Early On® / Part C Child Outcomes

SSIP Meeting

July 22, 2014

(Revised 1/12/15)

WAYNE STATE UNIVERSITY

THE CENTER FOR URBAN STUDIES

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Child Outcomes

(APR/SPP* Indicator 3)

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* *Annual Performance Report / State Performance Plan*

Measuring Child Outcomes

Why measure and report early childhood outcomes?

Benefits to early intervention

- Direct the focus to outcomes, and beyond process.
- Emphasize the importance of the family's knowledge of *Early On* and their role in supporting their children's development.
- Direct greater attention to working in partnership with families to achieve child outcomes.
- Retain federal funding.
- With demonstration of positive outcomes, possibly increase federal funding.
- With demonstration of outcomes, make a case for state funding.

Measuring Child Outcomes
Indicator 3

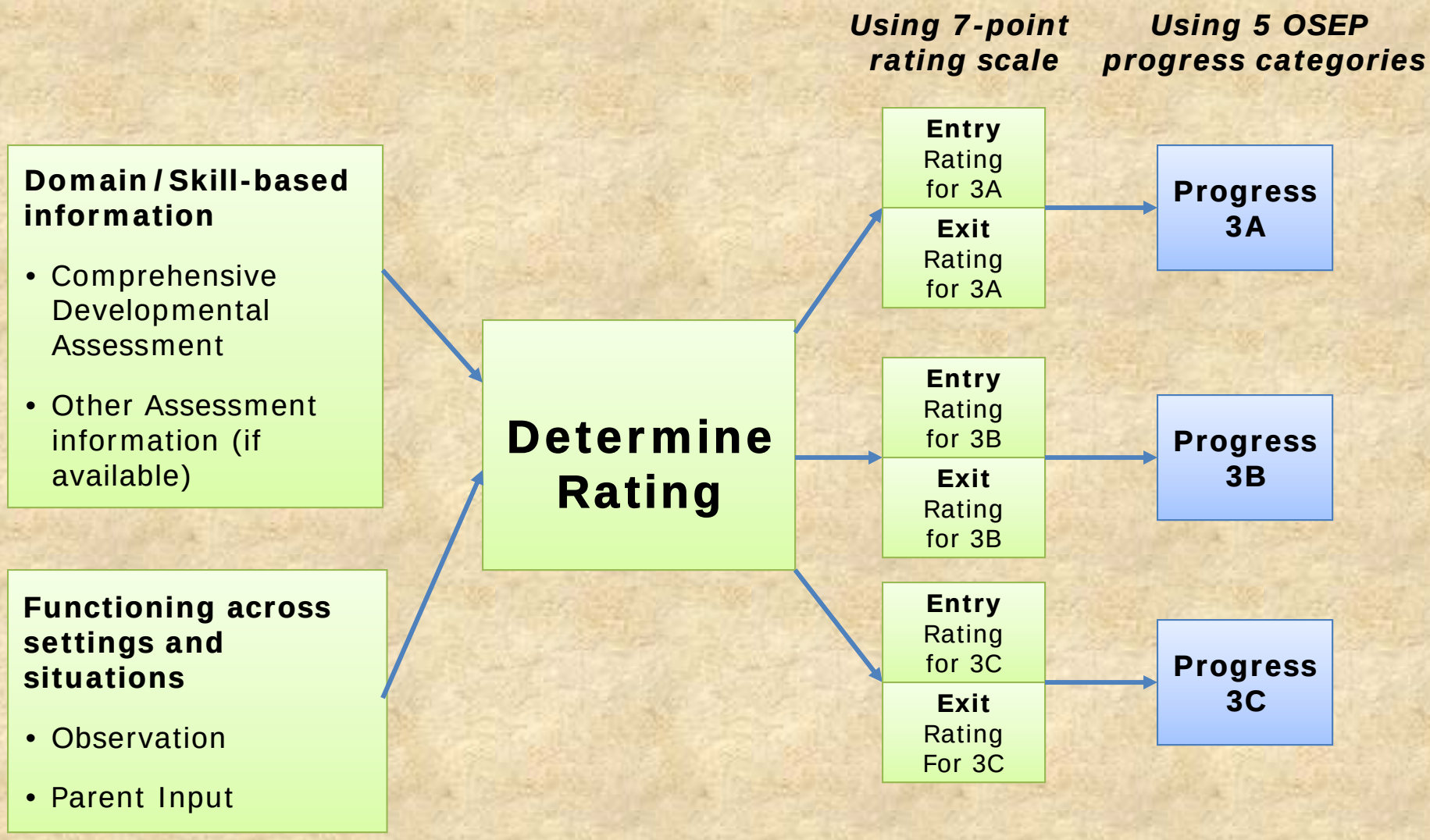
"Percent of infants and toddlers with IFSPs who demonstrate <u>improved</u>":

