



# Six Sigma DMAIC Improvement Story

**Project Objective:  
Reduce Juvenile Recidivism**

*Last Updated: 7-5-2013*



Team: ***Juvenile Crimestoppers***

Amy Horton-Tavera (Team Leader)

Mariaelena Salazar (Co-team Leader)

Jessica Vallejos-Landestoy

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Karen Diazgranados

*with support from Catherimarty Burgos & Cindy Akerman*

Ray Scher (Sponsor)

Morris Copeland (Sponsor)

# Six Sigma Problem Solving Process

The team utilized the 5-Step DMAIC problem solving process.

## DMAIC Performance Improvement Process

Process Step		Description of Team Activities
Number	Name	
1	DEFINE	<ul style="list-style-type: none"> <li>• Select Problem</li> <li>• Identify Project Charter</li> <li>• Develop Project Timeline</li> <li>• Establish Method to Monitor Team Progress</li> <li>• Construct Process Flowchart</li> <li>• Develop Data Collection Plan</li> <li>• Display Indicator Performance “Gap”</li> </ul>
2	MEASURE	<ul style="list-style-type: none"> <li>• Stratify Problem (i.e. “Gap”)</li> <li>• Identify Problem Statement</li> </ul>
3	ANALYZE	<ul style="list-style-type: none"> <li>• Identify Potential Root Cause(s)</li> <li>• Verify Root Cause(s)</li> </ul>
4	IMPROVE	<ul style="list-style-type: none"> <li>• Identify and Select Improvement(s)</li> <li>• Identify Barriers and Aids</li> <li>• Develop and Implement Improvement Plan</li> <li>• Confirm Improvement Results</li> </ul>
5	CONTROL	<ul style="list-style-type: none"> <li>• Standardize Improvements within Operations</li> <li>• Implement Process Control System (PCS)</li> <li>• Document Lessons Learned</li> <li>• Identify Future Plans</li> </ul>



# Select Problem

The Team reviewed many problems using a selection Matrix.

Problem(s) <i>(where cause is unknown and knowing cause is desired)</i>	Customer (Internal or External)	Selection Criteria			
		A Impact on Customer (Accuracy/ Cost /Timeliness)	B Need to Improve (Performance Gap)	C Ease of Project Completion (data availability & complexity, etc.)	D=A+B+C Overall
1 Reduce the number of juveniles who recidivate within 1 year of successfully completing a diversion program	External / internal	5	5	3	13.00
<i>Comments: One option is to focus on a particular program, e.g. civil citation. Some juveniles also decline to participate or fail to successfully complete the program. These are distinct populations.</i>					
2 Reduce the number of juveniles declining to participate in diversion program	External / internal	4	2	5	11.00
<i>Comments:</i>					
3					0.00
<i>Comments:</i>					
4					0.00
<i>Comments:</i>					
		Rating Scores: 5= Extreme 3= Moderate 4= High 2= Low 1=None			



# Identify Project Charter

The team (chartered by management) completed their Project Charter.

Project Charter	
<b>Project Name:</b>	Reduce Juvenile Recidivism
<b>Problem/Impact:</b>	Too many juveniles recidivate within one year of successful diversion program completion.
<b>Expected Benefits:</b>	Lower crime, lower arrest rates, improved quality of life for children and families, less impact on juvenile justice community, lower costs for JSD / juvenile justice system
<b>Outcome Indicator(s)</b>	Q1- % of youth re-arrested within one year of successful program completion
<b>Proposed Target(s)</b>	Target = 10%
<b>Time Frame:</b>	March - May - July 2013 (approx.)
<b>Strategic Alignment:</b>	Aligns to Strategic Plan, department mission and business plan
<b>In Scope:</b>	Youth successfully completing a diversion program in 2011
<b>Out-of-Scope:</b>	Juveniles older than 17 - once juveniles turn 18, JSD does not currently have a way to capture future arrests automatically
<b>Authorized by:</b>	Morris Copeland, Ray Scher
<b>Sponsor:</b>	Morris Copeland, Ray Scher
<b>Team Leader:</b>	Amy Horton-Tavera, Mariaelena Salazar
<b>Team Members:</b>	Jessica Vallejos-Landestoy, Lauren Rabbito, Cristina Molina, Karen Diazgranados; support from Cindy Akerman and Catherimarty Burgos
<b>Process Owner(s):</b>	Morris Copeland
<b>Mgmt Review Team:</b>	Morris Copeland, Russell Benford
<b>Completion Date:</b>	31-Jul-13
<b>Review Dates:</b>	Monthly and Final Review in July 2013
<b>Key Milestone Dates:</b>	See Action Plan



# Develop Project Timeline Plan

The team developed a timeline plan to complete the Project.

4. 

Legend:	
	= Actual
	= Proposed

**WHAT: Complete DMAIC Story Project by July 31, 2013**

DMAIC Story Process Step	WHEN					
	2013					
	Mar	Apr	May	Jun	Jul	Aug
1. Define	 		4/12/13			
2. Measure		 	4/20/13			
3. Analyze			 	5/31/13		
4. Improve				 	6/30/13	
5. Control					 	7/31/13

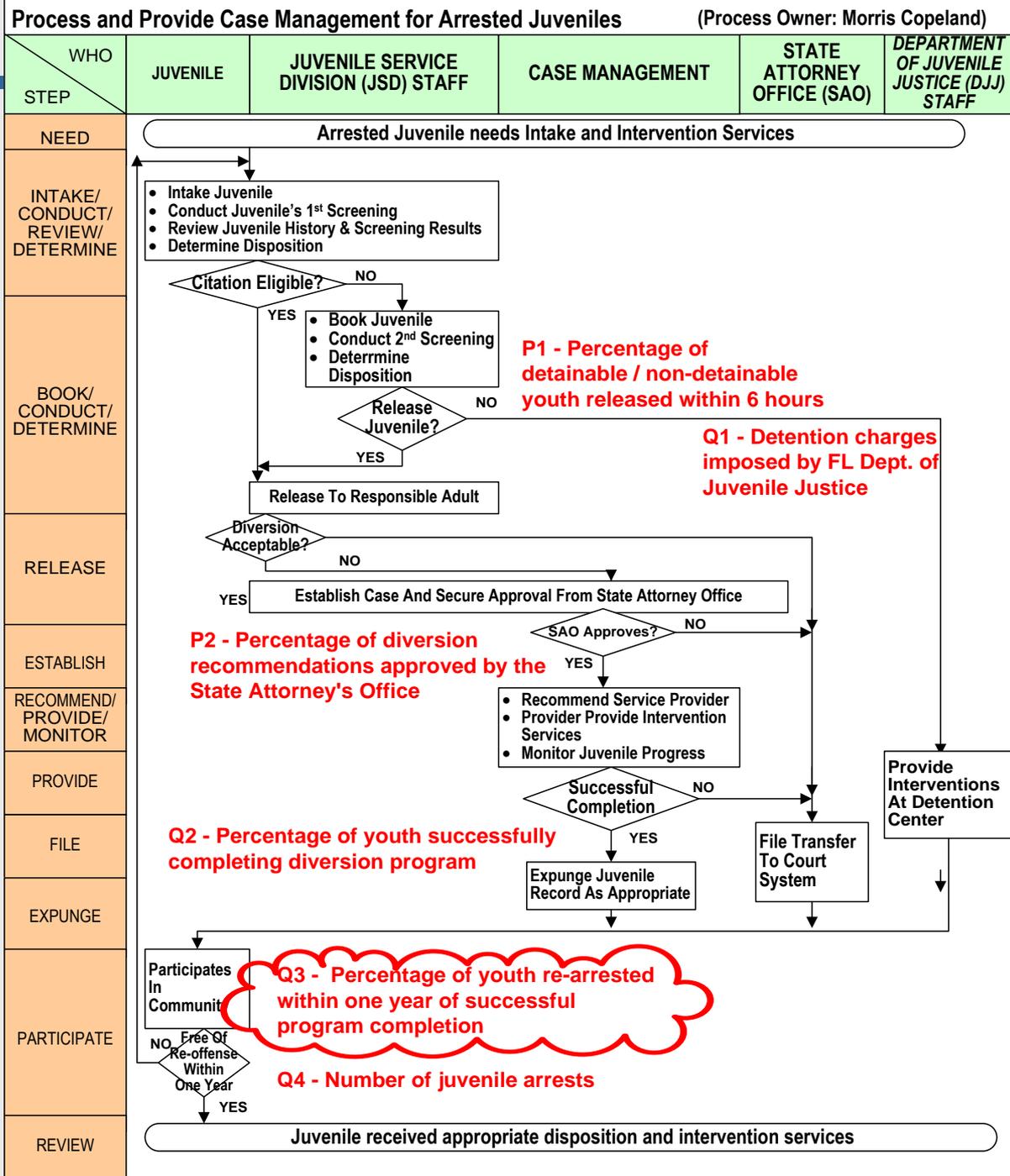




# Review Process Flow Chart

The team constructed a high level flowchart for the Juvenile Services Process.

