

Improving patient compliance with preoperative universal decolonization to reduce SSI and costs

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Title: Improving patient compliance with preoperative universal decolonization to reduce surgical infection rate and costs

Conflict of interest: none

Statement of research and objectives: In order to address spine patient non-compliance with preoperative nasal decolonization, a trial was undertaken to replace nasal povidone iodine (PVI) with alcohol based nasal antiseptic paired with chlorhexidine (CHG) bathing for all spine fusion and laminectomy patients for a period of three months.

Methods: In addition to preoperative CHG bathing already in place, an alcohol based nasal antiseptic was applied to the nose of all spine surgery fusion and laminectomy patients within one hour of surgery instead of the PVI nasal antiseptic that had been in use previously.

Findings: After switching to the alcohol based nasal antiseptic, there was a reduction in surgical site infections (SSI) of 64% from 0.58 to 0.21/100 spine fusion procedures and a reduction in SSI of 100% from 0.46 to 0.00/100 laminectomy procedures. This represents an estimated cost avoidance of \$127K associated with infections prevented. There was also a \$37K cost savings resulting from switching from nasal PVI to alcohol based nasal antiseptic, with patients reporting greater satisfaction.

Conclusions: Universal preoperative decolonization for spine fusion and laminectomy patients using an alcohol based nasal antiseptic and CHG bathing resulted in reduced infection rates and associated costs, reduced nasal antiseptic cost and improved patient satisfaction.

Statement of research and objectives: In order to address spine patient non-compliance with preoperative nasal decolonization, a trial was undertaken to replace nasal povidone iodine (PVI) with alcohol based nasal antiseptic paired with preoperative bathing with chlorhexidine (CHG) foam soap, for all spine fusion and laminectomy patients for a period of three months.

Methods: In addition to preoperative bathing with CHG foam soap, which was already in place, an alcohol based nasal antiseptic was applied to the nose of all spine surgery fusion and laminectomy patients within one hour of surgery instead of the PVI nasal antiseptic that had been in use previously.



Implementation Tips:

- The biggest challenge that we faced but were able to overcome, was getting documentation built into the EMR to document usage of the nasal antiseptic..
- Education of the staff is so important so that they understand the benefit of using a nasal antiseptic.
- The training and support from the vendor partner was very important and helpful.
- We were already using the nasal PVI product so it wasn't too hard to make the switch.
- The patients found the use of the alcohol-based antiseptic to be a pleasant experience.

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Conclusions: Universal preoperative decolonization for spine fusion and laminectomy patients using an alcohol based nasal antiseptic and CHG bathing resulted in reduced infection rates and associated costs, reduced nasal antiseptic cost and improved patient satisfaction.



- **64% reduction Spine SSI**
- **100% reduction Laminectomy SSI**



**\$127,000 + 37,000 =
\$164,000 annual cost
avoided**

No conflict of interest