| | Ages 0 to 4 | | | | Ages 5 to 10 | | | | Ages >10 | | | | All Ages | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Swim Exposure | Non Swimmers | Body Immersion | Head Immersion | Swallowed Water | Non Swimmers | Body Immersion | Head Immersion | Swallowed Water | Non Swimmers | Body Immersion | Head Immersion | Swallowed Water | Non Swimmers | Body Immersion | Head Immersion | Swallowed Water |
| Adjusted CIR (95% CI) | ref | 1.51 (1.14, 1.99) | 1.49 (1.11, 1.99) | 1.83 (1.35, 2.49) | ref | 2.00 (1.26, 3.20) | 2.06 (1.29, 3.29) | 2.39 (1.46, 3.91) | ref | 1.36 (1.24, 1.49) | 1.33 (1.20, 1.47) | 1.52 (1.32, 1.76) | ref | 1.45 (1.33, 1.59) | 1.44 (1.30, 1.58) | 1.74 (1.53, 1.97) |
| Incident Diarrhea Cases | 72 | 267 | 186 | 134 | 20 | 338 | 298 | 134 | 780 | 1,420 | 1,035 | 279 | 877 | 2,050 | 1,539 | 555 |
| Population At Risk | 1,505 | 3,778 | 2,689 | 1,586 | 945 | 8,625 | 7,524 | 2,995 | 22,346 | 33,222 | 25,315 | 5,866 | 25,093 | 46,315 | 36,086 | 10,591 |

Figure 1: Incident Diarrhea Associated with Water Exposure Stratified by Age. Adjusted cumulative incidence ratios (CIRs) were estimated with non-swimmers as the reference group. Estimates from a pooled analysis of 13 prospective cohorts in the United States, 2003-2009.
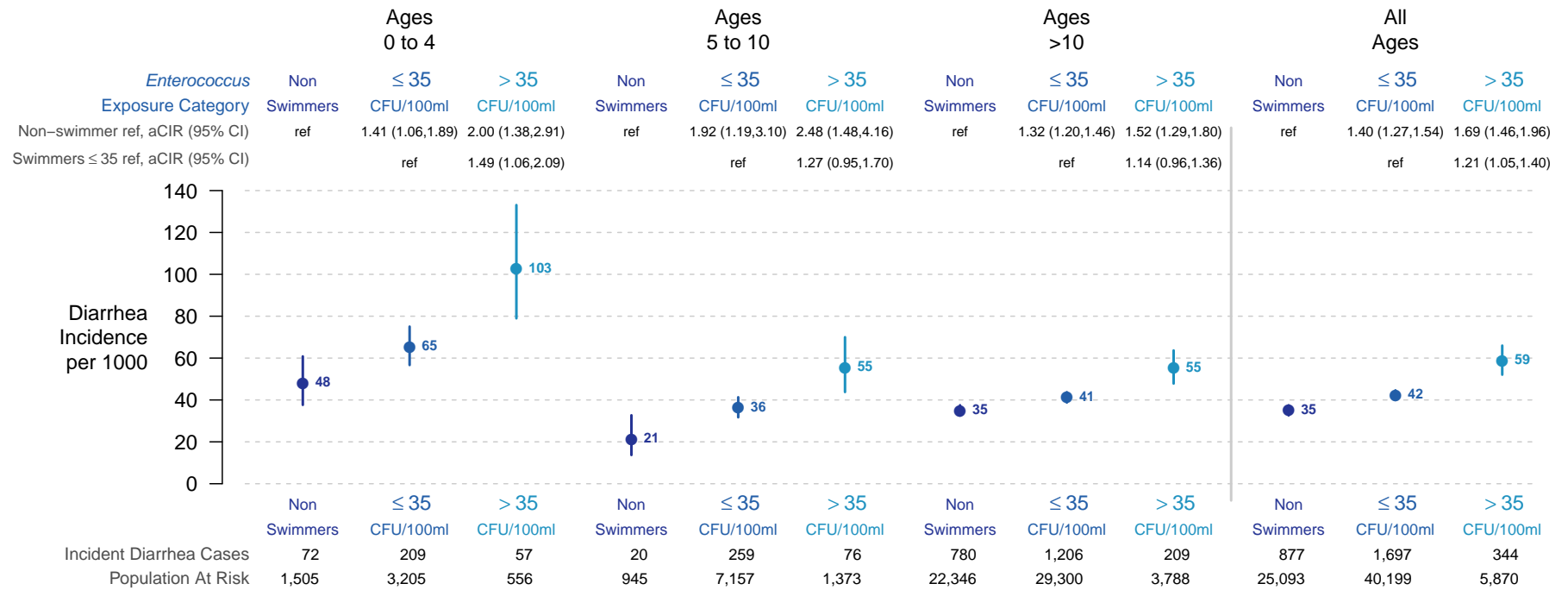
|  | Ages 0 to 4 | | | Ages 5 to 10 | | | Ages >10 | | | All Ages | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Enterococcus* Exposure Category | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml |
| Non–swimmer ref, aCIR (95% CI) | ref | 1.41 (1.06,1.89) | 2.00 (1.38,2.91) | ref | 1.92 (1.19,3.10) | 2.48 (1.48,4.16) | ref | 1.32 (1.20,1.46) | 1.52 (1.29,1.80) | ref | 1.40 (1.27,1.54) | 1.69 (1.46,1.96) |
| Swimmers ≤ 35 ref, aCIR (95% CI) | | ref | 1.49 (1.06,2.09) | | ref | 1.27 (0.95,1.70) | | ref | 1.14 (0.96,1.36) | | ref | 1.21 (1.05,1.40) |

