

Avoiding Risks in Dental Practice

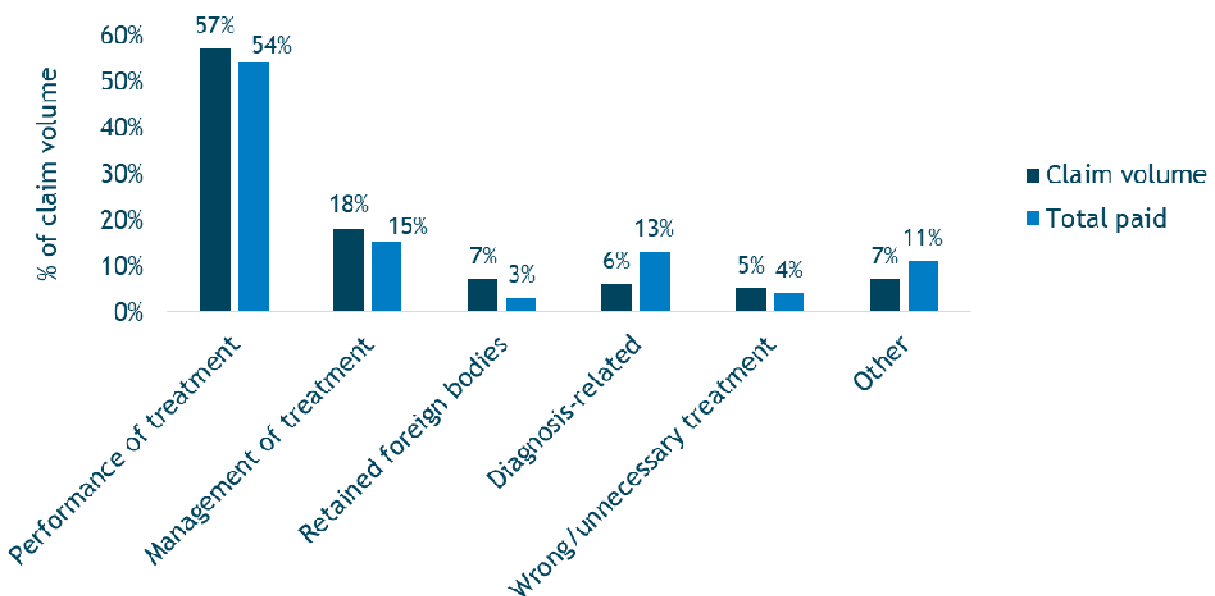


Treatment-related issues, including performance of procedures and management of the dental patient, are among the top allegations against dentists. Root canals, crown and implant procedures are most often noted, and the leading risk factors, which are defined as circumstances that may have contributed to allegations, injuries or initiation of claims, include technical skill, clinical judgment and patient behavioral issues. A search in the data for those claims involving the most significant patient injuries and resolved with significant expense revealed that nerve damage claims, and those involving implant procedures rose to the top. Anesthesia-related events in the dental office, while less frequent, tended to result in some of the highest severity patient injuries and additional dollars paid to defend and/or settle.

Data Overview

The majority of dental allegations and dollars paid involve performance of procedures and management of treatment plans (Figure 1).

