EPI-NEWS

NATIONAL SURVEILLANCE OF COMMUNICABLE DISEASES

Editor: Peter Henrik Andersen
Dept. of Epidemiology
Statens Serum Institut • 5 Artillerivej • DK 2300 Copenhagen S

Tel.: +45 3268 3268 • Fax: +45 3268 3874
www.ssi.dk • epinews@ssi.dk • ISSN: 1396-4798

GONORRHOEA 2004

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Laboratory diagnosed cases
According to the laboratory notification system, gonorrhoea was diagnosed in 434 patients in 2004; 382 males and 52 females, table 1.

Table 1. Patients with laboratory diagnosed gonorrhoea, by gender, 1998-2004

	Total	M	F	M/F ratio
1998	211	187	24	7.8
1999	334	291	43	6.8
2000	335	291	44	6.6
2001	309	259	50	5.2
2002	332 *	278	53	5.2
2003	258	227	31	7.3
2004	434	382	52	7.3

* *Gender unknown for one patient*

This represents an increase of 51% relative to the average for the previous 10 years (287). In Copenhagen and Frederiksberg Municipalities, the number for males increased from 110 in 2003 to 239 in 2004, and for females from 12 to 28 cases. A total of 63% of the cases among males were diagnosed in the two municipalities mentioned above. Twelve males had also had gonorrhoea in 2003, and 20 males had a total of 44 cases of gonorrhoea in 2004.

Gonorrhoea in throat and rectum
According to information from the diagnostic laboratories, 36% of the patients had throat swabs performed, of which 12% were positive. At GPs, 9% of the male patients had throat swabs taken. Swabs from rectum were performed in 37% of patients, of which 23% were positive. For Copenhagen and Frederiksberg Municipalities, the proportion was 49% and 23%, respectively, and for the rest of the country, 17% and 18%, respectively. Swabs from the rectum were performed less frequently by GPs than STI clinics, table 2.

Table 2. Rectum swabs taken among gonorrhoea patients in general practice and STI clinics, 2004

	M	F
General practice		
Number	206	33
of these, swabbed	10 %	3 %
of these, positive	40 %	100 %
STI clinics		
Number	156	13
of these, swabbed	78 %	77 %
of these, positive	20 %	10 %

Resistant gonococci
The frequency of penicillin resistant gonococci was 35% (34% in 2003); 12% were penicillinase-producing (24% in 2003). The frequency of fluoroquinolone resistance increased to 39% (29% in 2003), and a further 8% of the strains had reduced sensitivity (10% in 2003). A total of 44% were resistant to or had reduced sensitivity to both penicillin and fluoroquinolones (39% in 2003). Two strains had reduced sensitivity to ceftriaxone. Both were resistant to penicillin and one to fluoroquinolone.

Notified cases
In 2004, a total of 414 cases of gonorrhoea were notified, 361 (87%) males and 53 (13%) females. This distribution does not deviate from previous years. The notified cases constituted 89% of the laboratory diagnosed cases (72% in 2003). The median age was 29 years (14-70) for males and 26 years (13-63) for females. A total of 67 (16%) of the cases were immigrants, including 50 males and 17 females. In 2003, this proportion was 22%. The distribution by county is shown in table 3.

Table 3. Notified gonorrhoea cases, by county, 2004

County	Total	%
Copenhagen Municip.	175	42
Frederiksberg Municip.	24	6
Copenhagen County	52	13
Frederiksborg	10	2
Roskilde	8	2
West Zealand	8	2
Storstrøm	10	2
Bornholm	1	0
Funen	17	4
South Jutland	4	1
Ribe	9	2
Vejle	12	3
Ringkøbing	5	1
Aarhus	33	8
Viborg	3	1
North Jutland	16	4
Other/unknown	27	7
Total	414	100

A total of 226 (55%) of the notifications were forwarded by GPs, while 170 (41%) came from STI clinics.

Mode of transmission
Among males, 200 (55%) were infected via homosexual contact and 127 (35%) via heterosexual contact. For 34 males, the mode of infection was not stated. The proportion of males infected via homosexual contact was within the range observed over the previous 10 years (35%-61%).
The median age among those infected via homosexual contact was 29, and was thus not different from the median age for all males.
A total of 177 (89%) of those infected via homosexual contact and 66 (52%) of those infected via heterosexual contact acquired the infection in Denmark. Of males infected via heterosexual contact, 15 (12%) were infected in Thailand. For 283 males, the infection contact was stated, table 4.

Table 4. Infection contacts among males with gonorrhoea, 2004

Infection contact	Homosexual		Heterosexual	
	No.	(%)	No.	(%)
Steady partner	44	(22)	14	(11)
Casual partner	131	(65)	73	(57)
Prostitute	0	(0)	21	(17)
Not stated	25	(13)	19	(15)
Total	200	(100)	127	(100)

Among the females, 25 (47%) were infected by steady partners and 14 (26%) by casual sexual contacts. For 13, the mode of infection was not stated. A total of 42 (81%) of females were infected in Denmark. HIV status was not stated on 278 (67%) of the notifications. A total of 28 cases occurred among HIV-positive males. In 24 of these cases, gonococcal infection occurred via homosexual contact and in two via heterosexual contact. In two cases the mode of transmission was unknown. Among HIV-positive cases infected via homosexual contact, six cases of gonorrhoea were observed in two males who had been infected two and four times, respectively.

