

Home care for patients with suspected novel coronavirus (nCoV) infection presenting with mild symptoms and management of contacts

Interim guidance
20 January 2020

WHO/nCov/IPC_HomeCare/2020.1



Preamble

WHO has developed this rapid advice note to meet the need for recommendations on the safe home care for patients with suspected novel coronavirus (2019-nCoV) infection presenting with mild symptoms and public health measures related to management of asymptomatic contacts.

The document is informed by evidence-based guidelines published by WHO, including *Infection prevention and control of epidemic- and pandemic-prone acute respiratory diseases in health care: WHO interim guidance (1)*, and based on the current information available regarding the 2019-nCoV infection.

This document is adapted from the original version addressing MERS-CoV, which was published [in June 2018](#).

This rapid advice is intended for public health and infection prevention and control (IPC) professionals, health care managers, and health care workers. WHO continues to monitor the situation closely for any new data that may warrant revision of the contents of this rapid advice note.

Please refer to the following document for 2019-nCoV case definition.: [https://www.who.int/publications-detail/surveillance-case-definitions-for-human-infection-with-novel-coronavirus-\(ncov\)](https://www.who.int/publications-detail/surveillance-case-definitions-for-human-infection-with-novel-coronavirus-(ncov))

Home care for patients with suspected 2019-nCoV infection presenting with mild symptoms

In view of the currently limited knowledge of the disease caused by 2019-nCoV infection and its transmission patterns, WHO recommends that suspected cases of 2019-nCoV infection be isolated and monitored in a hospital setting. This would ensure both safety and quality of health care (in case patients' symptoms worsen) and public health security.

However, for several possible reasons, including situations when inpatient care is unavailable or unsafe (i.e. limited capacity and resources unable to meet demand for health

care services), or in a case of informed refusal of hospitalization, alternative settings¹ for health care provision may need to be considered.

If such a reason exists, patients with mild symptoms² and without underlying chronic conditions such as lung or heart disease, renal failure, or immunocompromising conditions that place him/her at increased risk of developing complications may be cared for in the home environment. The same principle of care in the home environment applies to symptomatic patients no longer requiring hospitalization. This decision requires careful clinical judgment and should be informed by assessing the safety of the patient's home environment³.

A communication link with a health care provider should be established for the full duration of the home care period until the patient fully recovers. Health care personnel should be involved in reviewing the current health status for the progression of symptoms³ of contacts by phone and, ideally and if feasible, by face-to-face visits on a regular (e.g. daily) basis, performing specific diagnostic tests as necessary.

In addition, the patients and the household members should be educated on personal hygiene, basic infection prevention and control measures, on how to care for the suspected infected member of the family as safely as possible, and to prevent spread of infection to household contacts. The patient and family should be provided with ongoing support, education and monitoring. They should adhere to the following recommendations.

- Place the patient in a well-ventilated single room.
- Limit the number of caretakers of the patient, ideally assign one person who is in a good health without risk conditions. No visitors.
- Household members should stay in a different room or, if that is not possible, maintain a distance of at least 1 m from the ill person (e.g. sleep in a separate bed)⁴.
- Limit the movement of the patient and minimize shared space. Ensure that shared spaces (e.g. kitchen, bathroom) are well ventilated (e.g. keep windows open).

¹ These includes home settings.

² Low-grade fever, cough, malaise, rhinorrhoea, sore throat without any warning signs, such as shortness of breath or difficulty in breathing, increased respiratory (i.e. sputum or haemoptysis), gastro-intestinal symptoms such as nausea, vomiting, and/or diarrhoea and without changes in mental status (i.e. confusion, lethargy).

³ A sample checklist is available on page 53 of *Infection prevention and control of epidemic- and pandemic-prone acute respiratory diseases in health care: (1)*.

⁴ An exception may be considered for a breastfeeding mother. Considering the benefits of breastfeeding and insignificant role of the breast milk in transmission of other respiratory viruses, the mother could continue breastfeeding. The mother should wear a medical mask when she is near her baby and perform careful hand hygiene before close contact with the baby. She would need also to apply the other hygienic measures described in this document.

