

comprehensive measures (0.2% positivity; 95%CI 0-0.4%) were associated with lower post-intervention employee COVID-19 positivity estimates than single measures like asymptomatic PCR testing (1.7%; 95%CI 0.9-2.9%) and universal masking (24%; 95%CI 3.4-55.5%). Modelling studies showed that combinations of (i) timely and widespread contact tracing and case isolation, (ii) facilitating smaller worker cohorts, and (iii) effective use of PPE can reduce workplace transmission. Comprehensive COVID-19 IPC measures incorporating swift contact tracing and case isolation, PPE, and facility zoning, can effectively prevent workplace outbreaks. Masking alone should not be considered as sufficient protection from SARS-CoV-2 outbreaks in workplace environments at high risk of virus transmission.

Key messages:

- Comprehensive contact tracing, syndromic surveillance, regular testing, PPE, and zoning measures can prevent COVID-19 outbreaks in the workplace.
- Masking alone should not be considered as sufficient protection from SARS-CoV-2 outbreaks in workplace environments at high risk of virus transmission.

COVID-19 prevention and control measures in workplace settings: a rapid review and meta-analysis

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Workplaces are high-risk environments for SARS-CoV-2 outbreaks and subsequent community transmission. Identifying, understanding, and implementing effective workplace SARS-CoV-2 infection prevention and control (IPC) measures is critical to protect workers, their families, and communities. A rapid review and meta-analysis were conducted to synthesize evidence assessing the effectiveness of COVID-19 IPC measures implemented in global workplace settings through April 2021. Medline, Embase, PubMed, and Cochrane Library were searched for studies that quantitatively assessed the effectiveness of workplace COVID-19 IPC measures. Included studies comprised varying empirical designs and occupational settings. Measures of interest included surveillance measures, outbreak investigations, personal protective equipment (PPE), changes in work arrangements, and worker education. Sixty-three studies from international healthcare, nursing home, meatpacking, manufacturing, and office settings were included, accounting for ~280,000 employees. Meta-analyses showed that