

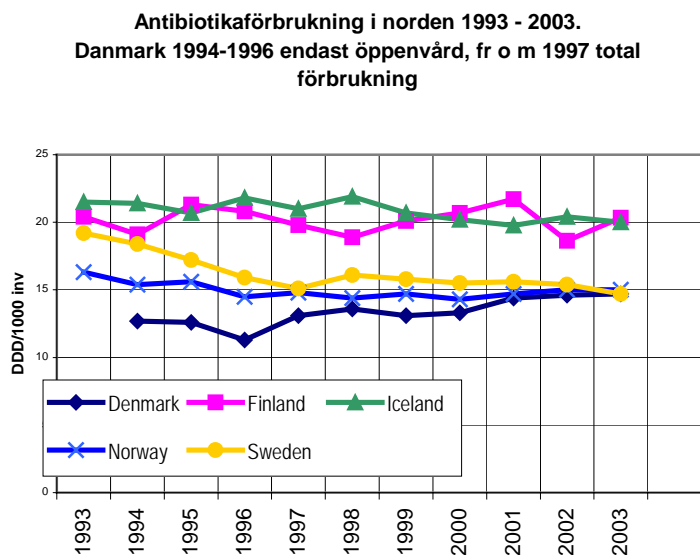
## Annual report 2004

# STRAMA - The Swedish Strategic Programme for the Rational Use of Antimicrobial Agents and Surveillance of Resistance

The Swedish Strategic Programme for the Rational Use of Antimicrobial Agents and Surveillance of Resistance, STRAMA, received funding of 8 million SEK for 2004, via the Dagmar Agreement. These funds were divided between management functions and national and local projects. The focus of STRAMA's work has been in accordance with the aims as stated in the proposal for a Swedish national plan of action against antibiotic resistance.

### Antibiotic consumption and resistance

Total antibiotic consumption in Sweden continued to fall during the year, although yet again, a slight increase was observed in older age groups. Only Sweden and the other Nordic countries regularly publish figures for total antibiotic prescribing, and these figures show that consumption in Sweden is comparable to that in Denmark and Norway.



*Diagram: Antibiotic consumption in the Nordic countries 1993 – 2003. Denmark 1994-1996 - primary care only; from 1997 - total consumption. DDD/1000 inhabitants*

The Institute for Infectious Disease Control (SMI) is responsible for the national antibiotic resistance surveillance programme. STRAMA follows developments and partakes in the exchange of information between authorities and other relevant organisations. Patterns of antibiotic resistance in Sweden remain

favourable in comparison to many other countries. A preliminary analysis of the numbers of reported MRSA cases in Sweden in 2004 shows that the sharply upward trend continues in most counties, in spite of the radical measures that were taken during 2004. A total of 709 cases were reported last year, representing a 30% rise on 2003 (544 reported cases).

SWEDRES 2003, the third annual report containing detailed information about the state of antibiotics and resistance in Sweden, was prepared in 2004 by STRAMA in collaboration with the Institute for Infectious Disease Control and the National Veterinary Institute. The report is in English and therefore represents an excellent instrument for increasing international awareness of Swedish methods of data monitoring, continuous intervention and contingency plans.

## **National STRAMA activity**

### *The National STRAMA group*

STRAMA's national management board held two meetings during the year at which decisions were taken regarding the focus of its activities, project priorities and distribution of available funding. An executive committee mandated by the national group is responsible for day to day management.

### *Education days*

- STRAMA arranged a national education day during the year, and this attracted over 100 participants.
- In addition, local STRAMA groups arranged local education days in Skåne, Borås, Örebro, and Umeå. These also attracted a great deal of interest, and participants had the opportunity to discuss specific treatment guidelines from a local perspective.

### *National STRAMA projects*

The aim of the studies initiated by STRAMA is to increase knowledge of the use of antibiotics, including the causes of antibiotic resistance and its effect on treatment decisions. Several studies were launched in 2003, and these continued into 2004.

### *Infections in children*

#### *Infections in nursery school*

The survey of hygiene practices in nursery schools, which was started in 2003, was completed in 2004. With the help of infection control nurses and child health nurses, the staff of 338 nursery schools were interviewed. Analysis of the collected data shows that most nursery schools have appropriate targets with regard to hand hygiene, but that improvements can be made in other areas. For example, only 20% of staff have taken part in courses on infection within the past

two years, and collaboration between child health care and nursery schools needs to be improved.

*Improved hand hygiene in nursery schools - less sickness absence?*

During the autumn a study was started in 72 nursery schools in 10 counties. This will look at the difference in sickness rates between children that complement hand washing with disinfectant gel and children that use soap only. Information about illness, sickness absence, parent social benefit payouts etc will also be gathered. Parents and staff have been keen to participate, and the study will continue until June 2005.

*Infections in families with children*

Between October 2002 and April 2003 a study was carried out in three municipalities with high antibiotic prescribing rates and in three municipalities with low prescribing rates. 954 families kept a diary for a whole month, recording all episodes of illness, medical consultations and absences from nursery, school and workplace. The first analysis is complete and is to be presented shortly in a medical journal. Further articles are planned.

*What does a ten-year-old know about antibiotic resistance?*

During the year, educational material regarding bacteria and viruses was distributed to schools. The material is intended for pupils aged 10 yrs and has been used previously in a study in 12 schools. Demand for the material has been very high, and about 10 000 pupils have used it for learning. A follow-up questionnaire is to be sent to teachers.

