

# 7. Outbreaks

## Summary

Number of outbreaks: 369  
 Number of IID outbreaks: 286  
 Number of non-IID outbreaks: 83

During 2010, 369 outbreaks of infectious diseases were reported with 5,222 associated cases of illness, including 1,054 (20.2%) cases hospitalised and eight deaths. Regional variation in outbreaks was observed between HSE areas with the highest rate observed in HSE-NW at 16.9 per 100,000 population while the lowest rate was observed in HSE-NE at 4.3 per 100,000 population. Table 1 details the regional distribution of all outbreaks of infectious disease, outbreaks of infectious intestinal disease (IID) and outbreaks of non-IID.

General outbreaks accounted for 69.1% (n= 255) of all outbreaks notified during 2010. The remaining outbreaks (30.9%, n= 114) were reported as family/household outbreaks. Similar to previous years, person-to-person spread\* was reported as the mode of transmission for the majority of outbreaks in 2010 (81.8%, n=2,302). Most of these outbreaks were due to norovirus, AIG and measles.

Private houses were the most frequently reported outbreak location in 2010, accounting for 24.7% (n=91) of all outbreaks while residential institutions were the second most common outbreak location, accounting for 20.9% (n=77) of all outbreaks. The highest numbers ill were reported from outbreaks in hospitals (n=2,133), residential institutions (n=1,210) and community hospital/long stay units (n=857). Table 2 details the number of IID and non-IID outbreaks and numbers ill by outbreak location for outbreaks reported during 2010.

### Infectious intestinal disease (IID) outbreaks:

IID outbreaks accounted for 77.5% (n=286) of all outbreaks reported during 2010. This was a 7% increase compared to the number of IID outbreaks reported during 2009 (n=266). Table 3 details the regional distribution of outbreaks of infectious intestinal disease (IID).

Norovirus/ suspect viral outbreaks, accounted for 67.5% of all IID outbreaks reported in 2010. Figure 1 compares norovirus/suspect viral outbreaks with non-norovirus IID outbreaks by year from 2001 to 2010. Norovirus was also responsible for the 10 largest outbreaks during 2010, all of which occurred in hospitals. Numbers ill ranged from 461 cases to 75 cases.

Table 1. Number of outbreaks by HSE area, 2010

HSE area	Number of outbreaks	Outbreak rate per 100,000	Number ill	Number hospitalised	Number of deaths	Number of IID outbreaks	Number of Non-IID outbreaks
HSE-E	106	7.1	2,274	580	4	69	37
HSE-M	27	10.7	269	10	0	23	4
HSE-MW	25	6.9	216	131	0	22	3
HSE-NE	17	4.3	87	17	1	17	0
HSE-NW	40	16.9	404	81	0	36	4
HSE-SE	37	8.0	673	6	0	34	3
HSE-S	68	10.9	690	50	2	45	23
HSE-W	46	11.1	568	158	1	37	9
HPSC	3	-	41	21	0	3	0
<b>Total</b>	<b>369</b>	<b>8.7</b>	<b>5,222</b>	<b>1,054</b>	<b>8</b>	<b>286</b>	<b>83</b>

