

**Middle East Consortium on Infectious Diseases
Surveillance**

MECIDS

**Regional Technical Report
2012**



Middle East Consortium on
Infectious Disease Surveillance

Definitions

Human specimens

Source of specimens from blood of patients or stool from patients or food handlers

Non human specimens

Source of specimens from food items, drinking water or waste water

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Regional Data analysis (2005-2012)

The cumulative number of specimens which were tested from the beginning of the project activities (July, 2005), until 31st, December 2012, from all three partners were 719893, yielded 8855 isolates, Salmonella isolates were divided according to the source of specimens into human which yielded 8112 isolates and non human which yielded 743 isolates.

Table 1; Distribution of tested Specimens and isolates by source of specimens, year and MECIDS partners,2005-2012

Source of Specimens	Country	Description	2005	2006	2007	2008	2009	2010	2011	2012	Total
Human	Israel	Specimens	70272	69689	42617	39209	33586	36269	34378	33669	359689
		Isolates	776	986	889	929	952	1048	1004	843	7427
		Isolationrate/1000	11	14	21	24	28	29	29	25	21
	Jordan	Specimens	5000	11599	13174	13102	13759	13304	13339	17396	100673
		Isolates	53	93	90	51	35	58	32	47	459
		Isolationrate/1000	11	8	7	4	3	4	2	3	5
	Palestine	Specimens	12842	6921	302	343	143	152	136	599	21438
		Isolates	80	52	35	15	31	2	3	8	226
		Isolationrate/1000	6	8	116	44	217	13	22	13	11
	All Human	Specimens	88114	88209	56093	52654	47488	49725	47853	51664	481800
Isolates		909	1131	1014	995	1018	1108	1039	898	8112	
Non Human specimens	Israel	Specimens	0	0	0	0	0	0	0	0	0
		Isolates	0	0	0	0	0	0	0	0	0
		Isolationrate/1000	0	0	0	0	0	0	0	0	0
	Jordan	Specimens	9422	22290	24769	30050	33559	25990	20308	21411	187799
		Isolates	0	10	7	13	21	8	18	11	88
		Isolationrate/1000	0.0	0.4	0.3	0.4	0.6	0.3	0.9	0.5	0.5
	Palestine	Specimens	8807	5315	4685	5975	7483	6555	5320	6154	50294
		Isolates	113	77	91	100	106	68	42	58	655
		Isolationrate/1000	13	14	19	17	14	10	8	9	13
	All Non Human	Specimens	18229	27605	29454	36025	41042	32545	25628	27565	238093
Isolates		113	87	98	113	127	76	60	69	743	
All	MECIDS	Total Specimens	106343	115814	85547	88679	88530	82270	73481	79229	719893
		Total Isolates	1022	1218	1112	1108	1145	1184	1099	967	8855
		Isolationrate/1000	10	11	13	12	13	14	15	12	12

Data collection in Israel began on January 2005; the total Number of specimens from Israel does not include the number of food specimens

Data collection in Jordan began on July 2005

Data collection in Palestine began on January 2005; there is no data within the period August-December 2006

Human specimens collected from patient's blood yielded 196 isolates; and from patients or food handlers stool yielded 7916 isolates.

Non human specimens collected from food items (Jordan), and from food items, water, waste water and swimming pools (Palestine) yielded 743 isolates; there weren't data concerning non human specimens from Israel

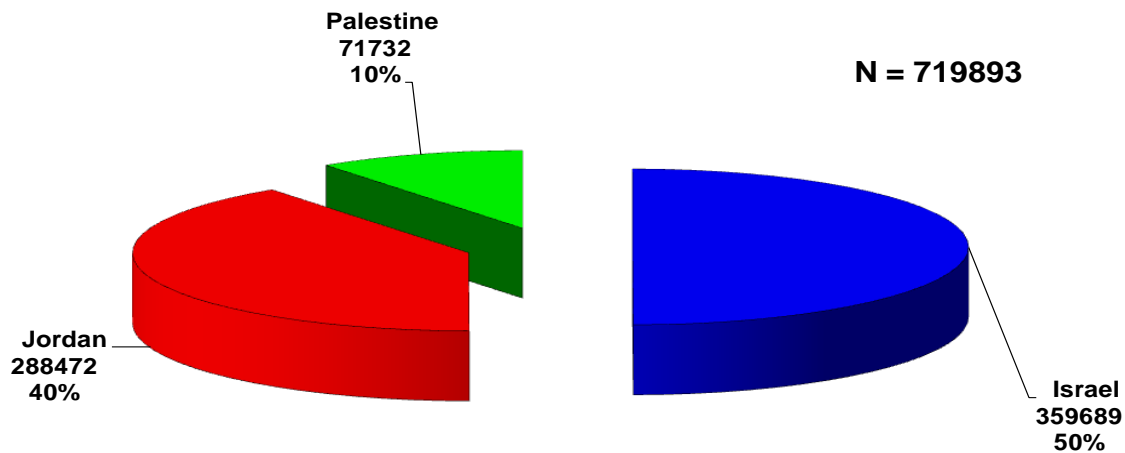
The following table illustrates the distribution of the Salmonella isolates by source of specimens, year and by MECIDS partners, table 2.

Table 2; Distribution of Salmonella isolates, by MECIDS partners, source of specimens and by year, 2005-2012

years		2005	2006	2007	2008	2009	2010	2011	2012	Total	
Human	Blood specimens	Israel	23	32	19	29	33	13	14	15	178
		Jordan	6	2	3	0	1	1	0	4	17
		Palestine	0	0	0	0	0	0	0	0	1
		Total	29	34	22	29	34	14	14	20	196
	Stool specimens*	Israel	753	954	869	900	920	1035	990	828	7249
		Jordan	47	92	87	51	34	57	32	43	443
		Palestine	80	52	34	15	30	2	3	8	226
		Total	880	1098	990	966	984	1094	1025	879	7916
Total Human		909	1132	1012	995	1018	1108	1039	899	8112	
Non Human specimens	Israel	0	0	0	0	0	0	0	0	0	
	Jordan	0	10	7	13	21	8	18	11	88	
	Palestine	113	77	91	100	106	68	42	58	655	
	Total	113	87	98	113	127	76	60	69	743	
Grand Total		1022	1219	1110	1108	1145	1184	1099	968	8855	

