

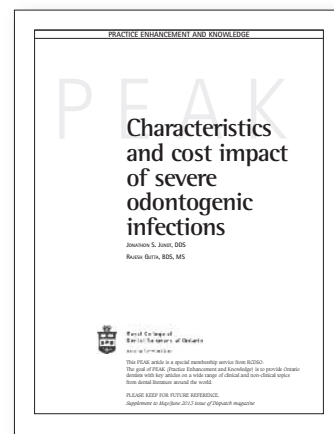
# Characteristics and Cost Impact of Severe Odontogenic Infections

PEAK (Practice Enhancement and Knowledge) is a College service for members. The goal is to regularly provide Ontario dentists with copies of key articles on a wide range of clinical and non-clinical topics from the dental literature around the world.

It is important to note that PEAK articles may contain opinions, views or statements that are not necessarily endorsed by the College. However, PEAK is committed to providing quality material to enhance the knowledge and skills of member dentists.

The impact of severe odontogenic infections is often underestimated. The disease process is insidious and most patients presenting to a hospital emergency department with acute pain of odontogenic origin have experienced multiple warning signs and symptoms leading up to the event.

In the pre-antibiotic era, severe odontogenic infections were frequently associated with mortality. Mortality rates were considerably reduced with the discovery and application of antibiotics. However, the increased use and misuse of antibiotics are associated with the emergence of multiple resistant bacterial strains that now pose a serious public health concern and a growing danger to our modern health care system.



Severe odontogenic infections are always a risk to patients and are a significant economic burden to public health care facilities. Incorrect or late treatment may lead to serious complications that could have been avoided.

To provide a broader perspective on this issue, PEAK is pleased to offer members the following article with the current issue of Dispatch: “Characteristics and Cost Impact of Severe Odontogenic Infections”, from the November 2012 issue of Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology.

The article presents a retrospective analysis of the clinical presentation, surgical management and cost implications of hospital inpatients

treated for odontogenic infections at a public tertiary hospital in the USA.

The study involved a three-year chart review to measure multiple outcomes, including length of stay, cost of hospitalization, site of infection, number of infected spaces,

microbiology profile, antibiotics administered, intensive care unit stay, number of days intubated, comorbidities, number of operating room visits, imaging studies and whether patients received preadmission treatment.

The study found that the average length of stay was 4.57 days at an approximate cost of \$17,842 per patient.

The article notes that, despite strong evidence to the contrary, some general practitioners have the misconception that surgical intervention should be delayed in the presence of dentoalveolar infection to prevent life-threatening complications and allow for better localization of the infectious process.

However, studies have demonstrated that early surgical drainage is associated with faster resolution of infection and decreased use of antibiotics. The delay of definitive care often results in worsening of the patient's condition. The use of antibiotics in these circumstances may predispose to the development of a severe odontogenic infection.

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**KEY POINTS TO CONSIDER:**

- Strategies to improve oral health care through a reduction in the incidence of untreated dental caries would maximize the use of health care resources and likely decrease the incidence of severe odontogenic infections.
- While antibiotics are an essential adjunct to surgical management, their use alone may contribute to worsening of the patient's condition.
- Early diagnosis and definitive surgical intervention of odontogenic infections portend a better prognosis.
- General practitioners must be able to recognize the classical signs of severe odontogenic infections, so that referral to the appropriate health care professional can be expedited. This referral could be life-saving.

**COLLEGE CONTACT**

Dr. Michael Gardner – Manager, Quality Assurance  
 416-934-5611 1-800-565-4591  
 mgardner@redso.org