Adjusted Risk Factors of Stunting

Jade Benjamin-Chung, Andrew N. Mertens, Esther Chung, Jeremy Coyle, Oleg Sofrygin, Nima Hejazi, Ivana Malenica, Alan E. Hubbard, Mark J. van der Laan, John M. Colford, Jr., Benjamin F. Arnold

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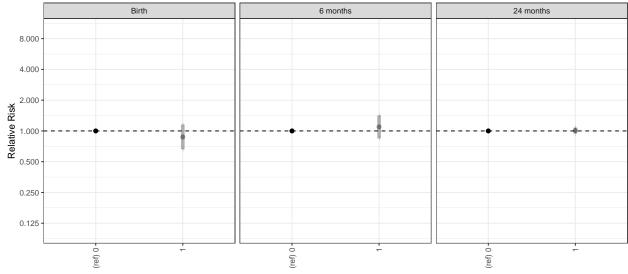
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Relative risk pooled across cohorts

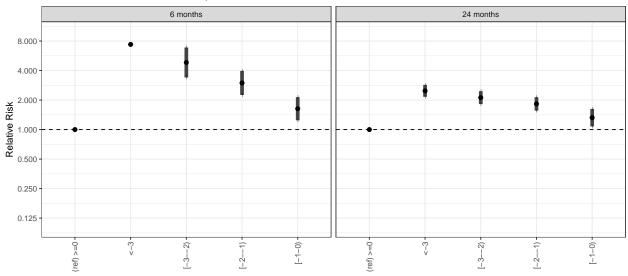
Point prevalence of stunting

Child characteristics

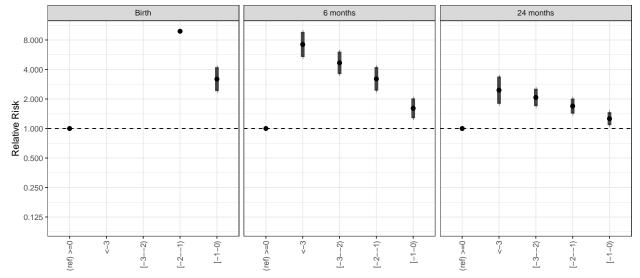
Any wasting in first 6 months Estimates from 7 cohorts in Asia, Africa



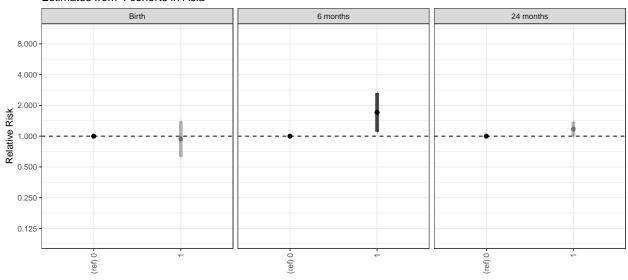
Birth length Estimates from 7 cohorts in Asia, Africa



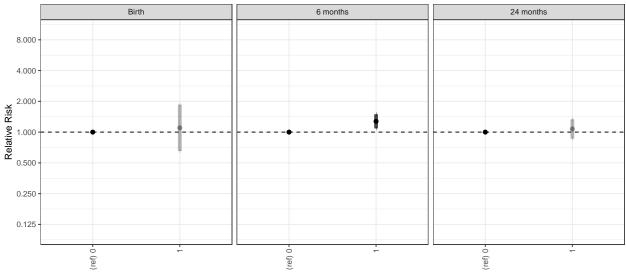
Birthweight Estimates from 2 cohorts in Asia, Africa



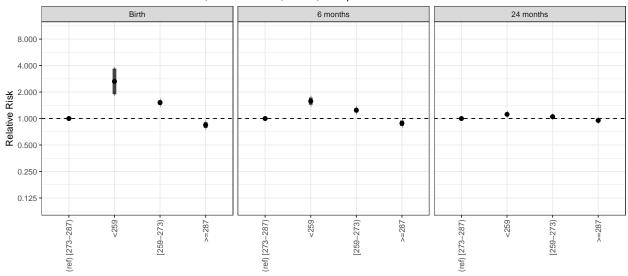
Child delivered at home Estimates from 4 cohorts in Asia



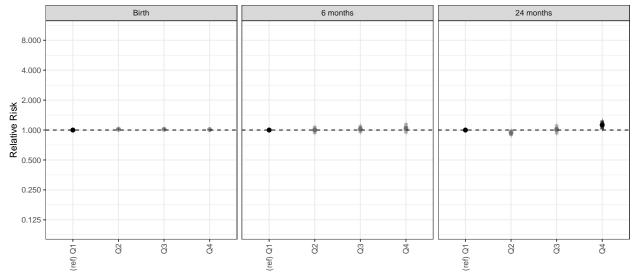
Enrolled wasted Estimates from 16 cohorts in Latin America, Asia, Africa, Europe



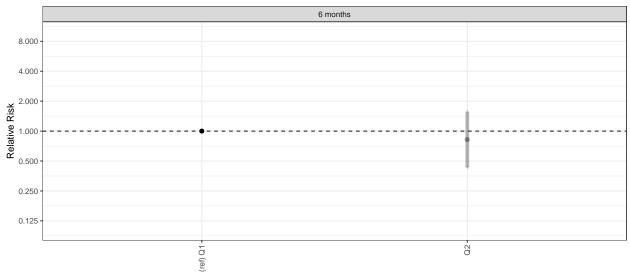
Gestational age at birth in days Estimates from 9 cohorts in Asia, Latin America, Africa, Europe



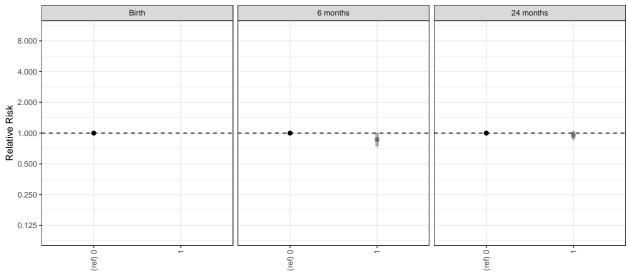
Percent diarrhea in first 24 months Estimates from 10 cohorts in Latin America, Asia, Africa



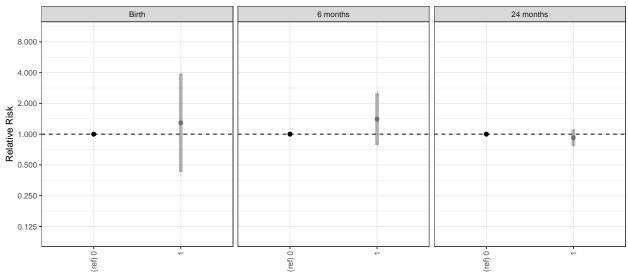
Percent diarrhea in first 6 months Estimates from 1 cohorts in Asia



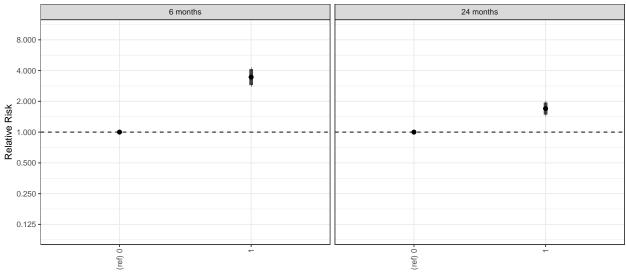
Percent exclusive breastfeeding Estimates from 11 cohorts in Asia, Africa, Latin America



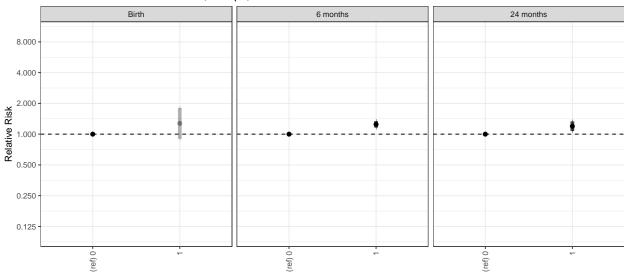
Persistent wasting in first 6 months Estimates from 2 cohorts in Asia



Stunted at enrollment Estimates from 20 cohorts in Asia, Africa, Latin America, Europe

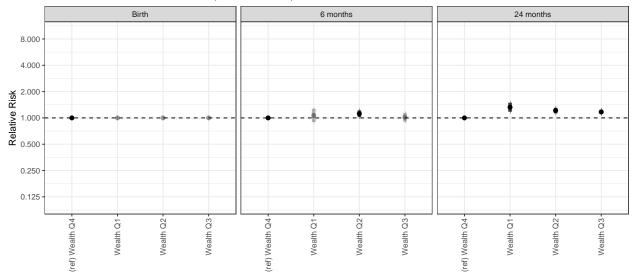


Vaginal delivery Estimates from 9 cohorts in Asia, Europe, Africa

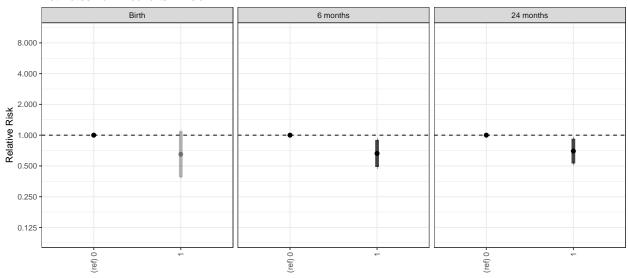


Household characteristics

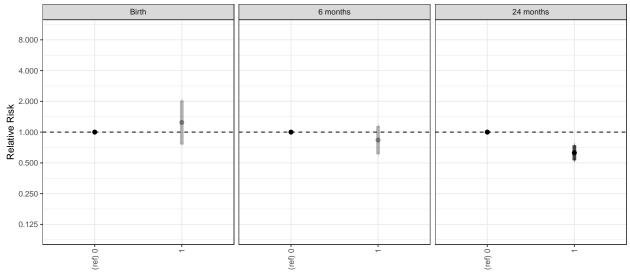
Asset based wealth index Estimates from 10 cohorts in Asia, Latin America, Africa



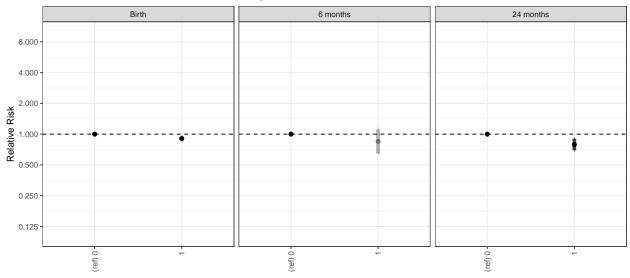
Clean cook Estimates from 4 cohorts in Asia



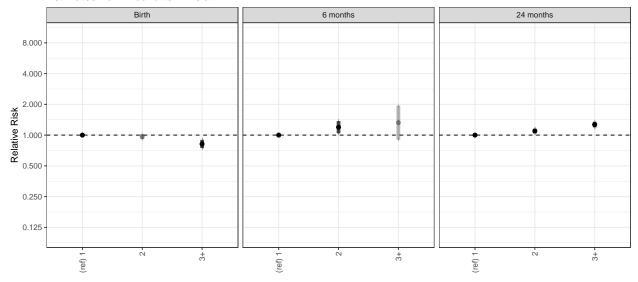
Improved floor Estimates from 8 cohorts in Asia, Latin America



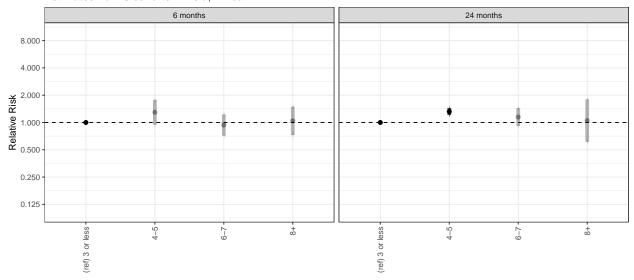
Improved sanitation Estimates from 11 cohorts in Latin America, Asia



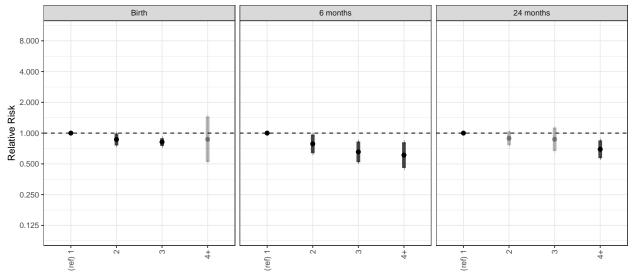
Number of children in the household under 5 years Estimates from 2 cohorts in Asia



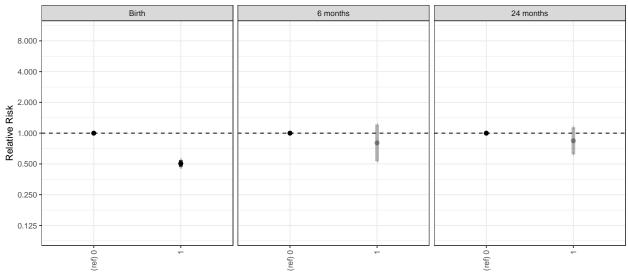
Number of people in the household Estimates from 6 cohorts in Asia, Africa



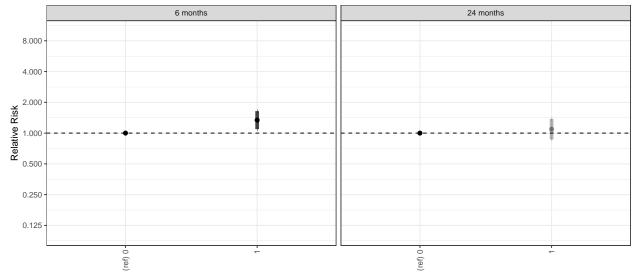
Number of rooms in household Estimates from 12 cohorts in Asia, Latin America, Africa



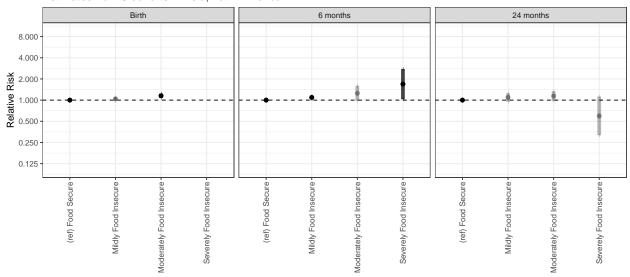
Safe water Estimates from 2 cohorts in Asia, Africa



Treats water Estimates from 1 cohorts in Asia

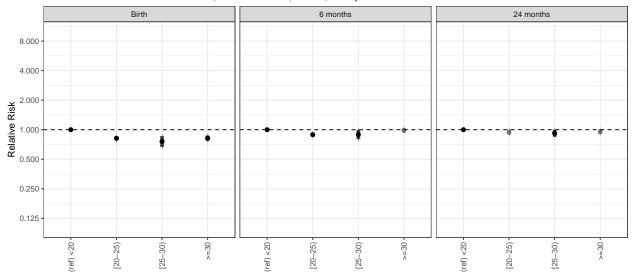


USAID Household Food Insecurity Access Scale (HFIAS) category Estimates from 5 cohorts in Asia, Latin America

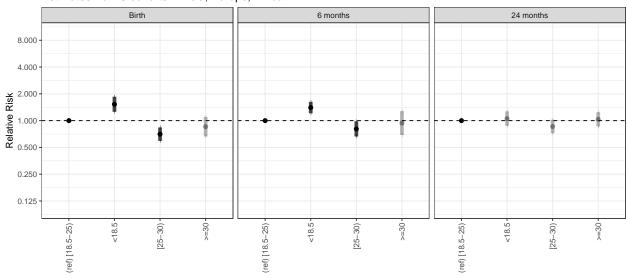


Maternal characteristics

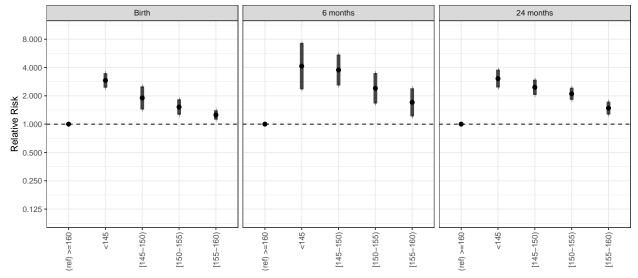
Maternal age Estimates from 21 cohorts in Asia, Latin America, Africa, Europe



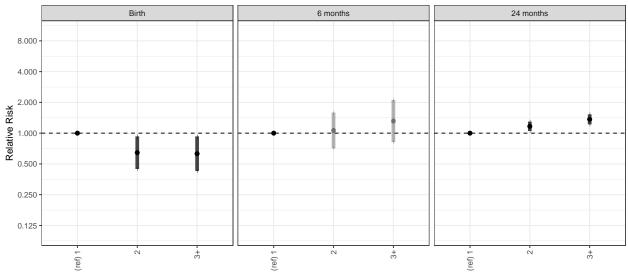
Maternal BMI Estimates from 3 cohorts in Asia, Europe, Africa



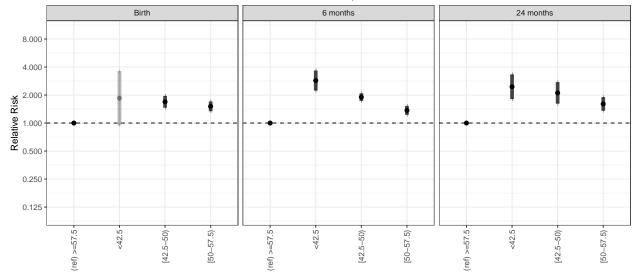
Maternal height Estimates from 5 cohorts in Latin America, Asia



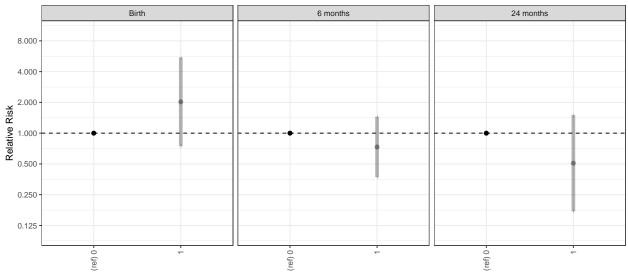
Maternal parity Estimates from 7 cohorts in Latin America, Asia, Africa



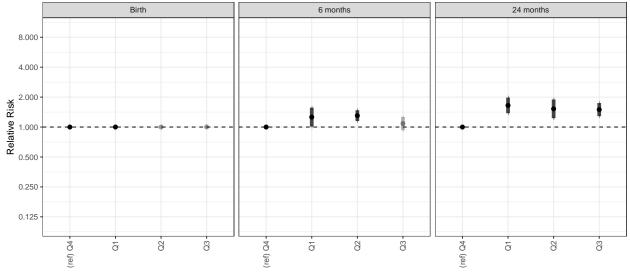
Maternal weight Estimates from 9 cohorts in Africa, Asia, Latin America, Europe



Mother is unmarried Estimates from 6 cohorts in Latin America, Asia, Africa

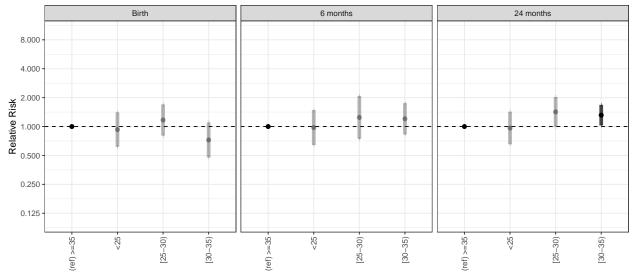


Mother's education Estimates from 15 cohorts in Asia, Latin America, Africa, Europe

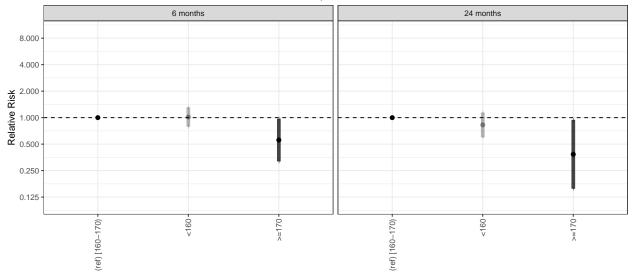


Paternal characteristics

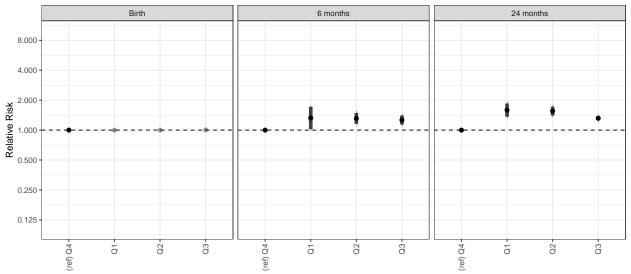
Father age Estimates from 2 cohorts in Latin America, Asia