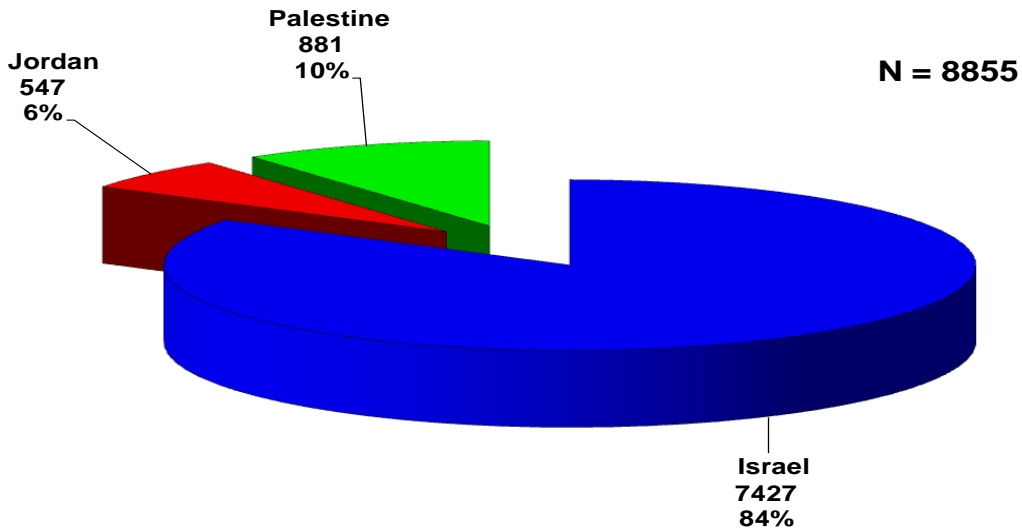
Of the total 719893 specimens which represents the cumulative number of tested specimens in the period 2005-2012 from MECIDS project partners; 359689 (50%) were from Israel yielded 7427 isolates, 288472 (40%) were from Jordan which yielded 547 isolates and 71732 (10%) from Palestine yielded 881 isolates figure. 1

Figure 1; Distribution of human and non human Salmonella Specimens 2005-2012 by MECIDS partners



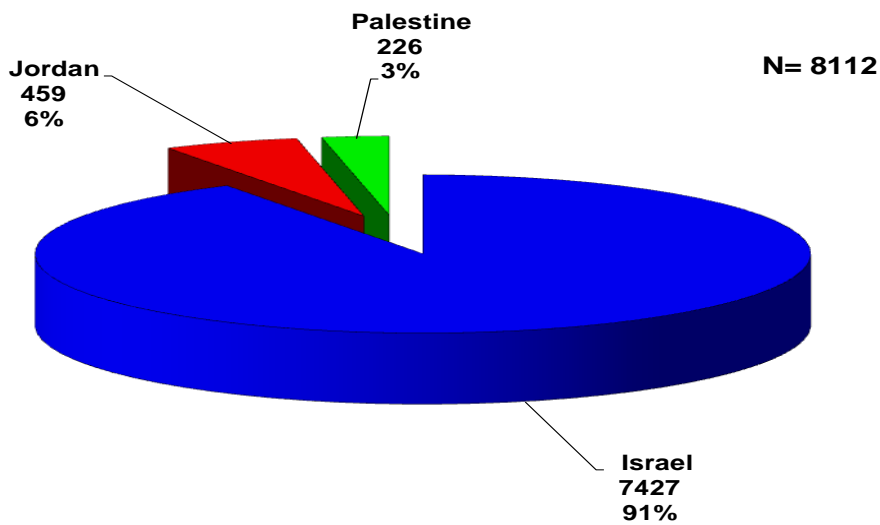
At the regional level 84% of isolates were from Israel, 10% of isolates were from Palestine and 6% of isolates were from Jordan figure 2.

Figure 2; Distribution of human and non human Salmonella isolates, 2005-2012 by MECIDS partners



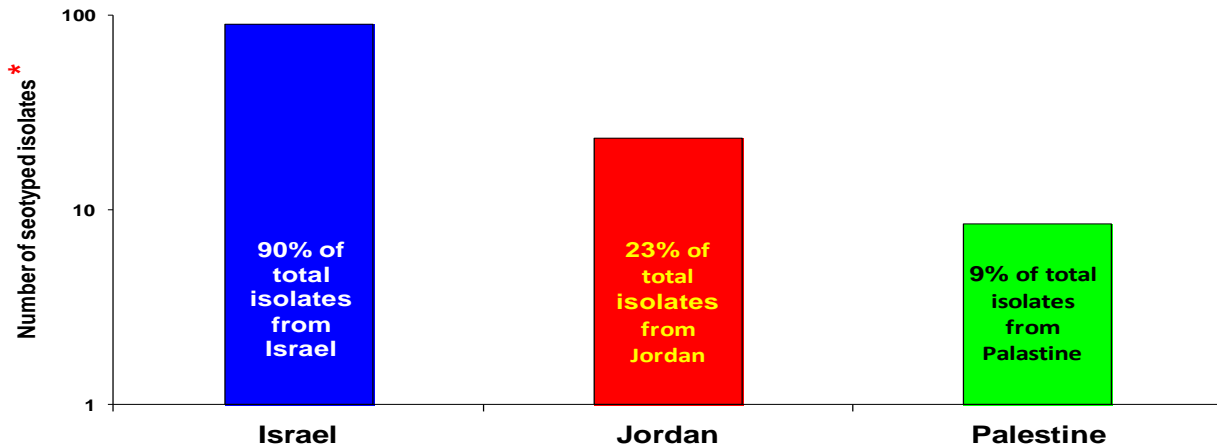
specimens from human source represents 481800 specimens yielded 8112 isolates; 91% of the yielded isolates were from Israel, 6% from Jordan and 3% from Palestine; figure 3.

Figure 3; Distribution of Salmonella isolates from human specimens, 2005-2012 by MECIDS partners



Serotyping were performed to 90%, 23% and 9% of Salmonella isolates from Israel, Jordan and Palestine respectively; figure 4.

