



ARMENIA (ARM)

Population: 3.5 million (1994)
Area: 29 800 km²



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1. General information

Administratively Armenia is divided into 11 districts-10 marzes and 1 city with the status of marz - Yerevan, capital of Armenia.

The country has developed State Hygienic and Epidemiological Service (SHES) responsible for prevention and control of communicable diseases including surveillance of foodborne infections, intoxications and poisonings. SHES is regulated in the framework of the law on "Ensuring sanitary-epidemiological safety of the population of RA". The main objectives of the SHES among others are implementation of preventive measures, their control and evaluation. The statute of the Service and principles of its activities are regulated by the Government resolutions N518 and N107, dated 12.10.1993 and 24.02.1998 respectively.

At the basic (first) level there are 51 territorial centres of HEC. The centres of HEC in marzes act as coordinating institutions and form link between the top (national level) and basic levels of the state HES. Each centre of HEC has a microbiological laboratory for examination of specimens obtained from patients, contacts, food handlers as well as specimens of food and water. Some of the territorial HEC have chemical laboratories as well.

At the national level the responsible agency is the Ministry of Health with its department of Hygienic and Epidemiological Surveillance and Republican Centre of Hygienic and Epidemiological Control (RCHEC). The Ministry of Health is the policy-making agency. RCHEC-operates as research, training and supervising centre for the work of the centres of *marzes*, cities and territorial communities of Hygienic and Epidemiological control (CHEC) and for collection and analysis of epidemiological data at the national level. RCHEC has some

specific, higher level laboratory activities. Epidemiological information from all 51 centres of HEC is collected centrally and published monthly and annually in MOH summaries.

All infectious diseases are notifiable in Armenia. Laboratory confirmation is needed for registration of cases of some diseases: cholera, dysentery, salmonellosis, etc. Some reference laboratories are able to diagnose and type strains obtained from other laboratories. Each medical worker (doctor or nurse) who diagnoses or suspects a case of a notifiable infectious disease is obliged to inform the territorial centre HEC on a standard form. In urgent or unusual cases the Ministry of Health can be informed directly, and faster communication methods can be used. Every case of notifiable disease is epidemiologically investigated by an epidemiologist from the territorial centre HEC. Outbreaks of foodborne infections and intoxications are always registered and epidemiologically investigated if there are (two) three or more people involved. Even a single case of botulism or other food poisoning is epidemiologically investigated and registered as an outbreak. Outbreak of foodborne diseases have been more carefully investigated than sporadic cases, and more effort has been made to identify causative agents, other attributes connected with the outbreaks.

2. Statutory notification

The present report focuses on foodborne diseases concerning the years 1993 to 1998, for which epidemiological data are available. According to the officially reported data the morbidity due to foodborne diseases during the period under consideration was low. Obviously, these data do not reflect the real situation of foodborne infections and intoxications in the country since they are based only on incidents, which come to the attention. This is because of the fact that the diseases are normally mild and people do not seek advice or treatment through primary health care services, hospitals or any medical facilities. The incidence rate of salmonellosis has decreased during these years (see Tab. AM 1).

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Country Reports: *ARMENIA 1993 – 1998*

Table AM 1

Notified cases of waterborne and foodborne diseases
ARMENIA 1993 - 1998

Disease	1993	1994	1995	1996	1997	1998
Salmonellosis incl. typhoid and paratyphoid	916	822	752	673	471	458
<i>Incidence rate</i>	26.2	23.5	21.5	19.2	13.5	13.1
Salmonellosis	843	769	713	601	436	429
<i>Incidence rate</i>	23.6	20.6	19.0	16.0	11.5	11.4
Botulism	50	54	67	37	62	61
<i>Incidence rate</i>	1.4	1.5	1.9	1.1	1.8	1.7
Campylobacteriosis			13	7	1	3
<i>Incidence rate</i>			0.4	0.2	0.0	0.1
Shigellosis	2520	1632	1071	1036	882	1216
<i>Incidence rate</i>	72.0	46.6	30.6	29.6	25.2	34.7
<i>E.coli</i> enteritis	599	574	452	696	653	874
<i>Incidence rate</i>	17.1	16.4	12.9	19.9	18.7	25.0
Cholera	-	-	-	-	-	229
<i>Incidence rate</i>						6.5
Brucellosis	632	458	297	204	133	101
<i>Incidence rate</i>	18.1	13.1	8.5	5.8	3.8	2.9
Hepatitis A	3415	2540	2608	3036	2949	2983
<i>Incidence rate</i>	97.6	72.6	74.5	86.7	84.3	85.2
Echinococcosis				4	12	11
<i>Incidence rate</i>				0.1	0.3	0.3
Giardiasis				6	7	8
<i>Incidence rate</i>				0.2	0.2	0.2
Infectious Enteritis of unknown origin	3470	2703	2221	3371	2457	2831
<i>Incidence rate</i>	99.1	77.2	63.5	96.3	70.2	80.9

Some increase of intestinal Shigellosis, Hepatitis A, Cholera, infections Enteritis of unknown origin registered in the years 1993-1998 are mainly due to waterborne diseases.

