Table 2: WHO Motor Milestones, Year 1 (Bangladesh)

| Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 | Adj. Diff (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| WHO Motor Milestones | Sum Total | alpha-1 antitrypsin (3 mo) | 806 | -1.48 | -0.23 | 0.03 (-0.18, 0.24) | 0.77 |
| WHO Motor Milestones | Milestones 2,4,5,6 | alpha-1 antitrypsin (3 mo) | 806 | -1.48 | -0.23 | -0.01 (-0.21, 0.18) | 0.9 |
| WHO Motor Milestones | Sum Total | myeloperoxidase (3 mo) | 808 | 8.34 | 9.86 | 0.08 (-0.04, 0.21) | 0.2 |
| WHO Motor Milestones | Milestones 2,4,5,6 | myeloperoxidase (3 mo) | 808 | 8.34 | 9.86 | 0.08 (-0.03, 0.18) | 0.17 |
| WHO Motor Milestones | Sum Total | neopterin (3 mo) | 809 | 6.81 | 7.75 | 0.14 (-0.1, 0.37) | 0.26 |
| WHO Motor Milestones | Milestones 2,4,5,6 | neopterin (3 mo) | 809 | 6.81 | 7.75 | 0.15 (-0.05, 0.35) | 0.15 |
| **WHO Motor Milestones** | **Sum Total** | **lactulose (3 mo)** | **984** | **-1.55** | **-0.01** | **-0.25 (-0.49, -0.01)** | **0.04\*** |
| **WHO Motor Milestones** | **Milestones 2,4,5,6** | **lactulose (3 mo)** | **991** | **-1.56** | **-0.02** | **-0.11 (-0.21, 0)** | **0.04\*** |
| **WHO Motor Milestones** | **Sum Total** | **mannitol (3 mo)** | **984** | **0.68** | **2.12** | **-0.23 (-0.36, -0.09)** | **0\*** |
| WHO Motor Milestones | Milestones 2,4,5,6 | mannitol (3 mo) | 991 | 0.68 | 2.11 | -0.1 (-0.2, 0) | 0.05 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | |

Table 3: WHO Motor Milestones, Year 1 (Kenya)

| Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 | Adj. Diff (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| WHO Motor Milestones | Milestones 2,4,5,6 | alpha-1 antitrypsin (6 mo) | 1,001 | -1.30 | -0.04 | 0.04 (-0.04, 0.13) | 0.31 |
| WHO Motor Milestones | Sum Total | alpha-1 antitrypsin (6 mo) | 1,001 | -1.30 | -0.04 | 0.01 (-0.07, 0.1) | 0.78 |
| WHO Motor Milestones | Milestones 2,4,5,6 | myeloperoxidase (6 mo) | 1,002 | 7.41 | 8.90 | 0.02 (-0.05, 0.09) | 0.6 |
| WHO Motor Milestones | Sum Total | myeloperoxidase (6 mo) | 1,002 | 7.41 | 8.90 | 0.01 (-0.07, 0.09) | 0.82 |
| WHO Motor Milestones | Milestones 2,4,5,6 | neopterin (6 mo) | 1,003 | 7.11 | 7.96 | 0.06 (-0.03, 0.16) | 0.16 |
| WHO Motor Milestones | Sum Total | neopterin (6 mo) | 1,003 | 7.11 | 7.96 | 0.07 (-0.03, 0.17) | 0.18 |
| WHO Motor Milestones | Milestones 2,4,5,6 | lactulose (6 mo) | 1,083 | -2.24 | -0.85 | 0.01 (-0.06, 0.08) | 0.75 |
| WHO Motor Milestones | Sum Total | lactulose (6 mo) | 1,083 | -2.24 | -0.85 | 0 (-0.07, 0.08) | 0.94 |
| WHO Motor Milestones | Milestones 2,4,5,6 | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 0.02 (-0.05, 0.09) | 0.6 |
| WHO Motor Milestones | Sum Total | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 0.02 (-0.06, 0.09) | 0.66 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | |

Table 4: Communicative Development Inventories (Bangladesh)

