



The Basics of Quality Data and Target Setting

Early Childhood Outcomes (ECO) Center
National Early Childhood TA Center
(NECTAC)

Workshop 1: December 5, 2009

By the end of the morning:



We hope you'll be

- Comfortable
- Conversant
- And immersed

In outcomes data!

Plan for today



- The first half of the morning we will review the results data provided in other EC PART reports
- The rest of the morning we will spend reviewing the sections of IDEA that refer to data

What we'll cover



- The BASICS workshop includes:
 - A quick review of the basics
 - Reviewing hypothetical progress data for accuracy
 - Considering data quality in target setting
 - Communicating to stakeholders about baseline and targets

Goal of early intervention/early childhood special education



“...To enable young children to be active and successful participants during the early childhood years and in the future in a variety of settings – in their homes with their families, in child care, in preschool or school programs, and in the community.”

(from Early Childhood Outcomes Center,
http://www.fpg.unc.edu/~eco/pdfs/eco_outcomes_4-13-05.pdf)

The child outcomes



A. Positive social emotional skills
(including positive social relationships)

The intended meaning:

Using social/emotional, language,
cognitive (etc) skills to have positive
social relationships

The child outcomes



B. Acquisition and use of knowledge and skills (including early language/ communication [and early literacy])

The intended meaning:

Using cognitive, language, etc. skills to reason, problem solve, and understand their physical and social worlds

The child outcomes



C. Use of appropriate behaviors to meet their needs

The intended meaning:

Using motor, language, social, cognitive, etc. skills to successfully take care of themselves and their needs

OSEP reporting categories



Percentage of children who:

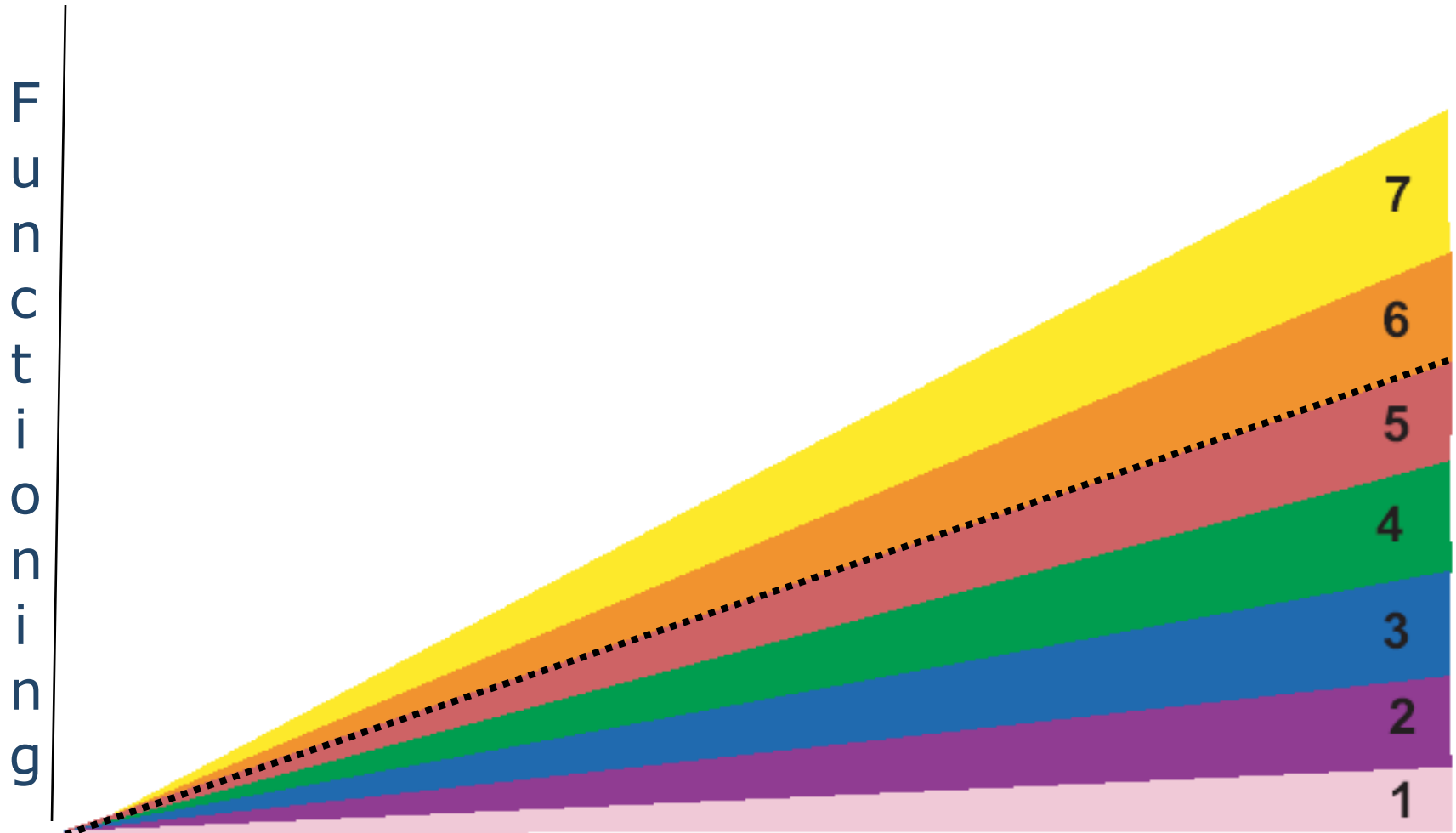
- a. Did not improve functioning
- b. Improved functioning, but not sufficient to move nearer to functioning comparable to same-aged peers
- c. Improved functioning to a level nearer to same-aged peers but did not reach it
- d. Improved functioning to reach a level comparable to same-aged peers
- e. Maintained functioning at a level comparable to same-aged peers

Key Concepts Related to Progress Categories



- Progress categories require 2 data points for each child,
- are based on growth trajectories,
- compare a child to him or herself over time, and also compare each child to age expectations

