Measuring Outcomes in Child Welfare

Presented by:

Charles L. Usher
Principal Investigator

Judith B. Wildfire
Co-Principal Investigator

Harlene C. Gogan

Jordan Institute for Families
School of Social Work
The University of North Carolina at Chapel Hill
Chapel Hill, NC

January 2004
Acknowledgements

Support for this workshop is being provided by the Annie E. Casey Foundation through a technical assistance grant supporting sites participating in the Family to Family initiative. The Foundation’s continuing support has been crucial to the development of the evaluation framework presented here. The approach also owes much to collaborators from numerous state and local child welfare agencies who have contributed creativity and ingenuity to the effort to measure child welfare outcomes. We also wish to acknowledge the contributions of Eleanor Locklin Brown to the development of an earlier version of this manual.
SECTION I

MEASURING OUTCOMES IN CHILD WELFARE:

AN OVERVIEW
Measuring Child Welfare Outcomes

*The Family to Family Perspective*

Harlene Gogan
Lynn Usher
Judy Wildfire

School of Social Work
Jordan Institute for Families
The University of North Carolina at Chapel Hill

January 21 – 23, 2004

An Emerging Value Base

- **Every child deserves a family**—
  - The 16 year old as well as the infant
  - Long-term foster care is not permanency
  - Congregate care should be used only when necessary, not merely when it is convenient to the agency

- **Families need support and services from their neighborhood and community**
  *Kids do better when their families do better, and families do better in strong neighborhoods and communities*

- **Child welfare agencies need neighborhood and community partners to protect children and to support families**
Some Assumptions About Accountability in the Child Welfare System

- A community-based approach is more responsive and responsible.
- The child welfare agency shares authority and responsibility with the community.
- Must address outcomes, not merely procedural compliance.
- New “bottom lines”
  - Child safety, permanence, & well-being
  - Family outcomes
  - Community outcomes

Whose Outcomes?

- Child Welfare Outcomes Report to Congress
- Child and Family Service Review Process
- Consent Decrees
- State Strategic Planning Processes
- Reform Initiatives
  - Family to Family, the Annie E. Casey Foundation
  - Casey [Family Program] Outcomes & Decision-Making Project
  - Families for Kids, the W.K. Kellogg Foundation
  - Community Partnerships for Protecting Children
“Real” Outcomes vs. Experiences of Families and Children

- Child welfare is much more attuned to results today, compared to procedure 10 years ago.

- Child welfare information systems contain data that make it possible to describe the experiences of children, but they do not contain clinical assessments of the well-being of children.

- Responsibility for the outcomes of children extend to society as a whole, not just the child welfare system—it is intended to be a temporary home.

Federal Outcome Framework

Safety
- Children are, first and foremost, protected from abuse and neglect.
- Children are safely maintained in their homes whenever possible and appropriate.

Permanency
- Children have permanency and stability in their living situations.
- The continuity of family relationships and connections is preserved for families.

Family and Child Well-Being
- Families have enhanced capacity to provide for their children’s needs.
- Children receive appropriate services to meet their educational needs.
- Children receive adequate services to meet their physical and mental health needs.
Federal Indicators & National Standards

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrence of Maltreatment</td>
<td>6.1%</td>
<td>For six months following the first report date during the period from January-June, the percentage about whom another substantiated or indicated report is received.</td>
</tr>
<tr>
<td>Incidence of Abuse and/or Neglect in Foster Care</td>
<td>0.57%</td>
<td>The percentage of children reported as maltreated by a perpetrator who was a foster parent or a residential facility staff person for the nine-month period of January 1 through September 30 divided by the population of children served in foster care for the same time period.</td>
</tr>
<tr>
<td>Foster Care Re-Entries</td>
<td>8.6%</td>
<td>Of all children who entered foster care during a given year, the percentage who were re-entering foster care within 12 months of a prior foster care episode.</td>
</tr>
<tr>
<td>Stability of Foster Care Placements</td>
<td>86.7%</td>
<td>At a point in time, among children who have been in foster care less than 12 mos from the time of the latest removal or left care in the previous 12 months without having been in care 12 mos, the percentage with &lt; 3 placement settings.</td>
</tr>
<tr>
<td>Time to Achieve Reunification</td>
<td>76.2%</td>
<td>Among children reunified in a given year, the percentage reunified in &lt; 12 months from the time of the latest removal.</td>
</tr>
<tr>
<td>Time to Achieve Adoption</td>
<td>32.0%</td>
<td>Among children who exit in a given year to a finalized adoption, the percentage who exit care in &lt; 24 months from latest removal.</td>
</tr>
</tbody>
</table>

Excerpt from a CFSR

- Item 7. Permanency goal for child

  ______   ______   Strength   ____   Area Needing Improvement

  Basis: Statewide Assessment

  The median length of stay for each of the last five entry cohorts (i.e. SFY 94-95 through SFY 98-99) is (in days) 425, 401, 391 and 369 respectively. DSS attributes this improvement to . . .

  The number of children in foster care has declined from a peak of 6,982 in 1997 to 5,765 in 2000. In part because of the requirements of ASFA, the percentage of terminations resulting from adoption increased from 14.8% of all closures to 21.3% of all closures.

  Basis: Onsite Review

  While the length of time to achieve reunification and achieve adoption did not meet the national standards, the trend is demonstrably going in that direction, as measured by declining average length of stay in foster care and the declining number of children in foster care.
### Scoreboard for 2001 CFSRs

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>States in Substantial Conformity</th>
<th>States Not in Substantial Conformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety 1</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Safety 2</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Permanency 1</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Permanency 2</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Well-Being 1</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Well-Being 2</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Well-Being 3</td>
<td>1</td>
<td>16</td>
</tr>
</tbody>
</table>


### Placements Types From Three Perspectives

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-Adoptive Homes</th>
<th>Foster Family Homes (Relative)</th>
<th>Foster Family Homes (Non-Relatives)</th>
<th>Group Homes</th>
<th>Institutions</th>
<th>Super'd Ind Living</th>
<th>Runaway</th>
<th>Trial Home Visit</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Placement Stability From Three Perspectives

No. of Placement Settings for 1st-Time Entry Cohort Group: AFCARS

No. of Placement Settings in Current Placement for Children in Point-in-Time Profile: AFCARS

No. of Placement Settings in Initial Spell Through Feb. 2001 for Entry Cohorts

The Bias of Caseload Snapshots: The Long and Short of It

Jan. 1, 2002

Jan. 1, 2001

Jan. 1, 2003
Current Ages of 7,397 Children In Care on May 31, 2002, Compared to Age at Entry of 10,250 Children Who Entered Care 1999 - August 2002

Caseload vs. Longitudinal Perspectives on Length of Stay

Caseload

- Birth - 1
- 2 - 4
- 5 - 12
- 13 - 18
- 19 or older

Cohort

- Birth - 1
- 2 - 4
- 5 - 12
- 13 - 18
- 19 or older

Caseload vs. Longitudinal Perspectives on Length of Stay

In Care Entered
- 30-Jun-95 SFY95
- 30-Jun-96 SFY95
- In Care
- Entered
- SFY95
- SFY96

- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35

- Months

- Months

- Months

- Months
The Cycle of Experiences in the Child Welfare System

- Permanency Through Reunification, Adoption, or Guardianship
- Counterbalanced Indicators of System Performance
- Use of Home-Based Services vs. Out-of-Home Care
- Use of Least Restrictive Form of Care
- Maintain Positive Attachments To Family, Friends, and Neighbors
- Lengths Of Stay As Brief As Possible
- Ensure Continuity Of Care
- Substantiated Report of A/N

The Cycle of Experiences in the Child Welfare System

- Permanency Through Reunification, Adoption, or Guardianship
- Counterbalanced Indicators of System Performance
- Use of Home-Based Services vs. Out-of-Home Care
- Use of Least Restrictive Form of Care
- Maintain Positive Attachments To Family, Friends, and Neighbors
- Lengths Of Stay As Brief As Appropriate
- Ensure Continuity Of Care
- Substantiated Report of A/N
The Cycle of Experiences in the Child Welfare System

Substantiated Report of A/N
Use of Home-Based Services vs. Out-of-Home Care
Counterbalanced Indicators of System Performance
Use of Least Restrictive Form of Care
Lengths of Stay As Brief As Appropriate
Maintain Positive Attachments To Family, Friends, and Neighbors
Ensure Continuity Of Care
Permanency Through Reunification, Adoption, or Guardianship

Initial Admissions to Child Welfare Custody

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2001</th>
<th>Projected 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>400</td>
<td>450</td>
<td>500</td>
</tr>
<tr>
<td>2001</td>
<td>450</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Projected 2002</td>
<td>500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Cycle of Experiences in the Child Welfare System

- Substantiated Report of A/N
- Use of Home-Based Services vs. Out-of-Home Care
- Use of Least Restrictive Form of Care
- Counterbalanced Indicators of System Performance
- Lengths of Stay As Brief As Appropriate
- Permanency Through Reunification, Adoption, or Guardianship
- Maintain Positive Attachments To Family, Friends, and Neighbors
- Ensure Continuity Of Care

Initial Placements for Children Entering Care 1997 - 2002

- Initial Placements for Children Entering Care
- Region 1, Region 2, Region 3, Region 4, Other
- Foster Care, Private Child Care, Relatives, Other

- Lengths of Stay
- As Brief As Appropriate
- Ensure Continuity Of Care
- Permanency Through Reunification, Adoption, or Guardianship
Initial Placements in F2F County: 1997 - 2002

Initial Placements of Children Entering Child Welfare Custody
1999 - 2002
Initial Placements in Two Counties

Initial Placements in First Spell
Substantiated Report of A/N Use of Home-Based Services vs. Out-of-Home Care

Use of Least Restrictive Form of Care

Counterbalanced Indicators of System Performance

Lengths of Stay As Brief As Appropriate

Maintain Positive Attachments To Family, Friends, and Neighbors

Ensure Continuity Of Care

Permanency Through Reunification, Adoption, or Guardianship
Are Children Being Placed Near Their Homes?  
Caseload vs. Longitudinal Perspectives

Percentage of Children Placed in Same Zip Code

Placements in Home County

White

Black/African-American
The Cycle of Experiences in the Child Welfare System

Substantiated Report of A/N

Use of Home-Based Services vs. Out-of-Home Care

Use of Least Restrictive Form of Care

Ensure Continuity Of Care

Maintain Positive Attachments To Family, Friends, and Neighbors

Permanency Through Reunification, Adoption, or Guardianship

Lengths of Stay As Brief As Appropriate

Counterbalanced Indicators of System Performance

Number of Placements in 1st Spell Among Children Initially Entering Custody 1999 - August 2002

- 1
- 2
- 3
- 4
- 5 or more
The Cycle of Experiences in the Child Welfare System

- Permanency Through Reunification, Adoption, or Guardianship
- Substantiated Report of A/N
- Use of Home-Based Services vs. Out-of-Home Care
- Counterbalanced Indicators of System Performance
- Use of Least Restrictive Form of Care
- Ensure Continuity Of Care
- Lengths of Stay As Brief As Appropriate
- Maintain Positive Attachments To Family, Friends, and Neighbors

Length of Stay Among DCSN Children Initially Placed in Foster Homes

Proportion remaining in care

Length of First Custody Spell

Balance of state
Shelby
Mid Cumberland
East Tennessee
Davidson
The Cycle of Experiences in the Child Welfare System

Substantiated Report of A/N  
Use of Home-Based Services vs. Out-of-Home Care  
Use of Least Restrictive Form of Care  
Counteralanced Indicators of System Performance  
Lengths of Stay As Brief As Appropriate  
Permanency Through Reunification, Adoption, or Guardianship  
Ensure Continuity Of Care  
Maintain Positive Attachments To Family, Friends, and Neighbors

The Cycle of Experiences in the Child Welfare System

Permanent Placements by County

- Reunification with Parents
- Guardianship
- Transfer to Another County or Agency
- Placed for Adoption
- Adoption (Legal Adoption)
- Runaway (ran from FC plcmnt)
- Living With Other Relatives
- Death of child while in FC
- Conversion Code-No Longer Used

Permanent Placements by County
Drawing Attention to the Relationship Between Changes in Practice and Improvements in Outcomes

- Strategy groups assembled to plan and implement changes in practice (TDM, community partnerships, and resource family recruitment, training and support) identify how their efforts will lead to specific improvements in outcomes.