Figure 4; Distribution of Serotyped Salmonella isolates, 2005-2012 by MECIDS partners

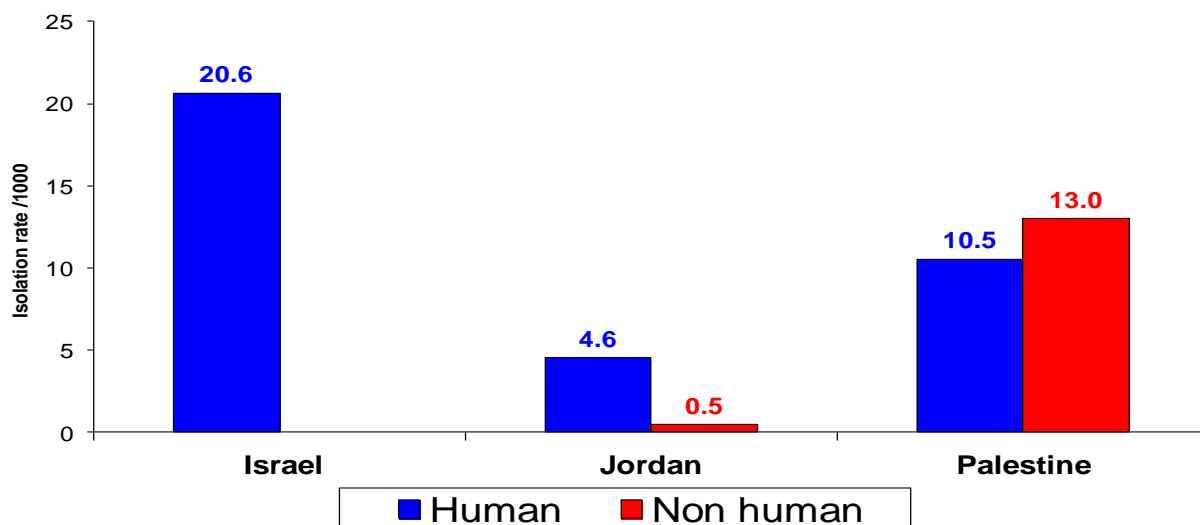


*** logarithmic scale**

The isolation rate for human specimens was 20.6, 4.6 and 10.5/1000 for Israel, Jordan and Palestine respectively.

The isolation rate for the non human specimens for Jordan was 0.5/1000 and for Palestine 13.5 /1000; there aren't non human specimens from Israel; figure 5.

Figure 5; Salmonella isolation Rate/1000, from both human and non human Specimens 2005-2012 by country



The following summary table illustrates total number of tested specimens “both human and non human”, number of Salmonella isolates, number of serogrouped and number of Serotyped Salmonella isolates from MECIDS partners by year, table 3.

Table 3; Total human and non human Salmonella isolates from MECIDS partners by Serogroups and year of isolation, 2005-2012

Salmonella Seogroups	Israel								Jordan								palestine								Israel	Jordan	Palestine	Grand total	
	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012					
Salmonella A	3	9	6	3	20	2	1	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	48	2	0	50	
Salmonella B	144	141	89	110	82	90	100	82	11	32	10	18	16	24	14	20	4	20	22	14	26	9	3	4	838	145	102	1085	
Salmonella C	0	23	13	28	6	29	28	11	0	0	0	0	0	0	0	0	4	21	1	0	0	0	0	138	0	26	164		
Salmonella C1	185	301	254	265	394	434	425	411	4	7	5	8	10	4	4	0	4	40	24	16	27	36	21	39	2669	42	207	2918	
Salmonella C2	107	187	138	145	114	111	94	79	9	25	7	12	3	10	6	8	2	39	31	26	23	2	10	6	975	80	139	1194	
Salmonella C2-C3	5	1	2	4	3	7	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	0	34	
Salmonella C3	12	6	6	1	1	0	1	1	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	28	0	8	36	
Salmonella D	240	250	172	168	237	219	154	83	19	20	45	9	23	18	9	13	5	5	5	2	1	2	0	0	1523	156	20	1699	
Salmonella D1	0	0	1	4	3	5	1	4	0	0	0	0	0	0	0	0	1	0	0	2	2	2	1	2	18	0	10	28	
Salmonella E	13	20	24	35	14	23	18	19	4	12	17	9	3	1	3	11	0	3	16	20	4	0	3	2	166	60	48	274	
Salmonella E1	0	1	0	1	6	6	1	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	19	1	0	20	
Salmonella F	1	1	0	1	4	8	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	15	1	0	16	
Salmonella G	3	9	2	12	10	18	102	18	0	1	2	1	1	3	1	0	0	1	0	0	0	0	0	0	174	9	1	184	
Salmonella H	0	1	2	0	0	2	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5	4	0	9	
Salmonella I	22	3	13	12	20	13	3	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	0	0	97	
Salmonella K	1	1	0	0	0	0	3	2	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	7	3	0	10	
Salmonella L	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Salmonella M	3	5	5	0	2	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	16	2	0	18	
Salmonella N	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
Salmonella O	1	1	3	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	
Salmonella Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella P	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
Salmonella Q	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Salmonella R	0	1	0	1	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	
Salmonella S	0	2	0	1	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	
Salmonella spp.	34	22	158	131	29	68	64	93	6	6	8	4	0	2	10	5	0	0	1	1	1	1	4	2	599	41	9	649	
Salmonella T	0	0	0	1	1	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	
Salmonella X	1	0	0	2	1	5	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	
Salmonella X	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Salmonella X	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Total No. specimens	70272	69689	42617	39209	33586	36269	34378	33669	14422	33889	37943	43152	47318	39294	33647	38807	21649	12236	4987	6318	7626	6707	5456	6753	359689	288472	71732	719893	
Total No. Isolates	776	986	889	929	952	1048	1004	843	53	103	97	64	56	66	50	58	193	129	126	115	137	70	45	66	7427	547	881	8855	
Total No. serogrouped isolates	776	986	889	929	952	1048	1004	843	53	103	97	64	56	66	50	58	24	112	119	82	84	52	40	54	7427	547	567	8541	
Isolation Rate/1000	11.0	14.1	20.9	23.7	28.3	28.9	29.2	25.0	10.6	8.5	7.1	4.3	3.2	4.7	3.3	3.2	19.1	22.0	135.3	60.5	230.9	23.5	30.0	9.4	21	5	24	12	

The following summary table illustrates human Salmonella isolates from MECIDS partners by Serogroups and year of isolation, table 4.

