The World Health Organization and colleagues from the University of Oxford, Imperial College London and Institut Pasteur* have estimated that, since 2016, 1 465 cases of Middle East Respiratory syndrome coronavirus (MERS-CoV) and between 300 and 500 deaths may have been averted due to accelerated global efforts to detect infections early and reduce transmission.

In 2012, a novel virus that had not previously been seen in humans was identified for the first time in a resident from Saudi Arabia. The virus, now known as MERS-CoV, has, as of 31 May 2019, infected more than 2 442 people worldwide. MERS-CoV is a respiratory virus that can cause severe disease and has been fatal in approximately 35% of patients to date. MERS is zoonotic and people are infected from direct or indirect contact with dromedary camels. While the virus has demonstrated limited ability to transmit between people outside of hospitals, it has repeatedly caused large scale outbreaks in health care facilities with severe health, security and economic impacts, most notably in Saudi Arabia in 2014-2016 and the Republic of Korea in 2015. The outbreak in the Republic of Korea in 2015 involved 186 cases and 38 deaths, and had an estimated economic impact of US$12 billion.

In a research letter published in the journal Emerging Infectious Diseases on 8 July 2019 , the researchers analyze case-based data on laboratory-confirmed MERS-CoV infections reported to WHO since 2012. The total number of cases averted, when taking into account reduced camel-to-human and human-to-human transmission, was estimated at 507 (189–967) in 2016, 507 (189–967) in 2017, and 451 (191–855) through September 2018, totaling 1,465 (895–2,165) cases averted and 293 (179–433) expected deaths averted (under the assumption of a 20% CFR) from 2016 through September 2018. Assuming a 35.5% CFR, this estimate corresponds to 520 (318–769) expected deaths averted.

In the letter, the authors write “We believe that affected countries are reducing the global threat of MERS through addressing knowledge gaps with regard to transmission, enhancing surveillance, and strengthening the ability to detect cases early and contain hospital outbreaks.” The authors suggest that the reduction in cases has been achieved through improved infection prevention and control measures that are reducing human-to-human transmission. In addition, restriction of camel movement, stronger and more comprehensive investigations of cases and clusters at the time outbreaks are detected, and increased communication nationally and internationally have been critical in preventing international spread and sustained transmission.

Although global efforts seem to have prevented hundreds of infections and deaths, vigilance and a sense of urgency to deal with this opportunistic infection must not be compromised. More needs to be done to understand MERS-CoV circulation in dromedaries and to limit spillover infections to humans. This will require stronger surveillance of dromedary populations and persons in direct contact with infected herds, coordination between animal and human sectors at the sub-national level and accelerated development of a vaccine for dromedaries. "The international community and affected countries have a collective and shared responsibility to curtail a major health security threat such as MERS in the Middle East and beyond," the

authors conclude.

*Donnelly CA, Malik MR, Elkholy A, Cauchemez S, Van Kerkhove MD. Worldwide reduction in MERS cases and deaths since 2016. Emerg Infect Dis. 2019 Sep.ÂÂ https://doi.org/10.3201/eid2509.190143