- Strategy groups monitor their progress toward full and effective implementation by establishing and monitoring benchmarks.

- The self-evaluation team supports strategy groups by providing outcome data at geographic and programmatic aggregations that are useful in monitoring improvements in outcomes.
### Estimate of Number of TDM Staffings per Month

#### Estimate of Children at Risk of Entering Placement
Source of data: entry cohort data files

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total initial entries in 5.25 years</td>
<td>11,971</td>
</tr>
<tr>
<td>Total reentries in 5.25 years</td>
<td>1,676</td>
</tr>
<tr>
<td>Total entries and reentries</td>
<td>13,647</td>
</tr>
<tr>
<td>Annual number of entries and reentries</td>
<td>2,599</td>
</tr>
<tr>
<td>Average number entries/reentries per month</td>
<td>217</td>
</tr>
<tr>
<td>Estimate of Children at “risk for placement” - TDM required (assumes 80% placement rate)</td>
<td>271</td>
</tr>
</tbody>
</table>

#### Estimate of Children exiting placement
Source of data: entry cohort data files

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total exits in 5.25 years</td>
<td>9,090</td>
</tr>
<tr>
<td>Annual number of exits</td>
<td>1,731</td>
</tr>
<tr>
<td>Average number exits per month</td>
<td>144</td>
</tr>
<tr>
<td>Number of TDM’s for children exiting</td>
<td>144</td>
</tr>
</tbody>
</table>

#### Estimate of placement changes
Source of data: entry cohort data files

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total placement changes in 5.25 years</td>
<td>8,694</td>
</tr>
<tr>
<td>Annual number of changes</td>
<td>1,656</td>
</tr>
<tr>
<td>Average number of changes per month</td>
<td>138</td>
</tr>
<tr>
<td>Number of TDM’s for children at risk for moves</td>
<td>138</td>
</tr>
<tr>
<td>Total events per month</td>
<td>553</td>
</tr>
<tr>
<td>SAR’s</td>
<td>407</td>
</tr>
</tbody>
</table>

### St. Louis City, 2000 Data

#### Average Distance From Home to Placement
Distance is in miles for children for whom we have data.
Year 2000 data.
Types of Data Used to Measure Child Welfare Outcomes

Evaluation efforts in *Family to Family* rely primarily on longitudinal data to describe the experiences of children involved with the child welfare system. This is in contrast to other outcome-oriented reports, such as the Child and Family Service Review process that use cross-sectional profiles or data describing characteristics of the group of children exiting care during a given period. The following discussion indicates why we emphasize this approach.

**Cross-Sectional Data**

Cross-sectional data, or snapshots of the caseload, have traditionally been the primary basis for characterizing the children served by child welfare agencies. Many agencies report characteristics of the group of children in placement on the last day of the month, the last day of the calendar or fiscal year, or children served at any point during the month or year. These data accurately describe the group of children in out-of-home placement at a specific point in time, however, they are not representative of all the children served by the child welfare system.

Compared to all the children served by the child welfare system, the group of children in the caseload on a given day or during a particular month includes a disproportionate number of children with longer-than-average lengths of stay. These children also tend to be those with the largest number of moves. As a result, caseload profiles do not portray the experiences of all children served because they over-represent those with
long stays and under-represent those with shorter-than-average lengths of stay. Thus, cross sectional data:

- Provide a profile of children in care on a given day or on any day during a given period
- Are useful for day-to-day agency and caseload management, but
- *Portray outcomes in worst possible light* – longest lengths of stay, highest disruptions because children who stay in care the longest are most likely to be in this group.

**Exit Cohort Data**

An exit cohort is the group of children who leave out-of-home care during a given period; e.g., children who were reunified with their families in the past six months or children who were adopted in the past nine months. This has intuitive appeal because it seems to be a way of capturing the experience of every child. Unfortunately, this approach inherently ignores the experience of children who are “stuck in care” and for whom the system is having difficulty achieving a permanent placement.

Using an exit cohort to obtain a representative sample of children in the child welfare system is not reliable because we cannot describe the population of children to which it is relevant. The only thing children in the group have in common is that they left care during the same period and we know that children with longer lengths of stay are underrepresented, but we are not sure to what degree. In contrast to caseload snapshots, therefore, data from exit cohorts tend to portray outcomes in a more favorable light.

From the standpoint of performance measurement, using exit cohorts to establish standards for “time to reunification” or “time to adoption” incorporates a perverse incentive not to find permanent placements for children who have been in care for long periods. This would discourage efforts to “clean up the backlog” of cases stuck in care because adding more of those cases to the exit cohort would increase estimates of time-to-permanency measures.
**Longitudinal Data**

Longitudinal data build statistical case histories for each child who enters out-of-home care, for the first time, during a specified period. We use the term *entry* cohort to refer to this group for two reasons. First, child welfare is one of the few fields in which exit cohorts are used in spite of the well-known biases of such data, and therefore, the label entry cohort clearly distinguishes it from the use of exit cohorts. Second, generally one-fourth or fewer children who achieve permanent placements later re-enter out-of-home care, thereby making them a distinct subset of all the children served in out-of-home care. It is appropriate, therefore, to separate initial entries to care from re-entries because it is likely that the two groups are systematically different and the experiences of children re-entering care are likely to differ systematically from children initially entering care.

A longitudinal database incorporates case histories that track events such as initial custody, placement changes, custody termination, and re-entries to care. Because it includes children who have left care and those who still remain in care, longitudinal data provide a sample of *all the children served by the child welfare agency over multiple years*. Longitudinal data:

- Include a series of entry cohorts of children who enter out-of-home care for the first time during a designated time period (e.g. calendar or fiscal year).
- Track the occurrence of custody and placement events through specified periods of time.
- Represent all child who ever enter care.
- *Provide valid and reliable estimates of length of stay and other outcomes such as placement stability.*

The following examples illustrate the differences in cross sectional data vs. longitudinal data for children in child welfare custody spells.
This graphic depicts the sampling error inherent in the use of point-in-time/cross-sectional/caseload snapshots and exit cohorts. Each line represents an individual child’s length of time in placement. Collectively, they include five long placement and five short placements.

- If we chose June 1, 1999 as our point-in-time for the sample, we select three children with long placements and one child with a short placement.

- If we chose an exit cohort on this date, it would include only one case.

*Slide prepared by Center for Social Services Research, School of Social Work, UC-Berkeley*

- If we pick as our point-in-time Jan. 1, 2000, we include five children with long placements and no children with short placements.

- If we selected an exit cohort of children who had left care in the previous year, we would have two cases and both would have short lengths of stay.
If we select June 1, 2000 as our point-in-time, we select 4 children with long placements and 2 children with short placements.

An exit cohort would include three children, all with shorter placements.
In all three cases, point-in-time examples are more likely to select children with longer placements:

<table>
<thead>
<tr>
<th>Date</th>
<th>Long</th>
<th>Short</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1, 1999</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>January 1, 2000</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>June 1, 2000</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

If we use these samples to depict the experiences of all children in placement, we will report that 75% or 100% or 67% of children have long placements. When, in fact, we know in our total sample there were 50% (5 children) with long and 50% (5 children) with short placements. Thus, every sample point in time over represents children with long placements. This is the bias inherent in cross-sectional/point-in-time/caseload samples.
Longitudinal Data Track the Experience of *Individual Children* Over Time:

The following placement data illustrate the sequences of placements of several hypothetical children:

<table>
<thead>
<tr>
<th>Beginning Date</th>
<th>Ending Date</th>
<th>Initial Placement Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/20/98</td>
<td>2/21/98</td>
<td>Foster Home</td>
</tr>
<tr>
<td>2/22/98</td>
<td>2/24/98</td>
<td>Youth Services Facility</td>
</tr>
<tr>
<td>2/25/98</td>
<td>4/3/98</td>
<td>Youth Services Facility</td>
</tr>
<tr>
<td>4/4/98</td>
<td>4/6/98</td>
<td>Group Home</td>
</tr>
<tr>
<td>4/7/98</td>
<td>5/28/98</td>
<td>Youth Services Facility</td>
</tr>
<tr>
<td>5/29/98</td>
<td>6/8/98</td>
<td>Youth Services Facility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beginning Date</th>
<th>Ending Date</th>
<th>Initial Placement Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/26/97</td>
<td>8/30/97</td>
<td>Emergency Shelter</td>
</tr>
<tr>
<td>11/1/97</td>
<td>12/1/97</td>
<td>Foster Home</td>
</tr>
<tr>
<td>12/2/97</td>
<td>12/12/97</td>
<td>Group Home</td>
</tr>
<tr>
<td>12/13/97</td>
<td>1/11/98</td>
<td>Foster Home</td>
</tr>
<tr>
<td>1/12/98</td>
<td>7/7/98</td>
<td>Relative</td>
</tr>
<tr>
<td>7/8/98</td>
<td>7/29/98</td>
<td>Foster Home</td>
</tr>
<tr>
<td>7/30/98</td>
<td>1/6/99</td>
<td>Foster Home</td>
</tr>
<tr>
<td>1/7/99</td>
<td>6/7/99</td>
<td>Foster Home</td>
</tr>
<tr>
<td>2/3/99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beginning Date</th>
<th>Ending Date</th>
<th>Initial Placement Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/17/97</td>
<td>6/19/97</td>
<td>Foster Home</td>
</tr>
<tr>
<td>11/13/97</td>
<td>11/16/97</td>
<td>Foster Home</td>
</tr>
<tr>
<td>11/17/97</td>
<td>11/30/97</td>
<td>Foster Home</td>
</tr>
<tr>
<td>1/29/98</td>
<td>2/26/98</td>
<td>Foster Home</td>
</tr>
<tr>
<td>3/10/98</td>
<td></td>
<td>Child Caring Institution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beginning Date</th>
<th>Ending Date</th>
<th>Initial Placement Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/16/00</td>
<td>8/16/00</td>
<td>Foster Home</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Beginning Date</th>
<th></th>
<th>Initial Placement Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/25/99</td>
<td></td>
<td>Relative</td>
</tr>
</tbody>
</table>
Longitudinal Data Track the Experiences of All Children Over Time

On January 1, 2002, we download data on children who initially entered placement in previous five years, 1997 to 2001. For children who first entered placement in January 1997 we have almost 5 years in which to follow their placement experiences (i.e. track all child welfare entries, exits, placement moves and reentries). For children who entered placement in December 2001 we have less than 1 month of time to follow their experiences (i.e. less than 1 month of “follow-up” time).