A. Positive social-emotional skills;

B. Acquisition and use of knowledge and skills; and

C. Use of appropriate behaviors to meet their needs.

Measuring Child Outcomes
Overview



Measuring Child Outcomes

*The 7-point rating scale**

1	**Not Yet**	Child does **not yet** show functioning expected of a child his or her age in any situation. Child's skills and behaviors also **do not yet include any immediate foundational skills** upon which to build age appropriate functioning. Child's functioning might be described as that of a much younger child.
2	Between Not Yet & Emerging	**Some** of the foundational skills are there, though not all the **immediate** foundational skills.
3	**Emerging**	Child does **not yet** show functioning expected of a child of his or her age in any situation. Child's behavior and skills include **immediate foundational skills** upon which to build age appropriate functioning. Functioning might be described as like that of a **younger child**.
4	Between Emerging & Somewhat	Immediate foundational skills are in place, and child has demonstrated age appropriate skills **once or twice**, perhaps not deliberately.
5	**Somewhat**	Child shows functioning expected for his or her age **some of the time and/or in some situations**. Child's functioning is a **mix** of age appropriate and not appropriate functioning. Functioning might be described as like that of a **slightly younger child**.
6	Between Somewhat & Completely	Child's functioning generally is considered **appropriate** for his or her age but there are **some concerns** about the child's functioning in this outcome area.
7	**Completely**	The child shows functioning expected for his or her age in **all or almost all everyday situations** that are part of the child's life. Functioning is considered **appropriate** for his or her age. No one has any concerns about the child's functioning in this outcome area.

**Early Childhood Outcomes Center*

Measuring Child Outcomes

Using 7-point rating scale

1	**Not Yet**
2	Between Not Yet & Emerging
3	**Emerging**
4	Between Emerging & Somewhat
5	**Somewhat**
6	Between Somewhat & Completely
7	**Completely**

Entry Rating *

Exit Rating *

Using 5 OSEP progress categories

Percent of infants and toddlers 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.

(a, b, c, and d) entered the program functioning below age expectations

(e) entered and exited functioning at age expectations

* Using the child outcomes calculator:
http://ectacenter.org/eco/pages/summary.asp#COSF

OSEP summary statements for APR reporting

Summary Statement 1

Of those infants and toddlers who entered Part C below age expectations in each Outcome, the **percent** who **substantially increased** their rate of growth by the time they exited.

Measurement:

% = **[**(**c+d**) / (a+b+c+d)**]** X 100

Progress category:
a
b
c
d

c and **d** changed their growth trajectories……made greater than expected progress

Summary Statement 2

The **percent** of infants and toddlers who were **functioning within age expectations** in each Outcome by the time they exited.

Measurement:

% = **[**(**d+e**) / (a+b+c+d+e)**]** X 100

Progress category:
a
b
c
d
e

d reached age expectations by exit; and **e** entered and exited at age expectations

http://ectacenter.org/eco/pages/fed_req.asp#SummaryStatements

Targets and Results

FFY2012 Progress Data

	3A. Social emotional skills	3B. Acquisition and use of knowledge and skills	3C. Use of appropriate behaviors
	N=3,682	N=3,674	N=3,675
a) Did not improve functioning.	0.8%	0.6%	0.7%
b) Improved functioning but not sufficient to move nearer to functioning comparable to same-aged peers.	17.4%	15.9%	16.8%
c) Improved functioning to a level nearer to same-aged peers but did not reach it.	24.1%	30.0%	28.2%
d) Improved functioning to reach a level comparable to same-aged peers.	33.9%	40.0%	40.9%
e) Maintained functioning at a level comparable to same-aged peers.	23.8%	13.5%	13.4%