Developmental Trajectories



Age in Months

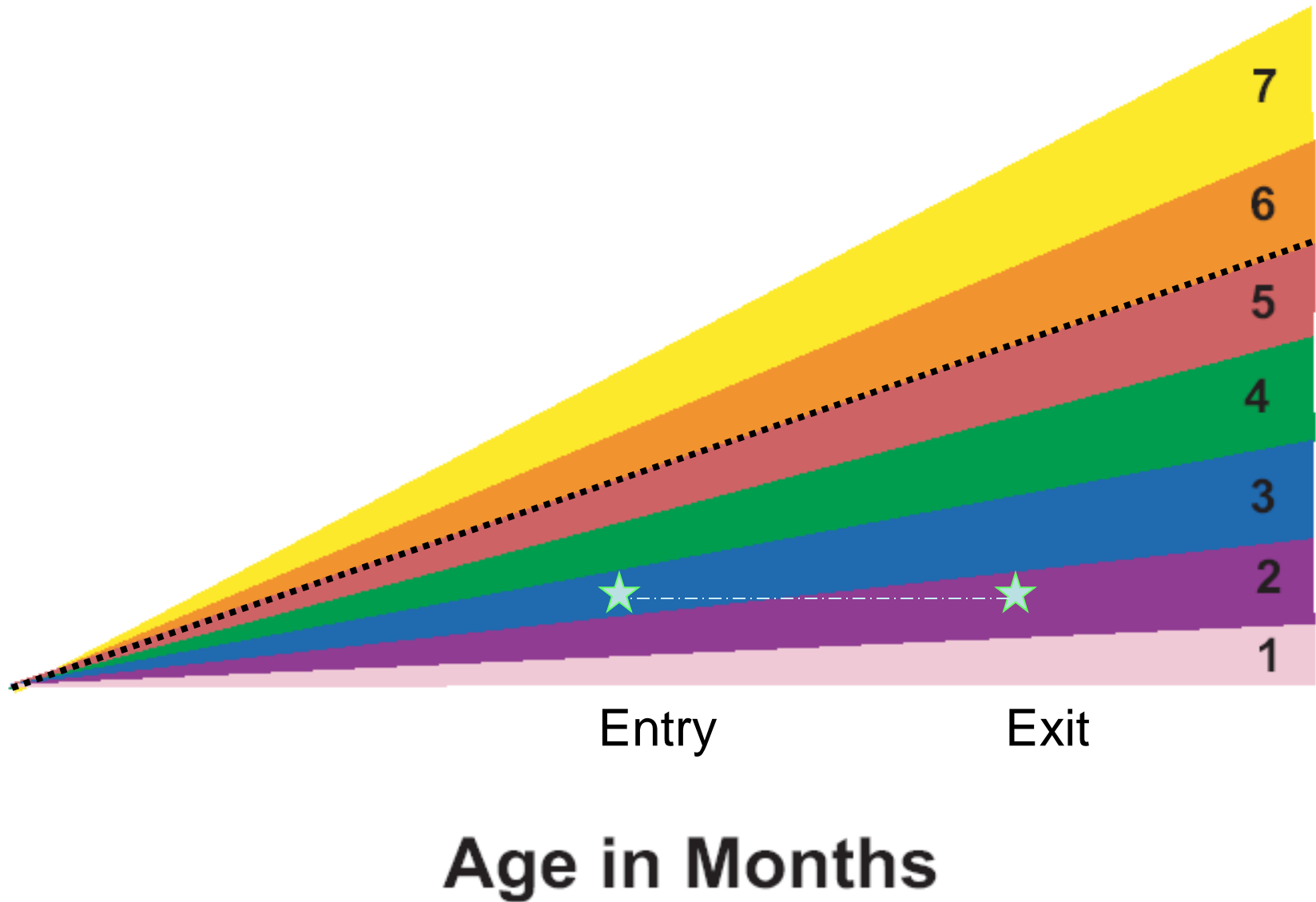
The “a” category



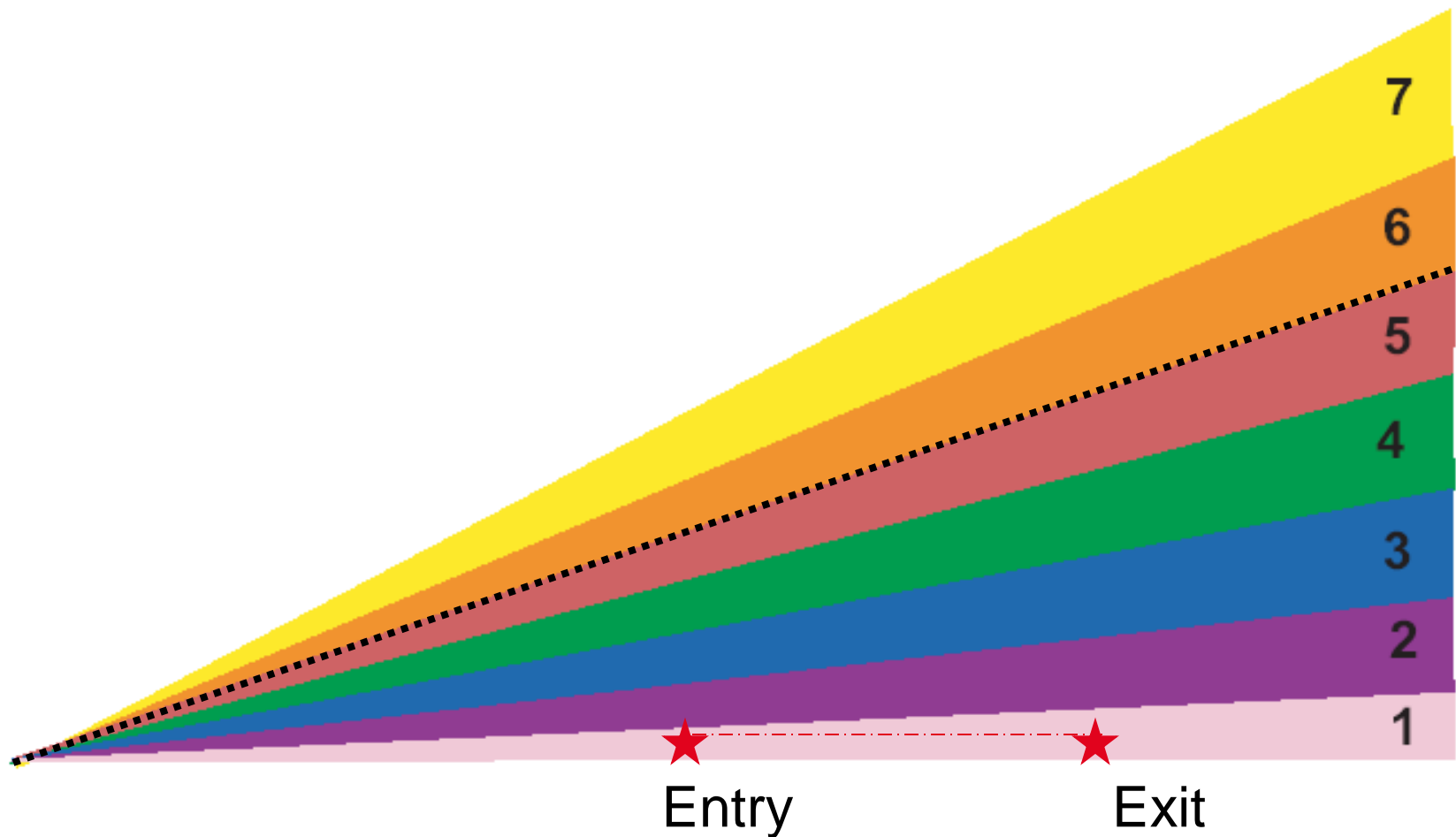
a. Percent of Part C/preschool children who did not improve functioning

