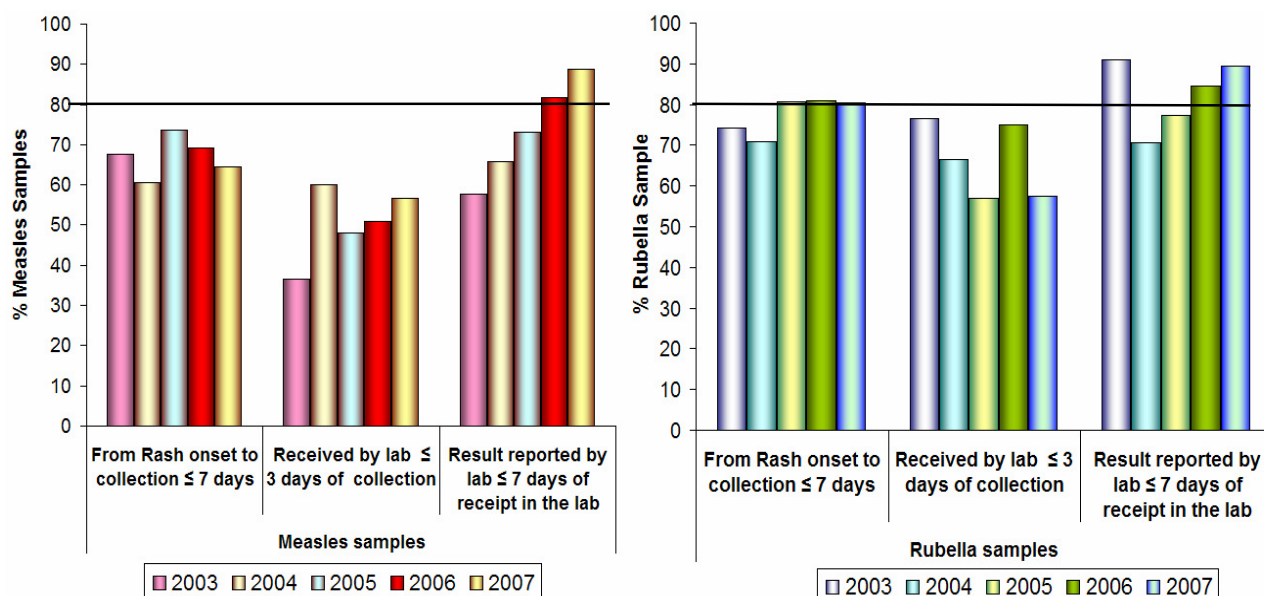


Measles and Rubella Sample Collection to Result Reporting Surveillance and Laboratory Indicators 2004-2007*, WHO EURO



*Data as of Dec, 2007
 Source: Monthly aggregate MR Lab reporting

The above graphs demonstrate the following surveillance and lab performance indicators in WHO/EURO between years 2003-2007:

- (i) Timeliness of collecting clinical specimen upon onset of rash for both measles and rubella,
- (ii) Timeliness of specimen transportation to the investigating laboratory and
- (iii) Timeliness of reporting laboratory results to the authorities.

| Number and type of samples received by lab for testing measles, rubella or both | | | | | | | | |
|---|-------|---------------|----------------|-------------------------|--------------------|------------|----------------------|--------------------|
| Year | Total | Serum (%) | Oral fluid (%) | Nasopharyngeal swab (%) | Dry blood spot (%) | Urine (%) | EDTA whole blood (%) | Other specimen (%) |
| 2003 | 8487 | 7915 (93.3%) | 451 (5.3%) | 18 (0.2%) | 0 (0%) | 60 (0.7%) | 11 (0.1%) | 32 (0.4%) |
| 2004 | 34756 | 29208 (84%) | 4622 (13.3%) | 224 (0.6%) | 0 (0%) | 306 (0.9%) | 49 (0.1%) | 347 (1%) |
| 2005 | 34803 | 30917 (88.8%) | 3020 (8.7%) | 61 (0.2%) | 48 (0.1%) | 125 (0.4%) | 458 (1.3%) | 174 (0.5%) |
| 2006 | 33436 | 24841 (74.3%) | 4901 (14.7%) | 710 (2.1%) | 126 (0.4%) | 668 (2%) | 1661 (5%) | 529 (1.6%) |
| 2007 | 27601 | 20391 (73.9%) | 4633 (16.8%) | 159 (0.6%) | 87 (0.3%) | 436 (1.6%) | 1197 (4.3%) | 698 (2.5%) |

