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## TECHNICAL REPORT: Permanency Court Processes and Outcomes for Children in Out of Home Care

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**P**ERMANENCY OUTCOMES for children in out-of-home care in Washington State are strongly affected if not driven by the actions of the dependency courts and the child welfare system. The Administration of the Courts (AOC) and the DSHS Children's Administration (CA) are cooperating on a joint project to investigate barriers to permanency in both systems, sharing administrative data and meeting regularly to review performance and discuss practice improvements. This Technical Report provides a comprehensive set of findings obtained through 2013 on the relationships between AOC and CA processes and permanency outcomes.

Both CA and AOC have established a variety of metrics that track performance. CA is expected to meet Federal and State guidelines designed to improve the outcomes for children who are removed from their families of origin and placed in out-of-home care. These include metrics that track the incidence and recurrence of maltreatment prior to placement, timeliness of permanency, proportion of children reunified, proportion re-abused and/or needing to re-enter care following reunification, and critical events and case processes known to impact the safety, permanency, and well-being of children such as moves to different care homes during placement, placement with relatives versus non-relatives, siblings placed together, and regular visits with their social worker, biological parents, and siblings (if not placed together).

AOC dependency courts are expected to meet statutory guidelines for case processing objectives related to the achievement of permanency for dependent children in Washington State. These court processing guidelines include holding the first fact-finding hearing within 75 days after the opening of a dependency case, holding the first review hearing within six months, the first permanency planning hearing within twelve months, filing a petition for termination of parental rights within 15 months, and finalization of adoption within six months of that termination. The Washington State Center for Court Research (WSCCR), as part of the Court Improvement Project, has been tracking compliance with these case processing guidelines for the past several years (cf. Orme, Skreen, O'Donnell, McCurley, Wang, and George, (2013)). In general, the rates of compliance have been improving, but the relationship between court processes and permanency outcomes such as length of dependency have not been systematically examined. To address this need, the WSCCR in partnership with CA and the Research and Data Analysis Division of DSHS (RDA) are conducting a multi-year study of the possible associations between permanency outcomes and various CA and court processes. This report focuses on the relationships between court processes and permanency outcomes and factors related to process guideline compliance, and also covers the influence of CA events and processes such as social worker visitation and placement with relatives. Special attention is given throughout to the presence and magnitude of racial disparities.

## Executive Summary

This technical report presents the results of multivariate statistical analysis of dependency cases opening during the seven-year period of CY2005 through CY2011. The SCOMIS docket activity data on children from the courts were matched to Children’s Administration FAMLINK data on Child Protective Services intakes, investigations, and out-of-home placements for those children and their caregivers, for intakes and placements through the CY2005-CY2011 period plus an additional 18-month follow-up period. This linked data set was subdivided into date range-appropriate analysis subsets, to examine the effects of court differences and case characteristics on the length of dependency, rates of compliance with court process guidelines, and the post-dismissal outcomes of placement re-entry or a new founded allegation of abuse or neglect.

Combination of the AOC and CA administrative data enabled analysis of the influence of a wide range of case characteristics. These characteristics included risk and assessment data for child and parent mental illness, substance abuse, criminality, economic stress, homelessness, and domestic violence, as well as basic demographic information. Child Protective Services intake and risk assessment information was also available, for the intakes related to the dependency as well as any prior history of abuse or neglect.

Factors influencing compliance of the courts with these case processing guidelines were examined: holding the first fact-finding hearing within 75 days of placement entry, first review hearing within six months, and first permanency planning hearing within twelve months, filing of a termination of parental rights petition within 15 months, and finalization of adoption six months after parental rights termination. Basic metrics of the general level of court action were also constructed and used in the analyses, such as number of docket activities and number of continuances per year of dependency.

Differences between courts and between race/ethnicity groups (racial disparities) are presented for each outcome of length of dependency, post-dismissal outcomes, and court process guideline compliance rates. This is followed by a summary of the influences of other case characteristics on these outcomes. Finally, a brief overview of future directions for this research is given. Full statistical model results are given in a Technical Notes appendix.

## Key Findings

- There are significant differences in length of dependency for different courts; those differences remain after adjusting for court differences in case types, including race
- The variation in length of dependency across courts is comparable in magnitude to the variation across races, and is typically larger than the effect of many other case characteristics
- There are significant racial differences in length of dependency, especially for longer dependencies, and in the degree of compliance with court processing guidelines
- Compliance with the statutory guidelines of holding the first fact-finding hearing within 75 days, first review hearing within six months, and first permanency planning hearing within twelve months is significantly associated with shorter lengths of dependency compared to non-compliance for each of these dependency court processes
- Compliance with the statutory guidelines of filing for termination of parental rights within fifteen months is significantly associated with shorter periods until finalization of adoption compared to non-compliance for this dependency court process

- The magnitude of the difference in dependency length between compliant and non-compliant cases varies with the court process and the type of dependency case
- The length of dependency difference between compliant and non-compliant cases diminishes over time, with a period that varies with the particular court process
- Compliance with the guideline to hold the first permanency planning hearing within 12 months also reduces the likelihood of subsequent placement re-entry or a new founded allegation of abuse for children who are reunified or established in guardianships, though this marginally-significant result should be interpreted with caution
- CA compliance with the guideline of social worker visits with the child at least once per month is also significantly associated with shorter lengths of dependency, at least for dependencies lasting 12 months or longer cases, and with higher likelihoods of compliance with the termination filing and adoption finalization court process guidelines.
- Cases involving chronic neglect and children with mental illness/behavioral problems are significantly likely to have longer lengths of dependency and higher likelihoods of placement re-entry or new founded allegations
- Cases with parental substance abuse, homelessness, or domestic violence are significantly more likely to result in post-reunification placement re-entry or new founded allegations of abuse and neglect

## Study Populations

Dependency cases opening during the seven-year period of CY2005 through CY2011 were matched to CA permanency records. Selecting the first dependency case for each unique child that could be successfully matched to CA data yielded a total of 29,666 cases (children). Because each of the court process standards were established at different times (e.g., the guideline of the first permanency planning hearing in CY2009), and because analyses revealed that the only feasible way to study the effects of court process compliance was to study each over different dependency timeframes, subsamples were derived from the total sample as shown in Table 1. Restrictions on minimum category counts for the multivariate analyses required combining courts with smaller numbers of cases into court groups. A subsample consisting of closed dependencies with permanency results other than adoption<sup>1</sup> was also constructed to study placement outcomes following dismissal. The smaller size for this subsample required further collapsing of individual courts into court groups, as shown in Table 2.

TABLE 1.

### Analysis Subsample Counts

Court Process/Guideline	Sample Definition	Number Compliant	Number Non-Compliant	N n/a* Other	TOTAL
First Fact-Finding Hearing within 75 days	Exits of Dependencies starting CY 2008-2011, length < 1 year	1,853	1,026	0	2,879
First Review Hearing within 6 months	Dependencies starting CY 2009-CY2011, length > 6 months	8,036	1,720	422	10,178
First Permanency Planning Hearing within 12 months	Dependencies starting CY 2009-2011, length > 1 year	7,089	975	996	9,060
Filing of Termination of Parental Rights Petition within 15 months	Dependencies starting CY 2005-2010 with Termination filed	4,794	2,707	0	7,501
Filing of Termination of Parental Rights Petition within 15 months	Dependencies starting CY 2005-2010 and Adoption Compliant or Non-Compliant	3,384	1,604	0	4,988
Permanency Outcome within 18 Months of Dependency Dismissal	Sample Definition	Number Occurring	Number Not Occurring	% Occurring	TOTAL
Placement Re-Entry	Closed Dependencies starting CY 2008-2011 to Permanency Results other than Adoption	256	4,406	5.5%	4,662
New Founded Allegation		234	4,428	5.0%	4,662
Re-Entry or New Founded		341	4,321	7.3%	4,662

\* Includes cases with compelling reasons for not meeting guidelines, unknown and bad records, etc.

TABLE 2.

### Subsample Counts for Court and Court Groups

Court/Court Group	Reunifications, < 1 year <sup>a</sup>	All types, >= 1 year <sup>a</sup>	Adoption-Related <sup>a</sup>	Closed Dependencies <sup>b</sup>
Mostly White-EAST	115	303	195	186
Mostly White-WEST	47	89	44	169
Higher Hispanic – EAST	159	784	588	419

1 Outcomes following adoption (adoption disruption) were measured separately. The prevalence was too low for meaningful statistical analysis.

Higher Nat. Am.- EAST	23	65	21	529
Higher Nat. Am.- WEST	122	605	473	
Clark	139	692	264	290
Cowlitz	18	153	158	<b>c</b>
King	299	1,362	1,152	615
Kitsap	113	449	411	216
Lewis	16	105	107	<b>c</b>
Pierce	289	1,448	1,217	746
Skagit	60	173	183	<b>c</b>
Snohomish	253	848	1,004	548
Spokane	336	935	860	637
Thurston	54	239	212	117
Whatcom	33	383	260	<b>c</b>
Yakima	77	427	352	190
State	2,153	9,060	7,501	4,662

**a) Composition of court groups for first three subsamples:**

**Mostly White-EAST:** Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

**Mostly White-WEST:** Island, San Juan, Skamania, Wahkiakum

**Higher Hispanic-EAST:** Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

**Higher Native American-EAST:** Ferry, Okanogan

**Higher Native American-WEST:** Clallam, Grays Harbor, Jefferson, Mason, Pacific

**b) Composition of court groups for closed dependencies subsample:**

**Mostly White-EAST:** Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

**Mostly White-WEST:** Cowlitz, Island, Lewis, San Juan, Skamania, Wahkiakum

**Higher Hispanic-EAST:** Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

**Higher Native American:** Clallam, Ferry, Grays Harbor, Jefferson, Mason, Okanogan, Pacific, Skagit, Whatcom

**c) Individual court added to a court group for the closed dependencies subsample**

TABLE 3.

**Subsample Counts for Race/Ethnicity Groups**

Race/Ethnicity Group	Reunifications, < 1 year	All types, >= 1 year	Adoption- Related	Closed Dependencies
White only	1,166	4,939	4,238	2,591
Native American only	64	460	303	153
Asian/PI only	75	167	77	101
Black only	204	761	602	429
Hispanic (white or unknown race)	329	1,294	1,056	653
Multiracial with Native American	152	652	495	374
Multiracial with Black, no Native American	110	595	544	300
Multiracial other (Asian/Hispanic/White)	26	146	141	61
unknown	27	46	45	0
All	2,153	9,060	7,501	4,662

## Case Characteristics used in Multivariate Models

The specific operational definitions of the case characteristics used for multivariate adjustments varied depending on the model and subsample. All characteristics were used in forms that retained the nature of a ‘pre-existing condition’; e.g., the permanent plan at 1 year in care was not used for the models of the subset of children exiting before 1 year.

- Child Characteristics: gender, age at start or end of dependency, combined race/ethnicity, child mental health (various indicators, depending on model: any indication of MH/BH problem, any DSM diagnosis, substance abuse, co-occurrence of mental illness and substance abuse, suicidal)
- Parental Characteristics: mental illness, criminality, economic stress, domestic violence, housing issue/homelessness, substance abuse; these characteristics are derived from CPS investigative findings and are noted as problems existing at the time of investigation or in the 12 months prior to investigation
- Intake Characteristics (at or just prior to dependency): more than 2 prior neglect allegations, investigative substantiation of allegation, type of abuse, allegation severity scale based on type of intake (from low = ARS intake to high of accepted and founded emergent CPS intake), prior Voluntary Placement Agreement for child
- Placement Characteristics: any founded allegation after dependency, child initially placed with relatives, placement move and type of move in first year of placement, DCFS social worker compliant with child visitation standard (of at least 1 visit per month) during first year in care, initial CA permanent plan of reunification
- Court Processing Characteristics: more than one court continuation in the first year of dependency, number of docket activities per year, permanent plan at 1 year in care of reunification, change in permanent plan goal during first year in placement, court compliance with performance standards (those relevant to timeframe of data subset), any early indication case is moving towards adoption (such as initial permanent plan of adoption or early opening of a termination case)
- Post-Dismissal Characteristics (for placement outcomes/closed dependencies subsample models): number of placement moves throughout entire dependency period, overall type of placement setting (relative, non-relative), length of dependency, change in type of permanent plan, dependency discharge type

## Courts Show Significant Variations in Length of Dependencies, before and after Adjusting for Differences in Race/Ethnicity Composition of Cases and other Case Characteristics

Table 4 presents the median length of dependencies for the different courts (counties) and court groups, for the three main dependency case samples described in Table 2. The shortest and longest values are marked in bold face. Note that the courts that show the shortest and longest lengths are different for short-term dependencies resulting in reunification, versus longer-term dependencies (all types of exits or adoption-related). Apparently, different case processing dynamics are at work for short-term versus longer-term dependencies in the different counties. Figure 1 is an alternative graphical view of these same data, to facilitate inter-court comparisons.

TABLE 4.

### Court Variations in Median Length of Dependencies (in Days, unadjusted)

Court/Court Group	Reunifications,	All types, >= 1 year	Adoption-Related
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	< 1 year		
Mostly White-EAST	140	922	1137
Mostly White-WEST	163	791	954
Higher Hispanic – EAST	189	791	1118
Higher Nat. Am. - EAST	<b>56</b>	903	1021
Higher Nat. Am. - WEST	162	862	1106
Clark	150	902	1142
Cowlitz	<b>294</b>	832	875
King	116	869	1070
Kitsap	174	849	1057
Lewis	107	848	1052
Pierce	248	829	1010
Skagit	202	866	1150
Snohomish	199	761	1011
Spokane	258	<b>643</b>	<b>826</b>
Thurston	115	751	964
Whatcom	117	855	1082
Yakima	260	<b>963</b>	<b>1188</b>
<i>State</i>	195	818	1027

**Composition of court groups:**

**Mostly White-EAST:** Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

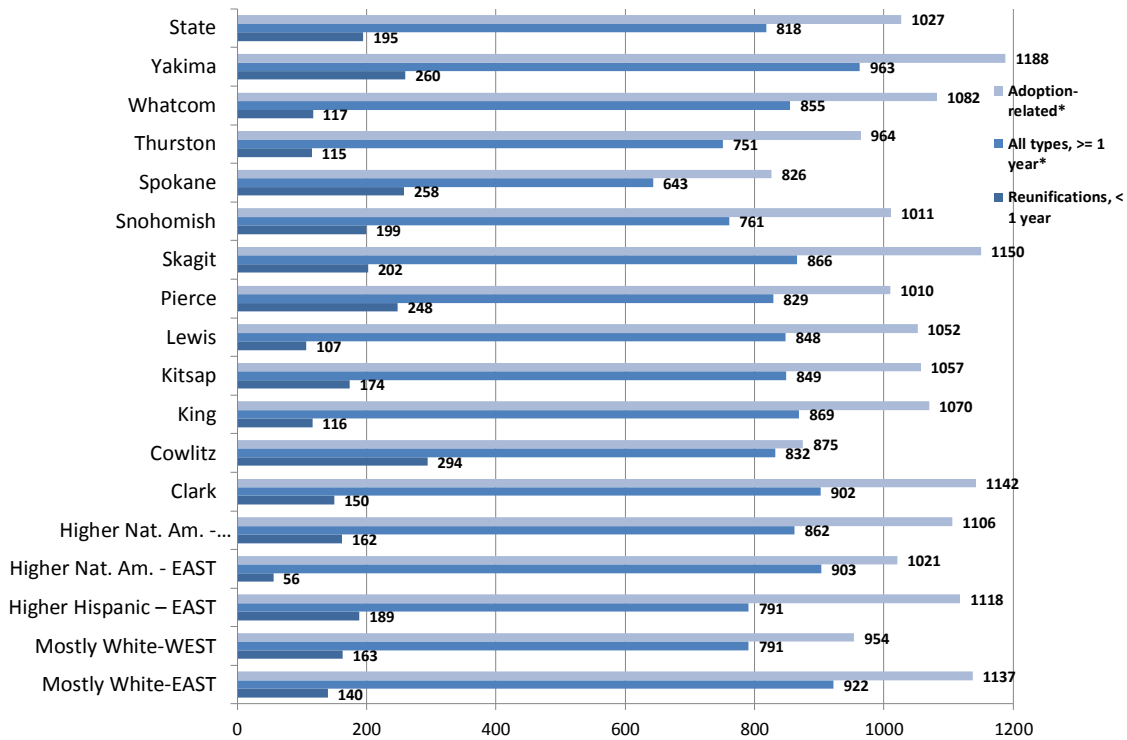
**Mostly White-WEST:** Island, San Juan, Skamania, Wahkiakum

**Higher Hispanic-EAST:** Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

**Higher Native American-EAST:** Ferry, Okanogan

**Higher Native American-WEST:** Clallam, Grays Harbor, Jefferson, Mason, Pacific

**Figure 1. Court Variations in Median Length of Dependencies (unadjusted)**



\* Kaplan-Meier estimation; approximate due to > 50% of sample cases still open in some counties

**Multivariate Statistical Adjustment**

Direct comparisons of median lengths of dependency or any other process or outcome measure between different administrative divisions such as courts, clinics, or offices can be misleading. Natural demographic or other differences in case composition between courts can mask or inflate differences in actual court performance. To give a hypothetical example, a rural county may be experiencing an unusually high rate of methamphetamine or other drug addiction, which can result in a higher placement rate of children and difficult dependency cases that take longer to resolve. Reporting that county’s median length of dependency without adjusting for the unusually high rate of parental substance abuse will give the impression that dependency court processes are to blame for the observed longer lengths of dependency. However, by statistically adjusting for inter-court differences in the rate of parental substance abuse, an ‘apples to apples’ comparison of lengths of dependency can be made.