- Children who acquired no new skills or regressed during their time in the program
- Didn't gain or use even one new skill
- Children with degenerative conditions/significant disabilities

Developmental Trajectories



Developmental Trajectories



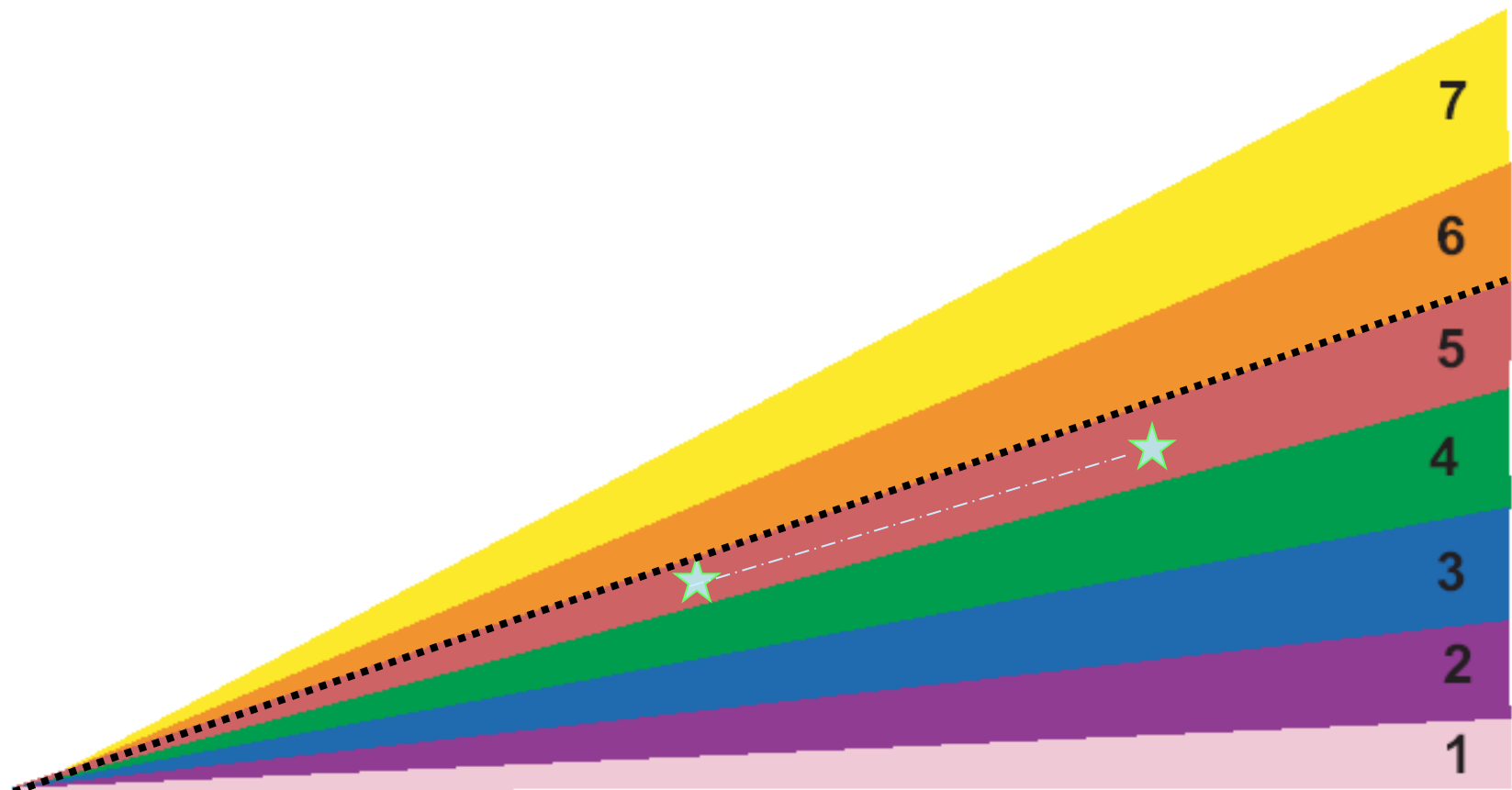
Age in Months

The “b” category



- b. Percent of Part C/preschool children who improved functioning but not sufficient to move nearer to functioning comparable to same-aged peers
- Children who acquired new skills but continued to grow at the same rate throughout their time in the program
 - Gained and used new skills but did not increase their rate of growth or change their growth trajectories while in services