Table 4; Total human Salmonella isolates from MECIDS partners by Serogroups and year of isolation 2005-2012

Salmonella Seogroups	Israel								Jordan								palestine								Israel	Jordan	Palestine	Grand total
	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012				
Salmonella A	3	9	6	3	20	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0	0	48
Salmonella B	144	141	89	110	82	90	100	82	11	30	9	11	9	22	9	14	1	2	4	0	3	0	0	1	838	115	11	964
Salmonella C	0	23	13	28	6	29	28	11	0	0	0	0	0	0	0	0	0	4	21	0	0	0	0	138	0	25	163	
Salmonella C1	185	301	254	265	394	434	425	411	4	6	5	6	7	3	1	0	0	35	4	0	0	2	1	3	2669	32	45	2746
Salmonella C2	107	187	138	145	114	111	94	79	9	24	7	11	3	10	5	7	0	4	0	1	2	0	0	975	76	7	1058	
Salmonella C2-C3	5	1	2	4	3	7	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	0	34	
Salmonella C3	12	6	6	1	1	0	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	28	0	2	30	
Salmonella D	240	250	172	168	237	219	154	83	19	15	39	9	14	16	7	13	0	2	4	0	0	0	0	1523	132	6	1661	
Salmonella D1	0	0	1	4	3	5	1	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	18	0	2	20	
Salmonella E	13	20	24	35	14	23	18	19	4	11	17	8	2	1	2	9	0	0	2	2	0	0	1	166	54	5	225	
Salmonella E1	0	1	0	1	6	6	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	19	
Salmonella F	1	1	0	1	4	8	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	15	1	0	16	
Salmonella G	3	9	2	12	10	18	102	18	0	1	2	0	0	1	0	0	0	1	0	0	0	0	0	174	4	1	179	
Salmonella H	0	1	2	0	0	2	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	5	4	0	9	
Salmonella I	22	3	13	12	20	13	3	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	0	0	97	
Salmonella K	1	1	0	0	0	0	3	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	7	2	0	9	
Salmonella L	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Salmonella M	3	5	5	0	2	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	16	2	0	18	
Salmonella N	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
Salmonella O	1	1	3	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	
Salmonella Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella P	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
Salmonella Q	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Salmonella R	0	1	0	1	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	
Salmonella S	0	2	0	1	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	
Salmonella spp.	34	22	158	131	29	68	64	93	6	6	8	3	0	2	7	4	0	0	0	1	1	0	2	599	36	4	639	
Salmonella T	0	0	0	1	1	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	
Salmonella X	1	0	0	2	1	5	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	
Salmonella Y	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Salmonella Z	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Total No. specimens	70272	69689	42617	39209	33586	36269	34378	33669	5000	11599	13174	13102	13759	13304	13339	17396	12842	6921	302	343	143	152	136	599	359689	100673	21438	481800
Total No. Isolates	776	986	889	929	952	1048	1004	843	53	93	90	51	35	58	32	47	80	52	35	15	31	2	3	8	7427	459	226	8112
Total No. serogrouped isolates	776	986	889	929	952	1048	1004	843	53	93	90	51	35	58	32	47	4	48	35	4	6	2	3	6	7427	459	108	7994
Isolation Rate/1000	11.0	14.1	20.9	23.7	28.3	28.9	29.2	25.0	10.6	8.0	6.8	3.9	2.5	4.4	2.4	2.7	6.2	7.5	115.9	43.7	216.8	13.2	22.1	21	5	11	17	

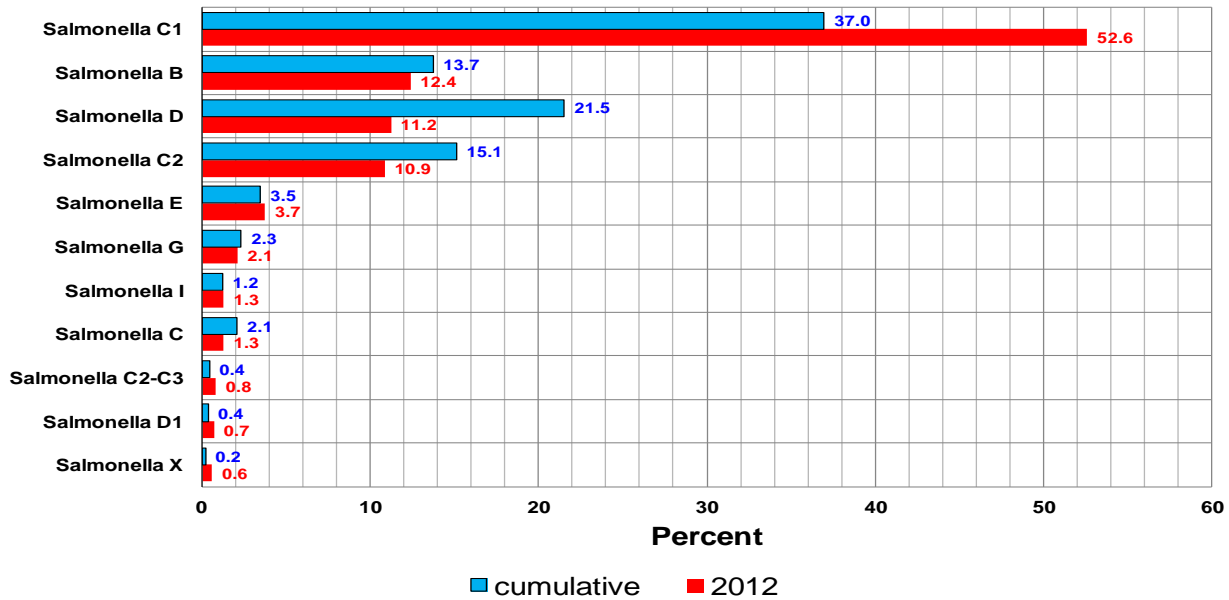
The following summary table illustrates non human Salmonella isolates from MECIDS partners by Serogroups and year of isolation, table 5.