- The caregiver should wear a medical mask fitted tightly to the face when in the same room with the ill person. Masks should not be touched or handled during use. If the mask gets wet or dirty with secretions, it must be changed immediately. Discard the mask after use and perform hand hygiene after removal of the mask.
- Perform hand hygiene (2) following all contact with ill persons or their immediate environment. Hand hygiene should also be performed before and after preparing food, before eating, after using the toilet, and whenever hands look dirty. If hands are not visibly soiled, alcohol-based hand rub can be used. Perform hand hygiene using soap and water when hands are visibly soiled. Address safety concerns (e.g. accidental ingestion and fire hazards) before recommending alcohol-based hand rubs for household use.
- When using soap and water, disposable paper towels to dry hands is desirable. If not available, use dedicated cloth towels and replace them when they become wet.
- Respiratory hygiene should be practiced by all, especially ill persons, at all times. Respiratory hygiene refers to covering the mouth and nose during coughing or sneezing using medical masks, cloth masks, tissues or flexed elbow, followed by hand hygiene.
- Discard materials used to cover the mouth or nose or clean them appropriately after use (e.g. wash handkerchiefs using regular soap or detergent and water).
- Avoid direct contact with body fluids, particularly oral or respiratory secretions, and stool. Use disposable gloves to provide oral or respiratory care and when handling stool, urine and waste. Perform hand hygiene before and after removing gloves.
- Gloves, tissues, masks and other waste generated by ill persons or in the care of ill persons should be placed in a lined container in the ill person's room before disposal with other household waste.⁴
- Avoid other types of possible exposure to ill persons or contaminated items in their immediate environment (e.g. avoid sharing toothbrushes, cigarettes, eating utensils, dishes, drinks, towels, washcloths or bed linen). Eating utensils and dishes should be cleaned with either soap or detergent and water after use and may be re-used instead of being discarded.
- Clean and disinfect frequently touched surfaces such as bedside tables, bedframes, and other bedroom furniture daily with regular household disinfectant containing a diluted bleach⁵ solution (1-part bleach to 99 parts water).
- Clean and disinfect bathroom and toilet surfaces at least once daily with regular household disinfectant containing a diluted bleach⁶ solution (1-part bleach to 99 parts water).
- Clean clothes, bedclothes, bath and hand towels, etc. of ill persons using regular laundry soap and water or machine wash at 60–90 °C with common household detergent, and dry thoroughly. Place contaminated linen into a laundry bag. Do not shake soiled laundry and

avoid direct contact of the skin and clothes with the contaminated materials.

- Use disposable gloves and protective clothing (e.g. plastic aprons) when cleaning or handling surfaces, clothing or linen soiled with body fluids. Perform hand hygiene before and after removing gloves.
- Persons with symptoms should remain at home until their symptoms are resolved based on either clinical and/or laboratory findings (two negative RT-PCR tests at least 24 hours apart).
- All household members should be considered contacts and their health should be monitored as described below.
- If a household member develops symptoms of acute respiratory infection, including fever, cough, sore throat and difficult breathing, follow public health recommendations below.

Healthcare workers providing home care should do risk assessment to select the appropriate PPE.

Management of contacts

In view of the limited evidence of human-to-human transmission of 2019-nCoV, persons (including health care workers) who may have been exposed to individuals with suspected 2019-nCoV infection should be advised to monitor their health for 14 days from the last day of possible contact and seek immediate medical attention if they develop any symptoms, particularly fever, respiratory symptoms such as coughing or shortness of breath, or diarrhoea.

A communication link with a health care provider should be established for the duration of the observation period. Health care personnel should be involved in reviewing the current health status of the contacts by phone and, ideally and if feasible, by face-to-face visits on a regular (e.g. daily) basis, performing specific diagnostic tests as necessary.

The healthcare provider should give advance instructions on where to seek care when a contact becomes ill, what should be the most appropriate mode of transportation, when and where to enter the designated health care facility, and what infection control precautions should be followed.

- Notify the receiving medical facility that a symptomatic contact will be coming to their facility.
- While traveling to seek care, the ill person should wear a medical mask.
- Avoid public transportation to the health care facility, if possible; call an ambulance or transport the ill person with a private vehicle and open the windows of the vehicle if possible.
- The ill contact should be advised to always perform respiratory hygiene and hand hygiene; stand or sit as far away from others as possible (at least 1 m), when in transit and when in the health care facility.
- Appropriate hand hygiene should be employed by the ill contact and caregivers.
- Any surfaces that become soiled with respiratory secretions or body fluids during transport should be

⁴ Countries may consider measures to ensure that the waste is disposed at a sanitary landfill, and not at an unmonitored open dump, wherever possible. Additional measures may be needed to prevent unhygienic reuse of gloves, masks,

syringes and other items, and other hazards occurring from scavenging at waste disposal sites.

⁵ Most household bleach solutions contain 5% sodium hypochlorite.

cleaned and disinfected with regular household containing a diluted bleach solution⁶ (1-part bleach to 99 parts water).

Acknowledgements

This rapid guidance is based on the MERS-CoV document which was developed in consultation with the WHO Global Infection Prevention and Control Network and other international experts. WHO thanks those who were involved in the development and updates of IPC documents for MERS-CoV.

References

1. Infection prevention and control of epidemic- and pandemic-prone acute respiratory diseases in health care. Geneva: World Health Organization; 2014 (WHO/CDS/EPR/2007.6; https://www.who.int/csr/bioriskreduction/infection_control/publication/en/, accessed 14 January 2020).
2. WHO guidelines on hand hygiene in health care. Geneva: World Health Organization; 2009 (WHO/IER/PSP/2009/01; <http://apps.who.int/iris/handle/10665/44102>, accessed 13 June 2018).

Further References

Management of asymptomatic persons who are RT-PCR positive for Middle East respiratory syndrome coronavirus (MERS-CoV): interim guidance. Geneva: World Health Organization; 2018 (WHO/MERS/IPC/15.2 Rev.1; http://www.who.int/csr/disease/coronavirus_infections/management_of_asymptomatic_patients/en/, accessed 13 June 2018).

