**SUPPLEMENTARY MATERIAL**

Supplementary Table S1. *Norovirus genogroups and genotypes by year of collection*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Genotype** | **Year of collection** | | | | |  |  |
|  |  |  |  |  |  |  |  |
| **RdRp-based** | **2009\*** | **2010\*** | **2011** | **2012** | **2013** | **Total** | **%** |
| GI.P2 |  |  |  | 1 |  | 1 | 0.3 |
| GI.P3 |  |  |  | 2 | 3 | 5 | 1.6 |
| GI.P6 |  |  | 1 |  |  | 1 | 0.3 |
| GI.P7 |  |  | 2 |  | 1 | 3 | 1 |
| GI.Pb |  |  |  |  | 1 | 1 | 0.3 |
| GI.Pf |  |  |  |  | 1 | 1 | 0.3 |
| GI.PNA |  |  |  | 2 | 2 | 4 | 1.3 |
| GII.P2 |  | 3 |  | 1 | 1 | 5 | 1.6 |
| GII.P4 | 20 | 22 | 33 | 52 | 9 | 136 | 44.2 |
| GII.P7 |  |  |  |  | 2 | 2 | 0.7 |
| GII.P13 |  | 1 |  |  |  | 1 | 0.3 |
| GII.P16 |  |  | 1 |  | 1 | 2 | 0.7 |
| GII.P21 | 8 | 10 | 5 | 5 | 3 | 31 | 10.1 |
| GII.Pc |  |  |  |  | 1 | 1 | 0.3 |
| GII.Pe |  |  | 10 | 7 | 34 | 51 | 16.6 |
| GII.Pg | 5 | 1 | 6 | 8 | 9 | 29 | 9.4 |
| GII.PNA |  | 2 | 3 | 1 | 28 | 34 | 11 |
| Total genotyped | 33 | 39 | 61 | 79 | 96 | 308 | 100 |
|  |  |  |  |  |  |  |  |
| **Capsid-based** |  |  |  |  |  |  |  |
| GI.1 |  |  | 1 |  |  | 1 | 0.3 |
| GI.2 |  |  |  | 1 |  | 1 | 0.3 |
| GI.3 |  |  | 7 | 5 | 4 | 16 | 4.7 |
| GI.5 |  |  | 1 | 1 |  | 2 | 0.6 |
| GI.6 |  |  | 1 | 1 |  | 2 | 0.6 |
| GI.7 |  |  | 2 |  | 1 | 3 | 0.9 |
| GI.NA |  |  |  | 1 | 1 | 2 | 0.6 |
| GII.1 |  |  | 6 | 2 |  | 8 | 2.4 |
| GII.2 | 2 | 3 | 4 | 1 | 3 | 13 | 3.8 |
| GII.3 | 6 | 11 | 7 | 4 | 26 | 54 | 15.9 |
| GII.4 | 22 | 22 | 46 | 58 | 43 | 191 | 56.3 |
| GII.6 | 2 |  | 3 | 1 |  | 6 | 1.8 |
| GII.7 | 1 |  | 1 | 1 |  | 3 | 0.9 |
| GII.10 |  |  |  |  | 1 | 1 | 0.3 |
| GII.12 | 6 | 1 |  | 5 | 5 | 17 | 5 |
| GII.13 |  |  |  | 1 | 3 | 4 | 1.2 |
| GII.14 | 1 |  |  |  | 6 | 7 | 2.0 |
| GII.16 |  | 1 |  |  |  | 1 | 0.3 |
| GII.17 |  | 1 | 1 |  |  | 2 | 0.6 |
| GII.21 |  |  | 1 | 3 | 1 | 5 | 1.5 |
| Total genotyped | 40 | 39 | 81 | 85 | 94 | 339 | 100 |
|  |  |  |  |  |  |  |  |

\*No norovirus GI strains from 2009 and 2010 were genotyped.

Supplementary Table S2. *Frequency of RdRp/capsid combinations detected from 2009-2013 in children with severe gastroenteritis in South Africa*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **RdRp/Capsid** | **Year of collection** | | | | |  |  |
| **Genotype** | **2009** | **2010** | **2011** | **2012** | **2013** | **Total** | **%** |
| GII.Pg/GII.1 |  |  | 6 | 2 |  | 8 | 2.9 |
| GII.Pg/GII.2 |  |  |  |  | 1 | 1 | 0.4 |
| GII.Pg/GII.10 |  |  |  |  | 1 | 1 | 0.4 |
| GII.Pg/GII.12 | 5 | 1 |  | 5 | 5 | 16 | 5.8 |
| GII.Pe/GII.4 |  |  | 10 | 7 | 32 | 49 | 17.8 |
| GII.P21/GII.3 | 6 | 9 | 2 | 1 |  | 18 | 6.5 |
| GII.P21/GII.21 |  |  |  | 3 | 1 | 4 | 1.5 |
| GII.P21/GII.2 | 2 |  | 3 | 1 |  | 6 | 2.2 |
| GII.P21/GII.13 |  |  |  | 1 | 2 | 3 | 1.1 |
| GII.PNA/GII.3 |  | 1 | 2 | 1 | 24 | 28 | 10.2 |
| GII.Pc/GII.2 |  |  |  |  | 1 | 1 | 0.4 |
| GII.P7/GII.14 |  |  |  |  | 2 | 2 | 0.7 |
| GII.P2/GII.2 |  | 3 |  |  | 1 | 4 | 1.5 |
| GII.P16/GII.17 |  |  | 1 |  |  | 1 | 0.4 |
| GII.P16/GII.3 |  |  | 1 |  | 1 | 2 | 0.7 |
| GII.P13/GII.17 | 1 |  |  |  |  | 1 | 0.4 |
| GII.P4/GII.4 | 20 | 21 | 32 | 48 | 8 | 129 | 46.9 |
| GII.PNA/GII.16 |  | 1 |  |  |  | 1 | 0.4 |



**Supplementary Figure S1:** Distribution of combined GII RdRp/capsid genotypes of 275 strains across the surveillance sites. Johannesburg=Chris Hani Baragwanath Hospital, Ga-Rankuwa=Dr George Mukhari Hospital, Empangeni=Ngwelazane Hospital, Pietermaritzburg=Edendale Hospital, Cape Town=Children’s Red Cross Hospital, Bushbuckridge=Matikwane and Mapulaneng Hospitals.