\* Including 70 outbreaks reported as person to person and airborne transmission

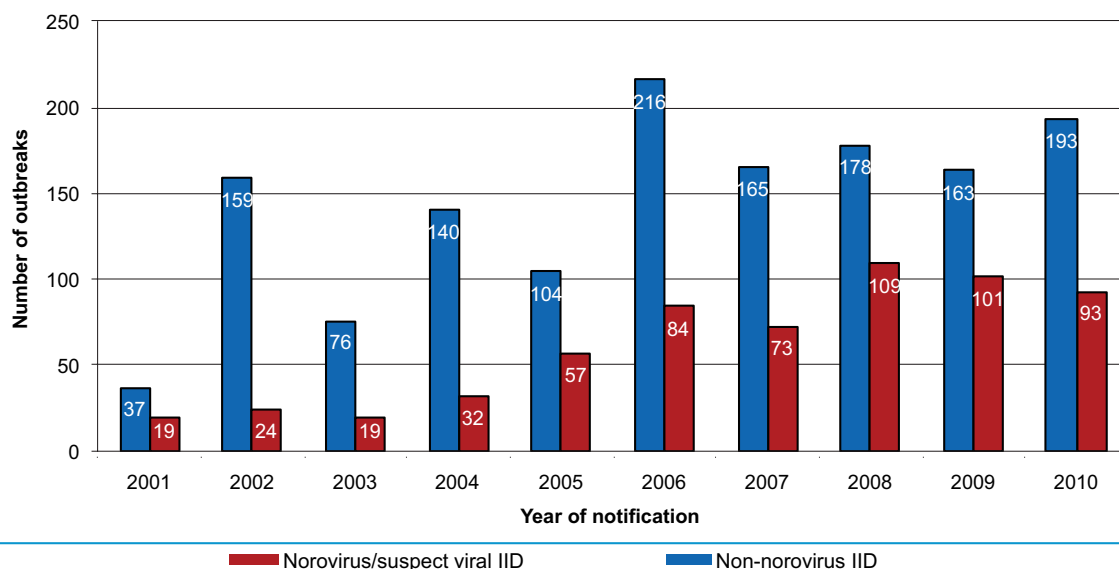


Figure 1. Number of norovirus/suspect viral outbreaks and number of non-norovirus IID outbreaks<sup>‡</sup> by year, 2001-2010

Table 2. Number of IID and non-IID outbreaks and number ill by outbreak location, 2010

Outbreak location	IID		Non-IID		Total outbreaks	
	Number of outbreaks	Number ill	Number of outbreaks	Number ill	Number of outbreaks	Number ill
Private house	62	152	29	83	91	235
Residential institution	73	1160	4	50	77	1210
Hospital	55	2085	6	48	61	2133
Comm. Hosp/Long-stay unit	53	857	0	0	53	857
School	0	0	17	183	17	183
Extended family	11	44	5	27	16	71
Other	9	76	3	20	12	96
Creche	4	44	7	48	11	92
Community outbreak	4	46	7	97	11	143
Hotel	6	123	1	2	7	125
Travel related	5	11	1	3	6	14
Restaurant / Cafe	3	45	0	0	3	45
University/College	0	0	1	3	1	3
Workplace	0	0	1	2	1	2
Coach tour	1	11	0	0	1	11
Not Specified	0	0	1	2	1	2
<b>Total</b>	<b>286</b>	<b>4654</b>	<b>83</b>	<b>568</b>	<b>369</b>	<b>5222</b>

Table 3. IID outbreak summary by HSE area 2010

HSE area	Number of outbreaks	Outbreak rate per 100,000	Number ill	Number hospitalised	Number of deaths
HSE-E	69	4.6	2,096	551	4
HSE-M	23	9.1	261	8	0
HSE-MW	22	6.1	205	129	0
HSE-NE	17	4.3	87	17	1
HSE-NW	36	15.2	329	78	0
HSE-SE	34	7.4	618	6	0
HSE-S	45	7.2	530	21	2
HSE-W	37	8.9	487	146	1
HPSC	3	-	41	21	0
<b>Total</b>	<b>286</b>	<b>6.7</b>	<b>4,654</b>	<b>977</b>	<b>8</b>

<sup>‡</sup>Includes all norovirus outbreaks and AIG outbreaks where organism was suspected norovirus, suspected viral or not specified

After norovirus (n=130), the next most commonly reported IID outbreaks during 2010 were acute infectious gastroenteritis (n=74), EHEC (n=48), salmonellosis (n=16) and cryptosporidiosis (n=8). The number of general and family outbreaks of IID and numbers ill, are outlined in Table 4.

The most frequently reported locations for IID outbreaks were residential institutions (n=73), private houses (n=62) and hospitals (n=55). The most commonly reported outbreaks in residential institutions were of norovirus (n=43) and AIG (n=30). In private homes the most commonly reported outbreaks were of Enterohaemorrhagic *E. coli* (n=40), salmonellosis (n=7) and cryptosporidiosis (n=6). In hospitals the most commonly reported outbreaks were norovirus (n=46) and AIG (n=9).

Person-to-person (P-P) spread<sup>†</sup> was the most frequently reported mode of transmission implicated in IID outbreaks during 2010 (80.4%, n=230).

The number of IID outbreaks peaked during the first three months of 2010. This peak is due to high numbers of norovirus outbreaks, with 40 norovirus outbreaks reported during January, 39 during February and 24 during March. This seasonal variation has been observed in previous years. Figure 2 illustrates the number of IID and non-IID outbreaks by month of notification during 2010.

