How to increase awareness of the general public about prudent use of antibiotics in a smaller country: Sweden

Otto Cars

The Swedish Strategic Programme Against Antibiotic Resistance
NATIONAL LEVEL
- National co-ordinating group
- Surveillance
- National projects

LOCAL LEVEL
- Local co-ordinating groups
- Implementation
- Behavioural change
Awareness raising of all stakeholders through news media

Patient

Prescriber

Authorities

MEDIA
Media needs news!

• National comparisons of antibiotic use and resistance

• International experience

• National studies

• Focussing on the individual consequences of antibiotic use
The proportion of non-fluoroquinolone prescriptions to women 18-74 years with UTI
Primary health centres in southern Stockholm
Figure 3.1.8. Swedish municipalities with the highest and lowest fraction of children treated with at least one course of antibiotics (J01 excl methenamine) in community care in 2007. Children aged 0-6 years, users/1000. Red coloured municipalities are large in size, yellow coloured are of medium size and blue coloured are small municipalities.
Super bug kills dozens in hospitals across country

Virulent stain of bacteria believed to be cause of death of 12-200 patients in hospitals. Experts explain most of those infected were already suffering from prior medical conditions. Health ministry says outbreak was kept secret to avoid mass panic.

Meital Yasur-Beit Or

Published: 03.07.07, 09:53 / Israel News
Otitis media: Swedish study in primary health care: 179 children randomized to placebo vs penicillin V

Educational activities for parents and children at day-care centres
Alcohol-based hand-disinfection reduced children's absence from Swedish day care centers

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Effect of Macrolide versus Placebo Use on Temporal Changes of Proportion of Macrolide-Resistant Oral Streptococci

- Mean preantibiotic carriage of Mac-R streptococci was 28%

- Use of both Clar and Azi resulted in a huge increase in resistant streptococci which persisted for at least 6 months ($P \leq 0.01$)

- Macrolide use is the single most important driver for the emergence of macrolide resistance
Influencing the demand side: Patients knowledge and perceptions

- Short time for consultation
- Difficult diagnosis
- Limited possibilities for follow-up
- Slave of habit
- (Percieved) patient expectations
Telephone interview with randomly selected Swedish citizens (n=750)

I agree

- Antibiotics cure common colds: 19%
- Antibiotics effects bacteria: 77%
- Antibiotics effects viruses: 21%
- Antibiotics makes bacteria resistant: 76%
No of visits for acute otitis media
Central primary health care district, Linköping Sweden
Figure 2. Use of macrolides 0-6 years of age, Sweden 1974-2002, primary care.
Prescriptions in Sweden in different age groups
1987 – 2004 (recipes/1000 inh/year)
Prescriptions of antibiotics for UTI (outpatients)

UVI-medel till kvinnor, öppenvård
0
10
20
30
40
50
60
J01CA08 - pivmecillinam
J01EA01 - trimetoprim
J01XE01 - nitrofurantoin
Kinoloner (norfloxacin + små cipro)

Recipen/1000/år

“Små cipro” avser ciprofloxacin 100 mg 6 resp 10 tabl, 250 mg 10 tabl och 500 mg 10 tabl.

Fluoroquinolones
Total sales of Antibiotics in the Nordic Countries 1978-2006*

*Excluding Metenamine. Before 1998 figures from Denmark do not include hospital use.
Strama-A Swedish working model for containment of antibiotic resistance
www.strama.se

**National network**
with local groups in each county

**Diagnose-prescribing and point-prevalence surveys**

**Annual reports since 2001:**
Antibiotic consumption and resistance

**National treatment guidelines**

**Action plans**

ESBL resistance in enteric bacteria

Information från Läkemedelsverket

**Strama**

Swedish resistance programme against antibiotic resistance
Possible success factors

• Small country with dominating public sector in health care
• Building on previous experience in the veterinary sector
• Community officers for communicable diseases
• Multidisciplinary coordinating group-involving all stakeholders
• Governmental support and mandate
• Decentralised organisation and local ownership
• Credible, scientifically based messages and interventions
• Clear communication and media strategy
Opinion poll 8 October 2008

Which health issues has been causing special attention during the last year?

General public: n=1003

<table>
<thead>
<tr>
<th>Health Issue</th>
<th>Importance</th>
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<tbody>
<tr>
<td>Kost-, övertäkt-, fetma</td>
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<tr>
<td>Trygga och säkra livsmedel</td>
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<tr>
<td>Barn och ungdomars bruk av alkohol och tobak</td>
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<tr>
<td>Patientinformation</td>
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<tr>
<td>Mältasamma sjukdomar som kräver samordning över gränser</td>
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<tr>
<td>Läkemedelsförfalskning</td>
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<td>EU:s betydelse för utveckling av nya innovativa läkemedel</td>
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Politicians n=213

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A difficult balance

- The best interests of the individual
- The global need for sustainable antibiotic use