Developmental Trajectories

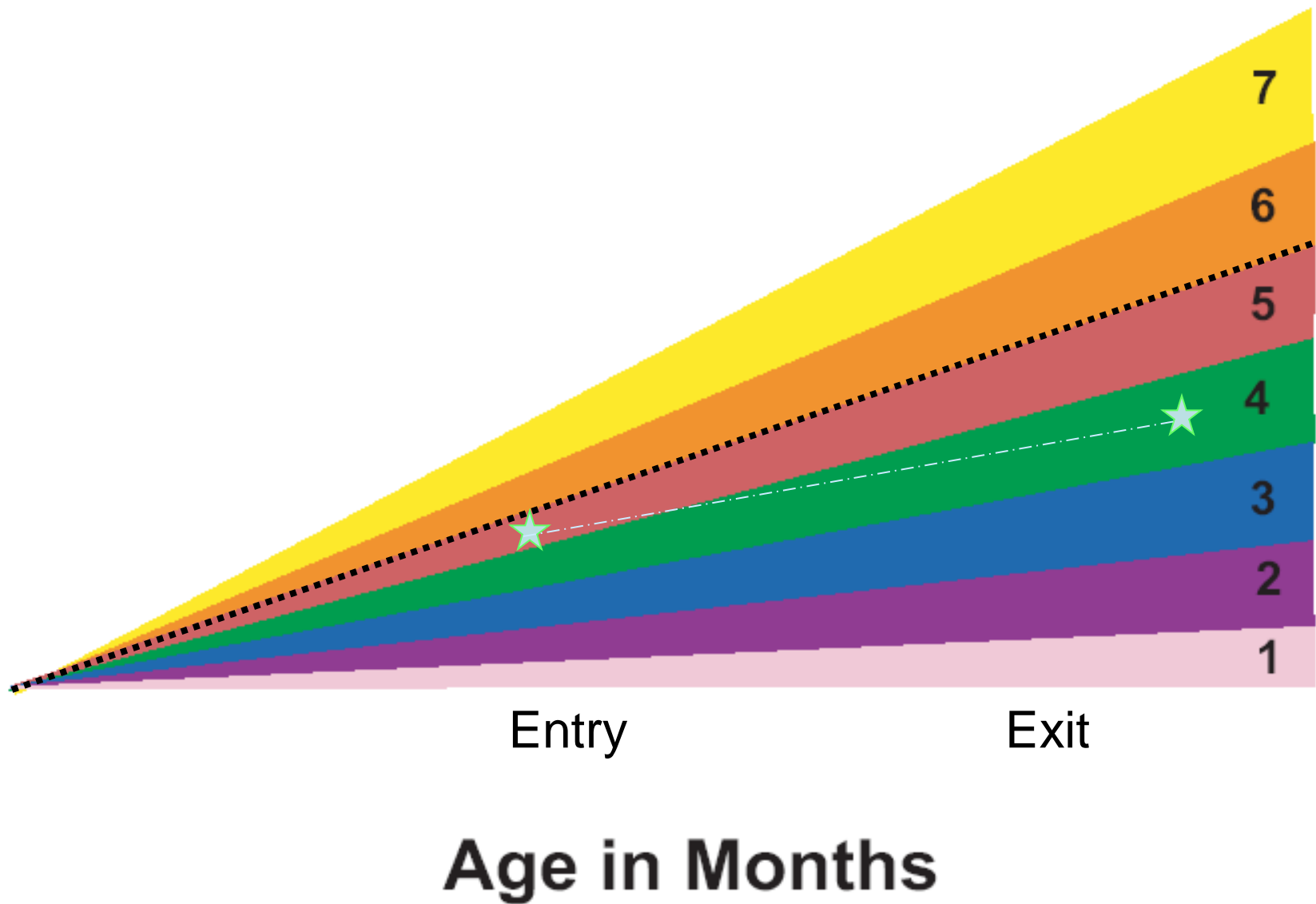


Entry

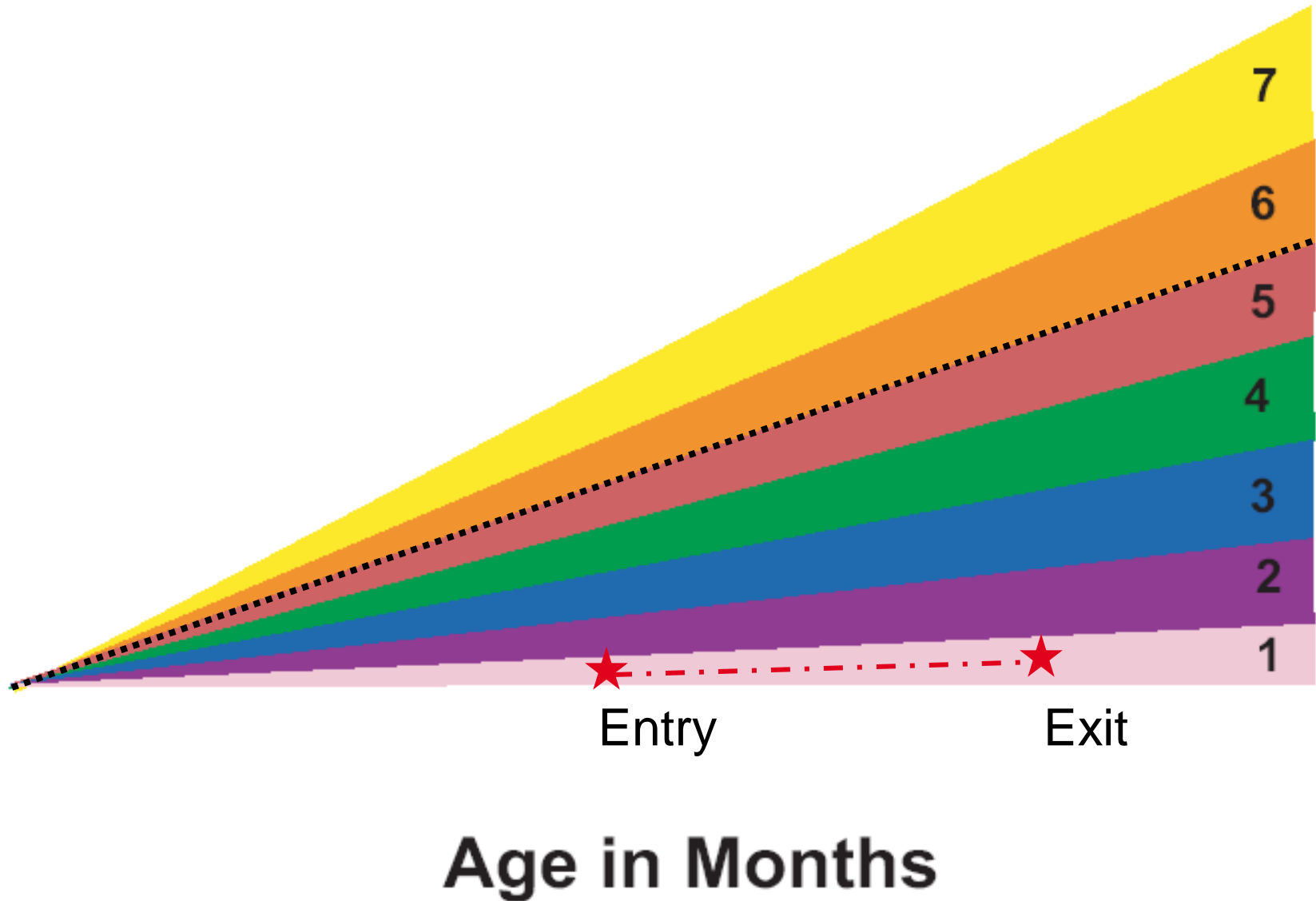
Exit

Age in Months

Developmental Trajectories



Developmental Trajectories

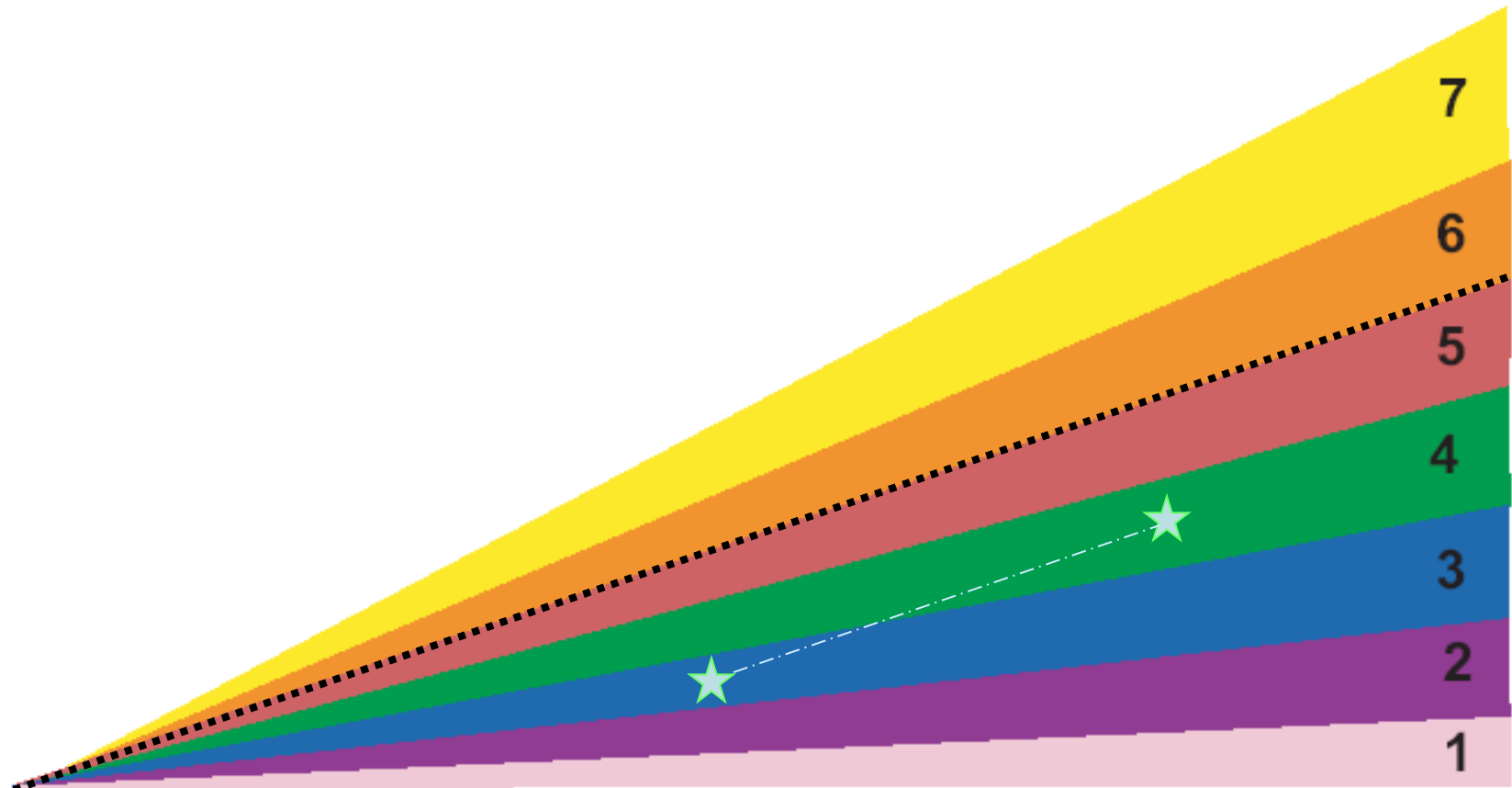


The “c” category



- c. Percent of Part C/preschool children who improved functioning to a level nearer to same-aged peers but did not reach it
- Children who acquired new skills but accelerated their rate of growth during their time in the program
 - Made progress toward catching up with same aged peers but were still functioning below age expectations when they left the program
 - Changed their growth trajectories --“narrowed the gap”

