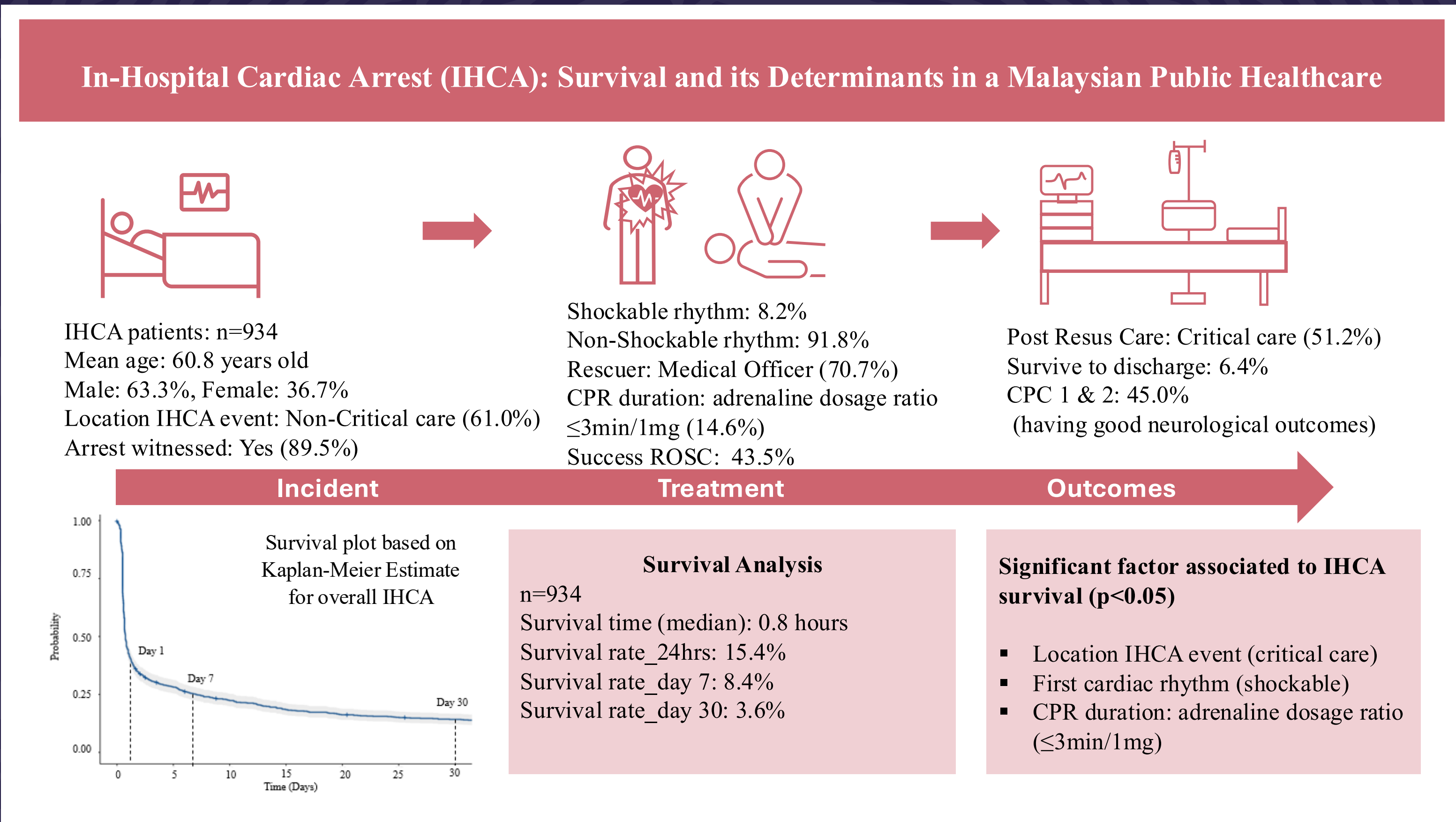


In-hospital cardiac arrest (IHCA): Survival status and its determinants in Malaysian public healthcare