*Data as of Dec, 2007
 Source: Monthly aggregate MR Lab reporting

Table 1: Classification of suspected measles and rubella cases, Jan-Nov, 2007

| Country | Measles | | | | | | | | | Rubella | | | | | | | | |
|---|-----------------|---------------------|----------------|------------|------------|------------|----------------------|-------------------|--------------|-----------------|---------------------|----------------|----------|-----------|-----------|----------------------|-------------------|--------------|
| | Total suspected | Total Confirmed (%) | Classification | | | | | Monthly Reporting | | Total suspected | Total Confirmed (%) | Classification | | | | | Monthly Reporting | |
| | | | Lab confirmed | Epi-Link | Clinical | Discarded | Pending ¹ | % Completeness | % Timeliness | | | Lab confirmed | Epi-Link | Clinical | Discarded | Pending ¹ | % Completeness | % Timeliness |
| Albania ² | 33 | 21 (64%) | 21 | 0 | 0 | 12 | 0 | 100% | 90% | - | - | - | - | - | - | 0% | 0% | |
| Andorra | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 45% | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 45% | |
| Armenia | 20 | 0 | 0 | 0 | 0 | 0 | 20 | 100% | 9% | - | - | - | - | - | - | 0% | 0% | |
| Austria | 3 | 2 (67%) | 2 | 0 | 0 | 0 | 1 | 100% | 81% | - | - | - | - | - | - | 0% | 0% | |
| Azerbaijan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90% | 45% | 3 | 1 (33%) | 1 | 0 | 0 | 0 | 2 | 81% | 27% |
| Belarus | 1 | 1 (100%) | 1 | 0 | 0 | 0 | 0 | 100% | 90% | 13 | 7 (54%) | 7 | 0 | 0 | 0 | 6 | 100% | 90% |
| Belgium | 50 | 49 (98%) | 8 | 10 | 31 | 0 | 1 | 90% | 72% | - | - | - | - | - | - | 0% | 0% | |
| Bosnia and Herzegovina | No Report | - | - | - | - | - | - | 0% | 0% | - | - | - | - | - | - | 0% | 0% | |
| Bulgaria | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 100% | 100% | - | - | - | - | - | - | 0% | 0% | |
| Croatia | 6 | 0 | 0 | 0 | 0 | 0 | 6 | 100% | 100% | 41 | 33 (80%) | 29 | 1 | 3 | 14 | 0 | 27% | 27% |
| Cyprus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 81% | 0 | 0 | 0 | 0 | 0 | 0 | 81% | 81% | |
| Czech Republic ³ | 2 | 2 (100%) | 2 | 0 | 0 | 0 | 0 | 100% | 45% | - | - | - | - | - | - | 0% | 0% | |
| Denmark ³ | 4 | 3 (75%) | 3 | 0 | 0 | 0 | 1 | 100% | 90% | 1 | 0 (0%) | 0 | 0 | 0 | 1 | 0 | 9% | 9% |
| Estonia | 1 | 1 (100%) | 1 | 0 | 0 | 0 | 0 | 100% | 90% | 9 | 9 (100%) | 6 | 0 | 3 | 0 | 0 | 100% | 27% |
| Finland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 100% | - | - | - | - | - | - | 0% | 0% | |
| France ³ | 53 | 38 (72%) | 22 | 0 | 16 | 15 | 0 | 90% | 63% | - | - | - | - | - | - | 0% | 0% | |
| Georgia | 39 | 2 (5%) | 2 | 0 | 0 | 0 | 37 | 100% | 45% | 209 | 0 (0%) | 0 | 0 | 0 | 0 | 209 | 100% | 27% |
| Germany ³ | 530 | 530 (100%) | 259 | 194 | 77 | 0 | 0 | 100% | 100% | - | - | - | - | - | - | 0% | 0% | |
| Greece | 1 | 1 (100%) | 0 | 0 | 1 | 0 | 0 | 54% | 9% | - | - | - | - | - | - | 0% | 0% | |
| Hungary | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 100% | 90% | 4 | 0 (0%) | 0 | 0 | 0 | 0 | 4 | 63% | 63% |
| Iceland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90% | 54% | - | - | - | - | - | - | 0% | 0% | |
| Ireland | 61 | 55 (90%) | 13 | 6 | 36 | 0 | 6 | 100% | 100% | 19 | 12 (63%) | 4 | 2 | 6 | 0 | 7 | 100% | 100% |
| Israel | 402 | 61 (15%) | 60 | 0 | 1 | 0 | 341 | 100% | 27% | - | - | - | - | - | - | 0% | 0% | |
