



# Washington State Newborn Screening Program Unsatisfactory Specimens & Demographic Errors Report by Submitting Facility

Received January 1, 2017 - December 31, 2017



DOH 951-143-Quality by Submitter  
November 2018

## Unsatisfactory Specimens

Some specimens are considered unsatisfactory due to the quality of specimen collection or handling. These specimens are tested for extreme values but another specimen must be obtained to complete screening. The need to obtain a repeat specimen could delay diagnosis and treatment of an affected infant.

## Demographic Errors

Some specimens arrive with missing or invalid demographic information. Key demographic fields are necessary for interpreting newborn screening results and for identifying the infant. Missing or invalid information can delay screening results and could delay diagnosis and treatment of an affected infant.

Submitting Facility	City	Total Specimens	Unsat Spec. <sup>1</sup> Error Rate	Demographic Error Rate <sup>2</sup>
Auburn Medical Center - MultiCare	Auburn	1,234	7.1%	6.6%
Capital Medical Center	Olympia	664	1.5%	5.9%
Cascade Valley Hospital	Arlington	206	9.2%	11.2%
Central Washington Hospital/Confluence Health	Wenatchee	1,365	2.1%	6.2%
Columbia Basin Hospital	Ephrata	4	25.0%	25.0%
Coulee Medical Center	Grand Coulee	129	5.4%	3.1%
Deaconess Hospital - MultiCare	Spokane	1,847	1.5%	7.1%
East Adams Rural Hospital	Ritzville	1	0%	0%
EvergreenHealth - Monroe	Monroe	47	2.1%	23.4%
EvergreenHealth Kirkland	Kirkland	4,966	2.2%	2.4%
Fairchild Air Force Base - 92nd Medical Group	Fairchild AB	1	0%	0%
Ferry County Memorial Hospital	Republic	1	0%	0%
Forks Community Hospital	Forks	109	3.7%	2.8%
Good Samaritan Hospital - MultiCare	Puyallup	2,372	0.9%	7.7%
Grays Harbor Community Hospital	Aberdeen	429	2.1%	5.6%
Harborview Medical Center - UW Medicine	Seattle	112	3.6%	28.6%
Harrison Medical Center	Bremerton	2,135	0.8%	5.6%
Highline Medical Center	Burien	1,026	2.5%	4.6%
Holy Family Hospital - Providence	Spokane	1,424	1.3%	2.6%
Island Hospital	Anacortes	694	1.4%	4.2%
Jefferson Healthcare	Port Townsend	185	1.1%	10.8%
Kadlec Regional Medical Center	Richland	3,286	0.9%	4.7%
Kaiser Permanente WA - Capitol Hill	Seattle	14	0%	7.1%
Kittitas Valley Healthcare	Ellensburg	340	2.9%	8.8%
Lake Chelan Community Hospital	Chelan	161	1.9%	10.6%
Legacy Salmon Creek Medical Center	Vancouver	3,668	0.7%	5.6%
Lewis County Hospital	Morton	3	33.3%	0%
Lincoln Hospital	Davenport	28	0%	35.7%

Submitting Facility	City	Total Specimens	Unsat Spec. <sup>1</sup> Error Rate	Demographic Error Rate <sup>2</sup>
Lourdes Medical Center	Pasco	1	0%	0%
Madigan Army Medical Center	Joint Base Lewis-McChord	3,977	0.9%	2.9%
Mary Bridge Children's Hospital - MultiCare	Tacoma	29	24.1%	31.0%
Mason General Hospital	Shelton	269	0.4%	6.3%
Mid-Valley Hospital	Omak	231	2.6%	13.9%
Mount Carmel Hospital - Providence	Colville	241	8.3%	15.8%
Naval Hospital - Bremerton	Bremerton	1,137	0.4%	2.7%
Naval Hospital - Oak Harbor	Oak Harbor	454	1.3%	11.7%
Newport Hospital	Newport	159	1.9%	3.1%
North Valley Hospital	Tonasket	102	2.0%	2.0%
Northwest Hospital - UW Medicine	Seattle	1,584	0.9%	3.9%
Olympic Medical Center	Port Angeles	948	1.1%	2.6%
Othello Community Hospital	Otherllo	807	3.5%	3.1%
Overlake Medical Center	Bellevue	3,861	1.6%	4.0%
PeaceHealth Southwest Medical Center	Vancouver	2,303	1.0%	13.2%
Prosser Memorial Hospital	Prosser	526	2.1%	6.3%
Providence Centralia Hospital	Centralia	697	7.5%	6.7%
Providence Everett Regional Medical Center	Everett	5,172	1.4%	10.5%
Providence St Peter Hospital	Olympia	2,329	6.7%	4.7%
Pullman Regional Hospital	Pullman	433	1.4%	8.1%
Sacred Heart Medical Center - Providence	Spokane	4,625	1.3%	6.3%
Samaritan Healthcare	Moses Lake	1,053	1.2%	3.4%
Seattle Children's Hospital	Seattle	806	1.9%	6.1%
Skagit Valley Hospital	Mount Vernon	1,013	1.6%	4.2%
St Elizabeth Hospital	Enumclaw	439	2.3%	6.4%
St Francis Hospital	Federal Way	1,496	1.5%	5.2%
St John Medical Center - PeaceHealth	Longview	863	1.0%	4.9%
St Joseph Hospital PeaceHealth - Bellingham	Bellingham	2,077	2.2%	4.7%
St Joseph Hospital Providence - Chewelah	Chewelah	10	0%	10.0%
St Joseph Medical Center - Tacoma	Tacoma	4,997	2.0%	6.2%
St Mary Medical Center - Providence	Walla Walla	701	0.3%	5.3%
Summit Pacific Medical Center	Elma	51	5.9%	15.7%
Sunnyside Community Hospital	Sunnyside	889	2.6%	3.9%
Swedish - Ballard	Seattle	1,229	2.1%	4.5%
Swedish - Cherry Hill	Seattle	1	0%	0%
Swedish - Edmonds	Edmonds	1,962	2.5%	4.2%
Swedish - First Hill	Seattle	8,531	1.9%	26.1%
Swedish - Issaquah	Issaquah	1,685	1.9%	4.5%
Tacoma General Hospital - MultiCare	Tacoma	3,737	2.4%	6.7%

