



THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA (FYM)

Population: 2.0 million
Area: 25 713 km²



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1. General information

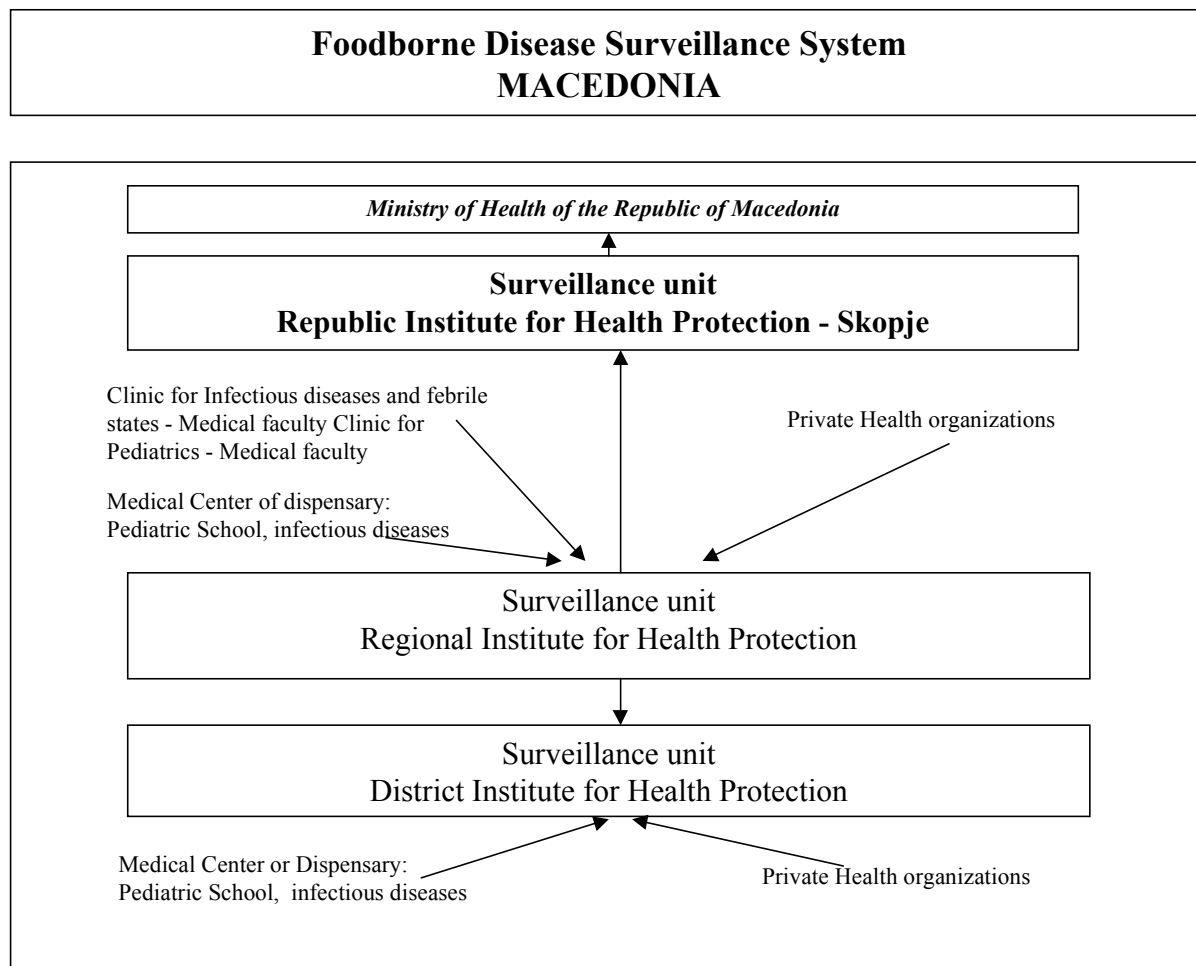
Based on the Republic of Macedonia Official Gazette No.11 from 14 of February 1992 and the article of the Health Protection act, reporting of Foodborne disease and alimentary toxoinfections cases and outbreaks is obligatory in the Republic of Macedonia.

The cases of sickness and deaths from infectious diseases lead to a special registered evidence and reports of the infected persons. Individual reporting is executed by the institution where the person is examined (Medical Centers or clinics). Two copies of an individual reporting form of diseases for the sickness/death caused by infection disease are issued by the medical institution that detect the illness. One copy of the report from the medical institution is sent to the Republic Institute of Health Protection and the second one to the medical station into the district of permanent residence of the patient. In the reporting form there is information about the patient and the code of the disease as well as other data contained into the report.