Father height Estimates from 5 cohorts in Latin America, Africa, Europe, Asia



Father's education Estimates from 4 cohorts in Asia, Africa

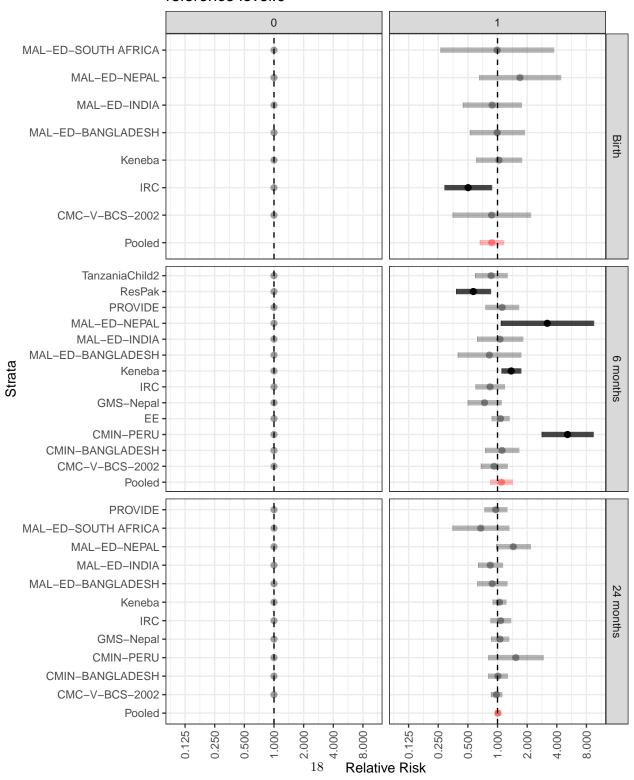


Appendix 1 - Relative risk stratified by cohort

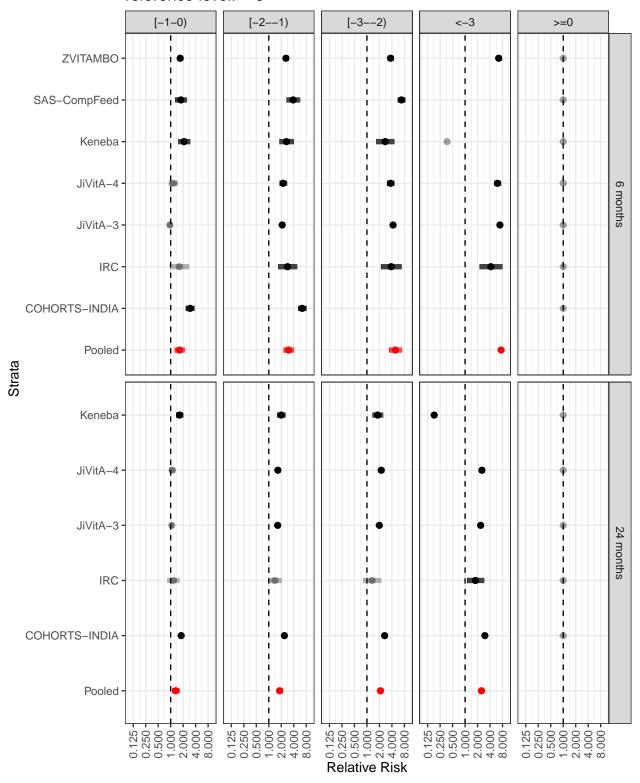
Point prevalence of stunting

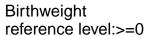
Child characteristics

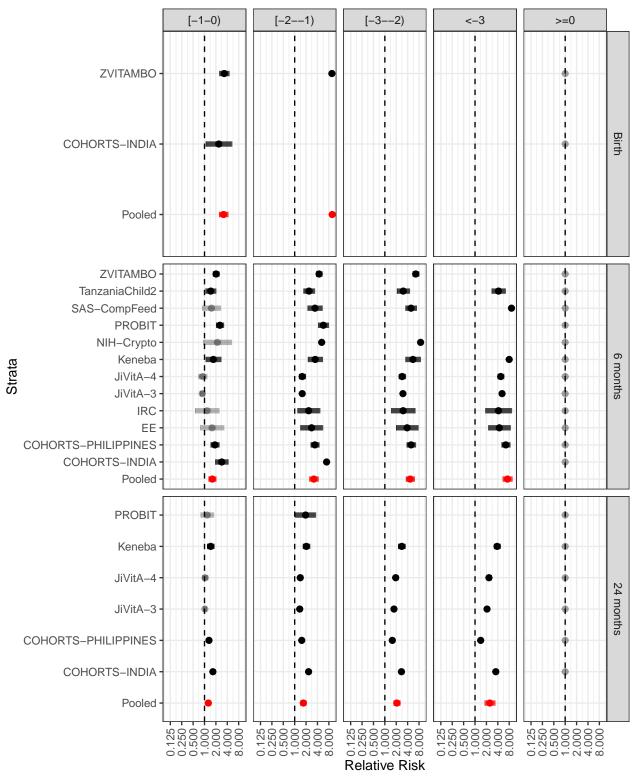
Any wasting in first 6 months reference level:0



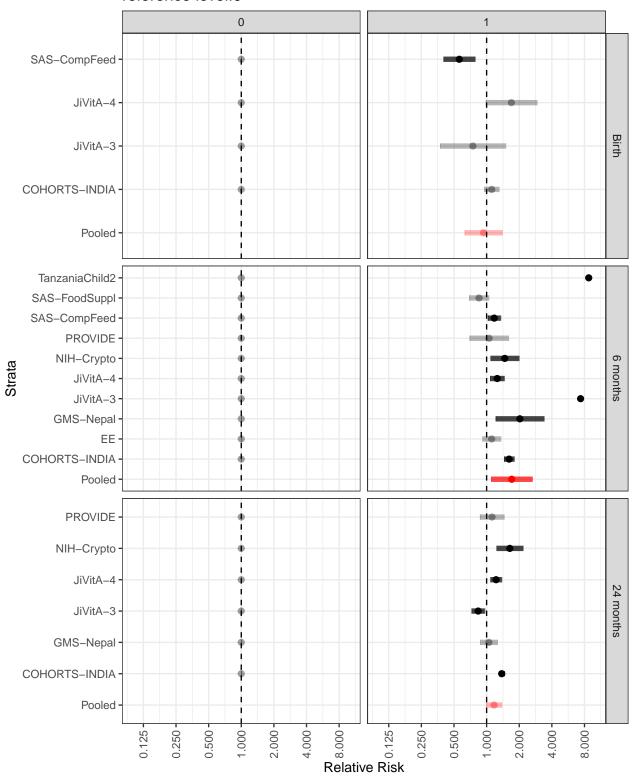
Birth length reference level:>=0



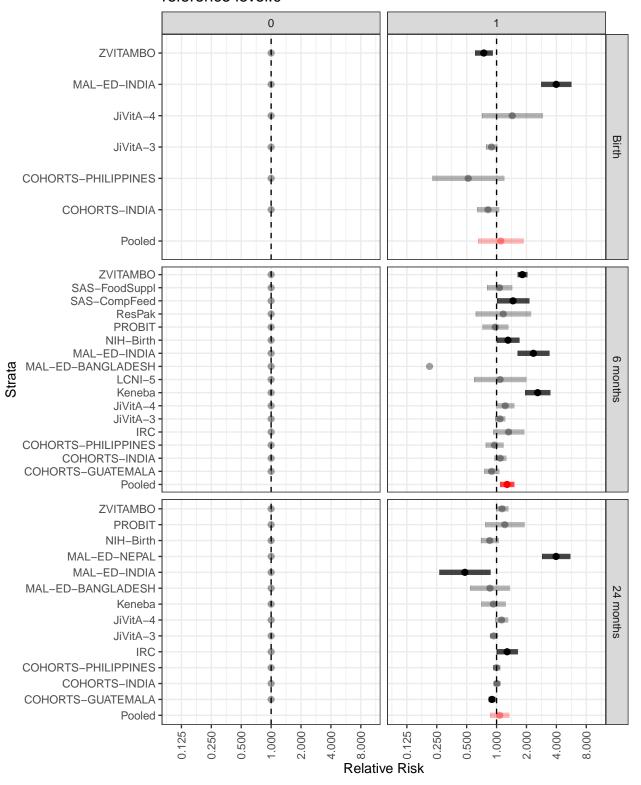




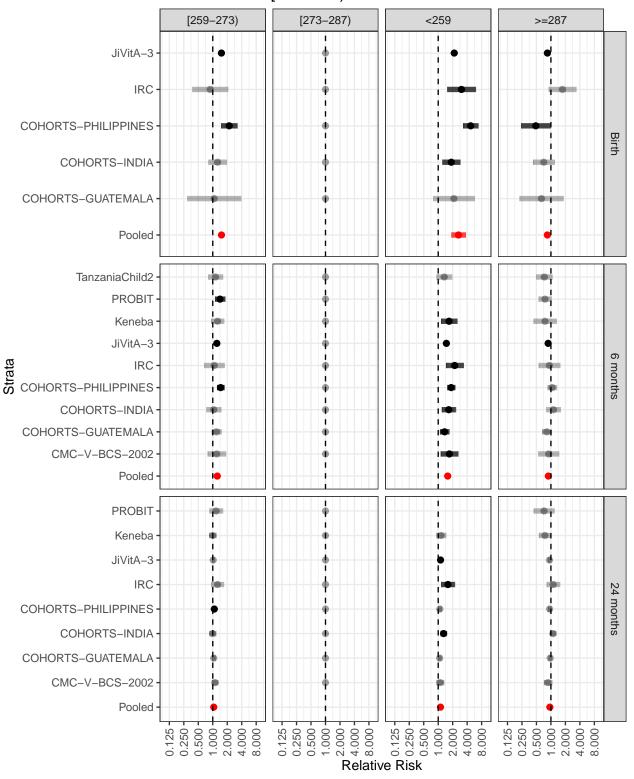
Child delivered at home reference level:0



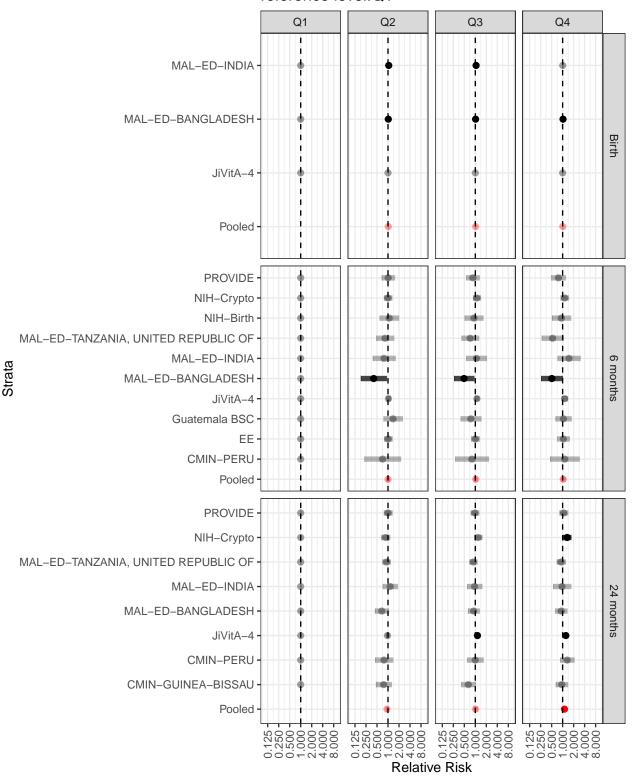
Enrolled wasted reference level:0



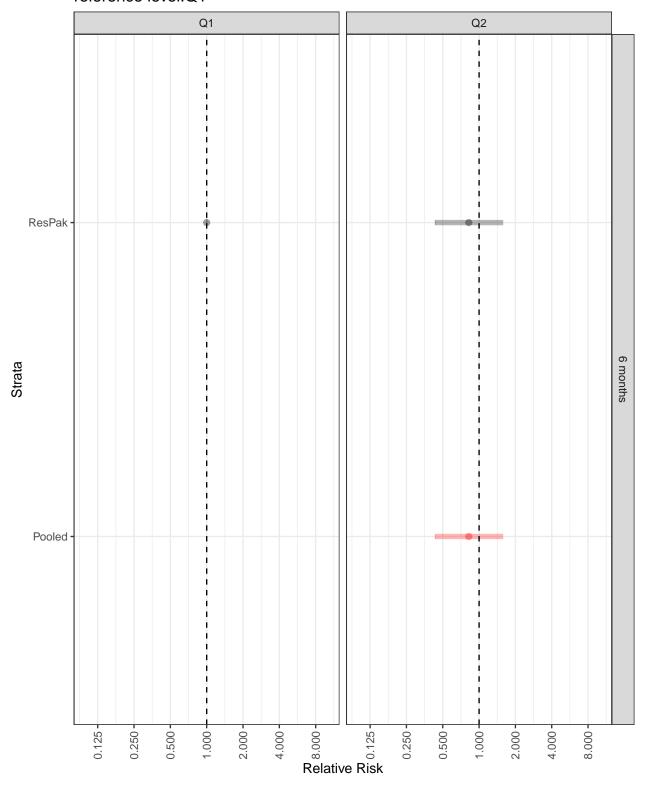
Gestational age at birth in days reference level:[273–287)



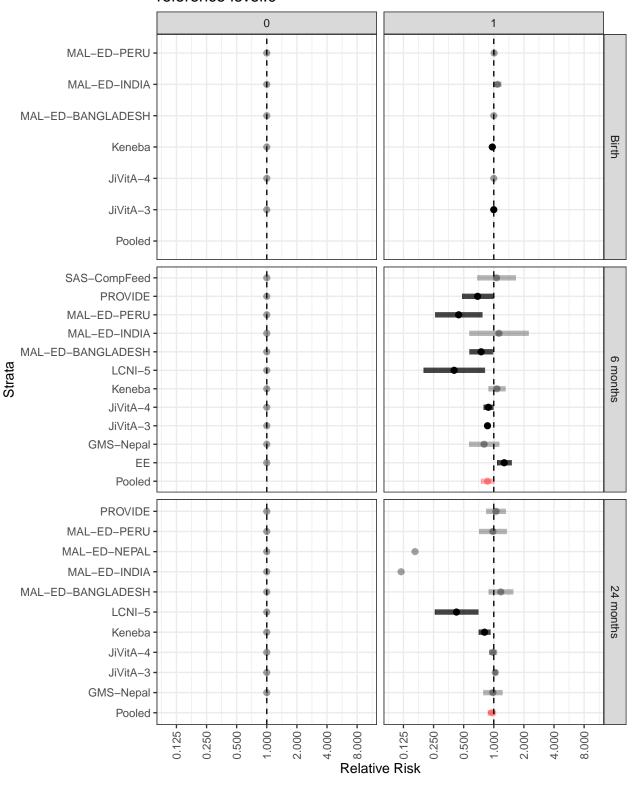
Percent diarrhea in first 24 months reference level:Q1



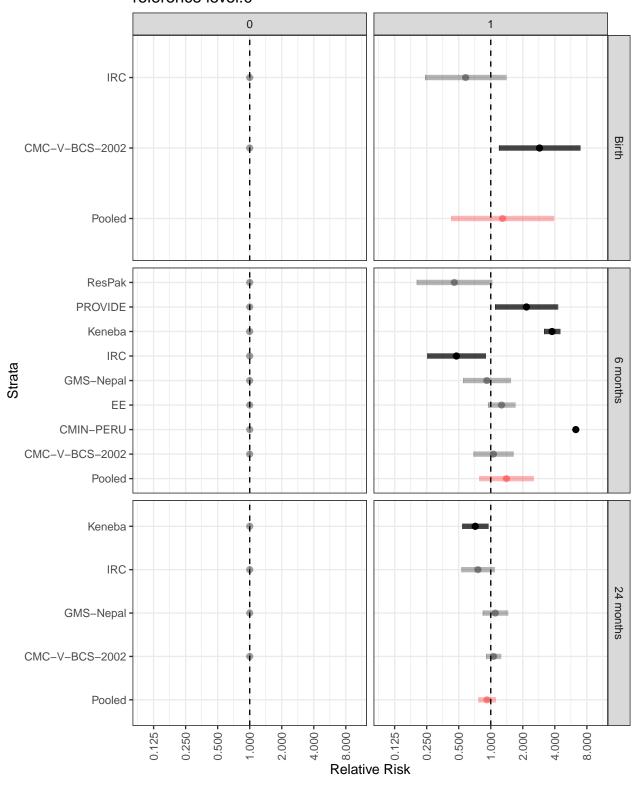
Percent diarrhea in first 6 months reference level:Q1



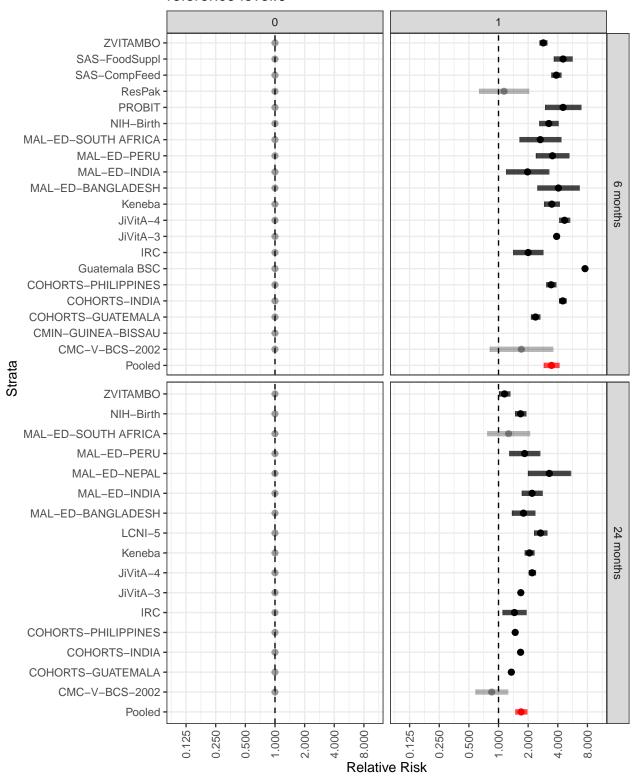
Percent exclusive breastfeeding reference level:0



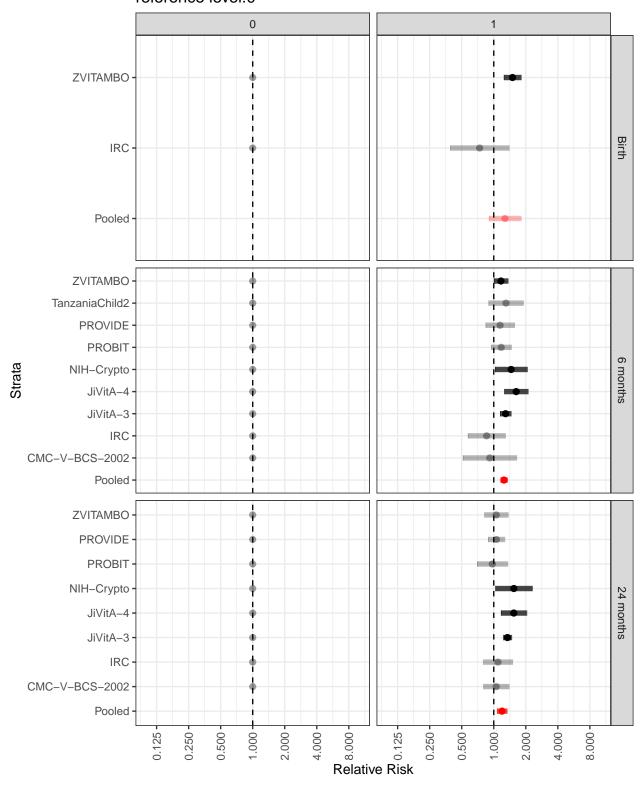
Persistent wasting in first 6 months reference level:0



Stunted at enrollment reference level:0

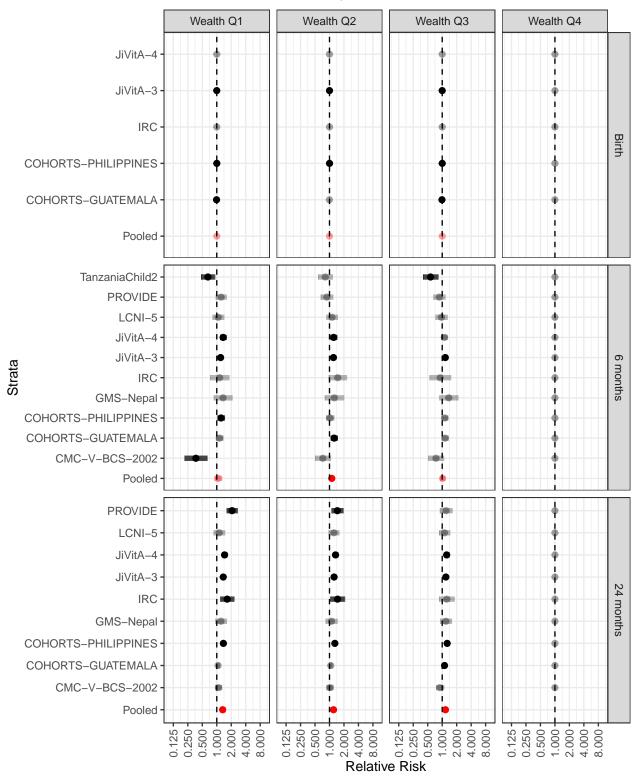


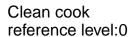
Vaginal delivery reference level:0

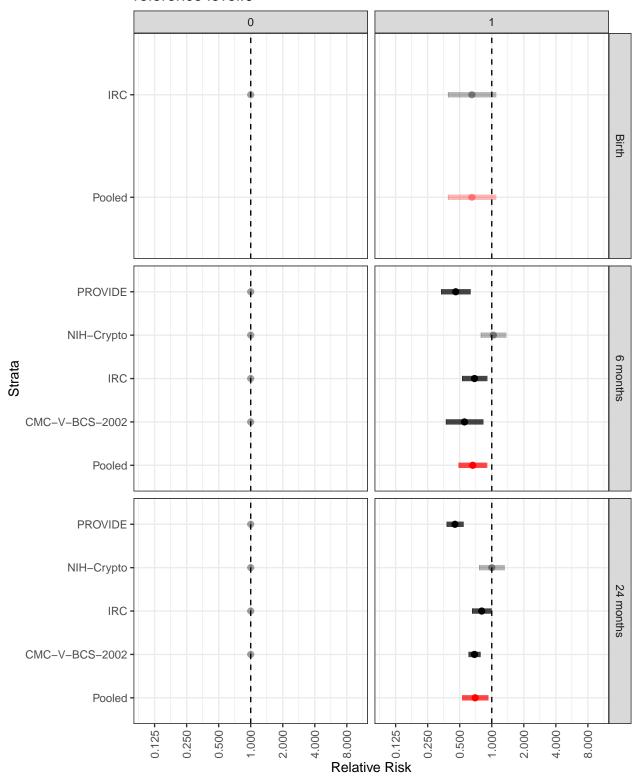


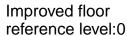
Household characteristics

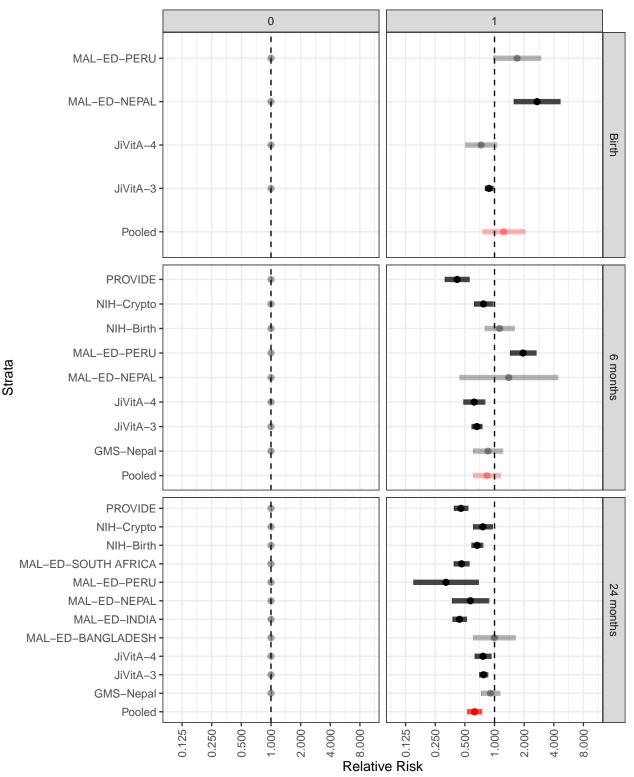
Asset based wealth index reference level: Wealth Q4



