

How do physicians respond to new medical research?

Evidence from an influential, but subsequently overturned clinical trial

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Research Question: What happens when the findings of a prominent medical study are overturned? We study the Term Breech Trial (TBT) to examine how OBGYNs respond to new information that C-sections do not provide better outcomes for breech births.

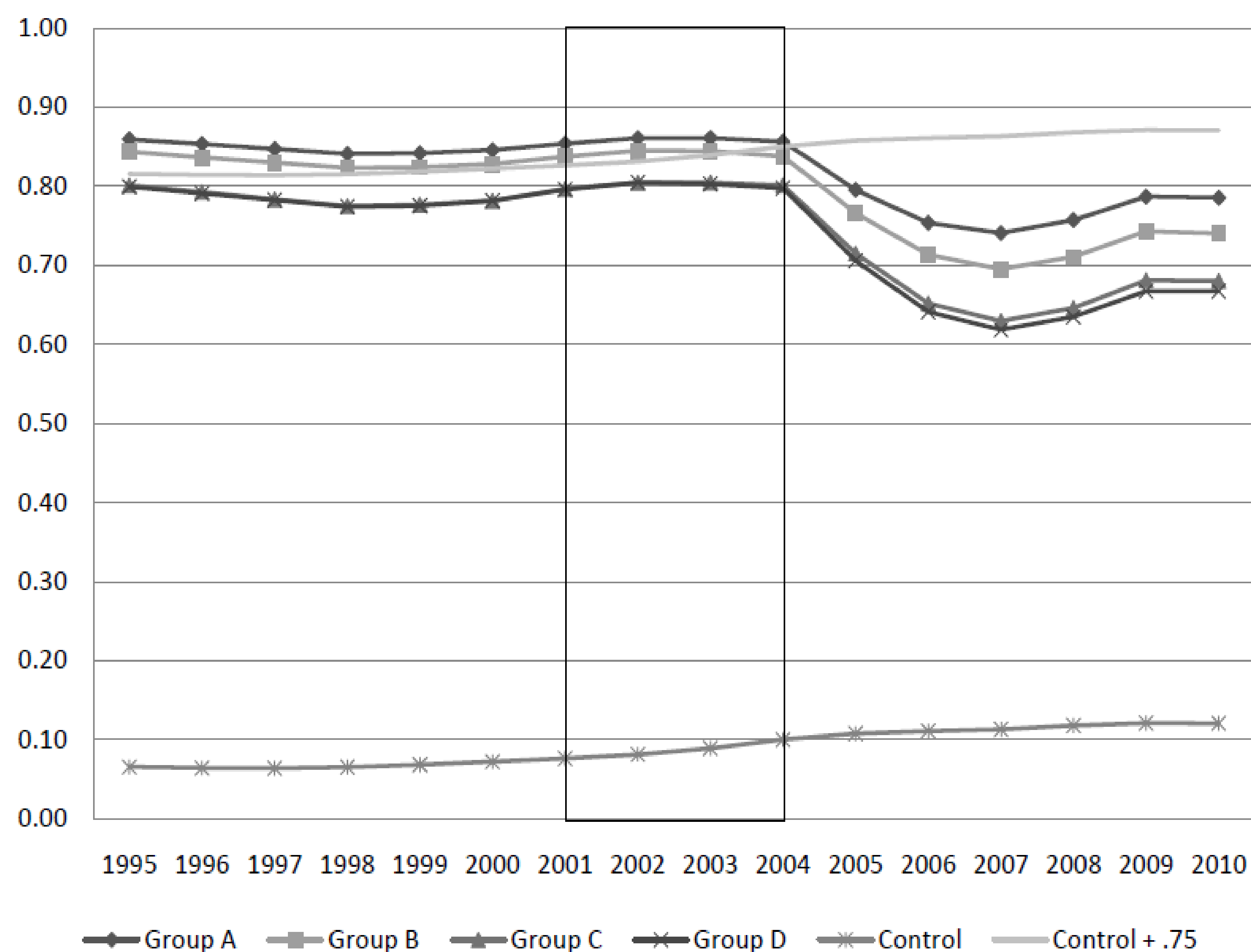


Figure 1: C-Section Rate Between Breech (Treatment) and Vertex/Head Down (Control) Deliveries

Note: The initial Term Breech Trial (TBT) results were published in October 2000, the reversed TBT results were published in October 2004. Group A are term singleton breech births. Group B builds on Group A and excludes those with previous C-sections. Group C also removes first parity births, and finally, group D also removes those characterized with risky pregnancies (ie. Chronic or gestational diabetes, blood pressure, or eclampsia).

