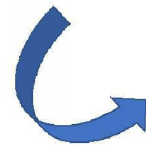


## SARS-CoV-2 / COVID-19

- 5-27% **secondary infections** in SARS-CoV-2 adult infected patients
  - 13.5-44% in patients admitted to ICU
- Frequent **bacterial superinfection** (bacteraemia and urinary tract infections) in terminal patients
- High use of antibacterials (80-100%) and antifungals (7.5-15%) in patients with severe COVID-19

Clancy CJ, Nguyen MH. Clin Infect Dis. 2020 May 1:ciaa524. doi: 10.1093/cid/ciaa524  
Bengoechea JA, Bamford CGG. EMBO  Med. 2020 May 26. doi:10.15252/emmm.202012560



*Have this influence on AMR development?*

## SARS-CoV-2 / COVID-19 – minor impact on AMR?

- Personal hygiene (hand hygiene)
- Use of personal protective equipment (PPE)
- Social distancing (even in patient management!)
- Early antibiotic use in hospitalization
- Potential less antibiotic consumption in outpatients (reduced access to pharmacies)



Rawson et al. Nat Rev Microbiol 2020; Jun 2:1-2; Rawson TM et al. J Antimicrob Agents 2020; 75:1681-84; Spornovasilis NA, Kofteridis DP. Infect Control Hosp Epidemiol 2020; 15:1-2;  
Clancy CJ et al. Clin Infect Dis 2020 May 1:ciaa524. doi: 10.1093/cid/ciaa524; Huttner et al. Clin Microbiol Infect 2020; 26:808-10

## SARS-CoV-2 / COVID-19 – major impact on AMR?



- Potential risk of coinfections and superinfections
- Overcrowding of healthcare systems. Workload of health care workers
- Non trainee staff, including nurses, in the management of infected patients
- Relaxing of measures preventing the spread of MDR organisms
  - decrease of screening cultures of MDR organisms
  - absence of isolation of patients in single rooms or cohorting patients with risk factors for MDR organisms colonization
  - breakdown of antimicrobial stewardship and educational programs
- Increased use of empiric use of broad spectrum antimicrobials
- Absence of clear guidelines: use of anti-bacterials (i.e azithromycin) in front line anti-COVID-19 treatment
- Loss of expert support in the use of antimicrobial agents
- Increase of telemedicine and antibiotic prescription
- Decrease of laboratory capacity on AMR (focused in SARS-CoV-2 diagnosis)
- Absence of use of diagnostic tests for detecting AMR organisms

Rawson et al. Nat Rev Microbiol 2020; Jun 2:1-2; Rawson HV et al. J Antimicrob Agents 2020; 75:1681-84; Spernovashtis NA, Korfelis DP. Infect Control Hosp Epidemiol 2020; 15:1-2; Clancy CJ et al. Clin Infect Dis 2020 May 1:ciaa524. doi: 10.1093/cid/ciaa524; Huttner et al. Clin Microbiol Infect 2020; 26:808-10