The team developed Outcome Indicators from SIPOC and Customer Rqmts analysis (see Appendix)



# Identify Data Collection Needs

The team developed a data collection spreadsheet to collect indicator and demographic data...

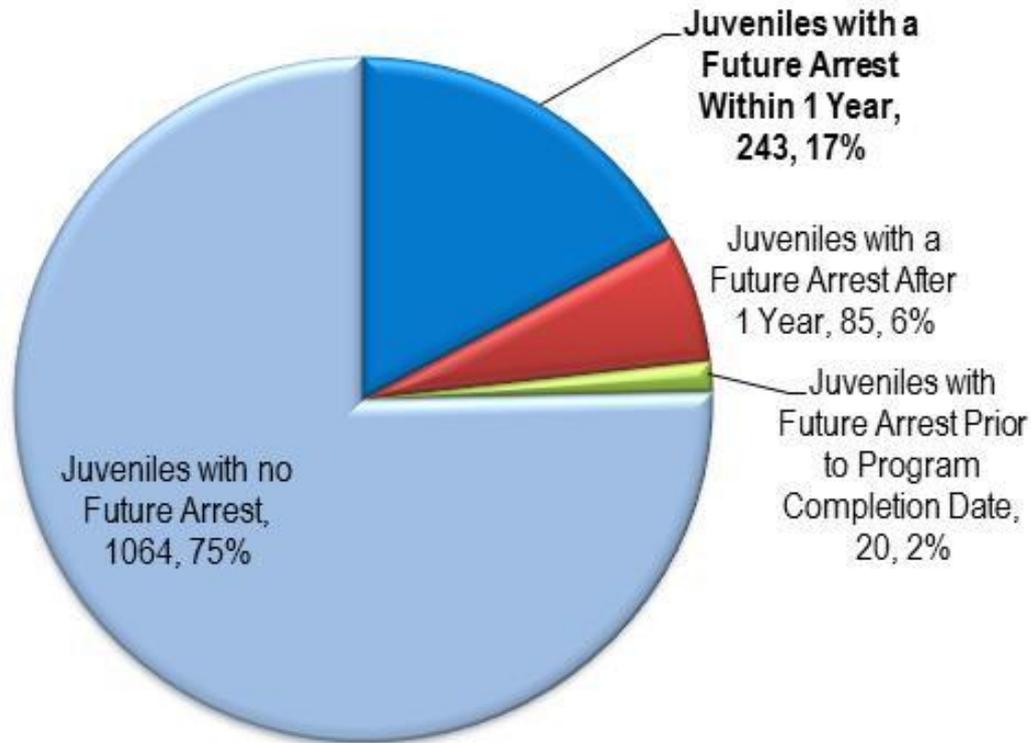
Requirement Supervision Level	Requirement Type	Case Alcohol Drug Risk	Case Baker Act	Requirement Disposition Status	Requirement Future Arrest Count	Requirement Future Non Arrest Count	Requirement Has Future Arrest	Requirement Has Future Non Arrest
Moderate supervision	Diversion programs	Drug Risk Low	Not Baker Act	Completed sanctions	13	1	Has Future Arrest	Has Future Non-Arrest
Moderate supervision	Diversion programs	Drug Risk Low	Not Baker Act	Completed sanctions	2	2	Has Future Arrest	Has Future Non-Arrest
Low supervision	Civil Citation			Completed sanctions	5	1	Has Future Arrest	Has Future Non-Arrest
Low supervision	Civil Citation			Completed sanctions	1	3	Has Future Arrest	Has Future Non-Arrest
Moderate supervision	Civil Citation			Completed sanctions	1	1	Has Future Arrest	Has Future Non-Arrest
				Completed sanctions	5	2	Has Future Arrest	Has Future Non-Arrest
				Completed sanctions	2	1	Has Future Arrest	Has Future Non-Arrest
				Completed sanctions	3	1	Has Future Arrest	Has Future Non-Arrest
				Completed sanctions	3	1	Has Future Arrest	Has Future Non-Arrest
				Completed sanctions	2	1	Has Future Arrest	Has Future Non-Arrest



# Review Selected Indicator

The team collected indicator data (performance trends have not been regularly tracked in the department due to data collection issues):

## Juveniles 17 and Under Successfully Completing a Diversion Program in 2011



n = 1412

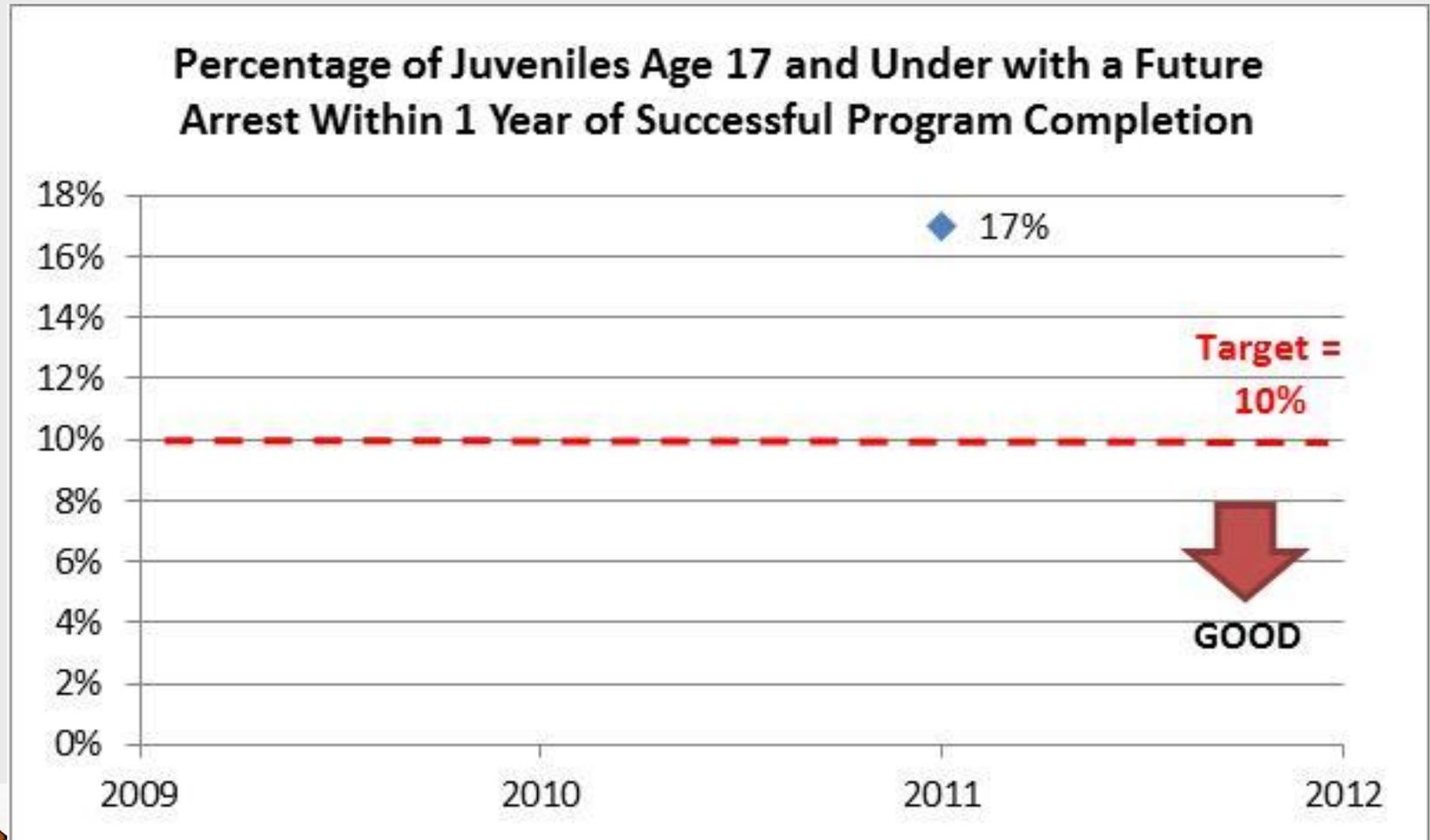
**Target = 10%**

Notes:

