SUPPLEMENTAL MATERIAL

Supplemental Table 1. Current Procedural Terminology lab codes included as "genetic tests."

Current Procedural Terminology lab codes	Name of Test
381000	Cytogenetics, unspecified
381010	Chromosome analysis
381015	Tissue culture for chromosome analysis
381020	Fragile X
381099	Other specified cytogenetics
382010	Molecular extraction
382030	Molecular separation
382040	Nucleic acid probe
382050	Polymerase chain reaction (PCR)
382060	Molecular diagnostics interpretation and report
382070	In situ hybridization
382081	Chromosomal microarray
382082	Duplication/deletion
382048	Mutation ID
382100	Molecular pathology procedure, level 1 (includes single germline variant)
382110	Molecular pathology procedure, level 2 (includes methylated variant, somatic variant, 2-10 SNPs)
382120	Molecular pathology procedure, level 3 (includes >10 SNPs, methylated variants, somatic variants)
382130	Molecular pathology procedure, level 4
382140	Molecular pathology procedure, level 5
382150	Molecular pathology procedure, level 6
382160	Molecular pathology procedure, level 7
382170	Molecular pathology procedure, level 8
382180	Molecular pathology procedure, level 9
383000	Sequencing, unspecified
383001	DNA sequencing
383006	Next generation sequencing (NGS)
383011	Sanger sequencing
383012	Bi-directional sanger sequencing
383099	Other specified sequencing

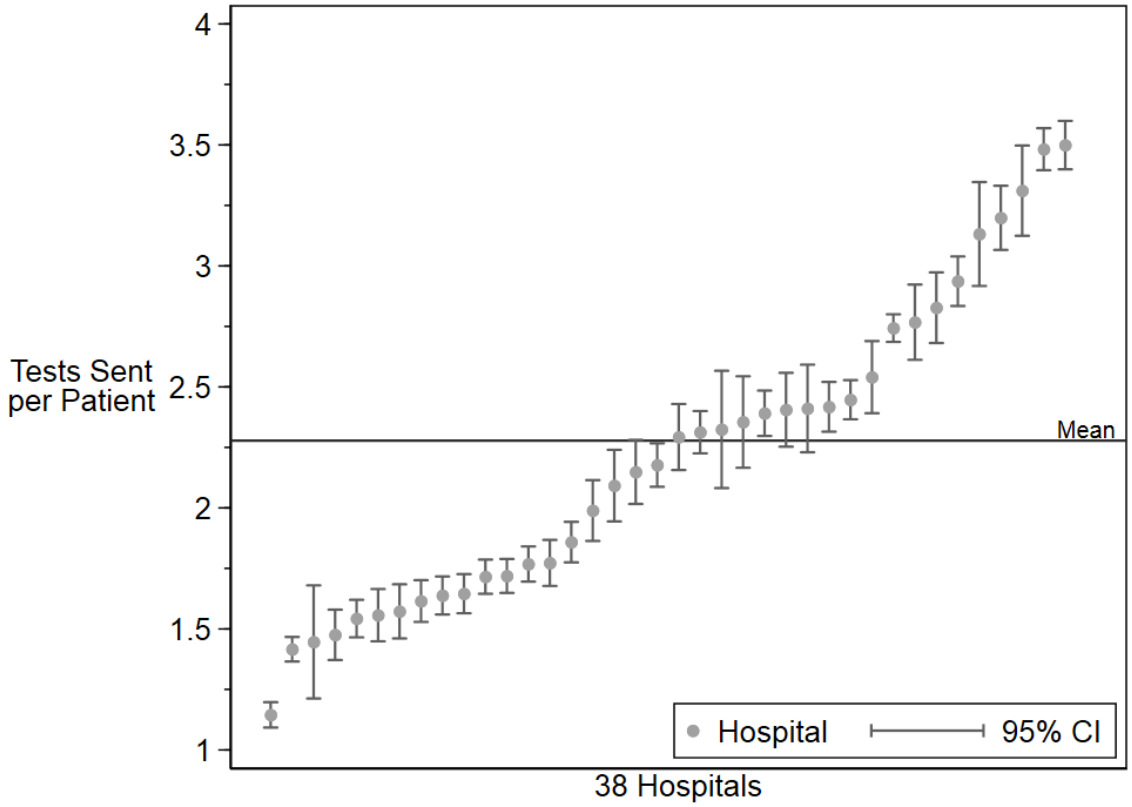
Legend: A medical geneticist curated a list of 29 Current Procedural Terminology lab codes that denote genetic testing

Supplemental Table 2. Hospital-level information about admissions per year and genetic testing percentage.

