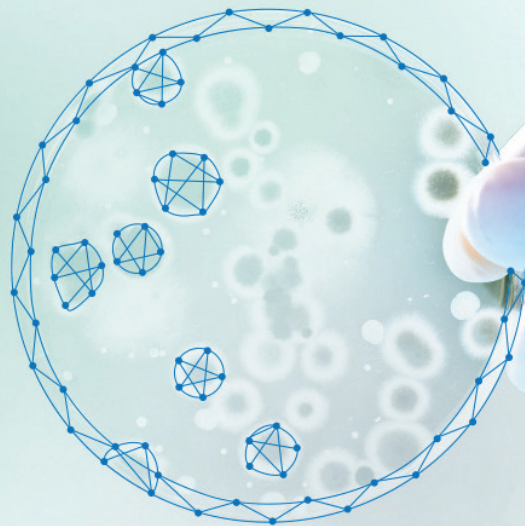


Antibiotic Stewardship Overview



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Antibiotic Stewardship helps hospitals focus on how to use antibiotics in a rational way, with the purpose to reduce antimicrobial resistance and excessive or inappropriate prescription of antibiotics

Challenge

The use of antibiotics both in Europe and in the world is growing rapidly¹. Excessive or inappropriate prescription of antibiotics and lack of follow up on treatments results in antimicrobial resistance. This is because the antimicrobials get resistant and therefore do not act on the antibiotics as expected. That makes the treatment ineffective and already now 20-50%² of all antibiotic prescriptions are useless. The fear is, that it might become one of the world's most pressing public health treats in the future.

If we improve using antibiotics in a rational way, with the purpose to reduce antimicrobial resistance and excessive or inappropriate prescription of antibiotics, we can slow down that development. That is also the common message in three reports from the Danish-, Swedish- and Norwegian governments³, who all want to control and reduce the use of antibiotics.

¹ <http://who.int/mediacentre/factsheets/antibiotic-resistance/en/>

² <https://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html>

³ <https://www.regjeringen.no/contentassets/915655269bc04a47928fce917e4b25f5/handlingsplan-antibiotikaresistens.pdf>
<http://www.sum.dk/Aktuelt/Publikationer/National-handlingsplan-for-antibiotika-til-mennesker-juli-2017.aspx>

<http://www.regeringen.se/contentassets/7b70f26ea0e74e18ab6cd1cc5d3f030f/svensk-strategi-for-arbetet-mot-antibiotikaresistens.pdf>

Solution

To support reducing antimicrobial resistance SAS Institute has developed *Antibiotic Stewardship*. The solution supports the healthcare professionals to work rationally with antibiotics. The solution offers control, overview and follow up on every patient in antibiotic treatment by using data to support clinical decisions.

The solution automatically responds to the targets set to measure the efficiency of the system, and it presents those patients to the healthcare professionals, where hospital and treatment guidelines are not met. The healthcare professional is presented with all elements, which are a part of the basis for decision-making for using antibiotics for a patient, and from that overview, it is easy to monitor and follow up on every patient in antibiotic treatment.

The solution can be used as a daily follow up and decision tool for healthcare professionals. The solution can also be used as a management tool to follow up and measure the total use of antibiotics.

The *Antibiotic Stewardship* access and interface is easy to use. The screen shows the overview of patients in antibiotic treatment. For each patient all necessary elements are available that are relevant for the antibiotic treatment decision. In addition, decisions taken by different healthcare professionals can be tracked and the treatment can be followed or changed if necessary. The solution leaves no patient behind and shows great transparency for every decision taken during the antibiotic treatment.

Quality and results

To achieve and ensure a rational use of antibiotics *Antibiotic Stewardship* is set to reach certain efficiency targets besides the overall objective to reduce the total use of antibiotics. These targets are the following.

Within 95% of all antibiotic treatments:

- The indication is valid and the choice of antibiotic is justified in the patient journal and matches the indication.
- A reassessment of indication and choice of antibiotics must be carried out within 48 hours.
- Relevant microbiology tests must be completed before the first antibiotics administration.
- There must be a receipt for the microbiological tests and an adjustment in treatment in accordance with the response within 24 hours if necessary.
- The antibiotic dosage must be properly prescribed and properly administered.

Benefits

Antibiotic Stewardship offers many advantages:

- Creates focus and offers overview on antibiotic treatment
- Ensures patient's accurate and rational antibiotic treatment
- Increases patient safety
- Lowers the consumption of antibiotics
- Documents the exact use of antibiotics
- Reporting of antibiotic use to authorities can take place automatically
- The solution can be used as a management tool both centrally and locally.

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