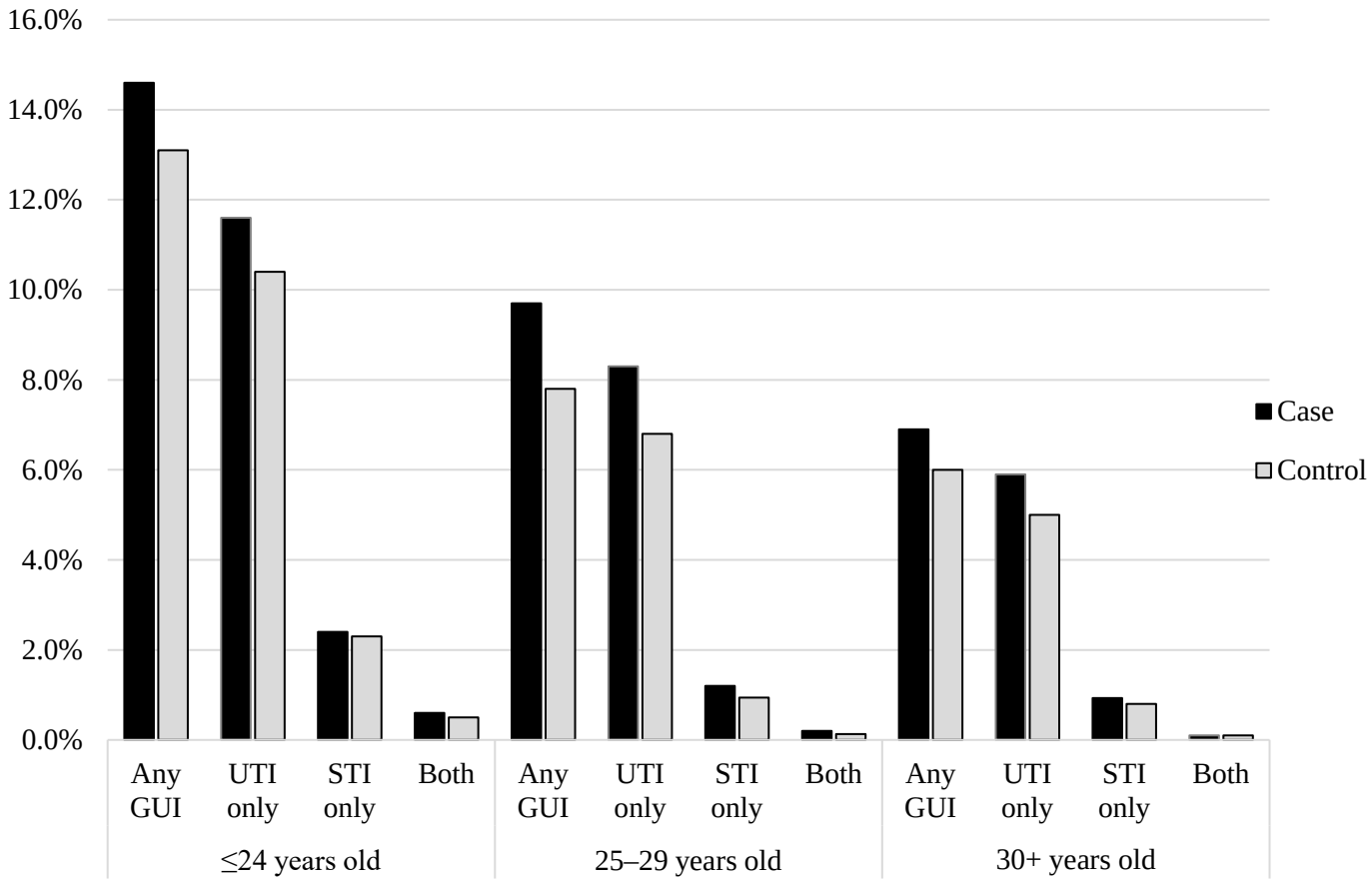
Supplemental Figure 1.



Supplemental Table 1. Associations between periconceptional genitourinary infections and isolated non-cardiac birth defects and simple isolated congenital heart defects, National Birth Defects Prevention Study 1997–2011.

