

# **STRAMA**

## **Swedish Strategic Programme for the Rational Use of Antimicrobial Agents and Surveillance of Resistance**

### **Annual Report 2002**

#### **Background**

The Swedish Strategic Programme for the Rational Use of Antimicrobial Agents and Surveillance of Resistance, STRAMA, was established in 1995 following discussions between the Swedish Society of Medicine's reference group on antibiotics (RAF), the Swedish National Board of Health and Welfare, the Medical Products Agency and the Institute for Infectious Disease Control (SMI). The main aim was to create a decentralised organisation to establish a broad base throughout the country. Through the agency of the county medical officers at least one regional STRAMA-group was established in each county. Today, there are 19 outpatient/primary care groups and 5 inpatient groups. The national management board of STRAMA is made up of the following Swedish public bodies and organisations: The Institute for Infectious Disease Control, The Association of County Medical Officers, The National Board of Health and Welfare, The Medical Products Agency, The Society of Medicine's Reference Group on Antibiotics (RAF) and its subcommittee on methodology (RAF-M), The Infection Control Association, The Federation of County Councils, The Association of Local Authorities, Apoteket AB, The NEPI Foundation, The National Veterinary Institute and The Board of Agriculture. During 2002 STRAMA received finance of 3 million SEK via the Dagmar agreement. These funds were divided between management functions and national and local projects. The focus of STRAMA's work during 2002 has been in accordance with the aims as stated in the proposal for a national plan of action against antibiotic resistance.

#### **Antibiotic consumption and resistance**

During STRAMA's first year, a marked reduction in the use of antibiotics was seen throughout the country. The greatest reduction was seen in the youngest age groups and there is good reason to ascribe this reduction to a reduction in unnecessary prescribing of antibiotics for virus infections e.g. the common cold. It can also be inferred from the statistics that the reduction primarily relates to those agents which ought to be used sparingly, when resistance is taken into consideration. The total national consumption of antibiotics has remained relatively constant since 1997. However, whilst a continuing reduction can be seen in the youngest age groups, a general increase in the use of antibiotics can be seen in people aged over 80. A more detailed analysis of the reasons for this increase is desirable and is currently being planned. The total cost of all pharmaceuticals in Sweden rose by 70% between 1997 and 2002, compared to only 9% for antibiotics. From an international perspective, the state of antibiotic resistance in Sweden remains favourable. The increasing prevalence of methicillin resistant *Staphylococcus aureus* (MRSA) is, however, a matter of concern. The dissemination of knowledge about this problem and the establishment of preventive measures in hospital and community care was one of STRAMA's priorities during 2002.

## Local STRAMA activity

### *Local STRAMA groups*

The local STRAMA groups, often in close collaboration with local pharmaceutical committees and their therapy groups, are continually working towards rational prescribing goals set by STRAMA. Local resistance patterns are also monitored in collaboration with local laboratories. All local STRAMA groups can apply for financial support for local projects. During 2000 and 2001, a total of 1 million SEK was awarded for local projects. The projects cover a wide area and a few examples are given below:

*The presence of antibiotics and the development of resistance in hospital drains* – At a unit of the Kalmar county hospital repeated bacterial cultures of drains water, sediment and biofilm are being done. At the same time, the use of all antibiotics within the unit is being monitored. Two substances have been successfully quantified in drains water.

*Antibiotic treatment of urinary tract infections, otitis and pneumonia* – A study aimed at measuring to what extent prescribers follow local treatment guidelines for these diseases.

*The physician's awareness of bacterial resistance to antibiotics and his ability to evaluate microbiological laboratory results* – A questionnaire study of 145 family doctors in Uppsala county which showed an acceptable level of knowledge regarding resistance but insufficient knowledge for the proper interpretation of the laboratories' culture results.

*STRAMA tour of Västra Götaland* – A county medical officer and an information pharmacist visited health centres and gave a talk on resistance and antibiotic selection. During the visits the local prescribing patterns were also discussed.

*Evaluation and quality assurance of antibiotic use at Huddinge University Hospital* – The evaluation showed that nearly a quarter of treatment decisions lacked a documented indication. Afterwards, an infection control programme was introduced with routines for monitoring and documentation.

*The monitoring of antibiotic resistance in population groups with average antibiotic consumption* – The study provided information about what volumes of cultures and resistance testing are needed to allow laboratories to assess local resistance patterns reliably.