Diarrhea Incidence per 1000

| | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml | Non Swimmers | ≤ 35 CFU/100ml | > 35 CFU/100ml |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 48 | 65 | 103 | 21 | 36 | 55 | 35 | 41 | 55 | 35 | 42 | 59 |
| Incident Diarrhea Cases | 72 | 209 | 57 | 20 | 259 | 76 | 780 | 1,206 | 209 | 877 | 1,697 | 344 |
| Population At Risk | 1,505 | 3,205 | 556 | 945 | 7,157 | 1,373 | 22,346 | 29,300 | 3,788 | 25,093 | 40,199 | 5,870 |

Figure 2: Incident Diarrhea Among Beachgoers Associated with *Enterococcus* Levels Above and Below Regulatory Guidelines, Stratified by Age. Adjusted cumulative incidence ratios (aCIRs) were estimated using two different reference groups: non-swimmers and swimmers exposed below EPA regulatory guidelines for *Enterococcus*: ≤35 colony forming units (CFU) per 100ml. Estimates from a pooled analysis of 13 prospective cohorts in the United States, 2003-2009.
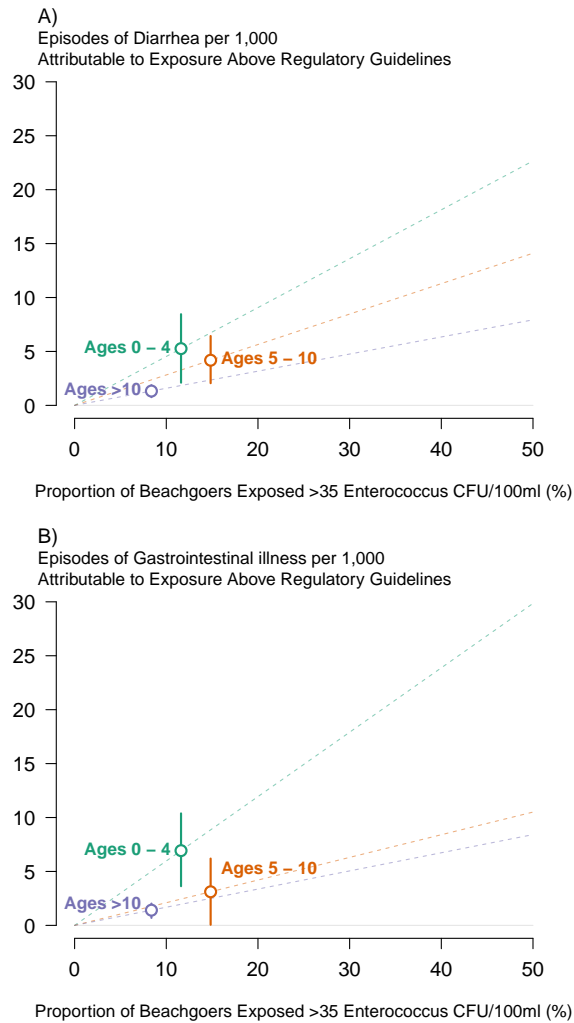
A)

Episodes of Diarrhea per 1,000
Attributable to Exposure Above Regulatory Guidelines

Ages 0 – 4
Ages 5 – 10
Ages >10

Proportion of Beachgoers Exposed >35 Enterococcus CFU/100ml (%)

B)

Episodes of Gastrointestinal illness per 1,000
Attributable to Exposure Above Regulatory Guidelines

Ages 0 – 4
Ages 5 – 10
Ages >10

Proportion of Beachgoers Exposed >35 Enterococcus CFU/100ml (%)

Figure 3: Age-stratified attributable risk among beachgoers from swimming in water with *Enterococcus* levels that exceed EPA regulatory guidelines of *Enterococcus*>35 CFU/100ml for A) Diarrhea and B) Gastrointestinal illness. Circles mark the observed levels of exposure and corresponding population attributable risk estimates with 95% confidence intervals. Dashed lines show adjusted model predictions over a range of exposure levels assuming the same risk relationship within age strata for different proportions exposed. Estimates from a pooled analysis of 13 prospective cohorts in the United States, 2003-2009.