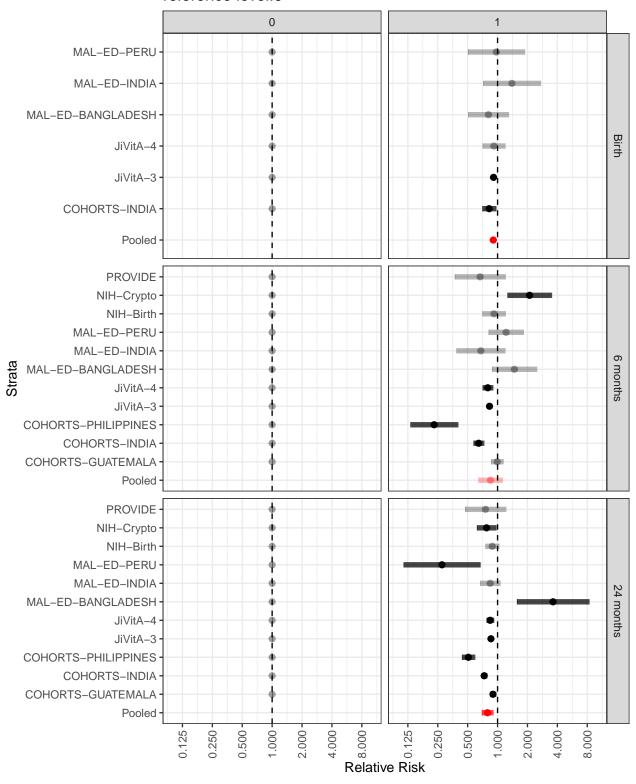




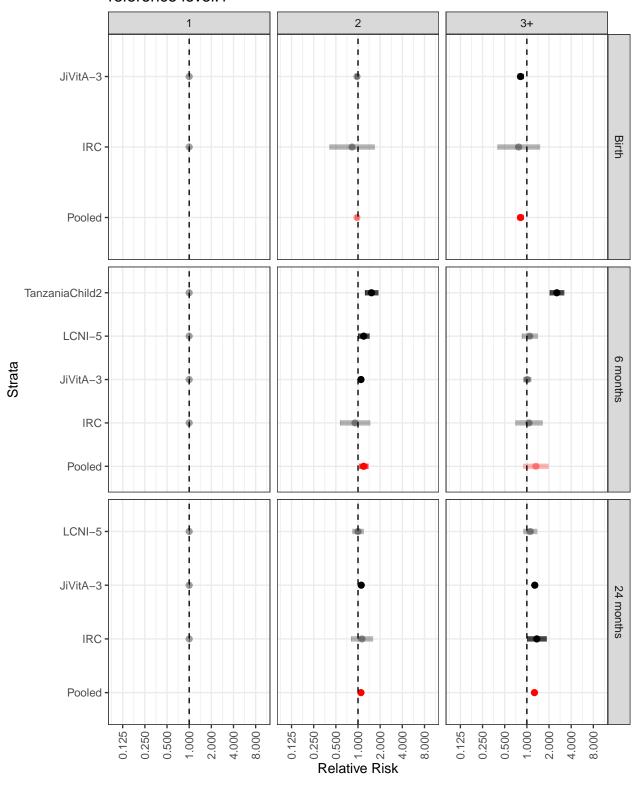




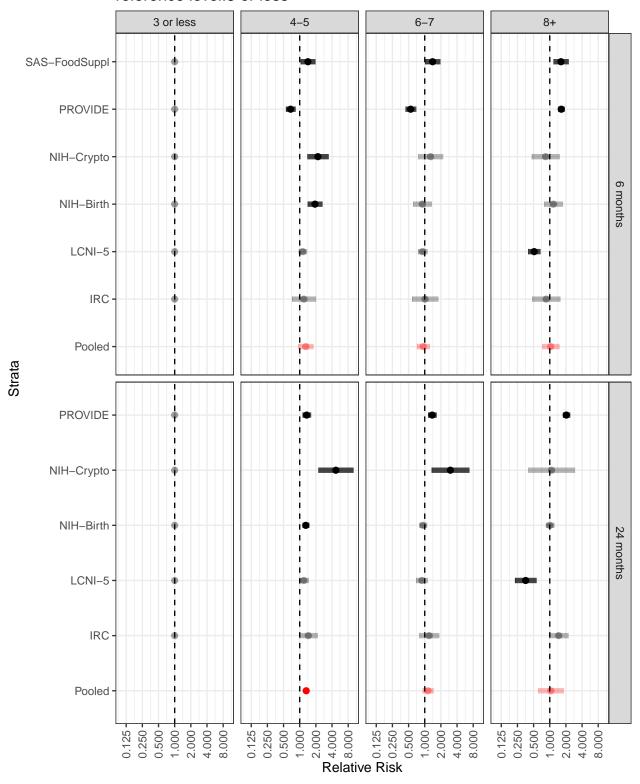
Improved sanitation reference level:0



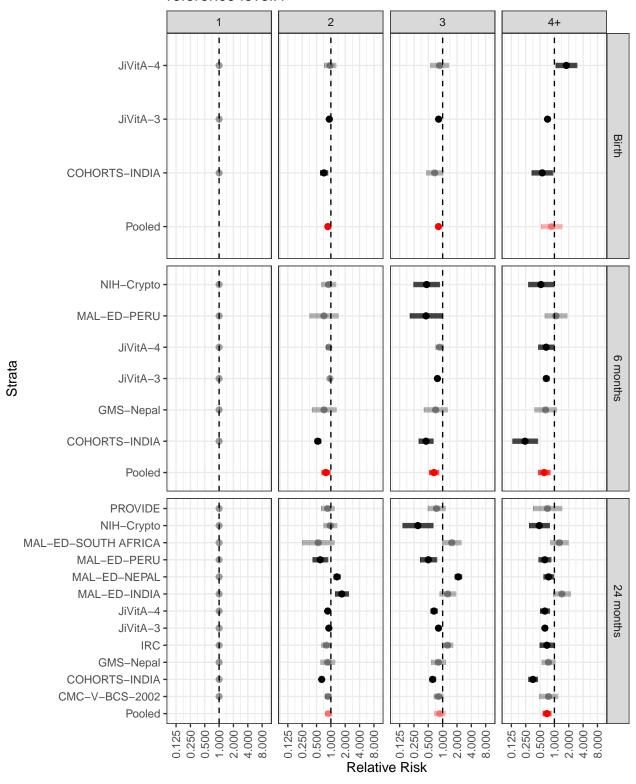
Number of children in the household under 5 years reference level:1

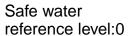


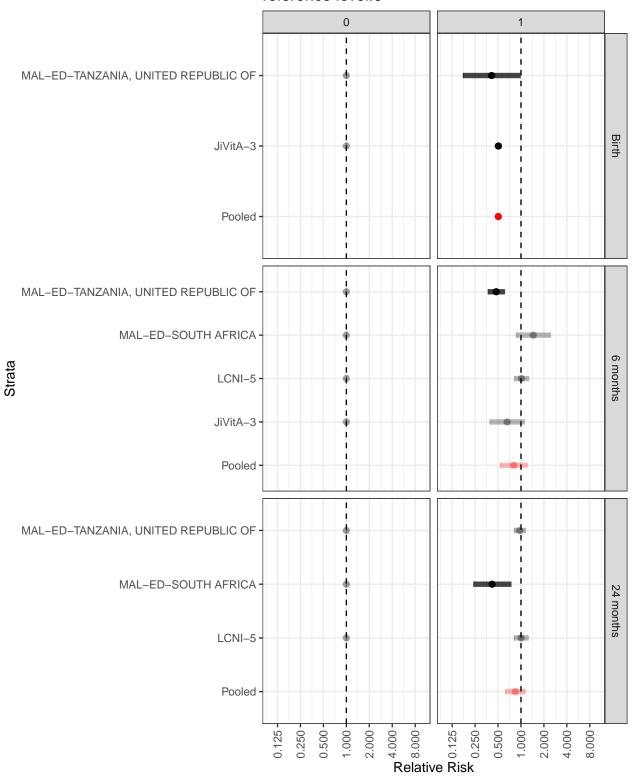
Number of people in the household reference level:3 or less



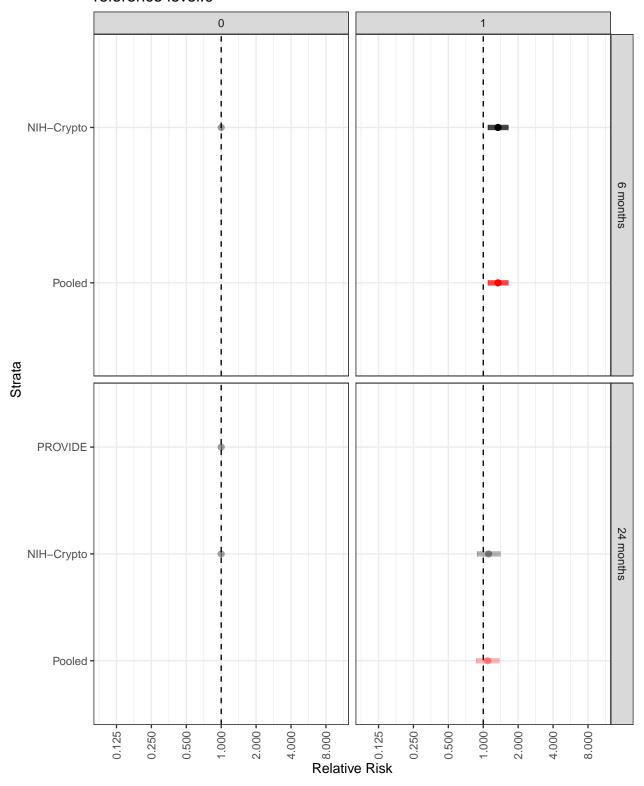
Number of rooms in household reference level:1



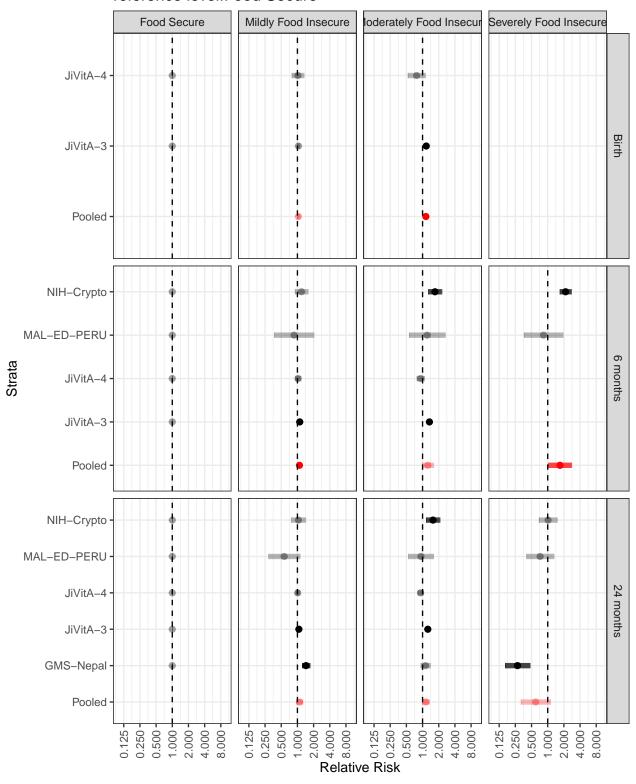




Treats water reference level:0

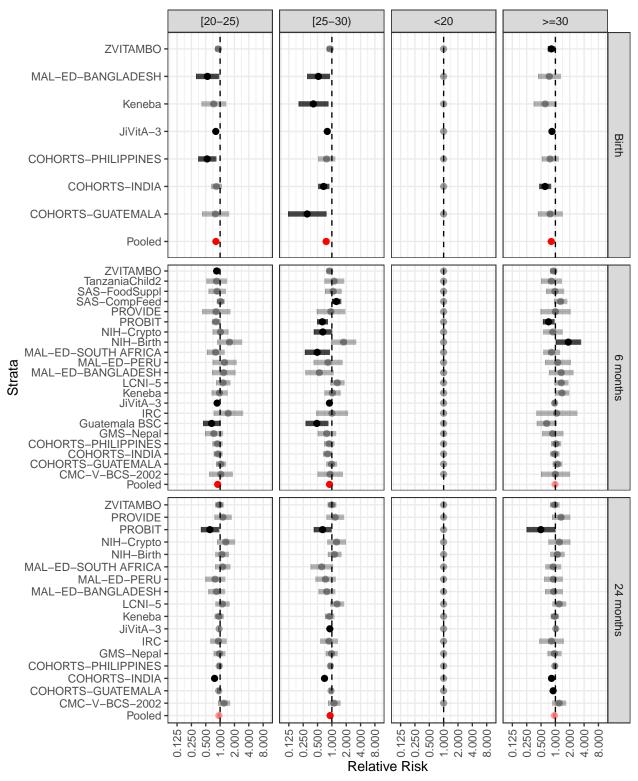


USAID Household Food Insecurity Access Scale (HFIAS) category reference level:Food Secure

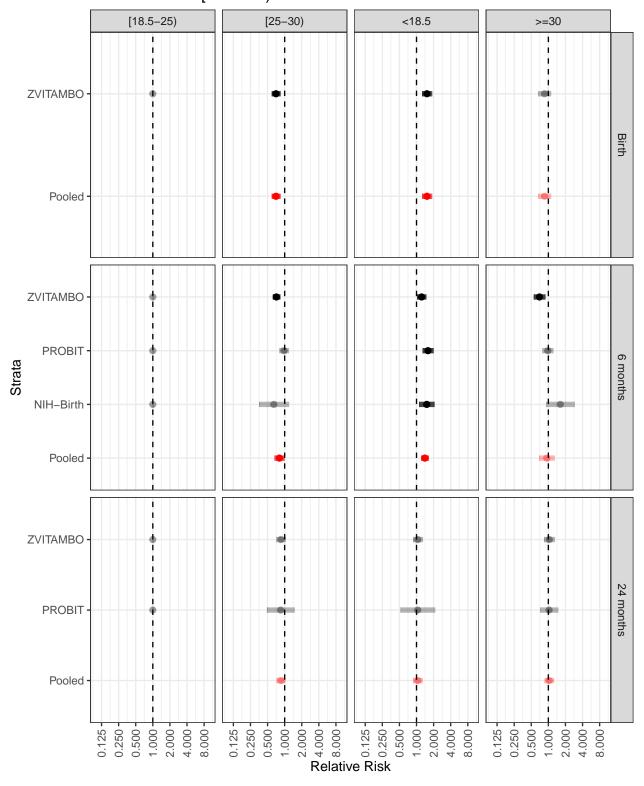


Maternal characteristics

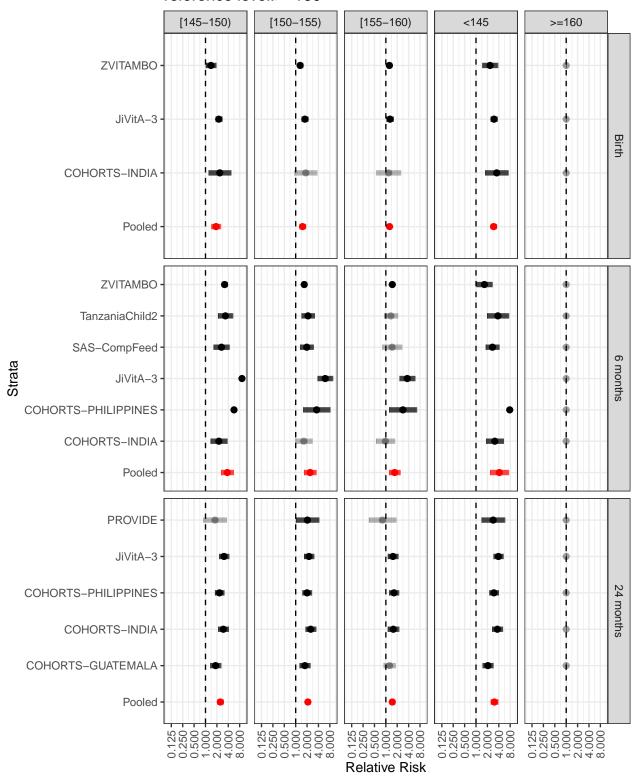
Maternal age reference level:<20



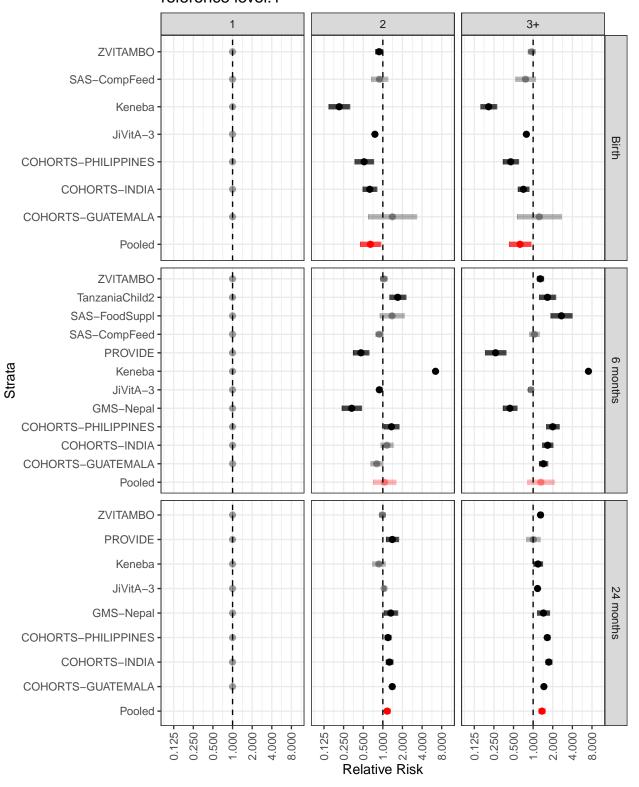
Maternal BMI reference level:[18.5–25)