Developmental Trajectories



Age in Months

Entry

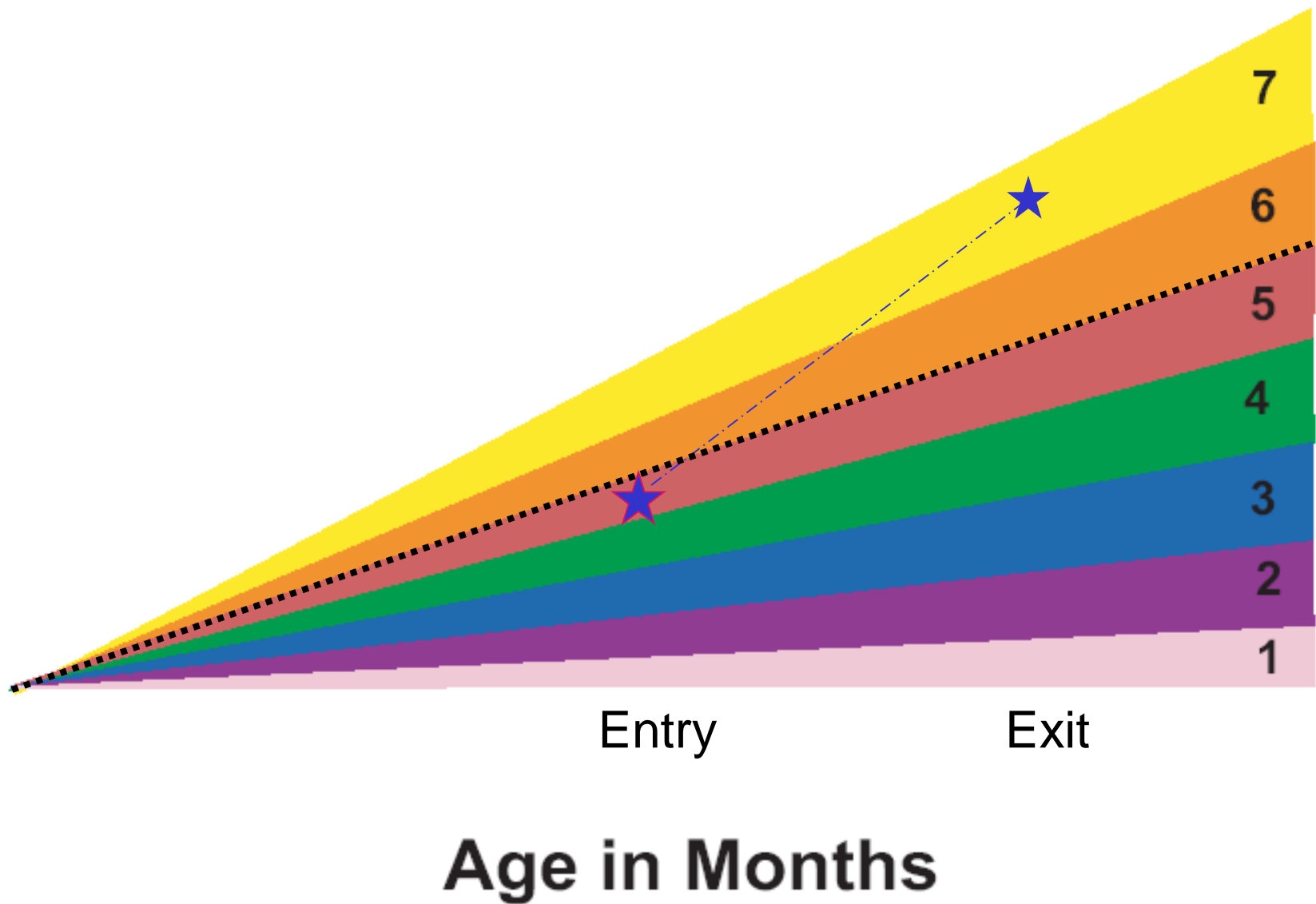
Exit

The “d” category



- d. Percent of preschool children who improved functioning to reach a level comparable to same-aged peers
- Children who were functioning below age expectations when they entered the program but were functioning at age expectations when they left
 - Started out below age expectations, but caught up while in services