*Parent education in nurseries in Vellinge municipality* – The number of visits to the doctor and the consumption of antibiotics in children aged up to 6 years was measured and compared after parental education was given. About 50% of parents attended the course and a reduction of 14% in both the number of visits to the doctor and antibiotic consumption was noted.

*Educational material about infections aimed at schoolchildren* – The material has been used in biology teaching for 10-11 year olds. On evaluation, an improvement was noted in the children's knowledge regarding treatment and the difference between bacterial and viral infections.

*The following local projects were granted funds during 2002:*

Fictitious patient case notes as educational tools in infectious diseases (Skåne).

Risk factors for septicaemia with ampicillin resistant enterococci in patients on a haematology ward - a case control study (Uppsala).

Primary care organisation for studies of resistance development in urinary tract infections (Kronoberg).

Evaluation and quality assurance of antibiotic use at a university hospital before and after the introduction of a hospital-wide infection control programme (Stockholm).

Antibiotic resistance in bacterial isolates from primary care patients with uncomplicated urinary tract infection (Uppsala).

### **National STRAMA activity**

#### *National STRAMA Group*

During the year, STRAMA's national management board has held two meetings at which the direction and priorities of its activities, and the collaboration between public authorities and other organisations were discussed, and at which the distribution of the year's Dagmar funding was decided. During the year the aims and terms of reference of STRAMA's work have been revised and laid down.

(See supplement 1 and 2). An executive committee mandated by the national group is responsible for day to day management.

#### *Educational days*

- This year's STRAMA day focused on national antibiotic consumption, illustrated by presentations of local studies and discussions about national treatment guidelines.
- In collaboration with the SMI, the Association of Local Authorities and the Federation of County Councils, a theme day was arranged to look at measures to prevent antibiotic resistance in non-hospital healthcare. An exceptionally high level of interest was expressed by nurses with medical responsibility for residential and nursing homes. The concluding panel discussion revealed a desire for follow-up theme days and a need for recommendations regarding practical everyday work.
- During the year, a STRAMA day focusing on antibiotic use in hospitals was also arranged. The meeting's participants, all with experience of hospital studies, were agreed that current estimates of consumption do not form an adequate basis for comparison with sickness rates, inpatient occupancy rates and other parameters. As a result, STRAMA has decided to carry out point prevalence studies in hospitals during 2003, following a common protocol.
- STRAMA contributed to a SMI day entitled "Multiresistant Bacteria in Nordic Healthcare". During the day, situation reports from England and the Nordic countries were presented.

*National STRAMA projects*

- The diagnosis/prescribing survey called "Infection Registration 2000" that was carried out in 5 counties in 2000 was repeated in 2002. During the course of 1 week, primary care physicians at 140 health centres filled in a form for every patient that sought help for infection-related symptoms, a total of 5 377 consultations. The age/sex distribution was essentially identical in both surveys, whilst certain trends in the distribution of both diagnosis and choice of antibiotic could be seen on comparison of the two. The preliminary analysis suggests that compliance with current treatment guidelines for e.g. urinary tract infections in women has improved.
- STRAMA's intensive care study continued during 2002. Nearly every county is taking part in the study, and the results are continually updated via a web application. The design and quality of the study has aroused interest within the EU and work is in progress on an application for support from the EU's 6th framework programme.
- Planning is in progress for a study that will look at infection rates in families with children, in relation to geographic differences in antibiotic consumption. The study is a collaboration project between STRAMA and individual counties.
- A new study is being planned in order to evaluate the new guidelines for the management of uncomplicated ear infections. The study is expected to take a couple of years as 2000 children are to be included. A preliminary analysis will be made when 800 children have been studied. This study is also a collaboration project.
- A study of antibiotic usage in nursing/residential homes is a national collaboration project involving STRAMA, the Karolinska Institute, the Association of Local Authorities and Apoteket AB. The objects of the study are to describe the treatment of infections in nursing/residential homes for the elderly and to develop and test a relevant educational pack. A pilot study that collected data on infection episodes in 7 nursing/residential homes over a period of 3 months is currently being analysed. The main study will begin during 2003. A substudy relating to staff focus group discussions centred on the treatment of infection in nursing/residential homes is to be carried out in 2003.

*Lectures and symposia*

STRAMA has, in collaboration with RAF and the MPA, arranged an expert meeting where new guidelines for the treatment of impetigo were drawn up. In addition, STRAMA's chairman has, during the year, been invited to lectures and discussion groups by local STRAMA groups, local pharmaceutical committees, specialist associations and other networks. These meetings and occasions have been given a high priority because they provide the opportunity for important exchange of information.