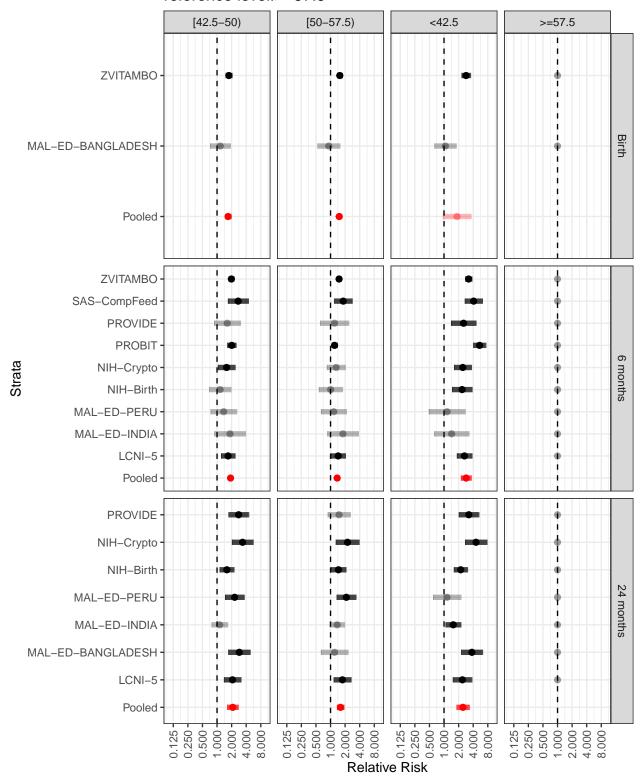
Maternal height reference level:>=160



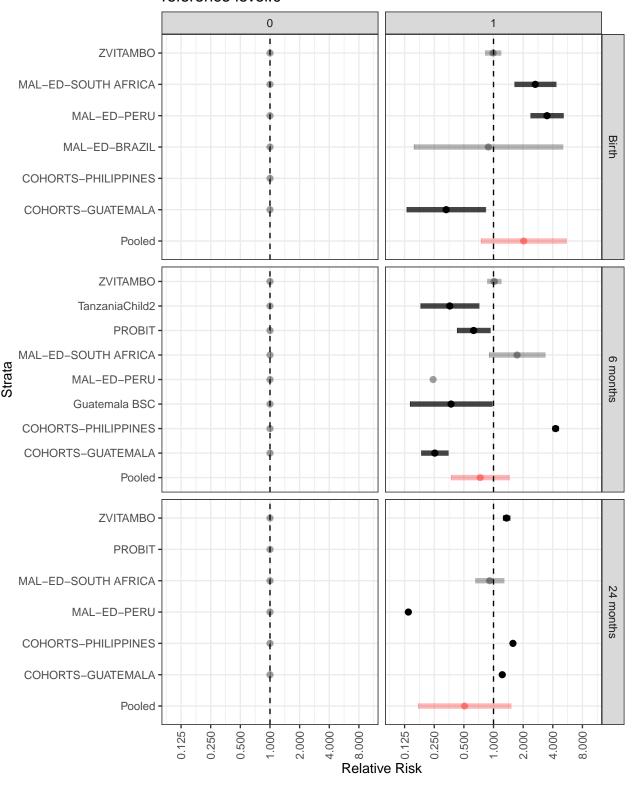
Maternal parity reference level:1



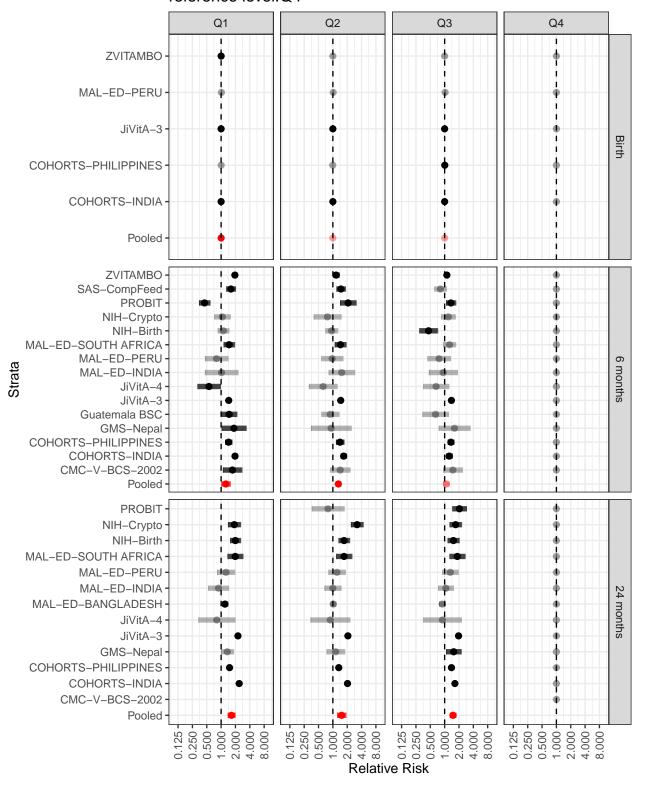
Maternal weight reference level:>=57.5



Mother is unmarried reference level:0

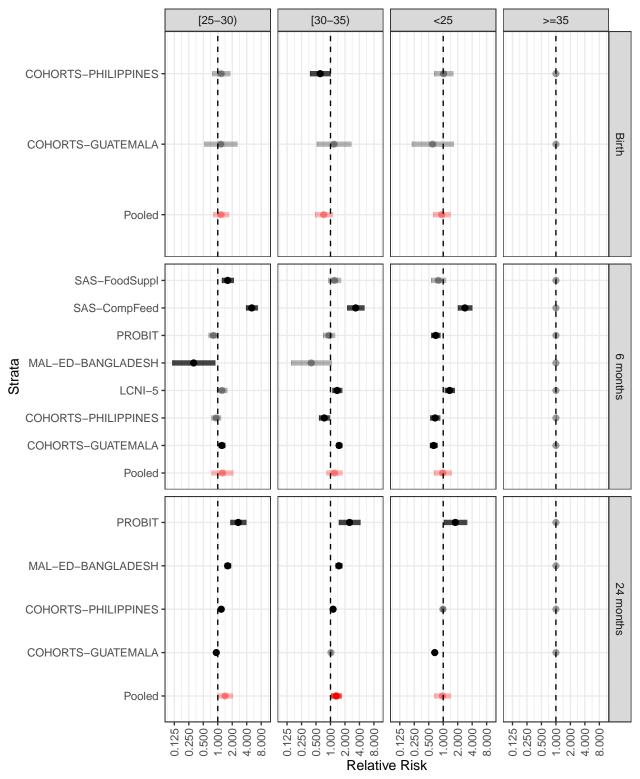


Mother's education reference level:Q4

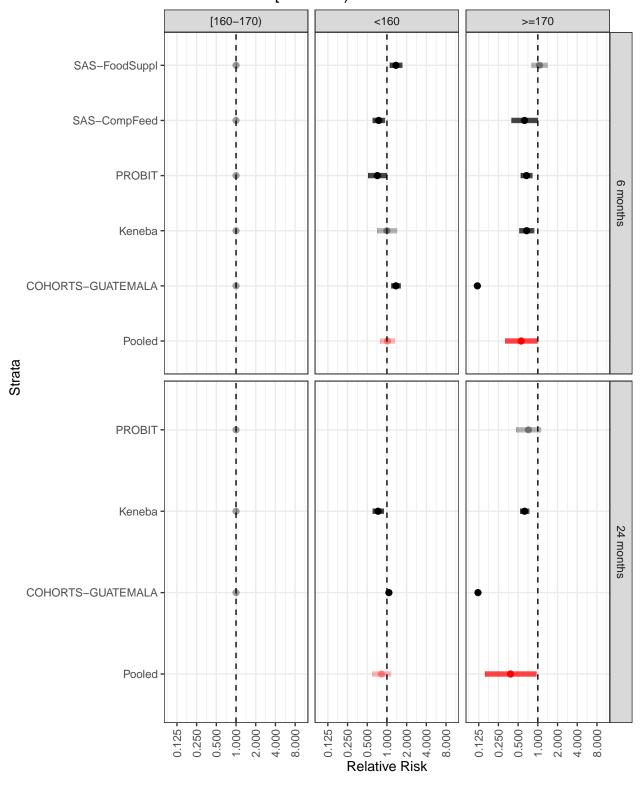


Paternal characteristics

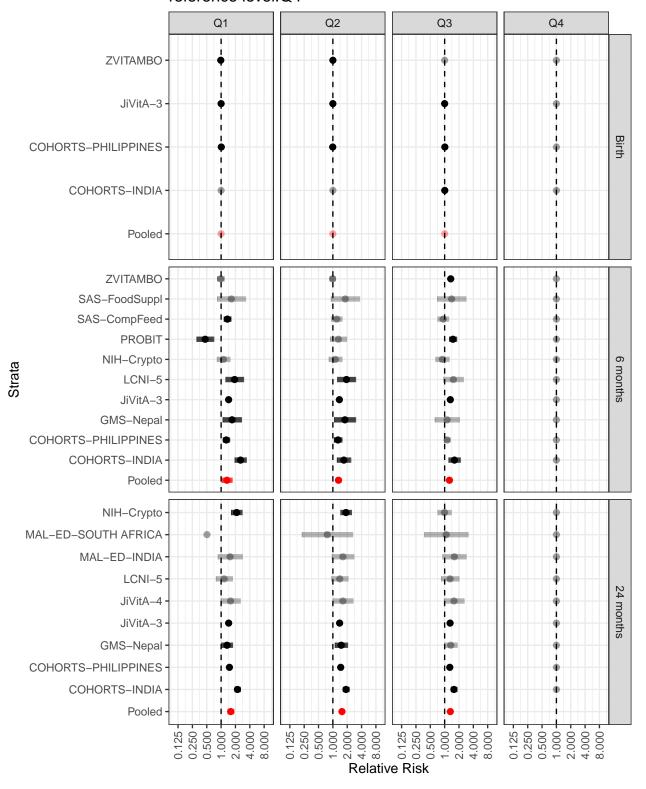
Father age reference level:>=35



Father height reference level:[160–170)



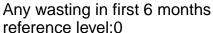
Father's education reference level:Q4

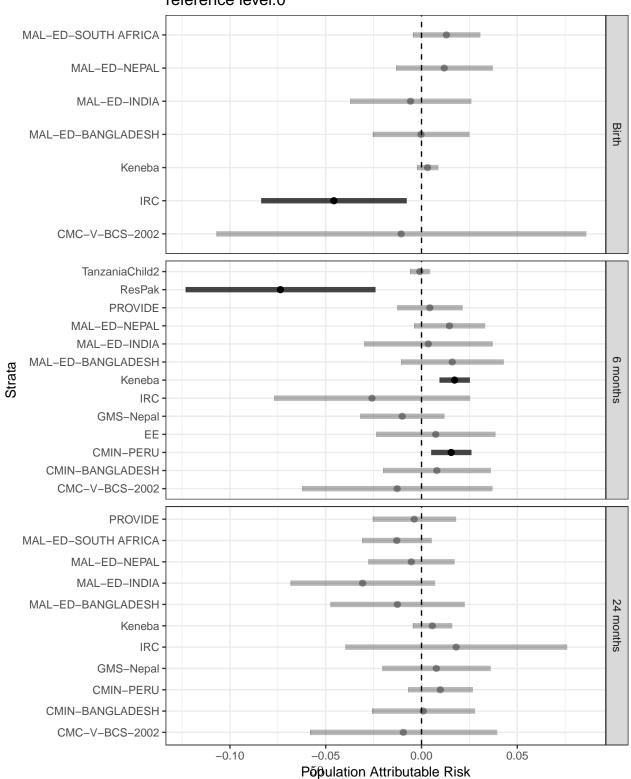


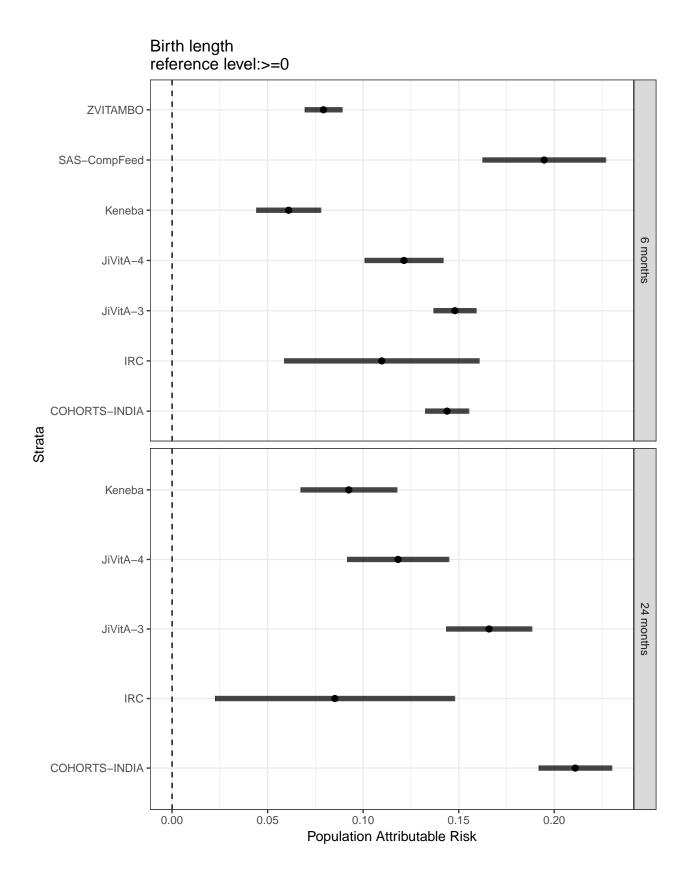
Appendix 2 - Population Attributable Risk stratified by cohort

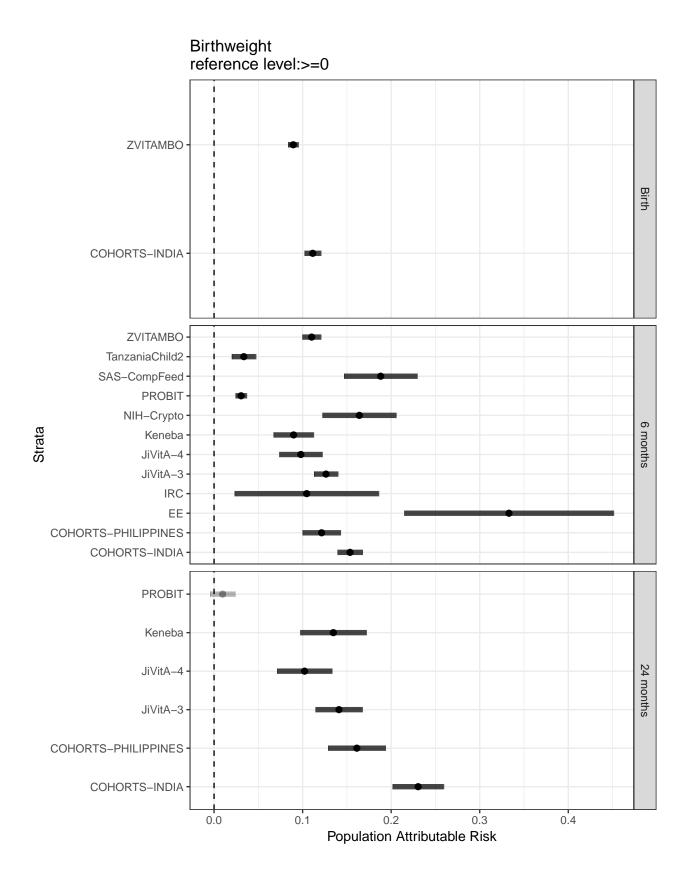
Point prevalence of stunting

Child characteristics

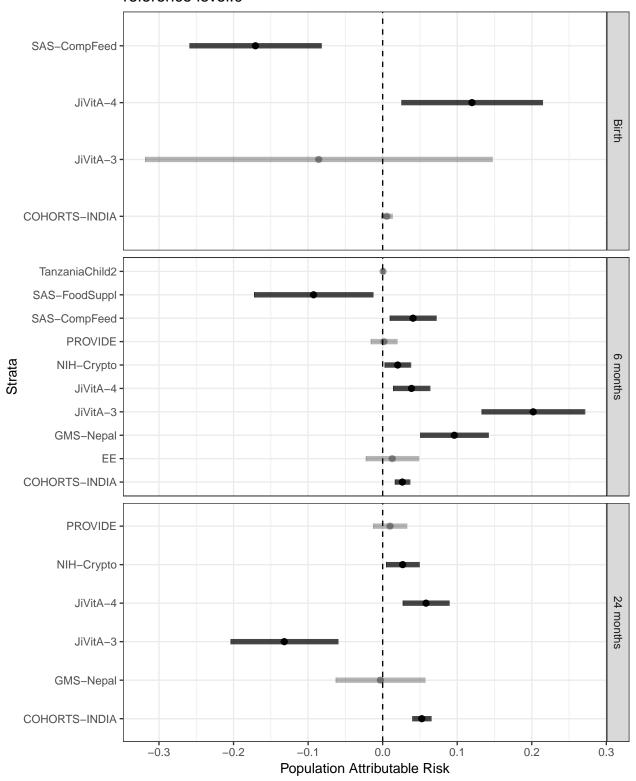


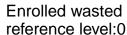


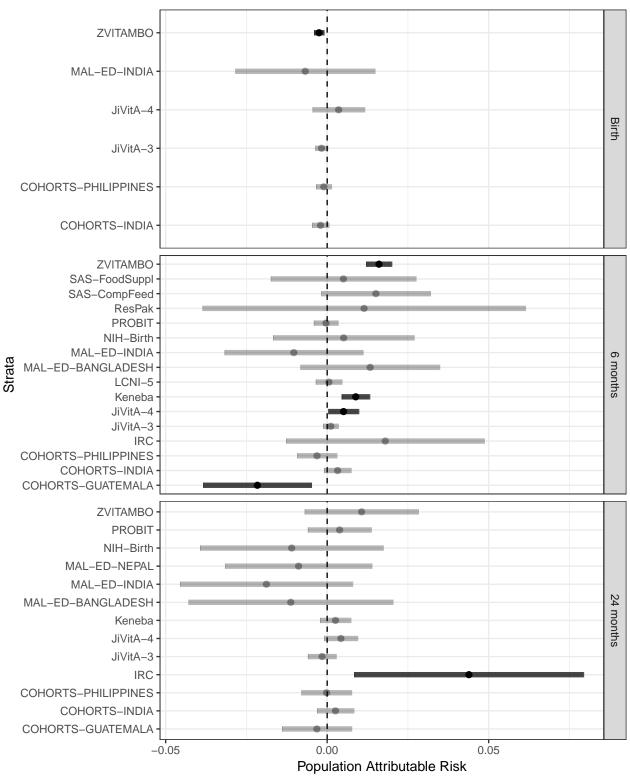




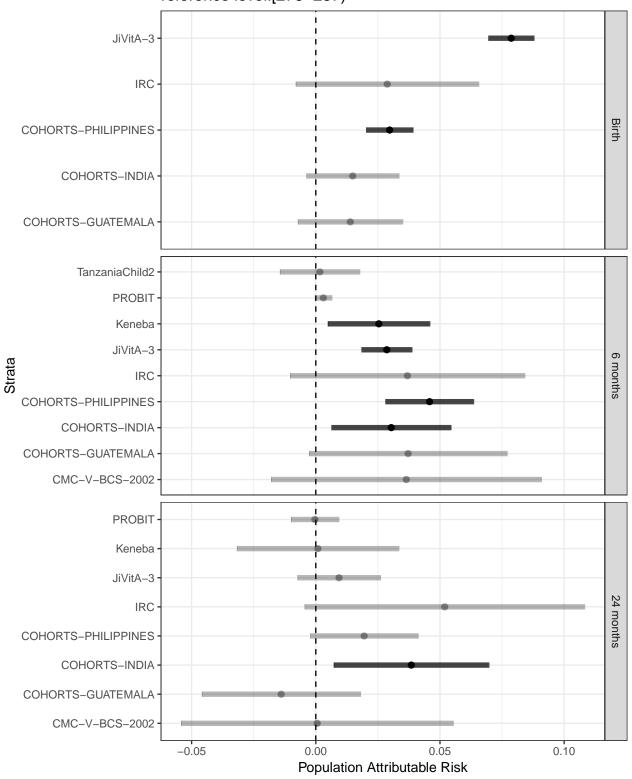
Child delivered at home reference level:0



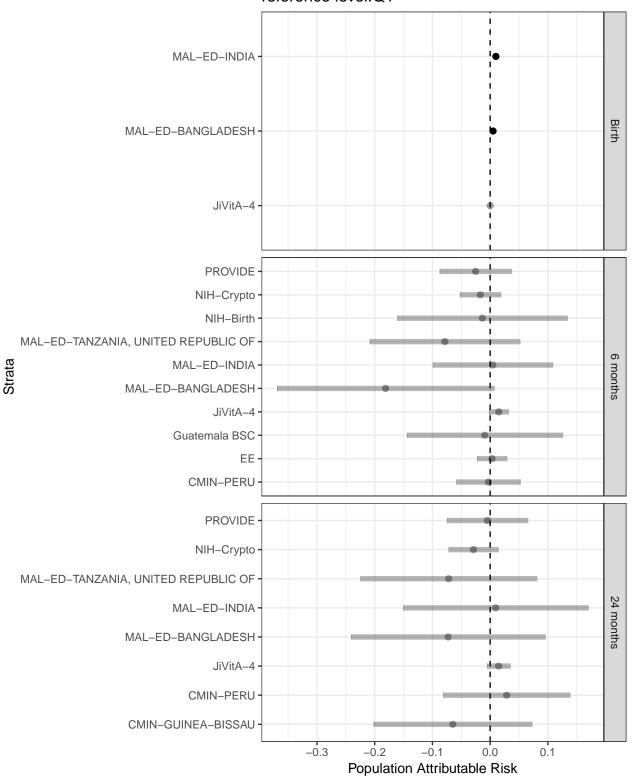




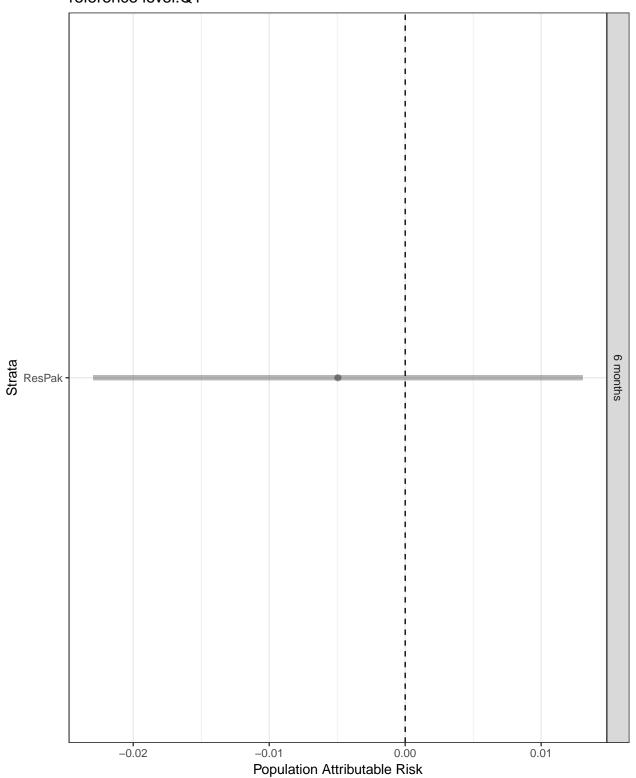
Gestational age at birth in days reference level:[273–287)



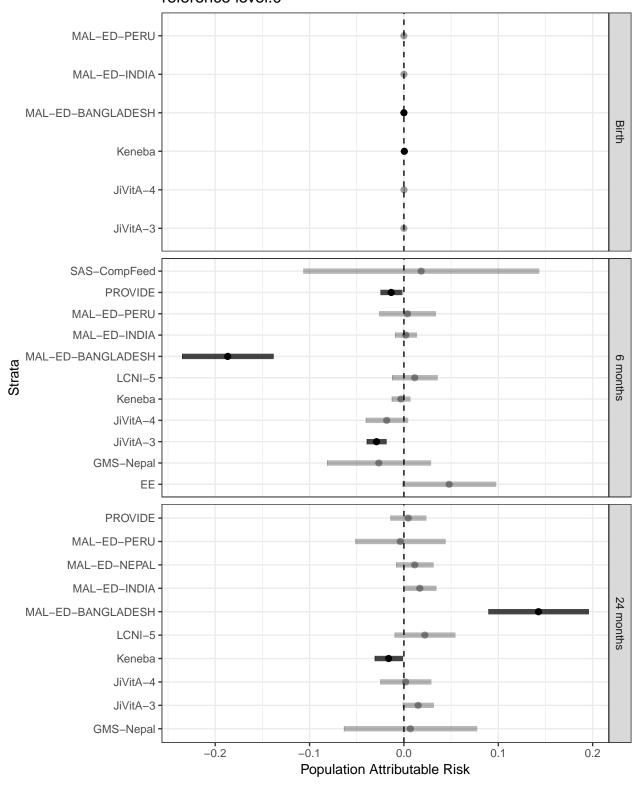
Percent diarrhea in first 24 months reference level:Q1