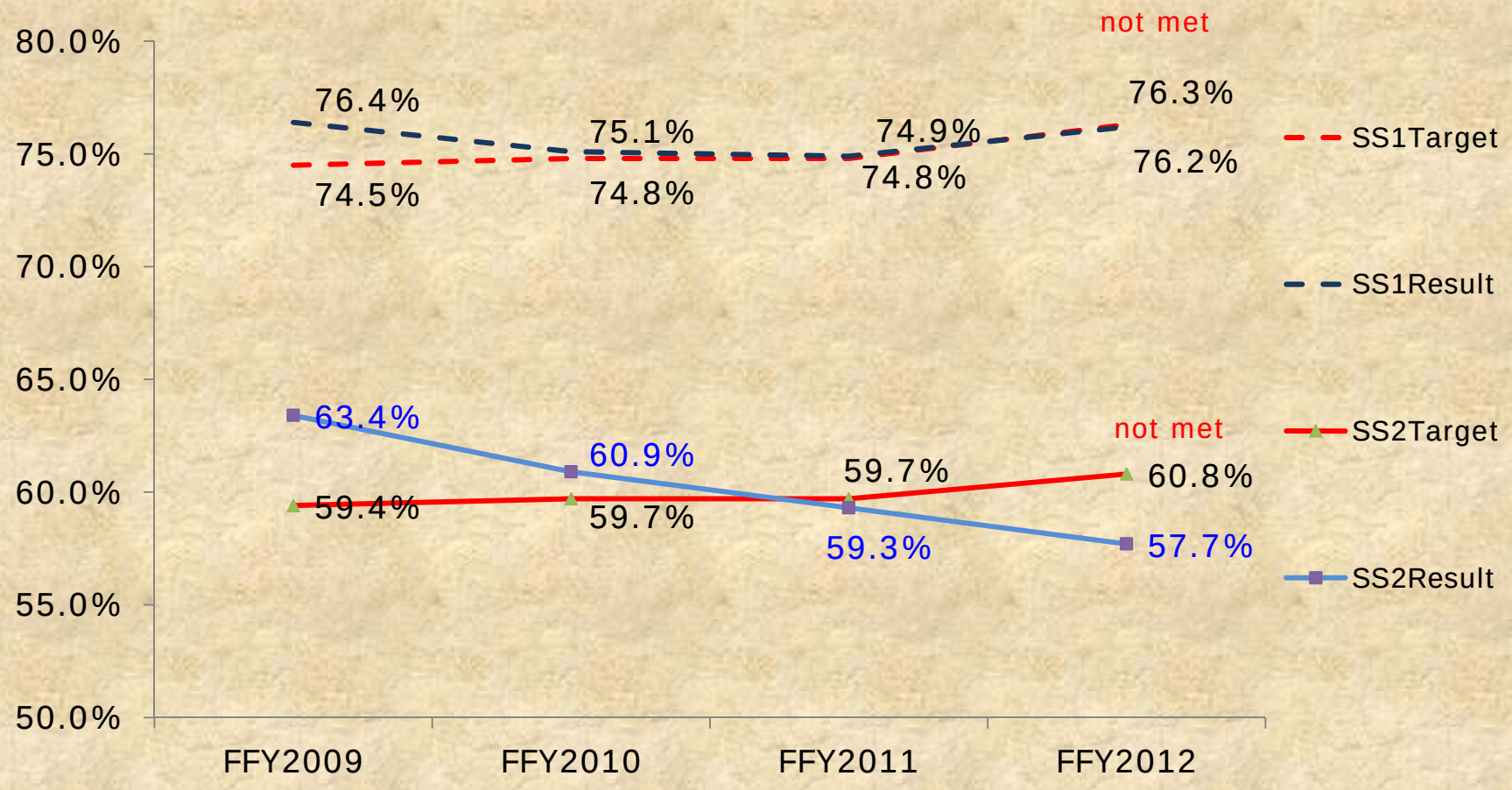
FFY2012 Targets and Results for Indicator 3

	Summary Statement 1 substantially increased			Summary Statement 2 within age expectations		
	Target	***Results***	***Met***	***Target***	***Results***	***Met***
3A: Positive social-emotional skills *N=3,682*	76.3%	76.2%	No	60.8%	57.7%	No
3B: Acquisition and use of knowledge and skill *N=3,674*	79.5%	80.9%	Yes	51.2%	53.5%	Yes
3C:Use of appropriate behaviors to meet needs *N=3,675*	79.5%	79.8%	Yes	60.1%	54.3%	No

