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Introduction

This report is an analysis of the aggregated data from MedPro Group’s dental claims opened between 2003 and 2012. The report is designed to provide our insureds with detailed claims data to assist them in purposefully focusing their risk management and patient safety efforts.

Analysis is focused on cases involving traditional dental services; it does not include oral surgery claims. Additionally, data are based on claim counts, not on dollars paid (unless otherwise noted).

The type of claims and the details associated with them should not be interpreted as an actuarial study or financial statement of dollars paid; however, the information may be referenced for issues of relativity.

A Note About MedPro Group Data

MedPro Group has entered into a partnership with CRICO Strategies, a division of the Risk Management Foundation of the Harvard Medical Institutions. Using CRICO’s sophisticated coding taxonomy to code claims data, MedPro Group is better able to identify clinical areas of risk vulnerability.

All data in this report represent a snapshot of MedPro Group’s experience with dental claims, including a deep dive into risk factors that drive these claims.
Dental Claims — Overview

Dental claims identify a dental provider as the responsible service at the time of the situation that gave rise to the claim. Figure 1 shows the volume of dental claims by allegation category.

The most frequent claims for dentists are related to the provision of treatment. These claims primarily involve complications of dental restorations, root canals, tooth extractions, and removable appliances (such as dentures).

Only 8 percent of all allegations against dentists fall outside of the dental treatment category, including:

- Diagnosis-related claims, which primarily involve allegations of failure to diagnose or delay in diagnosis of cancer or periodontitis.

- “Other” claims, which represent the remainder of the data, are claims in which no one category represents a significant individual amount. Allegations in the “other” category include issues with communication and patient safety.

Most of the analysis in this report is based on dental treatment allegations, unless otherwise noted.
Dental Claims — Patient Factors

The majority of dental claims involve adults ages 30–64, and almost two-thirds of claimants are female (see Figures 2 and 3).

Of note, communication difficulty between dental providers and patients is more prevalent with female patients than with males and is specifically related to informed consent and doctor–patient rapport. Communication is one of many contributing factors in dental claims and will be covered more thoroughly later in this report.

Figure 2. Claim Volume by Patient Age, 2003–2012

NOTE: Any totals not equal to 100 percent are the result of rounding.

Figure 3. Claim Volume by Patient Gender, 2003–2012
Dental Claims — Distribution of Allegations

Although allegations related to dental treatment account for the majority of dental claims, a slight increase in the relative frequency of diagnosis-related allegations occurred between 2005 and 2009; however, that increase has leveled off in recent years. Figure 4 shows the distribution of dental allegations over a 10-year period, grouped in overlapping 3-year increments.

Of note, the average total incurred dollars per diagnosis-related claim is three times that of the treatment-related claims. (NOTE: Total incurred dollars = indemnity plus expense dollars reserved on open claims and paid on closed claims.)

NOTE: Any totals not equal to 100 percent are the result of rounding.
Treatment-Related Claims

Allegation Subcategories

Figure 5 shows a breakdown of the top allegation subcategories within treatment-related claims. The technical performance of dental procedures drives more than two-thirds of all claims associated with dental treatment.

Allegations related to managing the course of treatment frequently involve treatment of the wrong tooth.

Retained foreign bodies — an issue most commonly seen in root canal claims — usually involve instruments, including broken files and swallowed/aspirated tools.

The “other” category spans several additional situations, including allegations of unnecessary treatment, delayed treatment, and premature termination of treatment.

NOTE: Top procedures implicated in the performance category can be found on page 10.
Claim Analysis: Improper Performance of Dental Procedure

A patient who had an acute fistula on the upper palate and a history of prior root canals on teeth 14 and 15 presented for treatment.

The dental provider filled the fistula with gutta percha and performed apicoectomies on teeth 14 and 15.

The provider did not note any presurgical discussion of risks, benefits, or treatment alternatives in the patient’s record, and no signed consent form was present.

At some point during the procedures, the sinus membrane was perforated, and the dentist documented a “sinus exposure.” One week later, the patient’s preexisting fistula symptoms had increased, and another dental provider opened the fistula to encourage draining. That provider also prescribed an antibiotic.

The patient ultimately required surgery to correct an oroantral communication of the fistula into the sinus.

Risk Management Issues for This Claim

• Failure to order diagnostic testing and to obtain a consult or referral
• Inadequate technical performance of the procedure
• Insufficient documentation of the informed consent process and of all clinical findings
A patient presented for acute onset of lower jaw and ear pain. The dentist determined that an impacted wisdom tooth (tooth 32) was causing the pain and advised the patient to have the tooth extracted.

