

# Using Early Care and Education Cost Modeling to Inform Policy

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# What is Cost Modeling?

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- A tool to estimate (model) the likely cost of providing early care and education services at varying levels of quality
  - Excel spreadsheets or online tools
  - Models a 'reasonable' budget given standards; does not reflect the actual budget of any specific center
- Design of the model depends on what you're trying to measure or learn about, for example:
  - Cost for a service provider to deliver ECE at various QRIS levels
  - Cost for a Shared Service Alliance (provider network) to deliver ECE
  - Cost for a state to provide subsidies or QRIS incentives under various scenarios; can also develop model for infrastructure costs if desired
  - How various revenue sources (HS/EHS, Prek, etc) impact cost
  - Implications of the Iron Triangle (full enrollment & fee collection, rates)

# Online Cost Models for ECE

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- PCQC (“Provider Cost of Quality Calculator”)
  - Web-based platform based on spreadsheets developed by Anne Mitchell (today’s example based on same spreadsheets)
  - Designed to help states and providers understand costs at different levels of quality, and degree of gap between revenues and costs
  - To be launched October 2014: [www.ECEQualityCalculator.com](http://www.ECEQualityCalculator.com)
- CEM (“Cost Estimation Module”)
  - Online tool designed to help state administrators determine costs of implementing all elements of a QRIS and explore phase-in and scale-up options
  - Can be used to estimate the cost per year of phasing in a QRIS, the cost of certain elements, or the overall cost of a full implemented QRIS.
  - Available on ACF website:  
<http://www.acf.hhs.gov/programs/occ/resource/qriscostestimationmodelandresourceguide>

# Using Cost Modeling to Inform Policy

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- Several States have used the cost modeling spreadsheets to understand the financial picture of center-based child care.
  - Developed with information from local providers and ECE organizations in the particular state
  - Informed by cost modeling spreadsheets developed by Anne Mitchell
  - Can apply revenues from multiple sources (HS/EHS, PreK, CCDF, etc)
- Model enables advocates to make the case with data and sophisticated fiscal analysis
- Model can also provides some guidance about how to address this challenge

# Understanding a Provider's Bottom Line

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Center-focused cost modeling can help answer:

- Given reasonable assumptions, can a center at least break even?
- What is the impact on the bottom line of moving up the quality ladder?
- What are the factors that have a positive, or negative, effect on the bottom line?
  - Revenues
  - Expenses
  - Operating Model (staffing, age mix, family income mix, etc.)
  - Business practices