Data: Birth Certificates, 95-10 (10 % sample)

Table 1: Summary Statistics for Preferred Sample (Group D)

	Breech Births (Treatment)			Vertex/Head Down Births (Control)		
	Pre- TBT Results	Initial TBT results	Reversed TBT results	Pre- TBT Results	Initial TBT results	Reversed TBT results
Outcome Variables:						
C-section	0.784	0.800	0.659	0.066	0.085	0.114
Low Apgar (<9)	0.109	0.112	0.160	0.065	0.067	0.090
Low Birth Weight (<2500g)	0.042	0.039	0.037	0.022	0.021	0.022
Mother's Characteristics:						
White	0.690	0.659	0.540	0.603	0.573	0.544
Hispanic	0.152	0.180	0.287	0.189	0.224	0.248
Black	0.096	0.099	0.111	0.146	0.140	0.139
Teenager	0.044	0.034	0.037	0.059	0.048	0.044
Forty and older	0.035	0.041	0.041	0.023	0.027	0.028
No High School Diploma	0.176	0.178	0.215	0.211	0.214	0.207
Some College and Higher	0.241	0.285	0.305	0.221	0.250	0.291
Married	0.751	0.736	0.661	0.716	0.696	0.644
Pregnancy Characteristics:						
Smoked during Pregnancy	0.168	0.139	0.107	0.142	0.122	0.108
Newborn Boy	0.477	0.479	0.488	0.508	0.509	0.509
Number of Prenatal Visits	11.646	11.544	11.242	11.471	11.444	11.116
State Characteristics:						
Medicaid Fee Difference	69.721	79.126	69.622	71.666	82.474	85.538
County Unemployment Rate	4.864	5.473	6.488	5.013	5.566	6.414
Caps on NED	0.344	0.361	0.637	0.349	0.367	0.571
Caps on PD	0.500	0.546	0.643	0.499	0.548	0.616
JSL reform	0.726	0.761	0.828	0.738	0.762	0.787
CSR	0.621	0.682	0.642	0.630	0.665	0.697
Number of Observations	233536	161640	356944	10182836	6858058	10267163

Methods: Diff-in-diff (tables) & event study (figures)