- For the purposes of this analysis, juveniles with a future arrest within 1 year of completing a diversion program are defined as “early recidivates”
- Future arrests include referral arrests / citations
- Does not include any future arrests after the juvenile turns 18
- See appendix on slide 29

# Review Selected Indicator

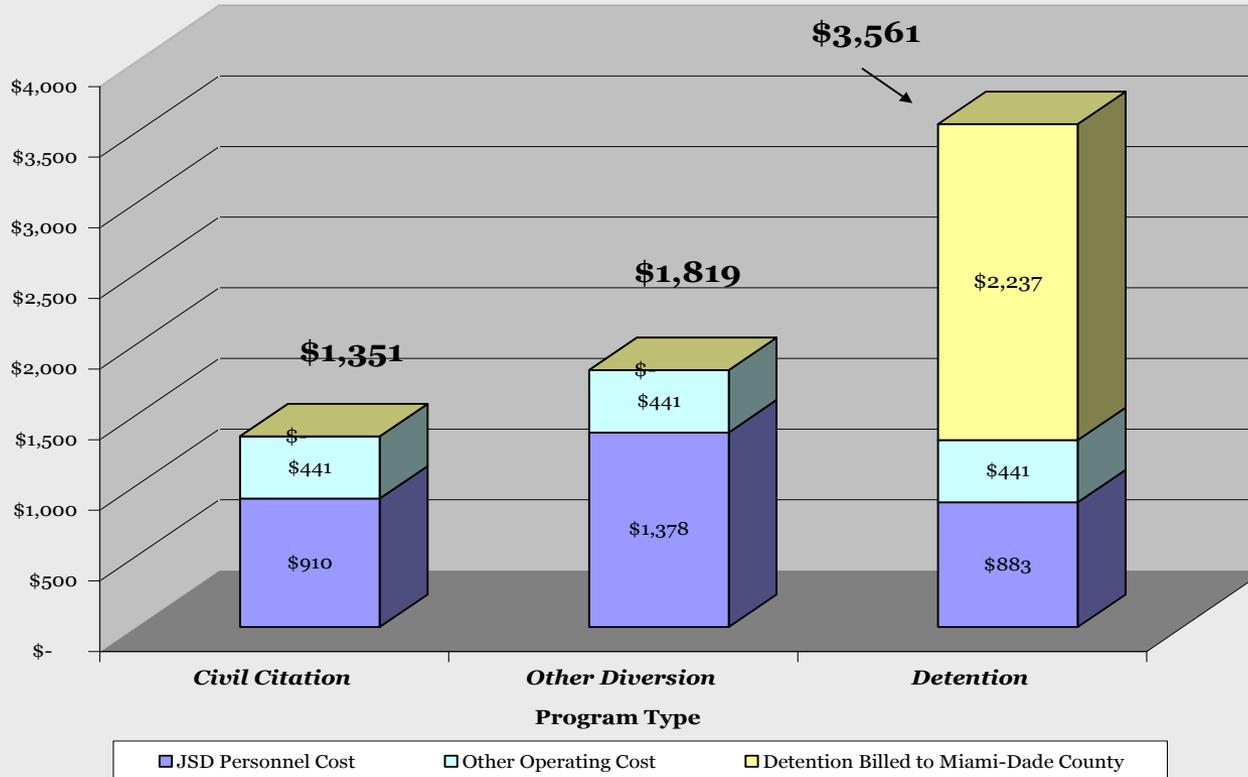
The team collected indicator data (performance trends are not regularly tracked in the department due to data collection issues):



# Hidden Costs of Juvenile Recidivism

The team collected info on costs of juvenile recidivism. In 2008, a cost study performed by OMB found that the County's cost per juvenile arrest is as follows:

Miami-Dade County Pre-Dispositional Cost per Juvenile by Program Type



- This excludes costs to other agencies including MDPD and other police departments, the Department of Juvenile Justice, the Clerk of Courts and court system, the State Attorney, and the Public Defender.



# Hidden Costs of Juvenile Recidivism, cont.

- At the time of the 2008 cost study, approximately 20% of arrested juveniles were assigned to the civil citation program; 15% to another diversion program; and 65% to detention
- The Team applied these ratios and estimated the costs of early recidivism as follows:
  - At the actual early recidivism rate of 17%:
  - At the target rate of 10%:

Total Juveniles:		243	
Assumed Juveniles in:		Cost per youth	Total cost
Civil Citation	49	\$ 1,351	\$ 65,659
Other Diversion	36	\$ 1,819	\$ 66,303
Detention	158	\$ 3,561	\$ 562,460
		Total Cost	\$ 694,421

Total Juveniles:		141	
Assumed Juveniles in:		Cost per youth	Total cost
Civil Citation	28	\$ 1,351	\$ 38,098
Other Diversion	21	\$ 1,819	\$ 38,472
Detention	92	\$ 3,561	\$ 326,366
		Total Cost	\$ 402,936

Cost of early recidivism at 17%	\$ 694,421
Cost of early recidivism at 10%	\$ 402,936
<b>Cost of performance gap</b>	<b>\$ 291,485</b>