| Italy | 167 | 0 | 0 | 0 | 0 | 0 | 167 | 81% | 9% | - | - | - | - | - | - | 0% | 0% | |
| Kazakhstan | 7 | 6 (86%) | 4 | 1 | 1 | 0 | 1 | 72% | 27% | 2 | 2 (100%) | 0 | 2 | 0 | 0 | 0 | 9% | 0% |
| Kyrgyzstan | 43 | 38 (88%) | 38 | 0 | 0 | 0 | 5 | 18% | 9% | - | - | - | - | - | - | 0% | 0% | |
| Latvia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 81% | 7 | 5 (71%) | 1 | 0 | 4 | 0 | 2 | 100% | 72% |
| Lithuania | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 90% | 13 | 0 (0%) | 0 | 0 | 0 | 0 | 13 | 90% | 63% |
| Luxembourg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 100% | - | - | - | - | - | - | 0% | 0% | |
| Malta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 100% | - | - | - | - | - | - | 0% | 0% | |
| Moldova | 10 | 7 (70%) | 7 | 0 | 0 | 0 | 3 | 100% | 18% | - | - | - | - | - | - | 0% | 0% | |
| Monaco | No Report | - | - | - | - | - | - | 0% | 0% | - | - | - | - | - | - | 0% | 0% | |
| Montenegro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90% | 36% | 0 | 0 | 0 | 0 | 0 | 0 | 81% | 54% | |
| Netherlands ³ | 9 | 8 (89%) | 8 | 0 | 0 | 1 | 0 | 72% | 27% | - | - | - | - | - | - | 0% | 0% | |
| Norway ³ | 20 | 20 (100%) | 17 | 3 | 0 | 0 | 0 | 100% | 81% | - | - | - | - | - | - | 0% | 0% | |
| Poland | 136 | 38 (28%) | 29 | 1 | 8 | 93 | 5 | 100% | 81% | 0 | 0 | 0 | 0 | 0 | 0 | 9% | 9% | |
| Portugal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 54% | - | - | - | - | - | - | 0% | 0% | |
| Romania | 353 | 348 (99%) | 343 | 0 | 5 | 5 | 0 | 100% | 18% | - | - | - | - | - | - | 0% | 0% | |
| Russian Federation | 173 | 171 (99%) | 163 | 0 | 8 | 0 | 2 | 100% | 100% | - | - | - | - | - | - | 9% | 9% | |
| San Marino | No Report | - | - | - | - | - | - | 0% | 0% | - | - | - | - | - | - | 0% | 0% | |
| Serbia | 174 | 147 (84%) | 147 | 0 | 0 | 0 | 27 | 72% | 27% | - | - | - | - | - | - | 9% | 9% | |
| Slovakia | 4 | 3 (75%) | 2 | 1 | 0 | 0 | 1 | 100% | 81% | 7 | 2 (29%) | 0 | 0 | 2 | 5 | 0 | 100% | 63% |
| Slovenia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 100% | - | - | - | - | - | - | 0% | 0% | |
| Spain | 260 | 260 (100%) | 234 | 19 | 7 | 0 | 0 | 100% | 81% | - | - | - | - | - | - | 0% | 0% | |
| Sweden | 1 | 1 (100%) | 0 | 0 | 1 | 0 | 0 | 100% | 90% | - | - | - | - | - | - | 0% | 0% | |
| Switzerland ³ | 1077 | 969 (90%) | 396 | 123 | 450 | 95 | 13 | 100% | 27% | - | - | - | - | - | - | 0% | 0% | |
| Tajikistan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81% | 9% | 188 | 100 (53%) | 100 | 0 | 0 | 0 | 88 | 81% | 9% |
| The former Yugoslav Republic of Macedonia | 1 | - | - | - | - | - | 1 | 100% | 9% | - | - | - | - | - | - | 0% | 0% | |
| Turkey | 3 | 3 (100%) | 3 | 0 | 0 | 0 | 0 | 54% | 9% | 576 | 0 (0%) | 0 | 0 | 0 | 0 | 576 | 63% | 9% |
| Turkmenistan | 59 | 59 (100%) | 34 | 0 | 25 | 0 | 0 | 100% | 0% | - | - | - | - | - | - | 0% | 0% | |
| Ukraine | 980 | 231 (24%) | 231 | 0 | 0 | 0 | 749 | 90% | 90% | - | - | - | - | - | - | 0% | 0% | |
| United Kingdom ³ | 886 | 886 (100%) | 870 | 16 | 0 | 0 | 0 | 100% | 63% | - | - | - | - | - | - | 0% | 0% | |
| Uzbekistan | 862 | 215 (25%) | 212 | 0 | 3 | 0 | 647 | 100% | 45% | 202 | 19 (9%) | 19 | 0 | 0 | 0 | 183 | 100% | 45% |
| Euro Total/Averages | 6434 | 4176 (65%) | 3132 | 374 | 670 | 222 | 2036 | 87% | 58% | 1294 | 190 (15%) | 167 | 5 | 18 | 20 | 1090 | 26% | 16% |