Multivariate statistical procedures extend this logic to adjust for any known factors outside of a court’s control that may be influencing performance. The resulting adjusted values then represent actual differences in court performance, variations in case characteristics aside. There are some limitations to this approach: the more factors entered into the model, the higher the number of cases that are required to obtain a reliable solution. This is the reason for the combination of cases from smaller courts into court groups described above, and for the substantial efforts made in these analyses to construct practically useful representations of the various factors of potential interest. More seriously, there may be *unknown* or *unobservable* factors that may underlie observed court differences. Therefore, there is always the possibility that the adjusted differences in courts reported here are influenced by unobserved extrinsic differences in case characteristics rather than intrinsic differences in court processes. The multivariate analysis approach recognizes that while a true ‘apples to apples’ comparison is perhaps impossible, an ‘apples to other tree fruits’ comparison is a



closer approximation to intrinsic court process differences than a completely unadjusted ‘apples to orangutans’ comparison.

### **Interpretation of Odds Ratios**

The primary statistical model parameter that can be used to make adjusted comparisons between courts is the odds ratio ( $\exp(\beta)$ ) for each court, a measure of the likelihood of dismissing a dependency.<sup>2</sup> These odds ratios are expressed, depending on the type of statistical model, as relative to a reference court or to the average across all courts. Table 5 shows differences in the  $\exp(\beta)$  or  $-\exp(\beta)$  coefficients for each major type of case; expressing the coefficients in this way allows for a straightforward comparison of differences. Positive values (above 1.0) indicate a reduction in the length of dependency, with the fractional value indicating the % increase in the likelihood of dependency dismissal relative to the mean effect of all courts: e.g., a value of 1.16 indicates a 16% increase in this likelihood; whereas negative values (below -1.0) indicate a decrease in the likelihood of dismissal: e.g., -1.12 indicates a 12% decrease in this likelihood.

Because racial differences in performance are of particular concern and are typically large compared to the effect of other factors, each statistically-adjusted model was done with and without race entered as one of the factors. See the Technical notes for full model specifications and the list of other adjustment factors entered into the models. The effects of these other factors are discussed separately in this report.

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<sup>2</sup> The length of dependency as evaluated in multivariate statistical models, strictly speaking, can only be defined with respect to specific values of all case characteristics used in the models, e.g., the adjusted length of dependency in King County for female white infants whose parents had mental health problems and ... is \_\_\_\_ . Therefore, the unadjusted lengths of dependency are shown for different courts and races, then, multivariate results are shown that demonstrate that adjustments alters the values but not the major inter-court rankings, e.g., Spokane still tends to have the shortest lengths of dependency, and Yakima the longest.

TABLE 5.

**Adjusted Court Variations in Median Length of Dependencies, expressed as  $\exp(\beta)$  or  $-\exp(\beta)$ <sup>3</sup>**

County/County Group	Reunifications, < 1 year		All types, >= 1 year		Adoption-Related	
	Race-adjusted	Not Race-adjusted	Race-adjusted	Not Race-adjusted	Race-adjusted	Not Race-adjusted
Mostly White-EAST	1.16	1.14	-1.24	-1.22	-1.29	-1.24
Mostly White-WEST	1.06	1.06	-1.05	-1.01	1.12	1.13
Higher Hispanic – EAST	-1.12	-1.10	1.00	1.02	-1.24	-1.19
Higher Nat. Am. - EAST	<b>1.74</b>	<b>1.70</b>	-1.11	-1.15	1.14	1.12
Higher Nat. Am. - WEST	-1.03	-1.04	-1.09	-1.06	-1.29	-1.29
Clark	-1.08	-1.05	-1.18	-1.16	-1.04	-1.04
Cowlitz	<b>-1.63</b>	<b>-1.60</b>	1.11	1.12	1.02	1.04
King	1.32	1.35	-1.13	-1.14	1.06	1.02
Kitsap	-1.13	-1.15	1.04	1.05	1.06	1.04
Lewis	-1.02	-1.04	1.00	1.03	-1.07	-1.05
Pierce	-1.17	-1.16	1.18	1.16	1.03	-1.01
Skagit	1.16	1.15	-1.05	-1.10	1.07	1.07
Snohomish	-1.15	-1.16	1.19	1.17	1.15	1.15
Spokane	-1.18	-1.19	<b>1.58</b>	<b>1.62</b>	<b>1.49</b>	<b>1.49</b>
Thurston	1.08	1.08	1.18	1.21	1.21	1.18
Whatcom	1.31	1.34	-1.20	-1.25	1.04	1.02
Yakima	-1.26	-1.25	<b>-1.34</b>	<b>-1.33</b>	<b>-1.55</b>	<b>-1.47</b>

**Composition of court groups:**

**Mostly White-EAST:** Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

**Mostly White-WEST:** Island, San Juan, Skamania, Wahkiakum

**Higher Hispanic-EAST:** Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

**Higher Native American-EAST:** Ferry, Okanogan

**Higher Native American-WEST:** Clallam, Grays Harbor, Jefferson, Mason, Pacific

The *lack* of large differences in the court odds ratios when comparing the race-adjusted to not race-adjusted results indicates that court differences in performance are only marginally due to differences in the race-ethnicity composition in different courts. In other words, differences in court performance are only slightly influenced by race, so the racial disparities in performance seen across the state are common in nearly all counties. These statewide racial differences are presented and discussed in later sections.

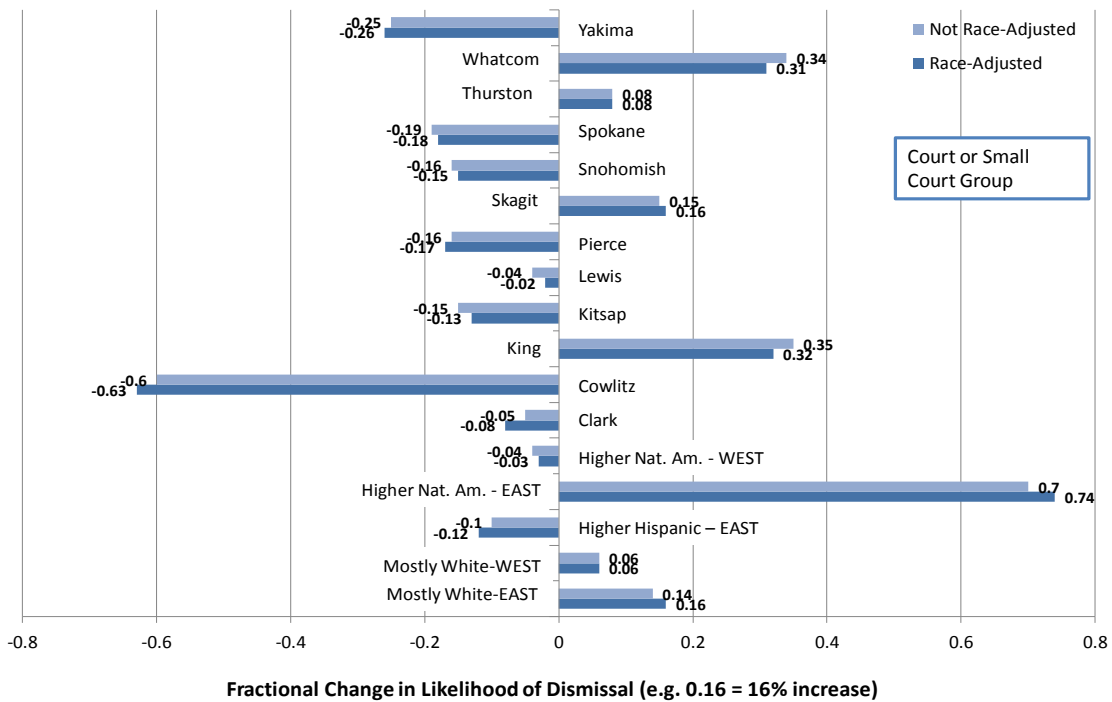
**Graphical Representation of Scaled Magnitudes of Court Differences**

Figures 2-4 provide an alternative graphical presentation of the data in Table 5, to facilitate inter-court comparisons. In these figures, the remainder of  $\exp(\beta)$  or  $-\exp(\beta)$  after subtracting 1.0 from positive  $\exp(\beta)$  values or  $-1.0$  from the negative  $\exp(\beta)$  values is plotted. This remainder represents the fractional increase; the corresponding percent increase is obtained by multiplying the remainder by 100. The percent change in likelihood of dismissal is relative to the average likelihood of dismissal for all courts (the Statewide average), represented by the vertical reference line at zero. Bars below

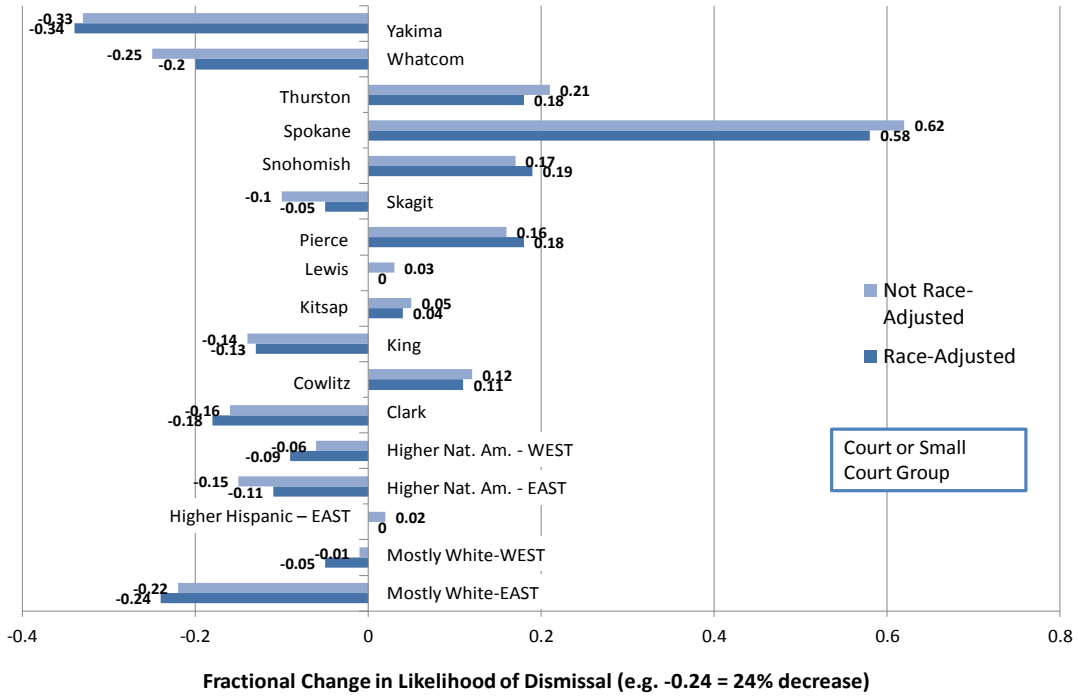
<sup>3</sup> Adjustment using Cox Mixed Effects regression models, treating courts as a ‘random’ variable via a Gaussian-distributed frailty term (Therneau, 2012). This properly corrects for bias that would otherwise result from the correlation of similar case processing experiences of cases within each court or group of courts; this type of approach is commonly used in the medical field to examine treatment outcome differences between various clinics or hospitals. See Technical Notes tables TN 1-5 for full model details.

zero (extending to the left) indicate a reduced likelihood of dismissal and therefore longer lengths of dependency, whereas bars above zero indicate an increased likelihood of dismissal and therefore shorter lengths of dependency, relative to the statewide average. This method of scaling and plotting model  $\beta$  parameters allows for a direct visual comparison of the court effects on the likelihood of dismissal. The lengths of the bars show the correctly scaled magnitude of the influence on length of dependency for each court or court group. Bars to the left of zero (negative remainders) represent courts with longer lengths of dependency relative to the statewide average; bars to the right, shorter lengths of dependency.

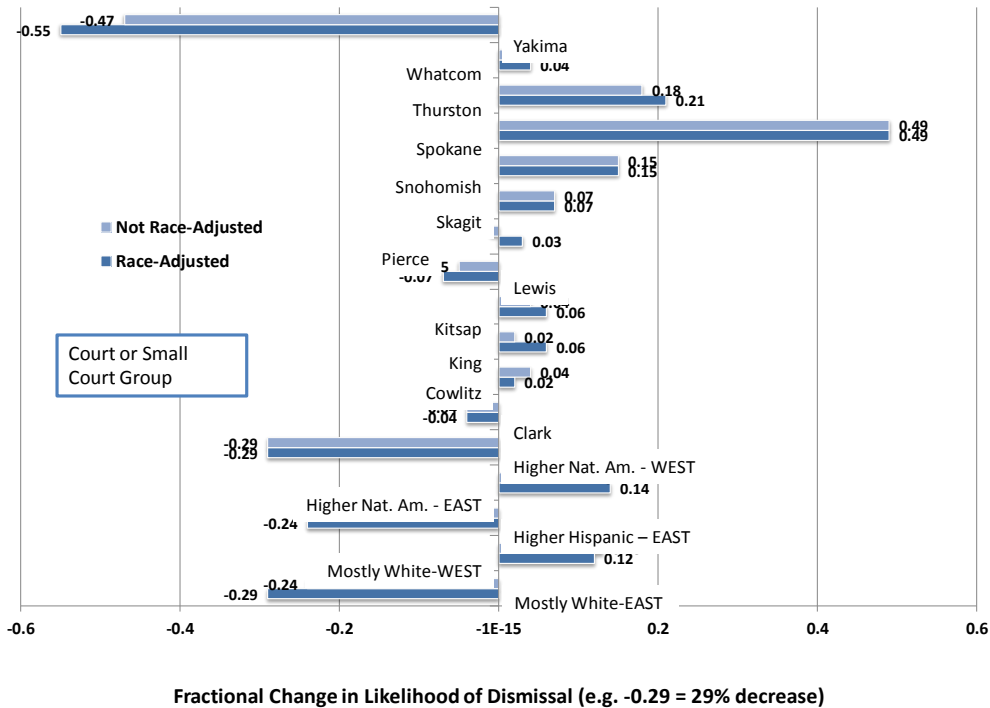
**Figure 2. Court Variations in Length of Dependencies, adjusted for variations in case characteristics, Reunifications, < 1 year**



**Figure 3. Court Variations In Length Of Dependencies, Adjusted For Variations In Case Characteristics, All permanency types >= 1 year**



**Figure 4. Court Variations In Length Of Dependencies, Adjusted For Variations In Case Characteristics, Adoption-Related**



## Racial Disparities in Length of Dependencies

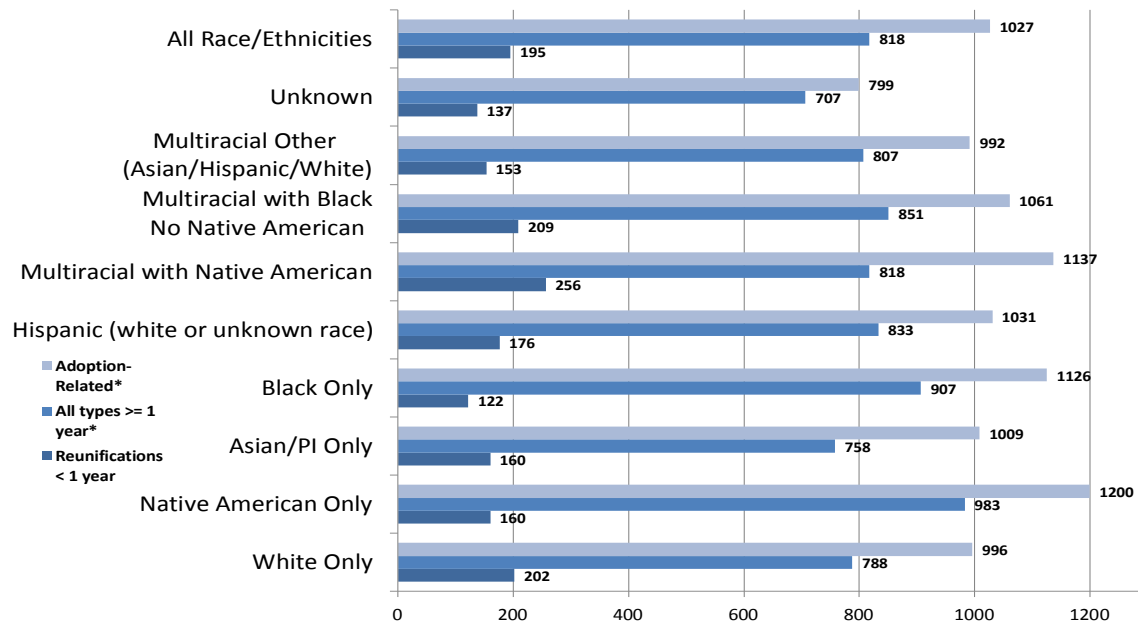
Turning now to the actual magnitudes of racial differences in length of dependency, Table 6 and Figure 5 show the unadjusted median length of dependency for each combined race-ethnicity group, for each of the three major dependency types.

