Actual/gold standard = data from NIRUDAK study; most accurate % dehydration calculation

NIRUDAK model = Model 6

Values in () are costs in BDT

Table 1. Total cost of initial recommended resuscitation

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Gold Standard Median** | **WHO Median** | **NIRUDAK Median** | **Gold Standard IQR** | **WHO IQR** | **NIRUDAK IQR** | **Gold Standard Total** | **WHO Total** | **NIRUDAK Total** | **Gold Standard Obser-vations** | **WHO Obser-vations** | **NIRUDAK Obser-vations** |
| **All Patients** | 37.75 (3222) | 5.23 (449) | 5.18 (445) | 15.69 -45.00  (1332 - 3841) | 5.09 - 22.17 (437 - 1883) | 0 - 25.46 (0 - 2166) | 68684 (5854650) | 28458 (2425359) | 30515 (2602843) | 2168 | 2168 | 2136 |
| **No**  **Dehyd-ration** | 37.39 (3200) | 0 (0) | 0 (0) | 12.26 - 44.99  (1052 - 3842) | 0 - 0 (0 - 0) | 0 - 0  (0 - 0) | 13122 (1120904) | 0 (0) | 0 (0) | 430 | 491 | 606 |
| **Some**  **Dehyd-ration** | 37.77 (3231) | 5.21 (448) | 5.16 (443) | 16.17 - 44.93 (1369 - 3836) | 5.18 - 5.24  (445 - 451) | 5.14 - 5.18  (441 - 446) | 45746 (3897372) | 4861 (417865) | 3208 (275687) | 1435 | 933 | 622 |
| **Severe**  **Dehyd-ration** | 39.14 (3331) | 30.31 (2579) | 28.22 (2405) | 18.99 - 45.48  (1611 - 3860) | 21.45 - 38.27  (1820 - 3259) | 20.01 - 36.50 (1704 - 3109) | 9298 (791346) | 23598 (2007496) | 27306 (2327156) | 278 | 744 | 908 |

* gold standard cost = actual fluid + actual hospital stay
* WHO & NIRUDAK
  1. for patients with ‘No Dehydration’ classification, cost = 0
  2. for patients with ‘Some Dehydration’ classification, cost = 4 hours hospital stay + amount of fluid needed for resuscitation (as predicted by the model)
  3. for patients with ‘Severe Dehydration’ classification, cost = actual length of hospital stay + amount of fluid needed for resuscitation (as predicted by the model) + actual amount of fluid given after 6 hours of admission to the hospital
     1. for most patients, the 2nd follow-up was closest to the 6-hour mark, so their “actual amount of fluid given after 6 hours of admission” = amount of fluid administered after their 2nd follow-up
     2. for some patients, the 1st follow-up was at or after the 6-hour mark, so their “actual amount of fluid given after 6 hours of admission” = amount of fluid administered after their 1st follow up
     3. for a small number of patients, the 1st, 2nd, and 3rd follow-ups were all somewhat far from 6-hour mark, so the 2nd follow-up was used for the sake of consistency
* observations missing diagnostic labels for a particular model were omitted in analysis for that model (hence the varying number of observations across models)

Table 2. Cost of fluid for initial recommended resuscitation

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Gold Standard Median** | **WHO Median** | **NIRUDAK Median** | **Gold Standard IQR** | **WHO IQR** | **NIRUDAK IQR** | **Gold Standard Total** | **WHO Total** | **NIRUDAK Total** | **Gold Standard Obser-vations** | **WHO Obser-vations** | **NIRUDAK Obser-vations** |
| **All Patients** | 5.43 (449) | 4.55 (375) | 3.27 (3217) | 4.16 - 5.43 (345 - 553) | 0 -5.76 (0 - 476) | 0 - 4.27 (0 - 354) | 10625 (880330) | 8574 (708647) | 5850 (483949) | 2173 | 2172 | 2139 |
| **No**  **Dehyd-ration** | 2.96 (245) | 0 (0) | 0 (0) | 1.06 -4.80  (89 - 398) | 0 - 0 (0 - 0) | 0 - 0  (0 - 0) | 1397 (115975) | 0 (0) | 0 (0) | 431 | 491 | 607 |
| **Some**  **Dehyd-ration** | 5.44 (451) | 4.45 (367) | 3.34 (276) | 4.18 - 6.68 (347 - 553) | 3.81 - 5.12 (314 - 423) | 2.84 - 3.85  (235 - 318) | 7492 (620577) | 4125 (340489) | 2072 (171002) | 1437 | 937 | 624 |
| **Severe**  **Dehyd-ration** | 5.64 (468) | 6.04 (500) | 4.30 (356) | 5.42 -6.75 (449 - 559) | 5.16 -6.81 (427 - 563) | 3.54 - 4.92 (293 - 407) | 1668 (138098) | 4449 (368158) | 3778 (312946) | 278 | 744 | 908 |

* gold standard cost = ORS administered in the first 6 hours (if applicable) + IVF administered in the first 6 hours (if applicable) + IV equipment (if applicable)
* WHO/NIRUDAK
  + for patients with ‘No Dehydration’ classification, cost = 0
  + for patients with ‘Some Dehydration’ classification, cost = amount of ORS needed for resuscitation (as predicted by the model)
  + for patients with ‘Severe Dehydration’ classification, cost = amount of IVF needed for resuscitation (as predicted by the model) + IV equipment
* observations missing diagnostic labels for a particular model were omitted in analysis for that model (hence the varying number of observations across models)