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Capturing Successful Child Welfare Practice in Rural, North Carolina Communities

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Rural Success

- Grants for rural projects assume deficit
  - ★ Poor counties + fewer resources = poor outcome
- Is this assumption valid?
- A strengths-based approach and beyond
- What can the rest of the world learn from the success of rural child welfare programs?

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Today's Topics

- What's in the literature?
- What do *we* mean by rural?
- What does rural look like in NC?
- Outcomes
- Process Measures
- Resources
- Implications

x+y=z

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What's in the literature?

- Approach
  - Little recognition of rural continuum (metro-non-metro)
  - Largely qualitative
- Outcomes
  - Few rural-urban comparisons
  - One finding suggest different rural and urban roles for child welfare
- Resources
  - Greater rural poverty
  - Poorer access to transportation and health care
- Policy and Practice
  - Professionalism is one focus—real or perceived difference?

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What Do We Mean by "Rural?"

- Census definition of "urban/rural" **not** "metropolitan/non-metropolitan"
- Continuous Variable "Percent rural"
- 5 rural categories (not interval)
  - 100% rural
  - More than 2/3 rural (66.7 to 99.9%)
  - More than 1/2 rural (50.1 to 66.6%)
  - More then 1/2 urban (33.3 to 50.0% rural)
  - More then 2/3 urban (0 to 33.3% rural)

Urban= all population in Urbanized areas or Urban Clusters

Generally has at least one block group or census block with density of 1,000 people per sq. mile and surrounding blocks with

Urbanized areas=densely settled territory that contains 50,000 or more people

Urban clusters=densely settled territory that has at least 2,500 people but fewer than 50,000
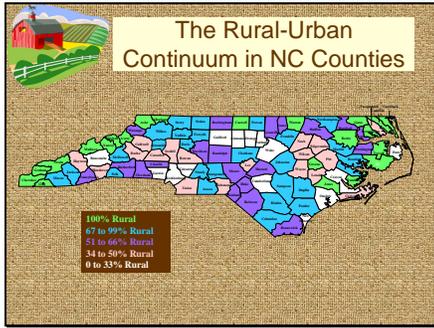
Rural is everything that is not urban.

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NC Regions

West/Mountains

Piedmont

East/Coastal Plain

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The Rural-Urban Continuum in NC Counties

100% Rural
67 to 99% Rural
51 to 66% Rural
34 to 50% Rural
0 to 33% Rural

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What Does Rural Mean in North Carolina?

* Most rural counties in West (mountains) and East (coastal plain)
* 39.8% of NC population is rural compared to 21.0% of US population
* 1.0% of NC population live on farms compared to 1.1% of US population
* Population density of rural counties is much greater than in the Western US

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Rurality and Outcomes

Stability of placements for children
Length of stay

In testing the implied hypothesis that rural agencies have serious deficits, we looked at three kinds of data—Outcomes for children, agency performance, and use of resources. In all of them, we are faced with an unusual challenge. Generally, in any analysis, we are trying to identify those factors which affect a dependent variable. In this case, we are turning usual procedure upside down, we are trying to see if one independent variable (the percent of the population living in rural areas) is a predictor of any of a range of dependent variables.

I'm sure the first thing that many

of you are thinking is "If you look at enough variables, some of them will be significant, just due to type I errors."

This is, of course, true and was a major concern to us, so we tried to limit the number of dependent variables we looked at. We are, however, somewhat reassured by the fact that every significant difference was in the direction that we hypothesized.

Let's start by looking at the first category of dependent variables: outcomes for children

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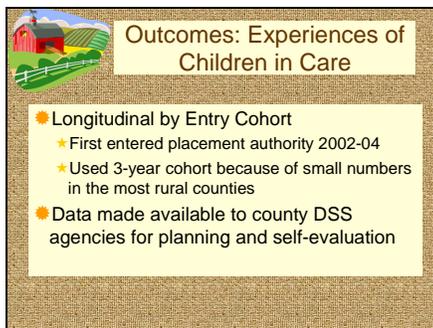
Outcomes: Experiences of Children in Care

☀ Longitudinal by Entry Cohort
  ★ First entered placement authority 2002-04
  ★ Used 3-year cohort because of small numbers in the most rural counties
☀ Data made available to county DSS agencies for planning and self-evaluation

Thanks to the pioneering work of Dr Charles "Lynn" Usher at the UNC School of Social work, the NC Division of Social Services, keeps a longitudinal data base tracking the experience of cohorts of children as they enter placement authority for the first time. These data are posted to the web to allow the county agencies to use the information. Our colleague John Painter who couldn't be with us today, has had a role in the upkeep of these data and is responsible for the analysis that I will be reporting in this section of today's presentation.

