**International surveillance network for the enteric infections - Salmonella and VTEC O157**

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# Enter-net Quarterly Salmonella Report - 98/4

## October - December 1998

### Summary.

This report gives details of the number of isolates identified by the national reference laboratories in the final quarter of 1998 and incorporated in the Enter-net salmonella database. Sixteen countries have supplied data for this database for this period in 1998 and 1997. One other country has provided the data as a paper copy. The cumulative total of serotypes isolated by country and population data are detailed in table one, serotypes with unusual increases over the same period in 1997 are shown in the figure on page two. Table two gives details of the top ten serotypes isolated in each country for which comparable data are available for the same period in 1997. The total number of human salmonella isolates reported this quarter are 20,303 with 16,464 (81.1%) being *S.enteritidis*, *S.typhimurium*, *S.hadar* or *S.virchow*.

### Quarterly data - major trends.

The total number of reports in the database show a decrease over the same period in 1997 (-16.3%). All the top serotypes have decreased *S.enteritidis* (11,852 isolates in the third quarter of 1998, 58.4% of the total) by 17.6%, *S.typhimurium* (3,596, 17.7%) by 22.5%, *S.hadar* (635, 3.1%) by 24.9% and *S.virchow* (381, 1.9%) by 12.4%. Nine other serotypes were identified more than 100 times during the quarter, *S.infantis* (215, 1.1%), *S.brandenburg* (175, 0.9%), *S.agona* (147, 0.7%), S.*newport* (134, 0.7%), *S.bovismorbificans* (128, 0.6%), *S.heidelberg* (124, 0.6%), *S.derby* (118, 0.6%) *S.braenderup* (117, 0.6%), and *S.blockley* (102, 0.5%).

Thirteen serotypes were isolated between 50 and 99 times; *S.stanley*, S.*livingstone*, *S.panama*, *S.typhi*, *S.montevideo, S.mbandaka*, *S.saintpaul*, *S.anatum*, *S.goldcoast,* S.ohio, S.*paratyphi* B, *S.bredeney* and *S.senftenberg*. These were a total of 929 isolates, 4.6% of the total. Thirty-seven serotypes were isolated between 10 and 49 times, 876, 4.3% and 163 were reported less than 10 times, 368, 1.8%. Four hundred and six isolates, 1.9%, have not been fully speciated at time of report.

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All data are provisional.

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| Enter-net salmonella database - isolates report in Q4 1998 (Q4 1997) | | |
|---|---|---|
| **Serotype** | **Freq** | **%** |
| enteritidis | 11,852 | 58.4 |
| | (14,380) | (59.3) |
| typhimurium | 3,596 | 17.7 |
| | (4,638) | (19.1) |
| hadar | 635 | 3.1 |
| | (845) | (3.5) |
| virchow | 381 | 1.9 |
| | (435) | (1.8) |
| infantis | 215 | 1.1 |
| | (254) | (1.0) |
| brandenburg | 175 | 0.9 |
| | (201) | (0.8) |
| agona | 147 | 0.7 |
| | (135) | (0.6) |
| newport | 134 | 0.7 |
| | (196) | (0.8) |
| bovismorbificans | 128 | 0.6 |
| | (143) | (0.6) |
| heidelberg | 124 | 0.6 |
| | (220) | (0.9) |
| derby | 118 | 0.6 |
| | (116) | (0.5) |
| braenderup | 117 | 0.6 |
| | (118) | (0.5) |
| blockley | 102 | 0.5 |
| | (74) | (0.3) |
| stanley | 94 | 0.5 |
| | (48) | (0.2) |
| livingstone | 92 | 0.5 |
| | (152) | (0.6) |
| other | 2,393 | 11.6. |
| | (2,312) | (9.5) |
| Total | 20,303 | 100 |
| | (24,267) | (100) |

## Unusual event report December 1998

In December 1998 two salmonella serotypes were identified by the algorithm routinely applied to the international database as having unusually high numbers of isolates in more than one country compared to historical levels - *S.stanley* and *S.saintpaul*.

Of the 46 isolates of *S.stanley* in the database, eleven are reported as being travel associated (8 Thailand, 2 India and 1 Iraq), there were 20 (43.5%) males and 22 (47.8%) females with four not stated. The predominant ageband (figure 1) was 15-64y (76.1%).
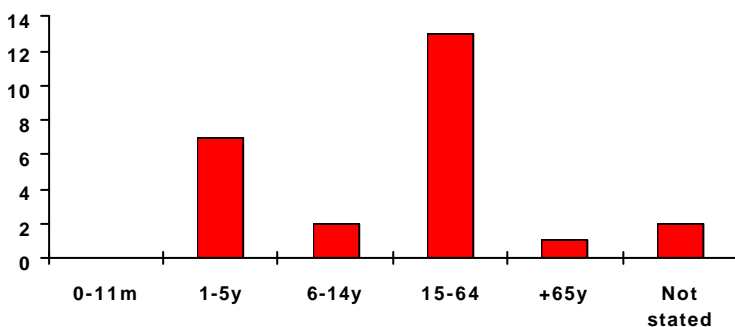
Figure 1