| CDI Year | Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 | Adj. Diff (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year 1 | Communicative Development Inventory | Understanding | alpha-1 antitrypsin (3 mo) | 797 | -1.48 | -0.23 | -0.04 (-0.26, 0.18) | 0.71 |
| Communicative Development Inventory | Expressing | alpha-1 antitrypsin (3 mo) | 793 | -1.48 | -0.22 | -0.06 (-0.23, 0.11) | 0.49 |
| Communicative Development Inventory | Understanding | myeloperoxidase (3 mo) | 799 | 8.34 | 9.86 | -0.03 (-0.14, 0.07) | 0.52 |
| Communicative Development Inventory | Expressing | myeloperoxidase (3 mo) | 795 | 8.35 | 9.88 | 0.02 (-0.08, 0.12) | 0.67 |
| **Communicative Development Inventory** | **Understanding** | **neopterin (3 mo)** | **800** | **6.80** | **7.75** | **0.23 (0.07, 0.39)** | **0.01\*** |
| Communicative Development Inventory | Expressing | neopterin (3 mo) | 796 | 6.80 | 7.75 | 0.07 (-0.16, 0.3) | 0.55 |
| **Communicative Development Inventory** | **Understanding** | **lactulose (3 mo)** | **979** | **-1.56** | **-0.01** | **-0.16 (-0.3, -0.01)** | **0.03\*** |
| **Communicative Development Inventory** | **Expressing** | **lactulose (3 mo)** | **976** | **-1.56** | **-0.01** | **-0.17 (-0.33, -0.01)** | **0.04\*** |
| Communicative Development Inventory | Understanding | mannitol (3 mo) | 979 | 0.67 | 2.11 | -0.12 (-0.25, 0.01) | 0.07 |
| Communicative Development Inventory | Expressing | mannitol (3 mo) | 976 | 0.67 | 2.12 | -0.11 (-0.27, 0.04) | 0.16 |
| Year 2 | Communicative Development Inventory | Understanding | alpha-1 antitrypsin (3 mo) | 684 | -1.45 | -0.21 | -0.01 (-0.1, 0.08) | 0.81 |
| Communicative Development Inventory | Expressing | alpha-1 antitrypsin (3 mo) | 690 | -1.45 | -0.21 | 0 (-0.1, 0.1) | 0.98 |
| Communicative Development Inventory | Understanding | myeloperoxidase (3 mo) | 685 | 8.38 | 9.91 | -0.01 (-0.11, 0.1) | 0.92 |
| Communicative Development Inventory | Expressing | myeloperoxidase (3 mo) | 691 | 8.37 | 9.90 | 0.02 (-0.1, 0.14) | 0.79 |
| Communicative Development Inventory | Understanding | neopterin (3 mo) | 686 | 6.82 | 7.76 | 0.06 (-0.04, 0.16) | 0.26 |
| Communicative Development Inventory | Expressing | neopterin (3 mo) | 692 | 6.82 | 7.76 | 0.09 (-0.03, 0.2) | 0.14 |
| Communicative Development Inventory | Understanding | lactulose (3 mo) | 853 | -1.57 | -0.03 | 0.04 (-0.17, 0.26) | 0.72 |
| Communicative Development Inventory | Expressing | lactulose (3 mo) | 861 | -1.57 | -0.03 | 0.11 (-0.1, 0.33) | 0.31 |
| Communicative Development Inventory | Understanding | mannitol (3 mo) | 853 | 0.70 | 2.11 | 0.03 (-0.16, 0.21) | 0.78 |
| Communicative Development Inventory | Expressing | mannitol (3 mo) | 861 | 0.70 | 2.11 | 0.01 (-0.19, 0.21) | 0.96 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | | |

Table 5: Extended Ages and Stages Questionnaire, Year 2 (Bangladesh)

| Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 | Adj. Diff (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Extended Ages and Stages (Year 2) | Personal Social | lactulose (3 mo) | 848 | -1.57 | -0.03 | -0.01 (-0.25, 0.23) | 0.93 |
| Extended Ages and Stages (Year 2) | Motor | lactulose (3 mo) | 841 | -1.57 | -0.02 | 0.05 (-0.05, 0.15) | 0.37 |
| Extended Ages and Stages (Year 2) | Combined | lactulose (3 mo) | 846 | -1.57 | -0.03 | 0 (-0.1, 0.11) | 0.96 |
| **Extended Ages and Stages (Year 2)** | **Communication** | **lactulose (3 mo)** | **847** | **-1.57** | **-0.03** | **-0.01 (-0.01, 0)** | **0.02\*** |
| Extended Ages and Stages (Year 2) | Personal Social | mannitol (3 mo) | 848 | 0.70 | 2.12 | -0.04 (-0.15, 0.07) | 0.51 |
| Extended Ages and Stages (Year 2) | Motor | mannitol (3 mo) | 841 | 0.70 | 2.13 | 0.04 (-0.06, 0.14) | 0.45 |
| Extended Ages and Stages (Year 2) | Combined | mannitol (3 mo) | 846 | 0.70 | 2.12 | 0.03 (-0.1, 0.16) | 0.69 |
| Extended Ages and Stages (Year 2) | Communication | mannitol (3 mo) | 847 | 0.70 | 2.13 | -0.02 (-0.18, 0.14) | 0.83 |
| Extended Ages and Stages (Year 2) | Personal Social | lactulose (14 mo) | 827 | -1.87 | -0.50 | -0.08 (-0.27, 0.11) | 0.42 |
| **Extended Ages and Stages (Year 2)** | **Motor** | **lactulose (14 mo)** | **819** | **-1.87** | **-0.50** | **-0.1 (-0.18, -0.01)** | **0.02\*** |
| Extended Ages and Stages (Year 2) | Combined | lactulose (14 mo) | 824 | -1.87 | -0.50 | -0.15 (-0.33, 0.03) | 0.1 |
| Extended Ages and Stages (Year 2) | Communication | lactulose (14 mo) | 826 | -1.87 | -0.50 | -0.04 (-0.21, 0.12) | 0.63 |
| Extended Ages and Stages (Year 2) | Personal Social | mannitol (14 mo) | 827 | 0.06 | 1.58 | 0.02 (-0.08, 0.12) | 0.7 |
| **Extended Ages and Stages (Year 2)** | **Motor** | **mannitol (14 mo)** | **819** | **0.06** | **1.58** | **-0.11 (-0.2, -0.02)** | **0.02\*** |
| Extended Ages and Stages (Year 2) | Combined | mannitol (14 mo) | 824 | 0.07 | 1.58 | 0 (-0.1, 0.09) | 0.94 |
| Extended Ages and Stages (Year 2) | Communication | mannitol (14 mo) | 826 | 0.06 | 1.58 | 0.04 (-0.05, 0.13) | 0.43 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | |

Table 6: Extended Ages and Stages Questionnaire, Year 2 (Kenya)

| Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 | Adj. Diff (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Extended Ages and Stages** | **Communication** | **alpha-1 antitrypsin (6 mo)** | **796** | **-1.27** | **-0.01** | **0.1 (0.01, 0.19)** | **0.03\*** |
| Extended Ages and Stages | Motor | alpha-1 antitrypsin (6 mo) | 816 | -1.27 | -0.02 | -0.01 (-0.1, 0.08) | 0.89 |
| Extended Ages and Stages | Personal Social | alpha-1 antitrypsin (6 mo) | 818 | -1.27 | -0.02 | 0.04 (-0.06, 0.13) | 0.43 |
| Extended Ages and Stages | Combined | alpha-1 antitrypsin (6 mo) | 816 | -1.27 | -0.02 | 0.06 (-0.03, 0.15) | 0.22 |
| Extended Ages and Stages | Communication | lactulose (6 mo) | 861 | -2.25 | -0.85 | 0.11 (-0.07, 0.28) | 0.24 |
| Extended Ages and Stages | Motor | lactulose (6 mo) | 862 | -2.25 | -0.85 | -0.04 (-0.12, 0.03) | 0.27 |
| Extended Ages and Stages | Personal Social | lactulose (6 mo) | 865 | -2.25 | -0.85 | 0.08 (-0.01, 0.16) | 0.08 |
| Extended Ages and Stages | Combined | lactulose (6 mo) | 861 | -2.25 | -0.85 | 0.04 (-0.1, 0.19) | 0.57 |
| Extended Ages and Stages | Communication | mannitol (6 mo) | 861 | -0.05 | 1.31 | 0.06 (-0.02, 0.14) | 0.15 |
| Extended Ages and Stages | Motor | mannitol (6 mo) | 862 | -0.05 | 1.31 | 0 (-0.07, 0.08) | 0.91 |
| **Extended Ages and Stages** | **Personal Social** | **mannitol (6 mo)** | **865** | **-0.05** | **1.31** | **0.15 (0.04, 0.25)** | **0.01\*** |
| Extended Ages and Stages | Combined | mannitol (6 mo) | 861 | -0.05 | 1.31 | 0.05 (-0.03, 0.13) | 0.2 |
| Extended Ages and Stages | Communication | alpha-1 antitrypsin (6 mo) | 812 | -1.28 | -0.04 | 0.08 (-0.08, 0.24) | 0.33 |
| Extended Ages and Stages | Motor | alpha-1 antitrypsin (6 mo) | 707 | -1.28 | -0.07 | -0.02 (-0.11, 0.07) | 0.72 |
| Extended Ages and Stages | Personal Social | alpha-1 antitrypsin (6 mo) | 814 | -1.28 | -0.03 | 0.02 (-0.07, 0.11) | 0.71 |
| Extended Ages and Stages | Combined | alpha-1 antitrypsin (6 mo) | 694 | -1.28 | -0.08 | 0.03 (-0.06, 0.12) | 0.55 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | |

Table 7: Individual WHO Motor Milestones - Hazard Ratios, Year 1 (Bangladesh)

