2021 COVID-19 Safer Air Initiative

How We Help Indoor Facilities Plan for Safety and Success

COVID EDUCATION:

Understanding Pathogen behavior and the required Medical Management goals.

KFI Engineers and LifeWings combine aerosol studies, ventilation, engineering, human factors, and medical management to offer HVAC strategies for preventing and controlling COVID-19 in our communities. Since the first of this year, our team of academic and industrial engineers and clinicians has taken a deep dive into respiratory transmission chemistry, biology, and medicine.

We have changed the way schools, healthcare facilities, government buildings, correctional facilities, and other indoor spaces treat the air in their buildings. Because the Safer Air team has a balanced approach to assessment, risk mitigation, and monitoring, our knowledge sharing has made it possible for facilities to open fully even as the pandemic continues.

Step 1: Assessment Phase

Facility assessment for best practice for COVID-19 response

Part A: Expert Clinical and Human Factors assessment of the facilities' policies, procedures, and protocols to ensure epidemic response best practices and meet current facility COVID19 guidelines and regulatory requirements.

Part B: Engineering Assessment of the facilities building systems characteristics for filtration, outside airflow, air-cleaning devices, and room airflow patterns for correct response to COVID-19**.**

Step 2: Implementation Phase

Deliver Rapid HVAC Implementation and "Defense in Depth"

1. Immediate implementation of recommendations
2. Implement Secondary/Intermediate Recommendations
3. Capital Expenditure Recos
4. Deploy Hardwired Safety Tools (HST) and related Standard Work

Step 3: Correction Phase

Continue Implementation / Retro-Commissioning

If a facility lacks the capability of providing adequate heating and cooling to provide occupant comfort and safety, a Retro-Commissioning effort will mobilize.

Most buildings systems are not operating as initially intended and require modifications beyond adjustment and balancing to provide Safe Air.

Step 4: Indoor Air Quality (IAQ) Monitoring Phase

1. Monitoring strategy and considerations
2. Equipment
3. Measuring IAQ and COVID HVAC success

In Summary

There is mounting evidence to support the presence and transmissibility of SARS-CoV-2 through inhalation of airborne viruses. Evidence is strong to require engineering controls targeting airborne transmission as part of an overall HVAC and “defense in depth” strategy to limit indoor infection risks. A multiple barriers approach, including enhanced ventilation, particle filtration, air disinfection, and improved PPE, must be considered to reduce viral transmission risks.