Figure 1. Major Case Types & Dollars Paid*

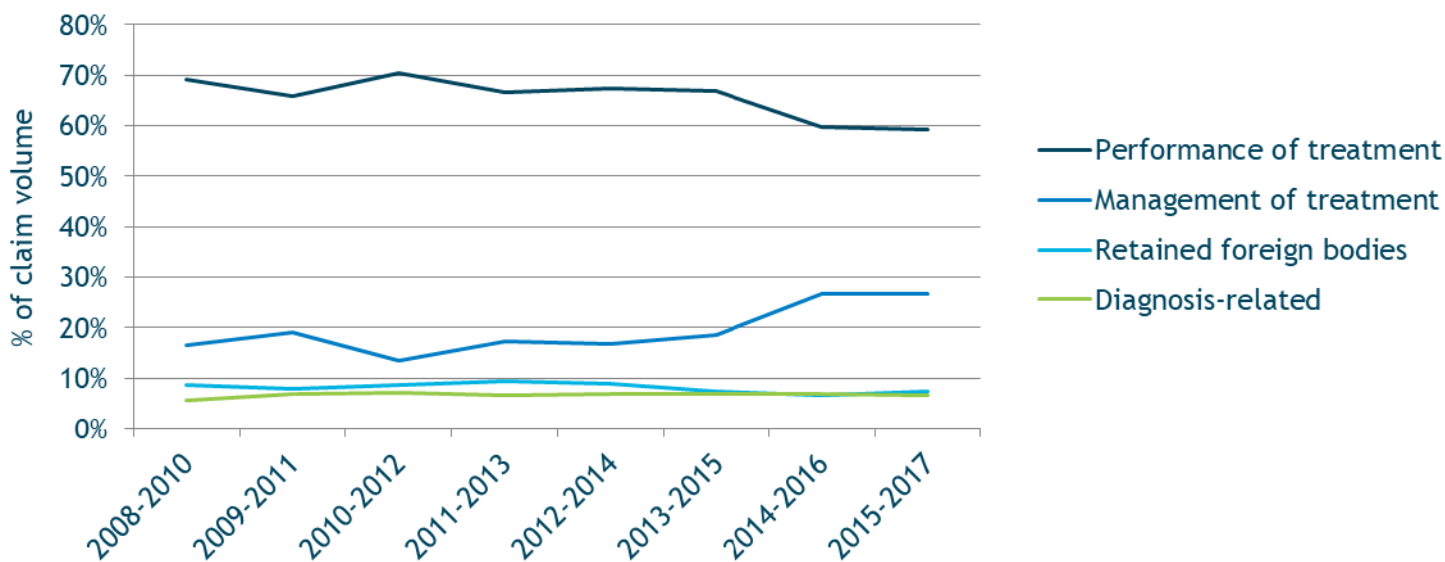


*Total dollars paid = expense + indemnity; approximately one-third of all cases were closed with an indemnity payment.

Diagnostic-related cases primarily involve failures to diagnose oral cancers or periodontitis, and on average, are more expensive than the treatment related cases. The ‘other’ category includes allegations for which no significant case volume exists. Anesthesia-related cases are infrequent, and are included in this ‘other’ bucket of data. Due to the high risk nature of providing anesthesia in a dental office setting, and the dollars expended on these cases, anesthesia-related cases will be examined later in this report.

As demonstrated in Figure 2, treatment-related allegations consistently comprise the bulk of dental cases; management-related cases appear to be trending upwards over the past 3 years.

Figure 2. Top Allegation Trending: Distribution of Case Volume by 3-Year Intervals

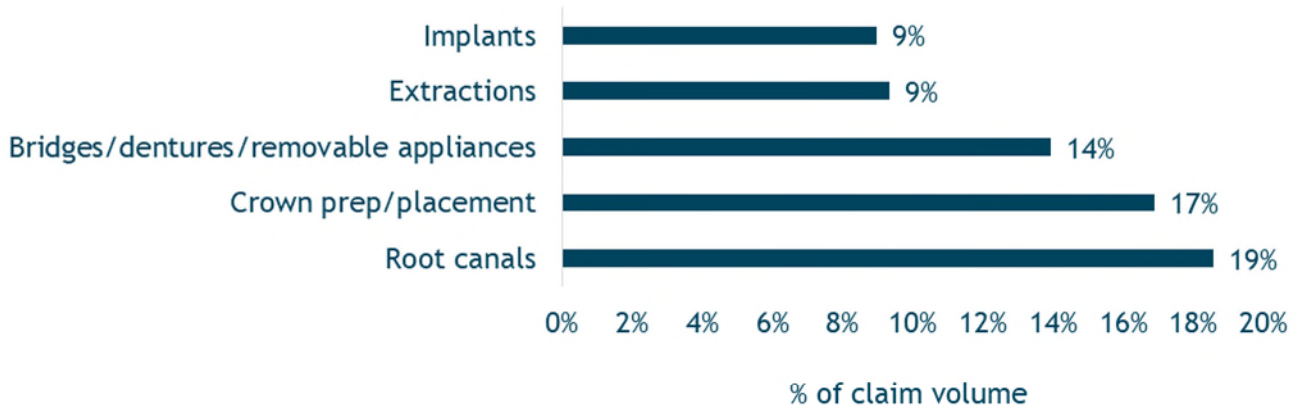


Procedures & Injuries

Root canals, crown preparation/application and dental implants are among the most frequently noted procedures in this data set (Figure 3). Patient injuries associated with these cases are displayed in Figure 4. Of note, 82% of the treatment-related injuries are classified as medium clinical severity (usually non-permanent; if permanent (i.e., nerve damage), these injuries do not have a disabling impact on the patient’s oral function). Ten percent of injuries

involve high clinical severity outcomes, including disabling paresthesia, infections which become septic, or procedures which alter tooth and jaw functionality.