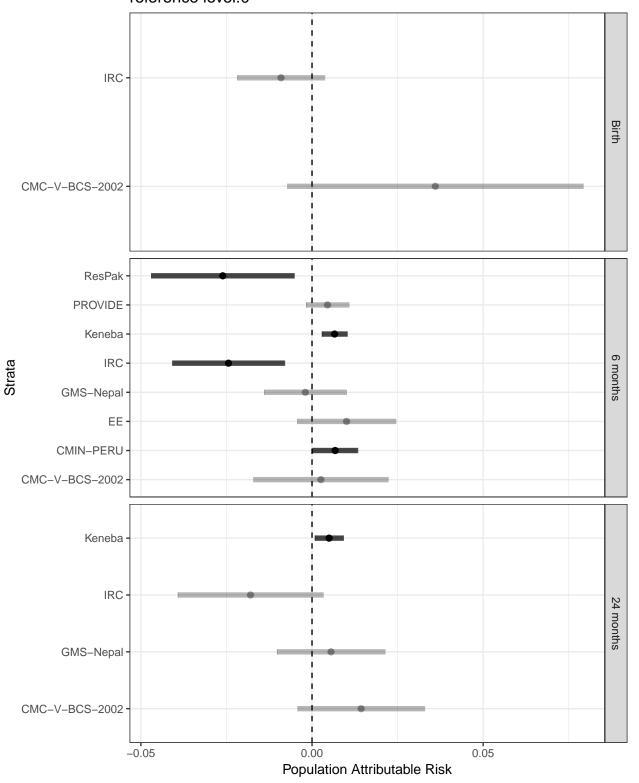
Percent diarrhea in first 6 months reference level:Q1



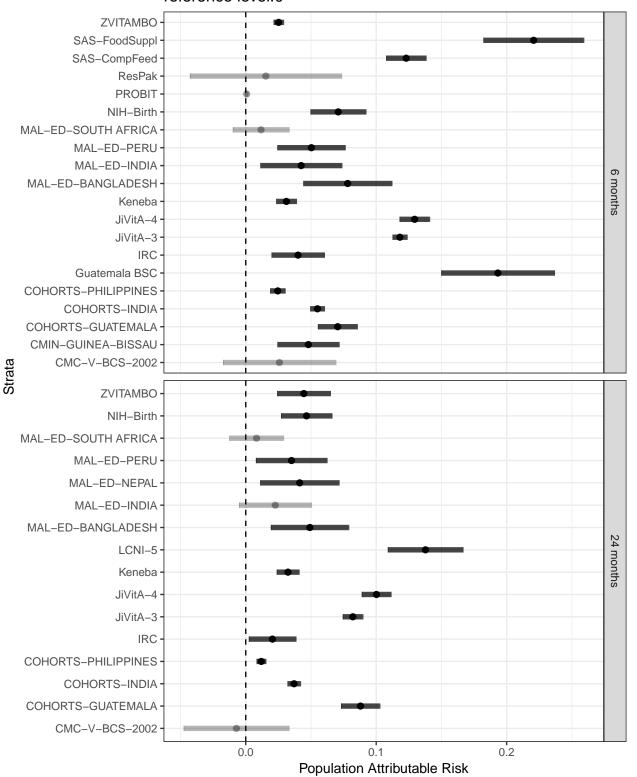
Percent exclusive breastfeeding reference level:0

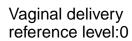


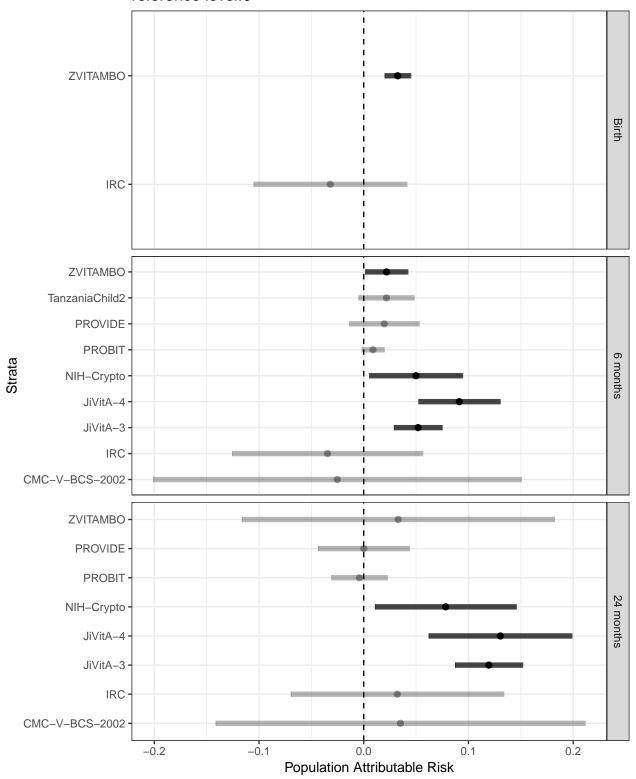
Persistent wasting in first 6 months reference level:0



Stunted at enrollment reference level:0

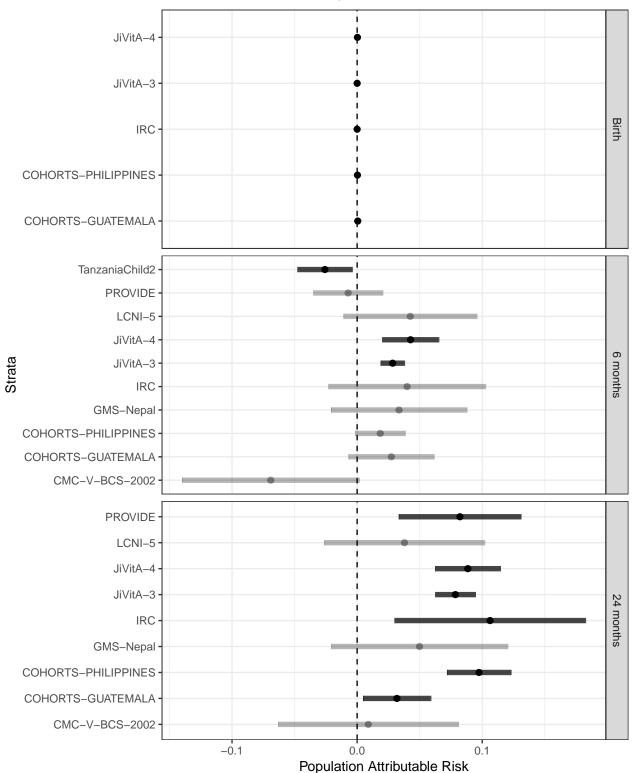


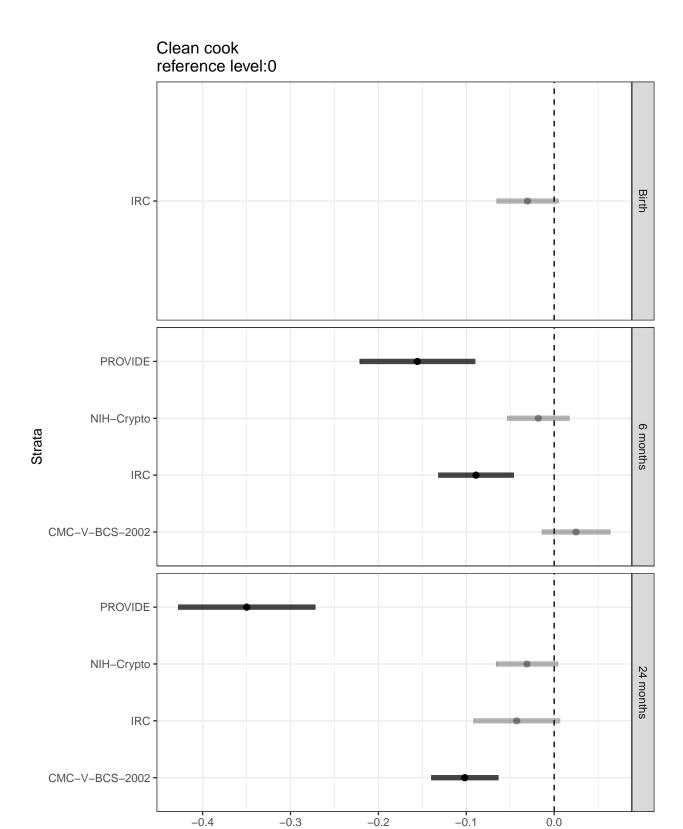




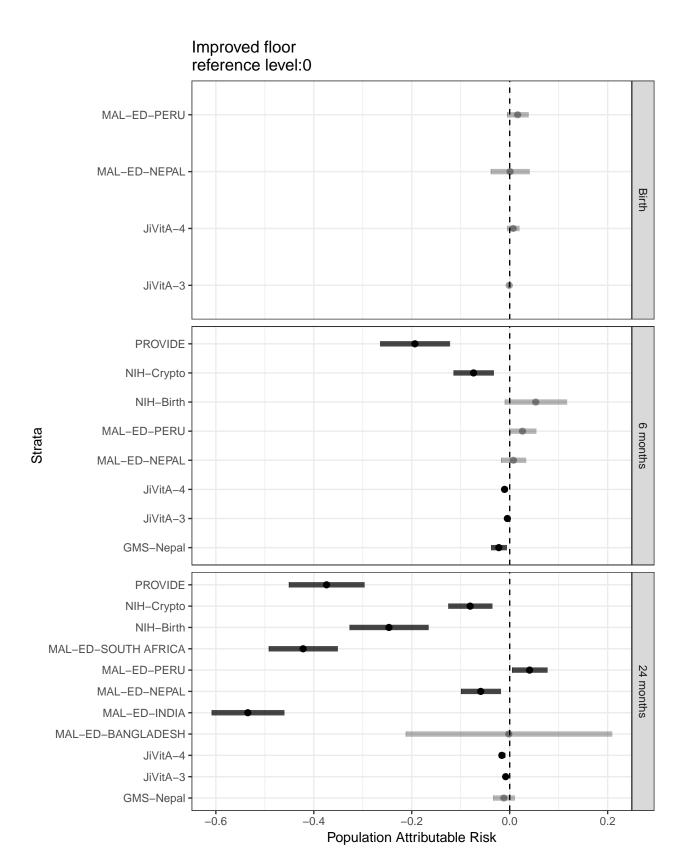
Household characteristics

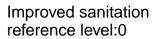
Asset based wealth index reference level: Wealth Q4

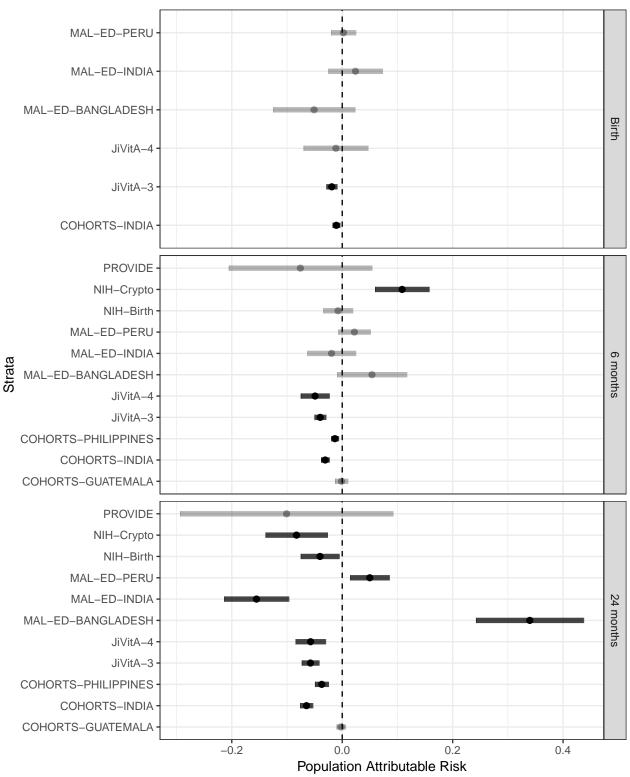




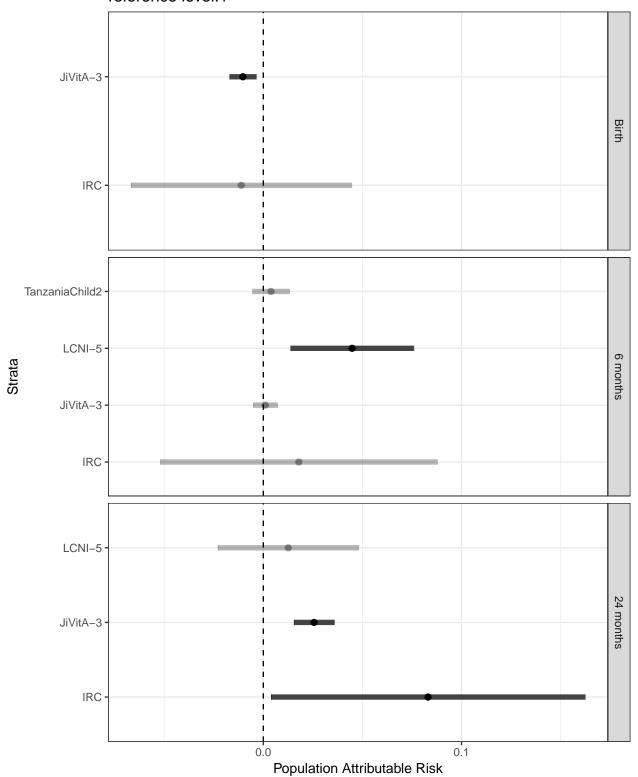
Population Attributable Risk



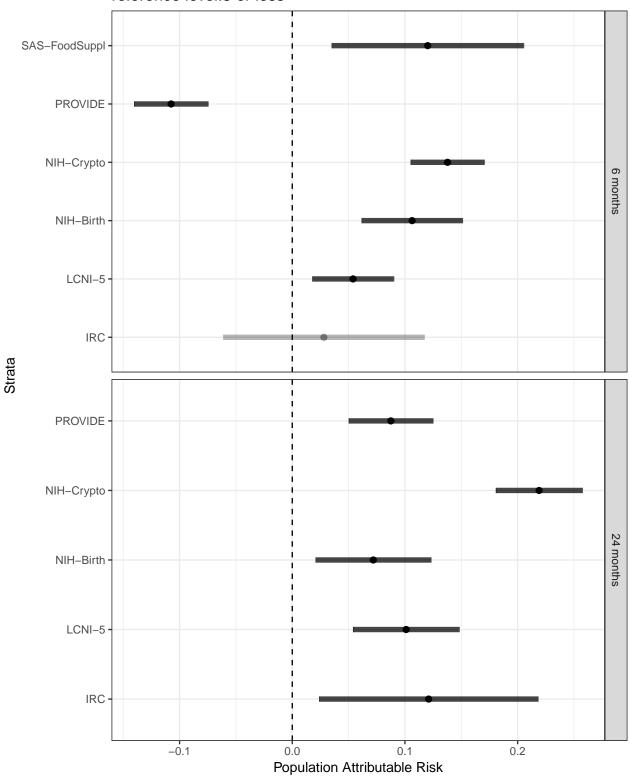




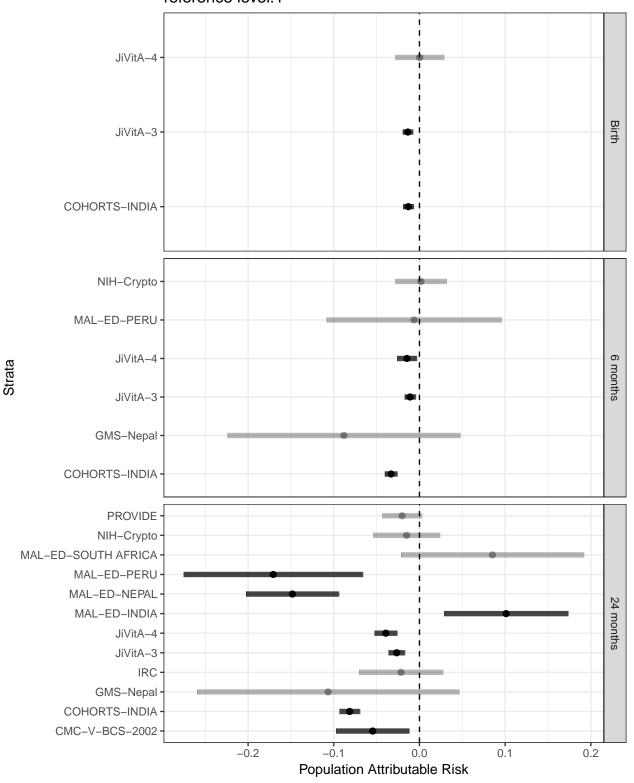
Number of children in the household under 5 years reference level:1

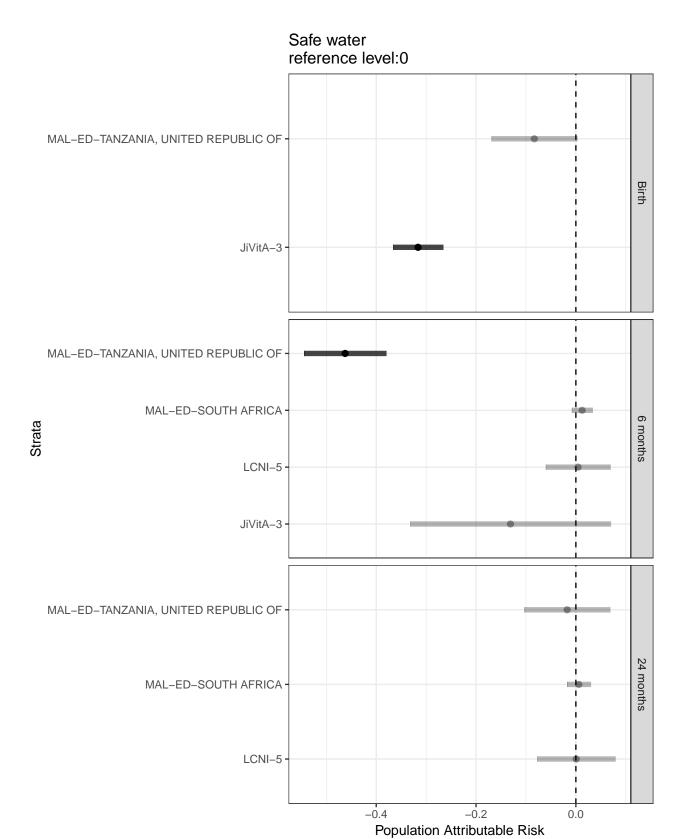


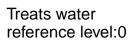
Number of people in the household reference level:3 or less

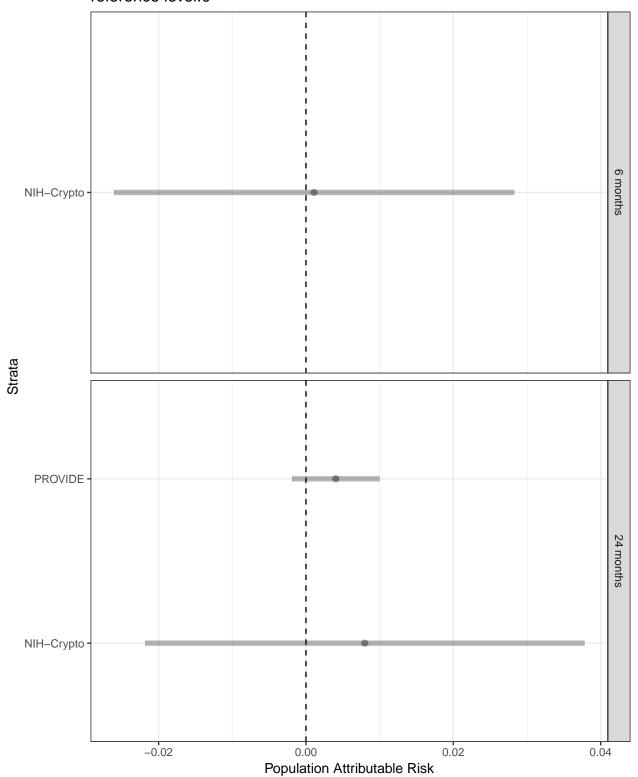


Number of rooms in household reference level:1

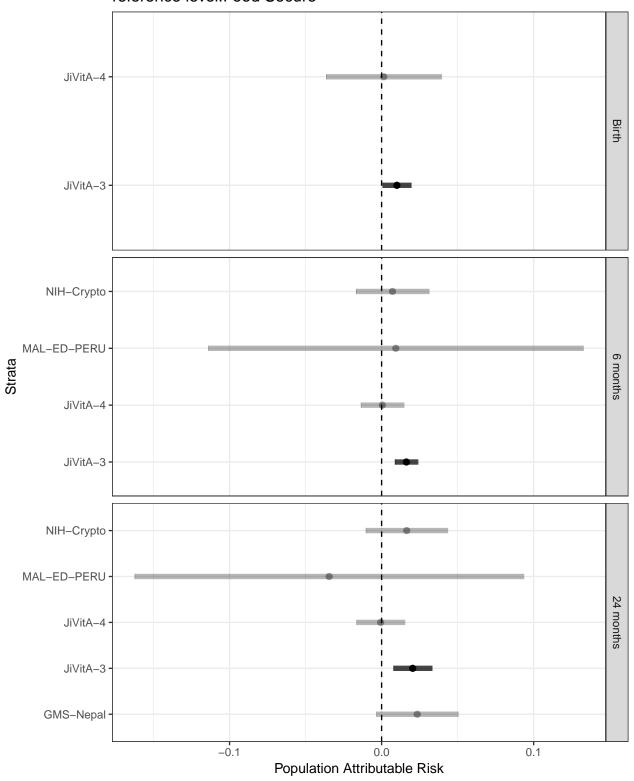




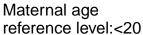


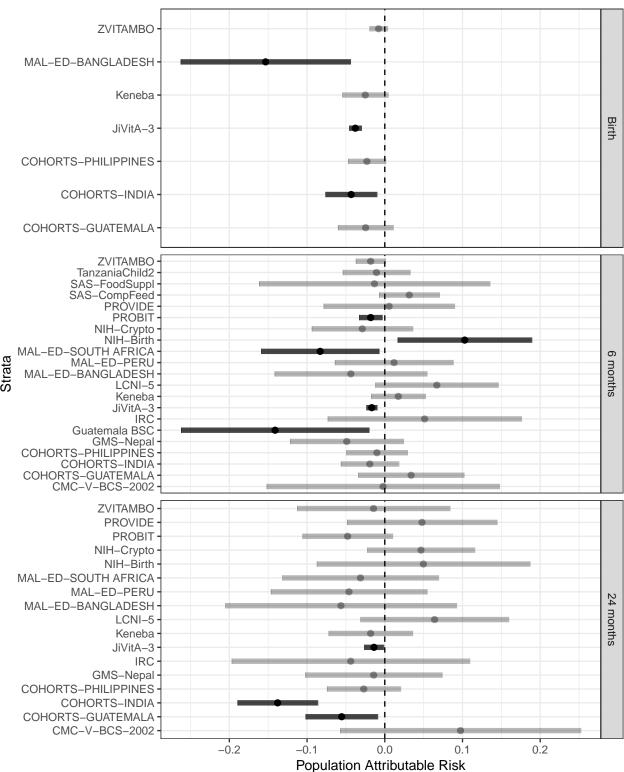


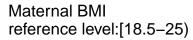
USAID Household Food Insecurity Access Scale (HFIAS) category reference level:Food Secure