Birth Defect	Exposed/Unexposed	OR (95% CI)[†]
Controls[‡]	1,014/10,531	
Non-cardiac birth defects		
Amniotic band sequence	31/246	1.13 (0.76, 1.68)
Anencephaly	71/490	**1.36 (1.03, 1.80)**
Spina bifida	115/999	1.12 (0.90, 1.39)
Encephalocele	20/143	1.36 (0.82, 2.25)
Holoprosencephaly	14/99	1.49 (0.84, 2.64)
Dandy–Walker malformation	9/99	0.98 (0.49, 1.96)
Hydrocephaly	37/302	1.18 (0.82, 1.70)
Cerebellar hypoplasia	3/33	0.94 (0.18, 3.02)
Anophthalmia/microphthalmia	14/117	1.21 (0.69, 2.14)
Congenital cataracts	34/271	1.40 (0.97, 2.03)
Glaucoma	18/130	1.48 (0.87, 2.53)
Anotia/microtia	54/415	1.22 (0.88, 1.68)
Choanal atresia	7/76	1.11 (0.48, 2.60)
Cleft palate only	110/1,156	1.02 (0.82, 1.26)
Cleft lip only	108/893	**1.32 (1.06, 1.64)**
Cleft lip with cleft palate	180/1523	1.16 (0.97, 1.39)
Esophageal atresia	15/301	0.58 (0.34, 1.01)
Duodenal atresia/stenosis	23/126	**2.05 (1.29, 3.24)**
Small intestinal atresia/stenosis	54/352	**1.60 (1.17, 2.17)**
Colonic atresia/stenosis	11/41	**2.24 (1.09, 4.58)**
Anorectal atresia/stenosis	45/404	1.02 (0.73, 1.43)
Biliary atresia	12/155	0.83 (0.44, 1.54)
Hypospadias	191/2,078	1.09 (0.90, 1.31)
Renal agenesis/hypoplasia	20/107	1.64 (0.98, 2.75)
Bladder exstrophy	4/50	0.83 (0.22, 2.27)
Cloacal exstrophy	9/49	**2.32 (1.11, 4.86)**
Longitudinal limb deficiency	35/253	1.35 (0.93, 1.97)
Transverse limb deficiency	67/522	**1.36 (1.04, 1.79)**
Craniosynostosis	113/1,318	0.97 (0.79, 1.20)
Diaphragmatic hernia	70/581	1.26 (0.96, 1.65)
Omphalocele	23/232	1.06 (0.68, 1.67)
Sacral agenesis	0/3	NC
Congenital heart defects		
Conotruncal heart defects		
Truncus arteriosus	10/73	1.52 (0.77, 2.99)
Tetralogy of Fallot	79/842	1.02 (0.79, 1.31)
d-TGA	49/510	0.95 (0.69, 1.32)
DORV-TGA[§]	6/46	1.35 (0.47, 3.19)
Other DORV	4/26	1.60 (0.40, 4.62)
Conoventricular VSD[§]	8/42	2.06 (0.83, 4.46)
Atrioventricular septal defect	21/146	1.55 (0.97, 2.49)
Total anomalous pulmonary venous return	16/230	0.71 (0.42, 1.21)
Left ventricular outflow tract obstruction defects		
Hypoplastic left heart syndrome	64/501	**1.37 (1.04, 1.81)**
Coarctation of the aorta	54/488	1.35 (1.00, 1.82)

Aortic valve stenosis	20/313	0.66 (0.40, 1.07)
Right ventricular outflow tract obstruction defects		
Pulmonary atresia	15/149	0.96 (0.54, 1.70)
Pulmonary valve stenosis	92/938	1.00 (0.79, 1.27)
Tricuspid atresia	5/65	0.80 (0.32, 2.02)
Ebstein anomaly	11/99	1.11 (0.57, 2.16)
Septal defects		
Perimembranous VSD	70/750	0.99 (0.76, 1.30)
Muscular VSD[§]	10/129	0.80 (0.36, 1.62)
Secundum atrial septal defect	178/1305	**1.22 (1.02, 1.47)**

OR=odds ratio, CI=confidence interval, NC=not calculated, TGA=transposition of the great arteries, DORV=double outlet right ventricle, VSD=ventricular septal defect

[†] For defects with 5+ exposed cases, estimates were adjusted for maternal age, race/ethnicity, and state of residence at the time of infant's birth. Counts in the adjusted analysis were slightly lower than presented due to missing values for some covariates. Crude ORs with exact 95% CIs are presented for defects with 3–4 exposed cases. Estimates are not presented for analyses based on < 3 exposed cases. Infants of mothers who did not report any thyroid medication use were the reference group.

[‡] The number of controls differed for the following birth defects analyses: congenital cataracts and glaucoma (865 exposed and 8,971 unexposed controls), clefts (1,001 exposed and 10,409 unexposed controls), hypospadias (521 exposed and 5,366 unexposed male controls), pulmonary valve stenosis (964 exposed and 10,116 unexposed controls) conoventricular and perimembranous VSDs (568 exposed and 6,130 unexposed controls), and muscular VSDs (63 exposed and 648 unexposed controls).

[§] Adjusted logistic model did not converge; estimates presented are crude OR and exact 95% CIs.

Supplemental Table 2. Odds ratios for associations between any GUI in the three months before pregnancy through the third month of pregnancy and birth defects, National Birth Defects Prevention Study 1997–2011.