Data source: Monthly aggregate and case-based data reported by Member States to WHO/Europe and/or EUVAC.NET.

¹ Under Investigation / classification unknown or not reported - clinically suspected measles / rubella

² Import related lab confirmed measles cases included in total cases: Albania = 21

³ Imported lab confirmed measles cases included in total cases: Czech Republic=1; Denmark=2; France =5; Germany =12; Netherlands=3; Norway=2; Switzerland=9; UK=21

Table 2: Measles and rubella laboratory test results, Jan-Nov, 2007

| Country | Specimen | | | | | | | | | Reporting | |
|---|--------------|--------------------|--------------------------|-------------------|----------------------|--------------------|--------------------------|-------------------|----------------------|----------------|--------------|
| | Collected | Tested for measles | Positive for measles (%) | Measles Equivocal | Negative for measles | Tested for rubella | Positive for rubella (%) | Rubella Equivocal | Negative for rubella | % Completeness | % Timeliness |
| Albania | 35 | 35 | 22 (63%) | 0 | 13 | 0 | 0 | 0 | 0 | 92% | 42% |
| Andorra | No Lab | | | | | | | | | 0% | 0% |
| Armenia | 161 | 79 | 1 (1%) | 0 | 78 | 152 | 85 (56%) | 3 | 64 | 100% | 42% |
| Austria | 4909 | 948 | 10 (1%) | 0 | 938 | 5421 | 61 (1%) | 0 | 5360 | 100% | 100% |
| Azerbaijan | 34 | 14 | 0 (0%) | 0 | 14 | 20 | 1 (5%) | 0 | 19 | 58% | 25% |
| Belarus | 148 | 144 | 2 (1%) | 0 | 142 | 146 | 6 (4%) | 1 | 139 | 92% | 50% |
| Belgium | 91 | 94 | 25 (27%) | 2 | 67 | 58 | 3 (5%) | 1 | 54 | 100% | 100% |
| Bosnia and Herzegovina | No Report | | | | | | | | | 0% | 0% |
| Bulgaria | 62 | 62 | 3 (5%) | 0 | 59 | 62 | 2 (3%) | 0 | 60 | 83% | 75% |
| Croatia | 32 | 0 | 0 | 0 | 0 | 32 | 21 (66%) | 0 | 11 | 92% | 67% |
| Cyprus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100% | 100% |
| Czech Republic | 66 | 31 | 7 (23%) | 4 | 20 | 64 | 7 (11%) | 0 | 57 | 100% | 100% |
| Denmark | No Report | | | | | | | | | 0% | 0% |
| Estonia | 508 | 173 | 3 (2%) | 0 | 169 | 511 | 10 (2%) | 0 | 500 | 100% | 100% |
| Finland | 645 | 128 | 0 (0%) | 0 | 128 | 517 | 0 (0%) | 0 | 517 | 92% | 83% |
| France | No Report | | | | | | | | | 0% | 0% |
| Georgia | 22 | 17 | 2 (12%) | 0 | 15 | 27 | 0 (0%) | 1 | 26 | 50% | 25% |
| Germany | No Report | | | | | | | | | 0% | 0% |
| Greece | 454 | 72 | 1 (1%) | 0 | 71 | 382 | 82 (21%) | 0 | 300 | 100% | 67% |
| Hungary | 784 | 41 | 2 (5%) | 0 | 38 | 63 | 1 (2%) | 0 | 62 | 100% | 67% |
| Iceland | No Report | | | | | | | | | 0% | 0% |
| Ireland | No Report | | | | | | | | | 0% | 0% |
| Israel | 1133 | 141 | 61 (43%) | 0 | 80 | 408 | 64 (16%) | 0 | 344 | 100% | 83% |
