The risk-adjusted post-operative stroke, bleeding requiring blood transfusion, and 90-day readmissions decreased only in elderly vulnerable patients aged ≥80 likely due to increased operator experience over time (2016 to 2019).

The inflation adjusted cost did not improve over time despite decreasing length of stay and increasing early discharge rates over time likely due to increasing procedural costs over time.

The impact of newer generation devices on trends in clinical outcomes in these age groups needs to be evaluated in future studies.

FIGURE 2

The risk-adjusted post-operative stroke, significant bleeding requiring blood transfusion, and 90-day readmission rates improved only in elderly vulnerable patients aged 80 and above, likely due to improving operator experience over time. The younger age group did not show any improvement over time.

Despite improving trends in length of stay and early discharge rates, the inflation adjusted cost has not improved over time, suggesting increased procedural costs over time.

We noted no improvement in in-hospital mortality over time despite risk adjustment, but the mortality has remained low through the period of our study.

CONCLUSION

The number of LAAO procedures increased five-fold in both age groups from 2016 to 2019.

Elderly vulnerable patients who underwent LAOO have likely benefited from increased operator experience over time with improvement in post-operative stroke, hemodynamically significant bleeding, and 90-day readmission rates. The increasing procedural costs have likely blunted the decreasing cost of the hospital stay over time as we noticed no change in inflation adjusted cost despite decreasing length of stay and increasing early discharge rates.

The impact of newer generation devices on trends in clinical outcomes in these age groups needs to be evaluated in future studies.