Figure 3. Top Procedures in Treatment-Related Cases



Dental implant cases are, on average, the most expensive to defend, and are more than twice as expensive as root canal and crown-related procedure cases.

Figure 4. Top Patient Injuries* in Treatment-Related Cases



Cases involving nerve damage, while accounting for just 10% of the patient outcomes, are among the most expensive on average, with total dollars paid more than three times that of damaged teeth and more than twice that of infection-related outcomes.

*More than one patient injury type may be noted on a case.

Risk Factors

Adverse dental patient outcomes rarely arise from a single cause; multiple issues might all contribute to an adverse outcome. Analysis of risk factors identified in this data set aids in

the understanding of process of care deficiencies in dental cases. Most cases involve more than one risk factor, and all categories noted in Figure 5 consist of multiple sub-categories (as shown in Figure 5a).

Figure 5. Top Risk Factor Categories

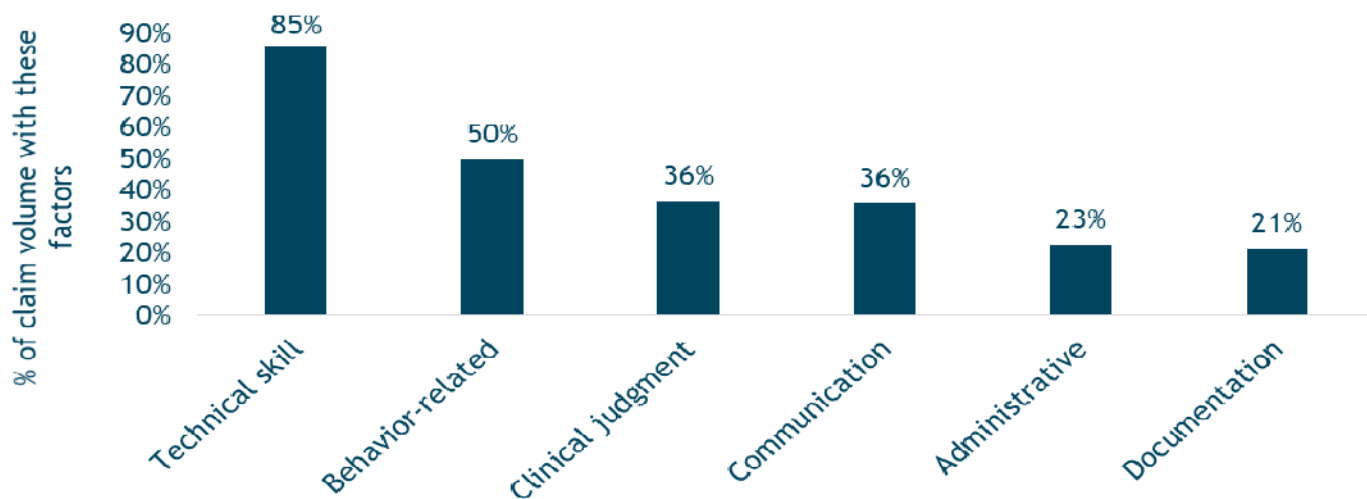


Figure 5a. Top Risk Factors: Listing of Several Often-Noted Sub-Categories

- Technical skill: occurrence of known complications; poor procedural technique
- Behavior-related: patient dissatisfaction; noncompliance with recommended treatment & appointments
- Clinical judgment: dentist's selection of the most appropriate procedure/treatment; failure/delay in obtaining specialty consults/patient referrals
- Communication: rapport with patients/managing their expectations; informed consent process
- Administrative: billing/collection issues
- Documentation: insufficient documentation about both clinical findings/rationale for treatment and informed consent discussions

