

- Risk, harm, cost: Procedural discomfort, cost of the procedure, lack of availability, risks of topical medications (anesthetics and decongestants), nasal bleeding risk from endoscopy
- Benefit-harm assessment: Balance of benefits and harms
- Value judgments: None
- Intentional vagueness: The term *unrecognized pathology* was used, as multiple conditions could warrant nasal endoscopy for further evaluation in a patient with nosebleed
- Role of patient preferences: Large
- Exclusions: None
- Policy level: Option
- Differences of opinion: None

Supporting Text

The purpose of these statements is to make clinicians aware of the benefit of evaluating the nasal cavity and nasopharynx with nasal endoscopy with rigid or flexible scopes in certain patients with epistaxis. While anterior rhinoscopy generally allows for examination of at least the anterior one-third of the nasal cavity, nasal endoscopy provides magnification of anterior nasal structures and a direct view of posterior nasal structures and the nasopharynx. This procedure may aid in localization of the site of bleeding (either anterior or posterior) and direct treatment of active or recurrent bleeding.^{7,85} Statement 7a recommends that nasal endoscopy be performed for those patients with persistent bleeding, who likely have a high risk of either bleeding from a posterior source or bleeding secondary to underlying nasal pathology. Patients for whom these conditions are of particular concern include those who have persistent or recurrent bleeding after normal efforts to control bleeding have failed and those who have recurrent unilateral bleeding. Statement 7b gives clinicians the option to perform nasal endoscopy for patients who do not meet the criteria for statement 7a but who have bleeding that is difficult to control or who have additional nasal symptoms that raise concern for additional pathology that may contribute to bleeding.

Nasal endoscopy should be performed for those patients who have recurrent bleeding after initial control with cautery or nasal packing. Such recurrence of epistaxis is seen more commonly in those patients with bleeding from areas other than Kiesselbach's plexus and when the site of bleeding is not located on initial evaluation.^{9,75,77} With nasal endoscopy, the bleeding site can be localized in 87% to 93% of cases.⁷ Posterior epistaxis can occur from locations on the septum (70%) or the lateral nasal wall (24%), making targeted therapy difficult without endoscopic identification of the source of bleeding.⁸⁵

Recurrent unilateral epistaxis, especially when associated with unilateral nasal obstruction, may be a sign of a nasal or nasopharyngeal mass or foreign body and should prompt evaluation with endoscopy of the nose and nasopharynx.

Nasal masses—which include benign lesions such as pyogenic granuloma, benign but locally aggressive tumors such as juvenile nasopharyngeal angiofibroma, and nasal or nasopharyngeal malignancies—may have nosebleed as the initial or major symptom. Juvenile nasopharyngeal angiofibroma, a rare tumor that occurs in adolescent male patients, presents with unilateral, unprovoked, and typically profuse unilateral epistaxis in 60% to 76% of patients.^{86,87} Examination of the posterior nasal cavity and nasopharynx is recommended in adolescent male patients with these symptoms.⁸⁷ Nasal malignancies present with unilateral nasal obstruction in 66.7% and epistaxis in 55% of cases, and these tumors may not be visible on anterior rhinoscopy.⁸⁸ While these conditions are rare, life-threatening bleeding has been associated with delayed diagnosis.⁸⁶

Nasal foreign bodies are a common issue in children, and delay in diagnosis is not uncommon. Common presenting symptoms of nasal foreign body include unilateral epistaxis, rhinorrhea, and foul smell. In a large case series, epistaxis was the presenting symptom in 7% of patients with a nasal foreign body. Bleeding was associated with the presence of a nasal foreign body or with removal of the foreign body in 30% of the cases.⁸⁹ Delay in diagnosis of a nasal foreign body can result in morbidity, including nasal infection, sinusitis, and nasal septal perforations or synechiae.⁸⁹ Morbidity is of even greater concern when the undetected foreign body is a disk battery, as retained batteries can cause tissue necrosis and septal perforation can occur in as little as 3 hours.⁹⁰ Nasal endoscopy may allow rapid and complete nasal examination to exclude foreign body not seen with anterior rhinoscopy.

While the conditions listed here warrant evaluation with nasal endoscopy, they are not an exhaustive list of indications for endoscopy in the management of patients with epistaxis. Even when a suspected bleeding site is identified and/or controlled in Kiesselbach's plexus, evaluation with nasal endoscopy may still be indicated, particularly if bleeding was unusually difficult to control or if clinical symptoms or signs exist alerting the clinician to additional bleeding sites or intranasal pathology. The recent French Society of Otorhinolaryngology guidelines for adults with epistaxis recommend nasal endoscopy in the evaluation of all patients with epistaxis, even when ectasia of Kiesselbach's plexus is seen.⁵⁰ The decision to proceed with nasal endoscopy in less severe nosebleeds should be discussed with the patient or caregiver, with the benefits of the procedure weighed against the risks.

STATEMENT 8. APPROPRIATE INTERVENTIONS FOR IDENTIFIED BLEEDING SITE: The clinician should treat patients with an identified site of bleeding with an appropriate intervention, which may include one or more of the following: topical vasoconstrictors, nasal cautery, and moisturizing or lubricating agents. *Recommendation based on randomized controlled trials and a systematic review with a preponderance of benefit over harm.*