CORONAVIRUS 2019-nCoV OUTBREAK
Information and interim guidelines for pharmacists and the pharmacy workforce
Announcements

Webinar House Rules

1. This webinar is being recorded.
2. The recording will be available at www.fip.org/coronavirus
3. You may ask questions using the chat tool
4. Your feedback is welcome.
Learning Objectives

1. Present key facts about the virus and the disease
2. Describe the roles that pharmacists can play to help control the outbreak
3. Review some of the frequently asked questions and myths that pharmacists can help respond and dispel.
4. Present the FIP response to the novel coronavirus outbreak.

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Introduction

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Coronavirus 2019-nCoV

1. Outbreak started in Wuhan, Hubei Province, China in December 2019
2. Novel zoonotic coronavirus previously unknown to humans
3. Over 37,000 confirmed cases and more than 800 deaths in just 5-6 weeks
4. Declared as Public Health Emergency of International Concern by the World Health Organization on 30 January
5. FIP published resources to support pharmacists in five languages on 6 February on www.fip.org/coronavirus
Speaker: Mrs Jane Dawson

- Chair of the FIP Taskforce on the Coronavirus Outbreak Response
- Director Defence Health Policy, Defence Health Directorate, New Zealand Defence Force
- Secretary of the FIP Military and Emergency Pharmacy Section
What is a coronavirus?

1. Large, enveloped, positive-stranded RNA viruses
2. Largest genome among all RNA viruses, packed inside a helical capsid
3. Spike proteins mediate entry into host cells, determine host range and tissue tropism and induce immune response
4. Spikes > crown-like (‘corona’ in Latin)

Image credit: Scientific Animations (CC BY-SA 4.0), Creative Commons
Coronaviruses

1. Usually affect mammals and birds – but occasionally mutate and affect humans too (and person-to-person transmission). The new coronavirus possibly originated from pangolins.

2. No previous exposure -> No natural immunity, no vaccines and no specific treatment

3. This may lead to outbreaks and eventually, pandemics (SARS in 2003, MERS in 2012, 2019-nCoV)
How is 2019-nCoV coronavirus transmitted?

1. From person to person among close contacts (about 6 feet/1.8 metres).

2. Via respiratory droplets produced when an infected person coughs or sneezes, similar to how influenza and other respiratory pathogens spread.

3. Droplets can land in the mouths, noses or eyes of people who are nearby or possibly be inhaled into the lungs.

4. It is currently unclear if a person can get 2019-nCoV by touching a surface or object that has the virus on it (fomites) and then touching their own mouth, nose or possibly their eyes.

5. Typically, with most respiratory viruses, people are thought to be most contagious when they are most symptomatic. With 2019-nCoV, however, there have been reports of spread from an asymptomatic infected patient to a close contact.

(Centers for Disease Control and Prevention, 2020)
How is 2019-nCoV coronavirus NOT transmitted?

1. Objects or surfaces that were contaminated with or exposed to the virus, *after a short period of time*.

2. Thoroughly cooked and properly handled foods.

The virus does not linger in the air. Transmission is via droplets expelled by infected persons. So it requires close contact for those droplets actually fall on another person’s mouth, nose or eyes.
2019-nCoV Acute Respiratory Disease – Clinical information

1. Main symptoms:
   - Fever (>80% of the patients)
   - Cough (>80%)
   - Shortness of breath (31%)
   - Muscle ache (11%)

2. Incubation period until symptom onset: 2 to 14 days

3. Disease may also occur with mild symptoms only, including: low-grade fever, cough, malaise, rhinorrhea, sore throat without any warning signs, such as shortness of breath or difficulty in breathing, increased respiratory secretions (i.e. sputum or haemoptysis), gastrointestinal symptoms such as nausea, vomiting, and/or diarrhoea and without changes in mental status (i.e. confusion, lethargy).

4. Most severe cases can cause pneumonia, severe acute respiratory syndrome, kidney failure and death
Evolution and mortality

- Figures of new daily cases seem to suggest that prevention and control measures are having a positive effect.

- The estimated mortality rate is around 2% (lower than SARS and MERS)

- Cases: 82% mild, 15% severe, 3% critical (percentages of cases accounted for)

- Many people who have died were frail and had other underlying conditions.

- The virus will likely spread further but it may be less lethal than we initially feared.