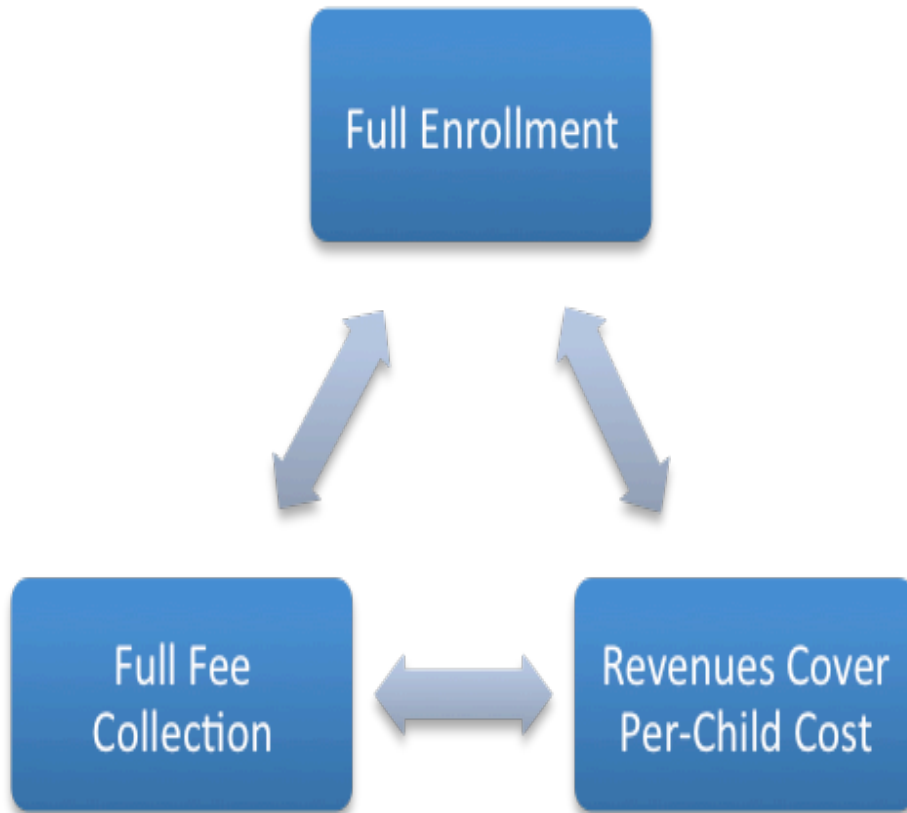
# How the Model Can be Used

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- Enables exploration of how various factors can affect profit or loss, e.g.:
  - Increased scale
  - Income mix of families served
  - Enrollment levels
