Strama
Swedish strategic programme against antibiotic resistance

10-point program against antibiotic resistance in healthcare

Developed by Strama

These points summarize important and necessary measures for reducing the development and spread of antibiotic resistance in healthcare proposed by Swedish experts.

A. Prevent the spread of infections and resistant bacteria

1. The spread of infection in health care must be prevented

• All healthcare associated activities must adhere to hygienic standards and ensure that staff have adequate knowledge of basic health care hygiene routines. Staff members' compliance to these routines should be regularly monitored.

• All departments must be given opportunities to collaborate with expertise from an infection control unit.

• Single rooms with separate toilets/ showers should be made available to as large extent as possible in all departments so that patients can receive the most optimal care in the most appropriate facilities.

• Overcrowding and transfers of patients between care units should be avoided unless the patient's condition necessities transfers.

• The staffing needs to be appropriate for maintaining appropriate hygiene practises.

• Screening cultures for multi-resistant bacteria must be taken according to current guidelines.

• Cleaning, disinfection, washing and waste management must take place in such a way that the risk of spread of via the environment and equipment is minimised.

• The employer must ensure that healthcare personnel are offered vaccination against relevant infections, define risk situations in their own field of activity and made aware how and which protective equipment should be used to prevent infections and spread of resistant bacteria, both to and from patients.

• Health-care premises should be designed in a way that minimizes the risk of the spread of infections and resistant bacteria.

2. Basic hygiene measures must always be applied

• All employees must always apply basic hygiene measures as recommended[1], regarding:
- Clothing
- Wearing of personal protective clothing and equipment; gloves, aprons, face masks glasses or face shields, as appropriate
- Hand disinfection before and after every procedure.
- Hands and forearms must be free from jewellery, nail polish or loose nails

[1] SOSFS provisions on basic hygiene in health care and care 2015; https://www.socialstyrelsen.se/globalassets/sharepoint-dokument/artikelkatalog/foreskrifter-och-allmanna-rad/2015-5-10-english.pdf

B. Use antibiotics rationally

3. Antibiotics must be used rationally

• The patient should receive antibiotic treatment only when the benefit exceeds the risk.

• The treatment must be given in accordance with current treatment recommendations.

• Selection of drug, dose, dosage interval, method of administration and duration of treatment must be adapted to the severity of the disease, diagnosis, age, gender, weight, kidney function, immune status, culture results and clinical course.

• In hospitals, treatments with antimicrobials must be evaluated daily.

• Antibiotic stewardship rounds, i.e. daily assessment by experts, should be gradually introduced and implemented in all relevant emergency wards.

• All health-care facilities should have access to infectious diseases´ specialists (or specifically trained consultants) as well as medical microbiological competence via on-site or remote consultation.

4. Local prescribing and resistance data should be analysed and fed back

• All healthcare providers should have tools to be able to link prescribed antibiotics to diagnosis both in hospitals and in primary care.

• Antibiotic prescribing related to diagnosis and antibiotic resistance should be monitored and reported back to managers and prescribers.

• Local Strama groups (or AMS-teams[2]), the clinical microbiological laboratories, the infectious diseases clinics and pharmacists active in Strama are resources that can provide support in the analysis of data and assess the need for interventions to increase compliance with treatment guidelines.

• Healthcare providers, local Strama groups or AMS-teams should have free access to local prescription data.

5. There should be recommendations for management of infections and compliance with these recommendations must be monitored.

• All prescribers must have access to current treatment recommendations.

• Adherence to recommendations must be measured regularly and be included in the organization's ongoing quality assurement.

6. Antibiotic prophylaxis must be administered according to guidelines.

• The use of antibiotic prophylaxis before surgery and for medical indications must be evidence-based. In the absence of evidence, the relevant medical specialty should develop recommendations in collaboration with infectious disease expertise.

[2] Antimicrobial stewardship teams

• There must be routines that ensure that antibiotic prophylaxis during surgery or invasive procedures is administered correctly, at the right time, for the right indication and, unless there are special reasons, as a single dose.

• Within each surgical department, adherence to guidelines for antibiotic prophylaxis must be measured regularly and included in quality assurement.

C. Optimize diagnostics for infections and ensure access to epidemiological data

7. Bacterial culture must be performed before antibiotic treatment

• Culture must be considered before any type of antibiotic treatment in hospitalised inpatients.

• The attending physician is responsible for ensuring that adequate microbiological diagnostics are requested and that referrals contain sufficient information.

• Blood culture and culture from a suspected focus of infection must be taken before intravenous antibiotic treatment.

• Culture from a suspected focus of infection must be taken prior to antibiotic treatment if infection with antibiotic-resistant bacteria is suspected.

• Culture from a suspected focus of infection must be taken prior to antibiotic treatment of a possible healthcare associated infection.

• The health care provider, in cooperation with the clinical microbiology laboratory, must ensure access to optimal logistics- and IT support so that both transportation of samples and delivery of test results are optimized.

• The healthcare provider should ensure that the microbiological laboratories offer adequate microbiological diagnostic service regardless of geographical location and time of day.

8. Microbiological laboratories must monitor the epidemiological situation and assist treating physicians, infection control units and local Strama groups or AMS-teams with results and analysis of data.

• The healthcare provider should ensure availability of medical expertise in laboratories as well as provide optimal data and IT systems to produce and compile resistance data.

• On behalf of the healthcare provider, the laboratory must continuously monitor local resistance data and analyse bacterial and antibiotic combinations of importance from an epidemiological perspective

• Local epidemiological resistance data as well as increasing resistance must be shared with the healthcare provider as well as Strama or AMS-team and infection control units at the local level.

• The laboratory must continuously cooperate with infection control units in order to promptly detect and respond to particularly unwanted resistance and outbreaks.

• The laboratories should have access to appropriate methods and IT systems in order to rule out or verify outbreaks or the presence of particularly unwanted resistance.

D. Reduce the need for antibiotics

9. Healthcare-associated infections must be prevented

• Healthcare workers must have good knowledge of healthcare-associated infections, risk factors for these infections and how to prevent them.

• The care provider must use national guidelines and local routines to prevent healthcare-associated infections and regularly evaluate compliance to these.

• Healthcare-associated infections must be continuously monitored and documented. These data form the basis for interventions to prevent healthcare-associated infections.

• The duration of using urinary catheters, intravenous accesses, intubation, antibiotics as well as bed rest and other risk factors for healthcare-associated infections must be kept at a minimum and be evaluated daily.

10. Community-acquired infections must be prevented

• Healthcare providers need to carry out active public health work with a broad perspective to prevent infections, including ensuring a high adherence to the national vaccination program.

• Healthcare providers need to offer targeted vaccines to risk groups.

• Ensure adequate hygiene routines in child and elderly care.

• Decrease incidence of sexually transmitted infections

• The public's knowledge about infections and measures against the spread of infection needs to increase.