Submitting Facility	City	Total Specimens	Unsat Spec. <sup>1</sup> Error Rate	Demographic Error Rate <sup>2</sup>
Three Rivers Hospital	Brewster	151	0%	1.3%
Toppenish Community Hospital	Toppenish	678	1.6%	4.9%
Trios Health Hospital	Kennewick	1,510	2.8%	7.6%
University of Washington Medical Center	Seattle	2,277	10.1%	7.3%
Valley Hospital	Spokane	976	1.3%	4.0%
Valley Medical Center - UW Medicine	Renton	4,007	2.9%	5.8%
Virginia Mason Hospital	Seattle	30	3.3%	6.7%
Virginia Mason Memorial	Yakima	4,319	1.8%	2.6%
Walla Walla General Hospital	Walla Walla	9	33.3%	22.2%
WhidbeyHealth Medical Center	Coupeville	387	1.8%	5.7%
Whitman Hospital and Medical Center	Colfax	63	3.2%	7.9%
Willapa Harbor Hospital	South Bend	2	0%	0%
Yakima Regional Medical Center	Yakima	1	0%	0%
<b>All Hospital Specimens</b>	<b>Statewide</b>	<b>102,286</b>	<b>2.1%</b>	<b>7.7%</b>
<b>Non-Hospital Specimens</b>	<b>Statewide</b>	<b>67,880</b>	<b>3.2%</b>	<b>19.1%</b>
All Birth Center Specimens	Statewide	754	2.4%	26.9%
All Midwife Specimens	Statewide	4,719	5.2%	17.9%
All Clinic and Laboratory Specimens	Statewide	62,407	3.0%	19.1%
<b>All Washington State Births</b>	<b>Statewide</b>	<b>170,166</b>	<b>2.5%</b>	<b>12.0%</b>

<sup>1</sup> See [Key 1: Unsatisfactory Specimen Descriptions](#) for descriptions and causes of unsatisfactory specimens

<sup>2</sup> Includes specimen cards with one or more missing or invalid demographic field

## Washington State Newborn Screening Program

### Key: Unsatisfactory Specimen Descriptions

January 1, 2017 - December 31, 2017

Some specimens are considered unsatisfactory due to the quality of specimen collection or handling. These specimens are tested for extreme values but another specimen must be obtained to complete screening. The need to obtain a repeat specimen could delay diagnosis and treatment of an affected infant.

Unsatisfactory Specimen Errors		
Error	Description	
<b>Layered or Supersaturated</b>	Blood was layered, clotted or supersaturated. Caused by: <ul style="list-style-type: none"> <li>• Repeated application of blood to the same filter paper circle</li> <li>• Blood applied to both sides of the filter paper</li> <li>• Blood clotting in a capillary tube</li> <li>• Application of too much blood</li> </ul>	
<b>Incompletely Saturated</b>	Blood did not completely soak through the filter paper or not enough blood on the filter paper. Caused by: <ul style="list-style-type: none"> <li>• Filter paper circles not fully saturated or not completely filled</li> <li>• Application of small blood spots</li> <li>• Blood applied to both sides of the filter paper</li> </ul>	
<b>Contaminated</b>	Blood was diluted, discolored, contaminated or exhibited serum rings. Caused by: <ul style="list-style-type: none"> <li>• Alcohol not completely drying before skin puncture</li> <li>• Puncture site squeezed or 'milked' to expel blood</li> <li>• Improper drying of specimen</li> <li>• Exposure to high temperatures</li> <li>• Filter paper contact with gloved or ungloved hands, or by substances such as alcohol, feeding or antiseptic solutions, hand lotion or powder</li> </ul>	
<b>Specimen Too Old</b>	Specimen was delayed in transit and is too old for testing due to deterioration of the dried blood spots. <ul style="list-style-type: none"> <li>• Specimens received more than 14 days after collection are too old for hemoglobin and galactosemia testing</li> <li>• Specimens received more than 30 days after collection are too old for all tests</li> </ul>	
<b>Abraded</b>	Specimen surface was scratched, dented, or abraded. Caused by: <ul style="list-style-type: none"> <li>• Improper application of blood with capillary tube or other device</li> </ul>	
<b>Partial Unsuitable</b>	Validation of the preliminary screening results was not possible due to the unsuitability of the residual blood. Caused by: <ul style="list-style-type: none"> <li>• Partial abrasion, contamination, damage, or oversaturation of residual blood</li> <li>• Insufficient quantity of blood</li> </ul>	
<b>Other Unsuitables</b>	Ambiguous Degradation	Hemoglobin screening results indicate degradation or chemical modification of hemoglobins present causing assay interference.
	Damaged Specimen	Specimen was damaged during transport and blood sample may be torn or contaminated by rain and/or other substances.
	Old Collection Card	Specimen was submitted on a collection card past its expiration date. Cards expire three years after their manufacture date.
	Received in Plastic	Specimen was received in a sealed plastic bag and may be damaged by heat exposure and moisture accumulation.
	No Blood	Specimen card received with no blood on filter paper nor valid refusal signature.