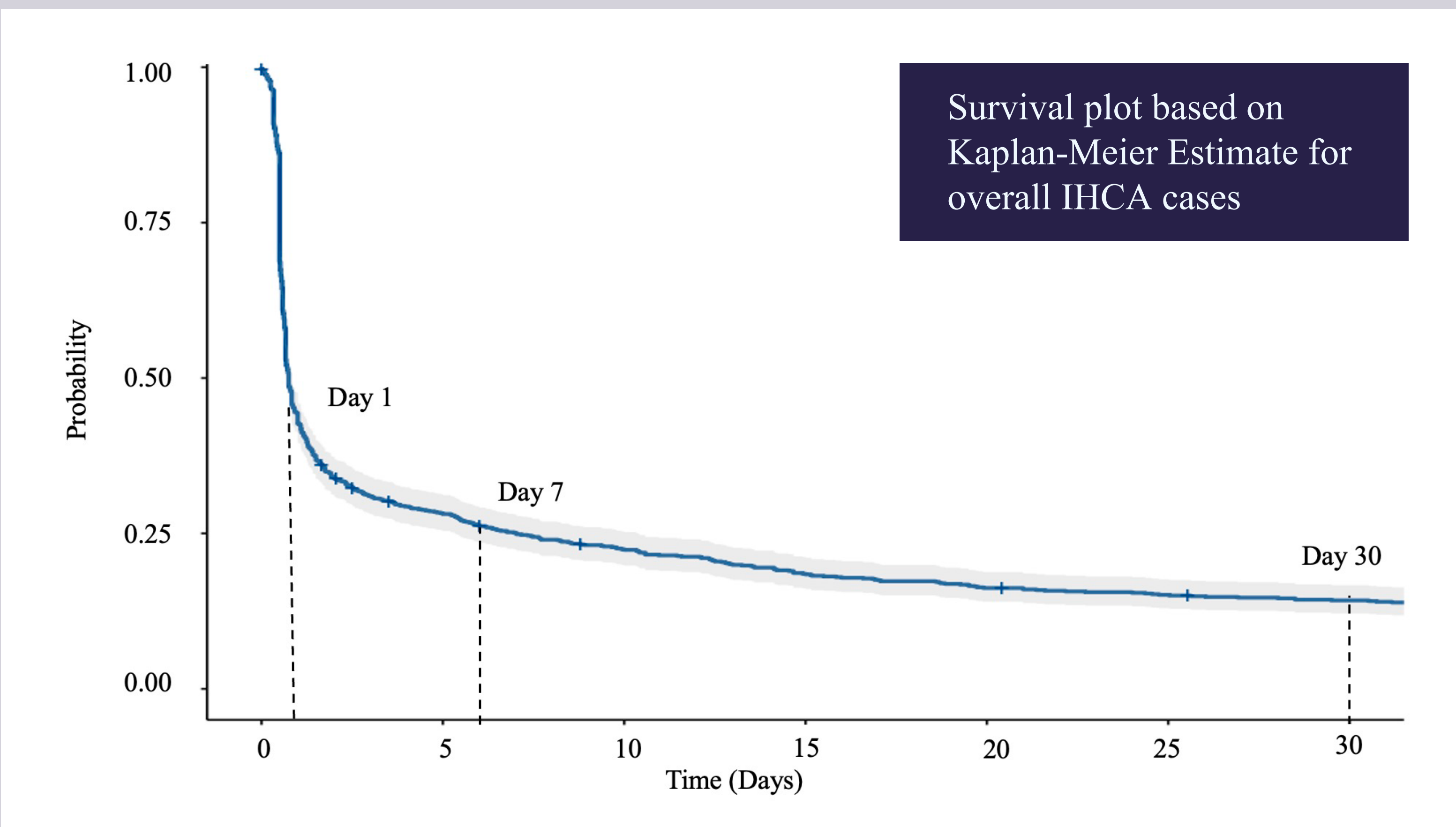
BACKGROUND

In-hospital cardiac arrest (IHCA) remains a significant clinical challenge despite advances in resuscitation and critical care. Enhanced inpatient monitoring and post-IHCA management have improved survival rates and better neurological outcomes at discharge. This study aims to evaluate the IHCA survival rates and analyse key determinants influencing survival status.



METHODS

A cross-sectional study was conducted using retrospective secondary data from a northern referral tertiary public hospital's cardiac arrest registry, encompassing IHCA cases in patients aged 18 and above between February 1, 2018, and January 31, 2019. The data included patient demographics, clinical characteristics, IHCA event timing, return of spontaneous circulation (ROSC), survival status, and post-arrest neurological outcomes. Patient survival was measured from the initiation of resuscitation to discharge or death, with survival analysis performed. Factors associated with IHCA survival were explored using logistic regression.



RESULTS

A total of 934 IHCA cases were analyzed. The mean patient age was 60.8 years, with most being male (63.9%) and of Chinese ethnicity (45.5%). IHCA commonly occurred in non-critical care areas (61.0%), with 79.6% admitted for medical conditions. Successful ROSC was achieved in 43.5% of cases, and 8.2% had a shockable first rhythm. Only 6.4% survived to discharge or 30-day, with 45% having good neurological outcomes.

CONCLUSION

In-hospital cardiac arrest remains a challenge, with low survival-to-discharge rates despite moderate ROSC success, which is associated with arrest location, shockable rhythms, and CPR duration to adrenaline dosage ratio. Enhancing post-arrest care, expanding ICU capacity, and establishing a robust national IHCA registry for comprehensive data collection and monitoring are vital steps toward improving outcomes.