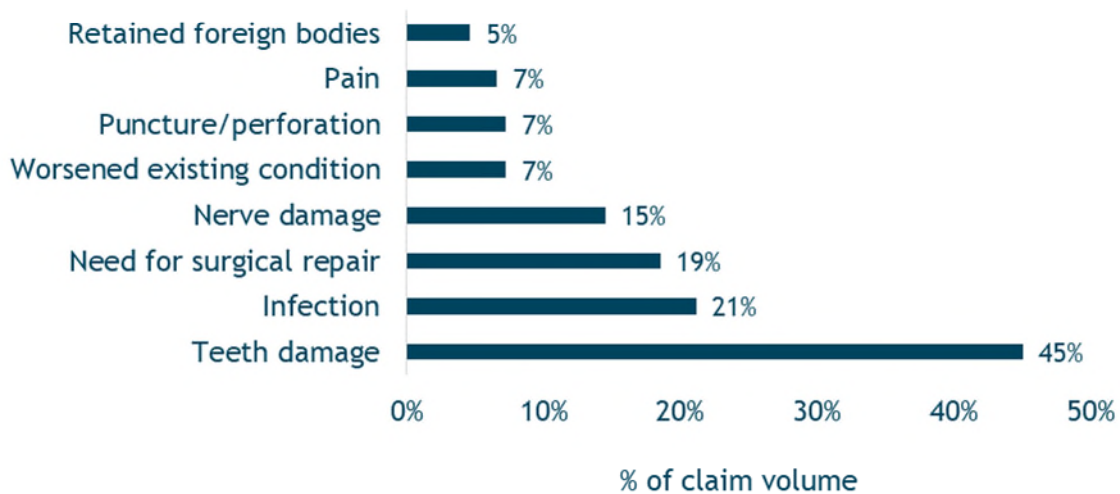
Technical skill factors most frequently indicate the development of known complications and the dentist's recognition of and response to those complications. A robust informed discussion that includes patient consent is key to mitigating the potential for a future medical malpractice claim. In approximately 11% of treatment-related cases where a recognized

procedural complication occurred, an inadequate informed consent process failed to adequately prepare the patient for possible outcomes and helped stoke a patient’s dissatisfaction with care received.

Focus on Dental Implants & Nerve Injuries

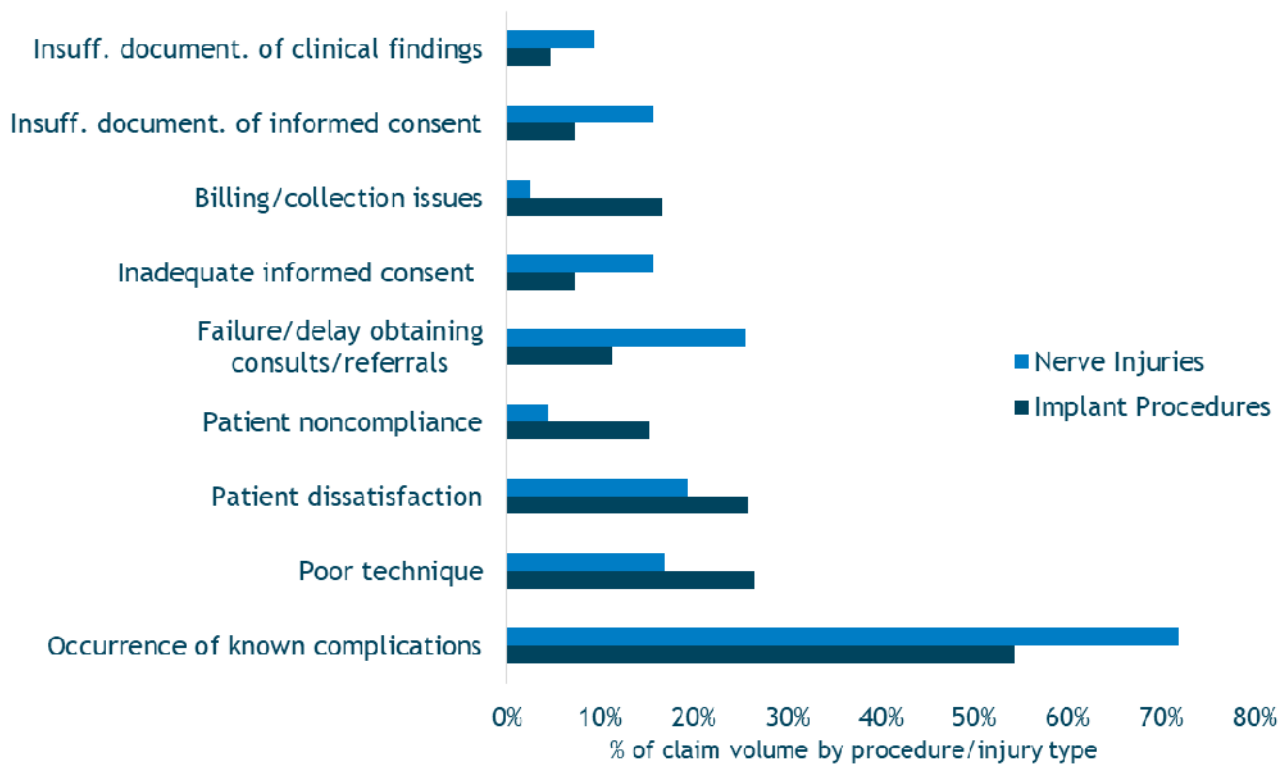
Dental Implants: Cases involving dental implants represent 9% of the treatment-related case volume (Figure 3). As noted earlier, these cases are among the most expensive to resolve, and 50% of them are closed with an indemnity payment. The most frequently identified patient injuries linked to failed dental implant procedures are demonstrated in Figure 6; 13% of them were classified as resulting in a high clinical severity injury for the patient, involving permanent damage.