The patient agreed and also requested that the dentist extract tooth 4 due to pain. The dentist noted that tooth 4 had mesial decay and needed to be filled only, not extracted.

The patient opted to seek a second opinion. The second dentist noted that teeth 32 and 1 should be extracted (because if tooth 32 is removed, tooth 1 will become nonfunctional, which may lead to impaction, delay, or abscess).

The patient verbally confirmed a desire for the second dentist to extract the upper and lower teeth (tooth 32 and tooth 1, respectively). However, a specific informed consent discussion with the second provider was not conducted, and a signed informed consent form was not included in the patient’s record.

Subsequently, the patient alleged that tooth 1 was wrongly extracted — he wanted tooth 4 removed (even though, from a clinical perspective, tooth 1 was the correct tooth — not tooth 4).

**Risk Management Issues for This Claim**

- Lack of communication among providers, and between the providers and the patient, regarding the patient’s condition and the procedure being performed
- Inadequate informed consent, resulting in the patient’s misunderstanding of, and ultimate dissatisfaction with, the treatment plan
Injury Severity

Most allegations associated with dental treatment involve medium severity injuries, such as tooth damage, nerve injury, and infection.

Figure 6 shows that medium severity injuries account for almost 90 percent of dental treatment claims opened between 2003 and 2012. Figure 7 shows the actual distribution of medium-severity injuries.
Top Contributing Factors

Contributing factors are broad areas of concern that may have contributed to allegations, injuries, or initiation of claims. These factors reflect issues that might be amenable to loss-prevention strategies. A claim can have one or more contributing factors.

As expected, technical skill issues — the broad category of skill associated with the practice of dentistry — is a persistent and recurring factor across treatment-related claims. The majority of claims with identified technical skill issues involve known complications of the procedure, although poor procedural technique and incorrect site issues also are seen.

Behavior-related factors are seen frequently as well, and they most often are related to patients who seek other dental providers because they are dissatisfied with the aesthetics of the work done on their teeth. Patient noncompliance with treatment regimens also is a common theme.

Clinical judgment is another contributing factor in treatment-related claims. Issues with clinical judgment often involve inadequate patient assessment, such as failure to respond to patient concerns, failure or delay in ordering diagnostic testing, and maintaining a narrow diagnostic focus.

Communication risk factors mostly are related to communication between the dentist and the patient/family. The most common issues are failure to obtain informed consent prior to treatment and inadequate disclosure of adverse events. Figure 8 shows the top risk factors that contribute to treatment-related claims.

![Figure 8. Top Contributing Factors in Treatment-Related Claims, 2003-2012](image-url)
Figure 9 shows how risk factors contribute to treatment-related claims over time. When analyzed over 10 years, all but the behavior-related issues have remained relatively flat. As with other specialties, dissatisfied patients are one of the driving forces behind behavior-related risk factors. Other behavioral factors include patients who are noncompliant with treatment regimens and follow-up appointments.

Procedure Types

Figure 10 shows the procedures that are most commonly implicated in allegations related to dental treatment.
Dental Restoration

Almost half of all treatment-related allegations involve dental restoration. Dental restoration involves a variety of procedures, but most predominately crown application, fixed bridge insertion, and placement of prostheses following dental implant procedures.

Recurrent themes in claims involving the application of crowns and bridge work include failure of a crown or bridge following treatment, infections leading to tooth loss, and improper planning for the procedures.

The risk factors associated with restoration claims mirror the risk factors that occur overall in dental claims.

In addition to technical performance issues, other concerns of note include patient dissatisfaction with results, patient noncompliance with treatment plans, failure of providers to respond to repeated patient concerns, and maintaining a narrow diagnostic focus.

Poor provider–patient rapport and inadequate informed consent are the predominant communication factors — and inadequate chart documentation continues to be a recurring issue as well.

Figure 11. Dental Restoration Claims: Top Contributing Factors, 2003–2012

- 88% Technical Skill
- 49% Behavior-Related
- 30% Clinical Judgment
- 27% Communication
- 16% Documentation
Root Canal

Root canal claims include allegations of post-procedure infections, tooth loss due to an incomplete or failed procedure, treatment of the wrong tooth, and perforation of the sinus cavity.

A look at the leading risk factors in root canal claims reveals that poor procedural technique, as a component of the larger technical skill factor, is seen in almost three-quarters of this claim type, as shown in Figure 12.

Inadequate documentation in the dental record of treatment rationale and clinical findings prior to and during treatment also is an issue, as are delays in seeking consults or referrals when the patient’s clinical condition changes.
Tooth Extraction

Tooth extraction claims, like root canal claims, largely involve issues associated with poor procedural technique, such as allegations of resulting temporomandibular joint disorders (TMJ), extraction of the wrong tooth, excessive bleeding post-procedure, and paresthesia.

