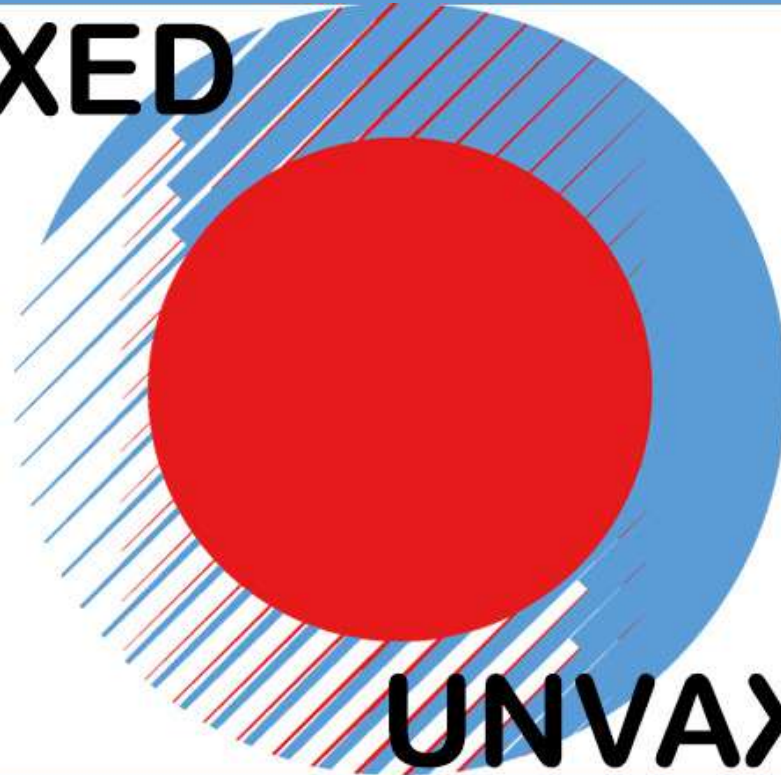


**VAXXED**



**UNVAXXED**

**The Science (Part 10)**

Children's  
Health Defense 

# Vaccination During the First Year of Life Increases the Odds of Developmental Delays by 2.18X

Original Article

SAGE Open Medicine

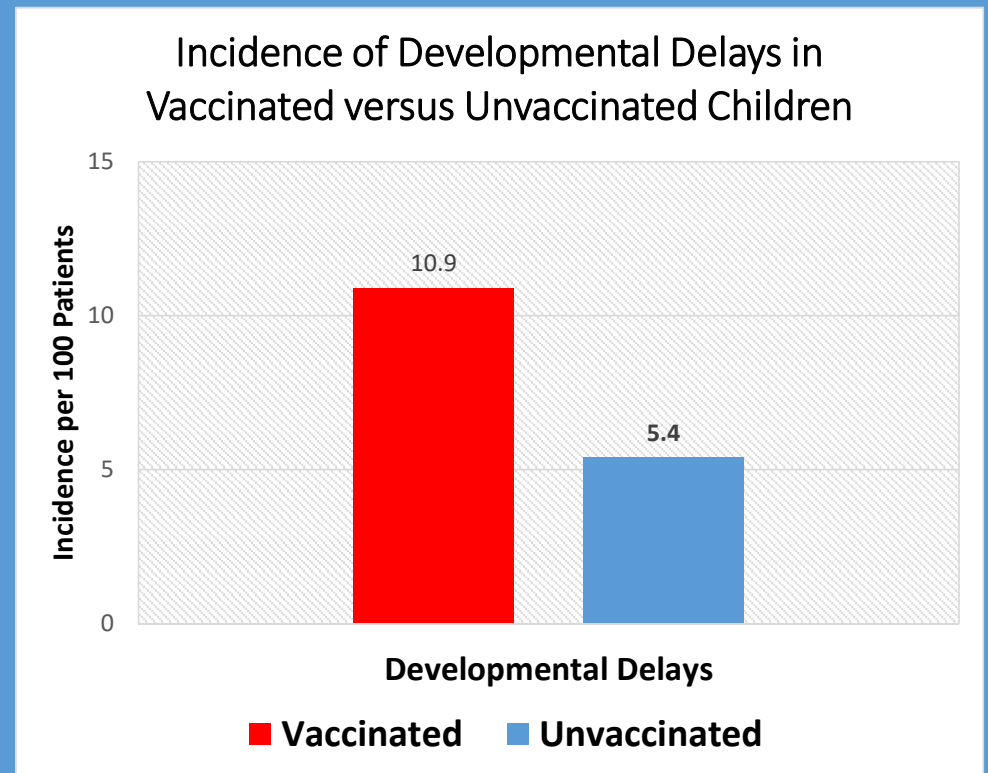
**Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders**