Birth Defects	Exposed/ Unexposed	OR (95% CI)[†]
Controls[‡]	1,156/10,388	
Non-cardiac birth defects		
Amniotic band sequence	43/283	1.15 (0.82, 1.62)
Anencephaly	89/536	**1.33 (1.03, 1.71)**
Spina bifida	143/1117	1.07 (0.87, 1.30)
Encephalocele	32/187	**1.51 (1.01, 2.25)**
Holoprosencephaly	22/131	1.52 (0.95, 2.42)
Dandy–Walker malformation	20/158	1.18 (0.73, 1.90)
Hydrocephaly	58/425	1.08 (0.80, 1.46)
Cerebellar hypoplasia[§]	7/54	1.17 (0.53, 2.57)
Anophthalmia/microphthalmia	30/190	1.36 (0.91, 2.04)
Congenital cataracts	43/303	1.40 (1.00, 1.95)
Glaucoma	25/157	1.54 (0.98, 2.43)
Anotia/microtia	78/584	1.16 (0.89, 1.51)
Choanal atresia	19/138	1.41 (0.84, 2.37)
Cleft palate only	153/1405	1.02 (0.85, 1.23)
Cleft lip only	136/939	**1.35 (1.11, 1.64)**
Cleft lip with cleft palate	242/1740	**1.17 (1.01, 1.37)**
Esophageal atresia	83/657	1.25 (0.98, 1.60)
Duodenal atresia/stenosis	39/197	**1.86 (1.30, 2.67)**
Small intestinal atresia/stenosis	68/406	**1.52 (1.16, 2.01)**
Colonic atresia/stenosis	12/46	1.89 (0.96, 3.73)
Anorectal atresia/stenosis	123/913	1.11 (0.90, 1.37)
Biliary atresia	20/173	1.09 (0.67, 1.78)
Hypospadias	245/2288	1.06 (0.90, 1.26)
Renal agenesis	27/153	1.28 (0.82, 2.01)
Bladder exstrophy	7/65	1.03 (0.47, 2.27)
Cloacal exstrophy	11/88	1.21 (0.64, 2.30)
Longitudinal limb deficiency	62/438	1.16 (0.87, 1.54)
Transverse limb deficiency	92/612	**1.36 (1.07, 1.72)**
Craniosynostosis	143/1430	0.98 (0.81, 1.18)
Diaphragmatic hernia	106/749	1.25 (1.00, 1.57)
Omphalocele	46/383	1.08 (0.78, 1.49)
Sacral agenesis	11/64	1.58 (0.81, 3.07)
Congenital heart defects		
Conotruncal defects		
Truncus arteriosus	17/106	1.42 (0.83, 2.43)
Tetralogy of Fallot	123/1039	1.12 (0.91, 1.37)
D-TGA	80/671	1.05 (0.81, 1.35)
DORV-TGA	21/163	1.22 (0.76, 1.94)
Other DORV	16/102	1.27 (0.71, 2.24)
Conoventricular VSD	20/90	**2.37 (1.43, 3.94)**
Atrioventricular septal defect	56/295	**1.68 (1.24, 2.28)**
Total anomalous pulmonary venous return	21/273	0.68 (0.43, 1.09)
Left ventricular outflow tract obstruction defects		
Hypoplastic left heart syndrome	77/559	1.27 (0.98, 1.63)
Coarctation of the aorta	111/1026	1.04 (0.84, 1.29)
Aortic valve stenosis	41/458	0.80 (0.57, 1.13)

Right ventricular outflow tract obstruction defects		
Pulmonary atresia	26/229	0.98 (0.64, 1.51)
Pulmonary valve stenosis	168/1358	1.11 (0.92, 1.33)
Tricuspid atresia	16/153	0.90 (0.51, 1.57)
Ebstein anomaly	20/159	1.14 (0.70, 1.85)
Septal defects		
Perimembranous VSD	130/1214	0.98 (0.80, 1.21)
Muscular VSD	19/164	1.00 (0.57, 1.78)
Secundum atrial septal defect	379/2564	**1.22 (1.07, 1.40)**
Single ventricle defects	18/139	1.19 (0.71, 2.01)
Heterotaxy	46/275	1.39 (0.99, 1.95)

OR=odds ratio, CI=confidence interval, NC=not calculated, TGA=transposition of the great arteries, DORV=double outlet right ventricle, VSD=ventricular septal defect

† For defects with 5+ exposed cases, estimates were adjusted for maternal age, race/ethnicity, and state of residence at the time of infant's birth. Counts in the adjusted analysis were slightly lower than presented due to missing values for some covariates. Crude ORs with exact 95% CIs are presented for defects with 3–4 exposed cases. Estimates are not presented for analyses based on < 3 exposed cases. Infants of mothers who did not report any thyroid medication use were the reference group.

‡ The number of controls differed for the following analyses: congenital cataracts and glaucoma (987 exposed and 8,847 unexposed controls), clefts (1,143 exposed and 10,266 unexposed controls), hypospadias (595 exposed and 5,290 unexposed male controls), pulmonary valve stenosis (1,096 exposed and 9,983 unexposed controls) conoventricular and perimembranous VSDs (654 exposed and 6,043 unexposed controls), and muscular VSDs (70 exposed and 641 unexposed controls).

§ Adjusted logistic model did not converge; estimates presented are crude OR and exact 95% CIs.