Source: https://www.worldometers.info/coronavirus/coronavirus-cases/, based on WHO data
Treatment

1. Several teams around the world are working towards developing treatments, diagnostic tools and vaccines – following full genome sharing by Chinese authorities on 10 January.

2. Treatment is symptomatic and based on patient’s clinical condition.

3. Supportive treatment includes oxygen therapy, hydration and fever/pain management and antibiotics if bacterial co-infection is present.

4. Medicines to stock as per your country’s or institution’s formularies or clinical recommendations: antimicrobial agents, antipyretic and analgesic treatment, corticosteroids, intestinal microecological preparations, other gastrointestinal treatment, antitussive treatment, sputum removal treatment, anti-asthmatic treatment.

5. Antiviral medicines: remdesivir (nucleotide analogue prodrug in development) has been used in USA and France and is being used in China too; recombinant human interferon; lopinavir/ritonavir; ribavirin (CPA list).

6. Ibuprofen, NSAIDs.

7. Methylprednisolone (not routinely; Only in situations of dyspnea and progress of chest imaging).

8. Chinese patent medicines (see FIP or CPA document).
Prevention

1. Frequently **clean hands** by using alcohol-based hand rub or soap and water;
2. When coughing and sneezing **cover the mouth and nose with a flexed elbow or tissue** – throw the tissue away immediately and wash hands;
3. **Avoid close contact** with anyone who has fever and cough;
4. If you have fever, cough and difficulty breathing **seek medical care early and share previous travel history** with your healthcare provider;
5. When visiting live markets in areas currently experiencing cases of novel coronavirus, **avoid direct unprotected contact with live animals** and surfaces in contact with animals;
6. The consumption of **raw or undercooked animal products should be avoided**. Raw meat, milk or animal organs should be handled with care, to avoid cross-contamination with uncooked foods, as per good food safety practices;
7. **Self-isolation** by persons with symptoms and/or persons who may have been in contact with infected persons
Hand hygiene


Hand washing with water and soap
OR
Hand rubbing with alcohol-based formulation (see FIP guidance for preparation guidelines)
Preventive measures by pharmacy teams/managers

1. Develop **emergency plans** and workflow
2. Carry out full **staff training**
3. Assess the **health status of pharmacists**
4. **Protect pharmacy personnel**
5. Strengthen pharmacists’ **infection monitoring**
6. Ensure **adequate cleaning and disinfection** management
7. Strengthen **patient management**
8. Strengthen **patient education**
9. Strengthen **infection exposure management**
10. Strengthen medical **waste management**

*Check FIP and CPA guidance for details*
Use of masks - health care workers

The use of a mask alone is insufficient to provide an adequate level of protection and other equally relevant measures should be adopted (listed above)

The WHO recommends that health care workers should:

1. Wear a medical mask when entering a room where patients suspected or confirmed of being infected with 2019-nCoV are admitted and in any situation of care provided to a suspected or confirmed case;
2. Use a particulate respirator at least as protective as a US National Institute for Occupational Safety and Health (NIOSH)-certified N95, European Union (EU) standard FFP2, or equivalent, when performing aerosol-generating procedures such as tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation and bronchoscopy.
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Three Key Factors Required for a Respirator to be Effective

1. The respirator must be put on correctly and worn during the exposure.

2. The respirator must fit snugly against the user's face to ensure that there are no gaps between the user's skin and respirator seal.

3. The respirator filter must capture more than 95% of the particles from the air that passes through it.

*If your respirator has a metal bar or a molded nose cushion, it should rest over the nose and not the chin area.
Use of masks – members of the public and patients

1. A medical mask is not required, as no evidence is available on its usefulness to protect non-sick persons.
2. Wearing medical masks when not indicated may cause unnecessary cost, add to the procurement burden and create a false sense of security that can lead to neglecting other essential measures such as hand hygiene practices.
3. However, masks might be worn in some countries according to local cultural habits.
4. If masks are used, **best practices should be followed on how to wear, remove, and dispose of them** and on hand hygiene action after removal.
5. **Individuals with respiratory symptoms should wear a medical mask and seek medical care** if experiencing fever, cough and difficulty breathing, as soon as possible or in accordance with local protocols.
Screening / triage and advice

- **No symptoms (cough, fever or breathing difficulties)**
  - Offer reassurance
  - Very unlikely to have 2019-nCoV infection risk
  - Highlight preventive measures
  - Provide evidence-based information and advice (oral and/or written)