| Motor Milestone |  |  | Exposure | n | Q1 | Q3 | Adj. HR (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sitting (w/o support) |  |  | alpha-1 antitrypsin (3 mo) | 800 | -1.47 | -0.23 | 37.25 (0, 6.35e+21) | 0.89 |
| Crawling (w/o support) |  |  | alpha-1 antitrypsin (3 mo) | 797 | -1.47 | -0.24 | 0.96 (0.85, 1.09) | 0.58 |
| **Standing (w/ support)** |  |  | **alpha-1 antitrypsin (3 mo)** | **799** | **-1.48** | **-0.24** | **0.52 (0.35, 0.79)** | **0\*** |
| Walking (w/ support) |  |  | alpha-1 antitrypsin (3 mo) | 798 | -1.48 | -0.24 | 1.09 (0.95, 1.24) | 0.22 |
| Standing (w/o support) |  |  | alpha-1 antitrypsin (3 mo) | 795 | -1.47 | -0.24 | 1.07 (0.77, 1.48) | 0.7 |
| Walking (w/o support) |  |  | alpha-1 antitrypsin (3 mo) | 794 | -1.47 | -0.23 | 1.02 (0.67, 1.56) | 0.94 |
| Sitting (w/o support) |  |  | myeloperoxidase (3 mo) | 802 | 8.37 | 9.88 | 2392.29 (0, 2.80e+22) | 0.74 |
| Crawling (w/o support) |  |  | myeloperoxidase (3 mo) | 799 | 8.37 | 9.89 | 0.96 (0.8, 1.14) | 0.64 |
| Standing (w/ support) |  |  | myeloperoxidase (3 mo) | 801 | 8.36 | 9.89 | 0.97 (0.8, 1.16) | 0.72 |
| Walking (w/ support) |  |  | myeloperoxidase (3 mo) | 800 | 8.36 | 9.87 | 1.05 (0.91, 1.22) | 0.5 |
| Standing (w/o support) |  |  | myeloperoxidase (3 mo) | 797 | 8.38 | 9.89 | 1.06 (0.88, 1.27) | 0.53 |
| Walking (w/o support) |  |  | myeloperoxidase (3 mo) | 796 | 8.39 | 9.89 | 1.16 (0.93, 1.46) | 0.18 |
| Sitting (w/o support) |  |  | neopterin (3 mo) | 803 | 6.81 | 7.75 | 33757.42 (0, 1.96e+61) | 0.88 |
| Crawling (w/o support) |  |  | neopterin (3 mo) | 800 | 6.81 | 7.75 | 0.95 (0.82, 1.09) | 0.47 |
| Standing (w/ support) |  |  | neopterin (3 mo) | 802 | 6.81 | 7.75 | 0.95 (0.76, 1.18) | 0.64 |
| **Walking (w/ support)** |  |  | **neopterin (3 mo)** | **801** | **6.81** | **7.75** | **1.35 (1.04, 1.75)** | **0.02\*** |
| Standing (w/o support) |  |  | neopterin (3 mo) | 798 | 6.81 | 7.75 | 1.05 (0.82, 1.34) | 0.7 |
| Walking (w/o support) |  |  | neopterin (3 mo) | 797 | 6.82 | 7.75 | 0.95 (0.63, 1.43) | 0.82 |
| Sitting (w/o support) |  |  | lactulose (3 mo) | 983 | -1.54 | -0.01 | 0 (0, Inf) | 1 |
| Crawling (w/o support) |  |  | lactulose (3 mo) | 980 | -1.54 | 0.00 | 0.79 (0.61, 1.02) | 0.08 |
| Standing (w/ support) |  |  | lactulose (3 mo) | 983 | -1.55 | -0.01 | 0.88 (0.74, 1.04) | 0.14 |
| Walking (w/ support) |  |  | lactulose (3 mo) | 982 | -1.56 | -0.01 | 0.83 (0.62, 1.12) | 0.23 |
| **Standing (w/o support)** |  |  | **lactulose (3 mo)** | **976** | **-1.55** | **0.00** | **0.66 (0.46, 0.94)** | **0.02\*** |
| Walking (w/o support) |  |  | lactulose (3 mo) | 976 | -1.55 | 0.00 | 0.85 (0.68, 1.07) | 0.18 |
| Sitting (w/o support) |  |  | mannitol (3 mo) | 983 | 0.68 | 2.12 | 0 (0, 3.86e+31) | 0.86 |
| **Crawling (w/o support)** |  |  | **mannitol (3 mo)** | **980** | **0.68** | **2.12** | **0.72 (0.6, 0.85)** | **0\*** |
| **Standing (w/ support)** |  |  | **mannitol (3 mo)** | **983** | **0.68** | **2.11** | **0.82 (0.68, 0.98)** | **0.03\*** |
| Walking (w/ support) |  |  | mannitol (3 mo) | 982 | 0.67 | 2.11 | 0.89 (0.77, 1.02) | 0.1 |
| **Standing (w/o support)** |  |  | **mannitol (3 mo)** | **976** | **0.68** | **2.12** | **0.77 (0.62, 0.97)** | **0.02\*** |
| Walking (w/o support) |  |  | mannitol (3 mo) | 976 | 0.68 | 2.12 | 0.91 (0.74, 1.13) | 0.39 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | | |

Table 8: Individual WHO Motor Milestones - Hazard Ratios, Year 1 (Kenya)