Developmental Trajectories

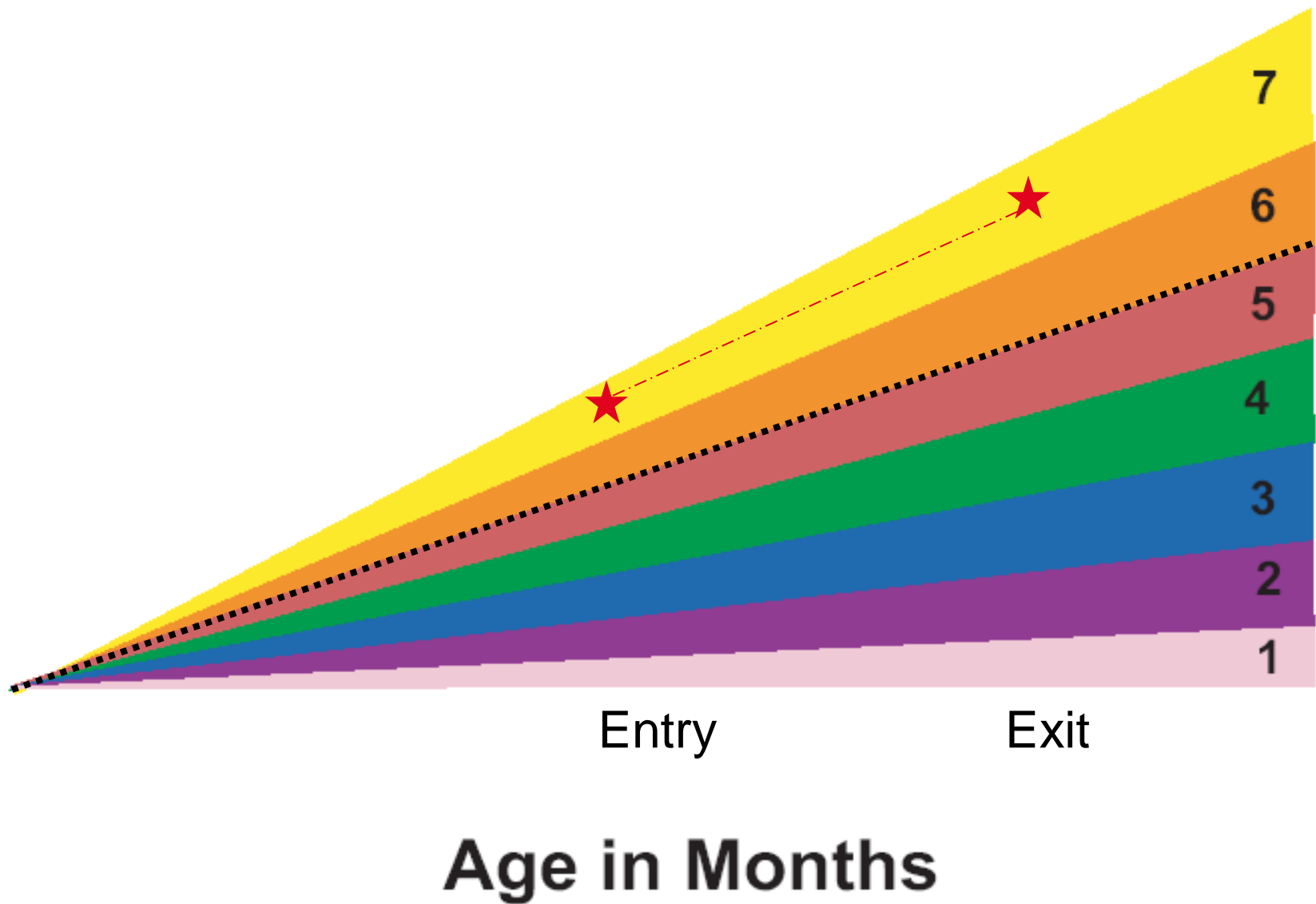


The “e” category

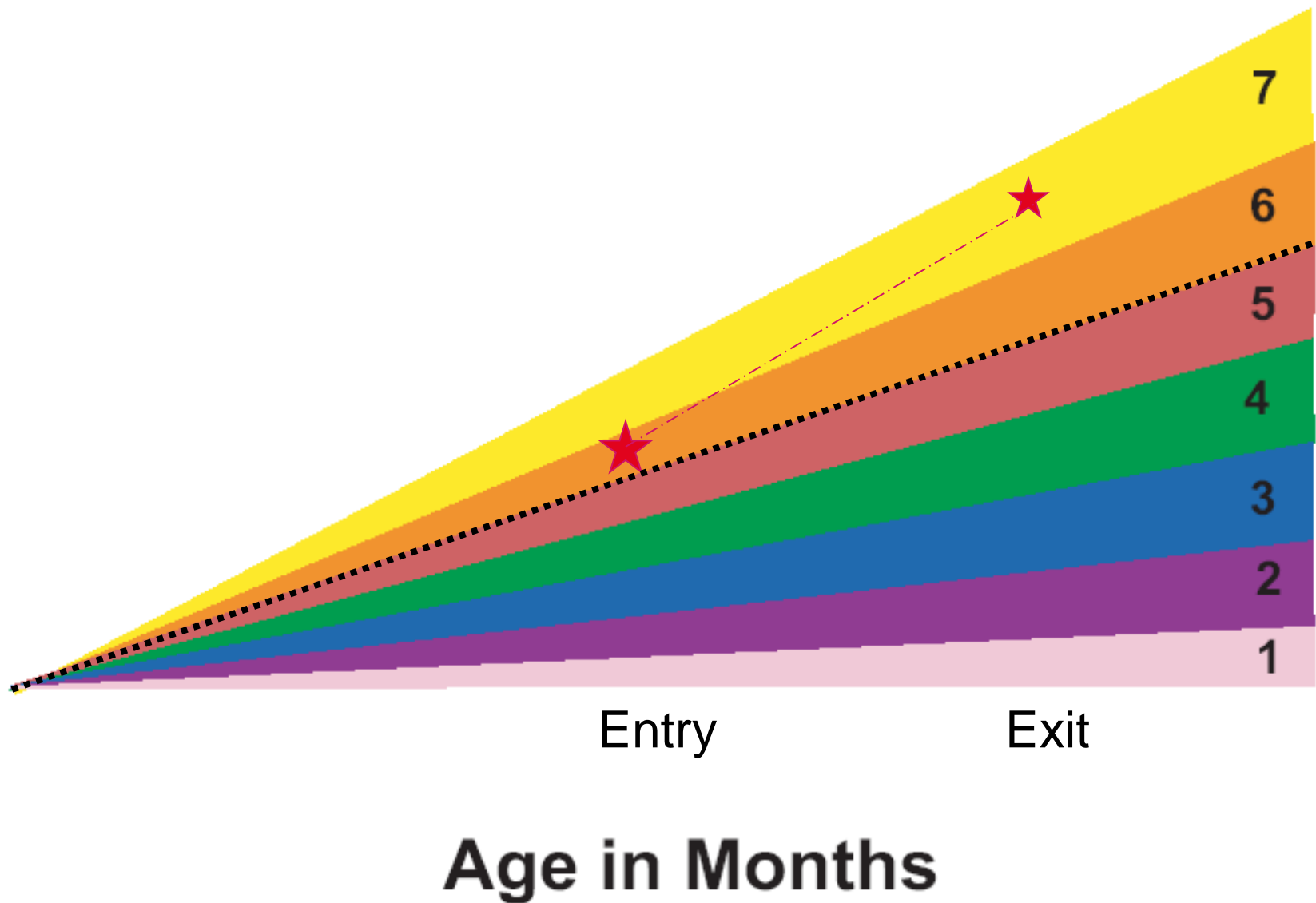


- e. Percent of Part C/preschool children who maintained functioning at a level comparable to same-aged peers
 - Children who were functioning at age expectations when they entered the program and were functioning at age expectations when they left
 - Entered the program at age expectations and were still up with age expectations at exit

Developmental Trajectories



Developmental Trajectories



Summary Statement Data



- Required Summary Statement 1:

Of those children who entered or exited the program below age expectations in each Outcome, the percent who substantially increased their rate of growth by the time they exited the program.

- Required Summary Statement 2:

The percent of children who were functioning within age expectations in each Outcome by the time they exited the program.

Summary Statement 1



Prog cat	#	%
a	17	2
b	106	14
c	67	9
d	169	22
e	425	54

359 (a, b, c, and d) or 46% of the children entered or exited the program functioning below age expectations

425 (e) or 54% of the children entered and exited functioning at age expectations

% of Children who made greater than expected progress



Prog cat	#	%
a	17	2
b	106	14
c	67	9
d	169	22
e	425	54

236 (c and d) of the 359 (a, b, c, and d) changed their growth trajectories (made greater than expected progress)

$$\frac{236}{359} = 66\%$$

% who Exited at Age Expectations



Prog cat	#	%
a	17	2
b	106	14
c	67	9
d	169	22
e	425	54
total	784	

22% of the children reached age expectations by exit and 54% of the children entered and exited at age expectations

$$\frac{169 + 425}{784} = 76\%$$

What the data can tell us:



- **Evidence, Inference, Action!**
- **Results, Implications, Action!**
- **Data, Interpretation, Action!**
- **Findings, Inference, Action!**

EIA, RIA, DIA, FIA!

