Engineering Controls in Healthcare

The National Institute for Occupational Safety and Health (NIOSH) conducts research on the control of exposure to infectious aerosols and hazardous drugs in healthcare environments. Research includes:

- **Expedient Airborne Infection Isolation:** Public health officials require practical strategies for quickly isolating infectious aerosols during outbreaks or epidemics. NIOSH developed several flexible control solutions to protect patients and workers in healthcare settings, including emergency medical shelters. NIOSH also developed a portable self-contained unit operating off solar or wind in austere environments.
- **Airborne Isolation Protection in Ambulance Modules:** NIOSH is investigating enhanced protection for ambulance medical workers and drivers against airborne and surface exposures. There are currently limited requirements to protect these workers from airborne and surface infectious exposures.
- **Computational Fluid Dynamics and Patient Rooms:** NIOSH joined researchers from the University of Cincinnati to develop Computational Fluid Dynamics models of traditional patient rooms. This collaboative research effort will produce future guidance and recommendations for patient room design.
- **Hazardous Drugs:** NIOSH is leading an initiative to educate healthcare workers on the dangers of nontherapeutic exposure to hazardous drugs. NIOSH will identify and provide guidance to reduce the potential for exposures to occur. NIOSH engineers are researching, identifying, and developing best practices in engineering control design, selection, and evaluation.

DHHS (NIOSH) Publication No. 2012–177

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To learn more about the Engineering Controls in Healthcare or to become a partner, contact the NIOSH Engineering Controls Program at 513–841–4221 or refer to www.cdc.gov/niosh/topics/engcontrols for more information.