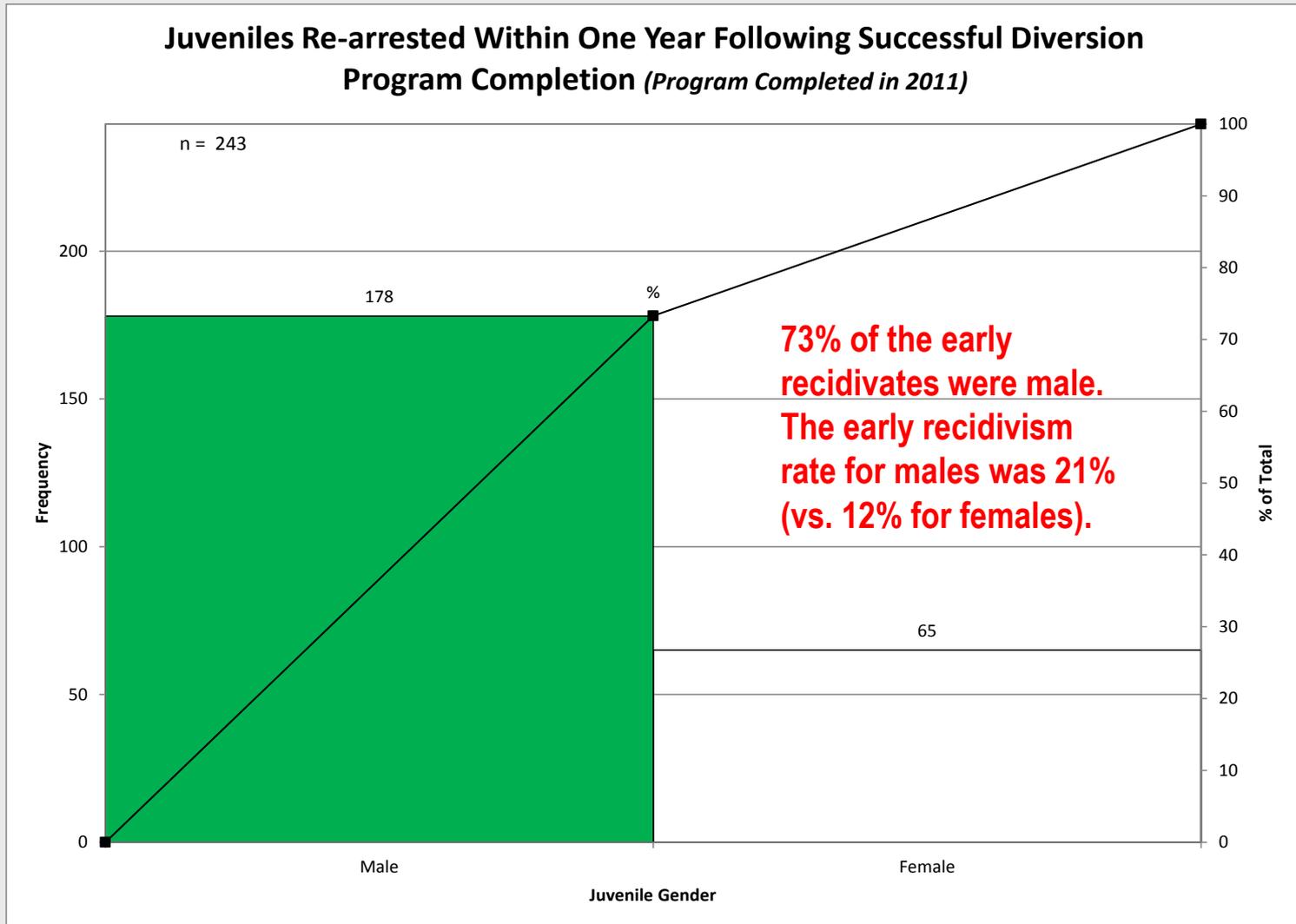


*\*Notes: Since 2008, personnel and other operating costs have increased; detention costs have decreased; more juveniles are assigned to home detention (no cost to MDC) by the Dept. of Juvenile Justice; a greater % of juveniles are now assigned to the civil citation program*



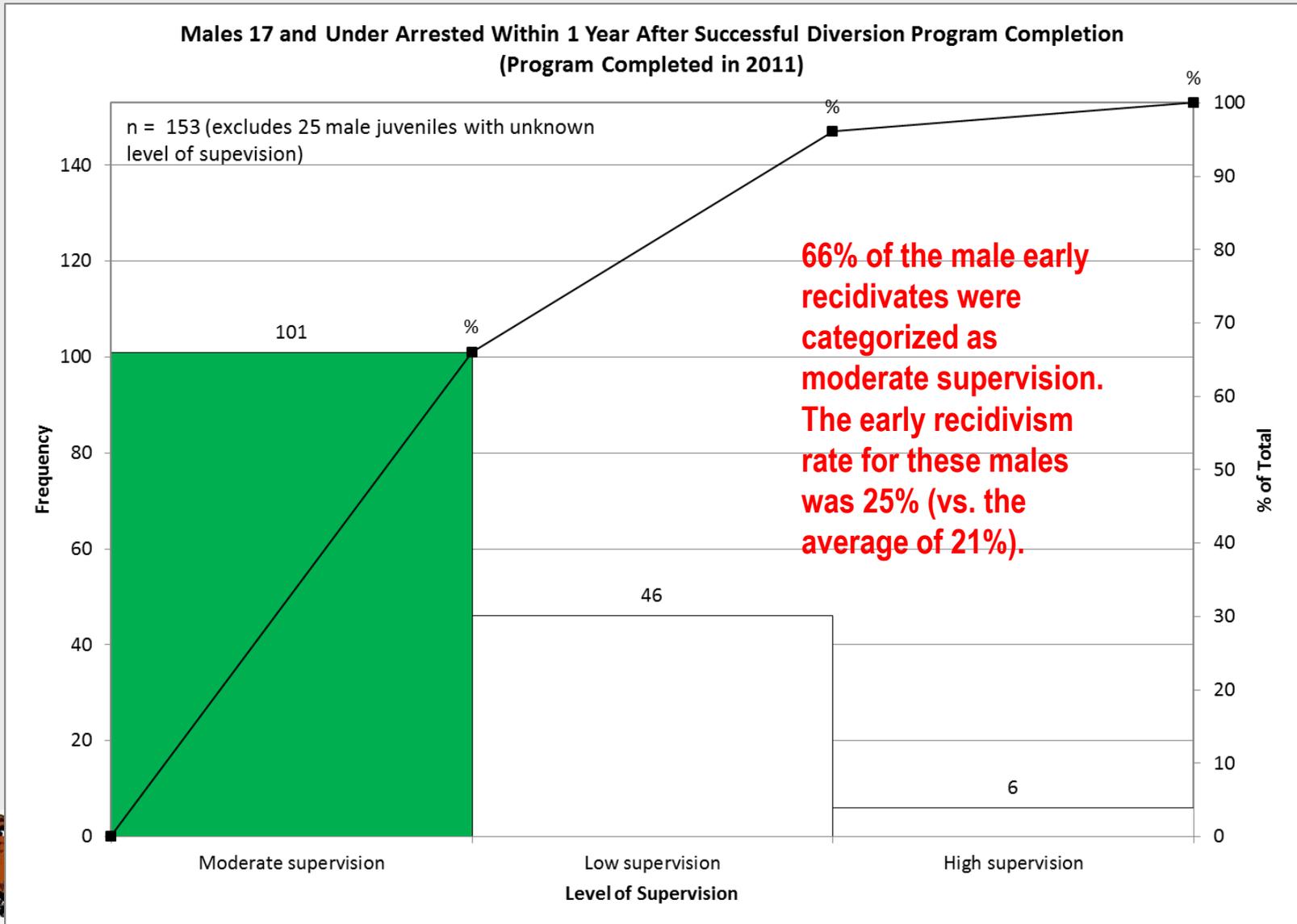
# Stratify the Problem

The team looked closer at the juveniles with a future arrest within a year of successfully completing a diversion program and found. The team stratified the data using a Pareto and found...



# Stratify the Problem

The team stratified the 178 male juveniles and found...



# Identify Potential Root Causes

The team sampled 20 of the 101 male juveniles categorized as moderate supervision and reviewed documentation and interviewed involved staff before conducting Single Case Bore Analysis.

**Problem Statement:** "101 male juveniles age 17 and under, categorized as moderate supervision level, who successfully completed a diversion program in 2011 were arrested again within one year."

Reasons or Factors (That possibly contributed to the re-arrest)	Sampled 20 of the 101 male juveniles (file numbers listed below)																			Total	Percentage	
	131048	133498	139912	13334	13050	134596	130551	135852	133818	135489	130817	134017	131100	136248	131887	1317142	132741	135359	134051			133797
Family Issues based on Assessment	X	X	X		X	X	X	X	X	X	X	X		X		X	X	X	X	X	17	85%
Single Parent Home	X	X	X		X		X		X	X	X	X	X	X	X	X	X	X	X	X	17	85%
Truancy (based on school report)	X	X	X			X	X	X	X	X				X		X	X	X	X		13	65%
Mental Health Issues based on assessment	X			X	X			X	X		X			X	X	X	X	X		X	12	60%
Other services not offered after completion	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X			15	75%
Substance Use based on assessment		X	X			X	X	X	X	X				X							9	45%
Failed a Grade	X	X		X								X	X	X		X	X			X	9	45%
Learning Disability diagnosed school	X			X			X	X			X									X	6	30%
Family History of Criminality					X		X							X			X				4	20%
Dependency History (foster care, etc.)					X																1	5%
Juvenile not enrolled in school																					0	0%

The team next looked closer at these 5 factors. ("Other services not offered" was integrated into the other 4 factors in the analysis on the following slide.)

# Identify Potential Root Causes

The team completed Cause and Effect Analysis and found...