SAGE Open Medicine  
Volume 8: 1-11  
© The Author(s) 2020  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/2050312120925344  
journals.sagepub.com/home/omj  
SAGE

Brian S Hooker<sup>1</sup> and Neil Z Miller<sup>2</sup>

**Abstract**  
**Objective:** The aim of this study was to compare the health of vaccinated versus unvaccinated pediatric populations.  
**Methods:** Using data from three medical practices in the United States with children born between November 2005 and June 2015, vaccinated children were compared to unvaccinated children during the first year of life for later incidence of developmental delays, asthma, ear infections and gastrointestinal disorders. All diagnoses utilized International Classification of Diseases-9 and International Classification of Diseases-10 codes through medical chart review. Subjects were a minimum of 3 years of age, stratified based on medical practice, year of birth and gender and compared using a logistic regression model.  
**Results:** Vaccination before 1 year of age was associated with increased odds of developmental delays (OR=2.18, 95% CI 1.47-3.24), asthma (OR=4.49, 95% CI 2.04-9.88) and ear infections (OR=2.13, 95% CI 1.63-2.78). In a quartile analysis, subjects were grouped by number of vaccine doses received in the first year of life. Higher odds ratios were observed in Quartiles 3 and 4 (where more vaccine doses were received) for all four health conditions considered, as compared to Quartile 1. In a temporal analysis, developmental delays showed a linear increase as the age cut-offs increased from 6 to 12 to 18 to 24 months of age (ORs=1.95, 2.18, 2.92 and 3.51, respectively). Slightly higher ORs were also observed for all four health conditions when time permitted for a diagnosis was extended from  $\geq 3$  years of age to  $\geq 5$  years of age.  
**Conclusion:** In this study, which only allowed for the calculation of unadjusted observational associations, higher ORs were observed within the vaccinated versus unvaccinated group for developmental delays, asthma and ear infections. Further study is necessary to understand the full spectrum of health effects associated with childhood vaccination.

Hooker and Miller, SAGE Open Medicine 2020  
<https://doi.org/10.1177/2050312120925344>



“Vaccination before 1 year of age was associated with increased odds of developmental delays (odds ratio, OR= 2.18, 95% CI 1.47–3.24), asthma (OR = 4.49, 95% CI 2.04–9.88) and ear infections (OR=2.13, 95% CI 1.63–2.78).

