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### PROSPECTIVE STUDY OF THE ETIOLOGY OF VIRAL ACUTE GASTROENTERITIS WITH RV GENOTYPES IN TWO SEASONS AND NORAVIRUS AS SECOND CAUSE

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**Objective:** To determine the viruses and genotypes circulating in children attending to Braga Hospital(BH) with AGE from January to September 2008\*. To compare RV genotype between two consecutive winter seasons (2007 and 2008).

**Methods:** Prospective study of all children ≤16 years, attending emergency room with AGE. A questionnaire and stool samples(SS) were collected. Stools were investigated for the presence of adenoviruses(AdV), rotaviruses(RV), noroviruses(NV) and enteroviruses(Echo) and were genotyped by reverse transcriptase-polymerase chain reaction.

**Results:** SS were collected from 207 children with median age of 17 months (1 month;16 years). In 83 (40.1%) SS were isolated viruses (2 coinfection). RV was the most prevalent(18.8%), followed by NV(11.6%). Adenoviruses and enteroviruses were identified in 7.2% and 3.4%, respectively. NV was the most prevalent in July, August and September, RV was the most frequent detected in all other months. Five genotypes of RV were isolated, the most prevalent was G1P[8](43.6%), followed by G9P[8](33.3%). Two genotypes of NV were identify GII.4(95.8%)-GI(4.2%); 2 AdV: AdV1(33.3%)-AdV2(66.6%) and 5 Echo genotypes:6(2),11,13,30,71.

**Conclusions:** RV was the most frequent isolated virus. G1P[8] was the most prevalent RV type detected. In 2007 G2P[4] was isolated in 77.8% of the samples, whereas in 2008 was present in only 1 case. G9P[8] is still the second genotype identify (1.9% vs 33.3%). These results show the variability of RV strains. This was the first study in Portugal with NV in AGE, we saw that NV was the second most frequent agent and it was the most prevalent in the summer months. No enteric genotypes of AdV were identified.

\*Started RV national surveillance

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### EFFECT OF HOME BASED CHILD CARE (HBCC) ON CHILD MORTALITY IN A TRIBAL POPULATION: RESULTS OF A FIELD TRIAL

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**Background:** Melghat is tribal area in India with very high child mortality & malnutrition. The major causes of mortality & morbidity are infectious diseases. We developed Home Based Child Care (HBCC) model for tribal population to reduce children mortality and infectious diseases.

#### Objectives:

1. To reduce Neonatal mortality rate (NMR), Infant Mortality rate (IMR) & under 5 children mortality rate (U5MR) (especially due to infections) from 54, 90, & 140 to 32.4, 58.05 & 72.1 per 1000 live births respectively in population of 14,120 of Melghat over 3 years.
2. To reduce incidence of infectious diseases by 35% over 3 years.

**Methods:** Study-design was Randomised Control Trial. We selected 16 intervention (population 14,888) and 18 control (population 16,310) villages. Trained village health workers in intervention area treated post-neonatal diseases such as diarrhoea, acute respiratory infections, malaria and neonatal diseases like neonatal sepsis, neonatal pneumonia, etc. Behaviour Change Communication programs were conducted.

**Results:** Baseline mortality indices in control versus intervention areas were: NMR- 57.19 vs 50.93, IMR- 72.97 vs 94.9, & U5MR- 102.56 vs 143.52. After intervention NMR, IMR & U5MR were significantly decreased in intervention area to 16.52, 24.79 & 37.19 respectively ( $p < 0.05$ ). The incidence, number of deaths & case fatality rates due to infectious diseases in intervention area were reduced significantly ( $p < 0.05$ ).

**Conclusions:** HBCC resulted in significant decrease in children mortality especially due to infections & incidence of infectious diseases. Our model is replicable for reducing children mortality due to infectious disease.