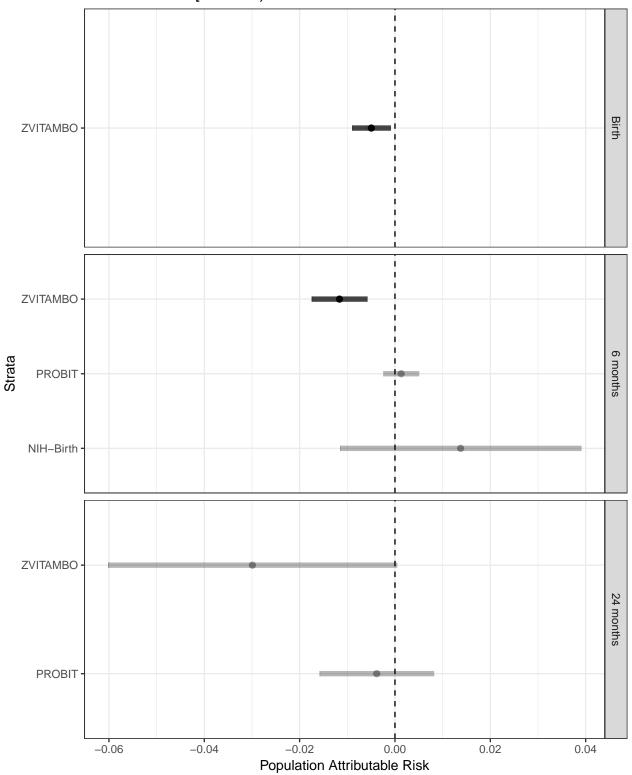


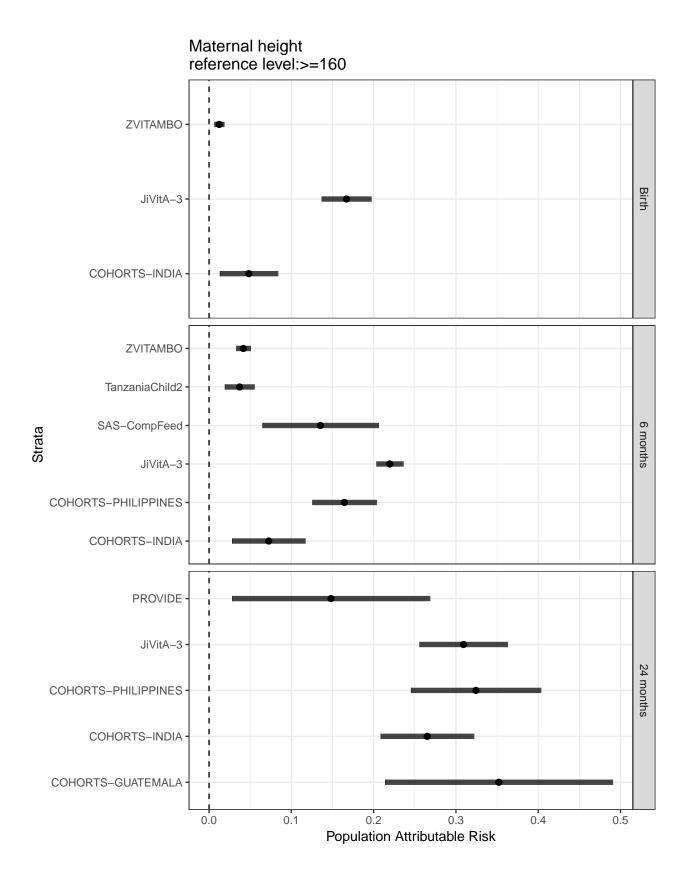
Maternal characteristics

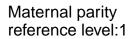


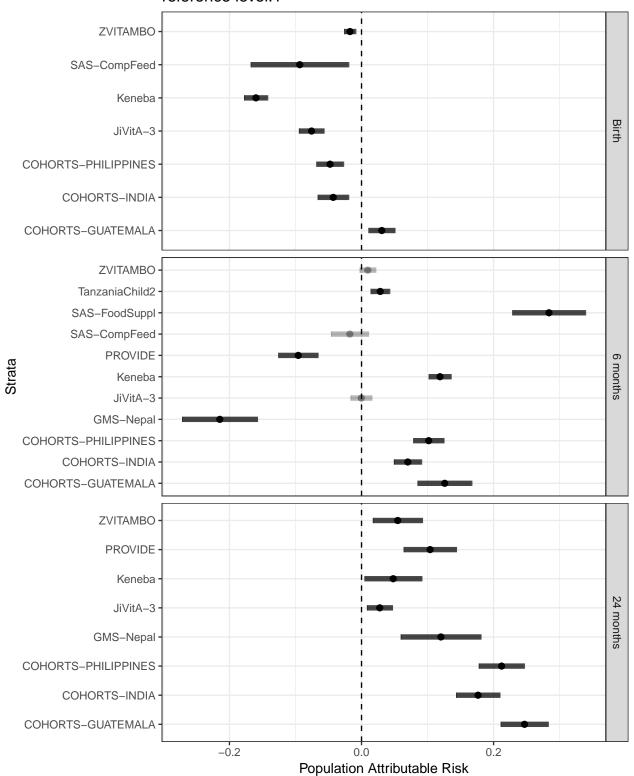


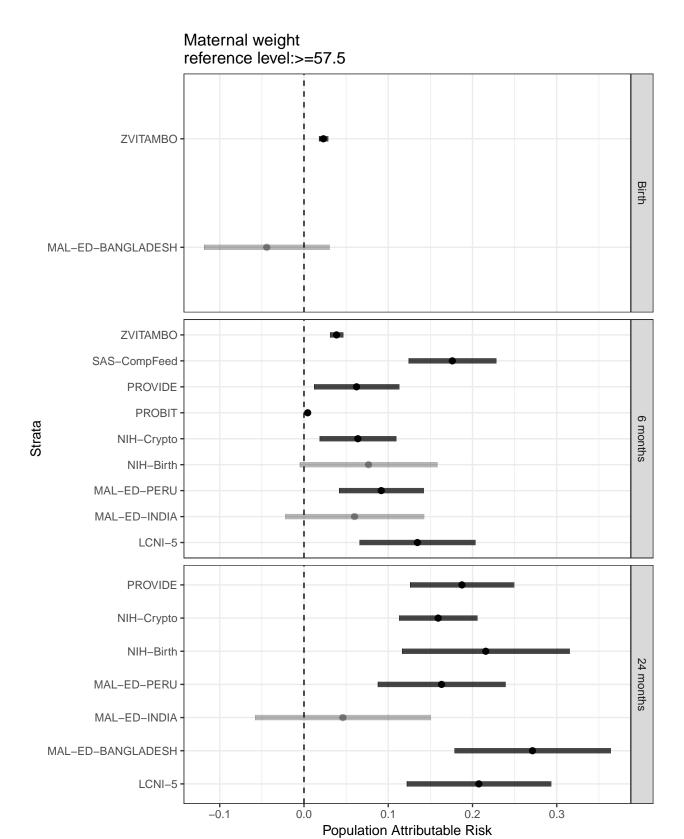


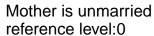


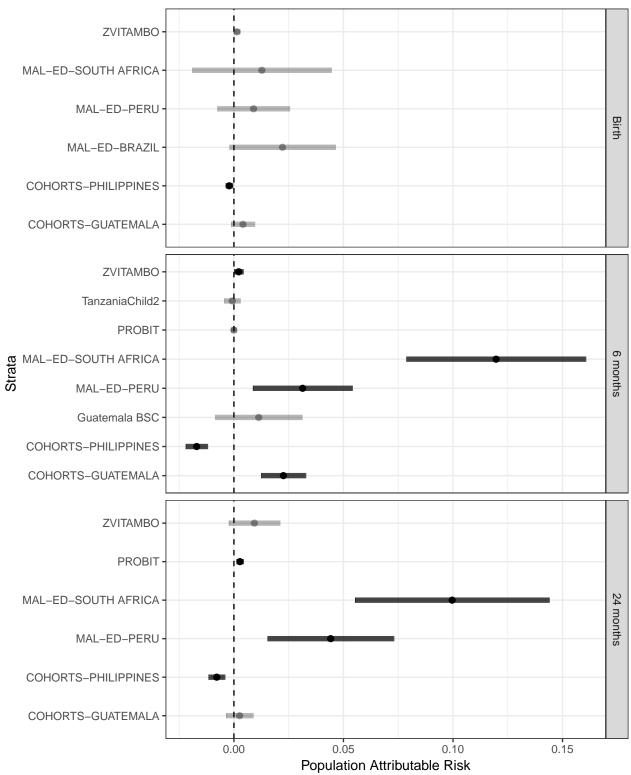


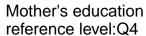


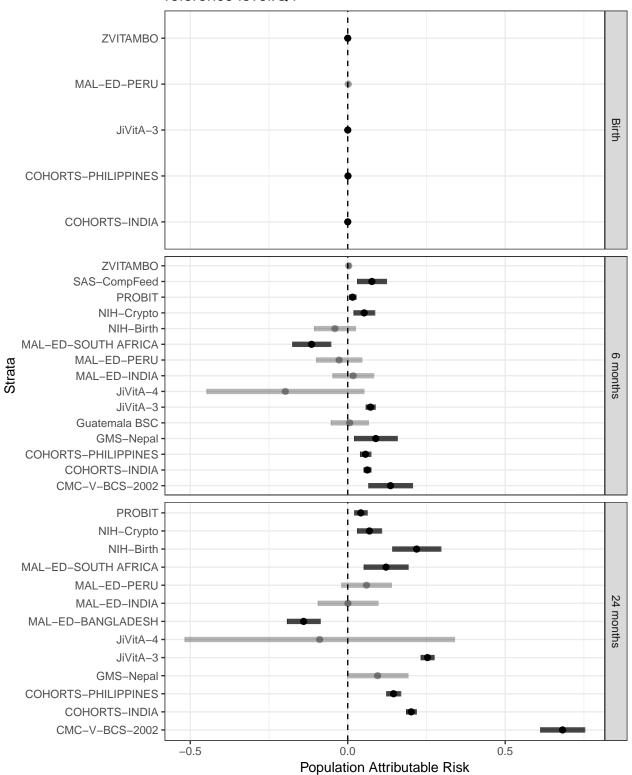




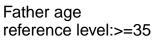


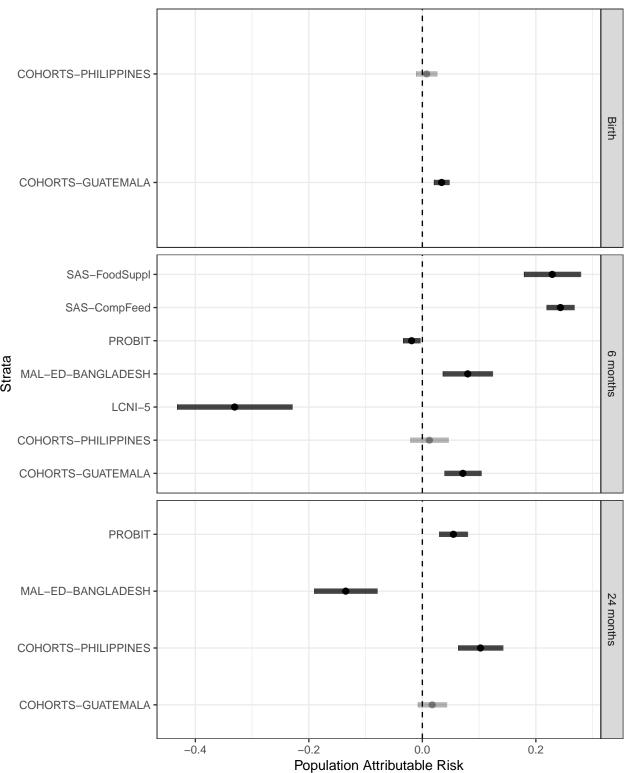


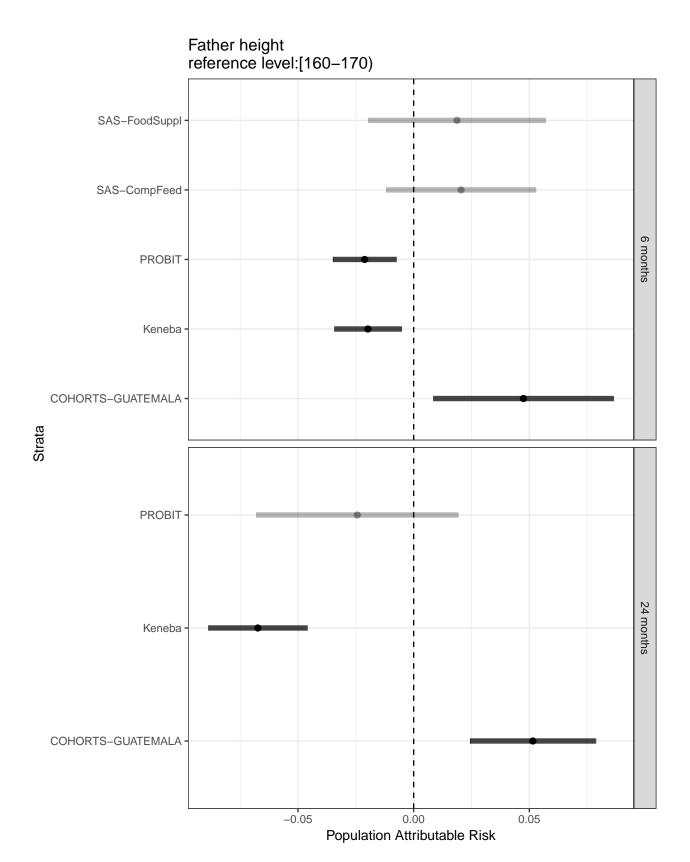


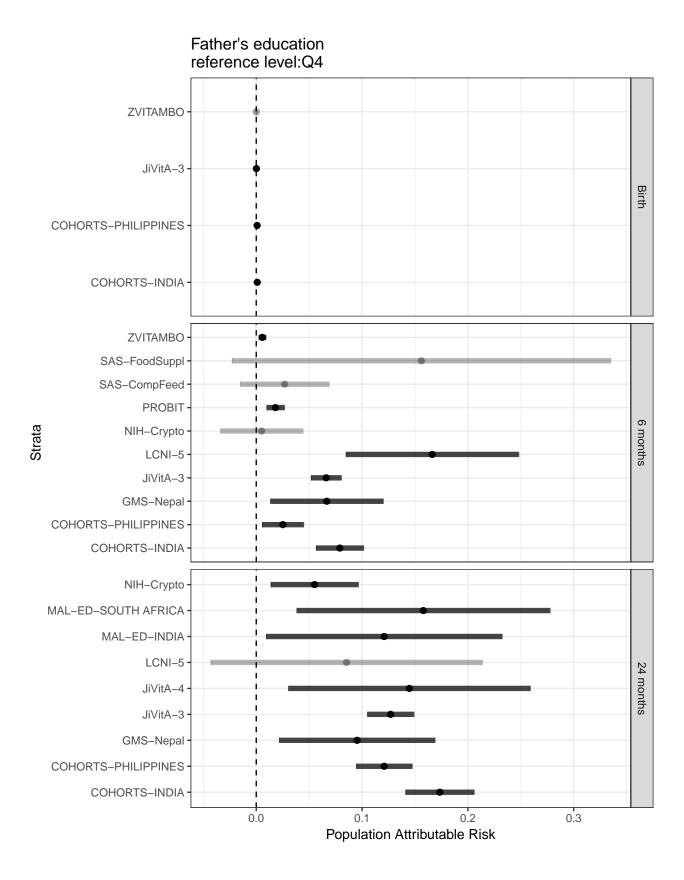


Paternal characteristics





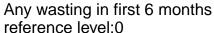


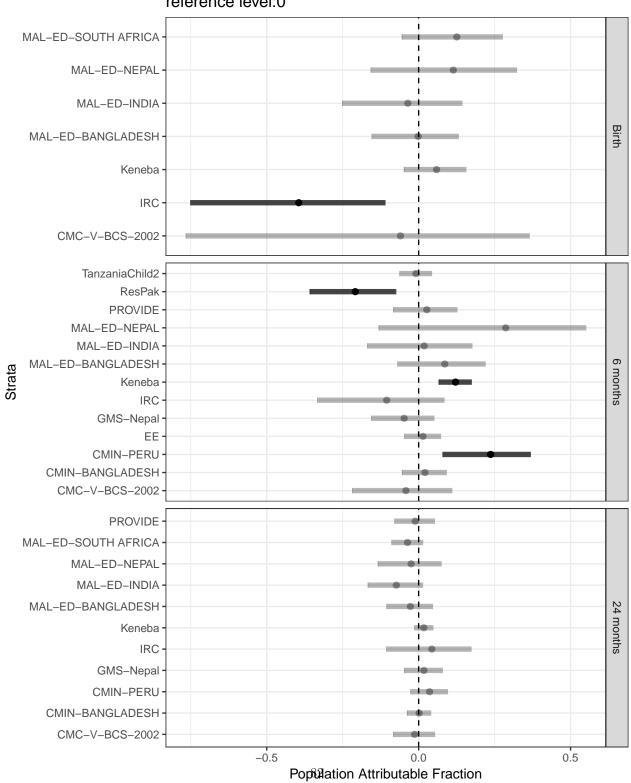


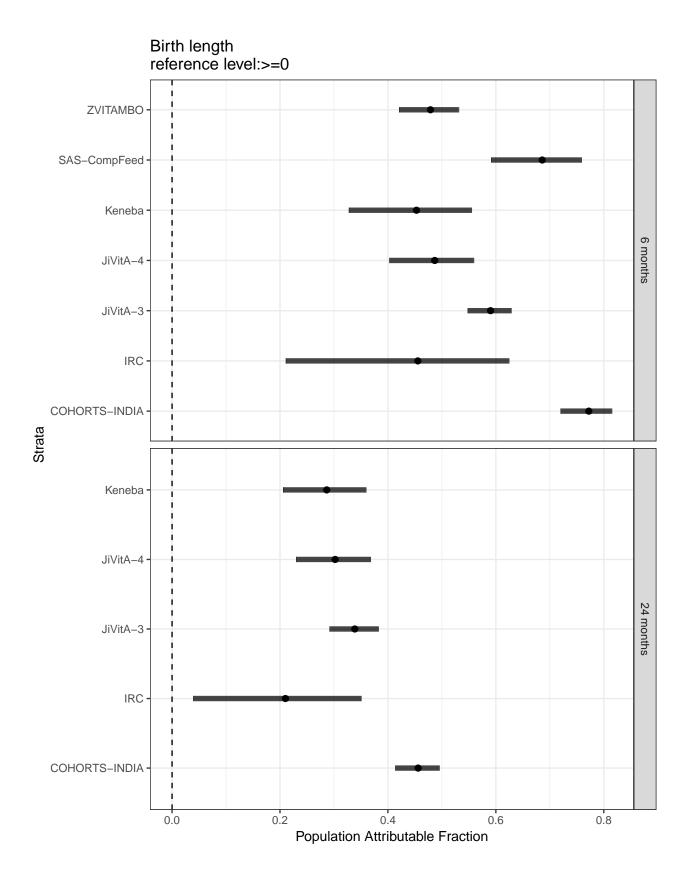
Appendix 3 - Population Attributable Fraction stratified by cohort