TABLE 6.

**Race/ethnicity Variations in Median Length of Dependencies (in Days, unadjusted)**

Race/Ethnicity Group	Reunifications, < 1 year	All types, >= 1 year	Adoption-Related
White only	202	788	996
Native American only	160	983	1200
Asian/PI only	160	758	1009
Black only	122	907	1126
Hispanic (white or unknown race)	176	833	1031
Multiracial with Native American	256	818	1137
Multiracial with Black, no Native American	209	851	1061
Multiracial other (Asian/Hispanic/White)	153	807	992
unknown	137	707	799
All	195	818	1027

**Figure 5. Race/Ethnicity Variations in Median Length of Dependencies (unadjusted)**

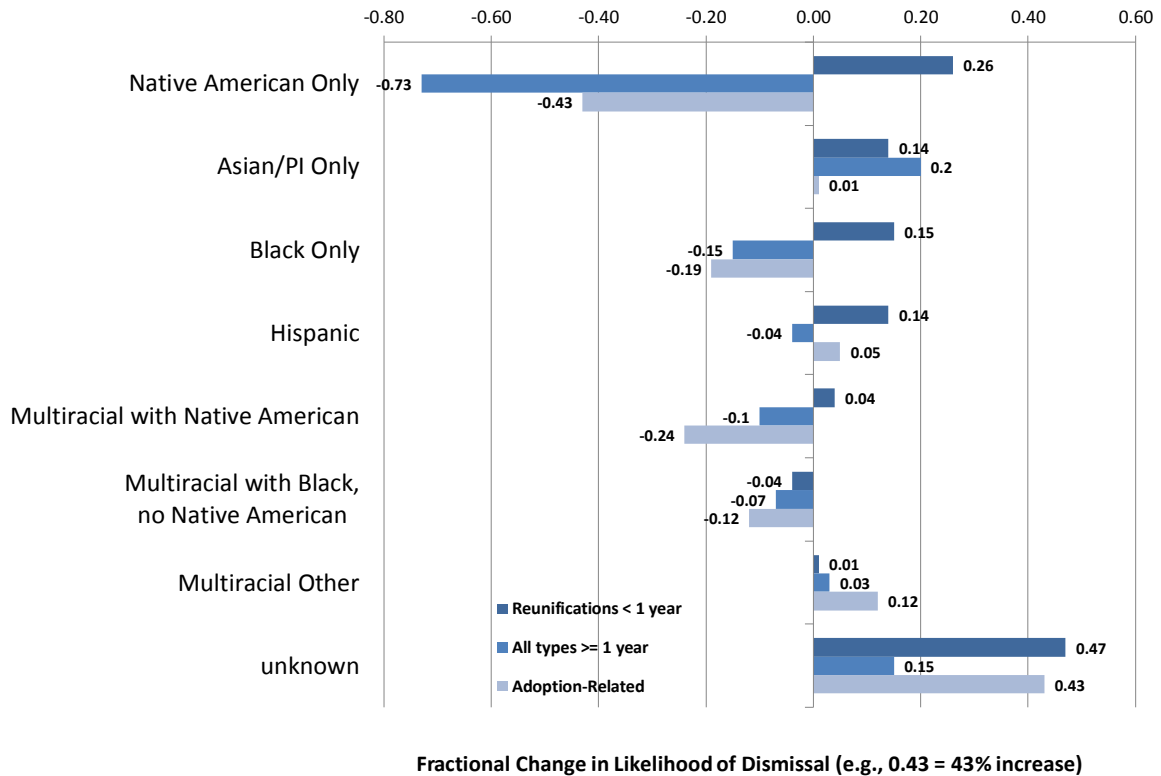


\* Kaplan-Meier estimation; approximate due to > 50% of sample cases still open in some counties

As before, plotting the remainder of  $\exp(\beta)$  or  $-\exp(\beta)$  values for the race/ethnicity groups compared to Whites from multivariate models of dependency length shows the magnitudes of the racial disparities when controlling for court and other case differences. Figure 6 presents these results: bars to the left of zero represent racial groups that have a reduced likelihood of dismissal (longer lengths of dependency) compared to Whites, and bars to the right of zero, groups with an increased

likelihood (shorter lengths). The greater the length of the bar, the larger the racial difference, whether longer or shorter than Whites. Both the unadjusted results (Table 6, Figure 5) and adjusted results (Figure 6) show that racial disparities become larger for longer-term periods of care, i.e., that as time goes on, Whites continue to exit from dependencies at higher rates than single or mixed race Native Americans and Blacks.

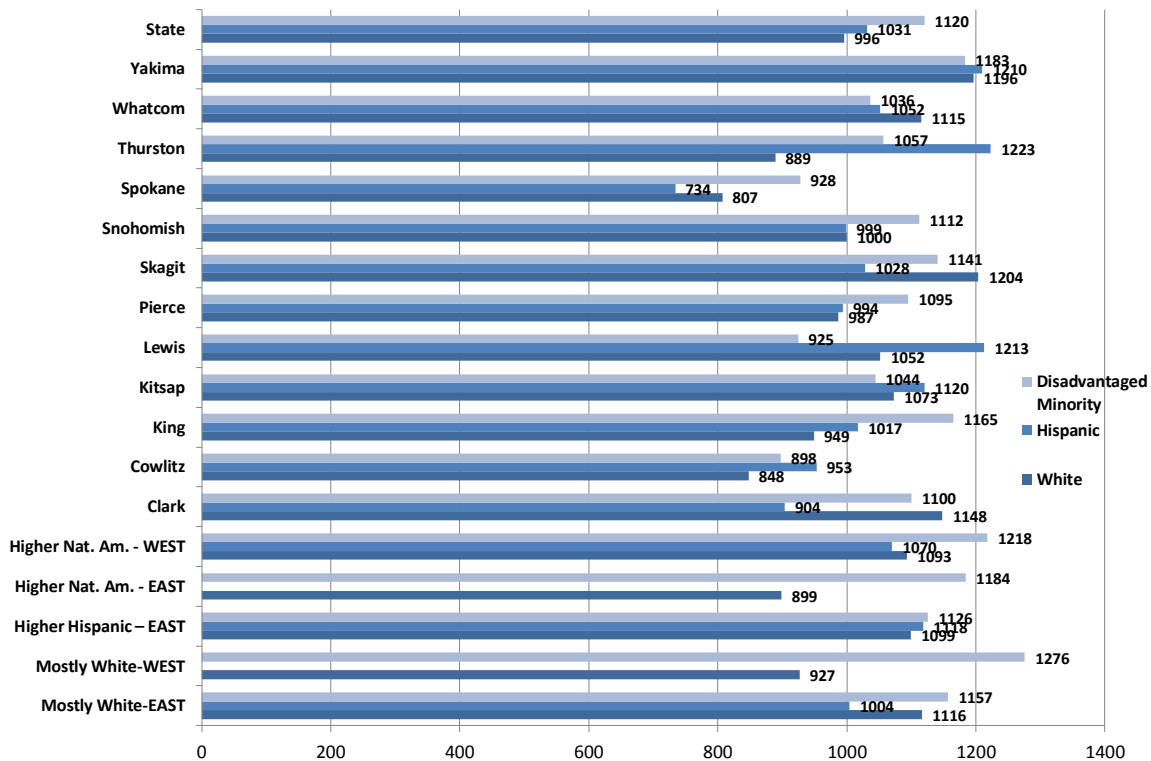
**Figure 6. Race/Ethnicity Variations in Median Length of Dependencies, Adjusted for variations in courts and other case characteristics**



Note that most minorities actually show increased likelihoods of dismissal (shorter lengths of dependency) compared to Whites for the short-term dependencies of less than a year that end in reunification ('Reunifications < 1 Year'). The commonly-observed racial disparity in dependency length only becomes apparent for the longer-term dependencies ('All types >= 1 Year' and 'Adoption-Related').

Further evidence that overall court differences persist for most courts regardless of the racial composition of cases, and that racial disparities exist independent of the overall length of dependency for individual courts, is obtained by examining length of dependency variation for each court or court group for different racial categories. To provide easily interpretable results, Figure 7 shows the median length of dependency for the major collapsed race-ethnicity categories of White, Disadvantaged Minority (Native American or Black, single or mixed race), and Hispanic (White or unknown race). The minor racial groups of Asian (single race or white/Hispanic mixed race) and Unknown are not included in this plot.

**Figure 7. Court Variations in Median Length of Dependencies for Key Race Categories (unadjusted), Adoption-related cases**



As shown in Figure 7, Disadvantaged Minorities show longer median lengths of dependency across the state than Whites, with Hispanics showing a median length in between that of Whites and Disadvantaged Minorities. This disparity is especially large for King, Pierce, Spokane, Snohomish, and Thurston counties, and also for each of the county groups except the group ‘Higher Hispanic- EAST.’ Despite Spokane county’s generally good performance (low dependency lengths), it’s racial disparity is large, with a median length of dependency for disadvantaged minorities in this county of 928 days compared to 807 days for Whites and 734 days for Hispanics. In contrast, Yakima courts, which in general have long lengths of dependency, show negligible differences for the different racial groups. Small racial differences are also seen for Clark, Cowlitz, Kitsap, Skagit and Whatcom counties. To summarize, racial differences in length of dependencies are seen statewide and in most individual courts, and a court’s overall median length of dependency apparently has little bearing on the magnitude of its racial differences in length of dependency.

### **Court Compliance with Permanency Case Processing Guidelines is Associated with Shorter Dependencies**

For each court process, cases in compliance were of significantly shorter dependency length than non-compliant cases. This held true even when adjusting, in a multivariate statistical model, for different demographic, parental history, and administrative factors.<sup>4</sup> Because the multivariate statistical models resulted in minor reductions in the magnitude of the compliance effect on length of dependency, the unadjusted differences reported in Table 7 should be viewed as slight overestimates of the actual effects. While the statistical models used to test these associations do

<sup>4</sup> Cox proportional hazards mixed effects regression, using a frailty term for different courts to account for intra-court correlation amongst cases (Therneau 2012); for details, see model parameter tables in the Technical Notes.

not prove that compliance causes reduced length of dependency, the observed differences are consistent with the reasonable conjecture that compliance with court processes related to achieving permanency should help reduce the overall length of dependencies.

TABLE 7.

**Median Length of Dependency (Days) for Court Process Compliance vs. Non-Compliance (unadjusted)**

Court Process/Guideline	Compliant Cases	Non-Compliant Cases	Difference	p-value	Difference dissipates within:
First Fact-Finding Hearing within 75 days	182	200	18	.0007	~95 days
First Review Hearing within 6 months	747	832	85	< .0001	~ 15 months
First Permanency Planning Hearing within 12 months	809	908	99	< .0001	~ 3 years
Filing of Termination of Parental Rights Petition within 15 months	884	1,255	371	< .0001	~ 4 years

Table 8 provides the adjusted odds ratios  $\exp(\beta)$  from multivariate Cox regression models (Technical Notes, Tables TN-1 through TN-5 and TN-8), which indicate the magnitude of the impact of compliance on the likelihood of dismissal while adjusting for the influence of court and other case characteristic differences. All odds ratios are positive, indicating an increased likelihood of dismissal (shorter dependency lengths) for compliant versus non-compliant cases.

TABLE 8.

**Odd Ratios and other Model Parameters for Court Process Compliance vs. Non-Compliance**

Court Process/Guideline	$\beta$	$\exp(\beta)$	S.E.( $\beta$ )	Wald Z	p-value
First Fact-Finding Hearing within 75 days	0.151	1.16	0.041	3.68	.0002
First Review Hearing within 6 months	0.121	1.23	0.038	3.20	.0014
First Permanency Planning Hearing within 12 months	0.294	1.34	0.052	5.63	< .0001
First Permanency Planning Hearing within 12 months – Competing Risks model for Reunification only	0.405	1.50	0.047	8.615	< .0001
Filing of Termination of Parental Rights Petition within 15 months – impact on all types of cases	0.613	1.84	0.030	20.41	< .0001
Filing of Termination of Parental Rights Petition within 15 months – impact on Adoption-Related cases only	0.667	1.95	0.035	19.3	< .0001

For the First Permanency Planning Hearing, a Competing Risks regression model (Gray, 1988; Fine and Gray, 1999; Gray, 2013) was also constructed, to determine the influence of compliance with this metric solely for cases that result in reunification. Note that the impact of compliance is higher for these cases ( $\exp(\beta) =$



1.50, a 50% increase in the likelihood of dismissal compared to non-compliant cases) than for all types of cases considered together ( $\exp(\beta) = 1.34$ , a 34% increase). For the Termination Filing guideline, the impact of compliance was an 84% increase in the likelihood of dismissal compared to non-compliant cases, for all exit types, and a 95% increase for adoption-related cases only.

## **Compliance/Non-Compliance Differences Dissipate over Time**

The association of compliance with shorter dependency lengths does not remain constant, but dissipates over time.<sup>5</sup> Table 7 also indicates the range of dependency lengths for which compliance for each court process remains associated with a shorter dependency length. The effect of compliance for each court process is strongest in the days immediately following the hearing, then declines to no effect by the number of days shown in the table. To give two examples, compliance with holding the first fact finding hearing within 75 days is associated with a shorter dependency only for dependencies lasting 95 days or less, a rather transitory effect. (The 18-day difference in dependency length given in Table 7 for this process, 182 versus 200 days, is an average over all dependency lengths in the fact finding sample.) In contrast, compliance with filing the termination of parental rights petition within 15 months has an effect that persists for about four years. Cases compliant with the guideline are shorter by 371 days than non-compliant cases, for all dependencies lasting four years or less, averaged over all dependency cases in the sample.

To summarize, compliance with statutory guidelines for court processes related to achieving permanency for children in out-of-home care is associated with shorter dependencies, with considerable variation in the magnitude of the difference in dependency length and in the persistence of the association over time. Compliance with some processes such as filing the termination petition have a large and relatively persistent effect, while others, especially compliance with the first fact finding hearing, show only a slight effect that does not last much beyond the date of the hearing itself.