Table 5; Total non human Salmonella isolates from MECIDS partners by Serogroups and year of isolation, 2005-2012

Salmonella Seogroups	Israel								Jordan								palestine								Israel	Jordan	Palestine	Grand total
	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012	Total 2005	Total 2006	Total 2007	Total 2008	Total 2009	Total 2010	Total 2011	Total 2012				
Salmonella A	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Salmonella B	0	0	0	0	0	0	0	0	0	2	1	7	7	2	5	6	3	18	18	14	23	9	3	3	0	30	91	121
Salmonella C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Salmonella C1	0	0	0	0	0	0	0	0	0	1	0	2	3	1	3	0	4	5	20	16	27	34	20	36	0	10	162	172
Salmonella C2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2	35	31	25	21	2	10	6	0	4	132	136
Salmonella C2-C3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella C3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6	6
Salmonella D	0	0	0	0	0	0	0	0	0	5	6	0	9	2	2	0	5	3	1	2	1	2	0	0	0	24	14	38
Salmonella D1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	0	2	0	0	8	8
Salmonella E	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	2	0	3	14	18	4	0	2	2	0	6	43	49
Salmonella E1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1
Salmonella F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella G	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	5	0	5
Salmonella H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella K	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Salmonella L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella spp.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	1	4	0	0	5	5	10
Salmonella T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella X	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonella Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total No. specimens	0	0	0	0	0	0	0	0	9422	22290	24769	30050	33559	25990	20308	21411	8807	5315	4685	5975	7483	6555	5320	6154	0	187799	50294	238093
Total No. Isolates	0	0	0	0	0	0	0	0	0	10	7	13	21	8	18	11	113	77	91	100	106	68	42	58	0	88	655	743
Total No. serogrouped isolates	0	0	0	0	0	0	0	0	0	10	7	13	21	8	18	11	20	64	84	78	78	50	37	48	0	88	459	547
Isolation Rate/1000	0	0	0	0	0	0	0	0	0.0	0.4	0.3	0.4	0.6	0.3	0.9	0.5	12.8	14.5	19.4	16.7	14.2	10.4	7.9	9.4	0	0	13	3

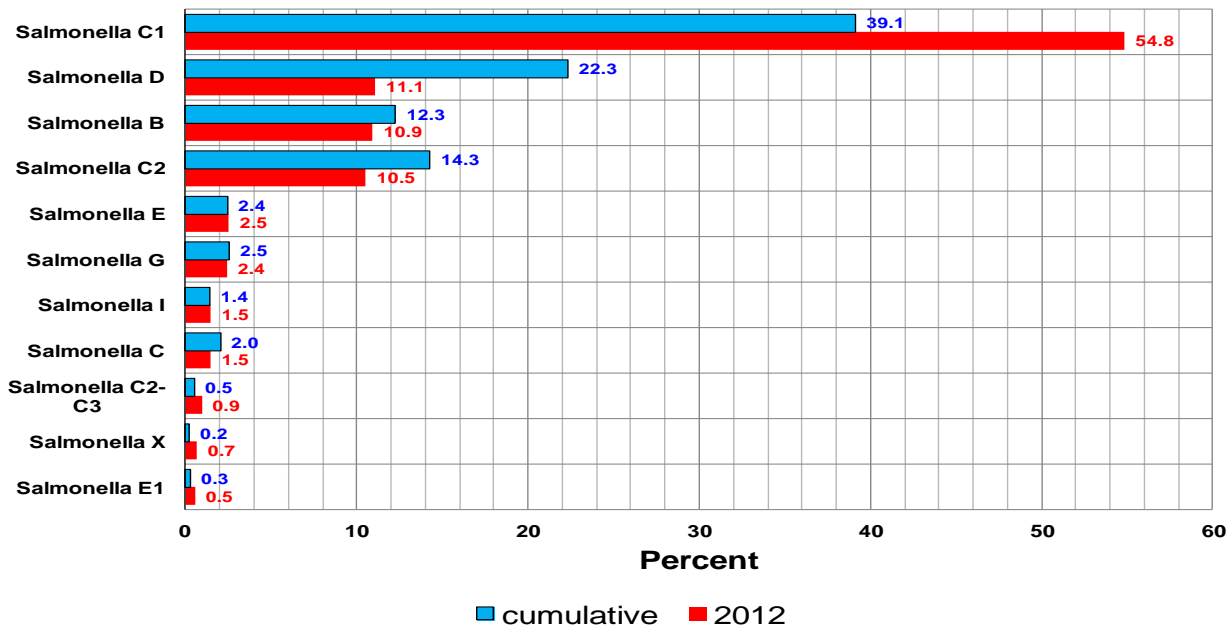
The most common Salmonella Serogroups tested at the regional level were Salmonella group C1 (37.5%), Salmonella group D (21.5%),; Salmonella group C2 (15.1%) and Salmonella group B (13.7%).