Comments
In 2004, there was an increase in the number of cases of gonorrhoea, which is reflected in both laboratory diagnosed and notified cases. On the basis of the available data, it is likely that infection via both homosexual and heterosexual contact has contributed to the increase. The issuing of notification forms to the treating clinicians, EPI-NEWS 50/03, has brought about a substantially increased degree of reporting. This applies particularly to GPs, who may have a different distribution of patient groups. It is thus difficult to make a direct comparison between notifications for 2004 and previous years.
GPs perform few swabs from throat and rectum. Gonorrhoea of the rectum and especially the throat is usually asymptomatic. Undiagnosed cases may thus constitute a reservoir.
(U. Germer, S. Hoffmann, Department of Bacteriology, Mycology and Parasitology, A. Mazick, S. Cowan, Department of Epidemiology)

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Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2005 figures are preliminary)

Table 1	Week 5 2005	Cum. 2005 [1]	Cum. 2004 [1]
AIDS	4	11	4
Anthrax	0	0	0
Botulism	0	0	0
Cholera	0	0	0
Creutzfeldt-Jakob	0	0	1
Diphtheria	0	0	0
Food-borne diseases	7	29	34
of these, infected abroad	0	7	5
Gonorrhoea	13	103	38
Haemorrhagic fever	0	0	0
Hepatitis A	2	13	8
of these, infected abroad	0	2	2
Hepatitis B (acute)	2	7	3
Hepatitis B (chronic)	5	12	25
Hepatitis C (acute)	0	1	0
Hepatitis C (chronic)	3	18	37
HIV	4	18	26
Legionella pneumonia	3	12	12
of these, infected abroad	0	2	1
Leprosy	0	0	0
Leptospirosis	2	3	1
Measles	0	0	0
Meningococcal disease	0	6	11
of these, group B	0	4	8
of these, group C	0	1	1
of these, unspec. + other	0	1	2
Mumps	0	0	0
Neuroborreliosis	0	10	40
Ornithosis	0	2	1
Pertussis (children < 2 years)	11	34	24
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	0	0
Listeria monocytogenes	0	0	0
Streptococcus pneumoniae	1	5	13
Other aethiology	0	0	0
Unknown aethiology	0	0	2
Under registration	6	22	-
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	5	11	7
of these, infected abroad	4	9	7
Syphilis	7	13	21
Tetanus	0	2	0
Tuberculosis	11	36	29
Typhoid/paratyphoid fever	0	3	3
of these, infected abroad	0	2	2
Typhus	0	0	0
VTEC/HUS	2	15	13
of these, infected abroad	1	8	4

[1] *Cumulative number 2005 and in corresponding period 2004*

Selected laboratory diagnosed infections

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

Table 2	Week 5 2005	Cum. 2005 [2]	Cum. 2004 [2]
Bordetella pertussis (all ages)	19	102	89
Gonococci	8	43	29
of these, females	0	4	8
of these, males	8	39	21
Listeria monocytogenes	0	5	2
Mycoplasma pneumoniae			
Resp. specimens [3]	54	361	20
Serum specimens [4]	28	189	54
Streptococci [5]			
Group A streptococci	6	16	19
Group C streptococci	2	3	2
Group G streptococci	4	17	5
S. pneumoniae	23	147	182

Table 3	Week 3 2005	Cum. 2005 [2]	Cum. 2004 [2]
Pathogenic int. bacteria [6]			
Campylobacter	35	161	113
S. Enteritidis	8	17	13
S. Typhimurium	12	27	26
Other zoon. salmonella	5	23	23
Yersinia enterocolitica	5	18	9

[2] *Cumulative number 2005 and corresponding period 2004*

[3] *Resp. specimens with positive PCR*

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

[5] *Isolated in blood or spinal fluid*

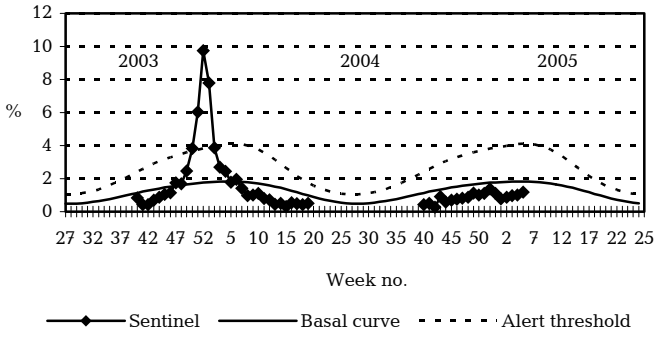
[6] *See also www.germ.dk*

Additional comment

The high number of received gonorrhea notifications is due to delayed forwarding of notifications from a single hospital in the period September-December 2004.

Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2003/2004/2005



Sentinel:	Influenza consultations (as percentage of total consultations)
Basal curve:	Expected frequency of consultations under non-epidemic conditions
Alert threshold:	Possible incipient epidemic

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