| Italy | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8% | 8% |
| Kazakhstan | 191 | 166 | 13 (8%) | 2 | 151 | 183 | 76 (42%) | 9 | 98 | 92% | 67% |
| Kyrgyzstan | 342 | 342 | 78 (23%) | 10 | 254 | 342 | 7 (2%) | 9 | 326 | 92% | 25% |
| Latvia | 189 | 47 | 0 (0%) | 1 | 46 | 143 | 0 (0%) | 0 | 143 | 92% | 92% |
| Lithuania | 11 | 13 | 0 (0%) | 0 | 11 | 11 | 0 (0%) | 0 | 11 | 100% | 100% |
| Luxembourg | 219 | 144 | 0 (0%) | 3 | 141 | 76 | 11 (14%) | 9 | 56 | 100% | 100% |
| Malta | 1135 | 9 | 2 (22%) | 1 | 6 | 1097 | 42 (4%) | 19 | 1036 | 83% | 58% |
| Moldova | 61 | 63 | 10 (16%) | 0 | 53 | 63 | 3 (5%) | 0 | 60 | 100% | 92% |
| Monaco | No Report | | | | | | | | | 0% | 0% |
| Montenegro | No Lab | | | | | | | | | 0% | 0% |
| Netherlands | 44 | 49 | 16 (33%) | 0 | 33 | 19 | 0 (0%) | 0 | 19 | 67% | 25% |
| Norway | 72 | 50 | 6 (12%) | 0 | 44 | 26 | 2 (8%) | 0 | 24 | 92% | 92% |
| Poland | 96 | 95 | 15 (16%) | 6 | 74 | 95 | 26 (27%) | 1 | 68 | 83% | 50% |
| Portugal | 49 | 7 | 0 (0%) | 5 | 2 | 0 | 0 | 0 | 0 | 100% | 100% |
| Romania | 937 | 825 | 346 (42%) | 4 | 475 | 569 | 5 (1%) | 2 | 562 | 92% | 0% |
| Russian Federation | 4075 | 3970 | 204 (5%) | 56 | 3710 | 2973 | 458 (15%) | 65 | 2450 | 100% | 92% |
| San Marino | No Lab | | | | | | | | | 0% | 0% |
| Serbia | 201 | 61 | 45 (74%) | 2 | 14 | 139 | 1 (1%) | 0 | 138 | 67% | 0% |
| Slovakia | 34 | 13 | 1 (8%) | 0 | 12 | 24 | 0 (0%) | 0 | 24 | 92% | 42% |
| Slovenia | 289 | 59 | 2 (3%) | 2 | 54 | 234 | 2 (1%) | 1 | 231 | 100% | 83% |
| Spain | 739 | 908 | 360 (40%) | 2 | 355 | 648 | 1 (0%) | 0 | 591 | 75% | 100% |
| Sweden | No Report | | | | | | | | | 0% | 0% |
| Switzerland | No Lab | | | 0 | | | | | | 0% | 0% |
| Tajikistan | 299 | 106 | 0 (0%) | 0 | 106 | 298 | 178 (60%) | 1 | 119 | 100% | 0% |
| The former Yugoslav Republic of Macedonia | No Report | | | | | | | | | 0% | 0% |
| Turkey | 951 | 951 | 2 (0%) | 5 | 944 | 950 | 251 (26%) | 67 | 632 | 83% | 0% |
| Turkmenistan | 220 | 220 | 38 (17%) | 1 | 156 | 220 | 9 (4%) | 0 | 186 | 83% | 33% |
| Ukraine | 954 | 906 | 230 (25%) | 8 | 589 | 693 | 106 (15%) | 10 | 577 | 100% | 50% |
| United Kingdom | 7032 | 5404 | 1525 (28%) | 183 | 3696 | 1339 | 50 (4%) | 49 | 1240 | 100% | 100% |
| Uzbekistan | 296 | 277 | 212 (77%) | 7 | 58 | 96 | 19 (20%) | 1 | 76 | 100% | 25% |
| Euro Total / Average | 27603 | 16664 | 3244 (19%) | 304 | 12816 | 18101 | 1590 (9%) | 249 | 16180 | 87% | 60% |

Data source: Aggregated monthly lab data provided by laboratories of the Regional Measles and Rubella Lab Network.

Website: <http://www.euro.who.int/vaccine>; CISID: <http://data.euro.who.int/cisid>; email: measles@euro.who.int