  - Fee collectability
  - Subsidy policy changes
  - Revenue sources, e.g. state-funded PreK or QRIS
- Enables modeling budget for a proposed center or group of centers

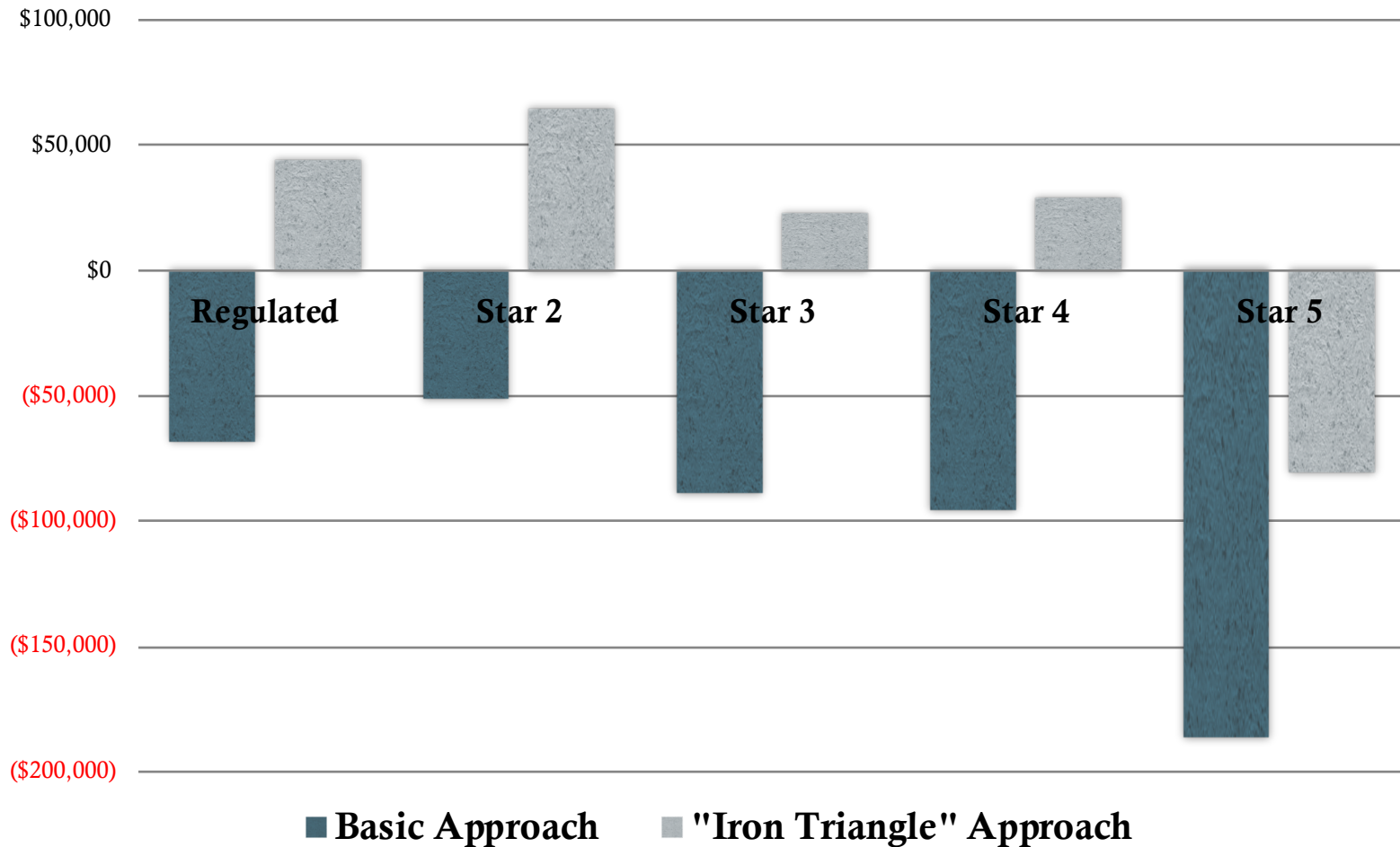
# Policy Implications: Modeling the Iron Triangle