| Motor Milestone |  |  | Exposure | n | Q1 | Q3 | Adj. HR (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sitting (w/o support) |  |  | alpha-1 antitrypsin (6 mo) | 1,001 | -1.30 | -0.03 | 15.1 (0, 2.72e+31) | 0.94 |
| **Crawling (w/o support)** |  |  | **alpha-1 antitrypsin (6 mo)** | **973** | **-1.30** | **-0.03** | **0.36 (0.17, 0.76)** | **0.01\*** |
| Standing (w/ support) |  |  | alpha-1 antitrypsin (6 mo) | 1,005 | -1.30 | -0.03 | 1.03 (0.9, 1.17) | 0.72 |
| Walking (w/ support) |  |  | alpha-1 antitrypsin (6 mo) | 979 | -1.29 | -0.03 | 0.96 (0.85, 1.1) | 0.58 |
| Standing (w/o support) |  |  | alpha-1 antitrypsin (6 mo) | 997 | -1.31 | -0.03 | 1.08 (0.95, 1.24) | 0.23 |
| Walking (w/o support) |  |  | alpha-1 antitrypsin (6 mo) | 978 | -1.30 | -0.03 | 1.1 (0.95, 1.27) | 0.22 |
| Sitting (w/o support) |  |  | myeloperoxidase (6 mo) | 1,002 | 7.41 | 8.90 | 0.9 (0.53, 1.51) | 0.7 |
| Crawling (w/o support) |  |  | myeloperoxidase (6 mo) | 974 | 7.41 | 8.90 | 0.89 (0.74, 1.06) | 0.19 |
| Standing (w/ support) |  |  | myeloperoxidase (6 mo) | 1,006 | 7.41 | 8.90 | 1.04 (0.92, 1.18) | 0.55 |
| Walking (w/ support) |  |  | myeloperoxidase (6 mo) | 980 | 7.41 | 8.90 | 1.04 (0.89, 1.2) | 0.64 |
| Standing (w/o support) |  |  | myeloperoxidase (6 mo) | 998 | 7.41 | 8.90 | 1.02 (0.9, 1.15) | 0.82 |
| Walking (w/o support) |  |  | myeloperoxidase (6 mo) | 979 | 7.41 | 8.90 | 0.97 (0.85, 1.11) | 0.66 |
| Sitting (w/o support) |  |  | neopterin (6 mo) | 1,003 | 7.10 | 7.96 | 0.58 (0.29, 1.16) | 0.12 |
| Crawling (w/o support) |  |  | neopterin (6 mo) | 975 | 7.11 | 7.96 | 1.01 (0.86, 1.18) | 0.94 |
| Standing (w/ support) |  |  | neopterin (6 mo) | 1,007 | 7.10 | 7.96 | 1.08 (0.97, 1.21) | 0.15 |
| Walking (w/ support) |  |  | neopterin (6 mo) | 981 | 7.11 | 7.96 | 1.01 (0.9, 1.13) | 0.9 |
| Standing (w/o support) |  |  | neopterin (6 mo) | 999 | 7.11 | 7.96 | 1.08 (0.88, 1.33) | 0.48 |
| **Walking (w/o support)** |  |  | **neopterin (6 mo)** | **980** | **7.10** | **7.96** | **1.51 (1.06, 2.13)** | **0.02\*** |
| Sitting (w/o support) |  |  | lactulose (6 mo) | 1,083 | -2.24 | -0.85 | 0.01 (0, 1.75e+51) | 0.95 |
| Crawling (w/o support) |  |  | lactulose (6 mo) | 1,076 | -2.25 | -0.85 | 0.9 (0.76, 1.06) | 0.22 |
| Standing (w/ support) |  |  | lactulose (6 mo) | 1,083 | -2.25 | -0.85 | 0.95 (0.84, 1.06) | 0.34 |
| Walking (w/ support) |  |  | lactulose (6 mo) | 1,081 | -2.25 | -0.85 | 1 (0.89, 1.12) | 0.97 |
| Standing (w/o support) |  |  | lactulose (6 mo) | 1,078 | -2.24 | -0.85 | 1.08 (0.96, 1.22) | 0.22 |
| Walking (w/o support) |  |  | lactulose (6 mo) | 1,083 | -2.24 | -0.85 | 1.02 (0.89, 1.16) | 0.82 |
| Sitting (w/o support) |  |  | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 16777.35 (0, 1.34e+27) | 0.73 |
| Crawling (w/o support) |  |  | mannitol (6 mo) | 1,076 | -0.06 | 1.29 | 0.99 (0.85, 1.15) | 0.88 |
| Standing (w/ support) |  |  | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 0.97 (0.86, 1.08) | 0.57 |
| Walking (w/ support) |  |  | mannitol (6 mo) | 1,081 | -0.06 | 1.29 | 0.99 (0.88, 1.11) | 0.85 |
| Standing (w/o support) |  |  | mannitol (6 mo) | 1,078 | -0.06 | 1.30 | 1.09 (0.97, 1.23) | 0.15 |
| Walking (w/o support) |  |  | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 1.04 (0.91, 1.19) | 0.55 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | | |