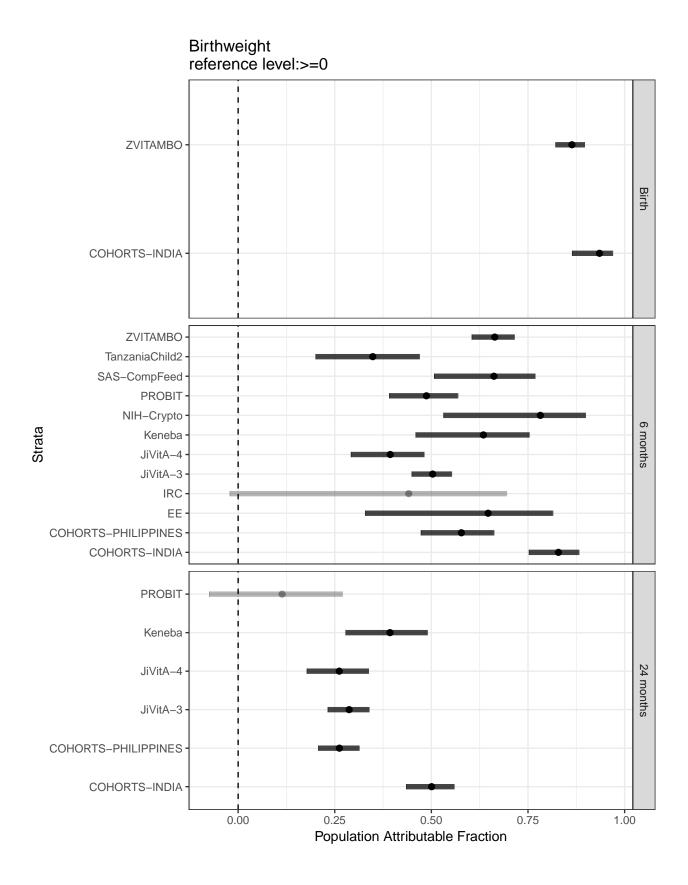
Point prevalence of stunting

Child characteristics

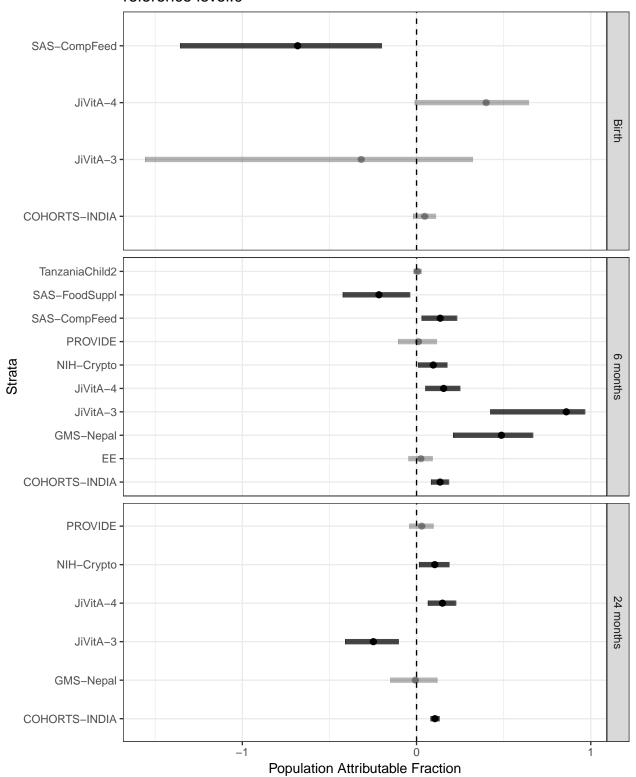


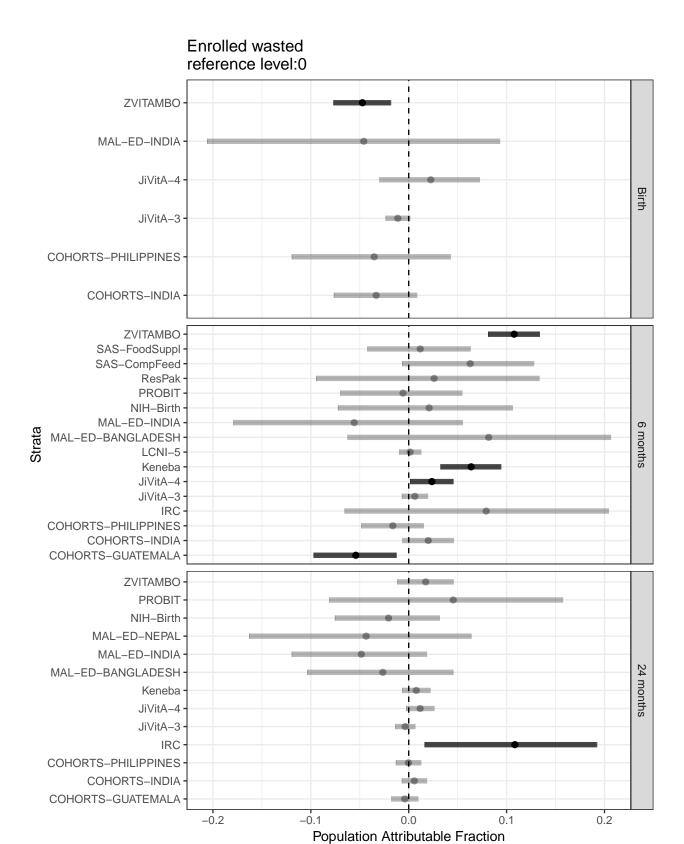




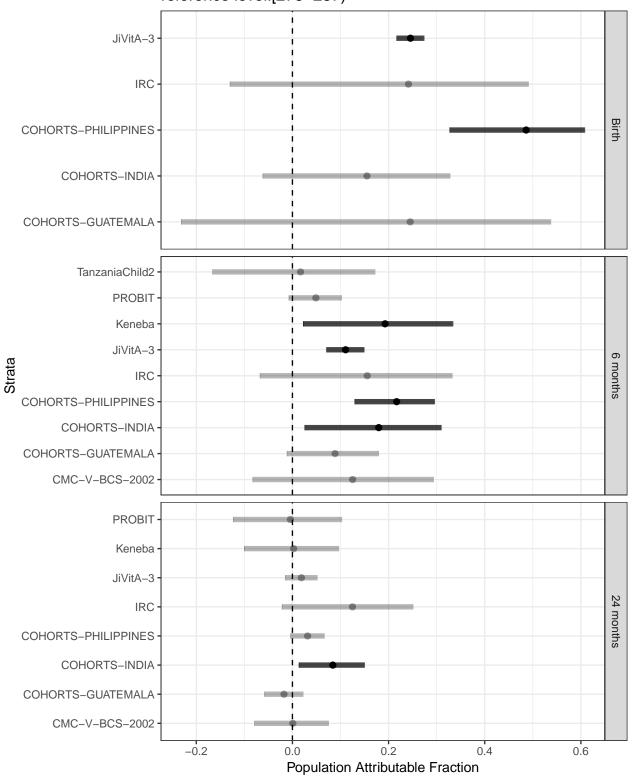


Child delivered at home reference level:0

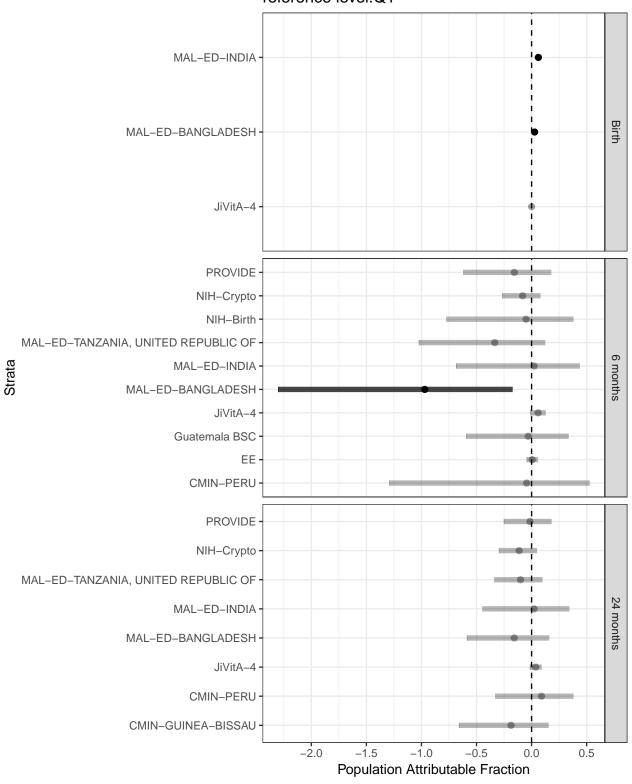




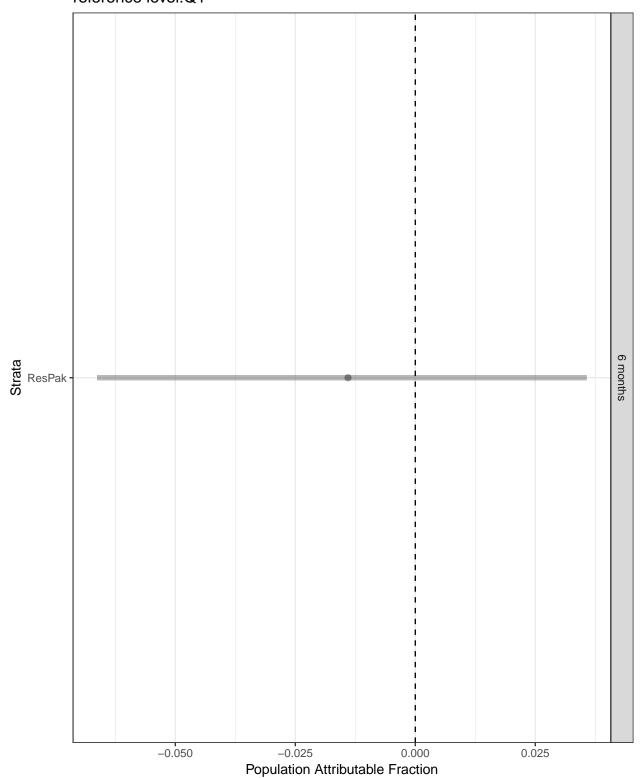
Gestational age at birth in days reference level:[273–287)



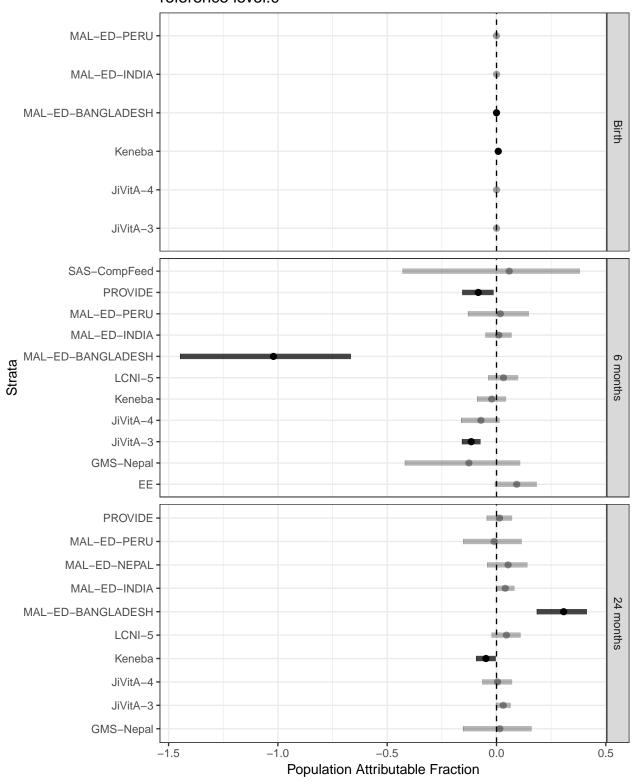
Percent diarrhea in first 24 months reference level:Q1



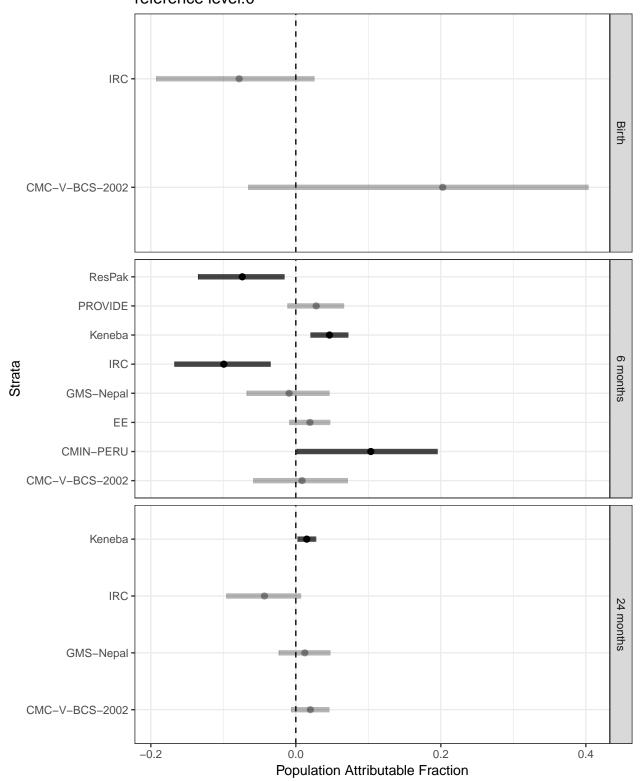
Percent diarrhea in first 6 months reference level:Q1



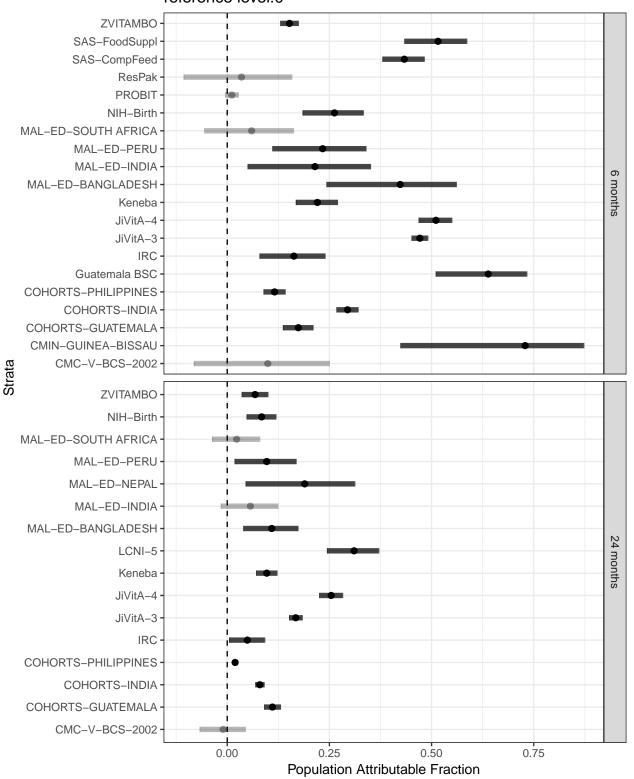
Percent exclusive breastfeeding reference level:0

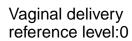


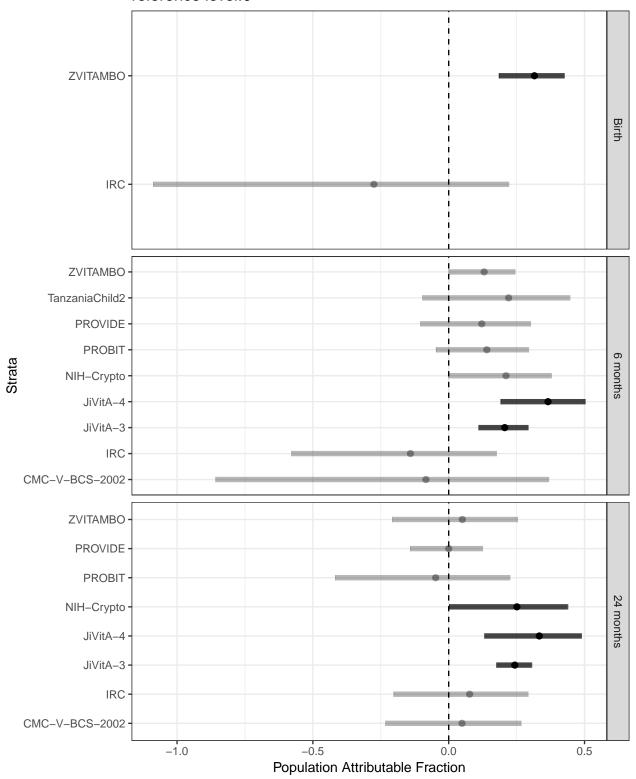
Persistent wasting in first 6 months reference level:0



Stunted at enrollment reference level:0

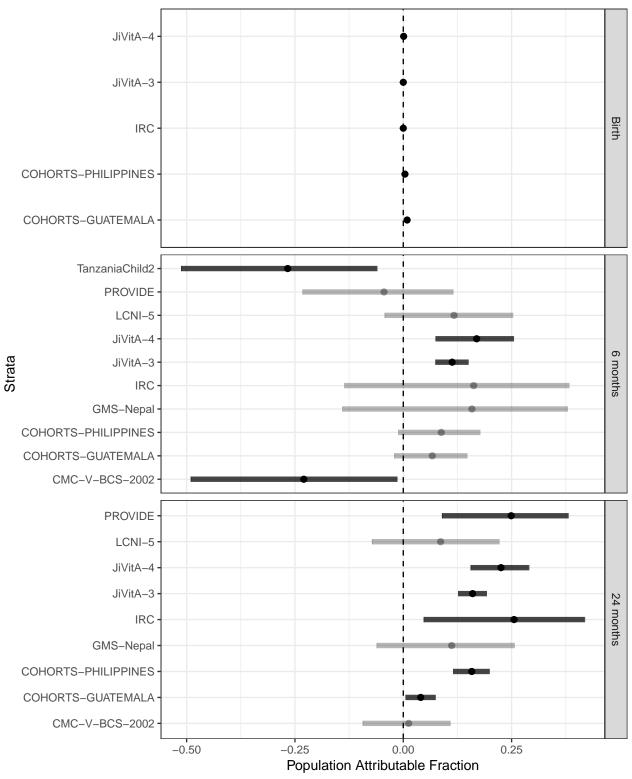


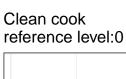


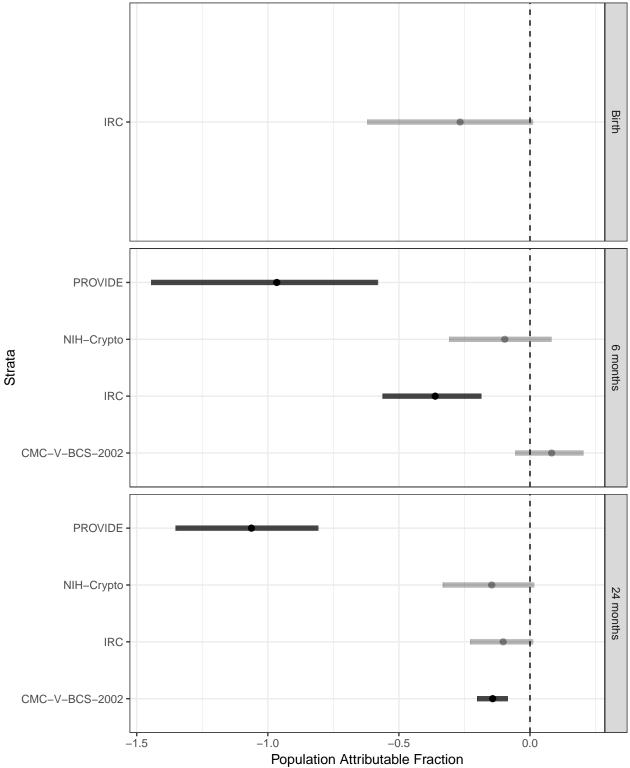


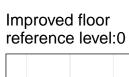
Household characteristics

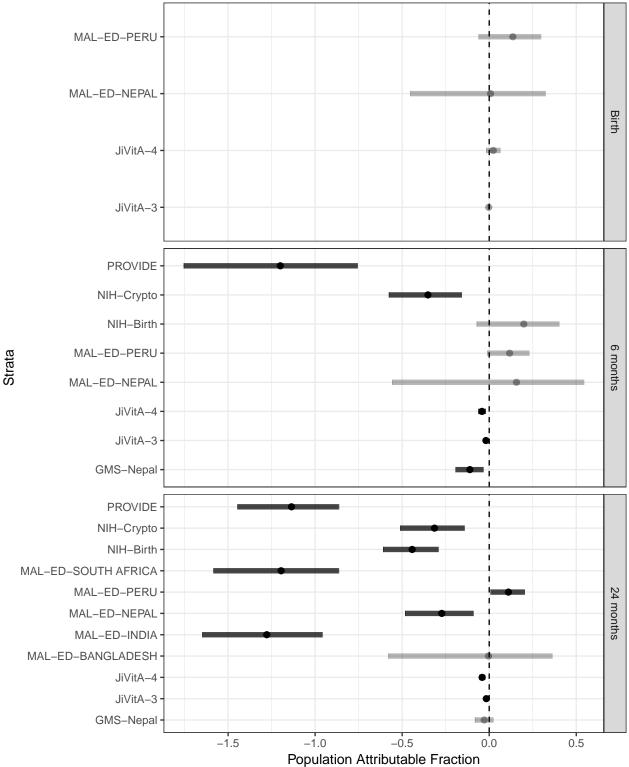
Asset based wealth index reference level: Wealth Q4

