

# INPLASY

## Factors Contributing to Adverse Events in Dental Practice: A Systematic Review

INPLASY202480046

doi: 10.37766/inplasy2024.8.0046

Received: 07 August 2024

Published: 08 August 2024

Abduljawad, AA.

### Corresponding author:

Asaad Abduljawad

asaad.abduljawad@gmail.com

### Author Affiliation:

Umm Alqura university - Mekkah.

### ADMINISTRATIVE INFORMATION

**Support** - None.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202480046

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 August 2024 and was last updated on 08 August 2024.

### INTRODUCTION

**Review question / Objective** It is crucial to understand the factors that contribute to Adverse events in the dental practice, to prevent them and ensure patient safety. This comprehensive systematic review delves into the factors contributing to AEs within dental practice settings, as elucidated through peer-reviewed publications, with the aim of gaining a thorough understanding of the underlying causative elements.

**Rationale** The rationale behind conducting a systematic review on the factors contributing to adverse events (AEs) in dental practice is multifaceted:

**Patient Safety:** Understanding the factors that lead to AEs is crucial for preventing them and ensuring patient safety. By identifying these factors, dental practices can implement strategies to mitigate risks and enhance the quality of care provided to patients.

**Comprehensive Analysis:** This systematic review aims to provide a thorough understanding of the underlying causative elements of AEs by analyzing peer-reviewed publications. This comprehensive approach helps in identifying patterns, common factors, and unique circumstances that contribute to AEs in dental settings.

**Evidence-Based Recommendations:** By synthesizing information from various studies, the review can offer evidence-based recommendations for improving patient safety. These recommendations can guide dental practitioners, policymakers, and educators in developing protocols and training programs to minimize the occurrence of AEs.

**Quality Improvement:** The insights gained from the review can be used to enhance the overall quality of dental care. By addressing the root causes of AEs, dental practices can improve their procedures, communication, and safety culture, leading to better patient outcomes.

**Condition being studied** Adverse Events (AEs) in Dental Practice: Adverse events in dental practice refer to unintended injuries or complications resulting from dental care, rather than the underlying health condition of the patient. These can include a range of issues such as procedural errors, medication-related problems, and complications from anesthesia. Common examples of AEs in dentistry include:

**Aspiration/Ingestion:** Accidental inhalation or swallowing of dental instruments or materials during procedures.

**Wrong-Site Surgery:** Performing a procedure on the wrong tooth or area of the mouth.

**Hard and Soft Tissue Damage:** Injuries to the teeth, gums, or surrounding tissues during dental procedures.

**Post-Procedural Pain:** Pain that persists or arises after dental treatments, which can sometimes be preventable.

## METHODS

**Search strategy** Web of Science, scopus.

**Participant or population** No patients required.

**Intervention** Policy and standardization intervention.

**Comparator** Standard Protocols vs. Enhanced Safety Protocols: Comparing the incidence of AEs when using standard dental care protocols versus enhanced safety protocols that include additional checks and balances.

**Study designs to be included** Clinical studies on human subjects.

**Eligibility criteria** The study will be included in this review if the study

- Reported on AEs in dental offices.
  - Identified factors contributing to the described AEs.
  - Was published in English.
  - Was published between January 2010 and January 2023.
  - Reported on practitioners' experiences.
- The following types of studies were excluded from the review:
- Reviews, meta-analyses, case reports, errata, letters, and study protocols.
  - Studies that did not report on the factors leading to the adverse events.

- Studies involving concomitant procedures on other organs or parts of the body.
- Studies on non-human subjects.
- Studies without online access to their full text.

**Information sources** Electronic databases.

### Main outcome(s)

1) Effect Measures

2) Incidence Rates

Severity of AEs: AEs classified based on severity, ranging from minor (temporary discomfort) to severe (permanent damage or life-threatening conditions).

3) Contributing Factors: Key factors contributing to AEs included practitioner inexperience, inadequate communication, and failure to adhere to safety protocols.

**Quality assessment / Risk of bias analysis** The Newcastle-Ottawa Scale will be used to assess the methodological quality and the results of the included studies. The criteria used were participant selection, comparability, and study outcomes.

**Strategy of data synthesis** The researcher will extract data from the included studies and tabulate it using a pre-designed template for the current study in Microsoft Excel.

**Subgroup analysis** Age Groups: Type of Dental Procedures: Analyzing AEs associated with various dental procedures such as extractions, fillings, root canals, etc. Practitioner Experience: Comparing AEs based on the experience level of the dental practitioners.

**Sensitivity analysis** Inclusion and exclusion criteria. Dates or timeframe of the studies selected for the systematic review.

**Language restriction** Only English is included.

**Country(ies) involved** Saudi Arabia.

**Keywords** Quality improvement, patient safety, Sentinel events, Adverse events.

### Contributions of each author

Author 1 - Asaad Abduljawad - Only Author and primary investigator.

Email: asaad.abduljawad@gmail.com