

Long Term Impact of TB on Child Health

Little lungs and an ugly disease



Is This Important?

- Children tend to have minimal disease
- Most children (if they don't have meningitis) should completely recover
- Young humans have remarkable healing properties....right?

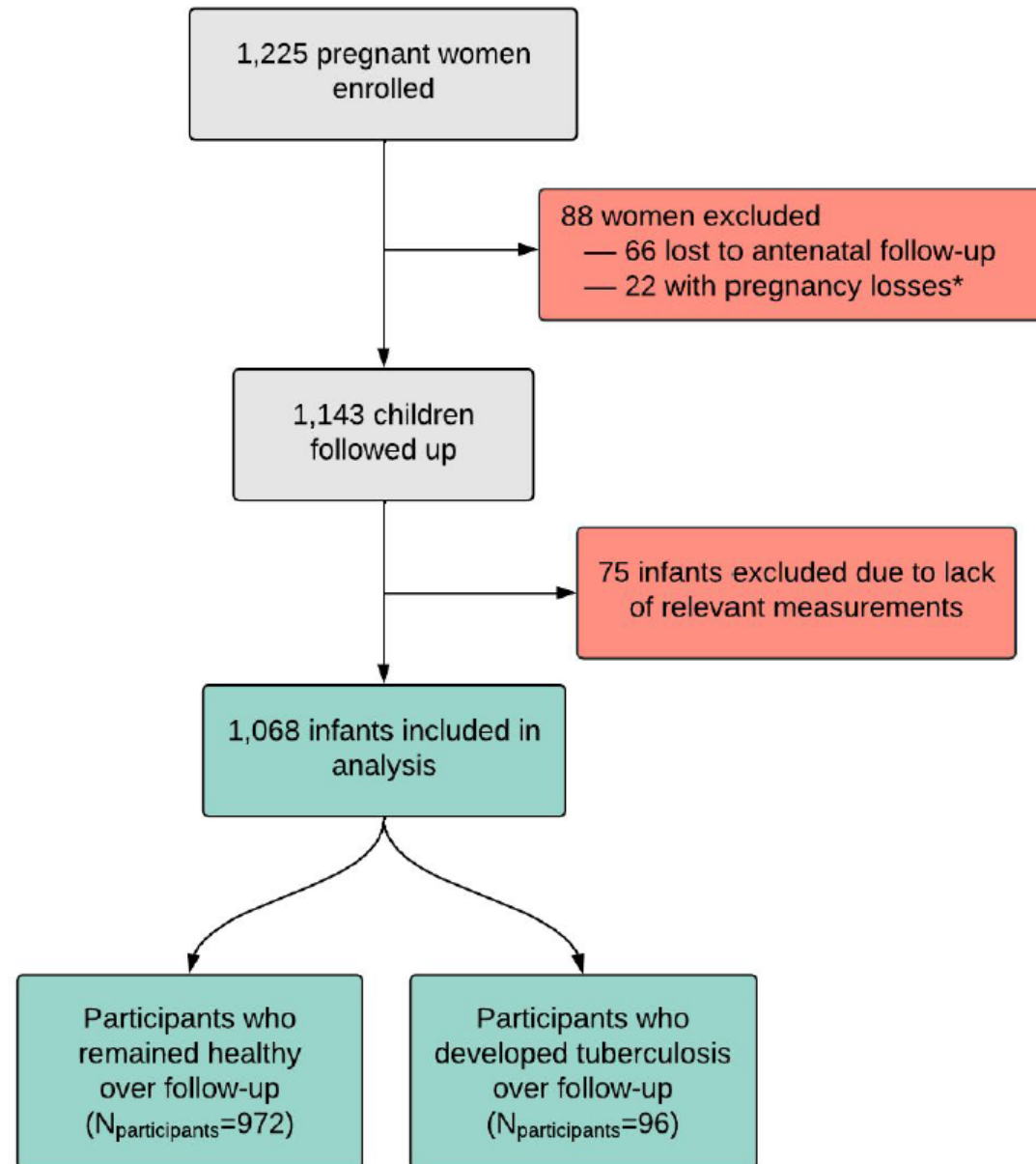


Methods

- Women were enrolled between 20-28 weeks' gestation
- All children received BCG at birth
- Informed consent renewed annually
- Follow ups at 6, 10, 14 weeks; 6, 9, 12 months; q6 months to 60 months of age
- Measures: height, weight, respiratory health assessment (lower respiratory infections, episodes of wheezing)
- Lung function assessments (PFTs) at 6 months, 1 year and yearly to 5 years old
- Children with TB were treated for 6 months



Enrollees



Outcomes

- Lower length/weight at 6 weeks old was associated with PTB between 1-5 years of age
- PTB prior to 1 year of age was associated with lower length/weight/BMI for age at 5 years of age
- Children with PTB between 1-4 years of age
 - Lower length and weight for age (but not BMI) at age 5 years
 - 2.8 higher odds of being in the lower tertile of tidal volume at age 5
- PTB was associated with subsequent impairment of lung function at age 5



Outcomes

Table 4. Multivariable Poisson regression models of the association between development of tuberculosis disease and subsequent wheezing.

Follow-up for wheezing	Timing of tuberculosis disease	N, participants	Incidence Rate Ratio (95% CI)
Any wheezing			
>6 months	<6 months	814	2.42 (1.32, 4.43)
>12 months	<12 months	655	1.64 (1.04, 2.60)
>24 months	<24 months	555	1.69 (1.05, 2.72)
>36 months	<36 months	512	2.07 (1.03, 4.17)
Recurrent wheezing			
>6 months	<6 months	455	2.19 (1.02, 4.68)
>12 months	<12 months	455	1.86 (0.94, 3.67)
>24 months	<24 months	455	1.86 (1.08, 3.21)
>36 months	<36 months	455	1.44 (0.70, 2.97)

Analyses used Poisson regression modelling with robust variance estimators to calculate incidence rate ratios. Follow-up time is indicated on the left-hand side of the table. Models are adjusted for infant sex, maternal HIV, and maternal smoking during pregnancy.



Conclusion

- Children that develop pulmonary TB were more likely to
 - subsequently wheeze
 - have poor lung function
 - and present with reduced length/weight

