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Supplemental Table 1: Definition of AKI by serum creatinine and urine output

Stage	Serum creatinine	Urine output over 24 hours
0	No change in serum creatinine <i>or</i> rise < 0.3 mg/dL	> 1 ml/kg/hour
1	SCr rise \geq 0.3 mg/dl within 48hrs <i>or</i> SCr rise \geq 1.5- 1.9 X reference SCr* within 7 days	>0.5 and \leq 1 ml/kg/hour
2	SCr rise \geq 2 to 2.9 X reference SCr*	>0.3 and \leq 0.5 ml/kg/hour
3	SCr rise \geq 3 X reference SCr * <i>or</i> SCr \geq 2.5 mg/dl** <i>or</i> Receipt of dialysis	\leq 0.3 ml/kg/hour

Supplemental Table 2. Classification used to describe congenital kidney anomalies

<i>Mild-to-Moderate kidney disease</i>	<i>Severe kidney disease</i>
<ul style="list-style-type: none"> • Vesicoureteral reflux grades 1-3 • Mild hydronephrosis • Unilateral hypoplasia/dysplasia/agenesis • Autosomal dominant polycystic kidney disease 	<ul style="list-style-type: none"> • Vesicoureteral reflux grades 4-5 • Moderate-severe hydronephrosis • Bilateral hypoplasia/dysplasia/agenesis • Autosomal recessive polycystic kidney disease • Posterior urethral valves

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Supplemental Table 3. Medications associated with neonatal AKI captured in data collection separated into categories.

Medication categories	Medications included in each class	
Antimicrobial medications	Acyclovir Amphotericin Aminoglycosides Piperacillin-tazobactam vancomycin	
Methylxathines	Caffeine	Theophylline
Diuretics	Bumetanide Furosemide	Chlorothiazide Spironolactone
Vasopressors	Dobutamine Milrinone Dopamine	Epinephrine Norepinephrine
Non-steroidal anti-inflammatory drugs (NSAIDs)	Indomethacin Ibuprofen	

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Supplemental Table 4. Prevalence of early AKI in the overall cohort and by gestational age cohorts with frequency of creatinine measurements, type and country of center.

Site	Whole groups			22-28 week group			29-35 week group			36+ week group			type of center
	AKI prevalence (%)	median sCr count	number enrolled	AKI prevalence (%)	median sCr count	number enrolled	AKI prevalence (%)	median sCr count	number enrolled	AKI prevalence (%)	median sCr count	number enrolled	
Australia	14	4	36	0	10	3	21	4	19	7	4	14	Perinatal-Surgical
India	19	0	58	0	2	1	16	0	31	23	0	26	Perinatal
Canada	8	0	102	14	3	29	0	0	34	10	0	39	Perinatal-Surgical
	30	2	64	0	3.5	2	21	2	14	33	2	48	Children's Hospital
USA	8	4	91	13	7	15	0	4	48	18	3	28	Perinatal-Surgical
	9	3	68	38	10	8	6	4	32	4	2	28	Perinatal-Surgical
	24	4	78	50	10.5	4	12	6	41	36	3	33	Perinatal-Surgical
	14	1	102	0	2.5	10	2	0	46	28	2	46	Perinatal-Surgical
	24	4	86	47	10	19	5	3	39	36	2	28	Perinatal-Surgical
	18	2.5	56	27	0	11	0	5	13	22	3	32	Perinatal-Surgical
	20	0	119	0	0	13	11	0	57	37	0	49	Perinatal-Surgical
	1	0	79	0	3	4	0	0	45	3	0	30	Perinatal-Surgical
	7	0	152	5	5	22	3	0	92	18	0	38	Perinatal-Surgical
	12	5	101	29	8.5	14	8	5	53	12	5	34	Perinatal-Surgical
	40	4	65	20	6	5	36	4	28	47	2.5	32	Children's Hospital
	24	0	119	24	1	21	13	0	30	28	0	68	Children's Hospital
	37	7	114	48	9	21	22	7	54	51	6	39	Children's Hospital
	47	5	90	4	6	6	46	4	48	44	5.5	36	Children's Hospital
	21	5	76	50	5.5	10	9	5.5	22	20	5	44	Children's Hospital
	50	5	74	71	7	7	47	4	17	48	5	50	Children's Hospital
	60	2	75	33	2	3	56	3	18	63	2	54	Children's Hospital
32	5	63	36	7	11	28	5	43	44	3	9	Perinatal	
6	2	189	38	6	21	4	3	76	1	2	92	Perinatal	
25	3	53	80	11	5	25	3	36	0	0	12	Perinatal	

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Supplemental Figure 1



