monitoring system, bolstered with machine-learning forecasting, to provide real-time clinical decision support to anesthesia providers in the operating room (OR). In the ACT randomized control trial, alerts are generated during surgical procedures and ORs are randomized to receive ACT input based on alerts or not. We were interested in determining the effect of the ACT on infectious outcomes. **Methods:** We used the existing ACT study design, a randomized control trial, to determine the impact of the ACT monitoring system above on SSI, CLABSI and CAUTI. HAI surveillance was performed by IP specialists using CDC NHSN definitions for SSI, CLABSI and CAUTI. We included CABG, colon, abdominal hysterectomy, hip, and knee arthroplasty procedures performed during ACT hours of operation from July 1, 2018 to January 31, 2023 and compared outcomes among patients by randomization to receive ACT. Here, we report on the intention-to-treat analysis based on randomization status. **Results:** The final cohort included 8,993 procedure dates including 862 CABG procedures, 2,654 colon surgeries, 2,732 abdominal hysterectomies, 2,105 hip arthroplasties, and 833 knee arthroplasties. Baseline characteristics (e.g. age, comorbidities, wound class) were balanced by randomization status. Characteristics captured during the procedure (e.g., temperature, oxygen) were also similar by randomization status. The infectious outcomes revealed that there was no difference in likelihood of SSI (4.0% vs 4.0%), 60-day CLABSI (0.2% vs 0.3%), or 60-day CAUTI (0.0% vs 0.1%) whether the procedure was randomized to receive ACT input or not. Thirty-day mortality (2.0% vs 1.9%) and readmission (16.6% vs 15.9%) did not differ by randomization. **Conclusions:** In this intention-to-treat analysis of the impact of a novel anesthesiology monitoring system on HAI outcomes, we did not find a difference in the incidence of SSI, CLABSI or CAUTI. Next, we will analyze the study data in a per-protocol fashion. This RCT was conducted in a resource-rich environment with robustly implemented best practice where a second layer of anesthesiology supervision may confer little benefit. The concept of an ACT may still be helpful in resource-limited settings.

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The Effectiveness of In-Hospital Continuous Masking Policies In Reducing Respiratory Viral Infection Risk: A Systematic Review
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Respiratory viral infection (RVI) outbreaks pose a significant threat to health. They are associated with patient morbidity and mortality, staff absenteeism, and financial burden on the healthcare system. There is a need for strategies to reduce RVI transmission in hospitals. One proposal is implementation of continuous masking policies. However, the effectiveness of such policies in mitigating RVI spread is unclear. We conducted a systematic review of the literature to determine the effectiveness of continuous masking in reducing the incidence and transmission of RVIs amongst patients and healthcare workers (HCWs) in hospitals. We systematically searched for original articles published between 2000-2024 according to a pre-determined search criterion. Studies were screened by two reviewers in Covidence. One reviewer extracted the data from eligible studies into a pre-determined data extraction form. For studies that reported only count data, results were summarized narratively. Meta-analysis to pool unadjusted or adjusted outcome measures for studies that report a statistical comparison between masking policies and transmission of infections will be considered if appropriate. Joanna Briggs Institute tools will be used for critical appraisal. 3691 studies were identified. 17 met eligibility criteria. 12 studies were conducted in single-center adult hospitals. 4 studies were conducted in pediatric hospitals, with 2 in neonatal centers. One study was conducted on a hospital system. The studied infections were influenza A/B, parainfluenza 1-3, adenovirus, respiratory syncytial virus (RSV), traditional human coronavirus strains, human metapneumovirus, SARS-CoV-2, and rhinovirus/enterovirus. Eight studies assessed the impact of a masking policy on infection rate in patients. All 8 reported masking policies reduce RVI transmission in patients. 9 studies assessed the impact of a masking policy on infection rate in HCWs. 7 were associated with reductions in RVI transmission in HCWs, whereas 2 showed no statistically significant change. The studies identified in this systematic review were associated with a reduction in RVI transmission with the use of continuous masking amongst patients. The evidence for continuous masking was less consistent for preventing RVI transmission amongst HCW with two studies reporting it was not effective. Our findings suggest that masking policies may play a role in RVI prevention but there are significant limitations with the use of observational design and masking in conjunction with other prevention measures. However, assessment of the quality of the papers is pending. Future directions will include assessing secondary outcomes like masking adherence and assessing adjusted analyses form confounding which are critically important.

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Appropriate De-Escalation of Contact Precautions in Patients with Discordant C. difficile PCR+/Toxin- Testing
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Background: Contact precautions reduce nosocomial spread of Clostridioides difficile (C. difficile). However, they can decrease patient interactions with providers and delay discharges, so it is imperative precautions are discontinued when appropriate. Patients with discordant C. difficile testing (PCR+/Toxin-) require clinical judgment to determine infection versus colonization. Our institution's C. difficile isolation protocol categorizes duration based on C. difficile treatment and type of patient floor to reflect this. We transitioned to a new electronic medical record (EMR) in June 2024, which included additional decision support for Contact precaution discontinuation. Prior to new EMR implementation, we hypothesized that patients with discordant C. difficile testing were not being appropriately de-escalated from precautions despite meeting institutional criteria. **Methods:** This was a retrospective chart review of inpatients admitted to our hospital who had discordant C. difficile testing (PCR+/Toxin-) from July 1, 2023 to October 10, 2023. Patients were excluded if there was no indication of PCR+ (critical value) notification to providers or if patients were on Contact precautions with an additional indication to C. difficile. The primary outcome was the proportion of patients with discordant C. difficile testing who had Contact precautions appropriately discontinued based on internal criteria (Figure 1). **Results:** A total of 90 patients had discordant C. difficile testing during the study period; 10 were excluded. In the study cohort (n=80), 33.8% (27/80) did not have orders placed for Contact precautions at any time despite positive PCR (Figure 2). Of the remaining 53 patients who were placed on Contact precautions, the median start time of Contact precautions after PCR notification was one hour and 20 minutes.