<table>
<thead>
<tr>
<th>File Creation/Download dates</th>
<th>1-Jan-02</th>
<th>1-Apr-02</th>
<th>1-Jul-02</th>
<th>1-Oct-02</th>
<th>1-Jan-03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qtr 1, 2002</td>
<td>Qtrs 1 &amp; 2, 2002</td>
<td>Qtrs 1 - 3, 2002</td>
<td>2002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Follow-up time*:</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>1 day</td>
<td>5 yrs.</td>
</tr>
<tr>
<td>Maximum</td>
<td>1 day</td>
<td>5.25 yrs.</td>
</tr>
<tr>
<td></td>
<td>1 day</td>
<td>5.5 yrs.</td>
</tr>
<tr>
<td></td>
<td>1 day</td>
<td>5.75 yrs.</td>
</tr>
<tr>
<td></td>
<td>1 day</td>
<td>5 yrs.</td>
</tr>
</tbody>
</table>

*Follow-up time depends on 1) date of first entry to placement authority and 2) date file is created.
### Follow-up Time Examples:

<table>
<thead>
<tr>
<th>Initial placement date</th>
<th>File created</th>
<th>Events tracked for..</th>
<th>Total follow-up time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Jul-98</td>
<td>1-Apr-02</td>
<td>6 months in 1998</td>
<td>3 years 9 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 1999</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 2000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 2001</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 months in 2002</td>
<td></td>
</tr>
<tr>
<td>30-Nov-01</td>
<td>1-Apr-02</td>
<td>1 month in 2001</td>
<td>4 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 months in 2002</td>
<td></td>
</tr>
<tr>
<td>15-Feb-97</td>
<td>1-Oct-02</td>
<td>10.5 months in 1997</td>
<td>5 years 7.5 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 1998</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 1999</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 2000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 months in 2001</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 months in 2002</td>
<td></td>
</tr>
</tbody>
</table>

Three months later, in April 2002, we download the data again. This gives us an additional 3 months of “follow-up” time for children in the original five entry cohorts. Additionally, we begin to build the entry cohort for 2002 by adding children who entered placement for the first time in the first quarter of this year. If we download every 3 months, by the end of the year we have added all children who initially entered placement in 2002 to our dataset and thus have another complete entry cohort group. In addition we have another full year of “follow-up” time for all children in the 1997 to 2001 entry cohort groups.
### Measuring Outcomes Via Caseload Snapshots or Entry Cohort Data

<table>
<thead>
<tr>
<th>Caseload Snapshot</th>
<th>Entry Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children in care on a given day in time (e.g. December 31, 2000)</td>
<td>Children who enter care for the first time during a defined period (e.g. Jan 1 – Dec 31, 2000)</td>
</tr>
<tr>
<td>Children with longest length of stay</td>
<td>Represents all children who ever entered care</td>
</tr>
<tr>
<td>Are most likely to be in this sample</td>
<td></td>
</tr>
<tr>
<td>Portray outcomes in worst possible light</td>
<td>Provides valid and reliable estimates of length of stay</td>
</tr>
</tbody>
</table>

The following exhibits illustrate these differences when measuring outcomes.
This graph shows the differences in the racial distribution of children served in out-of-home care, depending on whether the sample is a cross-sectional/point-in-time/caseload sample - referred to here as “In care June 30, 1995” or an entry cohort labeled ‘Entered SFY95’.

Because black children remain in placement slightly longer in this system, their numbers increase in the caseload. Note that about 47% of initial entries are black children compared to 55% of the children in care on June 30, 1995.
Measuring Length of Stay: Snapshot vs. Entry Cohort Data

The median length of stay is different depending on which sample of children is used.

Since the “In Care” samples include disproportionate numbers of children who have been in placement for very long times, medians based on such sample are significantly longer than a medians based on cohort samples.
Summary

Why use entry cohort data?

- Provides a realistic picture of the experiences of all children served in out-of-home care rather than only those “stuck in care” or those who left care after a relatively brief period of custody.

- Allows program administrators to identify groups of children for whom specific services and programs would be valuable.

- Gives an early indication of the impact of changes in policy and practice on outcome measures.

Lessons Learned

- Placement data can be used in a variety of ways for planning, management, and evaluation, but it is critical to recognize appropriate uses for different data types.

- The use of caseload snapshots or data from exit cohorts have inherent biases that compromise their validity and reliability as the basis for performance measures.

- Use of longitudinal data captures changes in outcomes more quickly than cross-sectional data.
Exercises with Entry Cohort Data

Sample County ABC

On December 31, 2000 County ABC had 153 children in DSS Placement. Two children have been in their first placement spell for six or more years. Eight children have been in their first placement spell for five years. Fifteen children for four years. Twenty-five children for three years. Thirty-seven children for two years. Forty-three children for one year. Twenty children have been in their first placement spell for less than one year. Three children had an initial spell of one year, re-entered after one year, and have been in their second spell for two years. How many children are in:

- Entry cohort 2000?
- Entry cohort 1999?
- Entry cohort 1998?
- Entry cohort 1997?
- Entry cohort 1996?
- Entry cohort 1995?
- Entered prior to 1995?

Sample County LMN

In county LMN the county commissioners want to know the average length of stay for children in out-of-home care. You tell them that children who entered placement in 2001 (the most current year available) had a median length of stay of 180 days, or six months. They tell you that last year your agency reported that the average length of stay was 450 days. They think your calculation is wrong.

How do you explain your data to them?

Answer: While the measure reported last year of 450 days as the average length of stay...
Sample County QRS

It is the end of the year 2001 in county QRS. From our data, we know that 50 children entered placement for the first time in 1997, 30 in 1998, 20 in 1999, 25 in 2000, and 25 in 2001. There are currently 30 children who have been in placement for more than one year. Also, of the 25 children who entered placement this year (2001), 15 achieved permanency. Finally, we know that three children have re-entered placement this year and are still in care.

How many children are in our caseload right now?

Answer: Included in the caseload are 30 children who entered before 2001, regardless of what specific year they entered or how long they have been in care. Of the 25 children who entered in 2001, only 10 remain. The 3 children who re-entered are still in care. Add 30 + 10 + 3 for a total caseload of 43.
Sample County XYZ

In County XYZ the caseload at the end of 1999 totaled ninety children in placement. By June 30, 2000, sixty children had left placement and five children had re-entered. The caseload on June 30, 2000 totaled eighty children.

How many children are in entry cohort 2000?

Answer: The end of year 1999 caseload of 90 would have to grow to some number $X$ to then subtract the 60 children who left and then add the 5 children who re-entered --and equal the end of year 2000 caseload of 80. A total number of 135 minus 60 plus 5 equals 120. Thus our entry cohort for 2000 is 45. $90 + (\text{entry cohort 2000}) - 60 + 5 = 80$. $135$ minus 60 plus 5 equals 80. The caseload at the end of year 1999 is 90. Thus our entry cohort for 2000 is 45.
A result for children and families involved with the child welfare system is an outcome.

A statistic --- number, percentage, median, average, etc. --- that describes the result is an outcome indicator.

A specific child welfare outcome, such as length of stay or re-entry, should never be considered alone. Since one outcome often affects another outcome, the outcomes should be considered in relationship to what is happening with other indicators. Changes in one outcome may have an impact on changes in another.

A number of the outcomes described earlier can be measured using straightforward descriptive tabulations and simple charts and graphs. Some examples are presented below. The appendix provides directions for producing such information using SPSS.

**Measuring Number and Rate of Children Initially Entering Placement**

The number of children initially entering placement in each year is the first indication of whether the number of children served away from their birth families is decreasing or increasing. Plotting this number by entry cohort year provides an estimate for whether an agency is trending up or down. However, since multiple factors can influence this number, including changes in the population of children in a county, it is also advisable to determine the rate of entry to out-of-home placement.
The rate of entry to out-of-home placement is defined as the number of initial entries to placement divided by the number of children in the population. Multiplying this number by 1,000 gives a rate per 1,000 children in the population, a more easily interpretable number. Frequency and cross tabulations are used to analyze this indicator. See Appendix for SPSS frequency and cross tabulation procedures.
Measuring Restrictiveness of Placement

Since the child welfare agency’s initial response to a child entering out-of-home placement often influences subsequent outcomes for the child, we begin measuring restrictiveness of placement by closely examining the initial placement type. There are numerous initial placement types that an agency may use including, for example, family foster home, relative home, shelter, institutional/congregate care and group homes. The number and percentage of children initially placed in different types of placements provides a first estimate of an agency’s use of least restrictive placement types. The following chart shows county-to-county variation in one of the states involved in Family to Family, revealing some counties’ reliance on shelter care.

![Initial Placements 1994 - 2000 Chart]
Since a significant number of children move during their out-of-home care placement experience, it is also necessary to look at subsequent types of placements. Indicators that measure restrictiveness of subsequent placements include number and proportion of children ever, subsequently and never placed with a relative caregiver and number and proportion of children ever in non-family-like settings. Frequency and cross tabulations are used to analyze these indicators. See Appendix for SPSS frequency and cross tabulation procedures.
The example below measures the number of children who initially entered placement in a state fiscal year whose race/ethnic identity was White Non-Hispanic, African American, Other, or where the data on race/ethnicity is missing. These data indicate that there is a slightly greater percentage of children entering placement in later years whose race/ethnic identity is other (e.g. Hispanic, American Indian, Asia), with a correspondingly smaller percentage of children who are African American. In interpreting these data, a question to ask agency staff is whether these data reflect a change about children entering care, or a change in the identification and coding of children by race and ethnicity.
Measuring Stability of Placement

The number of placements that a child experiences during the first spell of out-of-home placement provides basic information on the stability of the placement spell. The variable can be categorized so that children are grouped into ‘children having 1 or 2 placements (i.e. stable placement experience)’ and ‘children having 3 or more placements (i.e. more disruptive placement experience),’ thereby providing a variable to better describe placement stability of all children in the out-of-home placement. In analyzing this variable it is important to realize that ‘follow-up’ time can often influence the interpretation of the data. Since placement stability is associated with the amount of time that a child remains in out-of-home placement, tracking changes in this variable from year to year is problematic since the amount of ‘follow-up’ time for the analyses varies from year to year. Thus, another useful indicator for this outcome is the number of placements experienced during the first year of placement. Frequency and cross-tabulations are used to analyze this indicator. See Appendix for SPSS frequency and cross-tabulation procedures.
Since not all moves may be detrimental to a child (i.e. a child may be stepping down from an institutional placement to a therapeutic foster home), it is helpful to distinguish between different types of moves. A placement pattern variable in which each letter (or pair of letters) represents a type of placement concisely summarizes the series of placements that comprise the first spell for each child. You can run the SPSS frequency procedure on the placement pattern variable to identify the most common placement patterns for children in your county.

