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Perspective

"Is It Safe for Me to Go to Work?" Risk Stratification for Workers during the Covid-19 Pandemic

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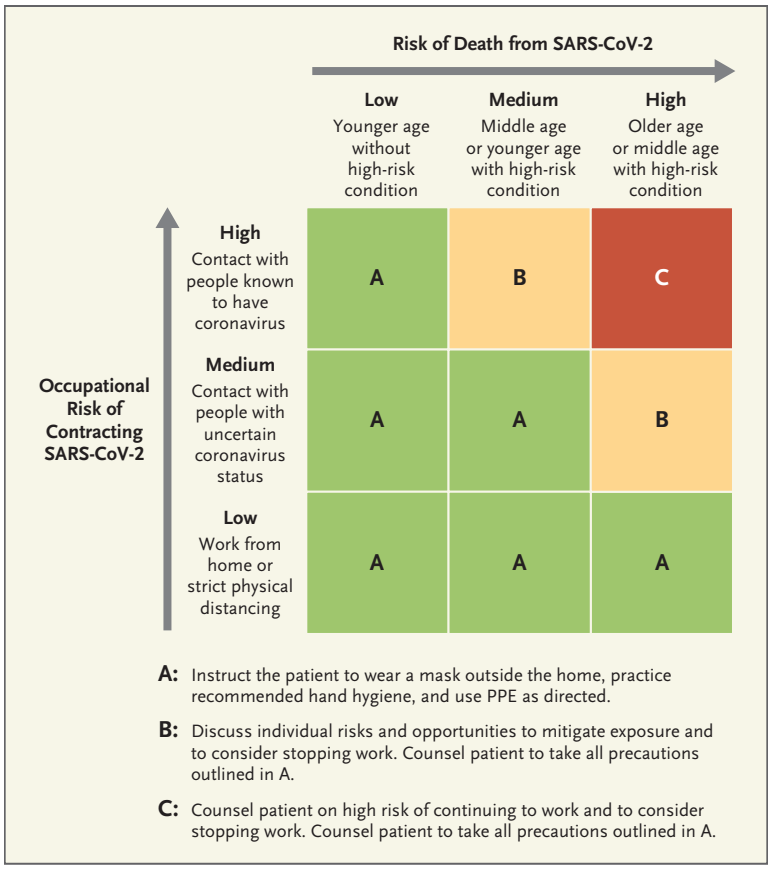
Apprehensively, I dialed Mr. M. for an update. Weeks earlier, he and his wife had tested positive for SARS-CoV-2. A few days before this call, Mr. M. had been discharged from the hospital, since his cough and fever were improving. Unfortunately, Ms. M. had developed worsening breathing, needed more oxygen, and was at that point being transferred to the ICU. Mr. M. picked up the phone, quiet and tearful. "How are you?" I asked.

"Terrible, doctor," he replied. "Maria died last night." She had died, alone, in an ICU. Mr. M. was now mourning her loss, alone, at home. Their children and grandchildren, who live in Europe, mourned at a distance much greater than the recommended 6 feet. As similar scenes play out repeatedly, I find myself saddened and outraged by the inadequacy of our response, which failed to prevent this tragedy for Ms. M. and thousands of patients like her.

Four weeks earlier, as I worked my way through my first telemedicine session of the Covid-19 era, I came to Ms. M. I had become the couple's primary care physician after they emigrated from Europe 5 years ago. Mr. M. has been unable to work, owing to several chronic medical conditions. Ms. M., who was in her 60s, had diabetes and worked in environmental services, cleaning at a nursing home. I called an interpreter, who connected us to Ms. M., and we began our visit.

Our conversation quickly turned to how she could protect herself at work. I recommended that she vigilantly perform hand hygiene, avoid touching her face, and use the personal protective equipment (PPE) recommended by her facility. She was not aware of anyone at the nursing home testing positive for SARS-CoV-2. We never discussed outright whether it was safe for her to continue to work. Although we can't be certain she became infected at work, in retrospect these precautions seem woefully inadequate.

Older people and people with chronic conditions, including diabetes, hypertension, and obesity, have faced higher mortality from Covid-19. In a large case series in China, the case fatality rate was less than 0.5% among people under 50 years of age, 1.3% among those 50 to 59, and 3.6% among those 60 to 69.[1] People with diabetes had a risk of death three times that of the overall cohort. These data suggest that the case fatality rate may approach 10% for people, like Ms. M., who are in their 60s and have diabetes — more than 20 times that among people under 50 without a high-risk chronic condition.