Clinical management of severe acute respiratory infection when Middle East respiratory syndrome coronavirus (MERS-CoV) infection is suspected: interim guidance. Geneva: World Health Organization; 2015 (WHO/MERS/Clinical/15.1; http://www.who.int/csr/disease/coronavirus_infections/case-management-ipc/en/, accessed 14 June 2018).

Infection prevention and control during health care for probable or confirmed cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection: interim guidance. Geneva: World Health Organization; 2015 (WHO/MERS/IPC/15.1; <http://apps.who.int/iris/handle/10665/174652>, accessed 14 June 2018).

Infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in health care: WHO guidelines. Geneva: World Health Organization; 2014 (<http://apps.who.int/iris/handle/10665/112656>, accessed 14 June 2018).

Atkinson J, Chartier Y, Pessoa-Silva CL, Jensen P, Li Y, Seto WH, editors. Natural ventilation for infection control in health-care settings: WHO guidelines 2009. Geneva: World Health Organization; 2009 (<http://apps.who.int/iris/handle/10665/44167>, accessed 14 June 2018).

Laboratory testing for Middle East respiratory syndrome coronavirus: interim guidance (revised). Geneva: World Health Organization; 2018 (WHO/MERS/LAB/15.1/Rev1/2018; http://www.who.int/csr/disease/coronavirus_infections/mers-laboratory-testing/en/, accessed 14 June 2018).

Investigation of cases of human infection with Middle East respiratory syndrome coronavirus (MERS-CoV): interim guidance. Geneva: World Health Organization; 2015 (WHO/MERS/SUR/15.2; http://www.who.int/csr/disease/coronavirus_infections/mers-investigation-cases/en/, accessed 14 June 2018).

Surveillance for human infection with Middle East respiratory syndrome coronavirus (MERS-CoV): interim guidance. Geneva: World Health Organization; 2015 (WHO/MERS/SUR/15.1; http://www.who.int/csr/disease/coronavirus_infections/surveillance-human-infection-mers/en/, accessed 14 June 2018).

Memish ZA, Zumla AI, Al-Hakeem RF, Al-Rabeeh AA, Stephens GM. Family cluster of Middle East respiratory syndrome coronavirus infections. *N Engl J Med*. 2013;368(26):2487–94. doi: 10.1056/NEJMoa1303729. (<http://www.ncbi.nlm.nih.gov/pubmed/23718156>).

Mailles A, Blanckaert K, Chaud P, van der Werf S, Lina B, Caro V et al. First cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infections in France, investigations and implications for the prevention of human-to-human transmission, France, May 2013. *Euro Surveill*. 2013;18(24):ii (<http://www.ncbi.nlm.nih.gov/pubmed/23787161>, accessed 13 June 2018).

Hijawi B, Abdallat M, Sayaydeh A et al. Novel coronavirus infections in Jordan, April 2012: epidemiological findings from a retrospective investigation. *East Mediterr Health J*. 2013;19(Suppl 1):S12–8 (http://applications.emro.who.int/emhj/v19/Suppl1/EMHJ_2013_19_Suppl_S12_S18.pdf, accessed 13 June 2018).

Health Protection Agency (HPA) UK Novel Coronavirus Investigation Team. Evidence of person-to-person transmission within a family cluster of novel coronavirus infections, United Kingdom, February 2013. *Euro Surveill*. 2013;18(11):20427 (<http://www.ncbi.nlm.nih.gov/pubmed/23517868>, accessed 13 June 2018).

Guery B, Poissy J, el Mansouf L, Séjourné C, Ettahar N, Lemaire X et al. Clinical features and viral diagnosis of two cases of infection with Middle East respiratory syndrome coronavirus: a report of nosocomial transmission. *Lancet*. 2013; 381(9885):2265–72 doi: 10.1016/S0140-6736(13)60982-4.

Assiri A, McGeer A, Perl TM, Price CS, Al Rabeeh AA, Cummings DA et al. Hospital outbreak of Middle East respiratory syndrome coronavirus. *N Engl J Med*. 2013;369(5):407–16. doi: 10.1056/NEJMoa1306742.

Omran AS, Matin MA, Haddad Q, Al-Nakhli D, Memish ZA, Albarrak AM. A family cluster of Middle East respiratory syndrome coronavirus infections related to a likely unrecognized asymptomatic or mild case. *Int J Infect Diseases*. 2013;17(9):e668-72. <https://doi.org/10.1016/j.ijid.2013.07.001>.

Ki M. 2015 MERS outbreak in Korea: hospital-to-hospital transmission. *Epidemiol Health*. 2015;37: e2015033. doi: [10.4178/epih/e2015033](https://doi.org/10.4178/epih/e2015033).

Drosten C, Meyer B, Müller MA, Corman VM, Al-Masri M, Hossain Ret al. Transmission of MERS-coronavirus in household contacts. *N Engl J Med*. 2014;371:828-35. doi: 10.1056/NEJMoa1405858.

WHO MERS-CoV summary and literature updates - 2013-2017. (http://www.who.int/csr/disease/coronavirus_infections/archives/updates/en/).