Figure 6. Injuries in Dental Implant-Related Cases



Nerve Injuries: These injuries are noted most frequently with extractions (29%), root canals (22%), implants (14%), and local anesthetic injections (11%). Almost half of the cases closed with an indemnity payment, and 17% of them are noted to have resulted in a high clinical severity patient injury with lasting consequences.

Figure 7. Risk Factor Details Involving Implant Procedures and Nerve Injuries



Case Study #1: Implant Resulting in Total Hypesthesia of Lip & Chin

An implant was placed on tooth #19 after the patient was informed of all risks of the procedure. The post-procedure x-ray, in hindsight, revealed that the implant may have been resting on the inferior alveolar nerve. The patient reported complete numbness in her lip & chin during several calls and a post-procedure visit and was given the option of having the implant removed. She declined, opting to wait to see if the numbness resolved. She then never returned to the office, and instead sought care elsewhere. Microsurgery performed thereafter resulted in only a slight improvement of the hypesthesia. The surgeon noted that there was insufficient bone for placement of the implant; it was poorly supported and in direct contact with the inferior alveolar nerve.

Risk issues identified: failure to refer patient for specialty consult; poor procedural technique

The case settled in the low six-figure range.

Case Study #2: Extraction Resulting in Trigeminal Neuralgia

The dentist recommended a root canal for tooth #3, but the patient's insurance carrier would not cover the procedure. The patient opted instead for extraction, and per the dentist, verbally consented to the procedure after being informed of the risks. The patient did not sign a consent form, nor was the verbal consent documented in the chart. Extraction resulted in perforation of the right maxillary sinus cavity and a triangular fracture of the patient's jaw due to fusion of the lingual nerve root to the jaw bone. The patient was informed of the injury. One week after the extraction, the patient went to the Emergency Department seeking treatment for pain radiating from the extraction site to the other side of the mouth. The dentist urged the patient to follow up with an oral surgeon, but she refused. Ultimately, the patient required maxillary reconstruction and sinus perforation repair. She sustained a permanent trigeminal neuralgia and suffers from a right-sided facial droop accompanied by chronic pain and sinus problems.

Risk issues identified: patient dissatisfaction; inadequate informed consent; insufficient documentation about informed consent; occurrence of a known (albeit rare) complication

The case settled in the mid-six figure range.

Focus on Anesthesia-Related Emergencies

Anesthesia-related cases were infrequently noted in this data set, but when they did occur, they were the most expensive to defend (75% were closed with an indemnity payment) and on average, resulted in the most severe patient injuries (including respiratory arrest, hypoxic brain injury, and death). Allegations of improper administration of anesthetic medications and improper management of patients under anesthesia were most common.

Clinical judgment risk factors were frequently seen in these cases, including the dentists' selection of the most appropriate combination of medications, and inadequate assessments of

the patients and their medical history prior to the procedure (to better glean co-morbidities and past history of pain/anesthetic medication reactions).