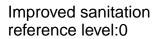


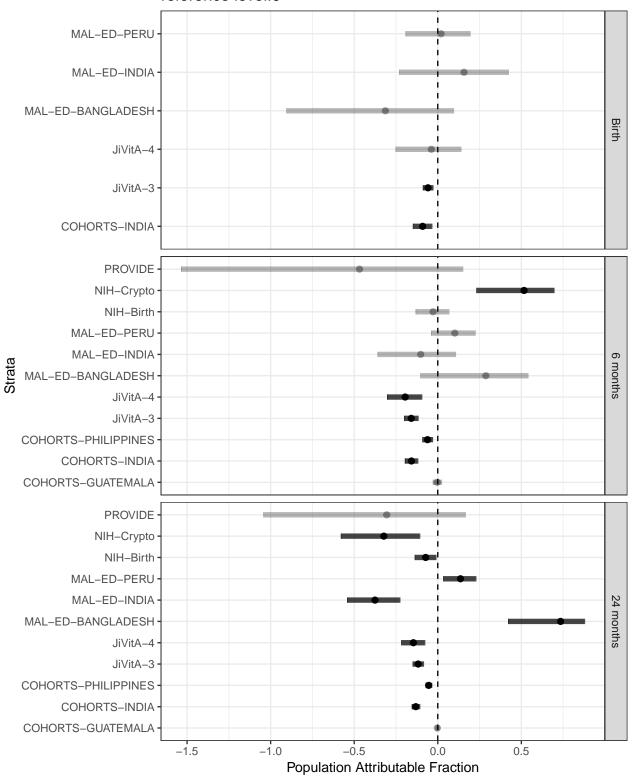




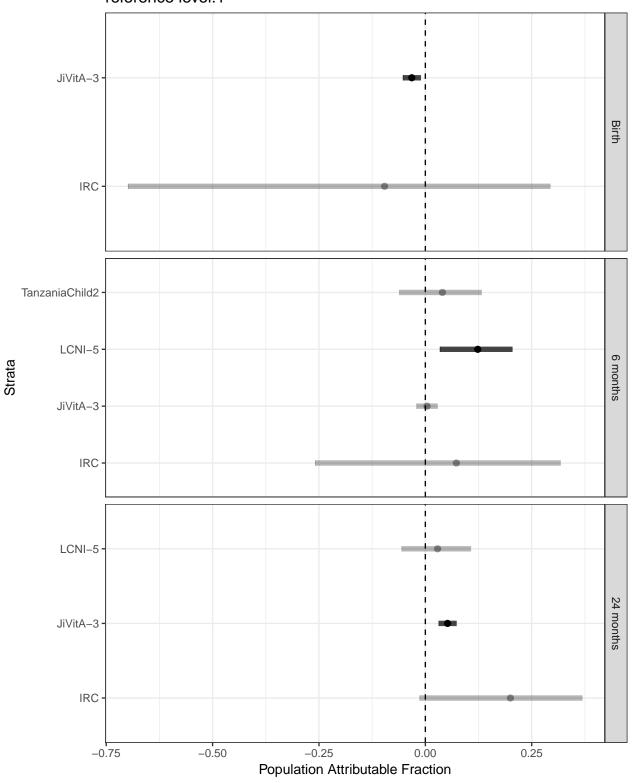




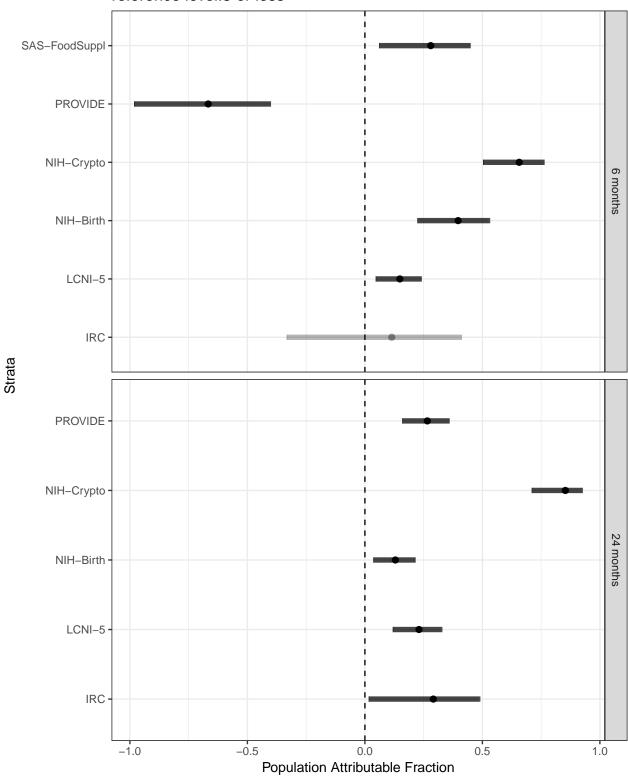




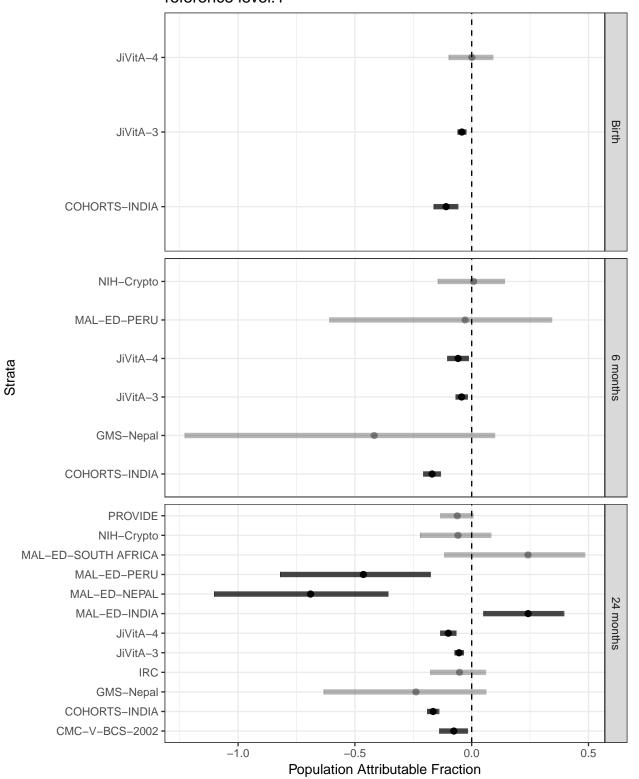
Number of children in the household under 5 years reference level:1

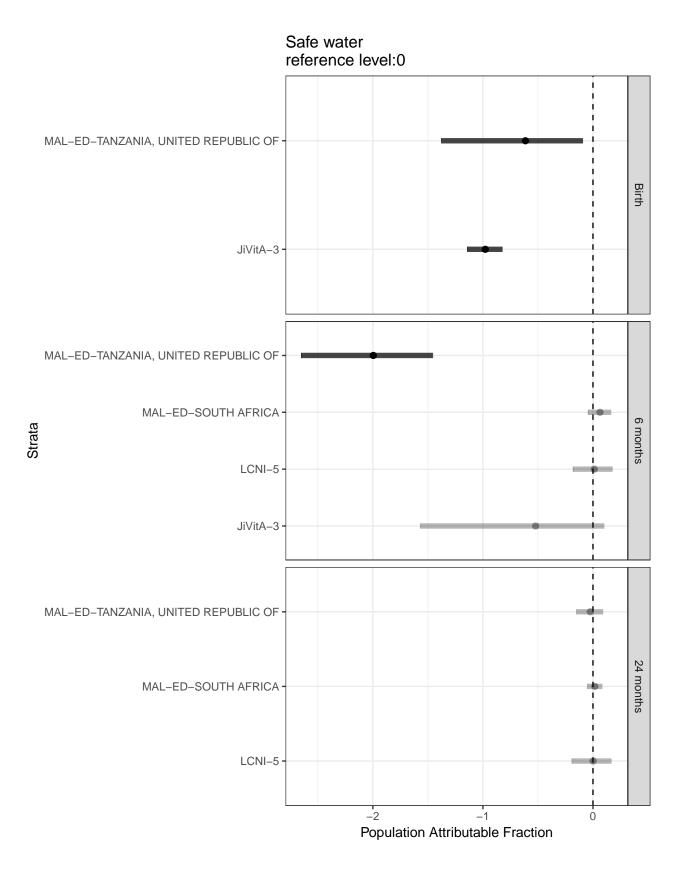


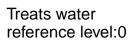
Number of people in the household reference level:3 or less

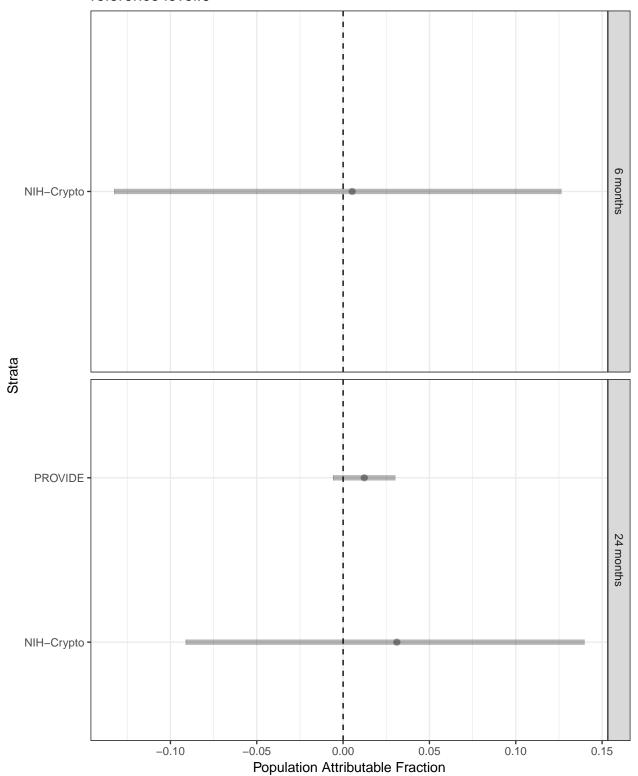


Number of rooms in household reference level:1

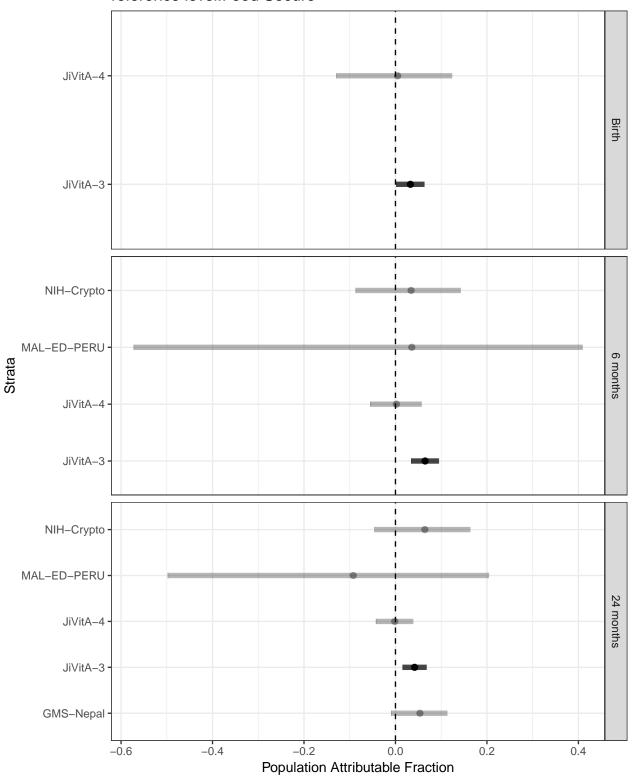




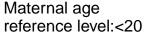


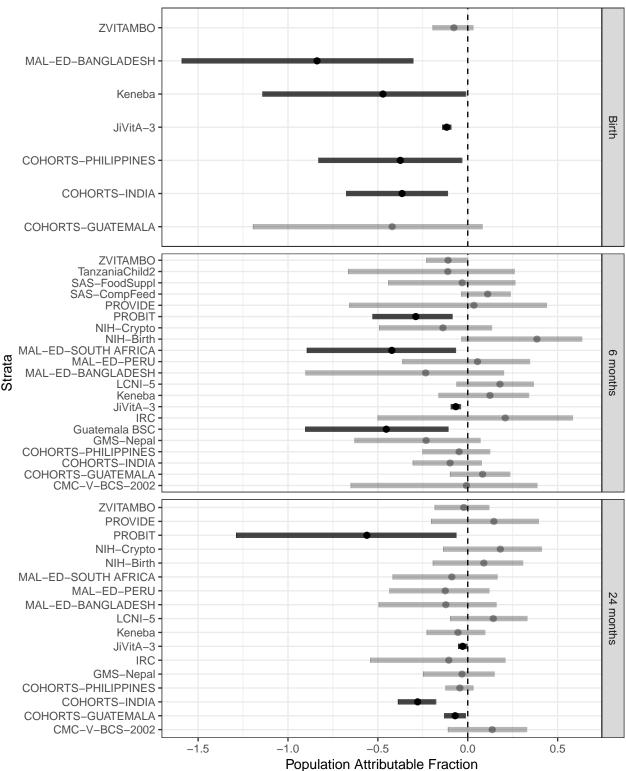


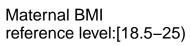
USAID Household Food Insecurity Access Scale (HFIAS) category reference level:Food Secure

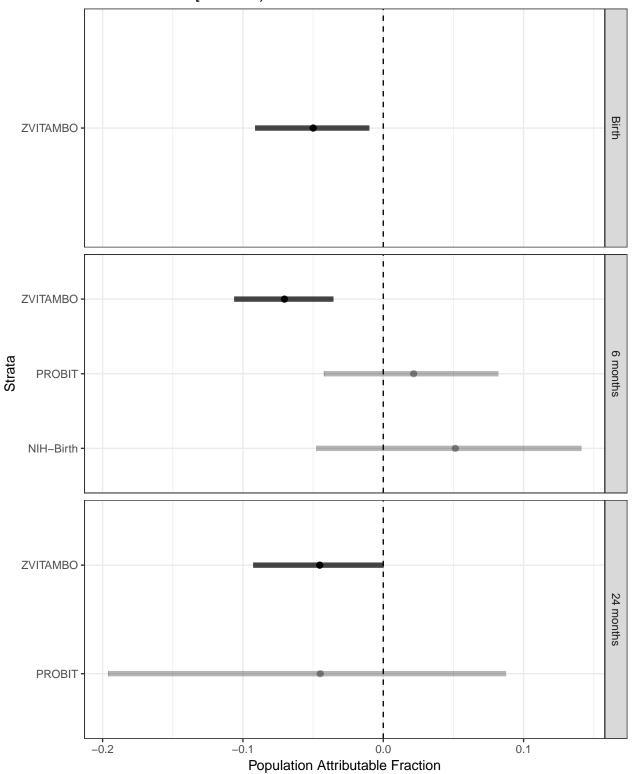


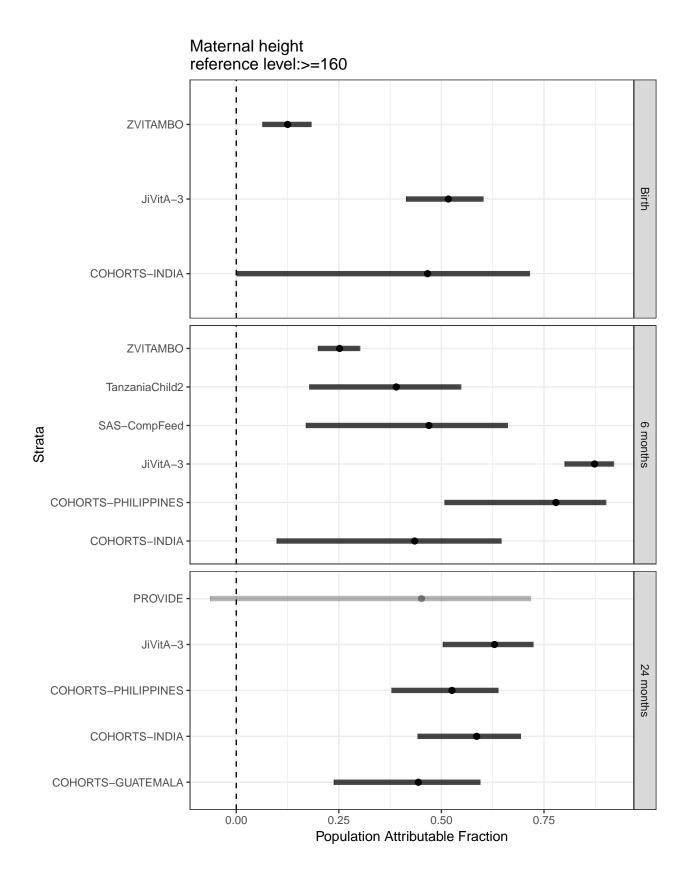
Maternal characteristics

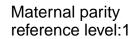


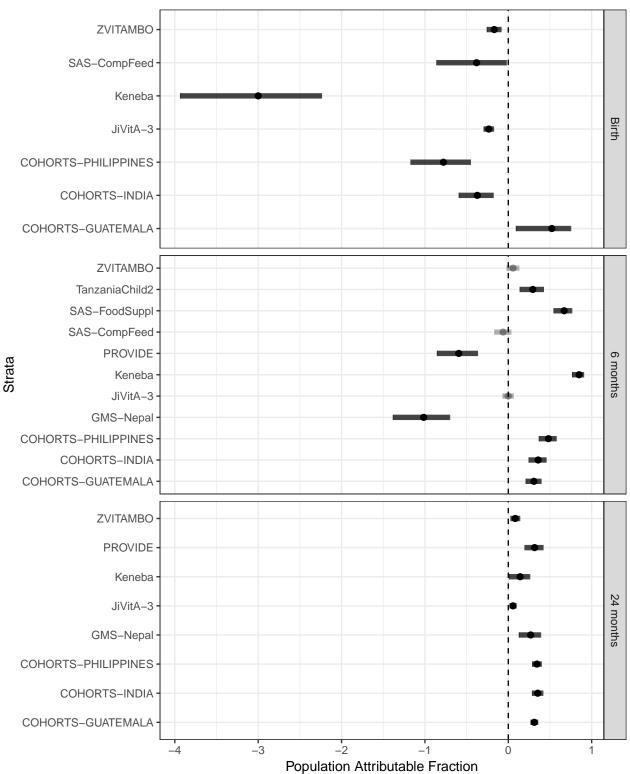


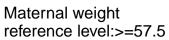


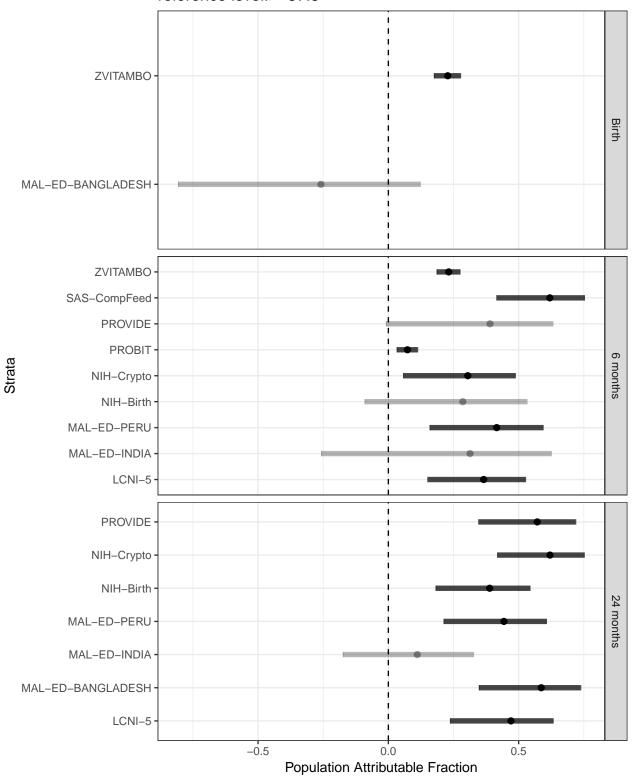


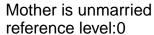


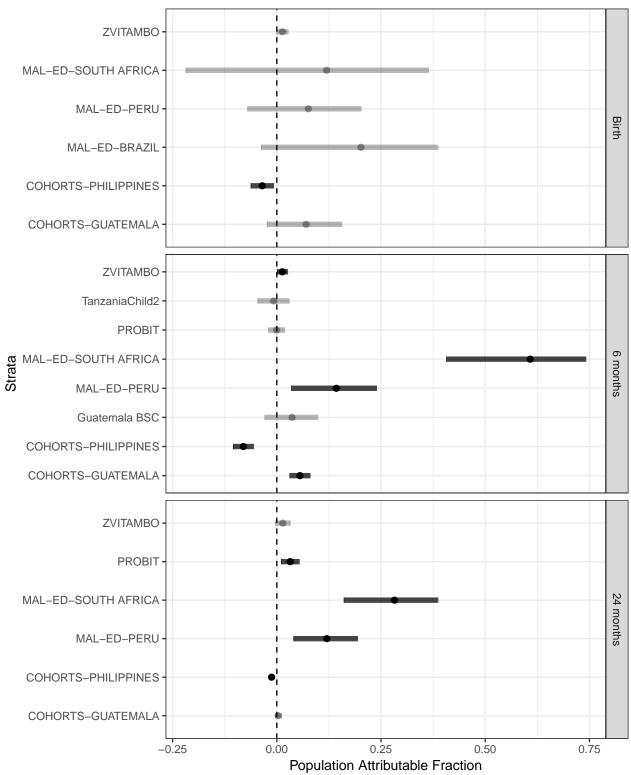


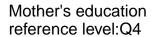


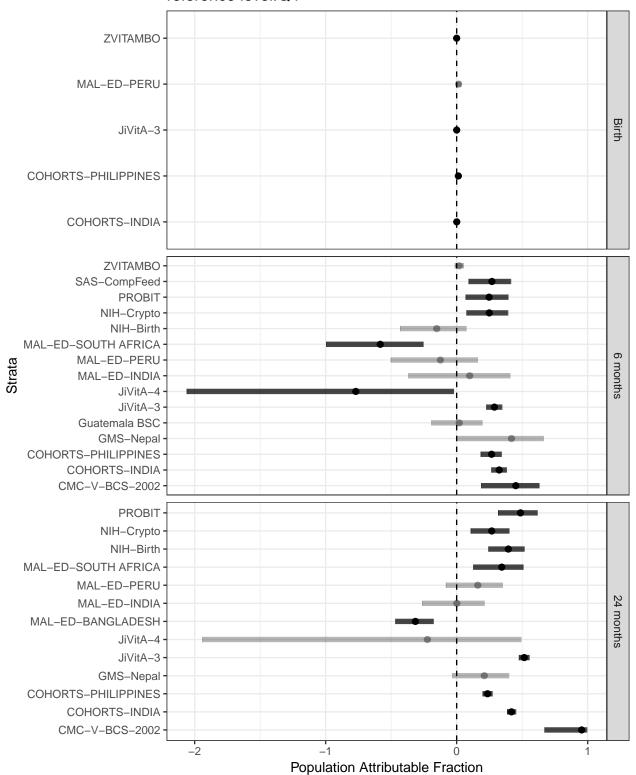












Paternal characteristics