In contrast to the results seen for length of dependency, the variation across courts in extent of compliance is substantially larger than the variation across other case characteristics: i.e., compliance differences seem not as driven by differences in case characteristics as the length of dependency differences; compliance differences seem more idiosyncratic, more dependent on internal court functioning and less dependent on (measurable) case characteristics (this is related to the basic finding that compliance does impact length of dependency, but not extensively so, except for the TPR filing metric), although there are still some important racial differences in compliance rates. See later sections for a summary of these racial differences in compliance rates.

## **Compliance with the Permanent Plan Hearing Guideline is Associated with a Reduced Likelihood of Placement Re-Entry or New Founded Abuse Allegations following Dependency Dismissal**

As described earlier in this report, a post-dismissal sample of dependencies resulting in reunification or guardianship was constructed to study the rates of post-dismissal outcomes. Tables 1-3 give the frequencies for this post-dismissal sample, by type of outcome, court, and race-ethnicity group. Table 9 presents the unadjusted rates of placement re-entry or new founded allegation of abuse or neglect for an 18-month follow-up period after dismissal, and Table 10 presents unadjusted

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<sup>5</sup> This dissipation was measured as a by-product of the Cox regressions, through use of tests of the proportional hazards assumption that provide plots of the Beta coefficients for compliance/non-compliance over time (length of dependency).

differences in these rates for cases that were compliant versus non-compliant in the permanency planning hearing guideline (hold the first hearing within 12 months of the dependency).

There were no observed outcome rate differences for the process guidelines of fact-finding hearing and first review hearing, and, for this analysis restricted to guardianships and reunifications, the process guidelines for termination petition filing and adoption finalization are not applicable. As noted earlier, a search for adoption disruptions in this multi-year data revealed only a small handful of cases, precluding any multivariate statistical analysis. A list of these cases has been provided to AOC for purposes of case review.

TABLE 9.

**Post-Dismissal Outcomes (unadjusted)**

Court/Court Group	OUTCOME (%) WITHIN 18 MONTHS OF REUNIFICATION			N Children Reunified
	Placement Re-Entry	New Founded Intake	Re-Entry or Founded	
Mostly White-EAST	10.5%	11.8%	15.8%	152
Mostly White-WEST	2.3%	3.8%	4.5%	133
Higher Hispanic – EAST	4.4%	3.8%	6.2%	340
Higher Native American	6.9%	6.3%	9.2%	447
Clark	5.6%	3.4%	6.4%	266
King	6.1%	5.9%	8.2%	511
Kitsap	5.7%	8.3%	9.8%	193
Pierce	6.2%	4.6%	7.3%	630
Snohomish	6.4%	5.1%	8.4%	486
Spokane	8.1%	8.4%	10.8%	491
Thurston	9.4%	7.1%	10.6%	85
Yakima	2.0%	3.3%	4.0%	150
<b>State</b>	<b>6.3%</b>	<b>5.8%</b>	<b>8.4%</b>	<b>3,884</b>
Court/Court Group	OUTCOME (%) WITHIN 18 MONTHS OF GUARDIANSHIP			N Children in Guardianships
	Placement Re-Entry	New Founded Intake	Re-Entry or Founded	
Mostly White-EAST	0.0%	3.7%	3.7%	27
Mostly White-WEST	0.0%	0.0%	0.0%	29
Higher Hispanic – EAST	0.0%	0.0%	0.0%	56
Higher Native American	0.0%	0.0%	0.0%	40
Clark	0.0%	10.5%	10.5%	19
King	0.0%	0.0%	0.0%	55
Kitsap	0.0%	0.0%	0.0%	7
Pierce	1.4%	1.4%	1.4%	70
Snohomish	2.4%	0.0%	2.4%	41
Spokane	4.4%	2.7%	4.4%	113
Thurston	0.0%	0.0%	0.0%	26
Yakima	4.0%	0.0%	4.0%	25
<b>State</b>	<b>1.6%</b>	<b>1.4%</b>	<b>2.2%</b>	<b>508</b>

**Composition of court groups:**

**Mostly White-EAST:** Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

**Mostly White-WEST:** Cowlitz, Island, Lewis, San Juan, Skamania, Wahkiakum

**Higher Hispanic-EAST:** Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

TABLE 10.

**Compliance with Permanency Planning Hearing Guideline and Post-Reunification Outcomes (unadjusted)**

First Permanent Plan Hearing within 12 Months?	OUTCOME (%) WITHIN 18 MONTHS OF REUNIFICATION			N Children Reunified
	Placement Re-Entry	New Founded Intake	Re-Entry or Founded	
Non-Compliant	11.3%	10.4%	16.5%	212
Compliant	5.3%	6.2%	8.2%	1,004
N/A, other*	6.2%	5.3%	7.8%	2,668
Overall	6.3%	5.8%	8.4%	3,884
Overall, for Compliant & Non-Compliant cases only	6.3%	6.9%	9.6%	1,216

\* Includes cases with compelling reasons for not meeting guidelines, unknown and bad records, etc. The N is particularly high for these outcomes primarily because the permanent plan hearing guideline began in 2009, and all pre-2009 cases in this post-reunification sample that are missing the compliance variable are lumped into this category, as well as cases lasting less than 12 months. Separating out these cases allows study of the effects of compliance vs. non-compliance for those post-2008 cases who are expected to meet the practice standard.

The smaller number of cases available in this post-dismissal data set present some additional problems for multivariate analysis and the derivation of adjusted factor effects on outcome rates. (The 18-month follow-up period was used in an effort to increase the number of events to a tractable level for analysis.) Attempts to construct logistic regression multivariate models (outcome within 18 months, yes or no) failed to yield reliable models. Cox regression survival analysis models treating the time to a placement outcome from the dismissal date as a continuous and censored variable were more successful, but only for the combined outcome of placement re-entry or new founded allegation (either or both outcomes). For this combined outcome, the combined race-ethnicity group was not significant in the final model. Court differences were significant, but of notably smaller magnitude than in the length of dependency and compliance models previously discussed. The odds ratio for compliance with the permanency planning hearing guideline was 0.62, which translates to a 61% reduction in the likelihood of a placement re-entry or new founded allegation compared to non-compliant cases, with a marginally-significant p-value of 0.056 (Table TN-15).

The observed reduction for compliant cases in the likelihood of these negative post-dismissal outcomes, while plausibly indicating a marginally-significant association, is difficult to explain. Why would compliance with this guideline during a dependency influence the likelihood of a post-dependency outcome? Compliance with the permanency planning guideline may in this situation be acting as a proxy for 'more difficult case,' with the characteristics describing this greater difficulty remaining unmeasured or unknown. This result should therefore be treated as provisional, and with caution. Future studies with a longer follow-up period and a larger total number of cases are planned to better evaluate this potential effect.

## Termination Cases and Adoption: Stages and Court Variations

The legal course of a typical termination case proceeds through several distinct stages. These include establishment of a dependency with a permanent plan of adoption, filing of a termination petition, termination of parental rights, and finalization of adoption/dismissal of dependency. The overall

lengths of dependency and their court and racial variations for the adoption-related cases were presented and discussed in earlier sections. Here, some additional descriptive information and multivariate statistical modeling results are presented for the times from dependency start to termination filing and from termination filing to dependency dismissal, for all termination cases and for adoption-only termination cases. The results show that some court and racial differences in overall length of dependency appear to be concentrated in one or the other of these two stages.

Table 11 provides the unadjusted median days for the two dependency stages, for all termination cases and for those ending or expected to end in adoption. For reference, the median total length of dependency for all termination cases reported in Table 4 is repeated.

TABLE 11.

**Court Variations in Median Length of Dependency Stages (in Days, unadjusted)**

Court/Court Group	Termination Cases, N = 7,051			Adoption-only Cases, N = 4,988		
	DEP start to TER start	TER start to DEP end	DEP start to DEP end*	DEP start to TER start	TER start to DEP end	DEP start to DEP end
Mostly White-EAST	491	637	1137	458	<b>601</b>	1049
Mostly White-WEST	439	473	954	432	453	901
Higher Hispanic – EAST	463	589	1118	445	529	995
Higher Nat Am. - EAST	427	563	1021	401	563	<b>1150</b>
Higher Nat Am. - WEST	446	622	1106	393	568	985
Clark	553	515	1142	499	480	942
Cowlitz	428	<b>357</b>	875	419	<b>330</b>	841
King	515	471	1070	480	427	984
Kitsap	349	658	1057	<b>332</b>	607	992
Lewis	461	518	1052	427	468	947
Pierce	<b>348</b>	619	1010	320	568	908
Skagit	<b>603</b>	498	1150	<b>594</b>	445	1061
Snohomish	489	461	1011	480	419	938
Spokane	356	448	<b>826</b>	344	423	<b>791</b>
Thurston	378	538	964	373	490	868
Whatcom	483	537	1082	468	506	1017
Yakima	370	<b>705</b>	<b>1188</b>	351	593	1009
State	427	541	1027	405	477	936

\* from Table 4

**Composition of court groups:**

**Mostly White-EAST:** Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

**Mostly White-WEST:** Island, San Juan, Skamania, Wahkiakum

**Higher Hispanic-EAST:** Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

**Higher Native American-EAST:** Ferry, Okanogan

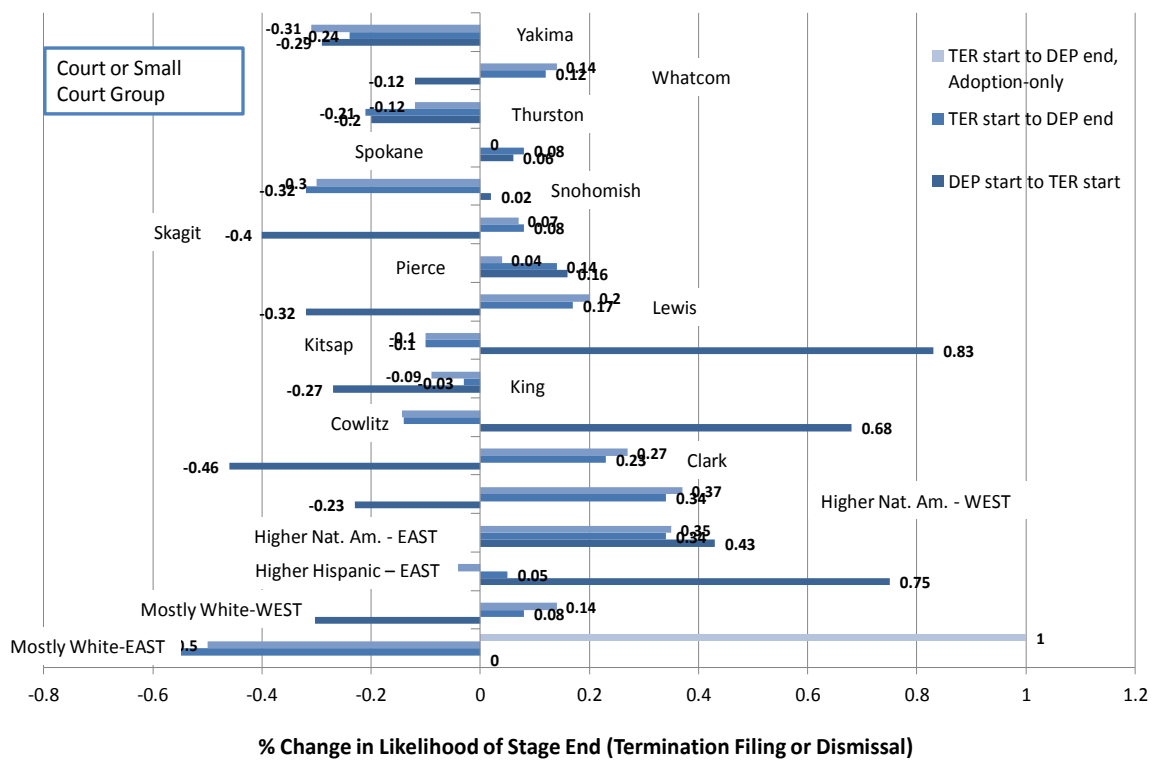
**Higher Native American-WEST:** Clallam, Grays Harbor, Jefferson, Mason, Pacific

Median lengths of the two stages and for the total dependency length tend to be longer in the Termination Cases sample than the Adoption-only sample; this is due to the inclusion of long-term foster care, guardianship, and adolescent emancipation cases in the former sample. The Adoption-only sample provides a view of comparative performance for the dependency-to-adoption track. Note that several counties have shorter median lengths compared to the statewide value for the stage of dependency start to termination start, but longer lengths for the stage of termination start to dependency end or adoption finalization. For Yakima county this difference is only apparent: when adjusting for other case characteristics as shown in Figure 8 below, Yakima still shows decreased likelihoods of dismissal or termination filing (longer stage lengths and total dependency

length) than the statewide value. Other types of variation can be seen through inspection of Table 11.

Figure 8 shows the variation in individual court impacts on dependency stage length, after adjusting for inter-court differences in other case characteristics (for full model details, see Technical Notes tables TN-6, TN-7, and TN-9.) As before, by presenting the model parameters in this way, the lengths of the bars give the correctly scaled magnitude of the influence on length of the dependency stage for each court or court group. Bars to the left of zero (negative remainders) represent courts with longer lengths of the dependency stage relative to the statewide average; bars to the right, shorter lengths of dependency stage.

**Figure 8. Court Variations in Length of Termination Case Stages, Adjusted for other case characteristics**



As with the unadjusted lengths reported in Table 11, the results shown in Figure 8 show that a number of courts have shorter median lengths compared to the statewide value for the stage of dependency start to termination start, but longer lengths for the stage of termination start to dependency end or adoption finalization.

Table 12 provides the variations in median length of dependency of the two stages for the different combined race/ethnicity groups. Here, the degree of racial disparity compared to Whites tends to occur in both stages, with the exception of Hispanics, which show no disparity in the first stage, but disparity in the second stage.

TABLE 12.

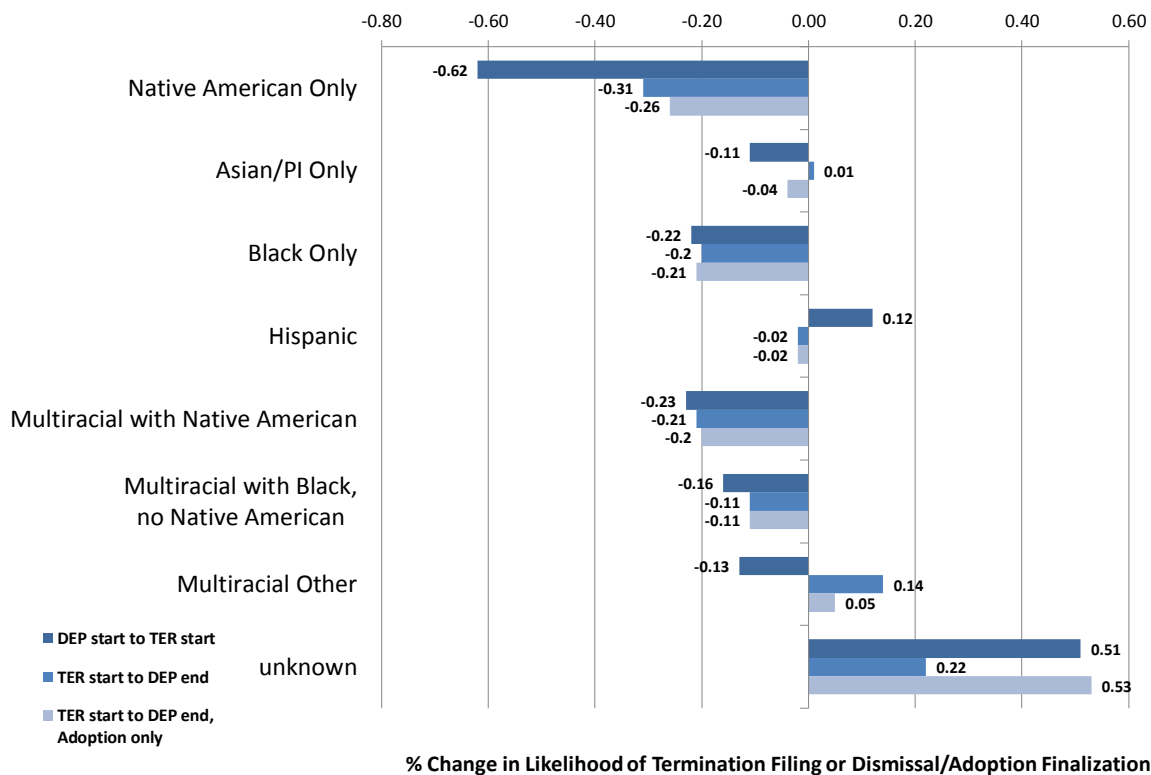
**Race/Ethnicity Variations in Median Length of Dependency Stages (in Days, unadjusted)**

Race/Ethnicity Group	Termination Cases, N = 7,051			Adoption-only Cases, N = 4,988		
	DEP start to	TER start to	DEP start to	DEP start to	TER start to	DEP start to

	TER start	DEP end	DEP end	TER start	DEP end	DEP end
White only	415	523	996	396	463	904
Native American only	507	591	1200	484	563	1119
Asian/PI only	470	542	1009	400	506	927
Black only	483	565	1126	475	491	1027
Hispanic (white or unknown race)	416	562	1031	392	492	937
Multiracial with Native American	455	601	1137	434	540	1061
Multiracial with Black, no Native American	439	582	1061	421	501	982
Multiracial other (Asian/Hisp./White)	440	509	992	443	453	940
unknown	362	413	799	362	399	755
All Groups	427	541	1027	405	477	936

Figure 9 provides the race-ethnicity group differences in likelihood of dependency stage end, adjusting for differences in courts and other case characteristics (see Technical Notes tables TN-6, TN-7, and TN-9.) Note the pervasive racial disparities at each stage (reduced likelihoods of stage end), with the exception of Hispanics for the stage of dependency start to termination filing.

