

# The Anti-Infection Tool



Infektionsverket, “The Anti-Infection Tool”, is a national IT support tool for consistent documentation, storage and feedback of information on healthcare-associated infections and antibiotics, which local electronic health record systems can access.

Daily updates are generated through a versatile report module and can easily be adapted to every health care unit’s needs in order to support **the local work of quality improvement**.

**It is estimated that the Anti-Infection Tool contributes** to the prevention of up to 20 percent of all healthcare-associated infections. This corresponds **to a savings of 300 human lives and 700 million SEK in direct healthcare costs per annum**.

The Anti-Infection Tool **integrates the sharing of life-saving information** between units with personal secrecy and **the correct prescription** of antibiotics.



PREVENTION



KNOWLEDGE SUPPORT



ANTI-RESISTANCE

The national IT-support project, Infektionsverket (The Anti-Infection Tool), contributes to the effort to provide constant improvements in the healthcare sector. Its purpose is to reduce healthcare-associated infections (HAIs) and to counter the prescription of inappropriate antibiotics.

Every healthcare unit that registers information with The Anti-Infection Tool can receive continuous feedback in the form of statistical information relevant to healthcare-associated infections, prescription of antibiotics, associated risk factors, etc., within the unit in question.

This feedback will support the healthcare units in identifying problems and provide them with a basis for preventive measures. The goal of The Anti-Infection Tool is to implement:

- National IT-support for constant improvements
- Feedback to healthcare units concerning healthcare-associated infections and prescription of antibiotics
- Increased patient safety through preventive measures

Combating problems **through awareness**

Healthcare-associated infections (HAIs) cause 1,500 deaths per annum in Sweden, and every tenth bed in the hospital service is occupied by a patient being treated for a healthcare-associated infection. The direct health-care costs of healthcare-associated infections is calculated to be 3.7 billion SEK per annum. Multiresistant bacteria and **both** suboptimal **use** and **excessive prescription** of antibiotics also constitute a considerable problem. One way of countering these problems in the Swedish healthcare system is by making individual healthcare units aware of how the existence of healthcare-associated infections and the prescription of antibiotics are handled in their specific unit. Such an awareness focuses on the need for a constant effort **to improve** the prevention of healthcare-associated infections **and choose** the most rational course of treatment with antibiotics.

The Center for eHealth in Sweden has, therefore, developed a national IT-support program for uniform documentation, storage and feedback of information on healthcare-associated infections and the prescription of antibiotics. The project – and IT-support solution – has been given the name Infektionsverket (The Anti-Infection Tool). During the au-

turn of 2011 the project will begin on a test basis in Uppsala and Västra Götaland.

### How does The Anti-Infection Tool work?

Briefly, the central idea of The Anti-Infection Tool is that doctors, in connection with the prescription of antibiotics, indicate in the patient electronic medical record if the cause for the prescription is an infection contracted in the community or is healthcare-associated, or if the prescription is being given for prophylactic (preventive) purposes. If it is a matter of a healthcare-associated infection the doctor also indicates the nature of the infection: urinary tract infection, pneumonia, septicemia, post-operative infection, infection with *Clostridium difficile* (a certain kind of intestinal infection associated with antibiotic treatment), or "other types of healthcare-associated infection." Information is also transferred from the patient's medical record to The Anti-Infection Tool concerning diagnoses, laboratory test results and other relevant medical procedures. Also included are important risk factors for healthcare-associated infections, such as urinary tract catheters, central intravenous lines and respirator treatments. From the information registered, statistics of different kinds can be compiled and returned as feedback to the healthcare unit in question.

The solution is based on a nationally uniform terminology and the storage of information on a national level. The ambition of The Anti-Infection Tool is to eventually be capable of collecting and refining information on laboratory results, risk factors, admissions and discharges from hospital care, and treatment with antibiotics, in order to promote patient safety and improve individual care and treatment in the area of HAIs.

### What is the benefit?

Pioneering use of a similar mechanism at Södra Älvsborg's Hospital has shown that continuous registration and subsequent feedback has an influence on both the adaptability of routines for preventive measures and recommendations for the prescription of antibiotics.

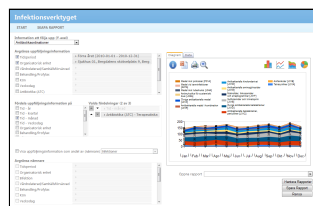
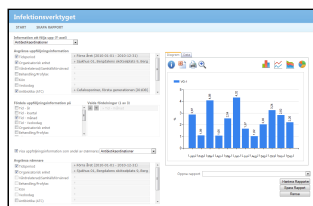
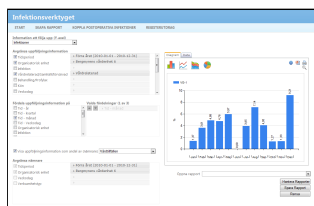
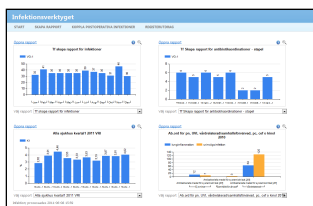
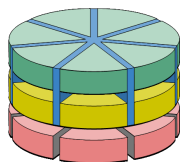
At least twenty percent of all healthcare-associated infections are considered preventable. This corresponds to 300 deaths per annum and two percent of all beds in the hospital service.

### Background

The work with The Anti-Infection Tool has its foundation in the involvement of the Swedish Association of Local Authorities and Regions (SALAR) in ensuring patient safety, including reducing the number of healthcare-associated infections. A list of requirements for a reasonably comprehensive IT-support system was developed and a preliminary study was conducted concerning the method of implementation during the spring of 2010. Based on that study, in May 2010 a joint decision was reached by all the counties/regions on creating a national tool for the registration, refinement and provision of feedback of information dealing with healthcare-associated infections and the prescription of antibiotics. The County of Uppsala and the Region of Västra Götaland were chosen for the pilot projects.

### The work continues

Implementation of The Anti-Infection Tool will commence with the pilot installations during the fall of 2011. An evaluation of the pilot phase will be completed by March 2012. The Ministry of Health and Social Affairs has planned to conduct a survey of the rules and regulations of different healthcare registers. The Anti-Infection Tool project is one of the players participating in the dialogue on new rules and regulations. An implementation of The Anti-Infection Tool is scheduled for 2012, and it is estimated that it will become fully operational throughout the health care system by June 30, 2014.



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For more information visit <http://www.cehis.se/vardtjanster/infektionsverktyget>