

# HEALTHCARE

## LEADERSHIP & INNOVATION

# Could the rise of the private online GP pose a future risk to the creation of superbugs?

Technological advances in healthcare have led to the development of online general practice consultations. The risks and benefits of telemedicine have been well described in the literature, and in our own previous blog. A recent publication has argued that there could now be a significant impact on antimicrobial resistance.

### Telemedicine

Telemedicine is the electronic transfer of medical information from one site to another to improve a patient's clinical health status<sup>1</sup>.

#### BENEFITS OF TELEMEDICINE

- **Self-care.** This empowers patients to take greater control of their health and care, creating treatments tailored to their own lifestyle and needs, with the guidance and support of healthcare professionals.
- **Anticipate need and prompt early intervention.** Teleconsultations can increase the availability of convenient healthcare advice. This can enhance the chance of identifying early stage symptoms before the disease progresses and the patient presents with a high disease burden.
- **Exchange of information between organisations.** Teleconsultations between community, ambulance service and acute care services could help improve instant communication between healthcare providers who all have an interest in a particular patient's care.
- **Highlight when patients are at risk and need help.** Telemedicine could allow a patient who is concerned about their health and alert a community responder to assess and respond to the situation appropriately.
- **Enable secure communications between providers and their patients and families.** The use of remote audio and video conferences with the care team, when appropriate, could allow convenient and regular communication.
- **Access to rural areas.** It can be challenging for patients residing in rural areas to access healthcare. Remote consultations provide convenient access to routine care.
- **Increased patient satisfaction.** Patients are often frustrated at the time required to access routine care. Telemedicine services can increase availability of convenient appointments, so improving patient satisfaction.

#### RISKS OF TELEMEDICINE

- **Patient privacy and confidentiality.** This can be a concern for the patient, if for example, they cannot see the whole room that the doctor is in on the camera.
- **Equipment failure.** If the technology does not transmit images correctly, for example, then there is the potential to miss a key finding on visual examination.
- **Jurisdiction.** It is important that the doctor is licensed for carrying out his/her professional activities in the jurisdiction where the patient is residing.
- **Fragmentation of clinical documentation.** The patient's clinical notes could sit with many different online providers, so a complete medical history might be difficult to obtain.
- **Potential for misdiagnosis.** There can be an increased level of uncertainty without seeing a patient face-to-face, potentially leading to a rise in misdiagnosis.

## Superbugs – a global public health issue

The World Health Organisation (WHO) has defined antimicrobial resistance as 'the ability of a microorganism (like bacteria, viruses, and some parasites) to stop an antimicrobial (such as antibiotics, antivirals and antimalarials) from working against it. As a result, standard treatments become ineffective, infections persist and may spread to others.'<sup>2</sup>

At the 68th World Health Assembly in May 2015, the WHO endorsed a global action plan to tackle antimicrobial resistance.<sup>3</sup>

The WHO has noted that a significant force in driving the spread of antimicrobial resistance is the inappropriate use of antimicrobials in the primary care setting. This is related to overprescribing, inappropriate selection and dosing of antibiotics by health care providers.

The Government of the United Kingdom has responded by issuing a five-year strategic plan. It stressed the current situation, where bacteria, viruses and fungi are adapting and becoming increasingly resistant to medicines, accelerated by the inappropriate use of medicines. It also identified that the development pipeline for new antibiotics is at an all time low. A study commissioned by the Government to the London School of Hygiene and the University of Birmingham found that antimicrobial resistance would have a major economic and social impact.<sup>4</sup>

The plan has a focus to optimise prescribing in primary care. It recognised that GP consultations can often be challenging, particularly when patients expect to receive antibiotics and may be unwilling to accept that they do not need them. In order to provide support for GPs in this area, a GP toolkit called 'Treat Antibiotics Responsibly, Guidance and Education Tool' (TARGET) was developed.<sup>5</sup> This can be found in the sources list below.

## Antibiotics in private primary care tele-consultations

An article published recently in the journal of the Royal Society of Medicine by researchers at Imperial College, attempted to examine the potential impact of online video consultations with private general practitioners on patients, the National Health Service (NHS) and antimicrobial stewardship.<sup>6</sup>

A major benefit of telemedicine is the ability to facilitate access and communication between healthcare providers and patients. Therefore, the Department of Health committed to integrate it into the health service.

As a result, there has been a surge of private providers of primary care online consultations. The GP at Hand company is a provider of remote primary care, which is funded by the NHS.<sup>7</sup>

The study described a number of services that specified on their website that they would prescribe antibiotics. Indeed, Internet searches for 'get antibiotics' and 'prescribe antibiotics' returned a link to a GP video consultation service advertising an antibiotic prescription in minutes.

None of the services identified mentioned the appropriate use of antibiotics or of antibiotic stewardship.

The authors were concerned that the inability to examine patients may have an impact on antimicrobial stewardship. The authors described that, although a physical examination may add little to the decision making process, the lack of opportunity to do so may prompt medical practitioners to err on the side of caution and prescribe antibiotics. The authors also imply that, since prescriptions of antibiotics are associated with increased patient satisfaction, in a competitive environment, private companies reliant on positive feedback could be a cause of an increased number of prescriptions issued.

## Current status

The impetus to examine this study was prompted by the widespread national media coverage that it received. However, there are limitations to this study. The most obvious is that there is no quantitative evidence, at least yet, that the rate of [inappropriate] antibiotic prescribing is higher from the private providers of online primary care services than public providers or face-to-face providers. Will GP at Hand also experience increased rates of antibiotic prescriptions? Are there any benefits for easier access to antibiotic prescriptions, such as for patients with pre-existing lung diseases, for instance COPD, who may require antibiotics for an acute exacerbation?

Antimicrobial stewardship is the responsibility of all governments, healthcare systems, medical researchers, and mostly importantly, the general public, across the globe. Private provision of online primary care services can demonstrate a huge benefit for patients. Such providers should implement antibiotic stewardship programmes. This should not be unique to these providers, but should be mandatory for each and every healthcare provider.

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## Sources and further reading

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