2.1 Salmonellosis

Figure AM 1

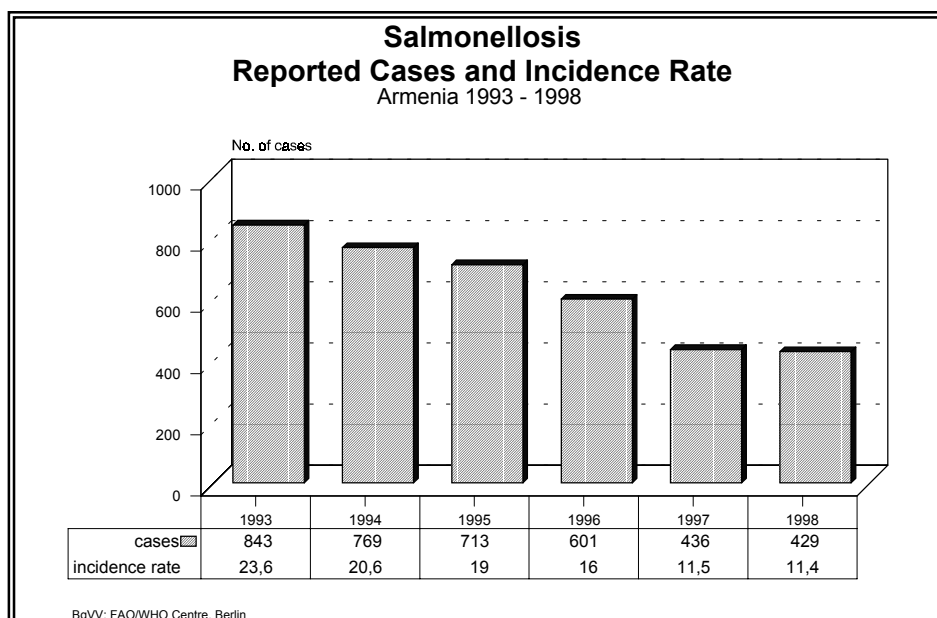


Table AM 2

Salmonella cases by serotypes
ARMENIA 1993-1998

Serotype	1993	1994	1995	1996	1997	1998
<i>S. Enteritidis</i>	9	32	2	-	-	36
<i>S. Typhimurium</i>	618	942	434	136	287	563
<i>S. Newport</i>	-	5	-	-	-	-
<i>S. Arizona</i>	30	38	26	32	77	77

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3. Epidemiologically investigated outbreaks

Table AM 3

Foodborne and waterborne outbreaks
ARMENIA 1993-1998

Year	Causative agent/disease	No of cases in outbreaks	Incriminated Food	Place of consumption	Contributory factors
1993	<i>Cl. botulinum</i>	50	Home made canned vegetables	Household	Violation of technological procedures in preparing canned food under household conditions
	Shigellosis and infect. enteritis of unknown origin	1323	Drinking water	Household	Contamination of drinking water by waste water
	<i>S. typhi</i>	15	Drinking water	Household	Contamination of drinking water by waste water
1994	<i>Cl. botulinum</i>	54	Home made canned vegetables	Household	Violation of technological procedures in preparing canned food under household conditions
	Salmonellosis and shigellosis	502	Drinking water	Household	Contamination of drinking water by waste water
1995	<i>Cl. botulinum</i>	67	Home made canned vegetables	Household	Violation of technological procedures in preparing canned food in household conditions
	Infectious enteritis of unknown origin	401	Drinking water	Household	Contamination of drinking water by waste water
1996	<i>Cl. botulinum</i>	37	Home made canned vegetables	Household	Violation of technological procedures in preparing canned food in household conditions
	<i>S. Typhimurium</i>	72	Home made Ice-cream	Private shop	Use of raw eggs without thermal treatment
	S. typhi	41	Drinking water	Household	Contamination of drinking water by waste water
	<i>Hepatitis A</i>	32	Drinking water	Household	Contamination of drinking water by waste water
	Shigellosis and infectious Enteritis of unknown origin	1191	Drinking water	Household	Contamination of drinking water by waste water

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Year	Causative agent/disease	No of cases in outbreaks	Incriminated Food	Place of consumption	Contributory factors
1997	<i>Cl. botulinum</i>	62	Home made canned vegetables	Household	Violation of technological procedures in preparing canned food in household conditions
	<i>Hepatitis A</i>	119	Drinking water	Household	Contamination of drink water by waste water
	Shigellosis and infectious Enteritis of unknown origin	593	Drinking water	Household	Contamination of drinking water by waste water
1998	<i>Cl. botulinum</i>	61	Home made canned vegetables	Household	Violation of technological procedures in preparing canned food in household conditions
	Food poisoning	26	Mushrooms	Household	Inedible mushrooms
	Shigellosis and infectious Enteritis of unknown origin	353	Drinking water	Household	Contamination of drinking water by waste water
	<i>Cholera</i>	229	Drinking water	Household	Contamination of drinking water by waste water
	<i>Salmonella typhi</i>	10	Drinking water	Household	Contamination of drinking water by waste water
	<i>Hepatitis A</i>	34	Drinking water	Household	Contamination of drinking water by waste water

Figure AM 2