## Mental health issues (60%)

Some juveniles do not have access to ongoing support to address mental health issues / medication compliance needs

JSD does not have a policy to create a transition plan for follow up after case is closed

A

## Family issues (85%)

Some juveniles do not have access to ongoing support to address family issues (and sometimes therapists do not follow up)

JSD does not have a policy to create a transition plan for follow up after case is closed

A

## Fishbone Cause and Effect Diagram

### Problem Statement

*"101 male juveniles age 17 and under, categorized as moderate supervision level, who successfully completed a diversion program in 2011 were arrested again within one year."*

Some juveniles do not have access to ongoing support to address truancy

JSD does not have a policy to create a transition plan for follow up after case is closed

A

Some juveniles do not have access to ongoing support to address economic pressures

JSD does not have a policy to create a transition plan for follow up after case is closed

A

Juveniles may lack positive male role model

B

Diversion programs do not incorporate male mentors / role models



= Potential Root Cause

## Truancy (65%)

## Single-parent home (85%)



The team next looked to verify these Potential Root Causes.

# Verify Root Causes

The team collected data to verify the root causes and found.... 11.,12. ✓

Root Cause Verification Matrix

Potential Root Cause	How Verified?	Root Cause or Symptom
<b>A</b> JSD does not have a policy to create a transition plan for follow up after case is closed	Team verified that JSD does not have a policy for transition planning	Root Cause
<b>B</b> Diversion programs do not incorporate male mentors / role models	Team verified that JSD currently does not include mentoring in its diversion programs	Root Cause

...both were validated as root causes.



# Identify and Select Countermeasures

The team brainstormed many countermeasures and narrowed them down to these for evaluation:

Problem Statement	Verified Root Causes	Countermeasures	Legend:				
			5=Extremely	3=Moderately			
			4=Very	2=Somewhat			
Ratings				Effectiveness	Feasibility	Overall	Take Action? Yes/No
<p>"101 male juveniles age 17 and under, categorized as moderate supervision level, who successfully completed a diversion program in 2011 were arrested again within one year."</p>	<p><b>A - JSD does not have a policy to create a transition plan for follow up after case is closed</b></p>	<p><b>A1-</b> Create new policy to create a transition plan before case is closed (to include: identifying juvenile populations for focus, engaging staff, developing incentives for families)</p>	5	3	15	Y	
		<p><b>A2-</b> Partner with community organizations (e.g. faith based, mentoring, family engagement etc.) that will carry out the plan (to include identifying organizations that already incorporate follow-up in their services)</p>	5	3	15	Y	
		<p><b>A3-</b> Recommend incorporating follow-up criteria into RFP for service providers (funding sources)</p>	3	3	9	Y	
		<p><b>A4-</b> Pursue additional resources for JSD to track transition plan implementation and/or provide incentives</p>	3	3	9	Y	
	<p><b>B - Diversion programs do not incorporate male mentors / role models</b></p>	<p><b>B1-</b> Incorporate mentoring into diversion programs as appropriate, especially for males, through a comprehensive approach (e.g. JSD staff, other County employees, partner organizations)</p>	5	4	20	Y	
		<p><b>B2-</b> Support Mayor's initiative to encourage County employees to to volunteer as mentors (under current County A.O.)</p>	5	5	25	Y	



The team selected 6 countermeasures for implementation.

# Identify Barriers and Aids

The team performed Barriers and Aids analysis on the selected Countermeasures.

Countermeasure(s): **Implement 6 Countermeasures to Reduce Juvenile Recidivism**

Barriers		Aids		
Impact (H, M, L)	Forces against Implementation		Forces For Implementation	
H	1)	Staff may resist changes / additional work <i>(Supported by Aid: A,C)</i>	A)	Management supportive of changes (e.g. Mayor's Roundtable on Youth Safety and Faith Based Initiative)
H	2)	Difficulty obtaining funding at all levels (local, state, federal) <i>(Supported by Aid: A,B)</i>	B)	JSD has strong reputation / track record / respect in community
H	3)	Challenges identifying high quality, accountable follow-up services <i>(Supported by Aid: A,B)</i>	C)	New employee recognition program

The team next sought to incorporate this analysis into the team's Action Plan.



# Develop and Implement Action Plan

Legend:  
 = Actual  
 = Proposed

The team implemented an Action Plan for the team's Countermeasures.

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## WHAT: Implement 6 Countermeasures to Reduce Juvenile Recidivism

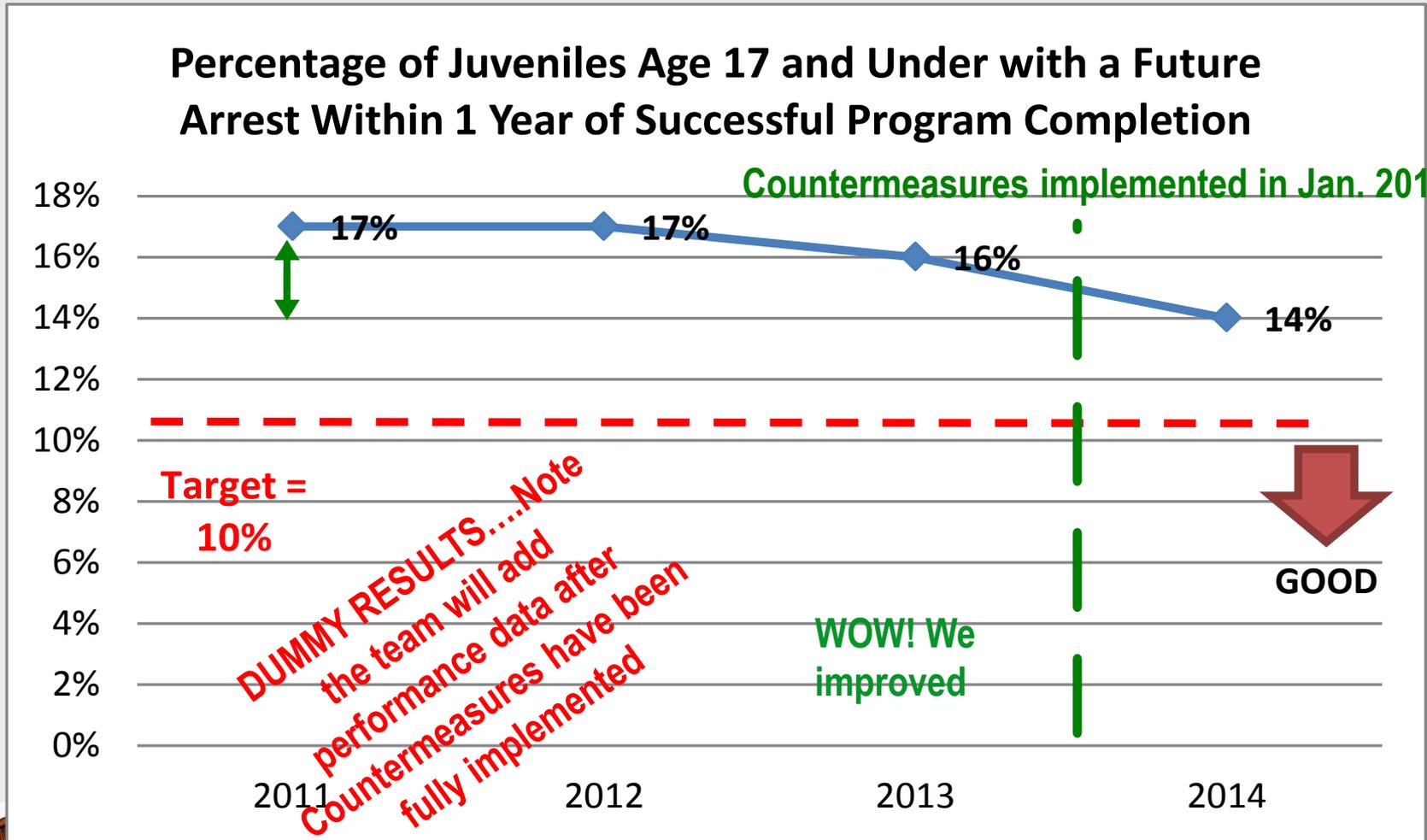
HOW	WHO	WHEN											
		2013						2014					
		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr		
<b>1. Develop and Implement Countermeasures:</b>													
A1- Create new policy to create a transition plan before case is closed (to include: identifying juvenile populations for focus, engaging staff, developing incentives for families)	Team	[Actual Bar]						1/1/14					
A2- Partner with community organizations (e.g. faith based, mentoring, family engagement etc.) that will carry out the plan (to include identifying organizations that already incorporate follow-up in their services)	Team	[Actual Bar]						1/1/14					
A3- Recommend incorporating follow-up criteria into RFP for service providers (funding sources)	Morris	[Actual Bar]			9/30/13								
A4- Pursue additional resources for JSD to track transition plan implementation and/or provide incentives	Cindy	[Actual Bar]						1/1/14					
B1- Incorporate mentoring into diversion programs as appropriate, especially for males, through a comprehensive approach (e.g. JSD staff, other County employees, partner organizations)	Team	[Actual Bar]						1/1/14					
B2- Support Mayor's initiative to encourage County employees to to volunteer as mentors (under current County A.O.)	Team	[Actual Bar] Ongoing											
<b>2. Review results and determine Benefits and adjust as necessary and present results to management</b>	Team											[Actual Bar] 2014 and beyond	
<b>3. Establish ongoing responsibilities and standardize countermeasures into operations</b>	Team / Morris											[Actual Bar] 2014 and beyond	



