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**For Discussion Purposes Only**  
**Congenital Hypothyroidism and Congenital Adrenal Hyperplasia Algorithms and Screening Metrics**  
**2002-2006**

**Endocrine Project Report**  
**Region 4 Genetics Collaborative**  
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**Okemos, Michigan**

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**Preliminary Results**

**Region 4 CH Algorithm and Screening Metrics**

	Method	Positive Criteria Hrs	TSH	T4	Year	Births	Total +	+/1000	S +	B +	Cases	Det. Rate	PPV %	False + rate	
Michigan final	Auto Delfia TSH Only 2004-2006  <b>2002-2006</b>	<b>24-36</b> <b>37-167</b> <b>168-743</b> <b>&gt;743</b>	>33 >=50 S+ >24 >=50 S+ >13 >=50 S+ >9 >=50 S+		2002	128689	6260		-----	-----		108	1/1192	2	4.78
					2003	129889	4964		-----	-----		88	1/1476	2	3.75
					2004	126789	1407		178	1229	67	1/1892	5	1.06	
					2005	124942	1362		172	1190	72	1/1735	5	1.03	
					2006	123095	694		156	538	49	1/2512	7	0.52	
						<b>633404</b>	<b>14687</b>	<b>23.2</b>			<b>384</b>	<b>1/1649</b>	<b>3</b>	<b>2.26</b>	
Wisconsin final	AutoDelfia TSH Only  <b>0-25</b> <b>26-96</b> <b>96-14days</b> <b>14+days</b>	>=37 >50 S+ >=30 >50 S+ >=17 >17 S+ >=15			2002	67408	333		85	248	32	1/2107	10	0.45	
					2003	68893	371		72	299	43	1/1602	12	0.48	
					2004	68472	410		85	325	58	1/1181	14	0.51	
					2005	68606	324		62	262	42	1/1632	16	0.32	
					2006	68739	348		80	268	45	1/1528	13	0.44	
						<b>342118</b>	<b>1486</b>	<b>4.3</b>			<b>220</b>	<b>1/1555</b>	<b>15</b>	<b>0.37</b>	
Minnesota final	AutoDelfia TSH Only  <b>0-26</b> <b>27-48</b> <b>49-168</b> <b>&gt;168</b>	>=37 >=30 >=23 >10			2002	68064	470		32	438	28	1/2431	6	0.65	
					2003	69999	291		41	250	32	1/2187	11	0.37	
					2004	70259	291		36	254	20	1/3513	7	0.39	
					2005	71058	246		38	208	34	1/2090	14	0.30	
					2006	73473	190		55	135	34	1/2161	18	0.21	
						<b>352853</b>	<b>1488</b>	<b>4.2</b>			<b>148</b>	<b>1/2384</b>	<b>10</b>	<b>0.38</b>	
Illinois final	AutoDelfia TSH Primary T4 Secondary	<b>All</b>	1. >53 2. Top 3% 3. Top 0.5% and<54 4. Not in top 0.5% but 36-54 5. Top 0.5%	<5    5-7.99	2003	179082	1382		184	1198	84	1/2132	6	0.72	
					2004	177417	1337		167	1170	89	1/1993	7	0.70	
					2005	176089	1337		165	1172	93	1/1893	7	0.71	
					2006	174975	1341		142	1199	96	1/1823	7	0.71	
						<b>707563</b>	<b>5397</b>	<b>7.6</b>			<b>362</b>	<b>1/1955</b>	<b>7</b>	<b>0.71</b>	
Indiana final	AutoDelfia TSH/T4 primary	<b>All</b>	>25.5	<5.0	2002	85506	2427		44	2383	32	1/2672	1	2.80	
					2003	87115	2459		42	2417	29	1/3004	1	2.79	
					2004	85923	2290		50	2240	29	1/2963	1	2.63	
					2005	85570	2164		55	2109	41	1/1990	2	2.48	
					2006	89786	1848		40	1808	32	1/2806	2	2.02	
						<b>433900</b>	<b>11188</b>	<b>25.8</b>			<b>163</b>	<b>1/2662</b>	<b>1</b>	<b>2.54</b>	
Ohio final	AutoDelfia  <b>&lt;=48</b> <b>&gt;48</b> <b>All</b>	>28 >34 >50		<=8 <=8 Any value	2002	149247	1376		224	1152	83	1/1798	6	0.87	
					2003	149670	1539		244	1539	88	1/1701	6	0.97	
					2004	149269	1177		173	1006	72	1/2073	6	0.74	
					2005	148458	1039		185	859	75	1/1979	7	0.65	
					2006	150814	1178		209	976	74	1/2038	6	0.73	
						<b>747458</b>	<b>6309</b>	<b>8.4</b>			<b>392</b>	<b>1/1907</b>	<b>6</b>	<b>0.79</b>	
Kentucky	RIA	<b>0-96</b> <b>&gt;96</b>	>25 >20	<5	2002										
					2003										
					2004										
					2005										
					2006										
TOTALS						<b>3,217,296</b>	<b>40,555</b>	<b>12.6</b>			<b>1,669</b>	<b>1/1928</b>	<b>4</b>	<b>1.21</b>	