Reporting of the case is obligatory in the period of 24 hours, and it is based on clinical or laboratory diagnoses. Laboratory testing to detect the presence of agents and for diagnosis confirmation is mandatory and is performed by the medical stations appointed by the Ministry of Health. Diagnose of diseases is written on Latin, and is obligatory coded by the International statistical Classification of Diseases and Related Health Problems – tenth Revision (ICD –10).

The Republic Institute for Health Protection reports to the Ministry of Health and prepares weekly, monthly and annual reports for the reported cases of the Foodborne infections and Intoxications cases and outbreaks in the country.

Figure MK 1



WHO Surveillance Programme for Control of Foodborne Infections and Intoxications in Europe
7th Report

Country Reports: *THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA 1993 – 1998*

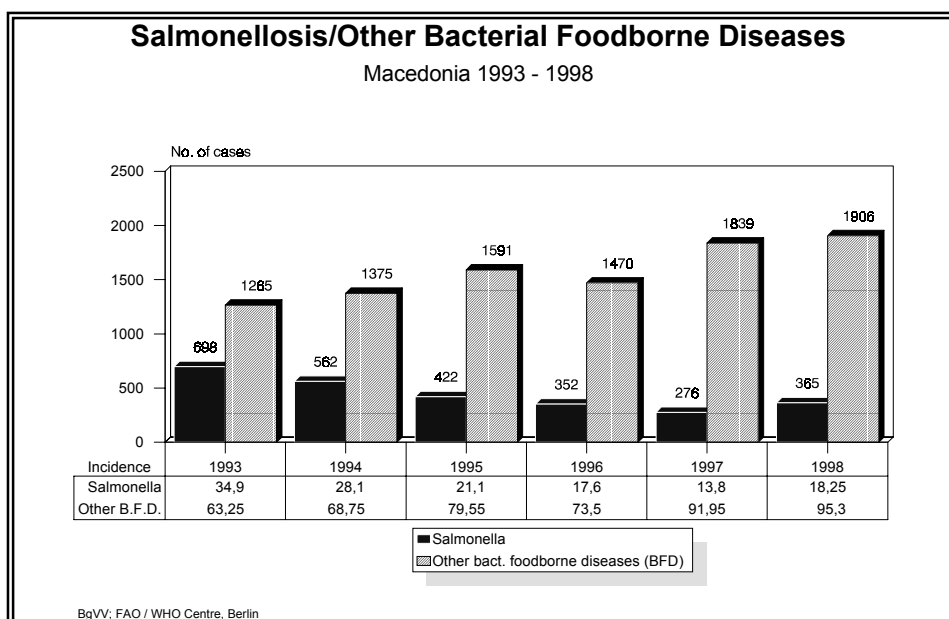
2. Statutory notification

Table MK 1

Notified cases of foodborne diseases
MACEDONIA 1993 – 1998

Disease	1993	1994	1995	1996	1997	1998
Salmonellosis	698	562	422	352	276	365
<i>Incidence rate</i>	34.9	28.1	21.1	17.6	13.8	18.3
<i>Staphylococcosis</i>	126	133	104	84	35	28
<i>Incidence rate</i>	6.3	6.7	5.2	4.2	1.8	1.4
Campylobacteriosis	-	20	37	41	47	48
<i>Incidence rate</i>		1.0	1.9	2.1	2.4	2.4
Shigellosis	204	289	297	108	212	388
<i>Incidence rate</i>	10.2	14.5	14.9	5.4	10.6	19.4
Brucellosis	565	603	752	565	773	531
<i>Incidence rate</i>	28.3	30.2	37.6	28.3	38.7	26.6
Other bact. foodborne diseases	1265	1375	1591	1470	1839	1906
<i>Incidence rate</i>	63.3	68.8	79.6	73.5	92.0	95.3
Hepatitis A	959	897	622	333	536	1061
<i>Incidence rate</i>	48.0	44.9	31.1	16.7	26.8	53.1
Echinococcosis	3	3	4	8	7	25
<i>Incidence rate</i>	0.2	0.2	0.2	0.4	0.4	1.3
Giardiasis	-	39	141	152	173	202
<i>Incidence rate</i>		2.0	7.1	7.6	8.7	10.1
Infectious Enteritis of unknown origin	3007	6684	6480	5003	7152	9710
<i>Incidence rate</i>	150.4	334.2	324.0	250.2	357.6	485.5