# Review Results

17.,18.,19.,20. ✓

The team collected indicator data and reviewed results of it's countermeasures



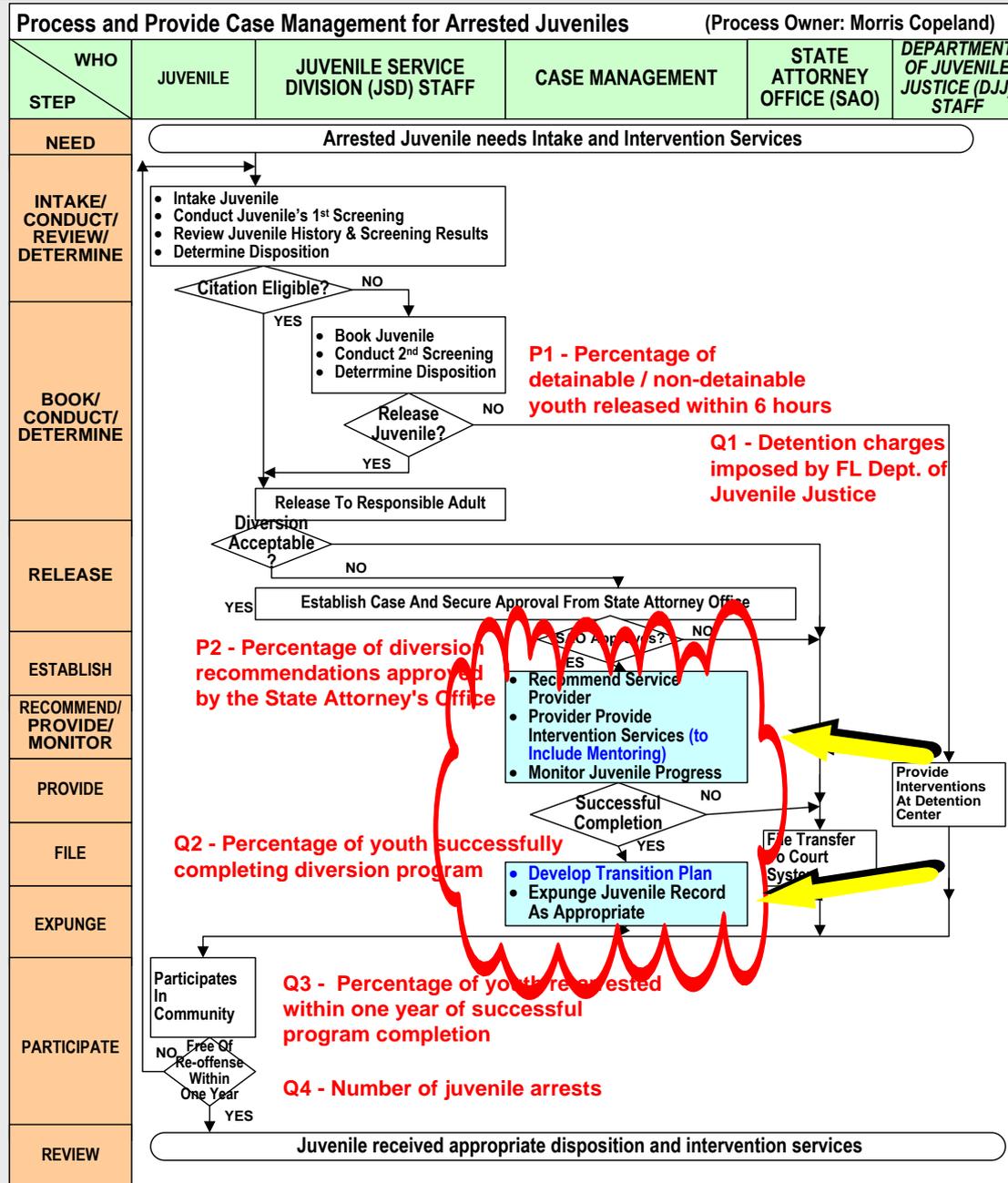
3. ✓

The team was encouraged by the results and will continue to monitor the countermeasures.



# Standardize Countermeasures

The team incorporated the improvements into the Process flowchart.



P1 - Percentage of detainable / non-detainable youth released within 6 hours

Q1 - Detention charges imposed by FL Dept. of Juvenile Justice

P2 - Percentage of diversion recommendations approved by the State Attorney's Office

Q2 - Percentage of youth successfully completing diversion program

Q3 - Percentage of youth re-arrested within one year of successful program completion

Q4 - Number of juvenile arrests

Mentoring and transition plan can reduce recidivism



# Standardize Countermeasures

The team Developed a Process Control System (PCS) to monitor the process on-going.

Process Control System						
<b>Process Name:</b> Process and provide case management for arrested juveniles			<b>Process Owner:</b> Morris Copeland			
<b>Process Customer:</b> All juveniles arrested in Miami-Dade County / families / juvenile justice community			<b>Critical Customer Requirements:</b> Timely processing; appropriate case disposition; low costs; successful diversion program completion; juveniles' remaining free of re-arrest			
<b>Process Purpose:</b> Support successful re-entry into the community of arrested juveniles			<b>Current Sigma Level:</b> TBD		<b>Outcome Indicators:</b> Q1, Q2, Q3, Q4	
Process and Quality Indicators			Checking / Indicator Monitoring			Contingency Plans / Misc. • Actions Required for Exceptions • Procedure References
Process Indicators	Control Limits	Data to Collect	Timeframe (Frequency)	Responsibility		
And	Specs/ Targets	What is Checking Item or Indicator Calculation	When to Collect Data?	Who will Check?		
Quality Indicators						
P1	Percentage of detainable / non-detainable youth released within 6 hours	75% / 60%	JSD system	Monthly	Morris Copeland	
P2	Percentage of diversion recommendations approved by SAO	90%	JSD system	Monthly	Morris Copeland	
Q1	Detention charges imposed by FL Dept. of Juvenile Justice	\$7.4 million	Billed by DJJ to County	Annually	Cindy Akerman / Morris Copeland	
Q2	Percentage of youth successfully completing diversion program	80%	JSD system	Monthly	Morris Copeland	
Q3	Percentage of youth re-arrested within one year of successful program completion	10%	% of Juveniles 17 and Under Successfully Completing a Diversion Program who are Re-arrested	Annually	Morris Copeland	May revisit definition to address exclusion of juveniles over 17; may revise target and/or frequency as additional data becomes available
Q4	Number of juvenile arrests	5,920	JSD system	Monthly	Morris Copeland	County Strategic Plan also includes target for # of arrests per 1,000 juvenile population



The team looked ahead to the future.