Because the most rural counties have the smallest populations and sometimes very small numbers of children in care, we have used a three-year entry cohort instead of a one-year cohort to provide meaningful numbers for the analysis.

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Why County-Level Data?

- County-level data is **not** an effective way to describe/predict the *experiences of children in placement*
  - Usual issues of aggregate data
  - HLM shows variance explained at child level 19 times greater than that at county level (little effect of specific agency)
- County-level data **is** the appropriate way to talk about the environment and performance of county agencies

Generally, when we are try to predict what factors contribute to the experiences of children, we are looking at children as the unit of analysis, or we may use Heirarchical Linear Modeling to take into account the fact that children are "nested" within the county DSSs in whose authority they are placed (i.e., they are subject to the same policies, strategies, and set of social workers).

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Number of Placements

- Observed difference
  - Correlation between percent rural and average number of placements per child ($r = -.253$, $p = .011$)
- Multilevel analysis model predicts significant effect of rurality on average number of placements
  - Model predicts average of 2.2 placements in first placement spell for children in 100% rural counties
  - 2.6 placements predicted for 100% urban county

Johns notes:

Variance due to

County   =   .27

Residual (children) =   5.14

Total variance   =   5.41

Comments:

Most of the variation in number of placements is not due to differences between counties.

Differences between children is 19 times larger than differences between counties.

Intra class correlation is: .27 / (5.14 + .27) = .05, which is very small (and suggests nesting effect can be ignored)

For every increase in percent rural average number of placements decreases by .004.

As you see here, the more rural the county, the fewer times a child was moved from one placement to another during their first spell of placement. The modal number of placements for children overall is one, but children with multiple placements drive up the mean.

The effect of rurality here is fairly small but for a child the difference in 2 placements and 3 placements may feel very large.
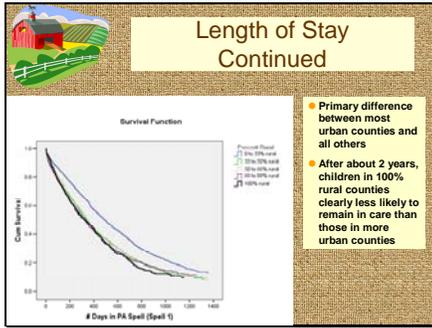
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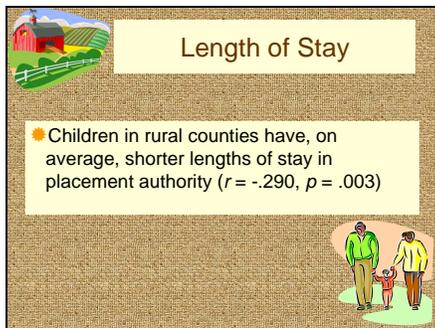
Length of Stay

☀ Children in rural counties have, on average, shorter lengths of stay in placement authority ($r = -.290$, $p = .003$)

In addition to having more stability in their placements, children in rural counties leave the system earlier, either to be re-united with parents or to adoptive or other permanent homes.
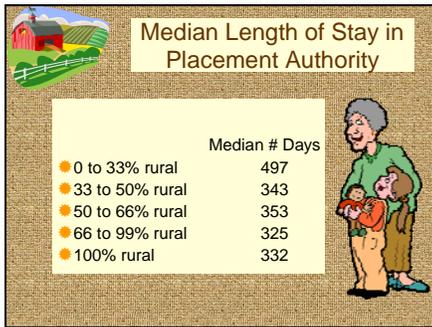
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As this survival curve shows, most of the difference is between the most urban counties (blue) and all of the less rural ones. After about 2 years in placement, the 100% rural children are less likely to remain in care than other mostly rural groups.

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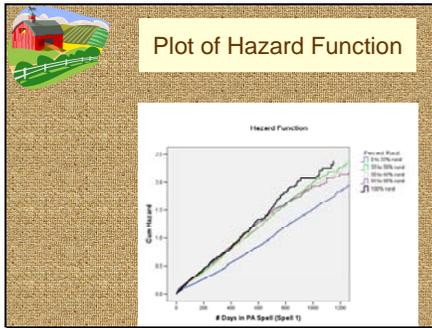
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These figures comparing the median number of days of placement are another way of summarizing that same finding.

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Other Outcomes

- No difference among rural and urban counties in:
  - Percent of children ever placed in non-family (group) care
  - Average number of placement spells (re-entry)

Out of the four child outcomes we looked at, two were roughly the same for children in rural and urban counties, while two showed somewhat better outcomes for rural counties.