Hospital Number	Number of Admissions Per Year (Mean)	Percentage of Patients Tested (Unadjusted)	Percentage of Patients Tested (Adjusted)
1001	1569	6%	6%
1005	474	38%	38%
1007	391	15%	15%
1010	510	15%	15%
1011	414	22%	22%
1012	1685	4%	4%
2001	991	9%	9%
2002	451	12%	12%
2004	562	17%	17%
2005	602	13%	13%
2007	167	40%	40%
2008	2207	10%	10%
2009	781	21%	21%
2012	385	20%	20%
2013	528	14%	14%
2015	1902	13%	13%
2016	611	23%	23%
2017	824	17%	17%
2020	790	30%	30%
2021	447	14%	14%
2022	973	19%	19%
2023	1777	10%	10%
2027	448	17%	17%
2028	303	27%	26%
2029	338	30%	29%
2033	442	15%	15%
2036	1029	10%	10%
2037	651	16%	16%
3001	253	7%	8%
3002	1009	6%	6%
3004	649	6%	6%
3005	1874	7%	7%
3006	1125	13%	13%
3008	448	7%	7%
3009	1357	4%	4%
3010	1184	12%	12%
3011	488	31%	30%
3014	743	16%	16%

Legend: PHIS Hospital Number and associated percentage of patients tested (unadjusted and adjusted for patient-level characteristics) and number of admissions per year.

Supplemental Figure 1. Mean number of tests sent per hospital for patients who had at least one genetic test sent.



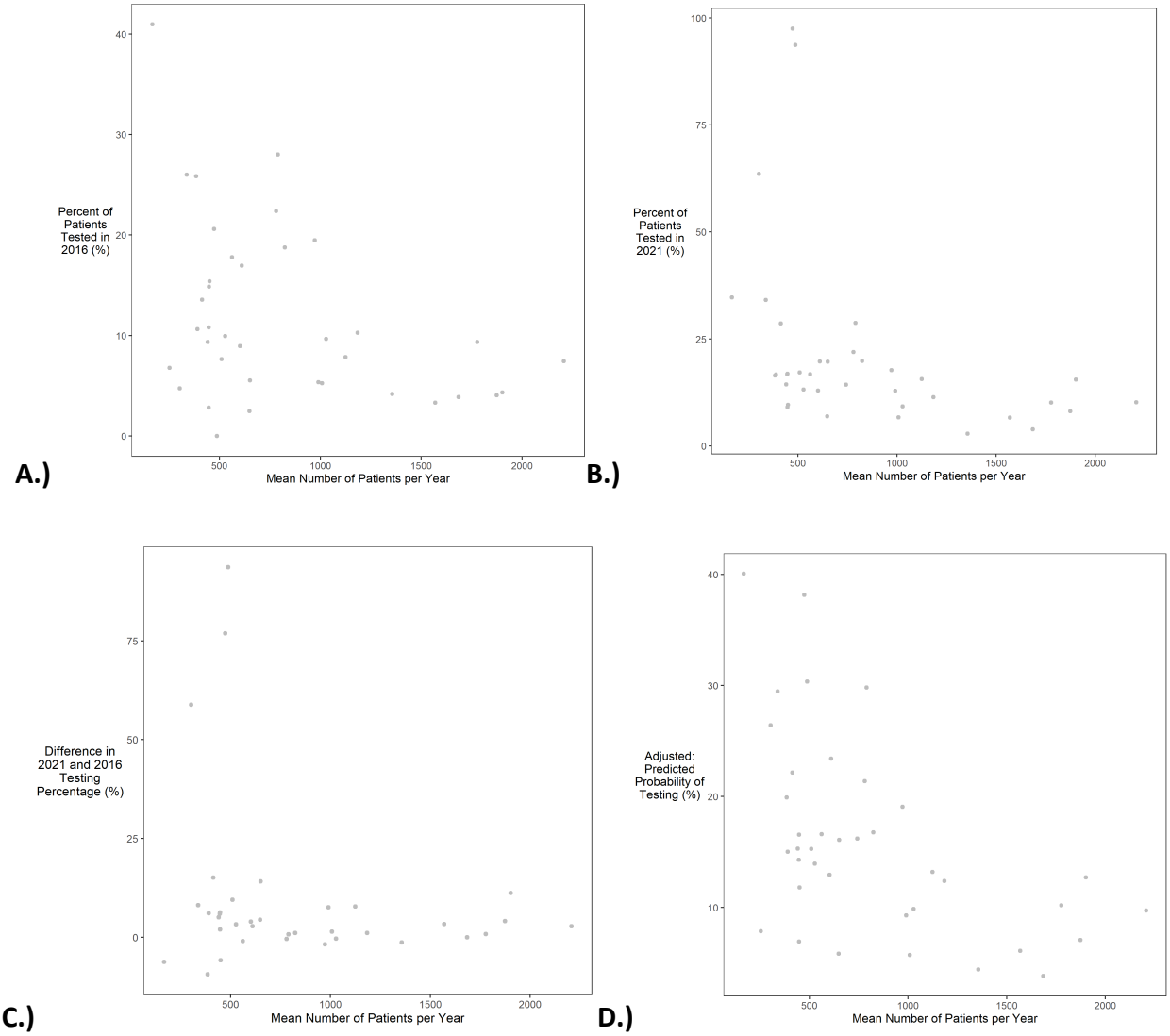
Legend: Each point represents a hospital and error bars indicate 95% confidence intervals.