1. The JSD Director noted that there is no single, consistent definition of “recidivism” among the juvenile justice community. However, looking at re-arrest rates may be informative; additionally, research has shown that most juveniles who do not re-offend within one year of completing sanctions remain arrest-free in the future
2. Currently, there is no automated method of obtaining information regarding arrests that occur after a juvenile turns 18. This makes it difficult to gain a complete understanding of recidivism among former JSD clients
3. The JSD system does not include juvenile date of birth in all of its management reports, making it difficult to determine juvenile age at key milestone dates
4. An alternative metric for estimating recidivism may be to calculate the percentage of all juveniles arrested who had successfully completed a diversion program within the past year
5. The JSD system does not automatically distinguish between arrests without a booking / citations and prevention cases in all of its management reports
6. Commission district was not recorded for 18% of the juveniles in the data sample. It was further noted that the JSD system has not been updated to reflect recent redistricting following the 2010 census



## Lessons Learned

- 1) There is more than one way to obtain recidivism information; sampling and other estimating techniques were useful
- 2) It would be optimal to track recidivism data once juveniles turn 18, but challenges exist
- 3) Data stratification and single case bore exercise supported anecdotal observations and research regarding root causes of juvenile recidivism

## Next Steps

- 1) Continue to monitor the countermeasures and performance results.



# Appendix –SIPOC Analysis (support for slide 8)

## S.I.P.O.C. Analysis

Process: *Process and provide case management for arrested juveniles*

Process Owner: *Morris Copeland*

Date Approved: \_\_\_\_\_

Suppliers	Inputs	Process	Outputs*	Customers
Police officers	Arrested Juveniles A-Form (currently being automated)	1. Complete intake and screening for arrested youth at Juvenile Assessment Center	Completion of Intake and first screening	Juveniles (is the juvenile a "customer"?) Responsible adults JAC supervisors / assessment staff State Attorney
JAC intake staff	Completion of first screening	2. Perform initial assessment of youth 2a. Determine case disposition if further assessment is not needed	Civil citation, release to responsible adult and referral to case management OR Transfer to DJJ OR Referral for further assessment	Juveniles Responsible adults JAC supervisor / secondary assessment staff / case management staff State Attorney
JAC assessment staff	Referral for further assessment from Step 2	3. Determine case disposition based on program criteria	Referral to diversion program, release to responsible adult and case management OR Release to responsible adult	Juveniles Responsible adults JAC supervisor / case management staff State Attorney
JAC secondary assessment staff	Civil citation OR Referral to diversion program	4. Manage case	Record expungement OR Program completion OR Referral to State Attorney	Juveniles Responsible adults JAC supervisor / case management staff State Attorney

\* Outputs used to Identify Outcomes



Note: See next Appendix Page for derived Indicators from SIPOC Outputs

# Appendix- Customer Requirements Matrix (Support for Slide 8)

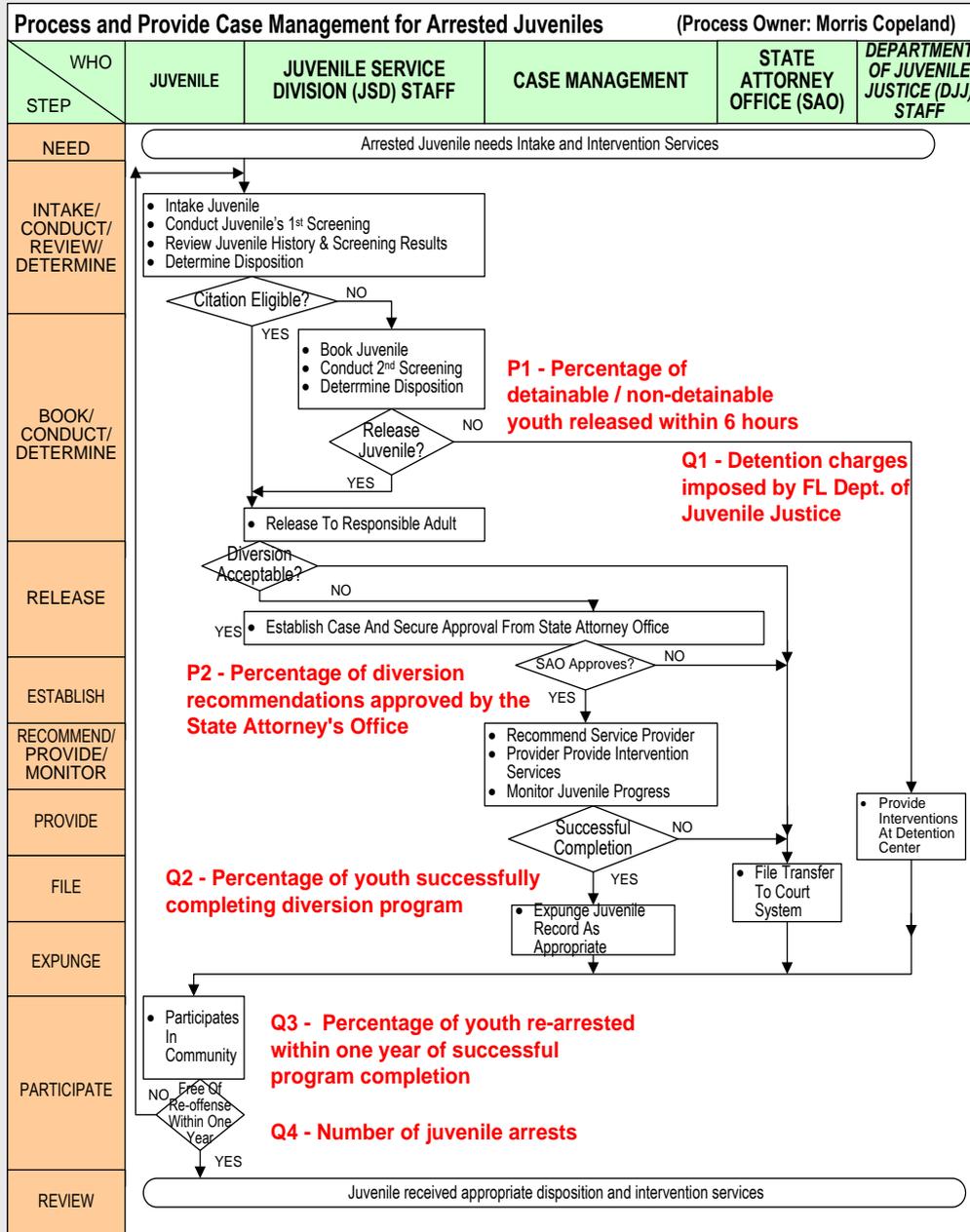
## Customer Requirements Matrix

Process: *Process and Provide Case Management for Arrested Juveniles*

Survey Voice of Customer		Process Output(s)	Customer Valid Requirement	Outcome Indicator
Quality Element	Example Question			
Timeliness	When do customers need the process outputs?	-Complete intake and 1st Screening - Transfer to DJJ or Release to responsible adult	Arrested youth processed within 6 hours of arriving at the JAC	P1 - Percentage of detainable / non-detainable youth released within 6 hours
Accuracy	How accurate do the process outputs need to be?	Civil Citation OR Referral to diversion program	Case disposition is appropriate and legal	P2 - Percentage of diversion recommendations approved by the State Attorney's Office
Cost	What cost/resources are customers willing to pay for process	Transfer to DJJ	Reduce County's cost of detention	Q1 - Detention charges imposed by FL Dept. of Juvenile Justice
Accuracy	How accurate do the process outputs need to be?	Civil Citation OR Referral to diversion program	Successful completion of diversion program	Q2 - Percentage of youth successfully completing diversion program
Accuracy	How accurate do the process outputs need to be?	Program Completion OR Record Expungement	Juvenile remains free of re-arrest	Q3 - Percentage of youth re-arrested within one year of successful program completion ( <i>Also consider: Percentage of youth re-arrested within on year of exiting diversion program prior to successful completion</i> )
				Q4 - Number of juvenile arrests