Proposed Framework for Counseling Patients about Working during the Pandemic.

As states enacted stay-at-home advisories or orders, businesses and workers deemed essential were universally excepted from these rules or recommendations. Yet these orders contained no guidance on how to protect essential workers who are at increased risk for poor outcomes because of advanced age or chronic conditions. Data on occupational risk for Covid-19 are not robust. The Centers for Disease Control and Prevention (CDC) reports that health care workers account for at least 11% of reported SARS-CoV-2 infections.[2] One hospital in Spain reported that 11.6% of its 6800 employees tested positive for the virus.[3] In addition, high rates of infection have been reported among workers in transit, grocery, and corrections occupations, in which maintaining safe physical distancing is difficult.

With these odds, should clinicians be advising persons at heightened risk for death from Covid-19 to consider stopping work in settings that confer a high risk of exposure? If a person's occupational risk of becoming infected and risk of death from infection each approaches 10%, their occupational mortality risk becomes 1 in 100 — 10 times the annual occupational mortality risk among commercial fisherman, the highest-risk occupation in the United States.

I believe that a strategy to protect at-risk workers needs at least three components: a framework for counseling patients about the risks posed by continuing to work, urgent policy changes to ensure financial protections for people who are kept out of work, and a data-driven plan for safe reentry into the workforce.

I propose a framework to help clinicians counsel patients about continuing to work in the midst of the pandemic that is based on their occupational risk of contracting SARS-CoV-2 and their risk of death if they are infected (see diagram). Though data on occupational risk are limited, the Occupational Safety and Health Administration has published guidance and proposed a scheme for classifying the risk of SARS-CoV-2 infection as high, medium, or low based on potential contact with persons who may or do have the virus (www.osha.gov/Publications/OSHA3990.pdf). Low-, medium-, and high-risk categories of individual risk of death from Covid-19 are based on age and the presence of high-risk chronic conditions identified by the CDC.[4] Persons with high risk in both domains should consider stopping work, and those with high risk in one domain and medium risk in the other should discuss risk with their clinician. Physicians should also inquire and counsel about risks to household or to other contacts who may be at high risk for poor outcomes.

Many people will be unable to stop working without additional financial support and protections. Our health care system relies on thousands of low-wage workers, including health care aides and environmental services workers to keep facilities clean and operational. Women and minorities are disproportionately represented in these jobs — nearly half of black

female and Latina health care workers earn less than $15 per hour.[5] Forgoing income even for a short period would be devastating to such workers' ability to continue to meet basic needs, including housing, food, and health care. In Massachusetts, being directed to self-quarantine by a medical professional is a qualifying reason to leave work and apply for unemployment insurance (www.masslegalservices.org/covid-19-and-ui). Congressional relief bills could include incentives for employers to provide better options for high-risk workers, including paid leave or voluntary furloughs. The Family and Medical Leave Act could be revised to allow people to take job-protected leave if their clinician determines that they or their family member is at increased risk for poor outcomes from Covid-19.

Finally, a plan is needed for safe workforce reentry for people with elevated individual and occupational risk from Covid-19. More data are needed to further elucidate occupation-specific risks, including data on availability and effectiveness of PPE according to the worker's role; policies mandating reporting of the occupational exposures of people undergoing testing would help fill this need. A combination of reduced community spread and increased testing will be needed, including consideration of universal testing of staff and patients in health care settings. The framework presented here is a starting point to assist clinicians in having conversations with patients regarding decisions about whether or not to work. Along with improved data, we need input from occupational health experts, medical professionals, and professional organizations representing employees in order to establish more specific recommendations, including cutoffs for risk stratification.

As states move to reopen their economies, millions of nonessential employees will join essential employees in putting themselves at risk for contracting SARS-CoV-2 at work. Physicians should engage patients in individualized risk assessments. Our society has the moral imperative and means to provide vulnerable employees a financial safety net until we can better ensure their workplace safety. It is too late for Ms. M., but not for the thousands of our essential partners, children, parents, siblings, and grandparents whom we can still protect.

Names have been changed to protect the family's privacy.

Disclosure forms provided by the author are available at NEJM.org.

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