Figure 6; Top ten sero-grouped Salmonella Isolates, MECIDS 2005-2012



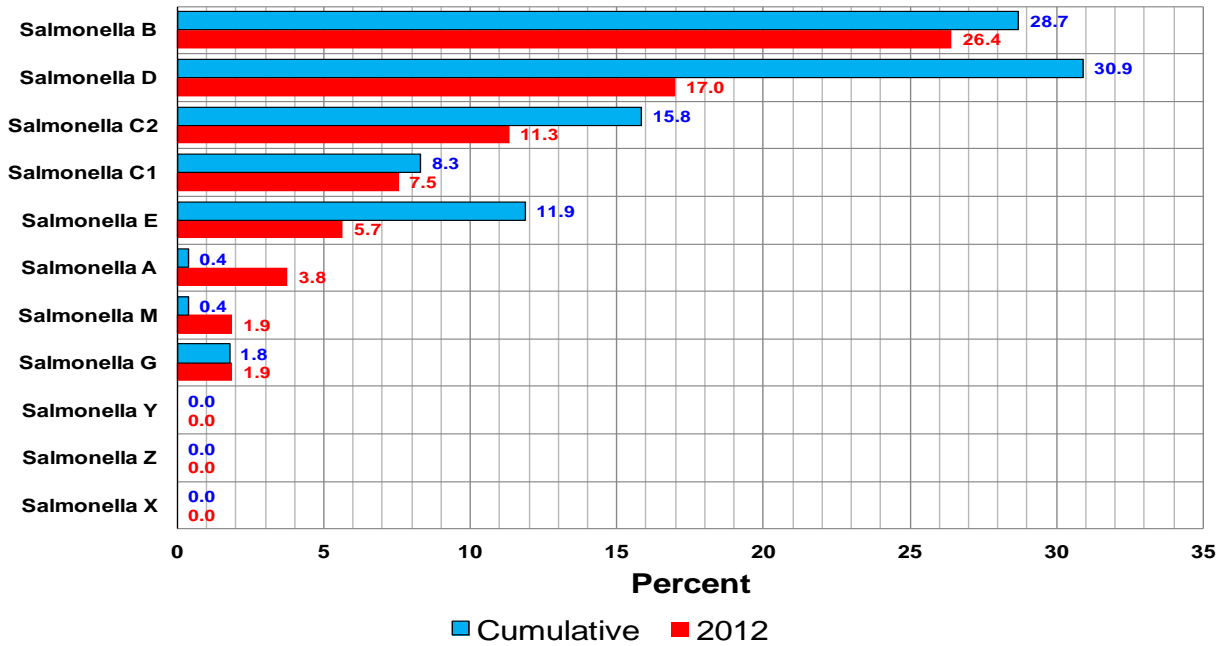
The most common Salmonella Serogroups tested in Israel were Salmonella group C1 (39.1%) followed by Salmonella group D (22.3%); figure 7.

Figure 7; Top ten Sero-grouped Salmonella Isolates, Israel 2005-2012



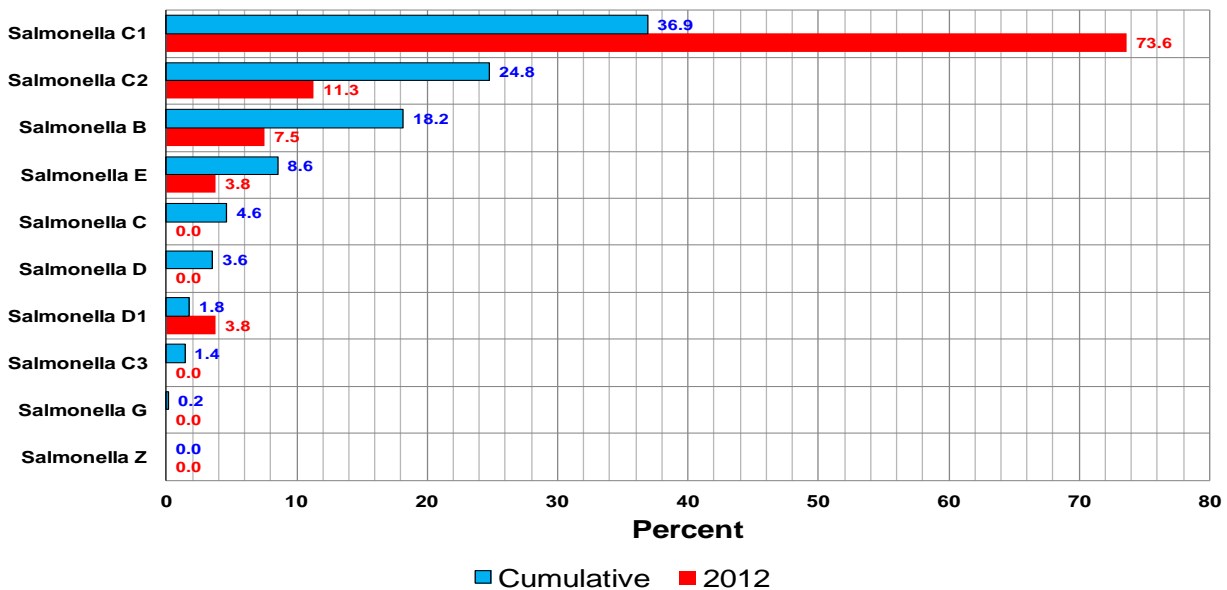
The most common Salmonella Serogroups tested in Jordan in were Salmonella group D (30.9%) followed by Salmonella group B (28.7%) and Salmonella C2 (15.8%); There is increasing in the proportions of A, G, and M Serogroups in 2012, figure 8.

Figure 8; Top ten Sero-grouped Salmonella Isolates, Jordan 2005-2012



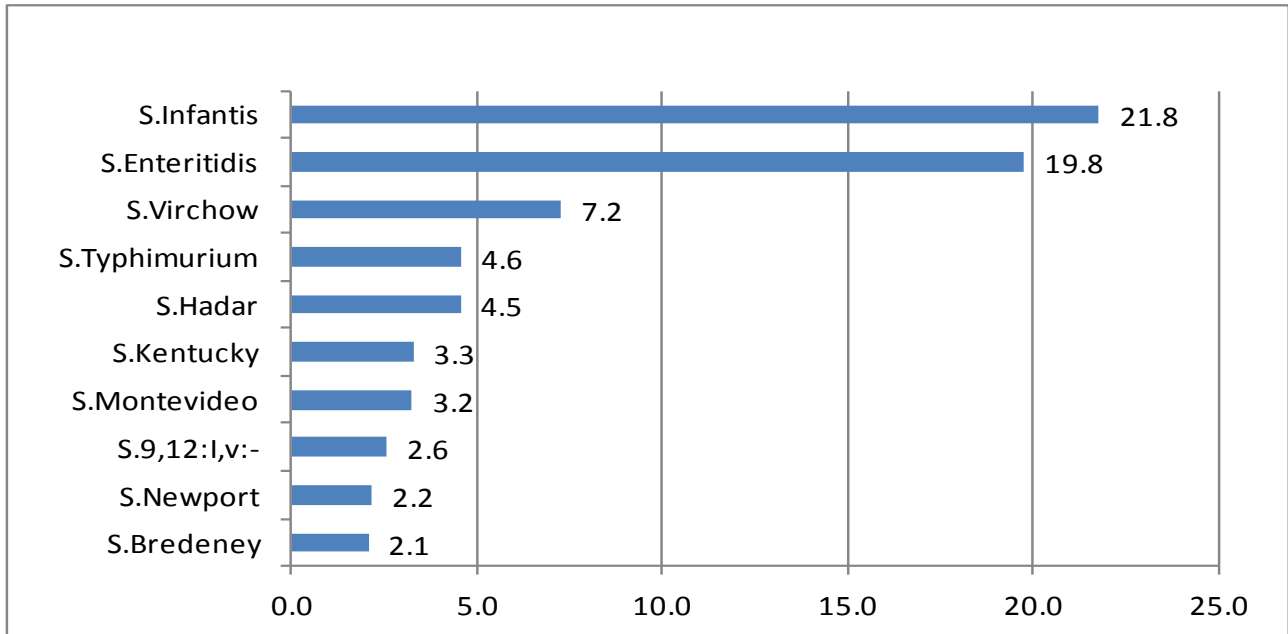
The most common Salmonella Serogroups tested in Palestine were Salmonella group C1 (36.9%), followed by Salmonella group C2 (24.8%); in 2012, there is increasing in the proportion of C1 and D1 Serogroups; figure 9.