# Vaccination During the First Year of Life Increases the Odds of Asthma by 4.49X

Original Article

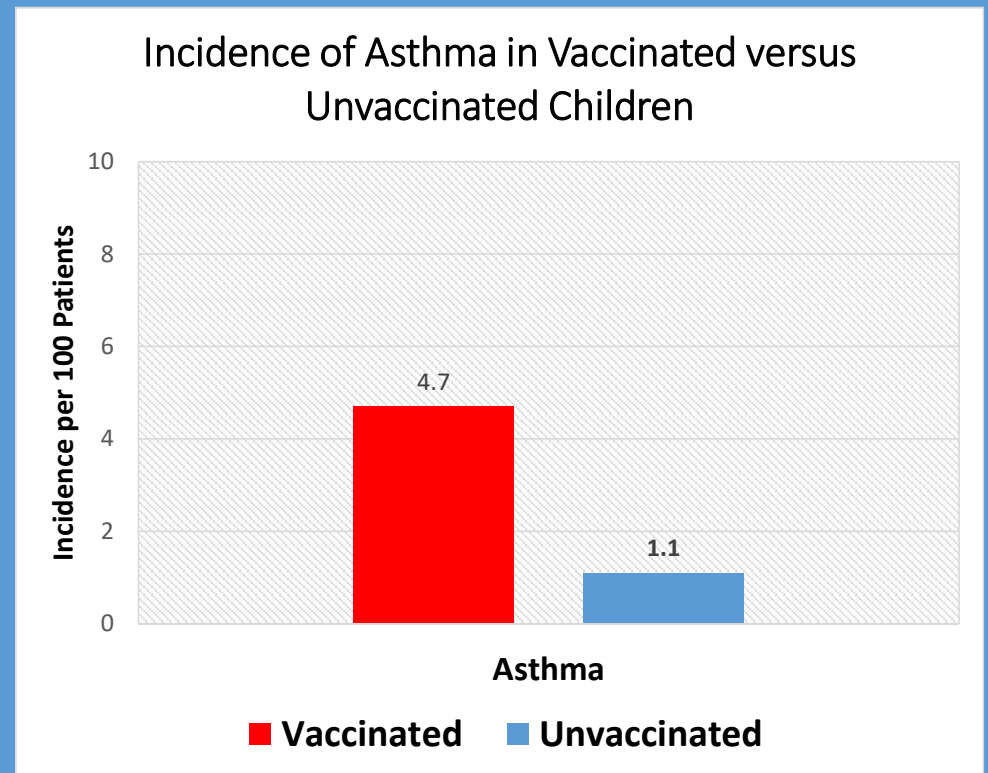
SAGE Open Medicine

**Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders**

Brian S Hooker<sup>1</sup> and Neil Z Miller<sup>2</sup>

**Abstract**  
**Objective:** The aim of this study was to compare the health of vaccinated versus unvaccinated pediatric populations.  
**Methods:** Using data from three medical practices in the United States with children born between November 2005 and June 2015, vaccinated children were compared to unvaccinated children during the first year of life for later incidence of developmental delays, asthma, ear infections and gastrointestinal disorders. All diagnoses utilized International Classification of Diseases–9 and International Classification of Diseases–10 codes through medical chart review. Subjects were a minimum of 3 years of age, stratified based on medical practice, year of birth and gender and compared using a logistic regression model.  
**Results:** Vaccination before 1 year of age was associated with increased odds of developmental delays (OR=2.18, 95% CI 1.47–3.24), asthma (OR=4.49, 95% CI 2.04–9.88) and ear infections (OR=2.13, 95% CI 1.63–2.78). In a quartile analysis, subjects were grouped by number of vaccine doses received in the first year of life. Higher odds ratios were observed in Quartiles 3 and 4 (where more vaccine doses were received) for all four health conditions considered, as compared to Quartile 1. In a temporal analysis, developmental delays showed a linear increase as the age cut-offs increased from 6 to 12 to 18 to 24 months of age (ORs=1.95, 2.18, 2.92 and 3.51, respectively). Slightly higher ORs were also observed for all four health conditions when time permitted for a diagnosis was extended from  $\geq 3$  years of age to  $\geq 5$  years of age.  
**Conclusion:** In this study, which only allowed for the calculation of unadjusted observational associations, higher ORs were observed within the vaccinated versus unvaccinated group for developmental delays, asthma and ear infections. Further study is necessary to understand the full spectrum of health effects associated with childhood vaccination.

Hooker and Miller, SAGE Open Medicine 2020  
<https://doi.org/10.1177/2050312120925344>



“Vaccination before 1 year of age was associated with increased odds of developmental delays (odds ratio, OR= 2.18, 95% CI 1.47–3.24), asthma (OR = 4.49, 95% CI 2.04–9.88) and ear infections (OR=2.13, 95% CI 1.63–2.78).