#### Non-IID outbreaks:

During 2010, 83 outbreaks of non-IID diseases were reported, representing 22.5% of all outbreaks notified nationally. The most common non-IID outbreak disease was measles accounting for 48.2% (n=40) of all non-IID outbreaks reported. After mumps, the next most commonly reported non-IID outbreaks during 2010 were tuberculosis (n=7) and chicken pox/suspected chicken pox (n=6). Table 5 details the regional distribution of non-IID outbreaks while the number of general and family outbreaks of non-IID disease and numbers ill are outlined in Table 6.

The number of non-IID outbreaks also peaked during the first three months of 2010. This peak was due to high numbers of measles outbreaks, with 13 measles outbreaks reported during January, seven during February and 10 during March (figure 2).

The most frequently reported locations for non-IID outbreaks were private houses (n=29), schools (n=17), crèches (n=7) and community settings (n=6), as shown in table 2. Non-IID outbreaks in these locations were most frequently caused by measles.

Person-to-person (P-P) spread<sup>§</sup> was the most frequently reported mode of transmission implicated in non-IID outbreaks during 2010 (86.7%, n=72).

Table 4. Number of general and family IID outbreaks by disease, 2010

Outbreak disease/pathogen	Family outbreak		General outbreak		Total IID outbreaks	
	Number of outbreaks	Number ill	Number of outbreaks	Number ill	Number of outbreaks	Number ill
Acute infectious gastroenteritis	7	26	67	846	74	872
Campylobacteriosis	1	15	1	5	2	20
Cryptosporidiosis	8	15	0	0	8	15
Enterohaemorrhagic <i>E. coli</i>	45	97	3	10	48	107
Giardiasis	1	2	0	0	1	2
Hepatitis A (acute)	1	3	2	13	3	16
Noroviral infection	1	36	129	3484	130	3520
Salmonellosis	11	28	5	59	16	87
Shigellosis	2	7	1	6	3	13
Typhoid	1	2	0	0	1	2
<b>Total</b>	<b>78</b>	<b>231</b>	<b>208</b>	<b>4423</b>	<b>286</b>	<b>4654</b>

Table 5. Non-IID outbreak summary by HSE area, 2010

HSE area	Number of outbreaks	Outbreak rate per 100,000	Number ill	Number hospitalised	Number of deaths
HSE-E	37	2.5	178	29	0
HSE-M	4	1.6	8	2	0
HSE-MW	3	0.8	11	2	0
HSE-NE	0	0.0	0	0	0
HSE-NW	4	1.7	75	3	0
HSE-SE	3	0.7	55	0	0
HSE-S	23	3.7	160	29	0
HSE-W	9	2.2	81	12	0
<b>Total</b>	<b>83</b>	<b>2.0</b>	<b>568</b>	<b>77</b>	<b>0</b>

<sup>†</sup>Including 46 IID outbreaks reported as person to person and airborne transmission

<sup>§</sup>Including 24 non-IID outbreaks reported as person to person and airborne transmission

The information gathered from outbreaks reported is used to inform public health professionals on the causes and factors contributing to outbreaks, to target prevention strategies and to monitor the effectiveness of prevention programmes.

For further information on disease specific outbreaks, please refer to the individual disease chapter.

Table 6. Number of family and general non-IID outbreaks by disease, 2010

Outbreak disease/pathogen	Family outbreak		General outbreak		Total Non-IID outbreaks	
	Number outbreaks	Number ill	Number outbreaks	Number ill	Number outbreaks	Number ill
Measles	24	73	16	76	40	149
Tuberculosis	2	17	5	24	7	41
Varicella /suspected varicella	1	2	5	51	6	53
Mumps	3	11	2	6	5	17
Pertussis	3	7	1	65	4	72
Influenza-like illness	0	0	4	74	4	74
Influenza	0	0	3	63	3	63
Scabies /suspected scabies	0	0	3	55	3	55
Hepatitis B	1	2	1	2	2	4
MRSA	0	0	2	10	2	10
Legionellosis	0	0	1	2	1	2
Malaria	1	3	0	0	1	3
Meningococcal disease	1	2	0	0	1	2
Impetigo	0	0	1	9	1	9
Respiratory Illness	0	0	1	5	1	5
Hand, foot & mouth disease	0	0	1	6	1	6
Parvovirus B19	0	0	1	3	1	3
<b>Total</b>	<b>36</b>	<b>117</b>	<b>47</b>	<b>451</b>	<b>83</b>	<b>568</b>