Figure 9; Top ten Sero-grouped Salmonella Isolates, Palestine 2005-2012



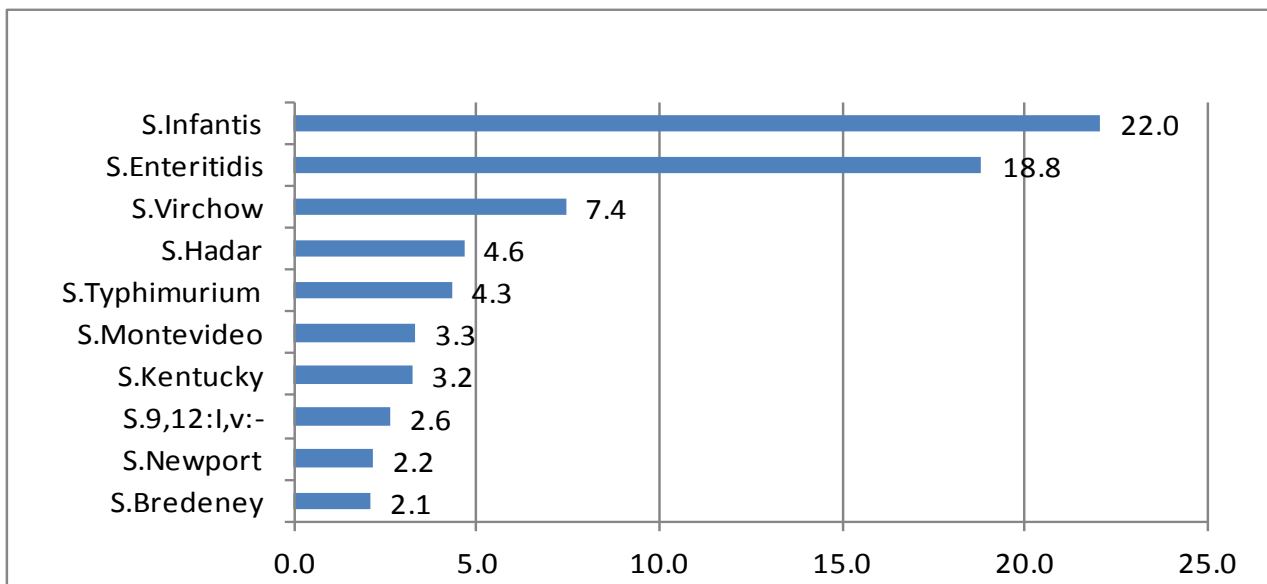
The total number of serotyped isolates from MECIDS partners was 6870; the most common serotypes were Salmonella C1, infantis, Salmonella D, enteritidis and Salmonella C1, virchow figure 10.

Figure 10; Top 10 salmonella serotypes, MECIDS 2005-2012



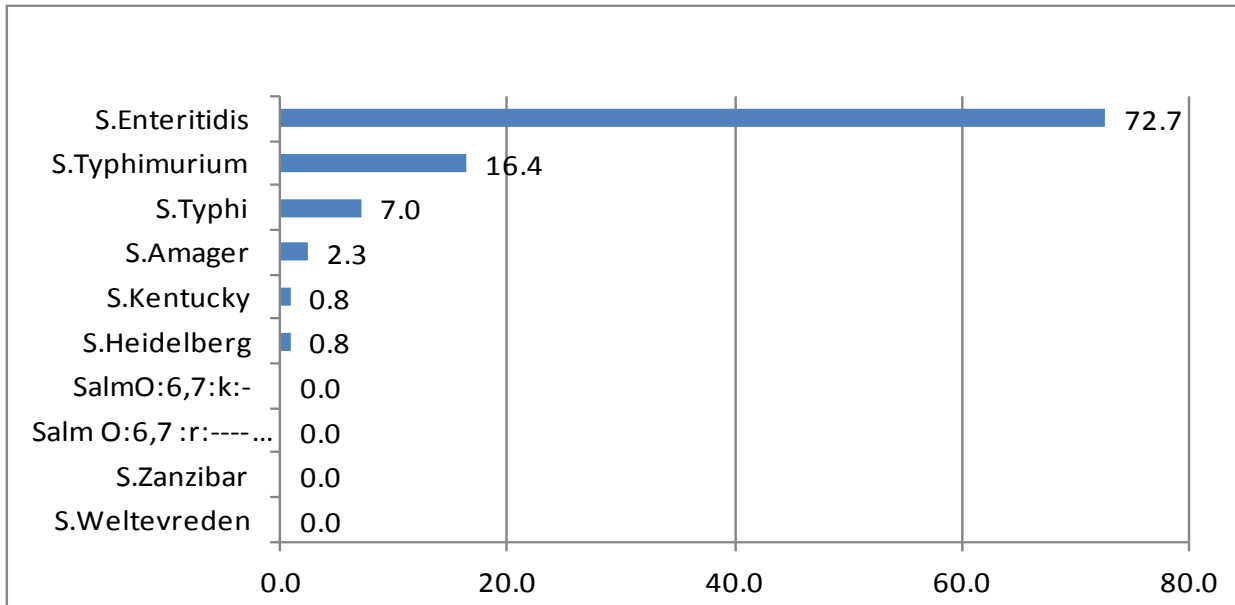
The cumulative number of serotypes identified from Israel was 6667, the most common serotype was Salmonella C1, infantis (22%), Salmonella D, enteritidis (19%); figure 11 illustrates top 10 serotypes from Israel,

