Acquired palate defects secondary to tooth extraction are either acute or chronic. Acute oronasal fistula following tooth extraction is diagnosed by direct visualization of the nasal cavity or observing nasal hemorrhage at the nares. This usually occurs following canine tooth extraction or extraction of teeth with severe periodontal disease leading to direct communication with the nasal cavity. Acute oronasal fistula is treated by elevating a buccal mucosal flap using a #15 scalpel blade or a periosteal elevator. Flap mobility and working length is enhanced by incising the periosteum at the flap base. Care is taken not to incise mucosa. The flap is sutured to hard palate mucosa using 3-0 or 4-0 synthetic absorbable material. Single-layer, primary intention healing is usually sufficient to prevent recurrence and chronic oronasal fistula.

A two-layer flap may be required to repair chronic oronasal fistula. There are three anatomic locations for flap development: 1) the mucosa of the periphery of the fistula; 2) buccal mucosa, and 3) hard palate mucoperiosteum. Therefore, two of these locations should be utilized. The clinician may decide which flaps to use in which position. However, the first flap must provide an epithelial surface for the nasal cavity. The submucosal surface of the first flap lies in the oral cavity. The second flap is designed to cover the submucosal surface of the first flap and also provide an epithelial surface for the oral cavity. Suture is placed in a simple interrupted pattern using 3-0 or 4-0 synthetic absorbable material.
Hard Palate Elevation to Augment Oronasal Fistula Repair

INDICATIONS
Mucoperiosteum elevation for oronasal fistula repair

DESCRIPTION OF THE PROCEDURE
The patient is positioned in dorsal recumbency with the neck extended. The neck is positioned over an elevated, padded area (rolled towel) and stabilized by taping the maxilla to the operating table. The mandible is suspended to open the mouth maximally. The mucoperiosteum is incised along the palatal aspect of the rostral dental arcade. A sharp periosteal elevator is used to undermine and elevate the hard palate mucoperiosteum. The caudal limit of dissection is marked by the exit of the major palatine arteries from the major palatine foramen. Hard palate mucoperiosteum may be used as a component of chronic oronasal fistula repair. Lateral and medial flaps are developed from healed perifistula tissue. The width of each flap is 1/2 the diameter of the fistula. The flaps are inverted to provide a nasal mucosal surface. The hard palate mucoperiosteal flap is placed over the submucosal surface of the newly positioned nasal mucosa.

CLOSURE
The small perifistula flaps and hard palate mucoperiosteal flap are sutured in place using synthetic absorbable suture in simple interrupted patterns. The soft tissue defect over the hard palate heals by epithelialization.

COMMENTS
A buccal mucosal flap may be elevated and positioned to provide a nasal mucosal surface as the first layer for repair of acute oronasal fistula. The hard palate mucoperiosteal flap is used as described to provide the second, oral mucosal surface.