http://www.michigan.gov/mde/0,4615,7-140-6530_6809-127141--,00.html

Targets and Results Across Years

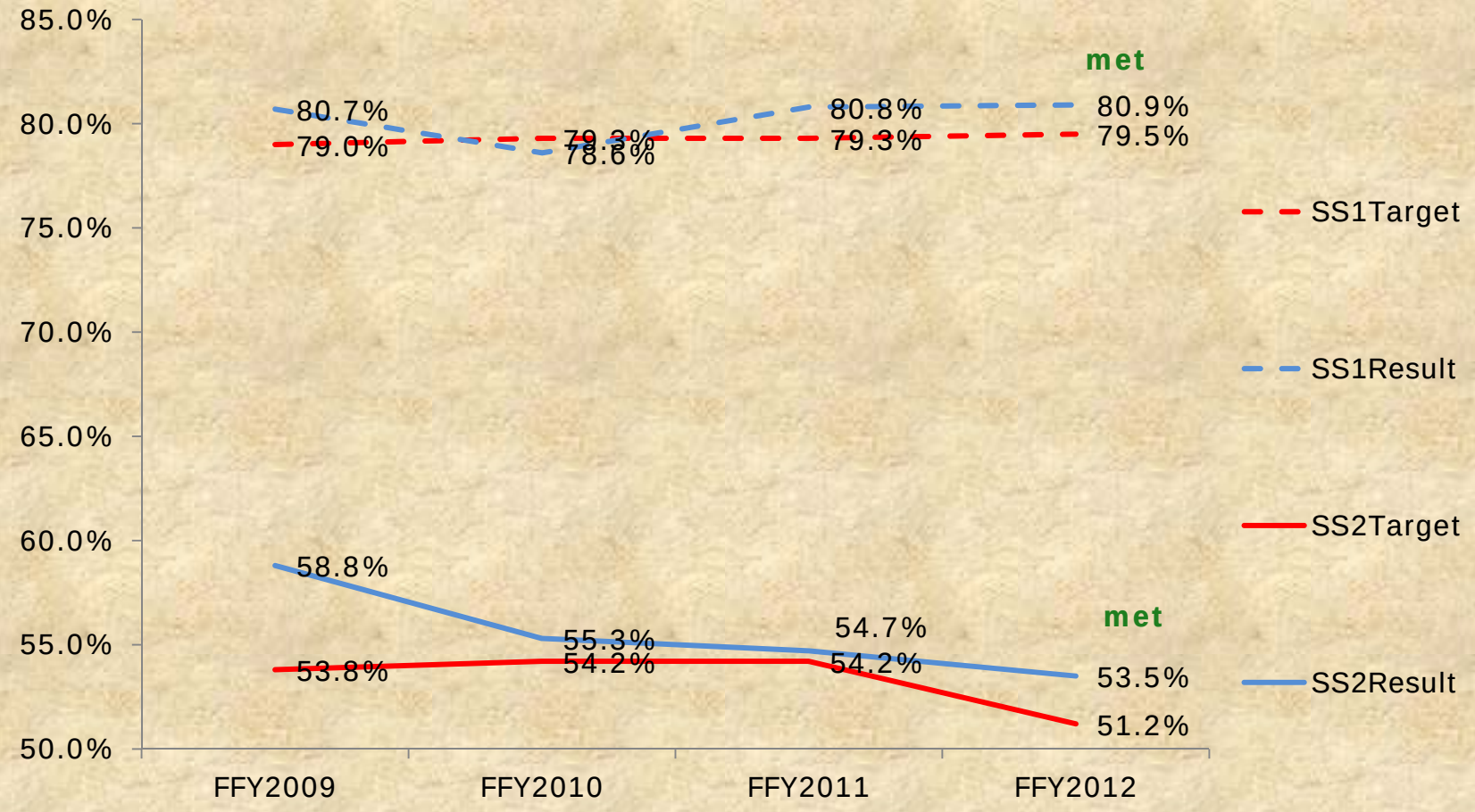
Indicator 3A: positive social-emotional skills



Percent of progress **within age expectations** (SS2Result) declined across four years – from 63.4% to 57.7%.

Targets and Results Across Years

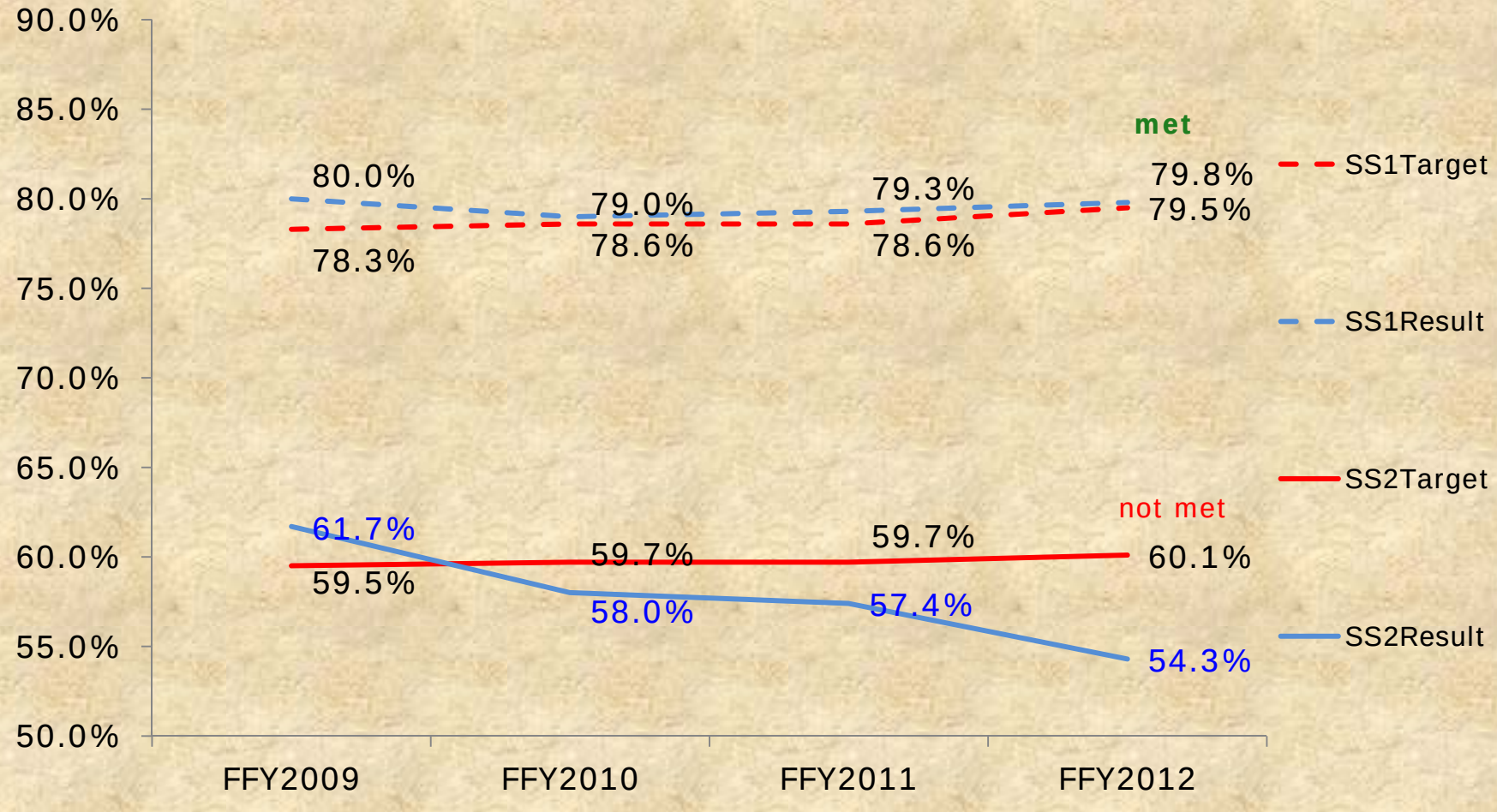
Indicator 3B: acquisition and use of knowledge and skills