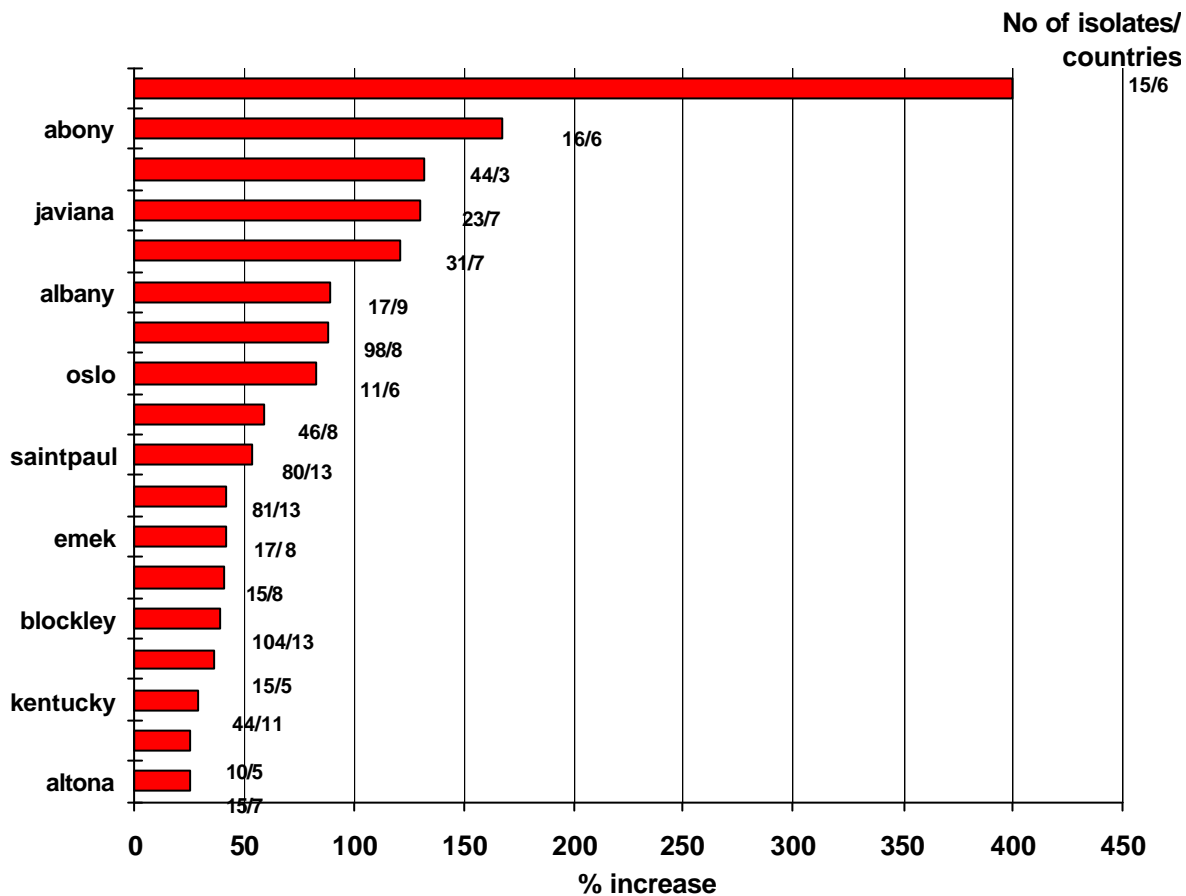### *S.stanley* by ageband - December 1998
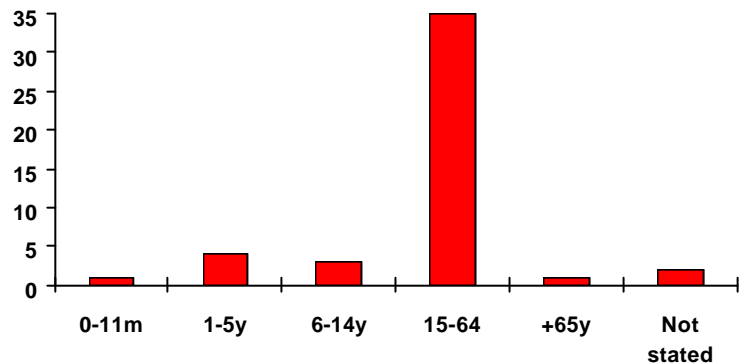


Twenty-seven isolates of *S.saintpaul* were reported, four were associated with travel (Korea, Philippines, Thailand, Zimbabwe, one each). There were 11 males, four females and 10 not stated. Twenty eight percent were aged between 1 and 5 years and 52% between 15 and 64 years (figure 2).

Figure 2

### *S.saintpaul* by ageband - December 1998

## Serotypes with unusual increases this Quarter

**No of isolates/ countries**

15/6
16/6
44/3
23/7
31/7
17/9
98/8
11/6
46/8
80/13
81/13
17/8
15/8
104/13
15/5
44/11
10/5
15/7

abony
javiana
albany
oslo
saintpaul
emek
blockley
kentucky
altona

0   50   100   150   200   250   300   350   400   450

**% increase**

## 1998 provisional summary.

The Enter-net salmonella database for 1998 shows a substantial reduction over 1997. The total number of human isolates have declined by 11,970 from 97,275 to 85,305. This reduction is predominantly in the most frequently identified serotypes. As has been previously reported by Enter-net *S.enteritidis* unexpectedly rose in 1997 by 20.15% (for comparable country data), this trend has reversed in 1998 with the provisional annual totals of this serotype having decreased by 7,343 (12.9%) from 56,859 to 49,516. There have also been significant reductions in *S.typhimurium* (down 3,344, 17.4% to 15,917), *S.hadar* (down 848, 23.9% to 2,706) and *S.virchow* (down 358, 17.0% to 1,742).

This report has been prepared by Ian Fisher, Enter-net Scientific Co-ordinator on behalf of, and in collaboration with the participants in the Enter-net network.