**Figure 9. Race/Ethnicity Variations in Median Length of Dependency Stages compared to Whites, Termination Cases, Adjusted for variations in courts and other case characteristics**



## Court Differences in Compliance with Court Process Guidelines

The Washington State Center for Court Research (WSCCR) provides substantial detail on the rates of compliance for each county, and has been tracking compliance with these case processing guidelines for the past several years. See cf. Orme, Skreen, O'Donnell, McCurley, Wang, and George, (2013) for this comprehensive court performance information. In this report, a few additional observations provided by multivariate analyses of court process compliance are presented.

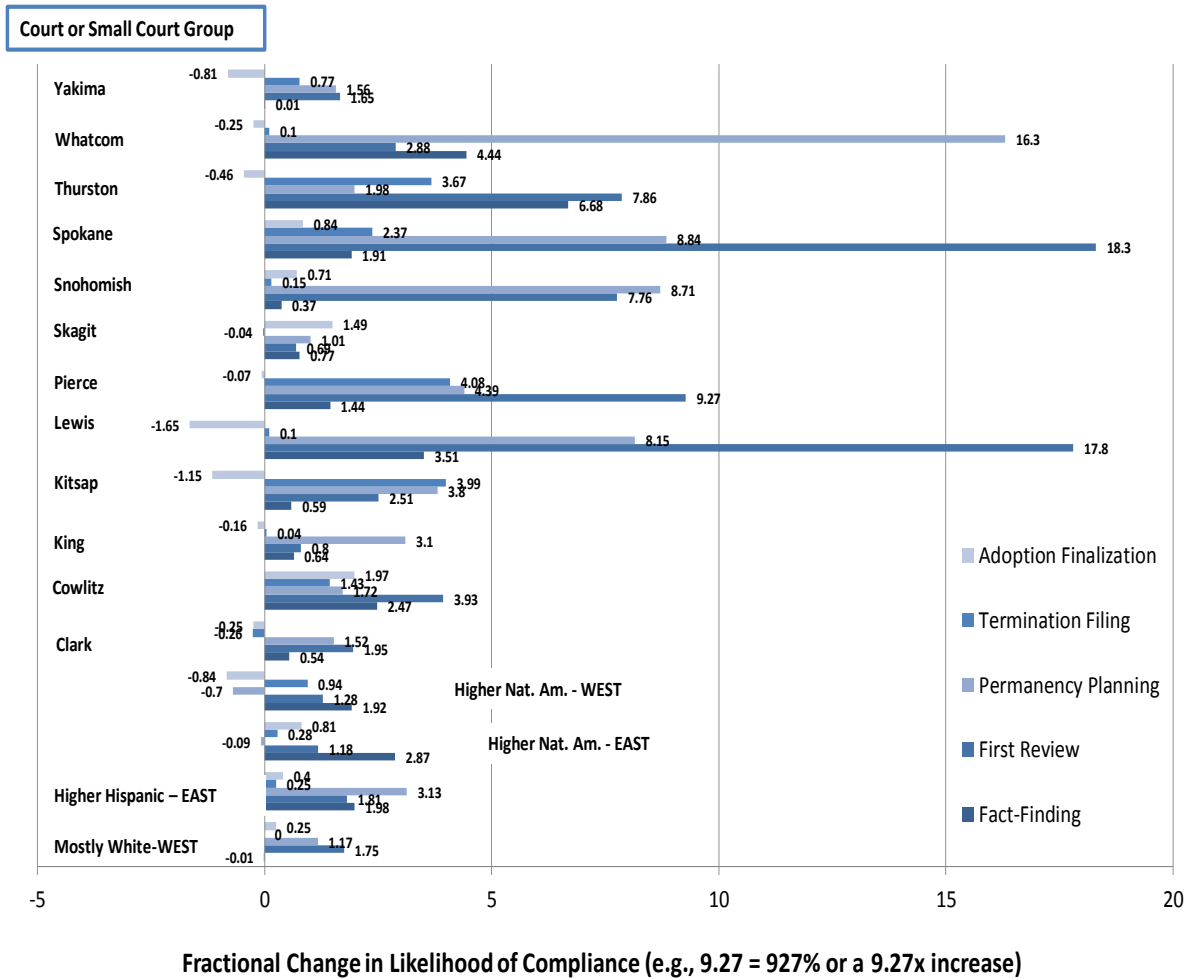
A general observation based on an overall review of the multivariate models in the Technical Notes is that differences between courts in rates of compliance are notably larger in magnitude compared to differences in race or other case characteristics, in contrast to the situation for court differences in length of dependency, where the magnitudes of the court differences can be comparable in size or smaller than the magnitudes of difference for racial groups or other case characteristics.<sup>6</sup> In other words, rates of compliance seem dominated by internal differences in the functioning of the different courts, and relatively less driven by demographic or child and family characteristics. Most notably, there were fewer significant racial differences: there are some racial disparities in compliance with some of the court process guidelines, but no pervasive and consistent racial disparities in compliance rates such as are seen with lengths of dependency. Compared to the multivariate modeling for dependency length (tables TN 1-9 and 15), the multivariate modeling for court process guideline compliance (tables TN 10-14) also revealed a smaller number of case characteristics that were significantly associated with the modeling outcome (dependency lengths or compliance rates, respectively).

Figure 10 shows the adjusted court differences in likelihood of compliance for each of the five compliance metrics studied. Limitations of the logistic regression models required entering courts as a categorical factor with 'Mostly White –EAST' chosen as the reference group. Similar to previous figures, the remainder of  $\exp(\beta)$  or  $-\exp(\beta)$  after subtracting 1.0 from positive  $\exp(\beta)$  values or  $-1.0$  from the negative  $\exp(\beta)$  values is plotted. This remainder represents the fractional increase; the corresponding percent increase is obtained by multiplying the remainder by 100. The percent change in likelihood of compliance is measured relative to the compliance rate for 'Mostly White –EAST,' represented by the vertical reference line at zero. Bars below zero (extending to the left) indicate a reduced likelihood of compliance, whereas bars above zero indicate an increased likelihood of compliance. The lengths of the bars show the correctly scaled magnitude of the increase or decrease in likelihood of compliance for each court or court group, relative to the 'Mostly White-EAST' court group. Since this group of courts happens to have a lower compliance rate on all process guidelines than nearly all other courts, nearly all of the bars in Figure 10 are greater than zero. This is not particularly important: selection of a different court as the reference group would lead to fewer positive and more negative values. What is important about these results is first, that the multivariately adjusted differences between courts are quite large (court-to-court variations in magnitudes of the  $\exp(\beta)$  remainders), indicating large differences in practice between the different courts, and second, that the overall magnitude of these court variations in compliance rate are large compared to the effects of other factors that influence compliance (see later sections and Technical Notes tables TN 10-14).

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<sup>6</sup> Compare  $\exp(\beta)$  and Wald(Z) values, when the associated p-values indicate statistical significance, in the various Technical Notes tables.

**Figure 10. Court Variations in Compliance, Adjusted for other case characteristics relative to reference court group 'Mostly White-EAST'**



### Racial Disparities in Compliance with Court Process Guidelines

In this section racial disparities in the extent of compliance with the court process guidelines are briefly summarized. The multivariate statistical models indicate that racial differences in compliance, though not as large or as prevalent as in length of dependency, do occur for certain process guidelines and types of cases. Table 13 summarizes the odds ratios ( $\exp(\beta)$  values) and model probabilities for the significant racial differences in each of the court process compliance models (see tables TN 10-14 for complete model parameters). Odds ratios above 1 indicate a higher likelihood of compliance for the race/ethnicity group compared to Whites, and values below 1 indicate a lower likelihood (lower compliance rate). (Because of the weaker overall fitting results for these models, not as much reliance should be placed on comparison of magnitudes of the  $\exp(\beta)$  values; however, the general direction of the effect, higher or lower likelihood, should be a reliable indicator.)

TABLE 13.  
**Significant Race/ethnicity Variations in Likelihood of Compliance with Court Process Guidelines**



Court Process	Race/Ethnicity Group	exp( $\beta$ )	p-value
Fact-Finding Hearing	Black only	1.64	.0069
First Review Hearing	none	--	--
First Permanency Review	Black only	0.74	.028
	Native American only	1.81	.0095
	Multiracial with Native American	1.42	.027
Termination Filing	Black only	0.55	< .0001
	Native American only	0.33	< .0001
	Multiracial with Native American	0.75	.0072
	Multiracial with Black, no Native American	0.74	.0055
Adoption Finalization	none	--	--

There is no consistent pattern to the race/ethnicity differences in compliance rates. Dependency cases for Black children have a higher likelihood of compliance with the Fact-Finding Hearing guideline than Whites, and Native American children also have a higher likelihood of compliance with the First Permanency Review guideline than Whites. Otherwise, the few significant racial differences are in the opposite and more frequently-observed direction, with the minorities showing a racial disparity in lower rates of compliance than Whites. This is the consistent pattern for compliance with the Termination Filing guideline: all significantly-different minority categories show lower likelihoods of compliance than Whites. This is consistent with the results for lengths of dependency, where racial disparities are largest for longer-term dependencies.

## Other Factors Influencing Length of Dependency, Compliance Rates and Placement Outcomes

Besides court and racial differences, multivariate modeling also evaluated the influence of other case characteristics on lengths of dependency, court process guideline compliance, and placement outcomes. The presence of these characteristics may provide useful information for program managers and the judges and field workers when faced with possible risk or triage factors to consider when handling dependency cases. Table 14 presents a simple summary of the influence of selected characteristics or combined characteristics on length of dependency, dependency stages, and the post-dismissal outcome. Table 15 presents this summary for the influence of characteristics on court process compliance. For these tables, ‘+’ refers to an influence of the factor in the desired direction (shorter length of dependency, higher compliance rate, or lower post-dismissal outcomes), and ‘-’ to an influence in the undesired direction (longer lengths of dependency, lower compliance rates, higher rates of post-dismissal outcomes). Several additional characteristics listed in those models are not discussed, as they are conceptually not risk or performance factors and were used only to adjust the models for the effects of different case subtypes. The characteristics also need to be carefully chosen in each model to ensure that they represent ‘pre-existing conditions.’ This restriction means, for example, that the indicators based on experiences and factors in the first year of a dependency cannot be used in the model for dependencies lasting less than a year. A brief discussion of each case characteristic and the implication of its significance in the models is given following the tables. Complete model results are given in the Technical Notes.

TABLE 14.

**Case Characteristics Influencing Length of Dependencies and Post-Dismissal Outcome**

Case Characteristic	Dependency Type			Dependency Stage		Placement Re-Entry or New Founded within 18 months of dismissal
	Reunifications, < 1 year	All exit types, >= 1 year	Adoption-Related	DEP start to TER start	TER start to Adoption	
N Neglect Allegations >= 3 (vs. 0-2) prior to Dependency	<b>n.s.</b>	-	-	-	<b>n.s.</b>	-
SDM Risk 4-5 (vs.0-3) at Intake prior to Dependency	-	<b>n.s.</b>	+	+	+	<b>n.s.</b>
Child Gender = Male (vs. Female)	<b>n.s.</b>	-	-	<b>n.s.</b>	-	<b>n.s.</b>
Child Mental/Behavioral Problem (multiple indicators) or DSM Diagnosis	-	<b>n.s.</b>	-	-	-	-
Parent Criminality prior to Dependency	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	+
Parent Mental Illness prior to Dependency	+	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	+	<b>n.s.</b>
Parent Substance Abuse prior to Dependency	-	<b>n.s.</b>	+	+	+	-
Family Domestic Violence prior to Dependency	<b>n.s.</b>	<b>n.s.</b>	+	<b>n.s.</b>	<b>n.s.</b>	-
Family Economic Stress prior to Dependency	+	-	<b>n.s.</b>	<b>n.s.</b>	+	<b>n.s.</b>
Family Homelessness or Housing Issue prior to Dependency	<b>n.s.</b>	<b>n.s.</b>	+	+	<b>n.s.</b>	-
Founded Allegation during Dependency	-	-	-	-	-	<b>n.s.</b>
Initially placed with Relative	-	-	-	-	-	<b>n.s.</b>
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	n/a	+	+	+	+	<b>n.s.</b>
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	n/a	+	+	-	+	<b>n.s.</b>
Child Experienced Placement Move(s) during first year of Dependency	n/a	-	-	-	-	<b>n.s.</b>
Primarily Relative Placement (>=75% of total LOS in placement)	n/a	n/a	n/a	n/a	n/a	+

**+** : characteristic influences outcome in the desired direction (shorter length of dependency, lower rate of post-dismissal outcomes)

**-** : characteristic influences outcome in the undesired direction (longer lengths of dependency, higher rate of post-dismissal outcomes)

**n.s.:** characteristic tested but was not significant in the model

**n/a:** characteristic not applicable in the model (not a pre-existing condition for the sample)

TABLE 15.

**Case Characteristics Influencing Court Process Guideline Compliance**

Case Characteristic	Court Process Guideline				
	Fact-Finding Hearing	First Review Hearing	First Permanency	Termination Filing	Adoption Finalization
N Neglect Allegations >= 3 (vs. 0-2) prior to Dependency	n.s.	n.s.	+	-	n.s.
SDM Risk 4-5 (vs.0-3) at Intake prior to Dependency	n.s.	n.s.	n.s.	n.s.	+
Child Gender = Male (vs. Female)	n.s.	n.s.	n.s.	n.s.	n.s.
Child Mental/Behavioral Problem (multiple indicators) or DSM Diagnosis	n.s.	n.s.	n.s.	-	n.s.
Parent Criminality prior to Dependency	n.s.	n.s.	n.s.	n.s.	n.s.
Parent Mental Illness prior to Dependency	n.s.	n.s.	n.s.	n.s.	+
Parent Substance Abuse prior to Dependency	+	+	n.s.	+	+
Family Domestic Violence prior to Dependency	n.s.	+	n.s.	n.s.	n.s.
Family Economic Stress prior to Dependency	n.s.	n.s.	n.s.	n.s.	n.s.
Family Homelessness prior to Dependency	n.s.	-	n.s.	n.s.	n.s.
Founded Allegation during Dependency	n.s.	n.s.	n.s.	n.s.	n.s.
Initially placed with Relative	n.s.	n.s.	+	n.s.	n.s.
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	n/a	n/a	n.s.	+	+
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	n/a	n/a	-	-	+
Child Experienced Placement Move(s) during first year of Dependency	n/a	n/a	n.s.	-	-

**+** : characteristic influences outcome in the desired direction (higher compliance rate)

**-** : characteristic influences outcome in the undesired direction (lower compliance rate)

**n.s.**: characteristic tested but was not significant in the model

**n/a**: characteristic not applicable in the model (not a pre-existing condition for the sample)

**Child Age**

Results for child age are not reported in Tables 14 and 15 because they are too complex to be simply tabulated. In general, lengths of dependency and the dependency stages tend to be shortest for infants and longer for older children, but the relationship between age and the magnitude of its influence on the likelihood of dismissal is non-linear, and in some samples, non-monotonic. Older children are also more likely to experience post-dismissal placement re-entry or a new founded allegation, an effect that levels off for ages 16-17. This leveling off is likely just due to the ageing out of children: after reaching the age of majority, they are no longer considered as potential victims of child abuse. Each analysis set required a somewhat different approach to modeling the effects of age on the outcome. In brief, age makes a difference in the outcomes, but not in any simple way.

