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CHIEF DIRECTORATE: HEALTH INFORMATION, EVALUATION AND RESEARCH

STATISTICAL NOTES is primarily a management tool. It is produced and circulated monthly to health managers and healthcare providers.

It is produced on the principle that health data should be translated into information that is useful for improving health provision and quality of care; for better planning and management at all levels and to inform policy development.

Timeous and accurate information should enable improvements in the services that we provide. Colleagues, reporting health events timeously is extremely important. The success of our health information system depends on good reporting.

Please write in if there is anything that can be done to support your reporting practice.

Submissions from directorates which collect data are welcome. The most updated information should be submitted by the 1st day of each month. It should be on both hard copy and disk or email.

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1. FOCUS OF THE MONTH: CHOLERA

1.1. BACKGROUND

The root of cholera is basically bad water. It is associated with low socio-economical conditions, whereby good clean water is either hard to come by or taken for granted.

Cholera received its name from the Greek word *chole*, meaning bilious. It is an endemic disease in Asia, mainly on the delta of the river Ganges with its alkaline waters that favor the cholera bacterium, *vibrio cholerae*. Through this route and migratory movements, it extended to Africa. This was in the early 19th century and throughout this century, science could not trace the mode of transmission of the disease.

By the end of the 19th century, cholera appeared to retreat as a global health threat. It re-emerged in Africa and Latin America in 1991 and remains endemic throughout these regions. The dramatic rise in the cholera cases was at that time blamed on political and economic turmoil, as well as overcrowding e.g. in urban slums or refugee camps. These conditions were accompanied by poor living conditions and deteriorating water sanitation. In 1991 Peru engineers of the public water supply system stopped chlorine disinfection of water, fearing that the byproducts posed a carcinogenic risk. In Latin America, the disease was traced to the growing use of wastewater to irrigate crops near urban areas.

To explain why cholera seemed to have disappeared between the end of the 19th century and 1991, environmental conditions have been identified. The cholera organism has been found to remain dormant in coastal waters for long periods, only to re-appear when conditions are favorable. This explains the seasonal cholera epidemic in Bangladesh, which often coincides with plankton blooms in the Bay of Bengal. Periodic changes in weather patterns e.g. *El Nino*, may also have contributed. The warm sea surface temperatures brought by *El Nino* encourage plankton blooms, which then awakens the cholera organism. This dependence on environmental factors may have some important implications for the future of cholera.

1.2. CLINICAL MANIFESTATIONS AND MODE OF TRANSMISSION

It is an acute bacterial disease caused by *Vibrio cholerae*. It affects the intestinal tract and results in a watery diarrhoea and leg cramps. Although there are often no stomach cramps or fever, the diarrhoea can cause severe dehydration which follows prolonged vomiting and the watery diarrhoea. Cholera can be distinguished from other forms of acute diarrhoea by its lack of blood, mucous or pus in the typical "rice-water" stools. If not controlled, cholera can kill in less than eight hours. Death is usually the result of shock. The symptoms may appear six hours to five days after exposure. Asymptomatic carriers of the disease are common.

Cholera is spread by eating contaminated food e.g. undercooked seafood from warm coastal waters, or drinking water contaminated by faecal waste of an infected person. Certain strains of cholera can survive in fresh water for a long period of time.

1.3 DIAGNOSIS AND TREATMENT

Diagnosis is made by taking a stool sample and testing it in the laboratory to isolate the bacteria. The basic treatment of cholera is the replacement of fluids by mouth or giving Hartmann's solution intravenously. If managed at home, the fluid should contain electrolytes (salt and sugar). Vomiting can deter sufficient rehydration. In this case, hospitalisation is necessary. Antibiotics can be administered to kill the bacteria and shorten diarrhoeal duration but the toxins already produced by these bacteria will continue causing massive fluid loss. Drug administration is therefore only an adjunct to hydration therapy.

Tetracycline is the drug of choice for adults, at 250mg four times daily dosage. It is not recommended for children 8 years or younger and pregnant women, since it stains the developing teeth of children and foetus. Antibiotics such as Furoxone, Cipro or Bactrim will also shorten the duration of illness.

1.4 SUSCEPTIBILITY AND RESISTANCE

Breastfed children are protected from gastric achlorhydria that increases the risk of infection. Reinfection is unlikely since infection results in agglutinating, vibriocidal, and antitoxic antibodies leading to resistance.

1.5 PREVENTION

Travelers to cholera-infested areas are expected to follow the following standard food and water precautions to avoid infection:

- Eat only food that is thoroughly cooked and still hot or fruit that you have peeled yourself.
- Avoid all salads.
- Avoid tap water, unless it has been boiled or treated with chlorine or iodine.
- Avoid food and beverages from street vendors.
- A simple rule of thumb - Boil it, cook it, peel it, or forget it!
(The Centres for Disease Control's bottom line)

To infested countries like Madagascar, a single 300mg dose of the prophylactic Doxycycline regimen is still in use, with alternatives for those who cannot take it. Cholera vaccine provides less than 50% protection for three to six months, which then translates to no useful protection. It is therefore no longer recommended by the World Health Organisation (WHO) for travelers to or from infested areas. Its present use is only to satisfy entry requirements for those few countries that still insist on cholera vaccination.