**Antibiotic use**

*The SANT study (Use of antibiotics in nursing/residential homes).*

The use of antibiotics in older age groups has been on the rise in recent years. For this reason, STRAMA is carrying out a study of the treatment of infection in nursing/residential homes. The study is divided into different phases, and staff training, carried out by GPs and pharmacists, was commenced in 2004. Following this, new data will be collected comparing treatment choices made before and after the training programme.

*Antibiotics in hospital care*

During the year, STRAMA repeated the point prevalence study of antibiotic use in hospitals that was previously carried out in November 2003. The second study included 11 300 inpatients, almost equalling the preceding study. The results of the two studies concurred, showing that peroperative prophylaxis is too long, and that certain antibiotics are used to a remarkable extent. The study has been presented at international congresses.

*Prescribing intervention in Kronoberg*

The association between increased use of antibiotics and increased bacterial resistance is now generally accepted. We do not know, however, if it is possible

to reverse the trend of increasing resistance by a radical reduction in any particular group of antibiotics. From September 2004 until October 2006, prescribers in Kronoberg will refrain from prescribing trimethoprim. This agent is used mainly in the treatment of urinary infection for which other agents are available. The historical resistance database that exists in Kronoberg will form the basis of the study, and comparisons can be drawn with later data. Statistics from Apoteket (the state-owned national pharmacy chain) will enable us to monitor prescribing, and a drop of 95% in prescriptions for trimethoprim observed during the first month of the study is a sign that the study is considered important.

#### *STRAMA in intensive care*

**IVA-STRAMA**, which was established in 1999, is a resource for local quality assurance activity aimed at minimising the appearance and spread of resistant bacteria within Swedish intensive care. The collaboration with the Swedish Intensive Care Register (SIR) has intensified during 2004, and a decision has been taken to integrate **IVA-STRAMA** into **SIR** at some point in the future. This would provide significantly better opportunities for monitoring the links between infection-related quality indicators, antibiotic resistance and antibiotic usage.

#### *Lectures and symposia*

Members of STRAMA's national management board and executive committee have taken part during the year in several educational events, e.g. the SMI's and RAF's educational days and courses. During the year, local STRAMA groups, local pharmaceutical committees, medical specialist associations and other networks have also invited STRAMA's chairman to lectures and discussion groups. Regular updates have been given to the media with regard to antibiotic resistance and consumption.

#### **Other activities**

A new web site has been developed during the year, providing a better instrument for dissemination of information in a more coherent fashion.

Antibiotic prescribing is being continually monitored using the statistics system X-plain (Apoteket AB). The system is not ideal from STRAMA's point of view, and a complementary system is desirable. The work of drawing up the required specifications has been put on hold, in favour of other priorities. The situation has been resolved with the provision of complementary data output by Apoteket AB, for a fee.

#### **Local STRAMA activity**

##### *Local STRAMA groups*

During 2003/4, an inventory of the work done by county councils with regard to the prevention of antibiotic resistance was made. The final report highlighted in particular the deficiencies that represent obstacles to effective collaboration,

namely the shortage of single rooms on hospital wards and the lack of specialist expertise in medical hygiene and infectious diseases. The report has been distributed to the management of county councils and hospitals, to public authorities and to the heads of clinical departments. The report is an important knowledge base for the current process of creating a hospital STRAMA.

#### *Local projects*

1 million SEK of current funding has been allocated to local projects throughout the country. The projects cover a wide spectrum, for example:

#### Projects in primary care

- The epidemiology and risk factors for the spread of penicillin-resistant pneumococci in nursery schools in Skåne.
- The production of a video film about upper respiratory tract infections in children. The film is aimed at staff, parents and pupils.
- Training in the management of infectious diseases for nurses in domiciliary healthcare.
- Gynaecological fungal infections – overtreatment and development of resistance.

#### Projects in hospital care

- A longitudinal study of MRSA carrier states and associated risk factors from an epidemiological perspective.
- Resistance patterns in *Strep viridans* in blood isolates, PCR typing.
- The development of systems for registering infections and antibiotics.

#### *International activities*

STRAMA is participating in the EU project ESAC (European Surveillance of Antibiotic Consumption), the aim of which is to document antibiotic use in Europe.

In collaboration with Dag Hammarskjöld Foundation, STRAMA arranged a meeting to discuss antibiotic resistance from a global perspective in May 2004. All parts of the world were represented at the meeting, and Sweden was given the role of coordinator for the REACT network, which consists of three working groups that shall work to:

- I. Highlight the problem and increase political awareness
- II. Support and coordinate current efforts to promote rational prescribing

- III. Analyse systematically the need for new antimicrobial agents, the obstacles to research and development, and solutions

A follow-up meeting in September 2005 is currently being planned.

REACT has a well established working relationship with the WHO. In the WHO report "Priority Medicines for Europe and the World", STRAMA's chairman was asked to take responsibility for the section dealing with antibiotics. This section covers all aspects of the problem and forms the basis of the Swedish resolution on antibiotic resistance which will be put before the World Health Assembly in 2005.

The Swedish STRAMA model was presented at the International Conference on Improving Use of Medicines, where 70 nations took part.

Solna, March 2005

On behalf of the national STRAMA group

Otto Cars  
Chairman

#### Financial report STRAMA 2004 (tSEK)

<i>Item</i>	<i>Cost</i>
Overheads	1 040
Administration and IT	325
Salaries	900
Meetings, education days, travel	596
National projects	2 242
Local projects	1 140
Project support and analysis	1 550
<b>Total</b>	<b>7 793</b>