonally adjusted Poisson regression model. Stratified analyses were performed to establish whether the effect of the lockdown varied by COVID-19 status of the hospital, sex, and age groups. **Results:** The mean monthly cataract surgical rates before lockdown was 14.1 per 100,000 population with an underlying trend of a 1.0% increase per month. The lockdown was associated with an abrupt 54.0% reduction in monthly rates (95%CI: 0.36-0.60; $p < 0.001$). In May 2020, we observed a gradual recovery in the rates with a peak at 13.8 per 100,000 population in September 2020 although it has not rebounded to its pre-lockdown rate in December 2021. There was no evidence that the effect of the lockdown differed by COVID-status of the hospital, sex, or age groups. **Conclusion:** The initial lockdown period in March 2020 was associated with an immediate reduction in cataract surgical rates to nearly half of its baseline rate. Although cataract surgical rates have marginally trended upward after restrictions were eased, efforts should be taken to restore the delivery of cataract services to its pre-pandemic level to mitigate the negative effects caused by service disruption.