Table 9: Bangladesh Analyses

| Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 |  | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| WHO Motor Milestones (Year 1) | Sum Total | alpha-1 antitrypsin (3 mo) | 806 | -1.48 | -0.23 |  | 0.77 |
| Milestones 2,4,5,6 | alpha-1 antitrypsin (3 mo) | 806 | -1.48 | -0.23 |  | 0.9 |
| Sum Total | myeloperoxidase (3 mo) | 808 | 8.34 | 9.86 |  | 0.2 |
| Milestones 2,4,5,6 | myeloperoxidase (3 mo) | 808 | 8.34 | 9.86 |  | 0.17 |
| Sum Total | neopterin (3 mo) | 809 | 6.81 | 7.75 |  | 0.26 |
| Milestones 2,4,5,6 | neopterin (3 mo) | 809 | 6.81 | 7.75 |  | 0.15 |
| **Sum Total** | **lactulose (3 mo)** | **984** | **-1.55** | **-0.01** |  | **0.04\*** |
| **Milestones 2,4,5,6** | **lactulose (3 mo)** | **991** | **-1.56** | **-0.02** |  | **0.04\*** |
| **Sum Total** | **mannitol (3 mo)** | **984** | **0.68** | **2.12** |  | **0\*** |
| Milestones 2,4,5,6 | mannitol (3 mo) | 991 | 0.68 | 2.11 |  | 0.05 |
| Communicative Development Inventory (Year 1) | Understanding | alpha-1 antitrypsin (3 mo) | 797 | -1.48 | -0.23 |  | 0.71 |
| Expressing | alpha-1 antitrypsin (3 mo) | 793 | -1.48 | -0.22 |  | 0.49 |
| Understanding | myeloperoxidase (3 mo) | 799 | 8.34 | 9.86 |  | 0.52 |
| Expressing | myeloperoxidase (3 mo) | 795 | 8.35 | 9.88 |  | 0.67 |
| **Understanding** | **neopterin (3 mo)** | **800** | **6.80** | **7.75** |  | **0.01\*** |
| Expressing | neopterin (3 mo) | 796 | 6.80 | 7.75 |  | 0.55 |
| **Understanding** | **lactulose (3 mo)** | **979** | **-1.56** | **-0.01** |  | **0.03\*** |
| **Expressing** | **lactulose (3 mo)** | **976** | **-1.56** | **-0.01** |  | **0.04\*** |
| Understanding | mannitol (3 mo) | 979 | 0.67 | 2.11 |  | 0.07 |
| Expressing | mannitol (3 mo) | 976 | 0.67 | 2.12 |  | 0.16 |
| Extended Ages and Stages (Year 2) | Personal Social | alpha-1 antitrypsin (3 mo) | 679 | -1.45 | -0.21 |  | 0.97 |
| Motor | alpha-1 antitrypsin (3 mo) | 670 | -1.44 | -0.20 |  | 0.34 |
| Combined | alpha-1 antitrypsin (3 mo) | 677 | -1.45 | -0.20 |  | 0.23 |
| Communication | alpha-1 antitrypsin (3 mo) | 677 | -1.45 | -0.21 |  | 0.33 |
| Personal Social | myeloperoxidase (3 mo) | 680 | 8.39 | 9.91 |  | 0.29 |
| Motor | myeloperoxidase (3 mo) | 671 | 8.43 | 9.92 |  | 0.81 |
| Combined | myeloperoxidase (3 mo) | 678 | 8.39 | 9.91 |  | 0.44 |
| Communication | myeloperoxidase (3 mo) | 678 | 8.39 | 9.91 |  | 0.24 |
| Personal Social | neopterin (3 mo) | 681 | 6.83 | 7.77 |  | 0.21 |
| Motor | neopterin (3 mo) | 672 | 6.83 | 7.76 |  | 0.25 |
| Combined | neopterin (3 mo) | 679 | 6.83 | 7.77 |  | 0.4 |
| Communication | neopterin (3 mo) | 679 | 6.83 | 7.76 |  | 0.29 |
| Personal Social | lactulose (3 mo) | 848 | -1.57 | -0.03 |  | 0.93 |
| Motor | lactulose (3 mo) | 841 | -1.57 | -0.02 |  | 0.37 |
| Combined | lactulose (3 mo) | 846 | -1.57 | -0.03 |  | 0.96 |
| **Communication** | **lactulose (3 mo)** | **847** | **-1.57** | **-0.03** |  | **0.02\*** |
| Personal Social | mannitol (3 mo) | 848 | 0.70 | 2.12 |  | 0.51 |
| Motor | mannitol (3 mo) | 841 | 0.70 | 2.13 |  | 0.45 |
| Combined | mannitol (3 mo) | 846 | 0.70 | 2.12 |  | 0.69 |
| Communication | mannitol (3 mo) | 847 | 0.70 | 2.13 |  | 0.83 |
| Communicative Development Inventory (Year 2) | Understanding | alpha-1 antitrypsin (3 mo) | 684 | -1.45 | -0.21 |  | 0.81 |
| Expressing | alpha-1 antitrypsin (3 mo) | 690 | -1.45 | -0.21 |  | 0.98 |