# Vaccination During the First Year of Life Increases the Odds of Ear Infections by 2.13X

Original Article

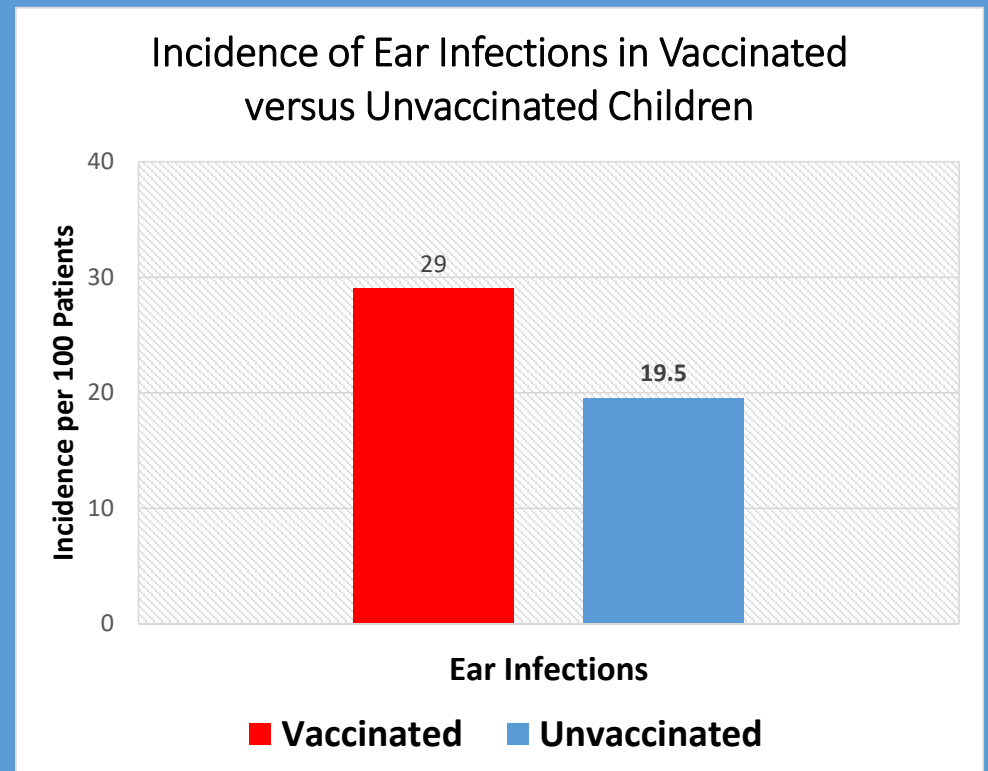
SAGE Open Medicine

**Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders**

Brian S Hooker<sup>1</sup> and Neil Z Miller<sup>2</sup>

**Abstract**  
**Objective:** The aim of this study was to compare the health of vaccinated versus unvaccinated pediatric populations.  
**Methods:** Using data from three medical practices in the United States with children born between November 2005 and June 2015, vaccinated children were compared to unvaccinated children during the first year of life for later incidence of developmental delays, asthma, ear infections and gastrointestinal disorders. All diagnoses utilized International Classification of Diseases–9 and International Classification of Diseases–10 codes through medical chart review. Subjects were a minimum of 3 years of age, stratified based on medical practice, year of birth and gender and compared using a logistic regression model.  
**Results:** Vaccination before 1 year of age was associated with increased odds of developmental delays (OR=2.18, 95% CI 1.47–3.24), asthma (OR=4.49, 95% CI 2.04–9.88) and ear infections (OR=2.13, 95% CI 1.63–2.78). In a quartile analysis, subjects were grouped by number of vaccine doses received in the first year of life. Higher odds ratios were observed in Quartiles 3 and 4 (where more vaccine doses were received) for all four health conditions considered, as compared to Quartile 1. In a temporal analysis, developmental delays showed a linear increase as the age cut-offs increased from 6 to 12 to 18 to 24 months of age (ORs=1.95, 2.18, 2.92 and 3.51, respectively). Slightly higher ORs were also observed for all four health conditions when time permitted for a diagnosis was extended from  $\geq 3$  years of age to  $\geq 5$  years of age.  
**Conclusion:** In this study, which only allowed for the calculation of unadjusted observational associations, higher ORs were observed within the vaccinated versus unvaccinated group for developmental delays, asthma and ear infections. Further study is necessary to understand the full spectrum of health effects associated with childhood vaccination.

Hooker and Miller, SAGE Open Medicine 2020  
<https://doi.org/10.1177/2050312120925344>



“Vaccination before 1 year of age was associated with increased odds of developmental delays (odds ratio, OR= 2.18, 95% CI 1.47–3.24), asthma (OR = 4.49, 95% CI 2.04–9.88) and ear infections (OR=2.13, 95% CI 1.63–2.78).