A frequency table of your data set’s placement pattern variable should look similar to the one shown below. This table shows the most common placement patterns for children in their first spell, and represents 57.5% of all children in this sample county (see the cumulative percent for the last row in the table). SPSS will give you the patterns for 100% of children, however, small numbers of children will be represented in the less frequent patterns.
Frequency of Placement Patterns Variable (SPSS Output)

<table>
<thead>
<tr>
<th>Coding</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>62</td>
<td>11.8</td>
<td>11.8</td>
<td>11.8</td>
</tr>
<tr>
<td>F</td>
<td>46</td>
<td>8.7</td>
<td>8.7</td>
<td>20.5</td>
</tr>
<tr>
<td>Z</td>
<td>18</td>
<td>3.4</td>
<td>3.4</td>
<td>23.9</td>
</tr>
<tr>
<td>FR</td>
<td>15</td>
<td>2.8</td>
<td>2.8</td>
<td>26.8</td>
</tr>
<tr>
<td>ZF</td>
<td>15</td>
<td>2.8</td>
<td>2.8</td>
<td>29.6</td>
</tr>
<tr>
<td>G</td>
<td>10</td>
<td>1.9</td>
<td>1.9</td>
<td>31.5</td>
</tr>
<tr>
<td>F_</td>
<td>9</td>
<td>1.7</td>
<td>1.7</td>
<td>33.2</td>
</tr>
<tr>
<td>FP</td>
<td>9</td>
<td>1.7</td>
<td>1.7</td>
<td>34.9</td>
</tr>
<tr>
<td>Y</td>
<td>9</td>
<td>1.7</td>
<td>1.7</td>
<td>36.6</td>
</tr>
<tr>
<td>ZR</td>
<td>9</td>
<td>1.7</td>
<td>1.7</td>
<td>38.3</td>
</tr>
<tr>
<td>FF</td>
<td>8</td>
<td>1.5</td>
<td>1.5</td>
<td>39.8</td>
</tr>
<tr>
<td>YR</td>
<td>8</td>
<td>1.5</td>
<td>1.5</td>
<td>41.4</td>
</tr>
<tr>
<td>M</td>
<td>7</td>
<td>1.3</td>
<td>1.3</td>
<td>42.7</td>
</tr>
<tr>
<td>P</td>
<td>7</td>
<td>1.3</td>
<td>1.3</td>
<td>44.0</td>
</tr>
<tr>
<td>YF</td>
<td>7</td>
<td>1.3</td>
<td>1.3</td>
<td>45.4</td>
</tr>
<tr>
<td>ZFF</td>
<td>7</td>
<td>1.3</td>
<td>1.3</td>
<td>46.7</td>
</tr>
<tr>
<td>FF_</td>
<td>5</td>
<td>.9</td>
<td>.9</td>
<td>47.6</td>
</tr>
<tr>
<td>RP_</td>
<td>5</td>
<td>.9</td>
<td>.9</td>
<td>48.6</td>
</tr>
<tr>
<td>RR</td>
<td>5</td>
<td>.9</td>
<td>.9</td>
<td>49.5</td>
</tr>
<tr>
<td>YP</td>
<td>5</td>
<td>.9</td>
<td>.9</td>
<td>50.5</td>
</tr>
<tr>
<td>FA</td>
<td>4</td>
<td>.8</td>
<td>.8</td>
<td>51.2</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
<td>.8</td>
<td>.8</td>
<td>52.0</td>
</tr>
<tr>
<td>ZFP</td>
<td>4</td>
<td>.8</td>
<td>.8</td>
<td>52.8</td>
</tr>
<tr>
<td>ZG</td>
<td>4</td>
<td>.8</td>
<td>.8</td>
<td>53.5</td>
</tr>
<tr>
<td>FFF_</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>54.1</td>
</tr>
<tr>
<td>PR</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>54.6</td>
</tr>
<tr>
<td>QR</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>55.2</td>
</tr>
<tr>
<td>ZF_</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>55.8</td>
</tr>
<tr>
<td>ZPRLF</td>
<td>3</td>
<td>.6</td>
<td>.6</td>
<td>56.4</td>
</tr>
<tr>
<td>AA</td>
<td>2</td>
<td>.4</td>
<td>.4</td>
<td>56.7</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>.4</td>
<td>.4</td>
<td>57.1</td>
</tr>
<tr>
<td>F_F</td>
<td>2</td>
<td>.4</td>
<td>.4</td>
<td>57.5</td>
</tr>
</tbody>
</table>

Coding of placements:

- R Relative
- F Foster Home
- G Family Foster Home (MM/RM/SAS
- M Hospital
- Y Other, court approved
- J Small Group Home/Residential
- P Parents
- A Adoptive Home
- Z Unknown
Measuring differences in outcomes by race/ethnicity, gender, and age

Since minority children and teenagers often have longer lengths of stay, more placement moves and more restrictive placements, it is necessary to analyze all outcomes by these characteristics. Stratified analyses and cross tabulations of the outcome indicators provide information on whether outcomes are different for specific groups of children. See Appendix for SPSS procedures.

An challenging problem in many sites is the increasing rate of children for whom race and/or ethnicity is not recorded or is recorded as multiracial. The circumstances of children's admission to out-of-home care often make it difficult for CPS workers to obtain a reliable report of a child's racial or ethnic identity. In a number of states, however, rates of missing data in this area vary considerably from locality to locality, so part of the problem is staff training and supervision.

Measuring number and rate of children coming into foster care who are placed in their own neighborhoods

Using data on the home addresses, it is possible to calculate the number of children entering placement from specific neighborhoods. Geographic mapping is a compelling way to analyze and present these data to neighborhood partners. Linking out-of-home placement addresses to home addresses provides information on whether children are removed from their own neighborhoods upon entering out-of-home placement. The number and rate of children removed from their own neighborhoods upon initial entry to out-of-home placement is a good estimate of a county’s status on this outcome. Frequency, cross tabulations and geographic mapping are used to analyze this indicator. See Appendix for SPSS frequency and cross tabulation procedures.

Measuring number and rate of children reunified with birth families

The reason for exiting out-of-home placement is usually recorded in administrative data files. These reasons include, for example, reunification, guardianship to a relative, runaway, adoption, death, and emancipation. The number and percentage of children who are reunified upon exit from placement provide an estimate for this indicator. Frequency and cross tabulations are used to analyze this indicator.
**Measuring Length of Stay Using Survival Analysis**

Length of stay generally refers to the period of time between a child's removal from his or her home and the achievement of a permanent placement, such as reunification, adoption, or guardianship with a relative. Consistent with this conceptualization and encouraged by federal AFCARS policy, states and localities measure length of stay from the day the state or local child welfare agency assumes custody to the day the parent(s) resume custody or the child enters another permanent placement. Unfortunately, custody beginning and ending dates (or "removal" dates) often are not entered accurately in many child welfare systems. To deal with this data problem, we measure "spells" of out-of-home care as the number of days that a child remains continuously in out-of-home placement without a break in a sequence of individual placements.

Obtaining the most reliable estimate of length of stay also requires that all children entering out-of-home care be included in the analysis. This is one of the main reasons why we emphasize the use of entry cohorts in *Family to Family*. However, we know that length of stay varies widely, and further, that children with longer-than-average lengths of stay will still be in placement when we want to measure length of stay for their cohort. This means that the observations for such children are incomplete, and therefore, that we do not yet know how long their stay in care will be. This problem is known as "censoring" and it requires the use of a group of analytic techniques called survival analysis (sometimes referred to as event-history analysis). Survival analysis makes it possible to include all children in estimating length of stay.
What is survival analysis?

Survival analysis is a group of analytic procedures used to estimate the length of time that it takes for a specific event to happen. We use survival analysis to study two types of events: (1) exit from out-of-home placement; and (2) reentry to out-of-home placement following an earlier exit from placement. We estimate, first, the likelihood a child will exit within given numbers of days following initial entry to out-of-home placement and the exit from out-of-home placement, and second, the likelihood of reentering care after exiting out-of-home care.

We use two different survival analysis procedures in Family to Family: (1) life table analysis for generating survival curves and (2) Kaplan-Meier analysis for estimating median days in placement. Examples of each approach are presented below.
Some Examples of Outcome Measurement Using Longitudinal Data

Reduce Length of Stay – Measuring exits by race/ethnicity

The example below uses survival analysis to estimate, for each race group, the proportion of children remaining in placement at specified numbers of days following entry to out-of-home care. The survival curves for white non-Hispanic children and other children intersect the line on the Y axis indicating the 50th percentile at approximately 360 days (indicated on the X axis). In contrast, the survival curve for African-American children crosses the 50th percentile at approximately 540 days. This indicates a median length of stay approximately six months longer for African-American children in this population.
Reduce Reentry to Placement: Measuring Reentry by Year of Initial Entry

The following example also uses survival analysis, but in a slightly different way. In this case, it is used to estimate the probability that a child who initially entered placement in the years 1995 through 1998 will reenter placement within a certain number of days after leaving care. The survival curves for children who entered care in 1998 and 1997 indicate that slightly less than six percent of them reentered out-of-home care within one year (360 days) of ending their first spell. This suggests an increase in reentry rates for them compared to children who initially entered care in 1995 and 1996. Among the earlier cohorts, fewer than five percent reentered within one of achieving a permanent placement at the end of their first spell.
Key Concepts of Survival Analysis

Survival analysis requires longitudinal data that track the occurrence of an event over time.

- We use longitudinal data to record all child welfare events that a child experiences over an extended period of time. These events include: initial entry to out-of-home placement, placement disruptions, exit from placement through reunification, adoption or other means, and reentry to placement after a prior exit from placement.

- We organize longitudinal data as calendar year or fiscal year cohorts. Children are members of the entry cohort for the year in which they initially entered out-of-home placement. For example, a child who enters placement for the first time in 1996 is a member of the 1996 entry cohort. We suggest updating information for each entry cohort every quarter to obtain information on any new child welfare events that children have experienced.

- When data are extracted from the system for analysis, the event of interest (e.g., exit from placement) may not yet occurred for some children in the cohort. Data for children are considered to be censored, but survival analysis techniques allow these data to be included in the analysis. This avoids the exclusion of certain children, particularly those experiencing longer lengths of stay.
Variables Needed to Analyze Length of Stay

Two types of information are needed to analyze length of stay:

- A time-to-event variable (______________) measures the number of days between either (1) initial entry to foster care and exit from foster care (if the child has left) or (2) initial entry to foster care and the date the data file becomes available for analysis (if the child is still in placement from first spell).

- A status or censor variable (______________) which contains different values that identify whether a child is still in placement or not:
  - 0 means child left placement
  - all other variables mean child is still in placement when file created or left placement for some reason other than a permanent placement, such as 18th birthday or death.

If you are interested in looking at the differences in number of days until exit from placement by different groups of children you can add other variables into the analyses such as year of initial placement, age of child at initial placement, race, gender and initial placement type.
Interpreting the Results of Survival Analysis

You get several different types of output when you run either a Life Table analysis or a Kaplan Meier analysis:

- Life table
- Survival Curve
- Kaplan-Meier Median

This section discusses each of these analysis in detail. The corresponding SPSS procedures are found in the Appendix.
Life Tables with Child Welfare Data – An Example

The table below shows a life table generated in SPSS using a child welfare data set. Following the table is a discussion of how to use and interpret the life table.
Using and Interpreting a Life Table

A life table provides a variety of types of information. Columns 1, 2, 5, 6, and 8 are particularly important in interpreting the results of Life Table analyses.