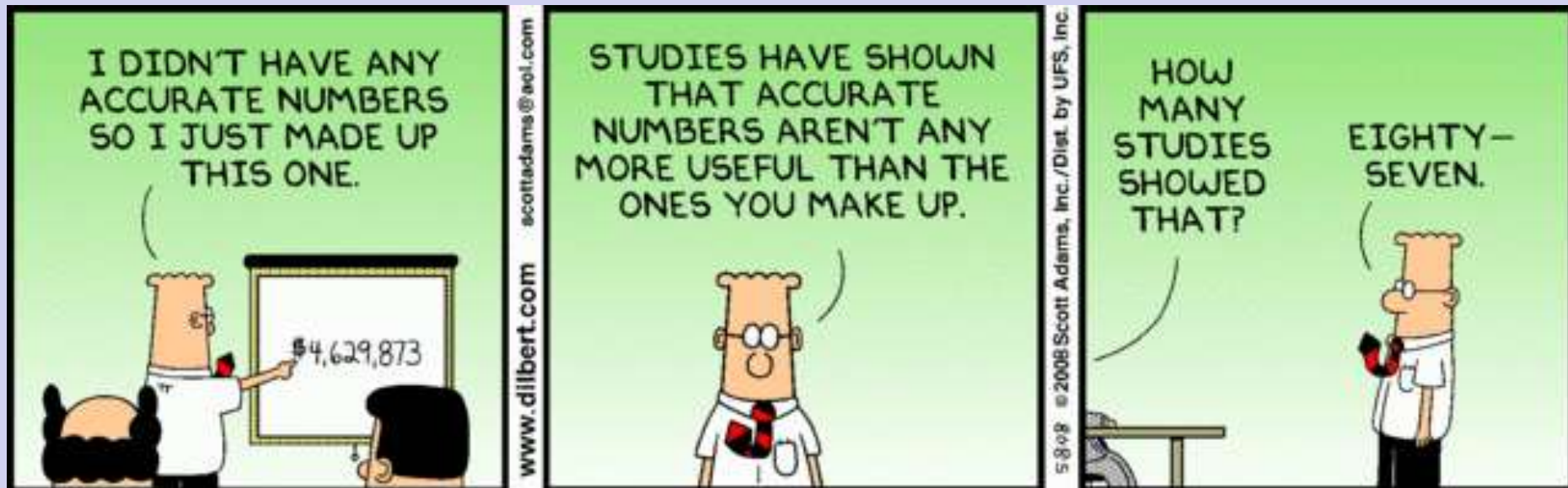


- Analysis yields
 - Evidence, results, data, or findings that allow you to make
 - Inferences or interpretations that lead to
 - Actions to improve the system.

The Data, Evidence, Results



Usually they are what they are, not debatable



Inference, Interpretation



- But what do the data mean?
- Good news? Bad news?
- Is debatable -- even reasonable people can reach different conclusions
- May be a question of the quality of the data
- To reach an inference, sometimes we analyze data in other ways (ask for more evidence)

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HE WAS ABOUT THIS TALL, HORNS, CLOVEN HOOVES AND A RING
IN HIS NOSE, BUT WHETHER OR NOT HE WAS A BULL,
I DON'T WANT TO SPECULATE.

Action



- Given the interpretation of the evidence, what should be done?
- Recommendations or action steps
- Action can be debatable – and often is
- Again, sometimes the action is to improve the quality of the data

STAKEHOLDER PERSPECTIVES

And then the
data told me
what I had
to do...

www.ComicStripGenerator.com

Let's begin the workshop



- In your packets:
 - Definitions of the progress categories
 - Summary Statements with explanations
 - Note taking chart with 12 local programs listed
 - Overall State Outcomes Data for the State of Euphoria

Reviewing Program Data



- Do we trust the state baseline?
- Looking at anomalies or outliers in the local program data to determine:
 - Is it poor quality (inaccurate) data?
 - Are there real differences among the children participating in the programs?
 - Are some programs really more or less effective than others?

Reviewing Progress and Summary Statement Data by Program



- Are there any programs that have funny looking data?
- Make notes on the note taking sheet, e.g.
 - Percentages look too high or too low compared to the rest of the state
 - Percentages are in a pattern unlike the rest of the state

What other data would you need?



- To decide:
 - Is it poor quality (inaccurate) data?
 - Are there real differences among the children participating in the programs?
 - Are some programs really more or less effective than others?

Let's look at Missing Data



- What did you find?
- What inferences would you make about local programs?

Comparing Entry Data



- What differences in entry data can you see across local programs?
- How might these differences be interpreted?

Comparing Disability Category Data



- What differences in Disability Category data can you see across local programs?
- How might these differences be interpreted?

Comparing Race/Ethnicity Data



- What differences in Race/Ethnicity data can you see across local programs?
- How might these differences be interpreted?



- Which programs are the outliers?
- Do you have hypotheses about whether program differences are due to bad data, different populations of children, or real differences in the effectiveness of services
- What else do you need to know?

Monitoring Notes



- What inferences would you make from the monitoring data?
- Which program data, if any, would you remove to get a more accurate estimate of your baseline?

Conclusions about Baseline Data



- How does the review of the data help you determine the accuracy of your baseline data?
- Do you think your baseline data is accurate? Overestimated? Or underestimated for each of the Summary Statements for each of the Outcomes?

Recalculated State Data



- Programs 1, 6, and 7 were removed from this analysis to see what the state data would look like with only the “cleanest” data included
- How does this data compare to your baseline?
- What are the implications for target setting?

TARGET SETTING

WHAT ABOUT 30%?
WE HAVEN'T USED
30% FOR A WHILE?

I'VE ALWAYS HAD
A SOFT SPOT FOR
40!

CLAIREVOYANT CLAIRE
THINKS THAT 34 IS A STRONG
NUMBER THIS MONTH!

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Target Setting



- What targets would you set for the State of Euphoria?
- What is your rationale?



The children aren't making progress and the press are asking questions. Stakeholders, we're looking for a scapegoat

What are key points you'd want to include in an explanation of your baseline and target data?

Think about . . .



- How you will explain the outcomes data to the public and the media?
- What are key messages you want to communicate?
- What additional actions would you take to improve the data?

ECO/NECTAC Resources re: target setting



- Summary statement calculator --
<http://www.fpg.unc.edu/~eco/pages/summary.cfm>
- National Conference calls
<http://www.fpg.unc.edu/~eco/pages/archive.cfm>
 - Conference Call on Summary Statements - June 9, 2009
 - Conference Call on Target Setting - June 16, 2009
 - Conference Call on Updating SPP/APR Indicators – August 13, 2009
- Suggested format for Feb 2010 SPP/APR:
http://www.fpg.unc.edu/~eco/pages/fed_req.cfm#UpdatingSPPIindicators

ECO/NECTAC Resources re: target setting



- Individualized TA with states:
 - Supporting states in preparing for stakeholder discussions on target setting
 - Supporting states in looking at their data in various ways
- Resources:
- Looking at State data:
<http://www.fpg.unc.edu/~eco/assets/ppt/4-statedata.ppt>
 - Playing with data:
<http://www.fpg.unc.edu/~eco/assets/xls/SummaryStatements-PLAY.xls>

Baseline and Targets: Typical Timelines



In Feb, 2010	Actual data= baseline	Targets for FFY 2009	Targets for FFY 2010
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In Feb, 2011	Actual data	Compared to FFY 2009 target	Progress or slippage; met or did not meet target
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In Feb, 2012	Actual data	Compared to FFY2010 target	Progress or slippage; met or did not meet target
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OR Baseline and Target can be Revised in Feb, 2011



In Feb, 2010	Actual data= baseline	Targets for FFY 2009	Targets for FFY 2010
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In Feb, 2011	Actual data= revised baseline	Compared to FFY2009 target	Progress or slippage; met or did not meet target	Revise Target for FFY 2010
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In Feb, 2012	Actual data	Compared to revised FFY2010 target	Progress or slippage; met or did not meet target
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