1.6 SURVEILLANCE AND REPORTING - WHO GUIDELINES

An adequate disease surveillance programme involves keeping daily records of diarrhoea cases seen in health facilities and by health workers in the community. This facilitates early detection of an outbreak. Cholera should be suspected if:

- a patient older than 5 years presents with dehydration following acute watery diarrhoea or dies of this; or
- there is a sudden increase in the daily number of cases of patients passing 'rice-water' stools typical of cholera.

Such changes prompt for sudden notification of the nearest referral health facility or the local health officer. The name, address, age and the date of illness of the patient should be specified. Members of the community should also be encouraged to help in detecting and reporting cases as well as preventing further spread of the disease. When the information comes from an area where cholera has not been confirmed, bacteriological and epidemiological origin need to be promptly investigated so as to determine the origin of the outbreak.

1.7 NATIONAL CO-ORDINATING COMMITTEE

The far-reaching effect of cholera outbreak often calls for an immediate action from the national co-ordinating committee, reinforced by senior members from relevant ministries. This control committee is responsible for:

- epidemic preparedness;
- inter-sectoral co-ordination;
- national and international collaboration;
- collection and reporting of cases and deaths;
- organisation of special training;
- procurement, storage and distribution of required supplies; as well as
- implementation, monitoring and evaluation of control activities.

In South Africa, a National Outbreak response team has been set up to fulfill these responsibilities. This structure is supported in its work by provincial outbreak response teams. Together they played an important role in the control of the cholera outbreak that erupted after the recent floods in Southern Africa.

1.8 CHOLERA SITUATION IN SOUTH AFRICA

Looking back at the past twenty years, cholera has last posed a major public health problem in 1980-1985. Kwa-Zulu-Natal (KZN) has had at least 1 case almost every year during that period, contributing over 73.0% of all the reported cases.

Following Kwa-Zulu Natal are Mpumalanga (11.7%) and the Northern Province (10.4%), contributing more than 10.0% each. In the year 2000, three cases have already been reported following the recent floods. The worst cholera epidemic occurred in 1982 when nearly 14 000 cases were diagnosed.

Table 1: Reported cases of cholera in the past 20 years

YEAR	EC	FS	GA	KZN	MP	NP	NW	WC	X X	TOTAL
1980	-	-	68	1	1238	96	15	-	-	1418
1981	-	22	205	943	1275	2458	633	-	-	5536
1982	125	1	140	12263	462	858	51	-	-	13900
1983	30	15	156	6427	142	107	2	-	-	6879
1984	7	1	12	1663	1	1	-	-	-	1685

1985	-	-	-	699	1	1	-	-	-	701
1986-1990	-	-	6	330	-	-	-	1	-	337
1991-1995	1	-	9	89	15	-	3	-	2	119
1996-2000	1	-	3	37	21	-	4	-	4	70
SA TOTAL	164	39	599	22452	3155	3521	708	1	6	30645

XX = Cases acquired outside South Africa

- = No reported case(s)

2. OUTBREAK NEWS: SOUTH AFRICA'S FIRST CHOLERA CASES IN THE WAKE OF FLOODS

The first South African to be diagnosed was a woman from Komatipoort. This happened two months after the floods struck the Northern Province and Mpumalanga. The 21-year old farm worker contracted the disease when her brother-in-law returned from visiting family in neighbouring Mozambique.

Since the beginning of the year, two cases of cholera from North West have been reported through the notification system. The patients were males of 35 and 55 years of age. More reports are still expected from areas which were stricken by floods.

3. A NATIONAL UPDATE ON TERMINATION OF PREGNANCY

About 3 668 terminations have so far been reported since the beginning of the year. This brings to total 110 547 terminations, which have been reported by the designated facilities since the implementation of the Choice of Termination of Pregnancy (CTOP) Act in 1997. With exclusion of cases of unknown age, the results show that about 55% of terminations are performed on women above 18 years. About 71% of the total terminations are performed during the first trimester. It should be noted that the figures on the TOP table (below are likely to change, especially for the end of 1999 and for 2000, since not all data has so far been received for the specified period.