Case Study #3: Failure to Promptly Recognize & Respond to Over-Sedation

Prior to undergoing a root canal, the patient expressed her desire for sedation. A combination of anxiety, pain and sleep medications (4mg diazepam, 0.5mg triazolam, 100mg hydroxyzine, 100mg meperidine) were administered. The patient's blood pressure was monitored by the dental assistant, but no baseline oxygen saturation reading was noted. Approximately 15 minutes into the procedure, the patient began snoring, and a pulse oximetry reading revealed an 80% saturation. Her blood pressure elevated, heart rate decreased and her respirations became shallow. Oxygen was administered, and 15 minutes later, naloxone was given, but the patient did not wake up. Forty-five minutes passed before 911 was called. Another anesthetic reversal medication was available, but not given because the dentist had never given it before. Upon arrival of the paramedics, the patient could not be intubated due to clenched teeth. Upon arrival at the hospital, she was intubated and placed on a vent. She endured a complicated hospitalization, but ultimately was discharged. She complained of resulting residual fatigue, lost tooth during intubation, and unfinished dental work.

Risk issues identified: use of inappropriate medications in excessive amounts; failure to recognize the signs of respiratory distress/over-sedation; delay in calling 911; lack of ACLS trained staff; no cardiac monitor on site; and lack of staff training/emergency protocols

The case was settled in the high five-figure range.

Case Study #4: Emergent Intubation Required

The patient presented for placement of two crowns and an implant under general anesthesia (to be administered by a dentist with a specialty in anesthesia) in the dentist's office. The patient expressly denied any past reactions to anesthesia. Pre-procedure vital signs included a blood pressure reading of 171/101, heart rate of 87 and an oxygen saturation level of 88. She was given a breathing treatment which improved the oxygen

saturation to 94%. Medications were given via IV with supplemental oxygen mask. Shortly after administration of IV medications, mask ventilation became more difficult. Upon the first intubation attempt, an obstruction in the posterior pharynx was encountered. Ultimately, a nasal endotracheal tube was passed. Once placed, the dentist noted that the patient had no carotid pulse and no EKG tracing. Staff were instructed to call 911 and chest compressions were begun. The patient's condition had begun to improve upon arrival of the paramedics and the patient was transported to the hospital where she ultimately did recover. Later, the patient's son informed the dentist that his mother had 'always had breathing problems with anesthesia.'

Risk issues identified: inadequate patient assessment; failure to appreciate significance of pre-procedure vital signs

The case was dismissed due to technical legal issues.

Case Study #5: Loss of Consciousness During Nitrous Oxide Administration

The patient presented for a crown preparation procedure and had expressed anxiety about the procedure. With her verbal consent (not documented in the chart), the dentist administered nitrous oxide using a new machine which had just been delivered earlier that day. The patient briefly lost consciousness. The dentist broke open one ampule of amyl nitrate and 911 was called. The patient was transported to the emergency department in stable condition. The office's patient care coordinator entered notes about the event into the patient chart and noted that the patient had been unconscious for 3 minutes. The dentist strongly disputed this (he indicated that the timeframe was but a few seconds), but that note was carried forward into subsequent medical documentation. After extensive medical workup, the patient was ultimately diagnosed with a hypoxic brain injury resulting in permanent disabilities.

During defense of the case, counsel discovered that the patient had been seeking care from a neurologist for migraines and other neurological issues prior to the dental procedure. The

plaintiff's expert opined that the dentist administered an overdose of nitrous oxide, and improperly used the amyl nitrate. The two stances could not be resolved.

Risk issues identified: insufficient documentation of informed consent; improperly utilized equipment; occurrence of a known complication

Ultimately, the case was settled in excess of \$1 million.

Resources

- [Checklist: Informed Consent](#)
- [Twelve Strategies for Improving Communication and Patient Care in Dental Practices](#)

Data Source

MedPro Group closed claims data, 2008-2017

This document should not be construed as medical or legal advice. Because the facts applicable to your situation may vary, or the laws applicable in your jurisdiction may differ, please contact your attorney or other professional advisors if you have any questions related to your legal or medical obligations or rights, state or federal laws, contract interpretation, or other legal questions.

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