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Performance Measures

Child and Family Services Review
"The Biennial Review"
SFY 2003-04 and SFY 2004-05 biennium

The second of our 2 sets of measures is performance. To get a more or less objective view we did secondary analysis on data from the biennial review that county DSSs in NC undergo


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The Biennial Review

- Paper self-evaluation
- Site visit with record review scored on 7 "outcomes"
  - Children are, first and foremost, protected from abuse and neglect (S1).
  - Children are safely maintained in their homes whenever possible & appropriate (S2).
  - Children have permanency and stability in their living situations (P1).
  - The continuity of family relationships and connections is preserved for children (P2).
  - Families have enhanced capacity to provide for their children's needs (WB1).
  - Children receive appropriate services to meet their educational needs (WB2).
  - Children receive adequate services to meet their physical & mental health needs (WB3)

The review consists of self-evaluation including some qualitative measures we'll like to analyze later in this project, and a record review from which agencies are scored on the 7 outcomes you see on the screen. –2 around safety, 2 around permanence, and 3 around child well-being.

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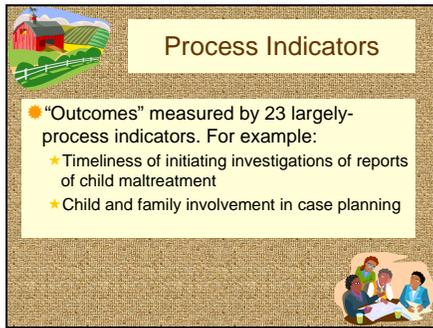
Process Indicators

- "Outcomes" measured by 23 largely-process indicators. For example:
  - ★ Timeliness of initiating investigations of reports of child maltreatment
  - ★ Child and family involvement in case planning

These data don't precisely fit our AI/ strengths-based model. Indicators are scored "in essential compliance" or "not in essential compliance". Nested under these 7 indicators, there are 23 process indicators that are scored as "needing improvement" or left blank. An agency may be scored as "needing improvement" on one indicator without being scored "not in compliance" on it's "outcome" depending on the severity
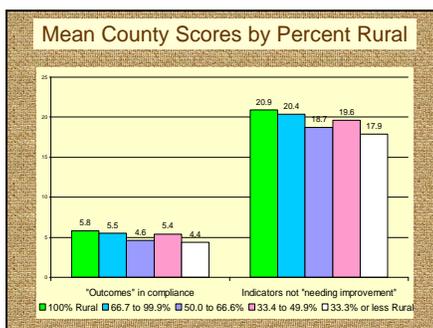
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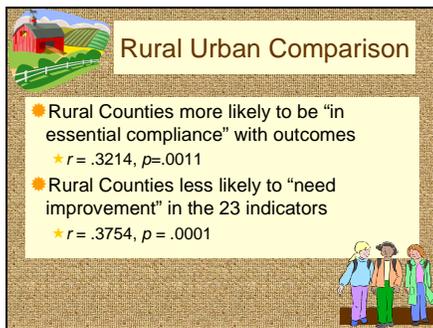
Rural Urban Comparison

- Rural Counties more likely to be "in essential compliance" with outcomes
  - ★ $r = .3214$, $p=.0011$
- Rural Counties less likely to "need improvement" in the 23 indicators
  - ★ $r = .3754$, $p = .0001$

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Mean County Scores by Percent Rural

20.9 20.4 18.7 19.6 17.9

5.8 5.5 4.6 5.4 4.4

"Outcomes" in compliance   Indicators not "needing improvement"
■ 100% Rural ■ 66.7 to 99.9% ■ 50.0 to 66.6% ■ 33.4 to 49.9% □ 33.3% or less Rural

These are the mean scores for our 5 rural categories on the outcomes to the left and the indicators to the right. Perfect score for the outcomes is 7, so you see mean outcomes range from 5.8 in the most rural to 4.4. for the most urban. For the indicators on the right, a perfect score would be 23, (talk about range) Possibly talk about the more than half urban.

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Differences and Similarities

- On most indicators, rural and urban counties had similar successes
- Differences (all in favor of rural) were found in the following:
  - *Item 1*. Timeliness of initiating investigations of child maltreatment
  - *Item 2*. Low level of repeat maltreatment
  - *Item 17*. Needs met/services for child, parents, foster parents
  - *Item 18*. Child and family involvement in case planning
  - *Item 19*. Worker visits with child
  - *Item 20*. Worker visits with parents
  - *Item 22*. Physical health needs of the child [met]
  - *Item 23*. Mental health needs of the child [met]

The differences in scores were not evenly distributed over the 23 indicators. The 8 listed here were significantly and meaningfully different.