Here, too.....from 58.8% to 53.5%.

Targets and Results Across Years

Indicator 3C: use of appropriate behaviors to meet needs



Here again.....from 61.7% to 54.3%.

Discussion on Summary Statement 2

functioning within age expectations

by the time they exited

According to the ECO Center:

- Reflects emphasis on school readiness; prevention of disability
- Reflects value added by the program
- Readily explainable
- Could serve as an incentive to states to broaden eligibility and serve more children

FFY2012 Results for Summary Statement 2 by Eligibility
within age expectations

	Michigan Mandatory Special Education (MMSE)	Part C Only	ALL (reported in APR)
N =	*1,841*	*1,737*	*3,578*
3A: Positive social-emotional skills	43.3%	73.5%	57.7%
3B: Acquisition and use of knowledge and skill	36.3%	72.1%	53.5%
3C:Use of appropriate behaviors to meet needs	37.7%	72.6%	54.3%

There's a difference by eligibility……..

Results by Eligibility and Demographics

Results for SS2 Across Years by **Eligibility**

So, where is the decline?

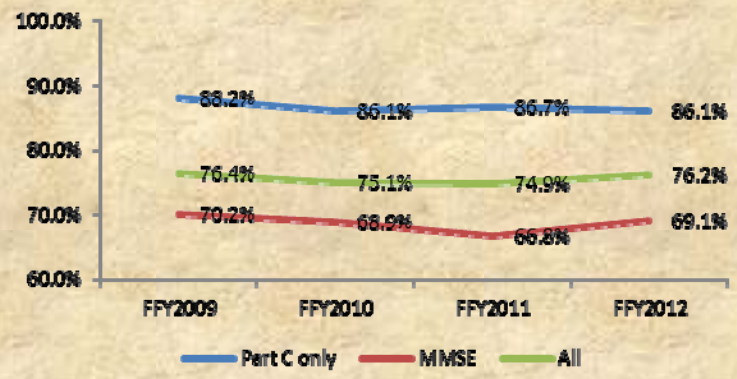
	Michigan Mandatory Special Education (MMSE)			Part C Only		
percent of sample size	*58%*	*51%*		*42%*	***49%***	
	FFY2009	*FFY2012*	*declining trend*	*FFY2009*	*FFY2012*	*declining trend*
3A: Positive social-emotional skills	47.9%	43.3%	*-4.6%*	85.1%	73.5%	***-11.6%***
3B: Acquisition and use of knowledge and skill	41.6%	36.3%	*-5.3%*	83.0%	72.1%	***-10.9%***
3C:Use of appropriate behaviors to meet needs	46.2%	37.7%	*-8.5%*	83.4%	72.6%	***-10.8%***

- From FFY2009 to FFY2012, greater decline in percent of Part C only eligible children exiting **within age expectations**.
  - Also, increasing percent of Part C only children in the sample.

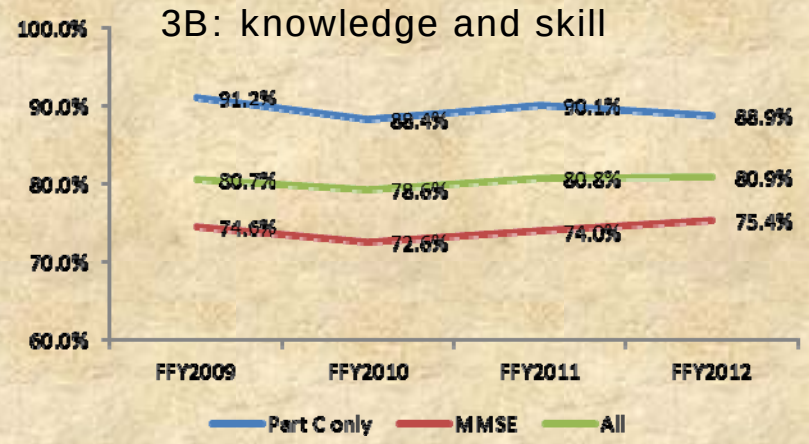
Summary Statement 1 - **substantially increased** Across Years by Eligibility

A case for separate targets?