**Child Gender**

Males tend to have slightly longer lengths of dependency than females for dependencies lasting over a year, and slightly higher rates of post-dismissal outcomes. Gender is not significantly associated with compliance rates.

**Child Mental Health/Behavioral Problem**

Children with any of several investigative or placement screening indications of a mental health issue or behavioral problem, including serious markers such as a DSM diagnosis or suicidal ideation, are consistently and logically associated with longer dependencies compared to children without any such indications. They also are associated with a lower likelihood of compliance for termination filing.

### **N Neglect Allegations >= 3**

This metric, a flag for three or more prior neglect allegations, was developed as the best indicator to distinguish chronic neglect cases from other types of cases. Logically, chronic neglect cases are significantly associated with longer dependency lengths and higher rates of post-dismissal outcomes, except for short-term dependencies and the dependency stage of termination filing to adoption finalization. For compliance rates, the results are more ambiguous: only significant for the permanency planning and termination filing guidelines, but associated with a higher likelihood of compliance for permanency planning and a lower likelihood for termination filing.

### **SDM Risk 4-5 at Intake**

This metric is a flag for the overall risk level from the Structured Decision Making intake assessment being moderately high to high, versus all lower levels of risk. This dichotomous collapse of the risk scale was determined to provide the best risk discrimination between cases. The higher-risk cases are associated with longer lengths of short-term dependencies (< 1 year), but shorter lengths for adoption-related cases: both the overall length of dependency and both of the dependency stages. The explanation for these effects is not clear.

### **Parent and Family Risk Factors**

Child Protective Services investigations include a number of items critically related to parent and family functioning. For these indicators, the factors are assessed as present in the 12 months leading up to the investigation that resulted in a dependency. The risk factors can have different directions of influence on the outcomes: Parent mental illness and substance abuse and family homelessness tend to be associated with shorter lengths of dependency, though primarily for longer-term adoption-related cases and dependency stages. This may be due to a mixture of effects, of these problems eliciting a more intensive treatment response on the part of CA which in turn contributes to a faster resolution of the dependency case for reunifications, but also to quicker progression to the decision to terminate parental rights for non-reunification cases. Parent substance abuse is also significant in four of the five compliance rate models, associated with a higher rate of compliance for all but the first permanency planning hearing guideline. These same factors are also usually associated with a higher likelihood of post-dismissal placement re-entry or new founded allegation in the reunification cases. In contrast, parent criminality is associated with a *lower* likelihood of these post-dismissal outcomes. This may be due to the actual incarceration of the offending parent, such that the reunified home is safer for the child. This seems consistent with the association of parent criminality with a higher rate of compliance for the adoption finalization guideline. Family domestic violence is significantly associated with shorter dependency lengths for adoption-related cases, but with higher rates of post-reunification re-entry or new founded. These effects also seem logically plausible.

### **Placement-Related Factors**

Children initially placed with relatives at the start of their dependencies show a consistently lower likelihood of dismissal (longer dependency lengths and dependency stages) than children not initially placed with relatives. This is consistent with a general tendency for relative placements to last longer than non-relative placements. However, children in relative placements show a lower likelihood of post-dismissal placement re-entry or new founded allegations compared to children in non-relative placements. Children showing instability in the first year of their placements (experiencing placement moves) show consistently lower likelihoods of dismissal (longer dependency lengths) for

longer-term and adoption-related dependencies and dependency stages (dependencies  $\geq 1$  year). Children in initially unstable placements also show lower likelihoods of compliance with the termination filing and adoption finalization guidelines. Finally, cases where the CA social worker has been in compliance with the requirement to hold a face-to-face meeting with the child every month, during the first year of placement, show higher likelihoods of dismissal (shorter dependency lengths) for all dependencies lasting at least 1 year, and higher likelihoods of compliance with the termination filing and adoption finalization guidelines.

### **Continuances**

The influence of court continuances on the outcomes of dependencies is, in these models, somewhat puzzling and contradictory. The number of continuances for dependency cases are reasonably collapsed into cases with zero or one continuance in the first year, versus those with more than one continuance in the first year. This rather crude indicator of delays in dependency case processing is significant in many of the models. Cases with more than one continuance in the first year are associated with a *higher* likelihood of dismissal (shorter dependencies) for dependencies lasting more than a year and the adoption-related cases, and for the termination filing to adoption finalization stage, but a *lower* likelihood of dismissal (longer lengths) for the dependency start to termination filing stage. For the compliance rate models, the results are again seemingly contradictory: cases with more than one continuance in the first year are associated with a lower rate of compliance for the permanency planning and termination filing guidelines, but a higher rate of compliance for the adoption finalization guideline. Future planned research should help clarify this situation.

### **Future Research**

The collaborative improvement project between AOC and CA is ongoing, and active research into the court and child welfare process dynamics and outcomes continues by WSCCR and RDA. Over the next few years, WSCCR and RDA plan to extend the research reported here in the following ways:

Improvements in data linking between the CA (FAMLINK) and AOC (SCOMIS) data systems since the datasets for these analyses were extracted and assembled will allow greater accuracy in relating court records to child welfare records. In particular, improvements in linking will permit a more accurate assessment of the trajectory of cases and the timing of events. In Spring 2014, WSCCR and RDA will be constructing an event history dataset that will be used to more accurately determine the relative magnitudes and possibly the causal relationships between discreet Court and CA actions and stages of a dependency case and its eventual outcomes. This new data set will also be able to take advantage of improvements in the documenting of court docket activities and reasons for continuances. This should help clarify the relative influence of the general level of court activity on a case and the case outcomes.

The advent of FAMLINK and the more recent implementation of specific service authorization and payment codes for a variety of Evidence Based Practices (EBP) should allow a targeted evaluation of the effectiveness of services and the interplay between services and court processes in determining the outcomes of dependency cases. WSCCR and RDA plan to conduct an exploratory study of the potential of such analyses, and hopefully some initial evaluative results, by the end of summer 2014.

Finally, accumulation of additional cases and a longer follow-up time will soon make it possible to evaluate any differences in factors that may influence the separate outcomes of placement re-entry versus new founded allegation following dependency dismissal, rather than being restricted to multivariate analysis of the combined re-entry/new founded outcome presented in this report.

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## SUMMARY OF ANALYTICAL APPROACH

- All multivariate models were constructed using various routines as implemented in the R statistical software language (R Core Team, 2013)
- A series of Cox Mixed Effects regression models (Therneau, 2012), treating courts as a ‘random effect’ via a Gaussian-distributed frailty term to correct for bias that would otherwise result from the correlation of similar case processing experiences of cases within each court or group of courts, were constructed to examine the influence of court process compliance and other factors on the length of dependencies and on the likelihood of placement re-entry or new founded allegation following dismissal of a dependency. Additional model diagnostics were computed using the routines described in Harrell (2013).
- Competing Risk models (Gray, 1988; Fine and Gray, 1999; Gray, 2013) for length of dependency were also constructed, to verify that process compliance remained significantly associated with length of dependency when correcting for probabilities of cases switching from reunification to other permanency outcome ‘tracks’ (guardianship, adoption)
- Logistic regression models (Harrell, 2013) with court process compliance metrics as the binary outcome variables were constructed in an initial exploratory step to screen for factors influencing compliance and compute various model diagnostics.
- Logistic multi-level (mixed effects logit) regression models (Almadhi and Bailey, 2013) as implemented in the general statistical package ‘Zelig’ (Imai, King, and Lau, 2008 and 2013) were also constructed to examine factors influencing compliance, treating courts as a ‘random effect’ to correct for bias that would otherwise result from the correlation of cases within each court or group of courts.

**Key to Court Groups** [Reference category in the Cox mixed effects models of length of dependency is the mean effect of all courts; in the Logistic Regression models for compliance, ‘Mostly White-EAST’]

Mostly White-EAST: Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

Mostly White-WEST: Island, San Juan, Skamania, Wahkiakum

Higher Hispanic-EAST: Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

Higher Native American -EAST: Ferry, Okanogan

**I. COX MIXED EFFECTS MODELS FOR LENGTH OF DEPENDENCY**

TABLE TN-1.

**Cox Mixed-Effects Model for Fact-Finding Hearing Compliance and Length of Dependency  
Exit Cohort with LOS < 1 year, total N =2,879**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Age at Beginning of Dependency	0.012	1.01	0.004	3.22	.001
Combined Race/Ethnicity (vs. Whites)					
Native American only	0.233	1.26	0.101	2.30	.021
Asian/Pacific Islander only	0.133	1.14	0.116	1.14	.250
Black only	0.138	1.11	0.071	1.45	.150
Hispanic (white or unreported race)	0.127	1.14	0.058	2.19	.028
Multiracial Native American	0.044	1.04	0.075	0.59	.560
Multiracial Black (no Native Amer.)	-0.042	0.96	0.086	-0.48	.630
Multiracial Asian/Hispanic/White	0.012	1.01	0.164	0.07	.940
unknown	0.384	1.47	0.174	2.21	.027
Child Mental Health or Behavioral Problem	-0.072	0.93	0.041	-1.75	.080
Prior Alleg. Finding (vs. No Finding)					
Unfounded/Inconclusive	0.281	1.32	0.053	5.26	< .0001
Founded	0.196	1.22	0.055	3.60	.0003
SDM Risk 4-5 (vs.0-3)	-0.237	0.79	0.045	-5.30	< .0001
Parent Mental Illness	0.331	1.39	0.070	4.72	< .0001
Parent Substance Abuse	-0.101	0.90	0.041	-2.48	.013
Family Economic Stress	0.119	1.13	0.060	2.00	.045
Founded Alleg. during Dependency	-0.450	0.64	0.126	-3.56	.0004
Initially placed with Relative	-0.130	0.88	0.044	-3.00	.003
Voluntary Placement Agreement prior to Dependency Placement	-0.323	0.72	0.073	-4.43	< .0001
First Permanent Plan was Reunification	-0.738	0.48	0.041	-18.17	< .0001
Fact Finding Hearing – Compliant	0.151	1.16	0.041	3.68	.0002
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	0.152	1.16	0.097		
Mostly White-WEST	0.048	1.05	0.126		
Higher Hispanic – EAST	-0.104	0.90	0.090		
Higher Nat. Am. - EAST	0.552	1.74	0.167		
Higher Nat. Am. - WEST	0.004	1.00	0.094		
Clark	0.031	1.03	0.092		
Cowlitz	-0.244	0.78	0.143		
King	0.263	1.30	0.081		
Kitsap	-0.135	0.87	0.100		
Lewis	-0.036	0.96	0.156		
Pierce	-0.192	0.82	0.080		
Skagit	0.030	1.03	0.116		
Snohomish	-0.111	0.90	0.083		
Spokane	-0.287	0.75	0.076		
Thurston	0.029	1.03	0.110		
Whatcom	0.264	1.30	0.137		
Yakima	-0.263	0.77	0.108		



TABLE TN-2.

**Cox Mixed-Effects Model for First Review Hearing Compliance and Length of Dependency  
Entry Cohort with LOS >= 6 Months, total N = 10,178**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.056	0.95	0.027	-2.09	.036
Age at Beginning of Dependency	-0.010	0.99	0.003	-3.07	.0022
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.620	0.54	0.072	-8.60	< .0001
Asian/Pacific Islander only	0.245	1.28	0.091	2.68	.0073
Black only	-0.231	0.79	0.053	-4.34	< .0001
Hispanic (white or unreported race)	-0.019	0.98	0.041	-0.46	.65
Multiracial Native American	0.00	1.00	0.053	0.00	1
Multiracial Black (no Native Amer.)	-0.132	0.88	0.057	-2.30	.022
Multiracial Asian/Hispanic/White	0.073	1.08	0.103	0.71	.48
unknown	-0.031	0.97	0.161	-0.19	.85
Child any DSM Diagnosis	-0.362	0.70	0.090	-4.01	.0001
Child Suicidal	-0.330	0.72	0.168	-1.96	.050
Prior Alleg. Finding (vs. No Finding)					
Unfounded/Inconclusive	0.020	1.02	0.037	0.54	.59
Founded	0.160	1.17	0.036	4.48	< .0001
N prior Neglect Allegs. >= 3 (vs. 0-2)	-0.315	0.73	0.031	-10.2	< .0001
Family Domestic Violence	-0.089	0.91	0.030	-2.97	.0030
Family Economic Stress	-0.028	0.97	0.037	-0.76	.45
Founded Alleg. during Dependency	-0.573	0.56	0.070	-8.17	< .0001
First Permanent Plan was Reunification	-0.315	0.73	0.042	-7.66	< .0001
First Review Hearing Compliance (vs. Non-Compliant)					
Compliant	0.121	1.23	0.038	3.20	.0014
Reasonable efforts, exempt, N/A	0.502	1.65	0.073	6.86	< .0001
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.049	0.95	0.084		
Mostly White-WEST	-0.043	0.96	0.117		
Higher Hispanic – EAST	0.051	1.05	0.067		
Higher Nat. Am. - EAST	-0.118	0.89	0.134		
Higher Nat. Am. - WEST	-0.018	0.98	0.070		
Clark	-0.152	0.86	0.070		
Cowlitz	0.005	1.00	0.098		
King	-0.030	0.97	0.064		
Kitsap	0.010	1.01	0.075		
Lewis	-0.178	0.84	0.111		
Pierce	0.064	1.07	0.060		
Skagit	0.030	1.03	0.098		
Snohomish	0.133	1.14	0.065		
Spokane	0.569	1.77	0.061		
Thurston	0.125	1.13	0.088		
Whatcom	-0.099	0.91	0.081		
Yakima	-0.301	0.74	0.080		

TABLE TN-3.

**Cox Mixed-Effects Model for Permanent Plan Hearing Compliance and Length of Dependency**  
**Entry Cohort with LOS >= 1 year, total N = 9,060**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.077	0.93	0.023	-2.59	.010
Age at Beginning of Dependency	-0.029	0.97	0.004	-7.44	< .0001
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.551	0.58	0.078	-7.09	< .0001
Asian/Pacific Islander only	0.186	1.20	0.106	1.74	.081
Black only	-0.137	0.87	0.059	-2.31	.021
Hispanic (white or unreported race)	-0.041	0.96	0.047	-0.88	.038
Multiracial Native American	-0.091	0.91	0.060	-1.51	.013
Multiracial Black (no Native Amer.)	-0.064	0.94	0.064	-1.01	.031
Multiracial Asian/Hispanic/White	0.034	1.03	0.115	0.29	.770
unknown	0.140	1.15	0.173	0.81	.42
Child Mental Health or Behavioral Problem	0.037	1.04	0.033	1.12	.26
Child Suicidal	-0.262	0.77	0.201	-1.31	.19
N prior Neglect Allegs. >= 3 (vs. 0-2)	-0.258	0.77	0.034	-7.61	< .0001
Parent Mental Illness	0.061	1.06	0.044	1.38	.17
Family Economic Stress	-0.077	0.93	0.041	-1.87	.061
Founded Alleg. during Dependency	-0.684	0.51	0.076	-8.94	< .0001
Initially placed with Relative	-0.132	0.88	0.034	-3.90	.0001
Type of First Move in First Year of Dependency (vs. no move)					
Moved to or between Relatives	-0.408	0.66	0.040	-10.1	< .0001
Moved from Relatives or between Non-Relatives	-0.461	0.63	0.036	-13.0	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.572	1.77	0.058	9.82	< .0001
Change in Permanent Plan in first year of Dependency	0.285	1.33	0.038	7.42	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.241	1.27	0.034	7.14	< .0001
Any indication case moved or is moving to termination/adoption	-1.128	0.32	0.034	-32.85	< .0001
Permanent Plan Hearing Compliance (vs. Non-Compliant)					
Compliant	0.294	1.34	0.052	5.63	< .0001
Reasonable efforts, exempt, N/A	0.197	1.22	0.068	2.90	.0037
Court/Court Group	Random Effects				
	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.218	0.80	0.092		
Mostly White-WEST	-0.051	0.95	0.127		
Higher Hispanic – EAST	-0.001	1.00	0.071		
Higher Nat. Am. - EAST	-0.102	0.90	0.140		
Higher Nat. Am. - WEST	0.084	1.09	0.076		
Clark	-0.170	0.84	0.075		
Cowlitz	0.102	1.11	0.104		
King	-0.124	0.88	0.066		
Kitsap	0.035	1.04	0.082		
Lewis	0.003	1.00	0.120		
Pierce	0.169	1.18	0.064		
Skagit	-0.048	0.95	0.109		

Snohomish	0.176	1.19	0.069		
Spokane	0.458	1.58	0.067		
Thurston	0.166	1.18	0.095		
Whatcom	-0.183	0.83	0.084		
Yakima	-0.296	0.74	0.085		

TABLE TN-4.