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- Ensure full enrollment – every day, in every classroom
- Collect tuition and fees – in full and on-time
- Revenue covers per-child cost (tuition, fees + 3<sup>rd</sup> party funding)

# State Example: Modeling the Impact of the Iron Triangle



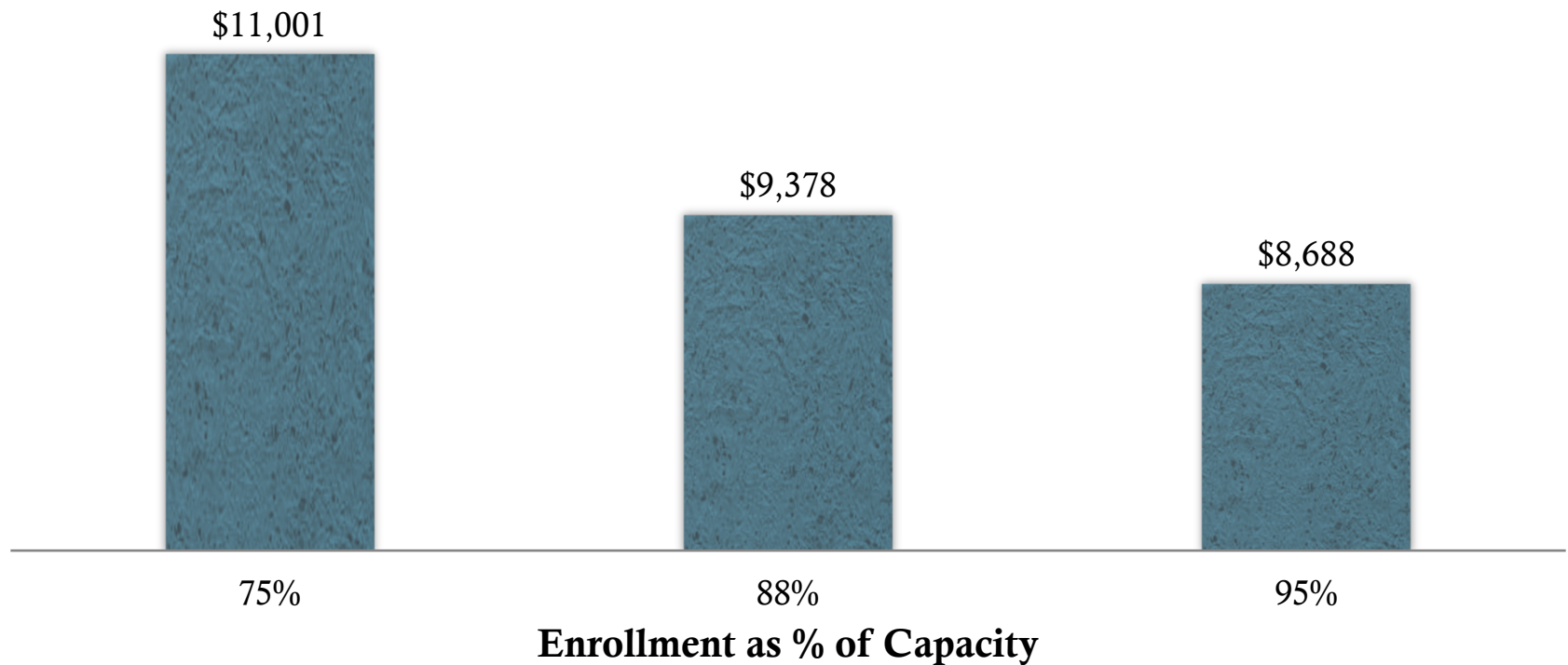
Iron Triangle approach boosts enrollment to 95% & lowers bad debt to 2%