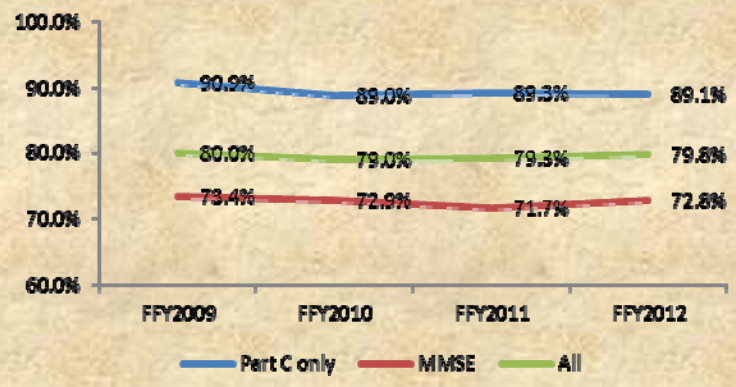
3A: social-emotional



3B: knowledge and skill

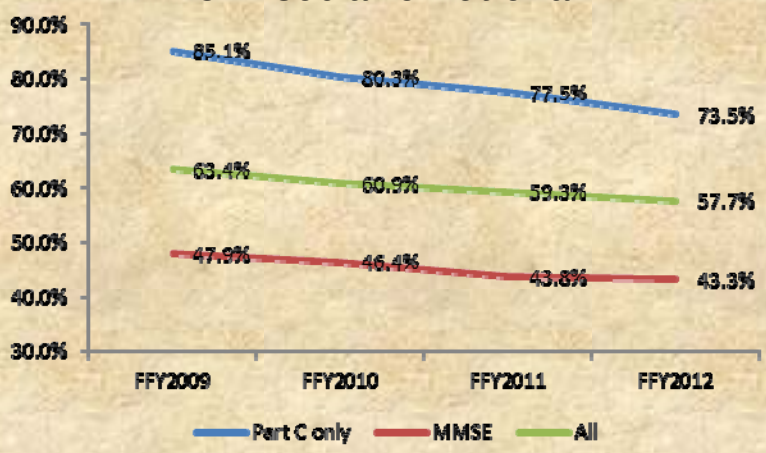


3C: appropriate behaviors

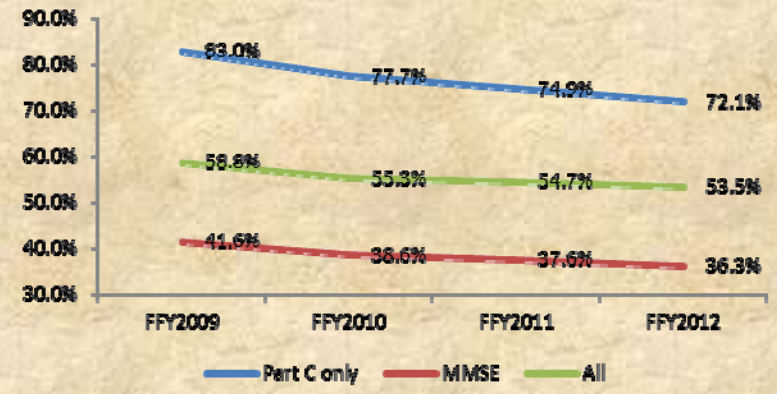


Summary Statement 2 – **within age expectations**
Across Years by Eligibility
A case for separate targets?