- The first column provides interval start times that allow you to estimate proportion of children remaining in care at certain time points.

- The second column gives the number of children who are still in placement at the beginning of the interval. In the example below there are 3,339 children in placement at the beginning of the analysis (i.e. interval beginning at day 0); there are 2,708 children still in placement at the beginning of the interval that begins with 30 days and ends with 59 days; there are 2,509 children still in placement at the beginning of the interval that begins with 60 days and end with 89 days.

- The number of terminal events gives the number of children who exited placement during the interval. There were 631 children who left placement between day 0 and day 30; there were 199 children who left placement between day 30 and day 60; there were 123 children who exited placement between day 60 and day 90.

- Column labeled "Proportion Terminating" gives the proportion of children who exited placement during the interval after accounting for those who are censored.

- The next column, "Cumul Propn Surv at End," provides an estimate of the cumulative proportion of children remaining in placement at the end of the interval – this can be used as an estimated percentage of children remaining in care.

- We can also use this percentage to estimate the percentage of children who exited care between day 0 and the end of the interval of interest by subtracting the proportion in Column 8 from 1 and multiplying by 100.

- For example, the proportion of children who are still in placement at day 30 is .8110.

- 1 -.8110 = .189, the proportion of children who left placement before day 30.

- Multiplying .189 by 100 gives 18.9% of children left care between day 0 and day 30.
Another example from the life table:

- The proportion of children who are still in placement at day 360 is .5577. We find this by looking to see what proportion are still in placement at the end of the preceding interval.

- \(1 - .5577 = .4423\) is an estimate of the proportion that left care before 360 days.

- \(.4423 \times 100 = 44.23\%\) of children left placement before 360 days.

<table>
<thead>
<tr>
<th>Time</th>
<th>Intrl</th>
<th>Intrvl Risk</th>
<th>Events</th>
<th>Surviving</th>
<th>Alive at End</th>
<th>Density Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>27460.0</td>
<td>92.0</td>
<td>27414.0</td>
<td>2533.0</td>
<td>.0920</td>
<td>.9080</td>
</tr>
<tr>
<td>30.0</td>
<td>24945.0</td>
<td>32.0</td>
<td>24829.0</td>
<td>1130.0</td>
<td>.0455</td>
<td>.9545</td>
</tr>
<tr>
<td>60.0</td>
<td>23680.0</td>
<td>20.0</td>
<td>23673.0</td>
<td>906.0</td>
<td>.0383</td>
<td>.9617</td>
</tr>
<tr>
<td>90.0</td>
<td>22757.0</td>
<td>35.0</td>
<td>22754.5</td>
<td>699.0</td>
<td>.0398</td>
<td>.9602</td>
</tr>
<tr>
<td>120.0</td>
<td>21503.0</td>
<td>39.0</td>
<td>21304.5</td>
<td>810.0</td>
<td>.0390</td>
<td>.9610</td>
</tr>
<tr>
<td>150.0</td>
<td>20236.0</td>
<td>34.0</td>
<td>20144.0</td>
<td>845.0</td>
<td>.0419</td>
<td>.9581</td>
</tr>
<tr>
<td>180.0</td>
<td>18947.0</td>
<td>31.0</td>
<td>18991.0</td>
<td>939.0</td>
<td>.0494</td>
<td>.9506</td>
</tr>
<tr>
<td>210.0</td>
<td>17836.0</td>
<td>32.0</td>
<td>17735.0</td>
<td>811.0</td>
<td>.0457</td>
<td>.9543</td>
</tr>
<tr>
<td>240.0</td>
<td>16763.0</td>
<td>30.0</td>
<td>16630.0</td>
<td>687.0</td>
<td>.0413</td>
<td>.9587</td>
</tr>
<tr>
<td>270.0</td>
<td>15820.0</td>
<td>33.0</td>
<td>15695.0</td>
<td>657.0</td>
<td>.0419</td>
<td>.9581</td>
</tr>
<tr>
<td>300.0</td>
<td>14933.0</td>
<td>36.0</td>
<td>14790.0</td>
<td>673.0</td>
<td>.0455</td>
<td>.9545</td>
</tr>
<tr>
<td>330.0</td>
<td>13994.0</td>
<td>37.0</td>
<td>13848.0</td>
<td>682.0</td>
<td>.0492</td>
<td>.9508</td>
</tr>
<tr>
<td>360.0</td>
<td>13393.0</td>
<td>38.0</td>
<td>13296.0</td>
<td>670.0</td>
<td>.0518</td>
<td>.9482</td>
</tr>
<tr>
<td>390.0</td>
<td>12292.0</td>
<td>39.0</td>
<td>12094.0</td>
<td>588.0</td>
<td>.0484</td>
<td>.9515</td>
</tr>
<tr>
<td>420.0</td>
<td>11611.0</td>
<td>38.0</td>
<td>11282.0</td>
<td>548.0</td>
<td>.0486</td>
<td>.9514</td>
</tr>
<tr>
<td>450.0</td>
<td>10365.0</td>
<td>35.0</td>
<td>10487.5</td>
<td>404.0</td>
<td>.0385</td>
<td>.9615</td>
</tr>
<tr>
<td>480.0</td>
<td>9966.0</td>
<td>32.0</td>
<td>9858.0</td>
<td>378.0</td>
<td>.0381</td>
<td>.9619</td>
</tr>
<tr>
<td>510.0</td>
<td>9370.0</td>
<td>30.0</td>
<td>9288.0</td>
<td>430.0</td>
<td>.0484</td>
<td>.9536</td>
</tr>
</tbody>
</table>
Survival Curves with Child Welfare Data – An Example

- This example below shows a Survival Curve generated in SPSS using a child welfare data set.
- The chart is an example of the unformatted survival curve that graphically represents the data from the Life Table.
- The curve presents Column 8 from the Life Table. Column (8) gives an estimate of the cumulative proportion of children remaining in placement at the end of the interval – this can be used as an estimated percentage of children remaining in care.
Other Examples of Survival Curves

The chart below shows another (unformatted) survival curve.

![Survival Function](image-url)
This second chart shows the same survival curve -- after it has been formatted.
Using and Interpreting Survival Curves

Interpretation of the survival curve follows much the same logic as does interpretation of the Life Table. From the survival curve you can estimate the proportion of children who are still in care at varying time points after entering placement.

- On the horizontal axis move from 0 to 180 days after entering placement.
- Draw an imaginary line through 180 days parallel to the vertical axis until it intercepts the curve.
- At the point of intersection draw a line parallel to the horizontal axis until it intercepts with the vertical axis.
- This is the point that estimates the proportion of children remaining in care at 180 days.
- In this case the proportion would be about .75
Another example using the 2 and half year mark (i.e. 900 days) and the survival curve:

- Move from 0 to 900 days on the horizontal axis.
- Draw a line from 900 parallel to the vertical axis until you intercept the curve.
- At this point begin drawing a line that is parallel with the horizontal axis until it intercepts the vertical axis.
- In this example the proportion nearest the intersection is about .28.
- The proportion of children still in placement after two and half years is about .28.
- This means that 1 - .28 = .72 gives proportion of children who have left placement by two and half years or about 72%.
Survival curves also produce estimates of the time point by which a specified proportion of children have left placement. For example, consider the proportion of 50%:

- Move from 0 to .5 going up the vertical axis.
- At the .5 mark draw a line parallel to the horizontal axis until it intersects the curve.
- At the point of intersection draw a line going down that is parallel to the vertical axis until you intersect the horizontal axis.
- The number of days at this point is the time point at which the proportion of children who have left care is .5 - this is the median.
- In this example, this would be about 390 days.

Length of Time in Out-of-Home Placement
Kaplan-Meier Median Length of Stay -- Example

The Kaplan-Meier Procedure provides the median in its text output
Measuring Reentry with Survival Analysis

Reentry is defined as a return to out-of-home placement after completing an initial spell of out-of-home placement. A child is identified as having reentered placement if there is a gap of more than one day between an exit from placement and a subsequent entry to placement. The number of days to reentry is determined by counting the days between the first exit from placement and the next entry to placement.

Only children who have exited placement are considered ‘at-risk’ for reentry and are included in these analyses. The event of interest in reentry analysis is ‘reentered placement.’ We are trying to estimate the probability that a child will reenter placement within specified time intervals after exiting from a first placement spell. Survival analysis actually estimates the probability that this event (i.e. reentry) does not occur. However, by subtracting this probability from 1 we can calculate the probability that the reentry event does occur.

The variables needed for all reentry analyses are:

- A “Time” variable. For child welfare data this is the number of days between date of exit from first spell and either (1) beginning date of second spell (2) the date child turns eighteen or (3) date the data file becomes available for analysis. The time variable for your data is ___ (name in your dataset).

- The “Status” variable (or the censor variable) for use in a reentry survival analysis is ___ (name in your dataset). This censor variable contains information on the status of reentry i.e. whether the child reentered placement or not.

The values for the censor variable in a sample data set are shown in the frequency table below. As you can see, the event of interest -- reentry -- is coded 0.

The frequency distribution below provides a summary of the number of children in each of the reentry categories. There are 30,104 children in the data set who have a value for the status.
variable, re18cens. These children will be included in the reentry analysis. In the frequency table below note that 6,467 children do not have a value for the re18cens status variable. These children are still in placement and will not be included in the reentry analysis using this method.

<table>
<thead>
<tr>
<th>RE18CENS</th>
<th>Censor for Reentry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Valid</td>
<td>8435</td>
</tr>
<tr>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>.00</td>
<td>reentered care</td>
</tr>
<tr>
<td>.00</td>
<td>15421</td>
</tr>
<tr>
<td>1.00</td>
<td>no reentry</td>
</tr>
<tr>
<td>1.00</td>
<td>5144</td>
</tr>
<tr>
<td>2.00</td>
<td>turned 18, withdrawn</td>
</tr>
<tr>
<td>2.00</td>
<td>1104</td>
</tr>
<tr>
<td>3.00</td>
<td>was 18 before spell ended</td>
</tr>
<tr>
<td>3.00</td>
<td>30104</td>
</tr>
<tr>
<td>4.00</td>
<td>Total</td>
</tr>
<tr>
<td>Missing</td>
<td>System</td>
</tr>
<tr>
<td>Total</td>
<td>36571</td>
</tr>
</tbody>
</table>
Understanding Reentry Survival Analysis Output

Life Table

The reentry survival analysis produces a Life Table as shown below. The interpretation of the Life Table is similar to that of a Life Table for Length of Stay. A key concept to keep in mind is that the column labeled ‘cumul propn surv at end’ is actually giving you the cumulative probability that a child has NOT reentered. To calculate the probability of reentry simply subtract this from 1.

In the Life Table below, look at the line for the interval starting at 330. This is the time interval begins at 330 days after exiting placement and ends at 359 days. Reading across we find that:

- 19,407 children were still in the analysis at day 330; i.e. these children had NOT reentered.