*Other activities*

STRAMA and the SMI have together drawn up a report concerning antibiotics and resistance patterns in Sweden - SWEDRES 2001. The report includes background, with historical and current data, and covers the period up to and including 2001.

STRAMA contributed analyses and evaluations during the compilation of the National Board of Health and Welfare's 1st quarterly report on pharmaceutical sales, which focused on antibiotics.

STRAMA's web site has, during the year, continuously presented newsletters containing reports about current national and international activities.

STRAMA has, during the year, been an important contact partner for a Swedish film group that has been given EU support for making a film about antibiotic resistance.

During the year, continuous discussions have been held with Apoteket AB and the National Board of Health and Welfare in order to safeguard continuing free access to antibiotic consumption statistics.

**International activities**

STRAMA's domestic activities have been presented at several international meetings and conferences. STRAMA is taking part in the EU-sponsored project ESAC (European Surveillance of Antimicrobial Consumption) the object of which is to survey antibiotic usage in Europe. The data that have hitherto been collected were presented at a conference in England. A report on the data from participating countries has been issued and demonstrates the uniquely valuable access to comprehensive antibiotic consumption statistics found in Sweden and the Nordic countries. STRAMA's chairman has participated in an expert meeting on antibiotic resistance held at the Geneva headquarters of the World Health Organisation. Several STRAMA members have been actively preparing for the first round of applications for research project funding under the EU's sixth framework programme.

Solna, 2nd April 2003

On behalf of the National STRAMA Group

Otto Cars  
Chairman

*Supplements:*

1. Aims
2. Terms of reference
3. Financial accounts

## The Aims of STRAMA

### (Laid down by the National STRAMA Group 11th Dec 2002)

#### **Background**

*Strama is a network organisation that was established in 1994. Strama consists of groups at county level and a central coordinating group. The groups at county level are made up of experts from various relevant fields of activity. Members of the central coordinating group represent relevant authorities and organisations.*

#### **Aims**

Strama's aim is to safeguard the availability of effective antibiotic treatment.

#### **Strategies**

- Prioritisation and coordination of activities within the network
- Better public and professional knowledge about infections and their management
- Rational use of antibiotics and reduced antibiotic resistance

#### **Activities**

- Monitoring antibiotic usage and resistance both nationally and internationally and identifying problem areas
- Gathering and analysing knowledge within prioritised problem areas in order to
  - identify measures for immediate implementation in healthcare
  - initiate the drawing up of programmes of action with measures and aims capable of practical application
  - influence the attitudes and behaviour of prescribers and the general public
  - identify knowledge gaps and initiate projects in these areas
  - identify changes needed in regulations or organisational support
- Disseminating knowledge bases and proposals for action to relevant professions, media, decision makers and the general public about
  - resistance patterns
  - antibiotic use
  - risk factors for the spread of infections and resistance
- Working actively for the practical implementation of knowledge and proposals
- Evaluating the effects of performed interventions

## **The Terms of Reference for STRAMA's Work**

(Laid down by the National STRAMA Group 11th Dec 2002)

### 1. Humans/Animals

STRAMA's project funding is exclusively used for problems related to human medicine.

### 2. STRAMA/Healthcare providers

The prime responsibility for work on quality improvements in the use of antibiotics and in the prevention of resistance lies with the healthcare provider. Activities at the local level should be supported by facilitating the gathering of knowledge and providing some financial support for local studies, up to a maximum of 1.5 million SEK for 2003.

### 3. Sweden/The World

STRAMA should, through the dissemination of knowledge, facilitate work on rational antibiotic use in other countries but may not provide direct financial support for the benefit of foreign or international bodies.

### 4. Knowledge base/Basic research

STRAMA shall in the first instance support projects that increase the knowledge base needed for interventions focused upon antibiotic use and the spread of resistance.

### 5. STRAMA/Public authorities

STRAMA's financial resources shall not be used to cover the cost of work that clearly falls within the remit of public authorities. Projects that lie within grey areas that may arise shall be judged individually.

### 6. Antibiotics/Antiviral agents/Antifungal agents

RAF (Reference group for antibiotics), and RAV (Reference group for antiviral therapy) and RAM (Reference group for antifungal agents) are expert groups in the field of antimicrobial therapy. STRAMA's main task is to promote the rational use of antibiotics and STRAMA should therefore, in the first instance, support the work of RAF. An example of such support might be the compilation of knowledge as a basis for drawing up treatment guidelines. STRAMA can also help with the dissemination of information from RAV and RAM.