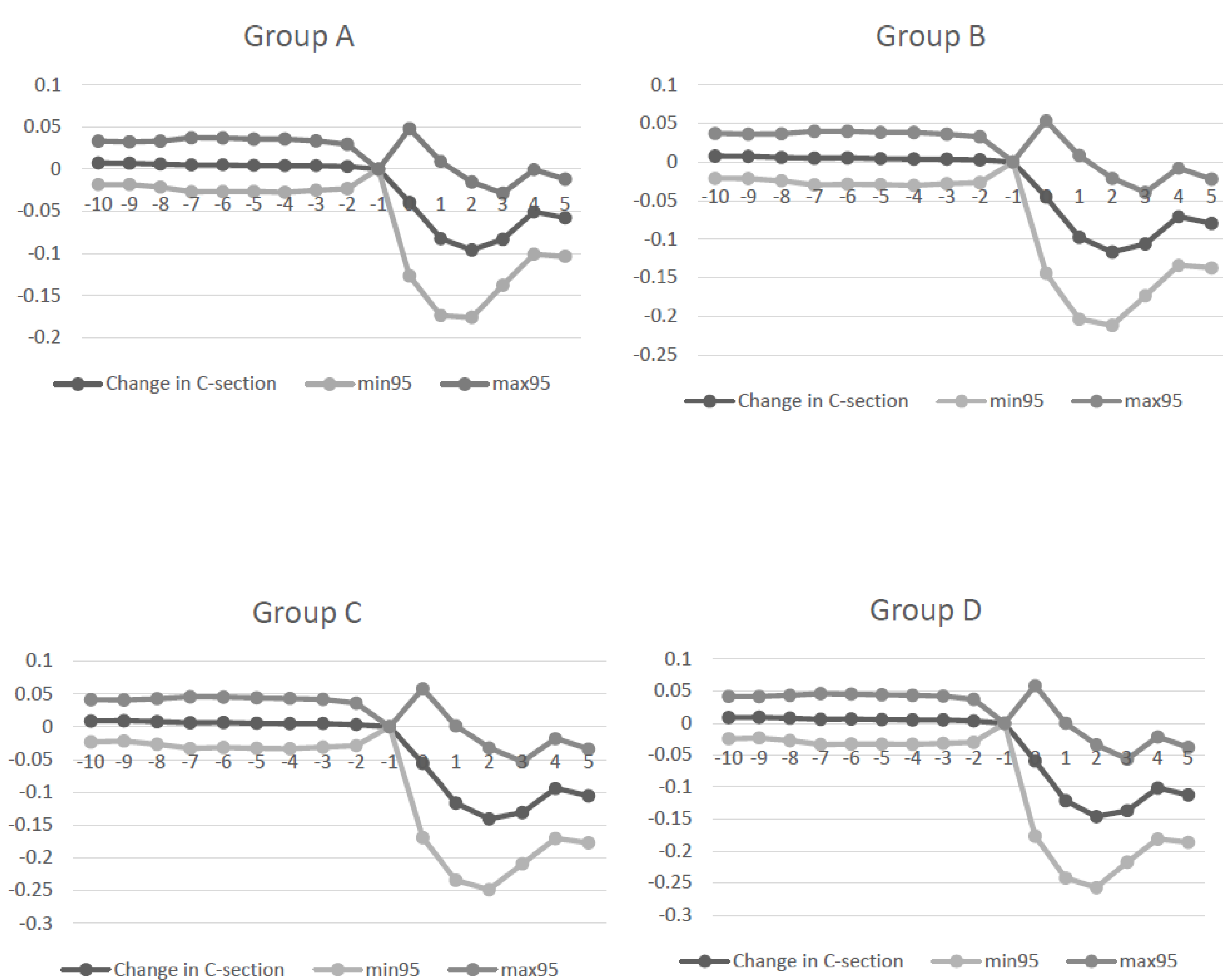


Table 4: Effects of Reversed TBT on C-Sections and Infant Health Outcomes Subsampled by Mother's Education and Race

	No High School Diploma	Some College and Higher	White	Black	Hispanic
Panel A: C-section Outcome During Reversed TBT Results					
Coefficient β_1	-0.257	-0.124	-0.117	-0.231	-0.307
Standard Error	0.087	0.056	0.044	0.064	0.099
P-value	0.006	0.033	0.013	0.001	0.004
Percentage Change (%)	-33.0	-15.8	-15.0	-29.7	-37.4
Observations	2653731	3375762	7529681	1733254	2795457

Table 5: Effects of Reversed TBT on C-Sections and Infant Health Outcomes Subsampled by Obstetricians' Characteristics

	Counties with male OBs (1)	Counties with more female OBs (2)	Counties with younger OBs (3)	Counties with older OBs (4)	Counties with more OBs from outside US medical schools (5)	Counties with OBs from US medical schools (6)
Panel A: C-section Outcome During Reversed TBT Results						
Coefficient β_1	-0.119	-0.124	-0.153	-0.075	-0.197	-0.135
Standard Error	0.047	0.045	0.055	0.042	0.086	0.057
P-value	0.018	0.009	0.008	0.083	0.030	0.025
Percentage Change (%)	-15.3	-16.3	-20.0	-9.6	-24.2	-17.4
Observations	714587	3179942	4325513	1033539	3046014	1973254

Results: We find that the reversal of the Term Breech Trial (TBT), led to a **15% decline** in C-sections for breech births. We find our largest estimated effects amongst traditionally **disadvantaged groups**. Moreover, we find that relatively **young physicians** are most responsive to new information.