As Figure 13 shows, other persistent risk factors in extraction claims are heavily related to informed consent — that is, obtaining an adequate consent from the patient and documenting the consent in the patient’s record.
**Diagnosis-Related Claims**

Although allegations of failure to diagnose or delay in diagnosis account for only 5 percent of dental claims opened between 2003 and 2012, these claims result in much higher incurred dollars per claim than the other allegation categories (as noted on page 4). Unlike dental treatment claims, 40 percent of diagnosis-related claims are of high clinical severity, which includes death and permanent injury.

Cancer, specifically advanced stage squamous cell carcinoma, is involved in one-third of diagnosis-related claims, followed by periodontitis, as shown in Figure 14. The “other” category includes TMJ, postoperative infections, and benign neoplasms.

![Figure 14: Diagnosis-Related Allegations by Condition, 2003–2012](image-url)

- **34%** Other
- **23%** Periodontitis
- **9%** Caries
- **34%** Cancer
Top Contributing Factors

The most common risk factors noted in diagnosis-related claims are clinical judgment issues, particularly patient assessment (including maintaining a narrow diagnostic focus).

Behavior-related factors also occur frequently. These issues, such as patient noncompliance with treatment regimens and follow-up appointments, can be disastrous if they contribute to a delay in diagnosis.

Inadequate documentation in the dental record of treatment rationale and clinical findings prior to and during treatment also is an issue.

Figure 15. Diagnosis-Related Claims: Top Contributing Factors, 2003–2012

- 73% Clinical Judgment
- 52% Behavior-Related
- 39% Documentation
- 18% Technical Skill
- 16% Communication
Claim Analysis: 
Delay in Diagnosis of Cancer

The patient presented to his general dentist with complaints of tooth pain and a whitish area on the gum line. An antibiotic was prescribed, and the patient returned 2 months later for periodontal treatment to the same area. The antibiotic was refilled two additional times over the next 2 months. At that time, the patient was referred to an endodontist for evaluation of ongoing tooth pain. Approximately 6 months after the initial visit to the general dentist, the patient had two teeth extracted by an oral/maxillofacial surgeon. A biopsy of the extraction area revealed squamous cell carcinoma.

Six months after the original visit to the general dentist, the patient was diagnosed and treated for Stage IV disease of gingiva, but died less than 1 year after diagnosis.

Plaintiff experts suggested that the malignancy was likely Stage I at the time of initial visit.

Risk Management Issues for This Claim

- Narrow diagnostic focus on infection without consideration of malignancy
- Failure or delay in obtaining a consult or referral
- Failure or delay in ordering diagnostic testing
Key Points

• Treatment-related claims represent the largest claim category for dental providers (92 percent of all claims opened between 2003 and 2012). The majority of these claims involve improper performance of procedures or improper management of treatment.

• The most common injuries in treatment-related claims are tooth damage, nerve injury, and infection.

• Various contributing factors — particularly technical skill — are persistent in treatment-related claims.

• Diagnosis-related claims, although much less frequent, are more costly than treatment-related claims. Diagnosis-related claims most often involve allegations of failure to diagnose or delay in diagnosis of cancer or periodontitis.

• The most common risk factors noted in diagnosis-related claims are clinical judgment issues, particularly patient assessment (including maintaining a narrow diagnostic focus). Behavior-related factors, such as patient noncompliance with treatment regimens and follow-up appointments, also occur frequently.

Dental Risk Strategies

The following strategies may help dental providers improve patient safety and address the factors that contribute to liability risks:

• Enhance technical skills via an ongoing performance improvement program that includes mentoring, proctoring, and continuing education.

• Communicate regularly with patients and parents/caregivers to (a) ensure appropriate informed consent discussions, (b) discuss treatment planning, (c) provide patient or parent/caregiver education, and (d) stress the importance of appropriate follow-up and the need for patients to participate in the plan of care.

• Ensure forms, consent documents, treatment plans, and patient education materials are clear, concise, and easy to read.

• Implement patient screening and selection processes, especially for patients requesting cosmetic procedures.

• Obtain medical clearance prior to procedures when indicated based on current clinical guidelines.

• Arrange timely consultations based on the patient’s clinical presentation (e.g., medically complex, atypical clinical presentation, and/or not within the practitioner’s scope of practice).

• Monitor patient satisfaction and implement patient complaint management policies and procedures.

• Document all clinical findings and discussions with patients, including presence or absence of periodontal disease, cancer, infection, and nerve injury.
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