# Appendix –Process Flowchart



# Appendix –Process Control System Form

Process Control System						
<b>Process Name:</b> Process and provide case management for arrested juveniles			<b>Process Owner:</b> Morris Copeland			
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Q4	Number of juvenile arrests	5,920	JSD system	Monthly	Morris Copeland	County Strategic Plan also includes target for # of arrests per 1,000 juvenile population



# Appendix – Method of calculating recidivism

1. A complete list of all juveniles successfully completing a diversion program in 2011 was obtained.
2. Juveniles who completed a prevention program were eliminated from the sample.
3. Because future arrest information is not available in the JSD system once the juvenile turns 18, it was decided to eliminate all juveniles over the age of 17 (at the time of program completion) from the sample.
4. The recidivism population was defined as the juveniles in the sample with either a “future arrest” or a “future non-arrest” occurring within one year of the diversion program completion date.
  - The juveniles with a “future arrest” or a “future non-arrest” occurring prior to the completion of the diversion program were excluded
  - A “future non-arrest” may represent an arrest without a booking (civil citation or referral arrest) OR a prevention case. Consequently, JSD staff manually checked the youth in this category and the team excluded juveniles with a future prevention case



# Appendix – Additional Data on Early Recidivism

Sub-groups whose early recidivism rate is above the overall average in the sample (17%) are highlighted in red.

## Juvenile Ethnicity (Summary and Detailed)

Ethnicity	Sum of All Juveniles in Sample	Sum of Early Recidivates	Early Recidivism Rate
African American	430	93	22%
Haitian	121	26	21%
Hispanic	735	111	15%
Anglo	68	9	13%
Other	31	4	13%
	1385	243	

Ethnicity (Detailed)	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Asian	2	1	50%
Canadian	3	1	33%
Mexican	28	9	32%
African American	430	93	22%
Haitian	121	26	21%
Dominican	25	5	20%
Colombian	66	13	20%
Puerto Rican	68	13	19%
Venezuelan	27	5	19%
Cuban	264	39	15%
Anglo	68	9	13%
Nicaraguan	42	5	12%
Other Hispanic	196	21	11%
Jamaican	12	1	8%
Other	14	1	7%
Argentinian	19	1	5%
	1385	243	

*\*Excludes juveniles of an ethnicity with zero early recidivates*



# Appendix – Additional Data on Early Recidivism

Sub-groups whose early recidivism rate is above the overall average in the sample (17%) are highlighted in red.

Race	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Asian	2	1	50%
Black	615	128	21%
White	795	114	14%
	1412	243	

Juvenile Language Spoken	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Creole	21	7	33%
English	734	163	22%
Spanish	279	42	15%
Unknown	370	31	8%
Other	6	0	0%
French	1	0	0%
Ukrainian	1	0	0%
	1412	243	

## *Juvenile Race and Language Spoken*



# Appendix – Additional Data on Early Recidivism

Juvenile Age at Program Completion		All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
From...	...To			
8.5	9.5	1	0	0%
9.5	10.5	4	0	0%
10.5	11.5	4	1	25%
11.5	12.5	26	4	15%
12.5	13.5	80	13	16%
13.5	14.5	195	41	21%
14.5	15.5	329	56	17%
15.5	16.5	483	89	18%
16.5	17.5	290	39	13%
		1412	243	

Juvenile Age at Program Completion		All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
From...	...To			
10.5	11.5	4	1	25%
13.5	14.5	195	41	21%
15.5	16.5	483	89	18%
14.5	15.5	329	56	17%
12.5	13.5	80	13	16%
11.5	12.5	26	4	15%
16.5	17.5	290	39	13%
8.5	9.5	1	0	0%
9.5	10.5	4	0	0%
		1412	243	

## Juvenile Age

*\*Identical data is sorted by age group (L) and by early recidivism rate (R)*



# Appendix – Additional Data on Early Recidivism

Number of Prior Arrests	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
3	5	3	60%
2	20	9	45%
1	231	40	17%
0	1156	191	17%
	1412	243	

Has Prior Non-Arrest?	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Yes	1159	200	17%
No	253	43	17%
	1412	243	

Number of Prior Non-Arrests	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
4	4	4	100%
3	23	11	48%
2	113	42	37%
0	253	43	17%
1	1018	143	14%
5	1	0	0%
	1412	243	

## Arrest History, Program and Supervision Level

Diversion Program	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
IDDS	69	19	28%
JDAP	26	6	23%
JASS	65	13	20%
JASP	161	28	17%
Civil Citation	1091	177	16%
	1412	243	

Supervision Level	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
High supervision	31	11	35%
Moderate supervision	609	130	21%
Low supervision	646	65	10%
Unknown	126	37	29%
	1412	243	



# Appendix – Additional Data on Early Recidivism

## Assessment Information

Alcohol / Drug Risk	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Drug Risk High	21	7	33%
No Assessment	158	50	32%
Drug Risk Moderate	229	50	22%
Drug Risk Low	1001	136	14%
Drug Risk Multiple	3	0	0%
	1412	243	

Family Risk	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
No Assessment	158	50	32%
Mental Risk Moderate	208	44	21%
Mental Risk High	19	3	16%
Mental Risk Low	1026	146	14%
Mental Risk Multiple	1	0	0%
	1412	243	

Family Risk	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Family Risk Multiple	2	1	50%
No Assessment	158	50	32%
Family Risk Moderate	286	59	21%
Family Risk High	39	7	18%
Family Risk Low	927	126	14%
	1412	243	



# Appendix – Additional Data on Early Recidivism

Commission District (pre-2010)	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
1	125	17	14%
2	141	32	23%
3	118	29	25%
4	105	20	19%
5	56	10	18%
6	40	6	15%
7	55	7	13%
8	79	12	15%
9	142	31	22%
10	57	10	18%
11	78	11	14%
12	74	8	11%
13	53	6	11%
Unknown	289	44	15%
	1412	243	

Commission District (pre-2010)	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
3	118	29	25%
2	141	32	23%
9	142	31	22%
4	105	20	19%
5	56	10	18%
10	57	10	18%
8	79	12	15%
6	40	6	15%
11	78	11	14%
1	125	17	14%
7	55	7	13%
13	53	6	11%
12	74	8	11%
Unknown	289	44	15%
	1412	243	

## Commission District of Residence

*\*Identical data is sorted by district # (L) and by early recidivism rate (R)*



# Appendix – Additional Data on Early Recidivism

## Diversion Program Duration

*\*Overall early recidivism rate: 17%*

Program Duration (Rounded to Nearest Number of Months)	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
0	100	32	32%
1	211	36	17%
2	150	15	10%
3	200	20	10%
4	232	49	21%
5	190	37	19%
6	176	35	20%
7	80	10	13%
8	35	5	14%
9	20	2	10%
10	8	1	13%
11	7	1	14%
12	0	0	N/A
13	1	0	0%
14	1	0	0%
15	0	0	N/A
16	1	0	0%
	1412	243	

Program Duration (Rounded to Nearest Number of Months)	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
0	100	32	32%
4	232	49	21%
6	176	35	20%
5	190	37	19%
1	211	36	17%
8	35	5	14%
11	7	1	14%
7	80	10	13%
10	8	1	13%
2	150	15	10%
3	200	20	10%
9	20	2	10%
13	1	0	0%
14	1	0	0%
16	1	0	0%
12	0	0	N/A
15	0	0	N/A
	1412	243	

*\*Identical data is sorted by duration # (L) and by early recidivism rate (R)*



# Appendix – Additional Data on Early Recidivism

## Type of Offense

Property Crime?	All Juveniles in Sample	Early Recidivates	Early Recidivism Rate
Property Crime	255	56	22%
Not Property Crime	1157	187	16%
	1412	243	

*\*Other offense types (e.g. domestic violence, homicide, high profile, etc.) were not analyzed because the number of juveniles in the sample arrested for these offenses was very small*