Supplemental Table 3. Most common genetic diagnoses.

Diagnosis	Frequency in dataset
Down syndrome	3,943
Other specified chromosomal abnormalities	1,040
Di George Syndrome	906
Indeterminate Sex	743
Trisomy 18	622
Other deletions from the autosomes	591
Other microdeletions	471
Congenital adrenogenital disorders	443
Velo-cardio-facial syndrome	431
Chromosomal abnormality	416

Legend: Two medical geneticists, one of whom is also a neonatologist, reviewed all international classification of disease (ICD) diagnoses and coded them as "genetic" if they were associated with an 80% chance of having a genetic etiology confirmable with molecular analysis. Discrepancies were resolved by consensus. This table displays the ten most common genetic diagnoses among all patients in our dataset and associated frequencies.

Supplemental Figure 2. Relationship between percentage of patients who receive genetic testing and mean number of patients admitted per year.



Legend: The scatterplots display the percentage of patients who receive genetic testing in 2016 (Panel A), in 2021 (Panel B), change over this period (Panel C), and adjusted using multilevel model (Panel D) versus the hospital's mean number of patients admitted per year. The highest testing hospitals have fewer patients per year, but mean patients per year loses significance after controlling for patient-level effects.

Supplemental Table 4. Differences between patients who did and did not receive genetic testing

	Unadjusted			**Adjusted**			
Risk Factor	Patients without genetic testing (%, n=163,504)	Patients with genetic testing (%, n=24,521)	*P*-value	Odds Ratio	95% CI		*P*-value
In-hospital Mortality	2.9	9.6	<.001	3.10	2.88	3.33	<.001
Complex Chronic Condition Flag	48.0	90.6	<0.001	3.85	3.66	4.05	<.001
Congenital anomaly flag	5.1	29.4	<.001	2.65	2.54	2.76	<.001
APR-DRG Severity level							
0	.5	.4	<.001	1.55	1.23	1.96	<.001
1	21.3	5.0		0.86	0.80	0.92	
2	28.8	12.5		1 [Reference]			
3	31.9	28.0		1.39	1.33	1.46	
4	17.6	54.0		2.02	1.92	2.13	
Gestational Age (weeks)	36.1	35.3	<.001	1.17	1.16	1.17	<.001
Race							
White	60.5	63.1	<.001	1 [Reference]			
Black	21.4	18.9		.90	.87	.94	<0.001
Asian	5.0	4.2		1.04	.94	1.10	.734
American Indian	.4	.6		1.07	.86	1.33	.557
Other	12.7	13.1		1.07	1.06	1.13	0.010
Length of Stay (weeks)	3.2	7.0	<.001	1.70	1.67	1.73	<.001
Year of Admission				1.17	1.16	1.18	<.001

Legend: Group characteristics and adjusted odds ratios from the multivariate model are presented for patients who did and did not receive genetic testing.