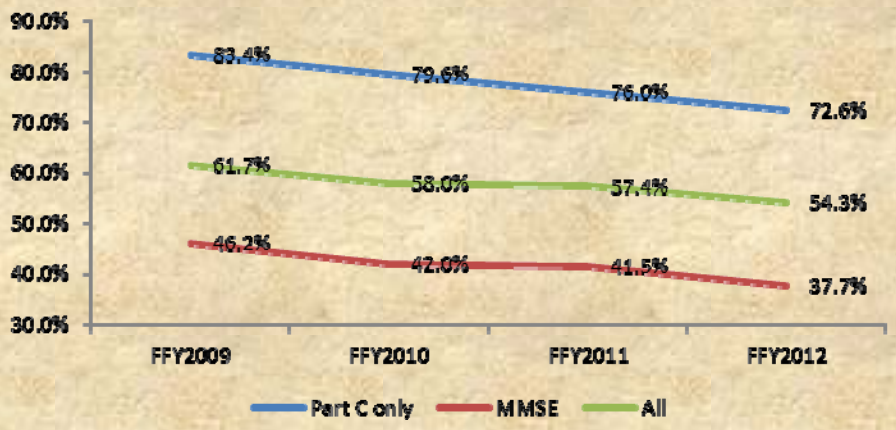
3A: social-emotional



3B: knowledge and skill



3C: appropriate behaviors



Summary Statement by **Ethnicity** - FFY2012

	Summary Statement 1			Summary Statement 2		
	The percent that substantially increased their rate of growth by the time they exited.			The percent that were functioning within age expectations by the time they exited.		
	3A social-emotional	3B knowledge and skills	3C appropriate behavior	3A social-emotional	3B knowledge and skills	3C appropriate behavior
White/Not Hispanic (n=2,764)	77.3%	82.5%	81.0%	59.4%	55.0%	55.4%
African-American/Not Hispanic (n=465)	69.9%	72.9%	72.9%	48.4%	45.2%	49.0%
Hispanic or Latino (n=252)	72.5%	75.0%	76.6%	56.7%	48.0%	54.4%
Multi-racial/Other (n=84)	77.1%	82.6%	80.6%	56.0%	58.3%	47.6%
Asian (n=85)	85.7%	86.8%	84.7%	58.8%	57.6%	55.3%

- *Summary Statement 1*: The percentage of White children was statistically significantly ($p<.05$) higher than those reported for African-American on all three indicators and for Hispanic/Latino on indicator 3B.

- *Summary Statement 2*: The percent of White children was statistically significantly ($p<.05$) higher than African American infants and toddlers on all three indicators, and statistically significantly ($p<.05$) higher than Hispanic/Latino on indicator 3B.

Summary Statement by **Gender** – FFY2012

	Summary Statement 1			**Summary Statement 2**		
	The percent that substantially increased their rate of growth by the time they exited.			The percent that were functioning within age expectations by the time they exited.		
	3A social-emotional	3B knowledge and skills	3C appropriate behavior	3A social-emotional	3B knowledge and skills	3C appropriate behavior
Male (n=2,268)	75.3%	79.8%	78.4%	55.3%	51.2%	51.9%
Female (n=1,304)	77.6%	82.8%	82.1%	62.0%	57.4%	58.4%

- *Summary Statement 1*: The percentage was statistically significantly higher for female children compared to the percentage for males on Indicators 3B and 3C.
- *Summary Statement 2*: A statistically significant higher percentage of female children were functioning within age expectations in all three domains as compared to male children.

Summary Statement by **Peer Group** – FFY2012

	Summary Statement 1			Summary Statement 2		
	The percent that substantially increased their rate of growth by the time they exited.			The percent that were functioning within age expectations e by the time they exited.		
	3A social-emotional	3B knowledge and skills	3C appropriate behavior	3A social-emotional	3B knowledge and skills	3C appropriate behavior
Rural (n=330)	78.4%	80.8%	82.3%	64.5%	63.7%	62.5%
Small (n=714)	74.2%	78.7%	77.9%	64.0%	61.2%	60.9%
Medium (n=443)	70.1%	78.0%	79.0%	62.3%	63.4%	58.0%
Metro Area (n=835)	78.5%	82.7%	79.2%	55.6%	54.0%	54.6%
Urban Center (n=1,360)	76.7%	81.6%	80.6%	52.6%	43.4%	47.5%

- *Summary Statement 1*: The percentages of growth from children in rural, metro, and urban areas were statistically significantly ($p<.05$) higher than those of children in medium size cities on indicator 3A. On indicator 3B, significantly more children from metro areas increased their rate of growth than children from small and medium sized cities ($p<.05$).

- *Summary Statement 2*: On all three domains, the percentages of growth from infants and toddlers in metro areas and urban centers were statistically significantly ($p<.05$) lower than the percent of children in the other areas (rural, small sized cities and medium sized cities).

Summary Statement by **Length of Service** – FFY2012

Length of Service	**Summary Statement 1**			**Summary Statement 2**		
	The percent that substantially increased their rate of growth by the time they exited.			The percent that were functioning within age expectations by the time they exited.		
	3A social-emotional	3B knowledge and skills	3C appropriate behavior	3A social-emotional	3B knowledge and skills	3C appropriate behavior
6 to 12 months (N=1,751)	80.1%	84.4%	82.8%	61.3%	57.3%	59.0%
12 to 24 months (N=1,267)	76.2%	81.9%	80.8%	57.1%	52.7%	54.4%
24 to 36 months (N=664)	66.1%	69.6%	70.2%	49.2%	44.6%	41.8%

- *Summary Statement 1*: The percentage reported for children remaining in the program for 6 to 12 months were statistically significantly higher ($p<.05$) in comparison to children who remained in the program for more than two years on all three indicators.

- *Summary Statement 2*: The percentage of infants and toddlers was statistically significantly higher ($p<.05$) for children who remained in the program 6 to 12 months in comparison to older children on all three indicators.

