

Perioperative Deep Vein Thrombosis (DVT) Screening and Prophylaxis in Outpatient Plastic Surgery Centers: An Updated National Assessment of Mortality Rates using QUAD-A Patient Safety Data Reporting

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Introduction

- Thromboprophylaxis refers to measures taken to prevent the formation of blood clots (thrombi) within blood vessels. ¹
- Deep vein thrombosis (DVT) occurs when a blood clot forms in a deep vein, usually in the legs. If a portion of this clot breaks off and travels to the lungs, it can result in a pulmonary embolism (PE), which is a potentially life-threatening condition. ²
- QUAD A, previously known as the American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF), is a reputable, international accrediting body that collaborates with independent medical facilities to elevate the standard of care provided. ³
- This organization accredits a total of 2,969 facilities, including 937 facilities that are either dedicated to plastic surgery or are multispecialty facilities predominantly focusing on plastic surgery.
- Each quarter, these facilities must report any unintended complications through the QUAD A online Patient Safety Data Reporting System (PSDR).
- Within the QUAD-A complication data, cases involving DVT/PE were identified using specific ICD codes pertinent to deep vein thrombosis and pulmonary embolism

Methods

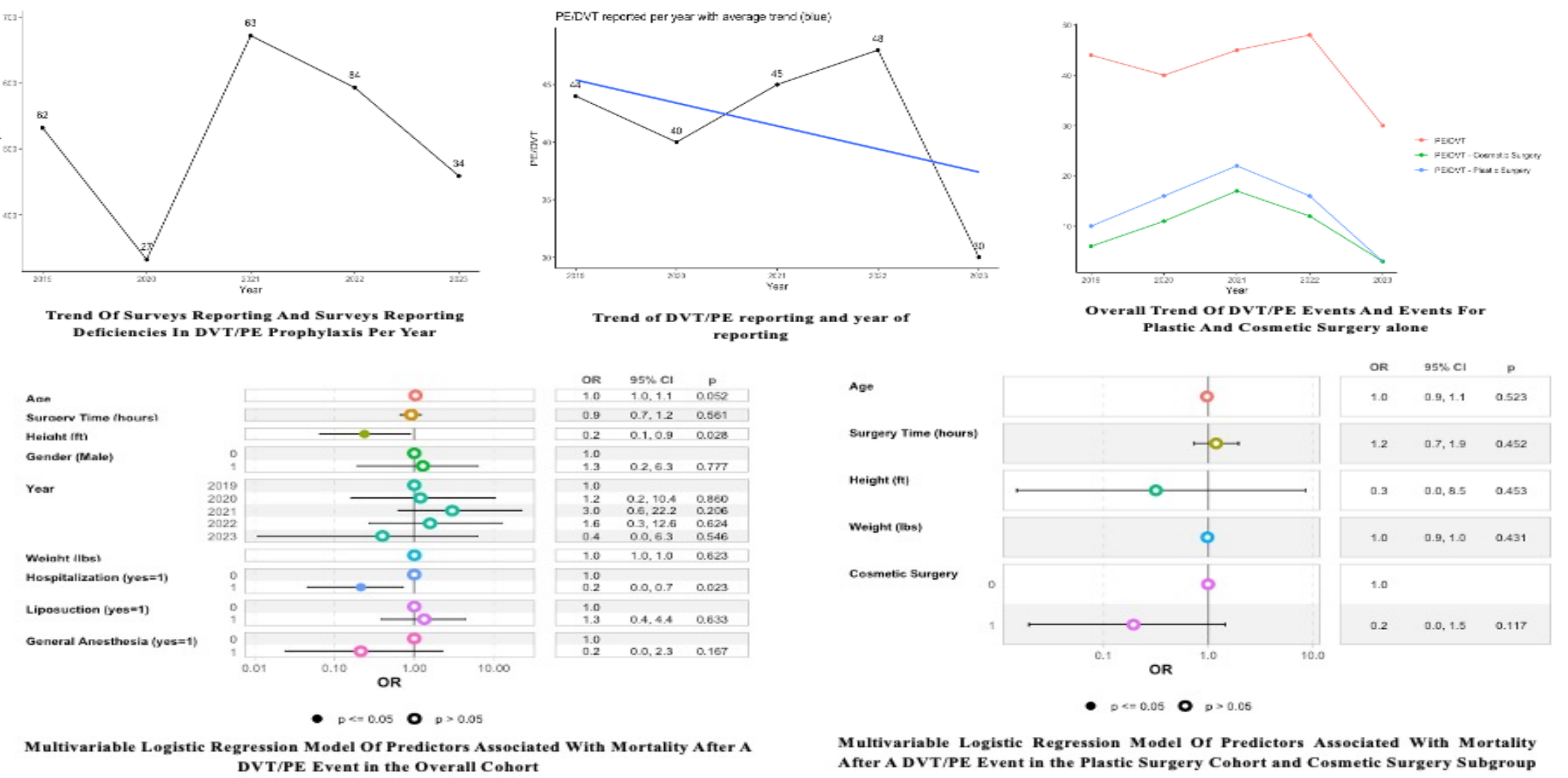
- To investigate the impact of thromboprophylaxis deficiencies on deep vein thrombosis (DVT) and pulmonary embolism (PE) rates in outpatient plastic surgery centers following the implementation of a new patient safety policy by QUAD-A.

Objectives

- Data spanning from 2019 to 2023 from QUAD-A-accredited facilities in the United States were analyzed.
- Statistical analyses, including correlation assessments and multivariable logistic regression modeling, were employed to explore associations and predictors of mortality.

Results

- The average number of surgeries per facility reporting in the "Total Number of Surgeries" field was approximately 141 surgeries.
- A total of 10,135 facilities reported their surgery counts explicitly. The sum of surgeries from facilities that reported their counts was 1,428,616.
- There were 13,594 facilities that did not provide a total surgery count, for which QUAD A used its estimated average to impute data.
- Applying the average of 140 surgeries to the facilities without specific entries yielded an additional estimate of 3,344,808 surgeries across 23,729 reporting entries.
- This comprehensive approach allowed QUAD A to create a robust estimation of total surgeries performed, enhancing the reliability of subsequent analytical processes such as the assessment of procedural complications and adherence to safety protocols.



Conclusion

- Our study provides a critical analysis of mortality rates associated with perioperative DVT and PE in cosmetic outpatient procedures, using data from the QUAD-A Patient Safety Data over a five-year period (2019-2023).
- It identifies a significant link between the adequacy of prophylaxis protocols and the occurrence of thromboembolic events, with centers lacking in DVT/PE prophylaxis reporting higher mortality rates, particularly in high-risk procedures like liposuction.
- Enhanced adherence to prophylactic guidelines is shown to markedly reduce DVT/PE incidence, emphasizing the importance of enforcing standardized, evidence-based prophylactic strategies in outpatient surgical centers.
- Future research should focus on refining prophylaxis guidelines and exploring the integration of personalized risk assessments to further reduce the incidence of life-threatening postoperative events.

References

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