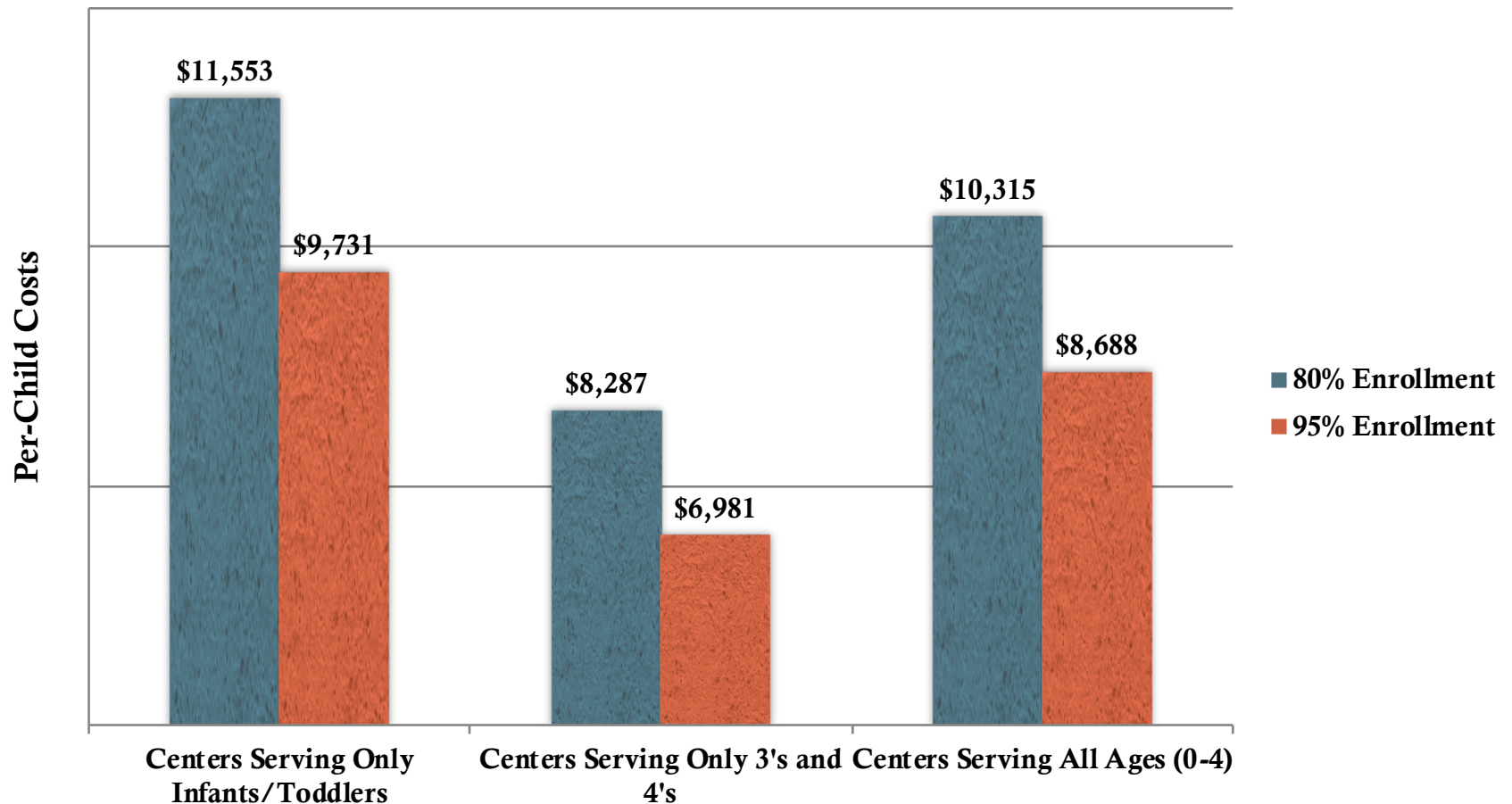
# State Example:

