**Supplement**

Evaluating the cost utility of racecadotril in addition to oral rehydration solution versus oral rehydration solution alone for children with acute watery diarrhea in four low middle-income countries: Egypt, Morocco, Philippines and Vietnam.

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# Clinical Evidence

Table 1: Clinical parameters from original core model and retained in all country adaptations.

|  |  |  |
| --- | --- | --- |
| Parameter | Mean | Source |
| Outpatient care |  |  |
| Proportion on ORS whose diarrhea resolves at 48 hrs  | 26% | Lehert |
| Proportion on ORS whose diarrhea does not resolve at 48 hrs  | 74% | Calculated |
| Proportion on R+ORS whose diarrhea resolves at 48 hrs  | 58% | Lehert |
| Proportion on R+ORS whose diarrhea does not resolve at 48 hrs  | 42% | Calculated |
| Inpatient care |   |   |
| Proportion on ORS referred for inpatient stay at 48 hrs  | 36% | Alvarez Calatayud |
| Proportion on ORS not referred for inpatient stay at 48 hrs  | 64% | Calculated |
| Proportion on R+ORS referred for inpatient stay at 48 hrs  | 6% | Alvarez Calatayud |
| Proportion on R+ORS not referred for inpatient stay at 48 hrs | 94% | Calculated |
| Adverse events |   |   |
| Proportion on ORS experiencing adverse events  | 16% | Baumer  |
| Proportion on R+ORS experiencing adverse events  | 12% | Baumer  |
| Quality of Life (Utility) |   |   |
| Average utility under 5 yrs, primary care/outpatient setting  | 0.7345  | Martin |
| Average utility under 5 yrs, secondary care/inpatient setting | 0.6145  | Martin |
| Average utility "well" child (no diarrhea) | 0.9400  | Kind  |

The reader is referred to a full description and justification of this evidence in Rautenberg 2012.

# Sensitivity Analysis

The reader is referred to a full description of the robustness of the model in Rautenberg 2017 and Rautenberg 2018.

Figure 1: Tornado diagram of univariate sensitivity analysis, Egypt



Figure 2: Tornado diagram of univariate sensitivity analysis, Philippines

The cost of an outpatient consultation has been set to 250 PHP and 500 PHP respectively for this sensitivity analysis.



Figure 3: Tornado diagram of univariate sensitivity analysis, Morocco



Figure 4: Tornado diagram of univariate sensitivity analysis, Vietnam



# Reference List

Alvarez Calatayud E, Pinei Simon G, Taboada Castro L, et al. Efectividad de racecadotrilo en el tratamiento de la gastroenteritis aguda [The effectiveness of racecadotril in the treatment of acute gastroenteritis]. Acta Pediatr.Esp. 2009;67(3):117–122. Spanish.

Baumer P, Joulin Y. Pre- and postmarketing safety profiles of Racecadotril sachets, a “new” antidiarrhoeal drug. J Pediatr Gastroenterol Nutr. 2009;48(Suppl 3):E99. [Google Scholar]

Kind P, Hardman G, Macran S. UK Population Norms for EQ-5D, Discussion Paper 172. Centre for Health Economics York University; 1999. [Google Scholar]

Martin A, Cottrell S, Standaert B. Estimating utility scores in young children with acute rotavirus gastroenteritis in the UK. J. Med Econ, 2008;11(3):471-484.

Lehert P, Cheron G, Alvarez Calatayud G, et al. Racecadotril for childhood gastroenteritis: an individual patient data meta-analysis. Dig. Liver Dis. 2011;43(9):707-713.

Rautenberg TA, Zerwes U, Foerster D, Aultman R. Evaluating the cost utility of racecadotril for the treatment of acute watery diarrhea in children: the RAWD model. Clinicoecon Outcomes Res. 2012;4:109-116. doi:10.2147/CEOR.S31238

Rautenberg TA, Zerwes U. The cost utility and budget impact of adjuvant racecadotril for acute diarrhea in children in Thailand. Clinicoecon Outcomes Res. 2017;9:411-422. Published 2017 Jul 17. doi:10.2147/CEOR.S140902

Rautenberg TA, Zerwes U, Lee WS. Cost utility, budget impact, and scenario analysis of racecadotril in addition to oral rehydration for acute diarrhea in children in Malaysia. Clinicoecon Outcomes Res. 2018; 10:169-178. Published 2018 Mar 15. doi:10.2147/CEOR.S157606