- **No travel history to affected areas or contact with infected people**
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- **Symptoms (cough, fever or breathing difficulties)**
  - Offer reassurance
  - Unlikely to have 2019-nCoV infection risk
  - Highlight preventive measures
  - Provide evidence-based information and advice (oral and/or written)

- **No travel history to affected areas or contact with infected people**
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  - Very unlikely to have 2019-nCoV infection risk
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Screening / triage and advice

- Offer reassurance
- Risk of 2019-nCoV infection may exist
- Highlight preventive measures and recommend home quarantine for 14 days
- Trace contacts history
- Provide evidence-based information and advice (oral and/or written)
- In case symptoms appear in the 14 days following return from travel or contact with infected person, contact emergency number or reference hospital

No symptoms (cough, fever or breathing difficulties)

- Recent travel history to affected areas or contact with infected people

Offer reassurance
- Risk of 2019-nCoV infection may exist
- Recommend home quarantine for 14 days upon return from travel
- Inform about the situation and ways of transmission
- Highlight preventive measures
- Provide evidence-based information and advice (oral and/or written)

Travel plans to affected areas or contact with infected people
Screening / triage and advice

Pharmacists who identify patients who match such criteria should:
1. Isolate the patient
2. Not physically examine them
3. Immediately notify the appropriate health authorities

Individuals who feel unwell but do not match these criteria should be advised to stay at home and adopt the general preventive measures of most respiratory infections unless symptoms worsen.
The pharmacy as an information centre

1. Information is key to control the outbreak and prevent panic
2. Panic derives from irrational fear of the unknown, and it leads to unfounded measures and behaviours, as well as discrimination and stigmatisation.
3. Pharmacists and their associations may develop information materials (posters, leaflets, websites, text messages, app alerts, etc) for the community
4. General information + relevant information to local needs
5. Small easy-to-print poster with key advice that pharmacists can provide in a range of different scenarios
6. FIP materials in different languages at www.fip.org/coronavirus
7. Additional information and communication resources online in different languages, listed in the FIP guidance document
Laboratory testing for 2019-nCoV in suspected human cases

1. In several countries, pharmacists commonly work and lead clinical biology laboratories.

2. Laboratories should be particularly careful to either send, or provide proper guidance to clinical practitioners on sending samples to the selected reference laboratories of their countries.

3. Two importance guidance documents:
Cleaning and disinfection management

Studies suggest that 2019-nCoV is sensitive to:

1. Ultraviolet radiation
2. Heat (56°C for 30 minutes)
3. Ether,
4. 75% ethanol
5. Chlorine-containing disinfectants
6. Peracetic acid
7. Chloroform.

Chlorhexidine could not effectively inactivate 2019-nCoV
Questions you may get from the public or patients

Largely covered in previous slides:

1. What is a novel coronavirus?
2. What is the source of 2019-nCoV?
3. How does the virus spread?
4. Is 2019-nCoV the same as the MERS-CoV or SARS virus?
5. I have fever and cough. Could it be the novel coronavirus?
6. What can I do to protect myself from infection?
7. Are there any specific medicines to prevent or treat 2019-nCoV?
Questions you may get from the public or patients

8. Do vaccines against pneumonia protect you against 2019-CoV?
9. Are antibiotics effective in treating the 2019-nCOV?
10. Can 2019-nCOV be caught from a person showing no symptoms?
11. Is it safe to receive a letter or a package from China?
12. Are medical masks effective in protecting me from infection?
13. I have been to China and I have diarrhoea. Could it be 2019-CoV?
14. Can pets at home spread 2019-nCoV?
Myth busting

1. 2019-CoV only affects old people or people with pre-existing diseases
2. Contact with Chinese people should be avoided until we know more about the disease
3. Eating garlic can help prevent infection with 2019-nCoV
4. The smoke and gas from fireworks and firecrackers prevent 2019-nCoV
5. Applying sesame oil blocks 2019-nCoV from entering the body
6. Drinking anise seeds infusion can help prevent infection with 2019-nCoV
7. Gargling mouthwash protects you from infection with 2019-nCoV
8. Regularly rinsing your nose with saline helps prevent infection with 2019-nCoV
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**NO!**
Soon:
Arabic
Portuguese
Turkish
Other languages?
Any questions?

*Please use the chat board*
Wrap up

Conclusions
Thank you for attending

Together, we can help stop this outbreak!