- During the period between day 330 and day 359, 273 children were withdrawn (column heading ‘number wdrawn during intrvl’). This means that during this 30 days interval either the follow-up time on the child ended or the child turned 18.

- Looking at fifth column, ‘number of termnl events’, we find that 117 children reentered during this interval.

- The 8th column, ‘cumul propn surv at end’, gives the probability that a child has not experienced the event (i.e. no reentry) by the end of the interval (i.e. 359 days). In this analysis that probability is .7724. Subtracting this from 1, gives a probability of reentry by 360 days of .2276, thus we estimate that about 23% of children reenter by 1 year.
Reentry Life Table

This subfile contains: 36571 observations

<table>
<thead>
<tr>
<th>Start Time</th>
<th>Intrvl</th>
<th>Time</th>
<th>Entrng</th>
<th>Wdrawn</th>
<th>Exposd</th>
<th>Propn Intrvl Risk</th>
<th>Propn Entrrng</th>
<th>Propn Wdrawn</th>
<th>Cumul Surviving at End</th>
<th>Propn Termnl Events</th>
<th>Propn Terminalizing</th>
<th>Cumul Probability</th>
<th>Cumul Hazard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>.0</td>
<td>29000.0</td>
<td>0</td>
<td>390.0</td>
<td>0</td>
<td>.0</td>
<td>.0205</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>120.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>180.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>210.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>240.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>270.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>300.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>330.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>360.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>390.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>420.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>450.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>480.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>540.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>570.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>630.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>660.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>690.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>720.0</td>
<td>25668.0</td>
<td>0</td>
<td>18.0</td>
<td>0</td>
<td>.0</td>
<td>.0210</td>
<td>.6761</td>
<td>.3239</td>
<td>.9329</td>
<td>.0022</td>
<td>.0023</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** These calculations for the last interval are meaningless.
Reentry Survival Curve

The reentry analysis also produces a survival curve as shown below. The survival curve plots the probability of NOT reentering.
Calculating One Minus Probability of Survival to Get Likelihood of Reentry

Since we are really interested in the probability of reentry to placement vs. probability of not reentering as shown in the previous survival curve, the plot of ‘one minus the survival’ is useful. This plot actually shows the probability of reentry.

![One Minus Survival Function](image)

Days to Reentry or Age 18
Using the formatted plot below, you can estimate the probability that a child reenters placement at varying time points. For example, consider the time point that is 90 days after the first spell ends. (In the plot below, there is a reference line drawn through the 90 day time point and parallel to the vertical axis.) The point where the reference line intersects the plot estimates the probability of reentry by 90 days, i.e. 11%.
Some Terms Used in Longitudinal Data Analysis

**Censoring.** Child welfare caseloads, in research terms, are open populations with children entering and exiting placement at different points in calendar time. If a child entered placement on November 1, 2001 and we measure our outcomes using data as of December 31, 2001, that child contributes 60 days or two months of real time. Children who have not experienced our event of interest, i.e. exit from placement, before we measure outcomes are defined as censored and contribute a specified amount of follow-up time to the analysis, in this case 60 days.

**Cross-sectional / point-in-time / caseload data.** Information on all children who are in care at a specified time point such as the last day of the year.

**Entry cohort.** A group of children who entered out-of-home care for the first time during a designated time period.

**Exit cohort.** A group of children who left out-of-home care during a designated time period.

**Follow-up time.** The amount of time from when a child entered placement to the time they either left care, or we measured our outcomes. If a child enters placement on November 1, 2001 and we measure our outcomes using data as of December 31, 2001, that child contributes 60 days or two months of real time. This amount of real time is also known as follow-up time.

**Longitudinal data.** Data that follow a selected group of children through calendar time until the point at which either a specified event occurs or the data become unavailable.

**Median length of stay.** Time point at which 50 percent of children in an entry cohort are no longer in out-of-home care.

**Spell.** A continuous period of out-of-home care that may have multiple placements or living arrangements within the spell.

**Survival analysis, event history analysis, life table analysis.** A class of statistical procedures for estimating the probability of remaining in out-of-home care at specified time points.

**Survival curve.** A graphical presentation of the probability that an event has not yet occurred (e.g. a child has not exited placement).
SECTION V

SELF-EVALUATION

A STRATEGY FOR MONITORING CHILD WELFARE OUTCOMES AND EVALUATING CHANGES IN POLICY AND PRACTICE
Key Ingredients in Self-Evaluation

1. **Agency is outcome focused.** This means that outcomes for children and families are clearly defined and disseminated throughout the agency. All staff members realize that the decisions that they make for individual families and children influence the outcomes for the agency.

2. **Self-evaluation is a collaborative process** that brings together individuals with different kinds of expertise to discuss the data used to measure outcomes and agency processes. The expertise represented at the “self-evaluation table” must include:
   - management information staff familiar with the data system;
   - data analysis staff who can analyze, organize and present data on outcomes;
   - program staff including managers, supervisors, and frontline staff who understand the context of child welfare.

   This group can be expanded to include community partners, staff from other partner human service agencies such as courts and mental health.

3. **Self-evaluation is an ongoing process** with meetings held on a regular basis to discuss agency status on outcomes. Between meetings self-evaluation members work together to identify, collect and analyze data. An agency develops interim processes to regularly update staff and community about the agency’s status on outcomes.

4. **Self-evaluation requires timely and accessible data that appropriately measure outcomes and other indicators of interest.** These data should include:
   - entry cohort data (abuse and neglect reports, and placement data) to measure child welfare outcomes
   - data on foster parent recruitment and retention
   - geographic indicators on where child welfare clients live.

5. **Self-evaluation should include on-going attention to implementation progress of the core strategies** used by the agency to improve outcomes for children. This allows timely response to unforeseen barriers and accountability to parents, children, and the community.

6. **Self-evaluation requires technical expertise** to ensure defensibility and adaptability.
Applying the Key Ingredients of Self-Evaluation

What is the primary responsibility of the Self-Evaluation Team (SET)?

SET keeps agency and/or community focused on outcomes

- SET must understand agency and/or community goals
- SET must understand what data are available to measure outcomes
- SET must determine if additional information is needed to measure outcomes
- SET helps to formulate analysis that will help agency and/or community know where they stand on outcomes

What does it mean to be outcome focused?

- Expected outcomes are clearly defined
- Outcomes are measurable
- Outcomes are achievable through successful implementation of the program/initiative
- Outcomes are known and understood by all agency staff and/or community members
- Agency staff and/or community members recognize how their work contributes to improved outcomes or creates a barrier
- Current agency and/or community status on outcomes is known by all
- Data on outcomes is used to plan programs and identify areas in existing programs in which modifications are required

What does it mean to have an ongoing self-evaluation process?

- Outcomes are regularly examined and discussed through regularly scheduled self-evaluation meetings (e.g. every other week, once a month, quarterly)
- Informal interim discussions about outcomes occur between regularly scheduled self-evaluation meetings in other agency and/or community forums
- Analysis results are presented on a regular basis; discussed by self-evaluation team who identify new areas of analysis:
What technical expertise is needed to begin self-evaluation?

- Ability to analyze data, present results in an understandable and useable format
- Ability to listen to program discussions and identify data and analysis that would be useful to staff and/or community members who are implementing programs
- Knowledge of data that are currently collected and available
- Ability to extract data from existing systems
- Ability to formulate data requests

What types of data might be used for self-evaluation?

- Administrative data files can be reconfigured to monitor outcomes
- Public health data files contain community health information on incidence and prevalence of events and conditions
- Other agencies, such as education, juvenile justice may have administrative information that can be linked to other data
- Other sources of data could include focus groups, key informant discussions, surveys
- Child welfare outcomes should be measured using longitudinal data that contains information on ALL children entering placement as opposed to only children in placement at a particular point in time
- Child abuse/neglect referral data provides information needed to determine the likelihood that a child will enter placement

What is a collaborative self-evaluation process?

- Size of SET varies, usually ranges from 3 to 15 participants
- Self-evaluation team includes people who represent diverse perspectives in terms of technical expertise and substantive knowledge
- Three areas should be represented on the SET: program and/or community knowledge, analysis capability, data manager

  Program staff and community representatives on the team:

  ➢ **Who**: partner agency managers, middle managers, frontline staff, community representatives, other human services agency staff

  ➢ **Role**: help understand the meaning of the data by bringing the frontline work perspective to the discussion of outcomes, communicate knowledge of outcomes to colleagues, identify information that is needed to understand outcomes
Analysis capability is on the team

- **Who**: planning/evaluation unit member, quality assurance staff, staff person who likes to use numbers and would be willing to be trained in analysis, new hire analyst, partnership with university

- **Role**: - Formulate analysis to determine current status on outcomes
  - Analyze data on outcome status
  - Present results in understandable and usable format
  - Participate in SET discussions with an eye to determining additional analysis that would be helpful in understanding outcome status
  - Act as resource person to others in agency and/or community around understanding outcomes and analysis questions

Data manager is on the team

- **Who**: data systems manager, programmer, agency “data” person

- **Role**: - Identify data elements needed to measure outcomes
  - Design process for regularly making identified outcome data available to agency and community members
  - Design reports for information that is needed on a regularly scheduled basis e.g. quarterly summary of outcome status
Implementing an Ongoing Self-Evaluation Process

The primary role of the self-evaluation team is to keep the agency focused on outcomes for families and children.

Forming the team and starting to meet

- Identify staff members including: person who can analyze data, person who knows what data available to measure child welfare outcomes and how to get access to the data, child welfare staff and administrators from different areas of the child welfare agency.
- Select a chairperson or co-chairs for the Self-evaluation team - it is often advisable to select “non-data” and “non-analysis” staff to chair the team. This sends the message that self-evaluation is the responsibility of everyone.
- Participation in self-evaluation should be considered a “real” part of the work of the agency, not merely an “add-on” to regular job responsibilities, staff should be rewarded for attention given to outcomes.
- Participation of administrators, directors, program managers in self-evaluation sends the message that self-evaluation, and outcomes, are important in the agency.
- Establish a regular meeting schedule - it may be necessary to meet more often in the early stages while identifying data sources and baseline outcomes.
- Establish communication link with agency management (e.g. administrators and program managers are members of self-evaluation team, members of self-evaluation team report to agency management during regularly scheduled meetings).