**Competing Risks Reunification Model for Permanent Plan Hearing Compliance and Length of Dependency  
Entry Cohort with LOS >= 1 year, total N = 9,060**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender	0.031	1.03	0.042	0.724	.47
Age at Beginning of Dependency	-0.019	0.98	0.005	-3.888	.0001
Combined Race/Ethnicity (vs. Whites)	0.004	1.00	0.009	0.472	.64
Child Mental Health or Behavioral Problem	0.408	1.50	0.049	8.333	< .0001
Child Suicidal	-0.431	0.65	0.285	-1.511	.13
N prior Neglect Allegs. >= 3 (vs. 0-2)	-0.113	0.89	0.049	-2.308	.021
Parent Mental Illness	0.082	1.08	0.061	1.333	.18
Family Economic Stress	0.080	1.08	0.054	1.478	.14
Founded Alleg. during Dependency	-0.533	0.59	0.106	-5.033	< .0001
Initially placed with Relative	-0.106	0.90	0.046	-2.285	.022
Type of First Move in First Year of Dependency (vs. no moves)	-0.310	0.73	0.025	-12.30	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.143	1.15	0.076	1.872	.061
Change in Permanent Plan in first year of Dependency	-1.851	0.16	0.089	-20.73	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.220	1.25	0.043	5.072	< .0001
Court/Court Group	-0.001	1.00	0.005	-.210	.83
Permanent Plan Hearing Compliance (vs. Non-Compliant)	0.405	1.50	0.047	8.615	< .0001

TABLE TN-5.

**Cox Mixed-Effects Model for Termination Petition Filing Compliance and Length of Dependency (Opening of Dependency case to Dismissal); Entry Cohort of Termination Cases, total N = 7,051**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.079	0.92	0.026	-3.07	.0021
Age at Beginning of Dependency	-0.069	0.93	0.004	-15.39	< .0001
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.355	0.70	0.069	-5.12	< .0001
Asian/Pacific Islander only	0.008	1.01	0.134	0.06	.95
Black only	-0.176	0.84	0.052	-3.38	.0007
Hispanic (white or unreported race)	0.046	1.05	0.041	1.13	.26
Multiracial Native American	-0.214	0.81	0.053	-4.03	.0001
Multiracial Black (no Native Amer.)	-0.115	0.89	0.052	-2.23	.025
Multiracial Asian/Hispanic/White	0.114	1.12	0.093	1.22	.22
unknown	0.358	1.43	0.159	2.26	.024
Child any DSM diagnosis	-0.348	0.71	0.064	-5.39	< .0001
N prior Neglect Allegs. $\geq$ 3 (vs. 0-2)	-0.129	0.88	0.031	-4.23	< .0001
SDM Risk 4-5 (vs.0-3)	0.142	1.15	0.035	4.02	< .0001
Parent Mental Illness	0.086	1.09	0.073	1.18	.24
Parent Substance Abuse	0.163	1.18	0.027	6.01	< .0001
Family Homeless prior to Dependency	0.112	1.12	0.049	2.31	.021
Founded Alleg. during Dependency	-0.493	0.61	0.056	-8.83	< .0001
Initially placed with Relative	-0.120	0.89	0.030	-3.98	.0001
Type of First Move in First Year of Dependency (vs. no move)					
Moved <i>to</i> or <i>between</i> Relatives	-0.474	0.62	0.037	-12.76	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.458	0.63	0.031	-14.72	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.224	1.25	0.029	7.76	< .0001
First Permanent Plan was Reunification	-0.252	0.78	0.027	-9.42	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.222	1.25	0.031	7.24	< .0001
Termination Petition Filing – Compliant	0.613	1.84	0.030	20.41	< .0001
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.252	0.78	0.091		
Mostly White-WEST	0.116	1.12	0.138		
Higher Hispanic – EAST	-0.214	0.81	0.071		
Higher Nat. Am. - EAST	0.131	1.14	0.168		
Higher Nat. Am. - WEST	-0.252	0.78	0.073		
Clark	-0.042	0.96	0.086		
Cowlitz	0.024	1.02	0.095		
King	0.055	1.06	0.065		
Kitsap	0.063	1.06	0.076		
Lewis	-0.063	0.94	0.104		
Pierce	0.032	1.03	0.064		
Skagit	0.070	1.07	0.090		
Snohomish	0.142	1.15	0.065		
Spokane	0.400	1.49	0.066		
Thurston	0.194	1.21	0.087		
Whatcom	0.037	1.04	0.084		
Yakima	-0.435	0.65	0.079		

TABLE TN-6.

**Cox Mixed-Effects Model for Time from Opening of Dependency Case to Opening of Termination Case  
Entry Cohort of Termination Cases, total N = 7,051 (no censored cases)**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.014	0.99	0.023	-0.61	.54
Age at Beginning of Dependency	-0.028	0.97	0.004	-7.39	< .0001
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.484	0.62	0.061	-8.00	< .0001
Asian/Pacific Islander only	-0.100	0.90	0.116	-0.86	.39
Black only	-0.198	0.82	0.048	-4.16	< .0001
Hispanic (white or unreported race)	0.117	1.12	0.037	3.17	.0015
Multiracial Native American	-0.203	0.82	0.048	-4.22	< .0001
Multiracial Black (no Native Amer.)	-0.151	0.86	0.046	-3.25	.0012
Multiracial Asian/Hispanic/White	-0.121	0.89	0.086	-1.41	.16
unknown	0.413	1.51	0.151	2.73	.0062
Child any DSM diagnosis	-0.159	0.85	0.053	-2.97	.003
N prior Neglect Allegs. $\geq$ 3 (vs. 0-2)	-0.245	0.78	0.028	-8.81	< .0001
SDM Risk 4-5 (vs.0-3)	0.099	1.10	0.030	3.25	.0012
Parent Mental Illness	0.071	1.07	0.059	1.20	.23
Parent Substance Abuse	0.148	1.16	0.025	6.03	< .0001
Family Housing Issue before Dependency	0.111	1.12	0.033	3.35	.0008
Founded Alleg. during Dependency	-0.325	0.72	0.047	-6.91	< .0001
Initially placed with Relative	-0.125	0.88	0.027	-4.66	< .0001
Type of First Move in First Year of Dependency (vs. no move)					
Moved <i>to</i> or <i>between</i> Relatives	-0.291	0.75	0.034	-8.66	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.232	0.79	0.028	-8.21	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.258	1.30	0.026	9.87	< .0001
First Permanent Plan was Reunification	-0.437	0.65	0.024	-18.2	< .0001
N Continuances $>$ 1 in first year of Dependency (vs. 0-1 continuances)	-0.239	0.79	0.028	-8.66	< .0001
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.252	0.78	0.107		
Mostly White-WEST	-0.114	0.89	0.154		
Higher Hispanic – EAST	-0.179	0.84	0.093		
Higher Nat. Am. - EAST	0.055	1.06	0.194		
Higher Nat. Am. - WEST	0.016	1.01	0.095		
Clark	-0.338	0.71	0.102		
Cowlitz	0.151	1.16	0.112		
King	-0.274	0.76	0.090		
Kitsap	0.604	1.83	0.097		
Lewis	-0.240	0.79	0.121		
Pierce	0.519	1.68	0.089		
Skagit	-0.377	0.69	0.108		
Snohomish	-0.211	0.81	0.089		
Spokane	0.355	1.43	0.090		
Thurston	0.562	1.75	0.106		
Whatcom	-0.274	0.76	0.102		
Yakima	-0.003	1.00	0.099		

TABLE TN-7.

**Cox Mixed-Effects Model for Time from Opening of Termination Case to Dismissal  
Entry Cohort of Termination Cases, total N = 7,051**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.070	0.93	0.026	-2.73	.0063
Age at Beginning of Dependency	-0.068	0.93	0.004	-15.1	< .0001
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.270	0.76	0.069	-3.90	.0001
Asian/Pacific Islander only	0.013	1.01	0.134	0.10	.92
Black only	-0.186	0.83	0.052	-3.61	.0003
Hispanic (white or unreported race)	-0.018	0.98	0.040	-0.45	.66
Multiracial Native American	-0.191	0.83	0.053	-3.58	.0003
Multiracial Black (no Native Amer.)	-0.105	0.90	0.052	-2.04	.041
Multiracial Asian/Hispanic/White	0.149	1.16	0.093	1.60	.11
unknown	0.253	1.29	0.158	1.60	.11
Child any DSM diagnosis	-0.359	0.70	0.065	-5.56	< .0001
N prior Neglect Allegs. $\geq$ 3 (vs. 0-2)	-0.074	0.93	0.031	-2.42	.016
SDM Risk 4-5 (vs.0-3)	0.122	1.13	0.035	3.47	.0005
Parent Mental Illness	0.134	1.14	0.073	1.84	.066
Parent Substance Abuse	0.096	1.10	0.027	3.57	.0004
Family Homeless prior to Dependency	0.089	1.09	0.049	1.82	.068
Founded Alleg. during Dependency	-0.364	0.70	0.056	-6.52	< .0001
Initially placed with Relative	-0.072	0.93	0.030	-2.40	.016
Type of First Move in First Year of Dependency (vs. no move)					
Moved <i>to</i> or <i>between</i> Relatives	-0.395	0.67	0.037	-10.7	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.382	0.68	0.031	-12.3	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.180	1.20	0.029	6.23	< .0001
First Permanent Plan was Reunification	-0.137	0.87	0.027	-5.10	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.298	1.35	0.030	9.88	< .0001
Termination Petition Filing – Compliant	0.010	1.01	0.030	0.33	.74
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.214	0.81	0.092		
Mostly White-WEST	0.112	1.12	0.139		
Higher Hispanic – EAST	-0.194	0.82	0.071		
Higher Nat. Am. - EAST	0.074	1.08	0.167		
Higher Nat. Am. - WEST	-0.281	0.76	0.074		
Clark	0.073	1.08	0.087		
Cowlitz	0.132	1.14	0.096		
King	0.159	1.17	0.065		
Kitsap	-0.095	0.91	0.077		
Lewis	-0.028	0.97	0.105		
Pierce	-0.129	0.88	0.065		
Skagit	0.204	1.23	0.091		
Snohomish	0.289	1.27	0.065		
Spokane	0.289	1.34	0.066		
Thurston	0.045	1.05	0.087		
Whatcom	0.079	1.08	0.085		
Yakima	-0.465	0.63	0.080		

TABLE TN-8.

**Cox Mixed-Effects Model for Time from Opening of Dependency Case to Adoption; Entry Cohort of Termination Cases Leading to Adoption (adoption compliant or non-compliant cases only), total N = 4,988**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.065	0.94	0.029	-2.22	.027
Age at Beginning of Dependency	-0.033	0.97	0.006	-5.86	< .0001
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.360	0.70	0.081	-4.42	< .0001
Asian/Pacific Islander only	0.009	1.01	0.152	0.06	.95
Black only	-0.136	0.87	0.060	-2.29	.022
Hispanic (white or unreported race)	0.029	1.03	0.045	0.64	.52
Multiracial Native American	-0.230	0.80	0.062	-3.71	.0002
Multiracial Black (no Native Amer.)	-0.069	0.93	0.059	-1.16	.24
Multiracial Asian/Hispanic/White	0.069	1.07	0.106	0.65	.52
unknown	0.514	1.67	0.164	3.14	.0017
Child any DSM diagnosis	-0.324	0.72	0.078	-4.16	< .0001
N prior Neglect Allegs. $\geq$ 3 (vs. 0-2)	-0.129	0.88	0.035	-3.67	.0002
SDM Risk 4-5 (vs.0-3)	0.314	1.37	0.042	7.56	< .0001
Parent Mental Illness	0.332	1.39	0.082	4.05	< .0001
Parent Substance Abuse	0.157	1.17	0.031	5.11	< .0001
Founded Alleg. during Dependency	-0.387	0.68	0.064	-6.00	< .0001
Initially placed with Relative	-0.163	0.85	0.034	-4.75	< .0001
Type of First Move in First Year of Dependency (vs. no move)					
Moved <i>to</i> or <i>between</i> Relatives	-0.456	0.63	0.042	-10.7	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.444	0.64	0.035	-12.74	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.302	1.35	0.033	9.12	< .0001
First Permanent Plan was Reunification	-0.187	0.83	0.031	-6.09	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.229	1.26	0.035	6.62	< .0001
Termination Petition Filing – Compliant	0.667	1.95	0.035	19.3	< .0001
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.341	0.71	0.106		
Mostly White-WEST	0.130	1.14	0.150		
Higher Hispanic – EAST	-0.153	0.86	0.075		
Higher Nat. Am. - EAST	0.022	1.02	0.180		
Higher Nat. Am. - WEST	-0.233	0.79	0.078		
Clark	0.047	1.05	0.092		
Cowlitz	-0.080	0.92	0.096		
King	0.082	1.08	0.067		
Kitsap	0.106	1.11	0.085		
Lewis	-0.094	0.91	0.114		
Pierce	-0.008	0.99	0.068		
Skagit	0.029	1.03	0.097		
Snohomish	0.170	1.18	0.066		
Spokane	0.423	1.53	0.068		
Thurston	0.137	1.15	0.091		
Whatcom	0.092	1.10	0.091		
Yakima	-0.329	0.72	0.082		

TABLE TN-9.

**Cox Mixed-Effects Model for Time from Opening of Termination Case to Adoption; Entry Cohort of Termination Cases Leading to Adoption (adoption compliant or non-compliant cases only), total N = 4,988**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.060	0.94	0.029	-2.06	.040
Age at Beginning of Dependency	-0.040	0.96	0.005	-7.57	< .0001
Combined Race/Ethnicity (vs. Whites)					
Native American only	-0.228	0.80	0.081	-2.81	.0049
Asian/Pacific Islander only	-0.036	0.96	0.151	-0.23	.81
Black only	-0.193	0.82	0.059	-3.26	.0011
Hispanic (white or unreported race)	-0.021	0.98	0.045	-0.05	.64
Multiracial Native American	-0.179	0.84	0.062	-2.90	.0038
Multiracial Black (no Native Amer.)	-0.100	0.90	0.059	-1.68	.092
Multiracial Asian/Hispanic/White	0.050	1.05	0.106	0.47	.63
unknown	0.428	1.54	0.163	2.63	.0087
Child any DSM diagnosis	-0.306	0.74	0.077	-3.96	.0001
SDM Risk 4-5 (vs.0-3)	0.250	1.28	0.044	5.65	< .0001
Parent Criminality	0.048	1.05	0.043	1.12	.26
Parent Mental Illness	0.291	1.34	0.082	3.57	.0004
Parent Substance Abuse	0.080	1.08	0.031	2.58	.0099
Family Economic Stress	0.235	1.26	0.086	2.72	.0065
Founded Alleg. during Dependency	-0.228	0.80	0.064	-3.56	.0004
Initially placed with Relative	-0.128	0.88	0.034	-3.73	.0002
Type of First Move in First Year of Dependency (vs. no move)					
Moved <i>to</i> or <i>between</i> Relatives	-0.390	0.68	0.042	-9.18	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.346	0.71	0.035	-9.98	< .0001
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.265	1.30	0.033	7.93	< .0001
First Permanent Plan was Reunification	-0.086	0.92	0.031	-2.78	.0055
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.300	1.35	0.034	8.82	< .0001
Termination Petition Filing – Compliant	0.003	1.00	0.034	0.08	.94
	Random Effects				
Court/Court Group	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	-0.267	0.77	0.109		
Mostly White-WEST	0.133	1.14	0.154		
Higher Hispanic – EAST	-0.115	0.89	0.077		
Higher Nat. Am. - EAST	< .001	1.00	0.187		
Higher Nat. Am. - WEST	-0.260	0.77	0.080		
Clark	0.069	1.07	0.094		
Cowlitz	0.043	1.04	0.098		
King	0.182	1.20	0.069		
Kitsap	-0.091	0.91	0.087		
Lewis	-0.082	0.92	0.117		
Pierce	-0.170	0.84	0.071		
Skagit	0.238	1.27	0.100		
Snohomish	0.316	1.37	0.069		
Spokane	0.297	1.34	0.070		
Thurston	-0.158	0.98	0.095		
Whatcom	0.130	1.14	0.093		
Yakima	-0.407	0.67	0.084		



## II. LOGISTIC REGRESSION MODELS FOR CASE PROCESS METRICS COMPLIANCE

TABLE TN-10.