Zooming in on Reporting Progress Categories

Zooming in on the reporting progress categories by Eligibility – FFY2012

	Below Age Expectations at Exit (Categories A to C)		At Age Expectations at Exit (Categories D and E)	
	Part C only	MMSE	Part C only	MMSE
3A. Social Emotional	30.6% (n=461)	69.4% (n=1,044)	61.6% (n=1,276)	38.4% (n=797)
3B. Knowledge and skills	29.3% (n=484)	70.7% (n=1,169)	65.3% (n=1,252)	34.7% (n=668)
3C. Appropriate behaviors	29.4% (n=475)	70.6% (n=1,143)	64.6% (n=1,261)	35.4% (n=692)

On all three indicators, around 70% of the children below age expectations (categories A to C) are those eligible for MMSE.

On all three indicators, there are statistically significantly ($p<.05$) higher percentage of Part C only children who reach age expectation (categories D and E) when compared to children eligible for MMSE.

Zooming in some more:

Reporting progress categories C, D, E and the two summary statements

	Category C (Improved functioning to a level nearer to same-aged peers but did not reach it)		Category D (Improved functioning to reach a level comparable to same-aged peers)		Category E (Maintained functioning at a level comparable to same-aged peers)	
	Part C only	MMSE	Part C only	MMSE	Part C only	MMSE
Social Emotional	33.2% (n=290)	66.8% (n=583)	63.3% (n=770)	36.7% (n=446)	59.0% (n=506)	41.0% (n=351)
Knowledge and skills	30.3% (n=328)	69.7% (n=756)	64.5% (n=924)	35.5% (n=509)	67.8% (n=328)	32.2% (n=156)
Appropriate behaviors	31.6% (n=319)	68.4% (n=692)	64.9% (n=953)	35.1% (n=516)	63.6% (n=308)	36.4% (n=176)

Summary Statement 1:
substantially increased:
[(**c+d**) / (a+b+c+d)**]** X 100

Summary Statement 2:
within age expectations:
[(**d+e**) / (a+b+c+d+e)**]** X 100

Increase in these reporting progress categories will improve the two summary statements.

Characteristics of children in categories C, D, E by Eligibility – FFY2012

		MMSE		Part C Only	
3A. Social Emotional		**Category C** (n=583)	ALL (N=1,841)	**Categories D and E** (n=1,276)	ALL (N=1,737)
Gender	Male	71.1%	68.2%	59.3%	60.6%
	Female	28.9%	31.8%	40.7%	39.4%
Ethnicity	White	72.1%	74.9%	78.4%	77.8%
	Black	14.7%	12.2%	10.8%	11.7%
Peer Group	Rural	6.9%	8.1%	11.4%	10.4%
	Small size cities	16.8%*	21.3%	20.6%	18.5%
	Medium size cities	8.7%*	13.5%	11.8%	11.2%
	Metro	19.0%*	15.0%	30.5%	32.2%
	Urban	48.5%*	42.0%	25.8%	27.7%

For children eligible for Part B, those who live in Metro or Urban areas are more likely to show *"improved functioning.....nearer to same-aged peers but did not reach it"* at exit.

Children living in small size or medium size cities are less likely to do so.

* Difference between the groups are statistically significantly different (p<.05).

Another way of zooming in: Cluster Analysis

Cluster analysis *is the task of grouping a set of objects in such a way that objects in the same group (called a* ***cluster****) are more similar (in some sense or another) to each other than to those in other groups (or clusters).*

- Child outcomes data were divided statistically into two groups (clusters) based on their similarities of performances on the three child outcome indicator areas.

- Then we looked at demographic characteristics within each cluster.

  - **Cluster 1** (lower performance, on average)
    - Male
    - African-American
    - Eligible for MMSE
    - Living in urban areas

  - **Cluster 2** (higher performance, on average)
    - Female
    - White
    - Part C only
    - Living in rural, small size cities or medium size cities

Zooming in: cluster analysis and demographics

		Cluster 1 lower	Cluster 2 higher	All
Gender*	Male	67.6%	61.9%	64.5%
	Female	32.4%	38.1%	35.5%
Ethnicity*	White	73.1%	77.8%	75.7%
	Black	14.9%	11.0%	12.7%
Eligibility*	Part C only	29.7%	63.9%	48.5%
	MMSE	70.3%	36.1%	51.5%
Peer Group*	Rural	7.0%	10.2%	9.0%
	Small size cities	16.1%	22.2%	19.4%
	Medium size cities	10.5%	13.3%	12.0%
	Urban	43.0%	32.1%	36.9%

* Difference between the two clusters are statistically significantly different ($p<.05$).

Zooming in: A Summary

Cluster analysis and analysis of reporting progress categories confirmed similar results……

1. Child outcomes were statistically different based on demographics:

- ❑ Children who are male, African-American, eligible for MMSE, or those living in urban areas are more likely to have lower level outcomes at exit.

2. To improve the Summary Statement results, different reporting progress categories could be targeted:

- ❑ Summary Statement 1 would increase if more children fell into categories C and D.
- ❑ Summary Statement 2 would increase if more children fell into categories D and E.

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.

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