Figure MK 2



3. Epidemiologically investigated incidents

3.1 Salmonellosis

Table MK 2

Salmonella cases by serotypes
MACEDONIA 1993 - 1998

Serotype	1993	1994	1995	1996	1997	1998
S. Enteritidis	112	172	119	106	85	146
S. Typhimurium	29	416	323	44	61	26
S. Oranienburg	2	-	-	5	-	-
S. Kisangani	-	1	-	-	1	-
S. Essen	-	-	1	-	-	-
S. Paratyphy "A"	-	-	1	-	-	-
S. Group C1	1	3	2	4	3	3
S. Group C2	-	2	1	-	-	1
S. Wien	-	-	-	-	-	5
S. Muenster	-	-	-	-	-	1
S. Newport	-	2	-	-	-	-
Total	144	596	447	159	150	182

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3.2 Epidemiologically investigated outbreaks

Table MK3

Foodborne disease outbreaks
MACEDONIA 1993 – 1998

Year	Causative agent	No. of cases in outbreak	Incriminated food	Place of consumption	Contributing factors
1993	<i>S. Enteritidis</i>	18	Domestic product candy	Cake shop	Uncooked products and bad hygienic practice
	<i>S. Enteritidis</i>	45	Domestic product candy	Cake shop	Uncooked products and bad hygienic practice
1994	<i>S. Typhimurium</i>	5	Eggs, mayonnaise	Intrahospital infection	Food contamination
	<i>S. Enteritidis</i>	24	Domestic product candy	Cake shop	Uncooked products and bad hygienic practice
	<i>S. Typhimurium</i>	13	Mayonnaise	Intrahospital infection	Uncooked products and bad hygienic practice
	<i>S. Enteritidis</i>	53	Eggs, Meat	Hotel	Uncooked products and bad hygienic practice
1995	<i>St. aureus</i>	133	Meat	School	Food contamination
	<i>S. Enteritidis</i>	155	Domestic product Candy	Cake shop	Uncooked products and bad hygienic practice
	<i>S. Typhimurium</i>	14	Chicken Meat	In family	Uncooked products and bad hygienic practice
	<i>S. Typhimurium</i>	24	Chicken Meat	In family	Food contamination
	<i>S. Enteritidis</i>	11	Chicken Meat	Military restaurant	Food contamination
1996	<i>S. Enteritidis</i>	76	Hamburger	Fast food	Food contamination
	<i>St. aureus</i>	60	Domestic product Candy	Weeding party	Food contamination
	<i>S. Enteritidis</i>	61	Mayonnaise	Fast food	Uncooked products and bad hygienic practice
	<i>St. aureus</i>	14	Mayonnaise	Tourists	Food contamination
	<i>St. aureus</i>	10	Ice cream with eggs	Cake shop	Food contamination
	<i>S. Enteritidis</i>	82	Chicken Meat	In family	Food contamination
	1997	<i>S. Enteritidis</i>	19	Eggs, Hot dog	Intrahospital infection/ kitchen
<i>S. Typhimurium</i>		33	Mayonnaise	Pizzeria	Food contamination
<i>S. Enteritidis</i>		13	Mayonnaise	Weeding party	Uncooked products and bad hygienic practice
<i>S. Enteritidis</i>		41	Mayonnaise	Fast food	Uncooked products and bad hygienic practice
<i>S. Enteritidis</i>		13	Salad with Mayonnaise	Fast food	Uncooked products and bad hygienic practice
<i>S. Enteritidis</i>		8	Domestic product candy	Cake shop	Uncooked products and bad hygienic practice
<i>St. aureus</i>		35	Domestic product candy	Family party	Uncooked products and bad hygienic practice

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Year	Causative agent	No. of cases in outbreak	Incriminated food	Place of consumption	Contributing factors
1998	<i>S.Typhimurium</i>	40	Mayonnaise	School	Uncooked products and bad hygienic practice
	<i>S.Enteritidis</i>	56	Mayonnaise	Fast food	Uncooked products and bad hygienic practice
	<i>S.Enteritidis</i>	137	Chicken Meat	Fast food	Uncooked products and bad hygienic practice
	<i>S.Enteritidis</i>	18	Cake	Family party	Uncooked products and bad hygienic practice
	<i>St.aureus</i>	28	Mashed potato	School	Uncooked products and bad hygienic practice
	<i>S.Enteritidis</i>	12	Mayonnaise, Ketchup	Fast food	Uncooked products and bad hygienic practice