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NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

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MRSA: NEW GUIDELINE AND MANDATORY NOTIFICATION

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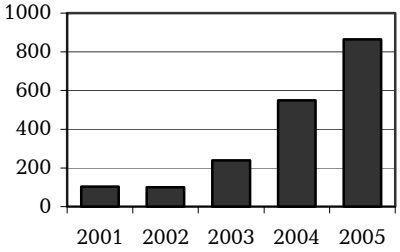
The incidence of infections caused by methicillin-resistant Staphylococcus aureus (MRSA) has increased in recent years, Figure 1, and infection has also been observed to spread outside hospitals, EPI-NEWS 47/05. The Danish National Board of Health has thus prepared a national guideline on MRSA prophylaxis in hospitals and in primary health care.

Figure 1. Newly diagnosed MRSA cases in Denmark, 2001-2005



The overall principle is that MRSA patients are entitled to receive treatment and care exactly like other patients and to participate in social activities outside hospitals. The two main prophylaxis principles are: 1) to identify and remove the bacteria in the persons concerned, and 2) to ensure that health care workers and carers adhere strictly to stipulated hygiene measures.

Who should be tested for MRSA?
On admission to hospital, all patients who have experienced a risk situation within a twelve-month period, should be tested, Table 1. Outside hospitals, patients are tested as part of standard clinical investigation. Household members should only be tested if employed in the care or health care sector, or if they present disease signs or have been exposed to individual risk factors, Table 2.

Treatment of carriers
The objective of carrier treatment is to prevent MRSA from spreading and to reduce the risk of carriers subsequently developing a clinical MRSA infection. Treatment includes the entire household. Where possible, other infections and skin diseases should be treated before MRSA treatment is initiated. Treatment takes five days and includes MRSA removal from the nose with mupirocin nasal ointment, and from the skin and hair by rinsing with chlorhexidine hydrochloride soap. The home must be cleaned thoroughly and clothes washed frequently. In connection with infection detection, treatment guidelines should be sent to the MRSA carrier.

Hygienic measures
The guideline builds on the general guidelines on hand hygiene, use of personal protection gear, handling of devices, handling of contaminated linen and refuse, and cleaning. Annexes have been made describing the general and supplementary MRSA measures for hospitals, nursing homes, home care and clinics. In hospitals, all MRSA-positive patients shall be treated in isolation. This also applies to patients with an increased risk of being MRSA positive, until negative swab results are produced. All persons who have been in a risk situation within the last two months shall be isolated on admission, Table 1. For patients with personal risk factors, the period is extended to twelve months, Table 2. In primary health care, hospital rules on hand hygiene and personal protection gear also apply. Clinics should be furnished and employees instructed to prevent infection and transmission of infection. The most essential measure is correctly performed hand hygiene. Persons who have been diagnosed with MRSA should be scheduled for visits at practices and clinics during the latter part of the day. Waiting time in the waiting room should be avoided. To the extent possible, any further contact with the health care system should be avoided until after the first negative control swab.

Mandatory notification
To monitor developments and facilitate the implementation of measures in connection with outbreaks, notification is now mandatory. The mandatory notification includes all cases where MRSA is initially diagnosed after 1 November 2006 and cases where an MRSA subtype, not previously found in the person, is detected. Notification is made to the Medical Officer of Health and to Statens Serum Institute. Cases of clinical infection as well as asymptomatic carrier cases are subject to notification. The Danish National Board of Health's new form 5001 is used for notification. The form is submitted to the treating clinician by the diagnosing laboratory. Consequently, clinicians do not need to order the forms themselves. The notification form is accompanied by a personal MRSA card and the treatment guideline.

Dissemination of information
Persons who have been diagnosed with MRSA are encouraged to inform health personnel etc. about the diagnosis, e.g. by presenting the MRSA card. When referring patients, doctors must pass on the patient's MRSA status, if relevant to the continued treatment or to any staff measures.

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1 November 2006

Table 1. Risk situations

- Previously MRSA positive
- Admitted to department with MRSA outbreak
- Admitted to ward with MRSA positive patient
- Lives/spends time daily at department belonging to nursing home/ organisation with MRSA outbreak
- Hospital abroad, excl. Scandinavia/the Netherlands: Admission or outpatient invasive treatment
- MRSA positive person in household or other close contact
- Stay in poor hygienic conditions, e.g. war zones, refugee camps, orphanages, etc.