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Resources

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Rural and Urban NC Counties
Differences and Similarities

- Differences— rural counties:
  - Higher % children in poverty ($r = .323$, $p = .0010$)
  - Lower median family income ($r = -.632$, p ,.0001)
  - More likely to be in West ($r = .295$, $p = .0029$)
  - Lower proportion of single-parent households ($r = -.216$, $p = .0309$)
- Similarities—no significant difference
  - Unemployment rates
 - Percent African American (varies regionally)

Like everyone else in the literature, we found that child poverty was greater in the rural counties along with lower

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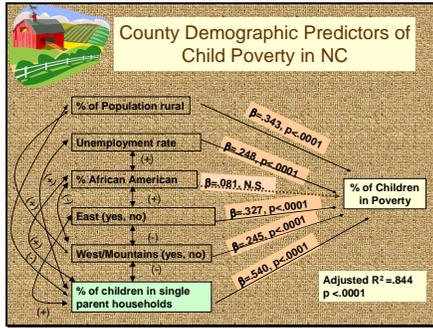
A model using these zero-order correlations shows that while single-parent households is the strongest predictor of poverty (standardized regression coefficient (beta) s .540, rural is second. If we control for region and single-head status, race drops out of the picture.

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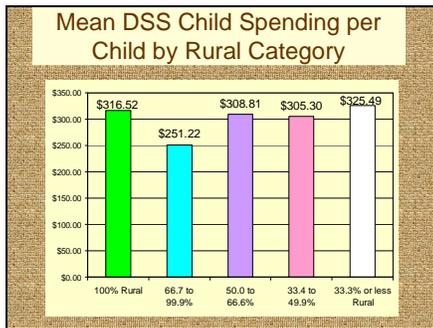
This is "per year, per child that lives in the county—not actual spending on children in care. It allows us to compare spending in counties of different sizes. We looked at all DSS spending and expert (Dan Hudgins, director for 30 years) identified which budget lines were entirely or primarily for children. As this slide illustrates, there is no significant zero-order relationship between rurality and spending. To the degree they vary, it is not linear.

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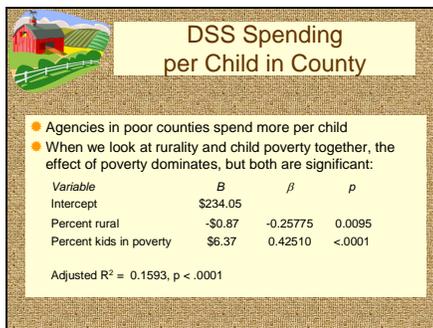
Although rurality and poverty are related as we've seen, they work in opposite directions in influencing the average DSS budget.

Using a linear regression equation we estimate that an imaginary agency with no rural population and no kids in poverty would spend $234 per child. Then for every percentage point increase in % of population rural, they would lose 87 cents, but for each percentage point of kids in poverty, they would gain $6.37.

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Sources of Funds

- **Federal spending**
  - ★ Higher in poor counties ($\beta = .717$, $p < .0001$)
  - ★ Lower in rural counties ($\beta = -.299$, $p = .0002$)
    - • Adjusted $R^2 = 0.453$, $p < .0001$
- **State spending**
  - ★ Does not differ significantly by poverty
  - ★ Lower in rural counties ($\beta = -.23032$, $p = .0280$)
- **County spending**
  - ★ Totally unrelated to poverty or rurality

Casual observation

Rural counties received less of their budget from the county (larger proportion federal)

Where does that money come from?

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DSS Child Spending by Source and Rural Category
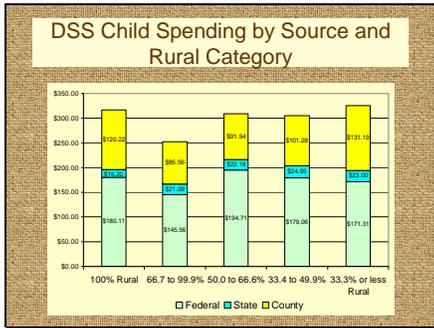
The proportion of spending from county, state, and fed make this pattern

The variance in county spending is much larger for the 100% rural counties, where the range is from $27 per child to $448.72 per child (almost $450)

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The Bottom Line

- ✹ Despite fewer resources, rural child welfare agencies, on average, are doing as well or better than urban agencies in both outcome and process measures.

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Policy Implications

- Need greater understanding of the unique complexities of child welfare in rural communities
- Need to think about distributing resources to reward outcomes as well as to recognize poverty and other additional challenges
- Informal connections in rural communities may offset economies of scale in urban communities
- Urban communities can learn from rural communities