# Vaccination During the First Year of Life Increases the Odds of Gastrointestinal Disorder by 2.48X

Original Article

SAGE Open Medicine

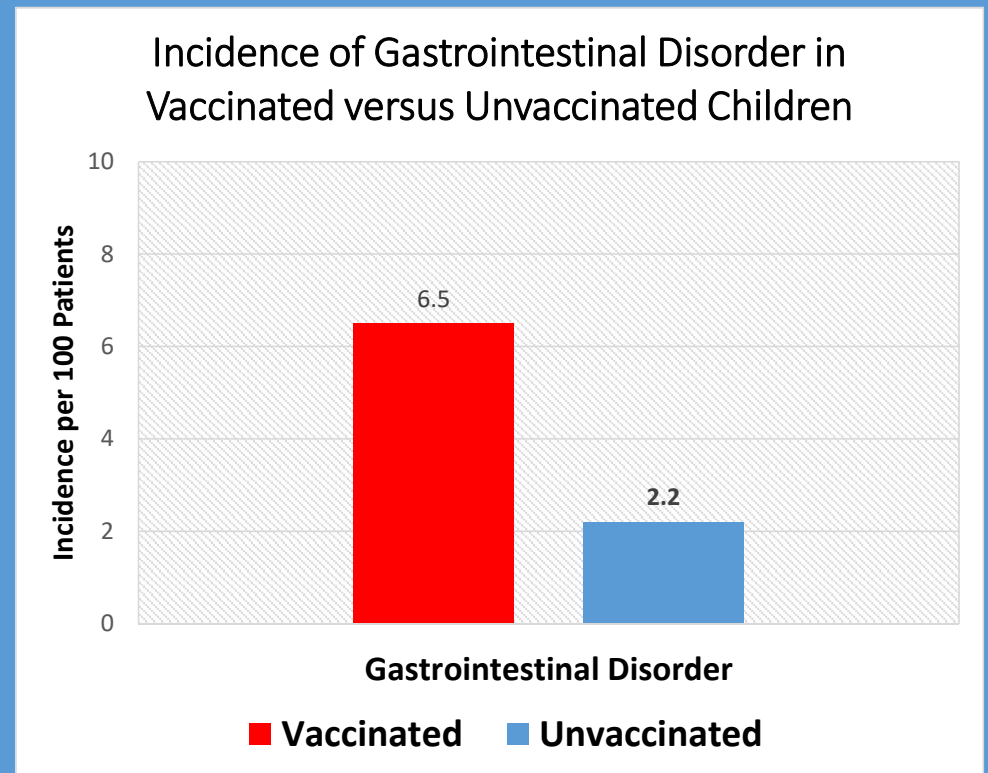
**Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders**

SAGE Open Medicine  
Volume 8: 1-11  
© The Author(s) 2020  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/2050312120925344  
journals.sagepub.com/home/omj  
SAGE

Brian S Hooker<sup>1</sup> and Neil Z Miller<sup>2</sup>

**Abstract**  
**Objective:** The aim of this study was to compare the health of vaccinated versus unvaccinated pediatric populations.  
**Methods:** Using data from three medical practices in the United States with children born between November 2005 and June 2015, vaccinated children were compared to unvaccinated children during the first year of life for later incidence of developmental delays, asthma, ear infections and gastrointestinal disorders. All diagnoses utilized International Classification of Diseases-9 and International Classification of Diseases-10 codes through medical chart review. Subjects were a minimum of 3 years of age, stratified based on medical practice, year of birth and gender and compared using a logistic regression model.  
**Results:** Vaccination before 1 year of age was associated with increased odds of developmental delays (OR=2.18, 95% CI 1.47-3.24), asthma (OR=4.49, 95% CI 2.04-9.88) and ear infections (OR=2.13, 95% CI 1.63-2.78). In a quartile analysis, subjects were grouped by number of vaccine doses received in the first year of life. Higher odds ratios were observed in Quartiles 3 and 4 (where more vaccine doses were received) for all four health conditions considered, as compared to Quartile 1. In a temporal analysis, developmental delays showed a linear increase as the age cut-offs increased from 6 to 12 to 18 to 24 months of age (ORs=1.95, 2.18, 2.92 and 3.51, respectively). Slightly higher ORs were also observed for all four health conditions when time permitted for a diagnosis was extended from  $\geq 3$  years of age to  $\geq 5$  years of age.  
**Conclusion:** In this study, which only allowed for the calculation of unadjusted observational associations, higher ORs were observed within the vaccinated versus unvaccinated group for developmental delays, asthma and ear infections. Further study is necessary to understand the full spectrum of health effects associated with childhood vaccination.

Hooker and Miller, SAGE Open Medicine 2020  
<https://doi.org/10.1177/2050312120925344>



“Statistical significance was seen for gastrointestinal disorders when... additional time was permitted for a diagnosis.”