TERMINATION OF PREGNANCY UPDATE (COMPILED ON 22/06/2000)

	Maternal Age			Gestational Age			Provincial Breakdown									TOT AL
	<1 8	>18	unkn own	<12 wks	>12 wks	unkn own	Gaut eng	M P	FS	KZ N	N C	NP	WC	EC	N W	
Feb'9 7	23 6	134 2	368	1187	759	0	1025	12 0	157	30	55	78	301	17 1	9	1946
Mar' 97	20 3	125 9	483	1185	760	0	912	13 6	274	90	21	27	304	17 1	10	1945
Apr'9 7	26 2	150 3	6	1131	640	0	663	17 8	231	119	42	0	351	16 3	24	1771
May' 97	29 3	147 6	245	1281	733	0	911	13 9	224	121	26	4	325	25 4	10	2014
Jun'9 7	22 9	161 8	372	1516	703	0	1078	13 5	218	153	28	59	315	20 2	31	2219
Jul'9 7	27 7	201 2	832	2119	100 2	0	1743	16 8	217	213	43	35	418	27 8	6	3121
Aug' 97	25 5	194 5	639	1929	910	0	1443	17 4	178	249	43	68	338	32 3	23	2839
Sep'9 7	25 2	170 3	626	1821	760	0	1350	15 2	227	144	51	58	338	24 8	13	2581
Oct'9 7	27 3	191 9	756	1963	985	0	1598	79	261	33	48	36	412	46 1	20	2948
Nov' 97	23 8	160 9	1156	2031	972	0	1858	10 5	285	39	43	64	335	24 3	31	3003
Dec' 97	19 8	104 7	769	1305	709	0	924	12 3	262	68	35	58	343	17 9	22	2014
TOT AL	27 16	174 33	6252	1746 8	893 3	0	1350 5	15 09	253 4	125 9	43 5	48 7	378 0	26 93	19 9	2640 1
Jan'9 8	21 1	123 5	1493	1884	105 5	0	1493	15 7	282	321	57	46	336	21 6	31	2939
Feb'9 8	22 0	137 3	1374	2061	906	0	1374	14 6	312	340	36	70	412	23 3	44	2967
Mar' 98	19 6	140 7	1345	2015	933	0	1345	17 8	342	335	6	43	411	26 7	21	2948
Apr'9 8	24 2	135 3	1542	2289	831	17	1540	14 7	311	355	34	83	429	21 8	20	3137
May' 98	20 8	144 5	1549	2183	101 5	4	1549	21 1	225	394	33	14 2	391	23 5	22	3202
Jun'9 8	17 9	142 5	1453	2198	856	3	1453	19 6	341	369	39	50	368	22 7	14	3057
Jul'9 8	20 3	164 0	1929	2590	118 2	0	1908	27 2	308	430	37	79	421	26 4	53	3772

Aug'98	251	1386	1883	2492	988	40	1883	141	301	342	44	113	432	227	37	3520
Sep'98	258	1409	1670	2412	925	0	1670	107	304	378	44	79	467	288	0	3337
Oct'98	252	1611	2138	2953	996	52	2134	99	344	500	52	68	448	294	62	4001
Nov'98	221	1481	0	877	825	0		77	310	514	78	16	466	241		1702
Dec'98	93	803	0	574	299	23		31	256	480	63				66	896
TOTAL	2534	16568	16376	24528	10811	139	16349	1762	3636	4758	523	789	4581	2710	370	35478
Jan'99	231	1741	1555	2637	886	4	1555	276	320	574	64	49	399	215	75	3527
Feb'99	261	1964	1650	2863	1005	7	1650	239	454	552	74	74	509	211	112	3875
Mar'99	275	2115	1728	3040	1061	17	1728	239	386	604	57	156	529	254	165	4118
Apr'99	246	1847	1499	2690	891	11	1499	74	386	544	41	125	505	270	148	3592
May'99	204	1977	1381	2712	850	0	1381	16	391	611	30	129	438	290	276	3562
Jun'99	278	2099	1612	3052	934	3	1612	207	414	576	39	102	472	260	307	3989
Jul'99	251	2306	1809	3428	920	18	1807	248	466	718	52	122	436	292	225	4366
Aug'99	210	2084	1494	2808	954	26	1494	169	263	656	53	149	497	313	194	3788
Sep'99	203	1885	1718	2826	947	13	1717	172	205	575	58	184	517	214	144	3786
Oct'99	179	1616	1759	2752	804	1	1739	199	27	511	52	140	480	207	202	3557
Nov'99	249	2265	1567	3039	1032	10	1566	227	592	655	47	157	445	278	114	4081
Dec'99	164	1580	1015	2043	659	57	1012	146	154	324	43	86	519	226	249	2759
TOTAL	2751	23479	18787	33890	10943	167	18760	2212	4058	6900	610	1473	5746	3030	2211	45000
Jan'00	194	1424	1	933	554	132		167	758		33	90	447		124	1619
Feb'00	67	516	21	324	280	0			410		63	13				604

0												1				
Mar' 00	35	213	0	157	89	2			56		55	50			87	248
Apr'0 0	11 6	107 9	2	909	287	1			582		14 8			43 9	28	1197
TOT AL	41 2	323 2	24	2323	121 0	135	0	16 7	180 6	0	29 9	27 1	447	43 9	23 9	3668
97- '00	84 13	607 12	4143 9	7820 9	318 97	441	4861 4	56 50	120 34	129 17	18 67	30 20	145 54	88 72	30 19	1105 47
