



# COVID-19

## Questions, Answers and Actions

### *Early use of antibiotics in high-risk patients (updated)*

**Question:** "What is the evidence for early use of antibiotics in high risk patients diagnosed with COVID-19 in the community setting?"

**Answer:** There is no evidence to support the empirical use of antibiotics to prevent community acquired pneumonia (CAP) in people with suspected COVID-19 not admitted to hospital care.

**Action:** Prescribers should follow NICE rapid COVID-19 guidance NG165: [managing suspected or confirmed pneumonia in the community](#):<sup>1</sup>

Do not offer antibiotic treatment for treatment or prevention of pneumonia if:

- COVID-19 is likely to be the cause and
- Symptoms are mild

Inappropriate antibiotic use may reduce availability if used indiscriminately, and broad-spectrum antibiotics in particular may lead to *Clostridioides difficile* infection and antimicrobial resistance.

There is very limited published evidence on the frequency of secondary bacterial infection in patients with COVID-19, but rates appear to be low in the community. A meta-analysis of published case series & observational studies (including all data published up to 21st February 2020) identified two relevant studies including 93 patients.<sup>2</sup> The rate of secondary infection was low (5.6%) but, due to small patient numbers, generalisability is not clear.

A large observational study in both in- and out-patients found that the incidence of symptoms characteristic of secondary infection (such as rash and lymph node swelling) ranged from 0.2-2.1%.<sup>3</sup> The rate of secondary infection appears to be higher in hospitalised patients, at around 15%.<sup>4</sup>

In line with this the [national advice from NICE](#) is to recommend treatment (not prevention) of CAP. Oral antibiotics may be offered for treatment of pneumonia in people who can or wish to be treated in the community if:

- the likely cause is bacterial or
- it is unclear whether the cause is bacterial or viral and symptoms are more concerning or
- they are at high risk of complications because, for example, they are older or frail, or have a pre-existing comorbidity such as immunosuppression or significant heart or lung disease (for example bronchiectasis or COPD), or have a history of severe illness following previous lung infection

The first choice antibiotics are doxycycline (200 mg on the first day, then 100 mg once daily for 5 days in total) or amoxicillin (500 mg three times daily for 5 days). See the [full guideline](#) for more information.

Prescribing within these guidelines will help secure sustained ability to treat confirmed cases of pneumonia over the course of the current pandemic. For alternatives see [NICE guideline NG138, Pneumonia, community-acquired](#).

Other NICE guidance and national resources may be helpful:

- [Pneumonia in adults: diagnosis and management \(CG191\)](#)
- [Pneumonia \(hospital-acquired\): antimicrobial prescribing \(NG139\)](#)
- [COVID-19: a remote assessment in primary care \(BMJ\)](#)
- [COVID-19: Managing the COVID-19 pandemic in care homes \(British Geriatrics Society\)](#)

### References

NICE COVID-19 rapid guideline: managing suspected or confirmed pneumonia in adults in the community. April 2020. Accessed via <https://www.nice.org.uk/guidance/ng165/>

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