Early tasks of self-evaluation team

- Understand the outcomes and how they are measured
- Identify data that are currently available for measuring outcomes
- Develop a process for getting regular ongoing access to the data needed to measure outcomes
- Determine agency baseline status on outcomes
- Create a process for regularly updating the agency’s status on outcomes
- Determine ways to communicate the agency’s status on outcomes to agency staff and to partners
- Identify information needed to support the planning of other core strategies

**Ongoing tasks of the self-evaluation team**

- Regularly analyze outcome data to determine agency’s current status on each outcome and to understand differences in each outcome by age, race, gender, needs of children in placement.
- Identify positive and negative changes in the outcomes over time.
- Through discussions at self-evaluation team meetings identify ways in which agency practice and policy (including other core strategies) have positively impacted on outcomes; ways in which agency practice and policy have created barriers to improvement in outcomes.
- Find ways to communicate outcomes with agency administrators, managers, frontline staff, and other partners such as: newsletters, email bulletins, regular reports, discussions in regularly scheduled agency meetings, posters throughout agency, media.
- Celebrate positive changes in outcomes.
- Use negative changes in outcomes to help identify changes in practice that are needed.
- Identify new areas of analysis that are needed to understand changes in outcomes.
- Implement new analysis, team meets to discuss outcomes, ……
- Identify ways to use data from partners (e.g. juvenile justice, mental health, education) to better understand outcomes for children and families.
- Identify ways to analyze data to help partners better understand child welfare outcomes in light of their own agency’s work (e.g. judicial district report presents child welfare outcome data for judicial districts in the state).
Getting Outcome Data

- Entry cohort data are needed to measure child welfare outcomes
- Existing administrative data can be reconfigured to measure child welfare outcomes
- Data management programs form the basis for a production process to regularly update outcome analysis files
- Quarterly updates of outcome data provide information needed to track changes over time
- Regular reports on outcomes provide a way to update staff on agency outcome status. BUT should not be the only source of outcome data – additional analysis are needed to understand differences in outcomes for different groups of children
- Information on the key components of agency processes are needed to be sure that the process is implemented as planned by agency staff.
- Linking process to outcome data allows staff to more closely connect practice to changes in outcomes.
- Data on foster parent recruitment, training, licensing and retention help staff to understand barriers to recruitment and retention.
- Geographic data are important to determine areas from which children are coming into placement and areas in which foster parents are needed.
Self-Evaluation Team Member Roles

Analyst

- Analyze outcome data
- Present data to self-evaluation team and participate in discussion of outcome results
- Identify new analyses that will help self-evaluation team understand changes in the agency’s outcomes
- Compile outcome data in ways that are understandable to multiple audiences such as self-evaluation team, administrators, managers, community partners
- Identify new data that are needed to understand outcomes and communicate these needs to data managers
- Learn to run SPSS data management programs to convert “raw data” files into files that can be used to measure outcomes

Data manager

- Identify data elements in existing administrative data systems that are needed to complete analysis of outcomes
- Develop data programs to extract data from existing data systems
- Attend self-evaluation meetings with an ear to identifying additional data elements that are available for ongoing analysis
- Develop a production process for regularly extracting data needed to measure outcomes (quarterly is usually sufficient)
- Learn to run SPSS data management programs to convert “raw data” files into files that can be used to measure outcomes
- In collaboration with the self-evaluation team, develop reports that update agency outcome status

Program staff

- Participate in self-evaluation discussions about agency status on outcomes. Each staff member brings his/her practice experience to the interpretation of outcome data.
- Have a clear understanding of the outcomes and data used to measure the outcomes and communicate this information to other program staff
- Identify ways in which practice impacts on outcomes
- Help other program staff understand how frontline practice impacts on outcomes for families and children
- Identify ways to communicate outcome status to agency staff as part of day to day “way we do business”
An Overview of Self-Evaluation in Family to Family

Results of Self-Evaluation

- Create a clear and unified vision of the agency’s work that is grounded in an explicit set of values, outcomes, and practice principles, distinct from reporting requirements.

- Provide a framework within which to communicate that vision to agency staff and to the community.

- Evaluate performance relative to:
  - Achievement of specific outcomes for families, children, and youth.
  - Conformity to values and principles that guide practice.
Some Key Issues

• Responding to reporting requirements imposed by CFSR, consent decrees, Family to Family, etc. is not the same thing as . . .

• Performance-based management that drives the work of an agency and provides a basis for assessing efforts by the agency and community to promote safety and permanency

• Support for local evaluation by state office

Self-Evaluation . . .

• Seeks to create a flow of information to support mid-course corrections and continuous improvements in outcomes

   Evaluation is a process, not a report

• Assumes evaluation is most effective when it includes diverse perspectives

   › Managers and staff of public agencies
   › Residents
   › Community-based organizations
   › Funders and policymakers
   › Evaluators

• Requires technical expertise to ensure defensibility and adaptability
Staffing Requirements for Self-Evaluation

Agency Management

Program Staff

Data Manager

Analyst

Expanding Self-Evaluation throughout the Agency and into the Community
Presenting Results Within a Framework That Facilitates Evaluation of Changes in Outcomes

- **Comparisons of localities**
  Capitalize on sub-state variations in local policies and practices, emphasizing how they are related to differences in outcomes, to establish a context within which to interpret results for a given locality.
Presenting Results Within a Framework That Facilitates Evaluation of Changes in Outcomes

- Comparisons of localities
  Capitalize on sub-state variations in local policies and practices, emphasizing how they are related to differences in outcomes, to establish a context within which to interpret results for a given locality.
  Avoids the “information in a vacuum” problem of working only with data from a single site.

- Comparisons of the experiences of cohorts across time reveal changes in local policies, practices, and outcomes
  Provides earliest indication of changes because focus is on distinct groups, especially those who entered care most recently and were subject to changes in policy and practice.
  Changes tend to be concealed in caseload data and longitudinal data are more reliable because they represent all children who enter care.

Obstacles to Self-Evaluation

- Manager’s failure to assert that self-evaluation is part of the “real work” of the agency

- Shifting the focus to reports or monitoring systems rather than maintaining a commitment to an ongoing interactive process

- Difficulty hiring and retaining staff who have analytic and data management skills
APPENDIX

SPSS PROCEDURES FOR ANALYZING CHILD WELFARE DATA

Frequency Distributions

Frequency distributions summarize variable or data element in the data set.

- Lists all possible values for one variable
- Records the number of children in the data set
- Records the percentage of children with each value

The following example describes the race of children coming into care using the SPSS frequency procedure.

<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>14813</td>
<td>71.9</td>
<td>71.9</td>
<td>81.0</td>
</tr>
<tr>
<td>Black or African American</td>
<td>3212</td>
<td>15.6</td>
<td>15.6</td>
<td>96.6</td>
</tr>
<tr>
<td>Asian</td>
<td>35</td>
<td>.2</td>
<td>.2</td>
<td>96.8</td>
</tr>
<tr>
<td>Indian/Alaskan Native American</td>
<td>31</td>
<td>.2</td>
<td>.2</td>
<td>96.9</td>
</tr>
<tr>
<td>Unable to Determine</td>
<td>628</td>
<td>3.1</td>
<td>3.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>2</td>
<td>.0</td>
<td>.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20589</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>
To generate a frequency table in SPSS, open your SPSS data file in the Data Editor window.

- Click on:
  - Analyze
  - Descriptive statistics
  - Frequencies

A dialogue box appears
- Scroll through variables in the box on the left to select the variables of interest
- Highlight each variable for which you want to produce a frequency table. Click on arrow pointing to the right to move variable into the ‘Variable(s)’ Box.
- You may include as many variables as you want in the ‘Variable(s)’ box
Selecting Cases

Click on OK

A Frequency Table for the variable you selected will look similar to the one shown below – this table used year as the variable of interest.

<table>
<thead>
<tr>
<th>Frequency Percent</th>
<th>Valid Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>18.8</td>
</tr>
<tr>
<td>1996</td>
<td>18.8</td>
</tr>
<tr>
<td>1997</td>
<td>15.6</td>
</tr>
<tr>
<td>1998</td>
<td>19.9</td>
</tr>
<tr>
<td>1999</td>
<td>21.6</td>
</tr>
<tr>
<td>2000</td>
<td>21.4</td>
</tr>
<tr>
<td>2001</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>
You can also ask for summary statistics using the frequency tables process. By clicking on

- Statistics box

The Statistics dialogue box appears

Click in the box next to any statistic that you wish to get for the variable of choice.
## Frequencies

### Statistics

<table>
<thead>
<tr>
<th></th>
<th>Valid</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>44185</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>1.67</td>
<td></td>
</tr>
<tr>
<td>Percentiles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>2.00</td>
<td></td>
</tr>
</tbody>
</table>

### Number of Placements in Spell 1

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>1</td>
<td>28599</td>
<td>64.7</td>
</tr>
<tr>
<td>2</td>
<td>8874</td>
<td>20.1</td>
<td>20.1</td>
</tr>
<tr>
<td>3</td>
<td>3436</td>
<td>7.8</td>
<td>7.8</td>
</tr>
<tr>
<td>4</td>
<td>1575</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>5</td>
<td>729</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>6</td>
<td>426</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>7</td>
<td>223</td>
<td>.5</td>
<td>.5</td>
</tr>
<tr>
<td>8</td>
<td>130</td>
<td>.3</td>
<td>.3</td>
</tr>
<tr>
<td>9</td>
<td>78</td>
<td>.2</td>
<td>.2</td>
</tr>
<tr>
<td>10</td>
<td>48</td>
<td>.1</td>
<td>.1</td>
</tr>
<tr>
<td>11</td>
<td>26</td>
<td>.1</td>
<td>.1</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>13</td>
<td>9</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>14</td>
<td>5</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>15</td>
<td>8</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>17</td>
<td>3</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>Total</td>
<td>44185</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Finally the frequency procedure can also produce charts by clicking on Charts box in the frequencies dialog box. You get the following box.

- Select chart type you want by clicking in box next to the type of chart you want.
- Then click on ‘Continue’

Which produces the following chart:
Tip for saving SPSS procedures using “Paste”

Click on the “paste” button which is displayed in the same location as “continue” to see the actual code that SPSS runs. This is helpful if you need to repeat the procedure. (However, editing charts cannot be done through syntax). Pasting and saving your procedures, known as Syntax, can...

- save time
- provide documentation and
- allow you to share your analyses with other analysts and other sites.
Cross Tabulations

Cross Tabulations are used to summarize the relationship of two or more variables or data elements in the data set. The SPSS cross tabulation procedure produces a table that contains:

- One row for each value in one variable
- One column for each value in the other variable
- The resulting cells in the table represent the intersection of the rows and columns.

SPSS cross tabulation output:

<table>
<thead>
<tr>
<th>AGECAT1 age categories * CLI_SEX Gender Crosstabulation</th>
<th>1 Male</th>
<th>2 Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 0-1</td>
<td>Count</td>
<td>3252</td>
<td>2790</td>
</tr>
<tr>
<td></td>
<td>% within AGECAT1 age categories</td>
<td>53.8%</td>
<td>46.2%</td>
</tr>
<tr>
<td>2.00 2-5</td>
<td>Count</td>
<td>3199</td>
<td>3234</td>
</tr>
<tr>
<td></td>
<td>% within AGECAT1 age categories</td>
<td>49.7%</td>
<td>50.3%</td>
</tr>
<tr>
<td>3.00 6-11</td>
<td>Count</td>
<td>3482</td>
<td>3324</td>
</tr>
<tr>
<td></td>
<td>% within AGECAT1 age categories</td>
<td>51.2%</td>
<td>48.8%</td>
</tr>
<tr>
<td>4.00 12-20</td>
<td>Count</td>
<td>2964</td>
<td>3731</td>
</tr>
<tr>
<td></td>
<td>% within AGECAT1 age categories</td>
<td>44.3%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>12897</td>
<td>13079</td>
</tr>
<tr>
<td></td>
<td>% within AGECAT1 age categories</td>
<td>49.6%</td>
<td>50.4%</td>
</tr>
</tbody>
</table>
To produce a cross tab, from the SPSS Data Editor:

- Click on
  - Analyze
  - Descriptive Statistics
  - Cross tab
Scroll down through variables to select both row and column variables.