## Impact of Enrollment on Cost-per-child

**Annual Cost Per Child**  
**All ages, Star 4 Center in Louisiana**  
**Capacity = 76**

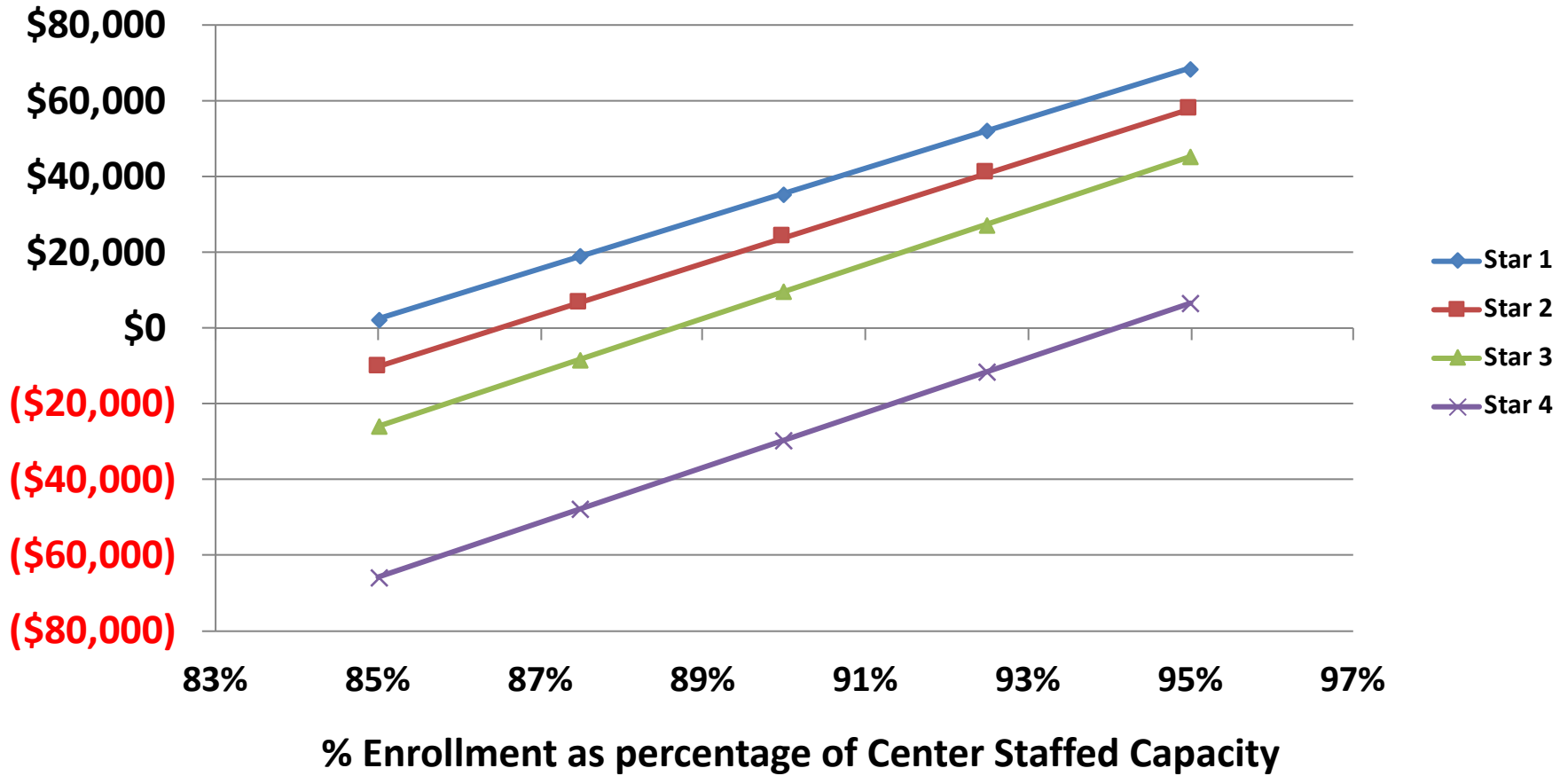


# State Example: Per Child Cost by Age and Enrollment



# State Example:

## Impact of Increasing Enrollment on Revenue Needed for Higher Stars



# State Example: Co-Payments Based on Cost of Care

**Family of 4, parents earn minimum wage,  
annual income \$30,160  
(New Orleans, LA)**

| Weekly Rates   | Infant   | 3-year-old | Total    |
|--|----------|------------|----------|
| Private Tuition  | \$150    | \$135      | \$285    |
| Child care subsidy rate ceiling  | \$92.50  | \$87.50    | \$180.00 |
| CCAP reimbursement after co-pay  | \$37.00  | \$35.00    | \$72.00  |
| <i>co-pay for this family = 60% of "cost" of care (e.g. of the state rate ceiling)</i> |          |            |          |
| Total cost to parent   | \$113.00 | \$100.     | \$213.00 |
| Parent cost as % of weekly income  | 19.5%    | 17.2%      | 36.7%    |

# State Example: Co-Payments Based on Family Income

**Family of 4, parents earn minimum wage,  
annual income \$30,160  
(Charlotte, NC )**

| Weekly Rates                                     | Infant    | 3-year-old  | Total        |
|--|-----------|-------------|--------------|
| Private Tuition                                  | \$200     | \$175       | \$375        |
| Child care subsidy rate ceiling                  | \$185     | \$168       | \$353        |
| CCAP reimbursement after co-pay                  | \$153     | \$136       | \$289        |
| <i>co-pay = 11% of income; \$32 wk per child</i> |           |             |              |
| Total cost to parent*                            | \$32      | \$32        | \$64         |
| Parent cost as % of weekly income                | 5.5%      | 5.5%        | 11%          |
| Parent cost if provider charges differential     | \$47 (8%) | \$39 (6.7)% | \$86 (14.8%) |

*\*Note: 24% of NC centers elect to collect additional fee to cover difference between subsidy ceiling & private rate; in this case parent fee would be higher*

# Potential Challenges

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- ECE cost modeling typically demonstrates that a high-quality, market-based program with less than 100 children can rarely break even.
  - But most ECE programs in the US are this small....so how can we explain that more programs haven't closed?
- ECE cost modeling often reveals that programs at base level of QRIS (e.g. Star 1 or 2) that are fully enrolled do not need higher rates; the largest inequity is with programs that meet higher star levels.
  - This can be a challenging finding from an advocacy perspective
- Can inform rate-setting for programs that tap multiple funding streams
  - IF funders are willing to collaborate on accountability/monitoring

# For more information...

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