Work (incl. study stays and internships/placements):

- Department at hospital/nursing home/organisation with MRSA outbreak
- Hospital abroad, excl. Scandinavia/the Netherlands
- Poor hygienic conditions, e.g. war zones, refugee camps, orphanages, etc.

Table 2. Risk factors

- Wounds
- Chronic skin diseases
- Chronic respiratory infections, including sinusitis
- Foreign bodies, e.g. urethral catheters, drainage tubes,
- intravenous catheters
- IV drug use

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2006 figures are preliminary)

Table 1	Week 43 2006	Cum. 2006 [1]	Cum. 2005 [1]
AIDS	1	38	50
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	1	22	2
Diphtheria	0	0	0
Food-borne diseases	11	469	470
of these, infected abroad	2	117	114
Gonorrhoea	8	358	417
Haemorrhagic fever	0	0	0
Hepatitis A	4	34	56
of these, infected abroad	0	16	19
Hepatitis B (acute)	0	15	31
Hepatitis B (chronic)	5	267	122
Hepatitis C (acute)	0	7	1
Hepatitis C (chronic)	5	405	263
HIV	11	206	216
Legionella pneumonia	6	111	100
of these, infected abroad	0	29	42
Leprosy	0	0	0
Leptospirosis	0	8	10
Measles	0	28	2
Meningococcal disease	0	56	81
of these, group B	0	26	38
of these, group C	0	11	21
of these, unspec. + other	0	19	20
Mumps	0	16	7
Neuroborreliosis	2	68	72
Ornithosis	0	10	18
Pertussis (children < 2 years)	1	38	132
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	2	1
Listeria monocytogenes	0	7	2
Streptococcus pneumoniae	0	67	100
Other aethiology	0	7	16
Unknown aethiology	0	16	17
Under registration	4	27	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	2	52	91
of these, infected abroad	0	43	73
Syphilis	0	55	108
Tetanus	0	2	2
Tuberculosis	11	334	357
Typhoid/paratyphoid fever	0	27	31
of these, infected abroad	0	24	29
Typhus exanthematicus	0	0	0
VTEC/HUS	3	118	134
of these, infected abroad	0	40	46

[1] *Cumulative number 2006 and in corresponding period 2005*

Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received in SSI laboratories

Table 2	Week 43 2006	Cum. 2006 [2]	Cum. 2005 [2]
Bordetella pertussis (all ages)	3	175	426
Gonococci	11	352	375
of these, females	3	64	39
of these, males	8	288	336
Listeria monocytogenes	1	43	32
Mycoplasma pneumoniae			
Resp. specimens [3]	19	363	805
Serum specimens [4]	6	307	647
Streptococci [5]			
Group A streptococci	2	121	89
Group B streptococci	3	80	67
Group C streptococci	0	19	21
Group G streptococci	6	121	99
S. pneumoniae	20	791	914
Table 3	**Week 41 2006**	**Cum. 2006 [2]**	**Cum. 2005 [2]**
Pathogenic int. bacteria [6]			
Campylobacter	40	2503	3052
S. Enteritidis	9	486	532
S. Typhimurium	11	326	448
Other zoon. salmonella	18	569	473
Yersinia enterocolitica	3	148	195
Verocytotoxin-producing E. coli	5	120	128
Enteropathogenic E. coli	5	242	224
Enterotoxigenic E. coli	4	201	308

[2] *Cumulative number 2006 and in corresponding period 2005*

[3] *Resp. specimens with positive PCR*

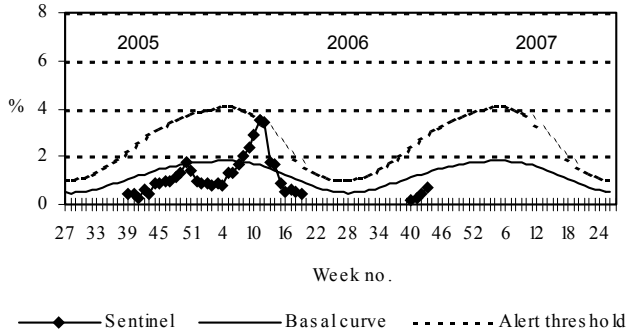
[4] *Serum specimens with pos. complement fixation test*

[5] *Isolated in blood or spinal fluid*

[6] *See also www.germ.dk*

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2005/2006/2007



Sentinel: Influenza consultations (as percentage of total consultations)

Basal curve: Expected frequency of consultations under non-epidemic conditions

Alert threshold: Possible incipient epidemic

1 November 2006