| Understanding | myeloperoxidase (3 mo) | 685 | 8.38 | 9.91 |  | 0.92 |
| Expressing | myeloperoxidase (3 mo) | 691 | 8.37 | 9.90 |  | 0.79 |
| Understanding | neopterin (3 mo) | 686 | 6.82 | 7.76 |  | 0.26 |
| Expressing | neopterin (3 mo) | 692 | 6.82 | 7.76 |  | 0.14 |
| Understanding | lactulose (3 mo) | 853 | -1.57 | -0.03 |  | 0.72 |
| Expressing | lactulose (3 mo) | 861 | -1.57 | -0.03 |  | 0.31 |
| Understanding | mannitol (3 mo) | 853 | 0.70 | 2.11 |  | 0.78 |
| Expressing | mannitol (3 mo) | 861 | 0.70 | 2.11 |  | 0.96 |
| Extended Ages and Stages (Year 2) | Personal Social | alpha-1 antitrypsin (14 mo) | 842 | -1.37 | -0.12 |  | 0.69 |
| Motor | alpha-1 antitrypsin (14 mo) | 831 | -1.38 | -0.12 |  | 0.89 |
| Combined | alpha-1 antitrypsin (14 mo) | 839 | -1.37 | -0.12 |  | 0.88 |
| Communication | alpha-1 antitrypsin (14 mo) | 841 | -1.36 | -0.12 |  | 0.76 |
| Personal Social | myeloperoxidase (14 mo) | 842 | 7.94 | 9.25 |  | 0.63 |
| Motor | myeloperoxidase (14 mo) | 831 | 7.93 | 9.24 |  | 0.66 |
| Combined | myeloperoxidase (14 mo) | 839 | 7.93 | 9.24 |  | 0.35 |
| Communication | myeloperoxidase (14 mo) | 841 | 7.94 | 9.24 |  | 0.51 |
| Personal Social | neopterin (14 mo) | 842 | 6.44 | 7.61 |  | 0.85 |
| Motor | neopterin (14 mo) | 831 | 6.45 | 7.61 |  | 0.61 |
| Combined | neopterin (14 mo) | 839 | 6.46 | 7.61 |  | 0.12 |
| Communication | neopterin (14 mo) | 841 | 6.46 | 7.61 |  | 0.21 |
| Personal Social | lactulose (14 mo) | 827 | -1.87 | -0.50 |  | 0.42 |
| **Motor** | **lactulose (14 mo)** | **819** | **-1.87** | **-0.50** |  | **0.02\*** |
| Combined | lactulose (14 mo) | 824 | -1.87 | -0.50 |  | 0.1 |
| Communication | lactulose (14 mo) | 826 | -1.87 | -0.50 |  | 0.63 |
| Personal Social | mannitol (14 mo) | 827 | 0.06 | 1.58 |  | 0.7 |
| **Motor** | **mannitol (14 mo)** | **819** | **0.06** | **1.58** |  | **0.02\*** |
| Combined | mannitol (14 mo) | 824 | 0.07 | 1.58 |  | 0.94 |
| Communication | mannitol (14 mo) | 826 | 0.06 | 1.58 |  | 0.43 |
| Communicative Development Inventory (Year 2) | Understanding | alpha-1 antitrypsin (14 mo) | 847 | -1.36 | -0.12 |  | 0.46 |
| Expressing | alpha-1 antitrypsin (14 mo) | 856 | -1.36 | -0.12 |  | 0.06 |
| Understanding | myeloperoxidase (14 mo) | 847 | 7.93 | 9.24 |  | 0.77 |
| Expressing | myeloperoxidase (14 mo) | 856 | 7.94 | 9.24 |  | 0.26 |
| Understanding | neopterin (14 mo) | 847 | 6.46 | 7.61 |  | 0.26 |
| Expressing | neopterin (14 mo) | 856 | 6.47 | 7.61 |  | 0.16 |
| Understanding | lactulose (14 mo) | 831 | -1.88 | -0.51 |  | 0.27 |
| Expressing | lactulose (14 mo) | 839 | -1.88 | -0.51 |  | 0.68 |
| Understanding | mannitol (14 mo) | 831 | 0.06 | 1.57 |  | 0.85 |
| Expressing | mannitol (14 mo) | 839 | 0.06 | 1.57 |  | 0.65 |
| Extended Ages and Stages (Year 2) | Personal Social | regenerating gene 1B (14 mo) | 840 | 4.62 | 5.45 |  | 0.61 |
| Motor | regenerating gene 1B (14 mo) | 829 | 4.62 | 5.45 |  | 0.11 |
| Combined | regenerating gene 1B (14 mo) | 837 | 4.62 | 5.45 |  | 0.83 |
| **Communication** | **regenerating gene 1B (14 mo)** | **839** | **4.62** | **5.45** |  | **0.01\*** |
| Communicative Development Inventory (Year 2) | Understanding | regenerating gene 1B (14 mo) | 845 | 4.62 | 5.45 |  | 0.82 |
| Expressing | regenerating gene 1B (14 mo) | 854 | 4.63 | 5.45 |  | 0.05 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | |

Table 10: Kenya Analyses

| Outcome Domain | Outcome Subdomain | Exposure | n | Q1 | Q3 | Adj. Diff (95% CI) | Adj. P-value |
| --- | --- | --- | --- | --- | --- | --- | --- |
| WHO Motor Milestones (Year 1) | Milestones 2,4,5,6 | alpha-1 antitrypsin (6 mo) | 1,001 | -1.30 | -0.04 | 0.04 (-0.04, 0.13) | 0.31 |
| Sum Total | alpha-1 antitrypsin (6 mo) | 1,001 | -1.30 | -0.04 | 0.01 (-0.07, 0.1) | 0.78 |
| Milestones 2,4,5,6 | myeloperoxidase (6 mo) | 1,002 | 7.41 | 8.90 | 0.02 (-0.05, 0.09) | 0.6 |
| Sum Total | myeloperoxidase (6 mo) | 1,002 | 7.41 | 8.90 | 0.01 (-0.07, 0.09) | 0.82 |
| Milestones 2,4,5,6 | neopterin (6 mo) | 1,003 | 7.11 | 7.96 | 0.06 (-0.03, 0.16) | 0.16 |
| Sum Total | neopterin (6 mo) | 1,003 | 7.11 | 7.96 | 0.07 (-0.03, 0.17) | 0.18 |
| Milestones 2,4,5,6 | lactulose (6 mo) | 1,083 | -2.24 | -0.85 | 0.01 (-0.06, 0.08) | 0.75 |
| Sum Total | lactulose (6 mo) | 1,083 | -2.24 | -0.85 | 0 (-0.07, 0.08) | 0.94 |
| Milestones 2,4,5,6 | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 0.02 (-0.05, 0.09) | 0.6 |
| Sum Total | mannitol (6 mo) | 1,083 | -0.06 | 1.29 | 0.02 (-0.06, 0.09) | 0.66 |
| **Extended Ages and Stages (Year 2)** | **Communication** | **alpha-1 antitrypsin (6 mo)** | **796** | **-1.27** | **-0.01** | **0.1 (0.01, 0.19)** | **0.03\*** |
| Motor | alpha-1 antitrypsin (6 mo) | 816 | -1.27 | -0.02 | -0.01 (-0.1, 0.08) | 0.89 |
| Personal Social | alpha-1 antitrypsin (6 mo) | 818 | -1.27 | -0.02 | 0.04 (-0.06, 0.13) | 0.43 |
| Combined | alpha-1 antitrypsin (6 mo) | 816 | -1.27 | -0.02 | 0.06 (-0.03, 0.15) | 0.22 |
| Communication | myeloperoxidase (6 mo) | 797 | 7.46 | 8.96 | -0.02 (-0.11, 0.06) | 0.6 |
| Motor | myeloperoxidase (6 mo) | 817 | 7.45 | 8.95 | 0.01 (-0.07, 0.1) | 0.76 |
| Personal Social | myeloperoxidase (6 mo) | 819 | 7.43 | 8.94 | -0.03 (-0.12, 0.06) | 0.52 |
| Combined | myeloperoxidase (6 mo) | 817 | 7.45 | 8.95 | -0.02 (-0.11, 0.06) | 0.6 |
| Communication | neopterin (6 mo) | 798 | 7.12 | 7.96 | 0.07 (-0.06, 0.2) | 0.29 |
| Motor | neopterin (6 mo) | 818 | 7.12 | 7.96 | 0.03 (-0.09, 0.15) | 0.67 |
| Personal Social | neopterin (6 mo) | 820 | 7.12 | 7.96 | 0.04 (-0.1, 0.18) | 0.59 |
| Combined | neopterin (6 mo) | 818 | 7.12 | 7.96 | 0.07 (-0.06, 0.2) | 0.29 |
| Communication | lactulose (6 mo) | 861 | -2.25 | -0.85 | 0.11 (-0.07, 0.28) | 0.24 |
| Motor | lactulose (6 mo) | 862 | -2.25 | -0.85 | -0.04 (-0.12, 0.03) | 0.27 |
| Personal Social | lactulose (6 mo) | 865 | -2.25 | -0.85 | 0.08 (-0.01, 0.16) | 0.08 |
| Combined | lactulose (6 mo) | 861 | -2.25 | -0.85 | 0.04 (-0.1, 0.19) | 0.57 |
| Communication | mannitol (6 mo) | 861 | -0.05 | 1.31 | 0.06 (-0.02, 0.14) | 0.15 |
| Motor | mannitol (6 mo) | 862 | -0.05 | 1.31 | 0 (-0.07, 0.08) | 0.91 |
| **Personal Social** | **mannitol (6 mo)** | **865** | **-0.05** | **1.31** | **0.15 (0.04, 0.25)** | **0.01\*** |
| Combined | mannitol (6 mo) | 861 | -0.05 | 1.31 | 0.05 (-0.03, 0.13) | 0.2 |
| Communication | alpha-1 antitrypsin (6 mo) | 812 | -1.28 | -0.04 | 0.08 (-0.08, 0.24) | 0.33 |
| Motor | alpha-1 antitrypsin (6 mo) | 707 | -1.28 | -0.07 | -0.02 (-0.11, 0.07) | 0.72 |
| Personal Social | alpha-1 antitrypsin (6 mo) | 814 | -1.28 | -0.03 | 0.02 (-0.07, 0.11) | 0.71 |
| Combined | alpha-1 antitrypsin (6 mo) | 694 | -1.28 | -0.08 | 0.03 (-0.06, 0.12) | 0.55 |
| Communication | myeloperoxidase (6 mo) | 813 | 7.41 | 8.94 | -0.04 (-0.13, 0.05) | 0.42 |
| Motor | myeloperoxidase (6 mo) | 707 | 7.41 | 8.93 | 0.04 (-0.06, 0.13) | 0.44 |
| Personal Social | myeloperoxidase (6 mo) | 815 | 7.41 | 8.94 | -0.03 (-0.12, 0.06) | 0.52 |
| Combined | myeloperoxidase (6 mo) | 694 | 7.41 | 8.93 | -0.04 (-0.14, 0.06) | 0.46 |
| Communication | neopterin (6 mo) | 814 | 7.12 | 7.96 | 0.08 (-0.07, 0.23) | 0.29 |
| Motor | neopterin (6 mo) | 708 | 7.10 | 7.93 | -0.07 (-0.15, 0.01) | 0.08 |
| Personal Social | neopterin (6 mo) | 816 | 7.12 | 7.96 | 0.04 (-0.13, 0.2) | 0.69 |
| Combined | neopterin (6 mo) | 695 | 7.10 | 7.93 | 0.03 (-0.11, 0.17) | 0.67 |
| Communication | lactulose (17 mo) | 831 | -2.68 | -0.98 | -0.03 (-0.19, 0.13) | 0.73 |
| Motor | lactulose (17 mo) | 831 | -2.68 | -0.98 | -0.01 (-0.08, 0.05) | 0.67 |
| Personal Social | lactulose (17 mo) | 1,078 | -2.77 | -0.93 | 0.02 (-0.07, 0.11) | 0.72 |
| Combined | lactulose (17 mo) | 831 | -2.68 | -0.98 | 0.03 (-0.08, 0.14) | 0.55 |
| Communication | mannitol (17 mo) | 831 | -0.42 | 1.18 | 0.05 (-0.05, 0.14) | 0.34 |
| Motor | mannitol (17 mo) | 831 | -0.42 | 1.18 | 0.01 (-0.07, 0.08) | 0.87 |
| Personal Social | mannitol (17 mo) | 1,078 | -0.42 | 1.24 | -0.02 (-0.09, 0.05) | 0.61 |
| Combined | mannitol (17 mo) | 831 | -0.42 | 1.18 | 0.03 (-0.08, 0.13) | 0.64 |
| N, 25th Percentile, and 75th Percentile are from the adjusted analyses | | | | | | | |