**Logistic Regression Model for Factors Associated with Fact-Finding Hearing Compliance, total N = 2,879**

Variable	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Z	Pr( Z )
Age Group 16-17 at Beginning of Dependency (vs. infants age 0)	0.496	1.64	0.184	2.70	.0069
Combined Race/Ethnicity (vs. Whites)					.088
Black only	0.534	1.71	0.162	3.28	.0010
Parent Substance Abuse	0.346	1.41	0.088	3.92	< .0001
First Permanent Plan was Reunification	-0.193	0.82	0.086	-2.25	.024
Court/Court Group (vs. Mostly White – EAST)					< .0001
Mostly White-WEST	-0.011	0.99	0.317	-0.03	.97
Higher Hispanic – EAST	1.092	2.98	0.233	4.68	< .0001
Higher Nat. Am. - EAST	1.352	3.87	0.471	2.87	.0041
Higher Nat. Am. - WEST	1.072	2.92	0.243	4.41	< .0001
Clark	0.432	1.54	0.226	1.91	.056
Cowlitz	1.245	3.47	0.442	2.81	.0049
King	0.493	1.64	0.204	2.42	.015
Kitsap	0.465	1.59	0.247	1.88	.060
Lewis	1.507	4.51	0.530	2.84	.0045
Pierce	0.893	2.44	0.206	4.34	< .0001
Skagit	0.573	1.77	0.292	1.97	.049
Snohomish	0.313	1.37	0.205	1.53	.13
Spokane	1.067	2.91	0.195	5.46	< .0001
Thurston	2.038	7.68	0.354	5.75	< .0001
Whatcom	1.693	5.44	0.412	4.11	< .0001
Yakima	0.012	1.01	0.268	0.05	.96

TABLE TN-11.

**Logistic Regression Model for Factors Associated with First Review Hearing Compliance, total N = 10,178**

Variable	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Z	Pr( Z )
Age Group 8-10 at Beginning of Dependency (vs. infants age 0)	-0.258	0.77	0.110	-2.35	.019
Parent Substance Abuse	0.308	1.36	0.062	4.93	< .0001
Family Homelessness	-0.169	0.84	0.079	-2.15	.032
Family Domestic Violence	0.178	1.19	0.065	2.74	.0061
First Permanent Plan was Reunification	0.291	1.34	0.097	3.01	.0026
Court/Court Group (vs. Mostly White – EAST)					< .0001
Mostly White-WEST	1.012	2.75	0.277	3.66	.0003
Higher Hispanic – EAST	1.033	2.81	0.148	6.99	< .0001
Higher Nat. Am. - EAST	0.778	2.18	0.304	2.56	.010
Higher Nat. Am. - WEST	0.825	2.28	0.151	5.48	< .0001
Clark	1.081	2.95	0.150	7.21	< .0001
Cowlitz	1.595	4.93	0.253	6.31	< .0001
King	0.586	1.80	0.137	4.29	< .0001
Kitsap	1.255	3.51	0.168	7.48	< .0001
Lewis	2.933	18.78	0.475	6.17	< .0001
Pierce	2.329	10.27	0.155	15.0	< .0001
Skagit	0.525	1.69	0.198	2.65	.0081
Snohomish	2.170	8.76	0.170	12.7	< .0001
Spokane	2.960	19.30	0.192	15.4	< .0001
Thurston	2.181	8.86	0.251	8.70	< .0001
Whatcom	1.356	3.88	0.185	7.32	< .0001
Yakima	0.976	2.65	0.170	5.74	< .0001

TABLE TN-12.

**Logistic Regression Model for Factors Associated with First Permanent Plan Hearing Compliance, total N = 9,060**

Variable	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Z	Pr( Z )
Combined Race/Ethnicity (vs. Whites)					.011
Native American only	0.593	1.81	0.228	2.59	.0095
Black only	-0.303	0.74	0.138	-2.20	.028
Multiracial Native American	0.352	1.42	0.160	2.21	.027
Major Type of Abuse (vs. no type identified)					.0001
Neglect	-0.292	0.75	0.150	-1.94	.052
Physical Abuse	-0.458	0.63	0.167	-2.74	.0062
Sexual Abuse	-0.884	0.41	0.210	-4.20	< .0001
N prior Neglect Allegs. >= 3 (vs. 0-2)	0.293	1.34	0.088	3.31	.0009
Voluntary Placement Agreement prior to Dependency Placement	-0.765	0.47	0.104	-7.33	< .0001
Initially placed with Relative	0.266	1.30	0.084	3.16	.0016
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	-0.418	0.66	0.081	-5.16	< .0001
Permanent Plan was Reunification at (or before) 12 months in care	-0.493	0.61	0.086	-5.71	< .0001
Court/Court Group (vs. Mostly White – EAST)					< .0001
Mostly White-WEST	0.775	2.17	0.442	1.75	.080
Higher Hispanic – EAST	1.419	4.13	0.195	7.27	< .0001
Higher Nat. Am. - EAST	-0.087	0.92	0.338	-0.26	.80
Higher Nat. Am. - WEST	-0.530	0.59	0.175	-3.03	.0024
Clark	0.925	2.52	0.182	5.08	< .0001
Cowlitz	1.002	2.72	0.279	3.59	.0003
King	1.410	4.10	0.178	7.91	< .0001
Kitsap	1.569	4.80	0.246	6.37	< .0001
Lewis	2.214	9.15	0.535	3.97	< .0001
Pierce	1.684	5.39	0.183	9.20	< .0001
Skagit	0.699	2.01	0.257	2.72	.0065
Snohomish	2.273	9.71	0.243	9.35	< .0001
Spokane	2.286	9.84	0.239	9.55	< .0001
Thurston	1.093	2.98	0.242	4.52	< .0001
Whatcom	2.853	17.34	0.413	6.91	< .0001
Yakima	0.939	2.56	0.213	4.42	< .0001

TABLE TN-13.

**Logistic Regression Model for Factors Associated with Termination Petition Filing Compliance, total N = 7,051**

Variable	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Z	Pr( Z )
Age at Beginning of Dependency	-0.144	0.87	0.024	-5.96	< .0001
modeled as nonlinear term (rcs(4))	0.185	1.20	0.048	3.87	.0001
Combined Race/Ethnicity (vs. Whites)					< .0001
Native American only	-1.097	0.33	0.134	-8.21	< .0001
Black only	-0.603	0.55	0.106	-5.67	< .0001
Multiracial Native American	-0.294	0.75	0.109	-2.69	.0072
Multiracial Black (no Native Amer.)	-0.298	0.74	0.107	-2.78	.0055
Child any DSM Diagnosis	-0.417	0.66	0.118	-3.55	.0004
Parent Substance Abuse	0.113	1.12	0.056	2.00	.045
N prior Neglect Allegs. $\geq$ 3 (vs. 0-2)	-0.369	0.69	0.065	-5.65	< .0001
Voluntary Placement Agreement prior to Dependency Placement	-0.458	0.63	0.072	-6.31	< .0001
Permanent Plan was Reunification at (or before) 12 months in care	-0.778	0.46	0.056	-14.0	< .0001
Type of First Move in First Year of Dependency (vs. no move)					< .0001
Moved <i>to</i> or <i>between</i> Relatives	-0.367	0.69	0.078	-4.71	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.166	0.85	0.066	-2.53	.011
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.602	1.83	0.062	10.0	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	-0.476	0.62	0.061	-7.83	< .0001
Court/Court Group (vs. Mostly White – EAST)					< .0001
Mostly White-WEST	-0.002	1.00	0.358	0	1.0
Higher Hispanic – EAST	0.225	1.25	0.179	1.26	.21
Higher Nat. Am. - EAST	0.247	1.28	0.485	0.51	.61
Higher Nat. Am. - WEST	0.662	1.94	0.185	3.58	.0003
Clark	-0.230	0.79	0.204	-1.13	0.258
Cowlitz	0.888	2.43	0.239	3.72	.0002
King	0.040	1.04	0.168	0.24	.81
Kitsap	1.608	4.99	0.208	7.74	< .0001
Lewis	0.096	1.10	0.260	0.37	.71
Pierce	1.625	5.08	0.175	9.27	< .0001
Skagit	-0.042	0.96	0.223	-0.19	.85
Snohomish	0.144	1.15	0.168	0.86	.39
Spokane	1.214	3.37	0.180	6.76	< .0001
Thurston	1.541	4.67	0.233	6.62	< .0001
Whatcom	0.093	1.10	0.206	0.45	.65
Yakima	0.573	1.77	0.202	2.84	.0045

TABLE TN-14.

**Logistic Regression Model for Factors Associated with Adoption Finalization Compliance, total N = 4,988**

Variable	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Z	Pr( Z )
Age at Beginning of Dependency	-0.248	0.78	0.048	-5.20	< .0001
modeled as nonlinear term (rcs(3))	0.576	1.78	0.149	3.86	.0001
SDM Risk 4-5 (vs.0-3)	0.652	1.92	0.095	6.86	< .0001
Prior Alleg. Finding (vs. No Finding)					.0023
Unfounded/Inconclusive	-0.311	0.73	0.093	-3.35	.0008
Founded	-0.279	0.76	0.093	-3.00	.0027
Parent Mental Illness	0.432	1.54	0.165	2.61	.0090
Parent Substance Abuse	0.138	1.15	0.068	2.04	.041
Type of First Move in First Year of Dependency (vs. no move)					< .0001
Moved <i>to</i> or <i>between</i> Relatives	-0.445	0.64	0.095	-4.69	< .0001
Moved <i>from</i> Relatives or between Non-Relatives	-0.174	0.84	0.075	-2.32	.020
DCFS Social Worker compliant with requirement to visit child every month, in first year of Placement	0.460	1.58	0.074	6.17	< .0001
N Continuances > 1 in first year of Dependency (vs. 0-1 continuances)	0.464	1.59	0.074	6.17	< .0001
Court/Court Group (vs. Mostly White – EAST)					< .0001
Mostly White-WEST	0.222	1.25	0.499	0.44	.66
Higher Hispanic – EAST	0.339	1.40	0.272	1.25	.21
Higher Nat. Am. - EAST	0.595	1.81	0.744	0.80	.42
Higher Nat. Am. - WEST	-0.610	0.54	0.286	-2.13	.033
Clark	-0.222	0.80	0.311	-0.71	.48
Cowlitz	1.088	2.97	0.304	3.58	.0003
King	-0.152	0.86	0.260	-0.58	.56
Kitsap	-0.765	0.47	0.314	-2.43	.015
Lewis	-0.973	0.38	0.420	-2.31	.021
Pierce	-0.071	0.93	0.263	-0.27	.79
Skagit	0.914	2.49	0.311	2.94	.0033
Snohomish	0.535	1.71	0.256	2.09	.037
Spokane	0.608	1.84	0.259	2.35	.019
Thurston	-0.381	0.68	0.318	-1.20	.23
Whatcom	-0.225	0.80	0.311	-0.72	.47
Yakima	-0.592	0.55	0.293	-2.02	.043

**III. COX MIXED EFFECTS MODEL FOR POST-DEPENDENCY OUTCOMES**

**NOTE:** The full set of potential covariates used in the Cox mixed effects length of dependency have too many degrees of freedom for the general guideline of at least 20 occurrence cases per degree of freedom. Therefore, alternative models were run, dropping variables meeting  $p \sim \geq 0.50$  with illogical direction of effect (e.g. parent mental illness), variables that seem to be proxies or artifacts based on high  $p$  and/or illogical effect direction, and relatively uninteresting and n.s. variables (e.g. gender) though  $p$  was  $< .50$ . Dropping the combined race/ethnicity variable ‘saves’ another 7 dof; therefore, models were run with and without race/ethnicity or substituting a model-specific collapsed version for the combined post-dependency outcome. It was also necessary to further collapse race/ethnicity and courts into a smaller number of groups, due to zero N in some cells causing infinite model coefficients. The principle changes to the court groupings were collapsing some additional counties into ‘Mostly White- WEST’ and combining the ‘Higher Native American-EAST and –WEST into a single Higher Native American group, and also adding Skagit and Whatcom counties. These changes resulted in a loss of 63 cases, giving a final N for this survival analysis data set of 4,599.

TABLE TN-15.

**Cox Mixed-Effects Model for Time to Placement Re-Entry or New Founded Allegation after Dismissal; Exit Cohort of Dismissed Dependencies with Permanency Types other than Adoption, total N = 4,599**

Variable	Fixed Effects				
	$\beta$	exp( $\beta$ )	S.E.( $\beta$ )	Wald Z	Pr( Z )
Gender = Male (vs. Female)	-0.126	0.88	0.084	-1.49	.14
Age at Dependency Dismissal	-0.079	0.92	0.011	-7.44	< .0001
Child Mental Health or Behavioral Problem	0.202	1.22	0.088	2.29	.022
N prior Neglect Allegs. >= 3 (vs. 0-2)	0.326	1.38	0.094	3.48	.0005
Parent Criminality	-0.183	0.83	0.096	-1.91	.056
Parent Substance Abuse	0.314	1.37	0.105	3.00	.0027
Family Homelessness	0.259	1.30	0.114	2.28	.023
Family Domestic Violence	0.325	1.38	0.093	3.49	.0005
Primarily Relative Placement (>=75% of total LOS in placement)	-0.316	0.73	0.093	-3.40	.0007
Permanent Plan Hearing Compliance (vs. Non-Compliant)					
Compliant	-0.476	0.62	0.172	-2.77	.0056
Reasonable efforts, exempt, N/A	-0.559	0.57	0.158	-3.52	.0004
Court/Court Group	Random Effects				
	$\beta$	exp( $\beta$ )	Penalized S.E.( $\beta$ )		
Mostly White-EAST	0.165	1.18	0.125		
Mostly White-WEST	-0.227	0.80	0.134		
Higher Hispanic – EAST	-0.119	0.89	0.114		
Higher Native American	0.090	1.09	0.125		
Clark	-0.125	0.88	0.121		
King	0.019	1.02	0.103		
Kitsap	0.004	1.00	0.126		
Pierce	-0.017	0.98	0.102		
Snohomish	0.001	1.00	0.106		
Spokane	0.089	1.09	0.099		
Thurston	0.064	1.07	0.140		
Yakima	0.055	1.06	0.128		

Key to Court Groups for Placement Outcome Model [Reference category is 'Mostly White-EAST']

Mostly White-EAST: Asotin, Columbia, Garfield, Kittitas, Klickitat, Pend Oreille, Stevens, Whitman

Mostly White-WEST: Cowlitz, Island, Lewis, San Juan, Skamania, Wahkiakum

Higher Hispanic-EAST: Adams, Benton, Chelan, Douglas, Franklin, Grant, Walla Walla

Higher Native American: Clallam, Ferry, Grays Harbor, Jefferson, Mason, Okanogan, Pacific, Skagit, Whatcom

**NOTE:** The combined race/ethnicity variable was not significant in the final model and was therefore dropped due to the need to restrict the degrees of freedom. The model presented in the above table treats court/court group as a random effect and stratifies by discharge type (reunification, guardianship, other).