**Region 4 CAH Algorithm and Screening Metrics**

	Method	Wt/Age Criteria	Cut-off	Year	Births	Total +	Total + /1000	S+	B+	Cases	Det. Rate	PPV %	False + %
Michigan final	AutoDelfia TMS 2 <sup>nd</sup> Tier final	All weights <=12 hrs or <2500 >12 hrs & >2500	>=150 >=110	2004	126789	322		78	244	7	1/18713	2	0.25
				2005	124942	844		322	522	6	1/20284	1	0.67
				2006	123095	694		267	447	3	1/41032	0	0.56
					<b>374826</b>	<b>1860</b>	<b>5.0</b>			<b>16</b>	<b>1/23427</b>	<b>1</b>	<b>0.49</b>
Wisconsin final	AutoDelfia final	>=2200g 1700-2199 <1699	>=86 >=105 >=190	2002	64408	116		18	98	1	1/64408	1	0.18
				2003	68893	134		27	107	4	1/17223	3	0.19
				2004	68472	72		12	60	2	1/34236	2	0.50
				2005	68606	349		62	287	5	1/13721	1	0.50
				2006	68739	277		46	231	2	1/34370	2	0.40
	<b>339118</b>	<b>948</b>	<b>2.8</b>			<b>14</b>	<b>1/24223</b>	<b>1</b>	<b>0.28</b>				
Minnesota final	AutoDelfia TMS 2 <sup>nd</sup> tier final	>=2200g 1600-2199 1099-1599 >1099	>=65 >=112 >=146 >=175	2002	68064	419				18	1/3781	4	0.59
				2003	69999	340				1	1/69999	0	0.48
				2004	70259	162				3	1/23419	2	0.23
				2005	71058	48				3	1/23686	6	0.06
				2006	73473	47				4	1/18363	9	0.06
	<b>352853</b>	<b>1016</b>	<b>2.9</b>			<b>29</b>	<b>1/12167</b>	<b>3</b>	<b>0.28</b>				
Illinois final	AutoDelfia final	Term Upper 0.5% Outside 0.5% Premature: <2000g or <=36 wks.	>=48 >=60 >=100	2003	179082	1188		166	1022	6	1/29847	1	0.66
				2004	177417	933		164	769	7	1/25345	1	0.52
				2005	176089	1534		350	1184	10	1/17609	1	0.87
				2006	174975	2212		475	1737	5	1/34995	0	1.26
	<b>707563</b>	<b>5867</b>	<b>8.3</b>			<b>28</b>	<b>1/25270</b>	<b>0</b>	<b>0.83</b>				
Indiana final	AutoDelfia final	>2500g 1500-2499 <1500	>=50 >=90 >=135	2002	85506	530		8	525	3	1/28502	1	.062
				2003	87115	496		16	480	6	1/14519	1	0.56
				2004	85923	268		6	262	3	1/28641	1	0.31
				2005	85570	1044		23	1021	5	1/17114	0	1.21
				2006	89786	728		21	727	2	1/44893	0	0.81
	<b>433900</b>	<b>3066</b>	<b>7.1</b>			<b>19</b>	<b>1/22837</b>	<b>1</b>	<b>0.70</b>				
Ohio	AutoDelfia final	<1500g 1501-2000 2001-2500 >2500	>250 >130 >100 >90	2003	84973	238				4	1/21243	2	0.28
				2004	149269	201				6	1/24848	3	0.13
				2005	148458	812				10	1/14846	1	0.54
				2006	150814	1102				10	1/15081	1	0.72
	<b>533514</b>	<b>2353</b>	<b>4.4</b>			<b>30</b>	<b>1/17784</b>	<b>1</b>	<b>0.44</b>				
Kentucky	AutoDelfia TMS 2 <sup>nd</sup> tier	<1500g 1500-2500 >2500	<90 <70 <50										
<b>TOTAL</b>					<b>2,741,774</b>	<b>15,110</b>	<b>5.5</b>			<b>146</b>	<b>1/18779</b>	<b>1</b>	<b>0.55</b>