- Highlight variables and then click on right pointing arrow next to box of either row or column. For this example we use the race variable _________ and the year variable __________.

Now click on ‘Cells’ Box at bottom of screen
- This dialogue box allows you to choose which percentages and counts you want included in your output
- This choice depends on the question you are attempting to answer
For example, if we want to know if the percentage of children, by race group, entering foster care has changed over the years, we would click on

- **Observed**
- **Column percentages** (year is the column variable and will provide percentages within each year of each race group)
- **Continue**
We get the following output that lets us look at the number and percentage of children initially entering placement by race to see if it is changing over the years.

You can also modify the look of this table by double-clicking on the table, highlighting sections to be changed, making your changes, and then click on close.
Selecting Cases: A Subset of Observations to Analyze

1. Your cursor must be in the SPSS data window.

2. Click on:
   ♦ Data
   ♦ Select cases

This window appears
Selecting Cases

- Click in the circle next to ‘If condition is satisfied’ and on the “If” button; the dialogue box below appears.
- Scroll down through the variables listed in the window on the left until you reach the categorical age variable ____________.
- Click on this variable.
- Click on the right-pointing arrow to move this variable into the box as shown below.
- Place cursor in box and type = ______ the value of your age group variable you are interested in. In the example below we chose 4.
- This will select all children in a specific age group.
- Click on ‘Continue’
Selecting Cases

- This box appears
- Be sure that the circle next to ‘Filtered’ at the bottom of the box is selected
- Click on ‘OK’

You should now see the data window. Notice that there are slashes through some of the numbers of the left-hand side of the window. These children are not in the age group you specified, so they will not be included in any analysis UNTIL the Filter is removed.
Selecting Cases

To Remove the Filter You should have cursor in the Data window

- Click on
  - Data
  - Select Cases
  - Reset (at the bottom of the window)
  - OK
Selecting Cases

This data window now appears. Note there are no slashes on the left-hand side of the window. All observations will be included in subsequent analyses.
Creating New Variables

Often you will need to make changes to way your data is organized. This is not changing your data, just the way it is presented in SPSS. For example, suppose you wanted to know the proportion of children entering placement over the past five years who were age 0-1 at entry, 2, 3, 4, 5, and above 5? Is the proportion in each year increasing?

Your data set should include a variable for age of child at entry ________________. You can use this variable to create a new variable that looks at children by the specific age groupings you are interested in. These steps are described below.

You should open SPSS and the data editor.

Click on

- Transform
- Recode
- Into Different Variables

The following SPSS dialog box should appear.

The following SPSS dialog box should appear.
Creating New variables

- In the variable listing on the left of the dialog box,
- Click on your age
- Then click on the single arrow to move the variable open box
- Type a new variable name (e.g. agegrp1) into the open/blank box under Name:
- Click on Change
- Type a label (i.e. Age group) in the open/blank box under Label:
- Then Click on Old and New Values
Another dialog box should then appear

- Select Old Value Range and set equal to 0 to .9999
- Click in open box under New Value and type in 1
- Click on Add
Creating New variables

The dialog box will now look like this.

Repeat the same steps of identifying old value and new value, and add each to the list of changes as follows:

- **Old Value Range 1 to 1.99999**
  - New value 2
  - Click on Add

- **Old value Range 2 to 2.99999**
  - New value 3
  - Click on Add

- **Old value Range 3 to 3.99999**
  - New value 2
  - Click on Add

- **Old Value Range 4 to 4.9999**
  - New value 4
  - Click on Add

- **Old Value Range 5 through highest**
  - New value 5
  - Click on Add

Next Click on:
- All other values (under Old Value box the last choice)
- System missing (under New Value)
- Click on Add
- Click on Continue
Creating New variables

You will then get your earlier recode variables screen back

- Click on OK.
Your data editor Window will reappear. Once SPSS is finished processing this procedure, you can scroll to the end of the list of variables across the top of the data editor, and see your new variable.

Then you will want to run check over the data in the data editor by choosing a record and compare the age in your old variable to the value in your new categorical/grouping variable.

*For some new variables created from existing categorical variables, use a cross tabulation to check your recodes. The example below is from a recoding of a race variable into a variable that describes Hispanic ethnicity.*

*Cross tabulation to Check Recode Procedure Race and Ethnicity Example*

<table>
<thead>
<tr>
<th></th>
<th>Hispanic Ethnicity</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>238</td>
</tr>
<tr>
<td>ORIGINAL RACE VARIABLE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>208</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Hispanic</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American Non-Hispanic</td>
<td>255</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American Hispanic</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander Non-Hispanic</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>465</td>
<td>39</td>
<td>504</td>
</tr>
</tbody>
</table>
Survival Analysis

- Analyzes the length of time until the occurrence of a specific event:
  - Re-Entry into out-of-home care following permanent placement.
  - Permanency (i.e. reunification, guardianship)

- Uses all available data including information on cases that have not yet experienced the event of interest (i.e. censored cases)

- Estimates the probability that the event of interest will occur at specific time points.

We use Survival Analysis to estimate the likelihood that a child will experience an event of interest. This event could be leaving placement, a frequent analysis in child welfare that determines length of stay in care for a group of children. The event could also be entry to placement following a substantiated report of abuse and/or neglect. A Life Table provides the cumulative probability of the event of interest using very small time periods of observation, including all children in the analysis.
To do a Life Table analysis:

- Click on:
  - Analyze (in command line at top)
  - Survival
  - Life Tables
Survival Analysis

This opens up the dialogue box shown below:

The variables that can be included in the Life Table analyses are listed in the box on the left side of the dialogue box. Note that this includes only variables that are coded as numeric in the data set. You can tell whether a variable is a numeric variable or not by clicking on the ‘Variable View’ tab at the bottom of the Data window. (Remember that the Data Window is the SPSS window in which you can actually see the data. It resembles a spreadsheet format.)
TIP: Data Management in SPSS

After clicking on the ‘Variable View tab,’ this window opens. Column 1 gives the name of the every variable in the data set, column 2 gives the type of variable (i.e. numeric, string, date). Other useful columns are column 5 which gives the variable label and column 6 which list the values of every code the variable may have.

In this example, you can click on the box in row 6 (gender variable) and column 6 (Values) to open this box. You will see a list of the value codes for gender and tells you that all observations with a value of 1 in the gender value are male and with a value of 2 are female.
Scroll through the variable list on the left hand side of the box until the time variable you want to use is highlighted as shown above.

- Click on this variable
- Click on the first arrow pointing towards the – this will move the time variable you have chosen into the Time box

You must now “Display the time intervals” for the Time variable by entering two numbers. The first number specifies how long you want the follow-up time to be for the analyses. We usually have 1440 days (i.e., approximately 4 years) of follow-up time. The second number describes how to divide this time into shorter intervals that will be used for the analyses. We usually use 30 day intervals.

- Type 1440 in the first box under “display time intervals” so that it reads “0 through 1440”
- Type 30 in the second box under “display time intervals” so that it reads “by 30”.
You must now select the “Status” variable. Scroll through the variables in the box on the left until the censor variable you want to use is highlighted.

- Click on the arrow pointing towards the right under Status – this should move your censor variable into the “Status” box.

You will see “??” indicating that more information is needed before the analyses can be completed.

- Click on “Define Event” box.

In the dialog box that appears you will note that the information needed is the “Value indicating Event Has Occurred”.

- Click in circle next to single value and then type the value that indicates the event of interest has occurred.

- Click on Continue.
**Tip:** If you are unsure of the value of each code in the Status variable you can click on “Utilities”, “Variables” in the command line of any window. It will open up a dialogue box that allows you to display the codes of any variable.
You must now specify what type of output you would like to get from your analysis.

- Click on “Options” box in the lower right hand corner of the Life Tables box.
- Click in box beside “Life table(s)
- Click in box beside “Survival”
- Click on “Continue”
You are now ready to run a basic life table analysis

- Click on “OK”
The analysis that you just completed above estimated the length of time until exit from placement for all children in your data set. You may want to look at whether the experiences are different by characteristics such as age, race, initial placement, year of initial entry and gender. To do this repeat Steps 1 through 5 above and then select the characteristic/variable that you would like to look at in more detail. For example, age at initial entry.

- Scroll through variables in the box on the right and highlight the one you are interested in.
• Click on right arrow near “Factor” box - this moves your variable of interest into the box and you will see “??” indicating more information is needed.

• Click on the box called “Define Range”. You must type in the two numbers indicating which categories that you want to include in the analyses.
• For example, if you are using an age category variable, you may want to use a range with minimum 0 and maximum 5 as shown below. The minimum and maximum of the range will depend on the coding for the variable you choose.

![Life Tables: Define Range for Factor Var...](image)

- Click on “continue”
- Click on “OK” to run.
Creating Charts and Graphs

A bar chart or graph is a visual illustration of frequency or cross tab tables. A bar is drawn for each variable or group of variables.

To create a bar chart from the Graph menu

Click on

- Graphs
- Bar

You will see the following dialog box.
Creating Charts and Graphs

Next Click on:

- The type of bar you want:

  *Simple* one variable – bars represent different categories for that variable

  *Clustered* two variables – bars are clustered together in groups, based on the variables we have selected

  *Stacked* two variables – rather than clustered together, the bars are segmented;

  *Summaries for groups of cases (default)* – groups cases by category for a variable (e.g. for the age variable you can get a bar showing the number of cases for each age group identified by the age variable)

  *Summaries of separate variables* - summarizes more than one variable

  *Values of individual cases* - individual values of one variable are plotted in simple charts

- Click on Define
Click on—

- Age variable from the list on the left of the small dialog box on your screen
- Arrow to move this variable to the Category Axis box.
- From this same list on the left, click on your year variable
- And the arrow to move this year variable to the define clusters by box.
- N of cases (if not already checked) for the Bars Represent part of the dialog box.
- OK
Your chart should look similar to the following:

![Bar chart showing age categories and counts for different fiscal years.](image-url)
To modify a bar chart

Double-click on the inside the chart

Click on
- Chart to display the chart menu
- “Axis” to open axis selection dialog box
Click on
• “scale”
• “OK” to open scale axis dialog box
• “justification” to center title
• Replace “count” with “number”
• “justification” to center title
• “OK” to return to chart editor

To make another modification

Again, Click on
• “Chart” to display the chart menu
• “title” to open title dialog box
• Type in title
  • Title 1: Children Entering Placement
  • Title 2: By Year
  • Subtitle: Sample County
Creating Charts and Graphs

You can also change the way the title looks when you are in chart editor

Click on

- Text of any title (to change the font)
- The small T from the row of menu option icons on the top)
- Different size font you prefer
- Apply
- Repeat for other titles as you prefer
- OK when finished

When you are finished editing close chart editor (to return to chart navigator)

- Click on File
- Click on Close
You will be back in the SPSS Navigator Window, for SPSS output.

- To save a chart you will use the same procedures you used to save a data set or output table.
- To print a chart you will use the same procedures you used to print an output table.