Figure 11, Distribution of salmonella serotypes, Israel 2005-2012



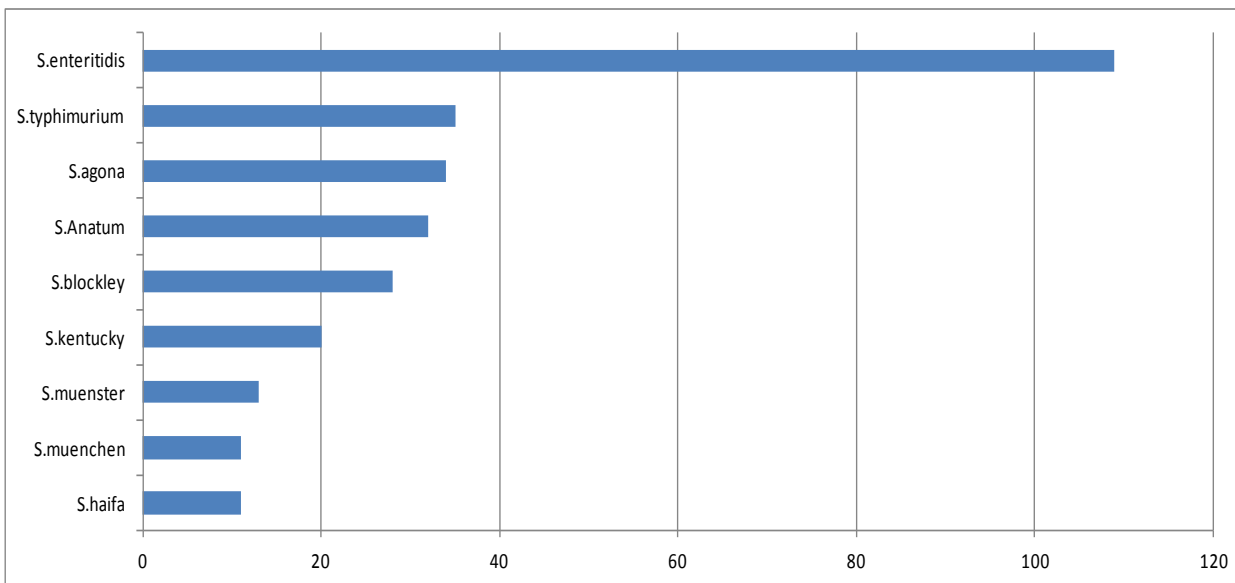
The cumulative number of serotypes from Jordan was 128, the most common was Salmonella D, enteritidis (73%), figure 12;

Figure 12, Distribution of salmonella serotypes, Jordan 2005-2012



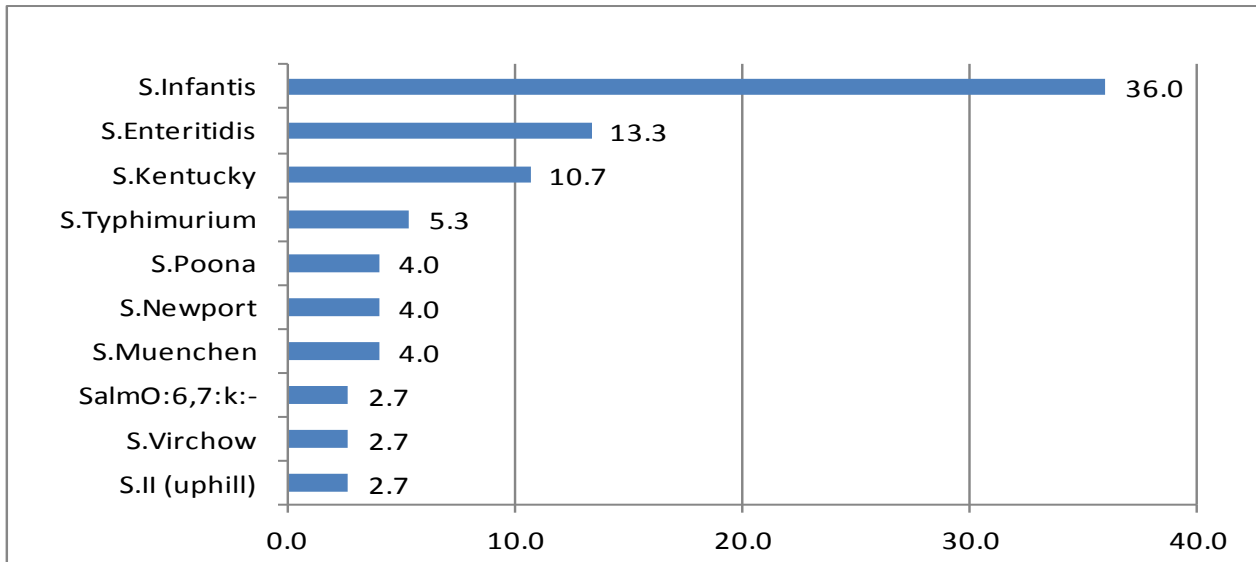
The serotype distribution in Jordan was changed after serotyping stored Salmonella isolates in Israel as a recommendation of executive board of MECIDS, but the most common serotype still S. enteritidis, and S. typhimurium followed by S. Agona and S. anatum Figure.13

Figure 13, Distribution of salmonella serotypes including serotypes from referral lab., Jordan 2005-2012



The cumulative number of serotypes from Palestine was 75; the most common was Salmonella C1,infantis (36%), figure 15 illustrates top 10 serotypes from Palestine; figure 14

Figure 14, Distribution of salmonella serotypes, Palestine 2005-2012



Data for Shigella was available from Jordan, the total number of isolates was 34, the most common subgroups was Sonnei (24), followed by Flexneri (10) but there wasn't any shigella Boydi; was observed seasonal distribution in the summer and early autumn, figure 15

Figure. 15 Distribution of Shigella isolates by month and subgroups, Jordan 2012

