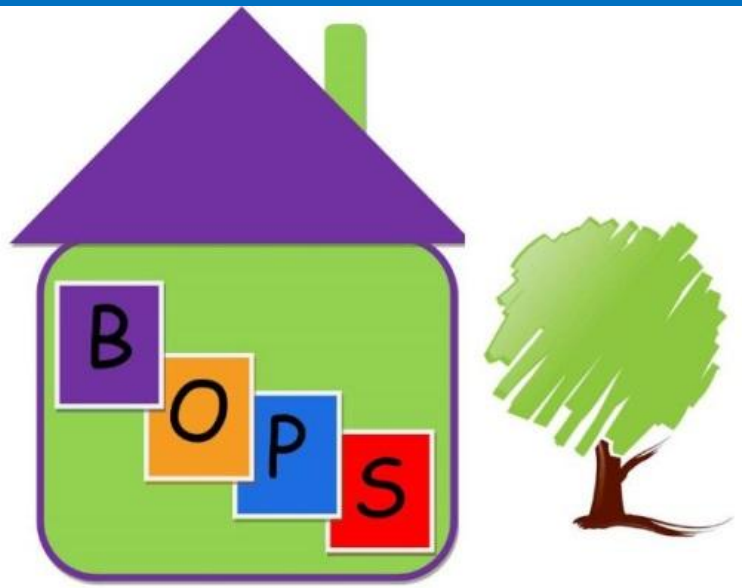


BRONX ONGOING PEDIATRIC SCREENING (BOPS) IN THE MEDICAL HOME

A DEMONSTRATION OF RAPID-CYCLE LEARNING FOR QUALITY IMPROVEMENT

Paul Meissner, MSPH

EINSTEIN
Albert Einstein College of Medicine
OF YESHIVA UNIVERSITY

Montefiore
THE UNIVERSITY HOSPITAL

Presenter Disclosures

Paul Meissner

(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

"No relationships to disclose"

BOPS in the Medical Home

A federally funded cooperative agreement for a quality improvement collaboration between:

1. HRSA (Health Resources and Services Administration)
2. Albert Einstein College of Medicine - Montefiore Medical Center

Officially launched on March 22, 2011

Purpose

1. To use a practice based research network (NYC RING) to form a consortium of 13 clinical sites- (pediatrics, family medicine and school based practices) in Bronx, NY

2. To design, implement and evaluate a continuous, comprehensive, coordinated, evidence based, culturally appropriate universal screening regimen across the pediatric lifespan from birth to adolescence that focuses on four critical domains.

3. To conduct an evaluation of this initiative.

Questions for this Presentation

1. Does learning happen in Learning Collaboratives?
2. What would be evidence that would demonstrate that learning?
3. Can we produce that evidence?

BOPS Screening Domains

1. Newborn Infectious, Genetic and Metabolic Disease
2. Early Childhood Developmental and Social-Emotional Health
3. School Aged and Adolescent Mental Health
4. Adolescent Sexual Health

Methods : Learning Collaborative

- Learning Collaborative based on IHI methodology
  - Physician-led multi-disciplinary site teams including nursing and administrative staff members
  - Quality improvement coaching provided to each site team by the Project Director and Assistant
  - Quarterly learning sessions where all site teams gather to share lessons and solutions

Other Methods

Pay for Quality

- Monetary incentives for sites based on meeting specific screening goals
- MOC credit for physicians (ABFM, ABP)

Data Feedback Loop

- Real time validated data feedback via monthly, customized ‘smart reports’ generated from EMR
- Site level and provider level data for each month’s screening activities

BOPS Monthly Smart Report

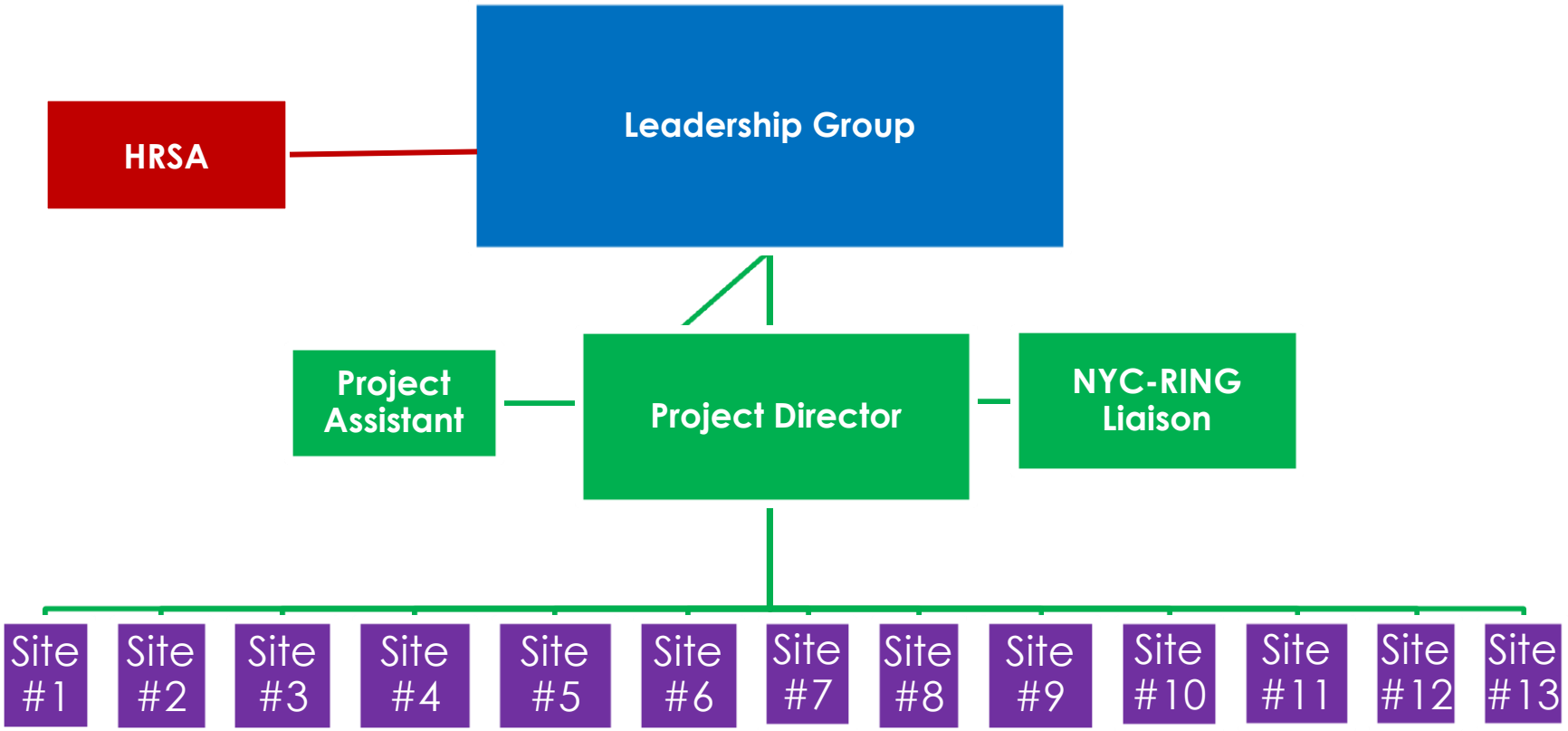
Domain: Infant & Toddler Developmental Screening.

Report Period: August 01, 2013 to August 31, 2013

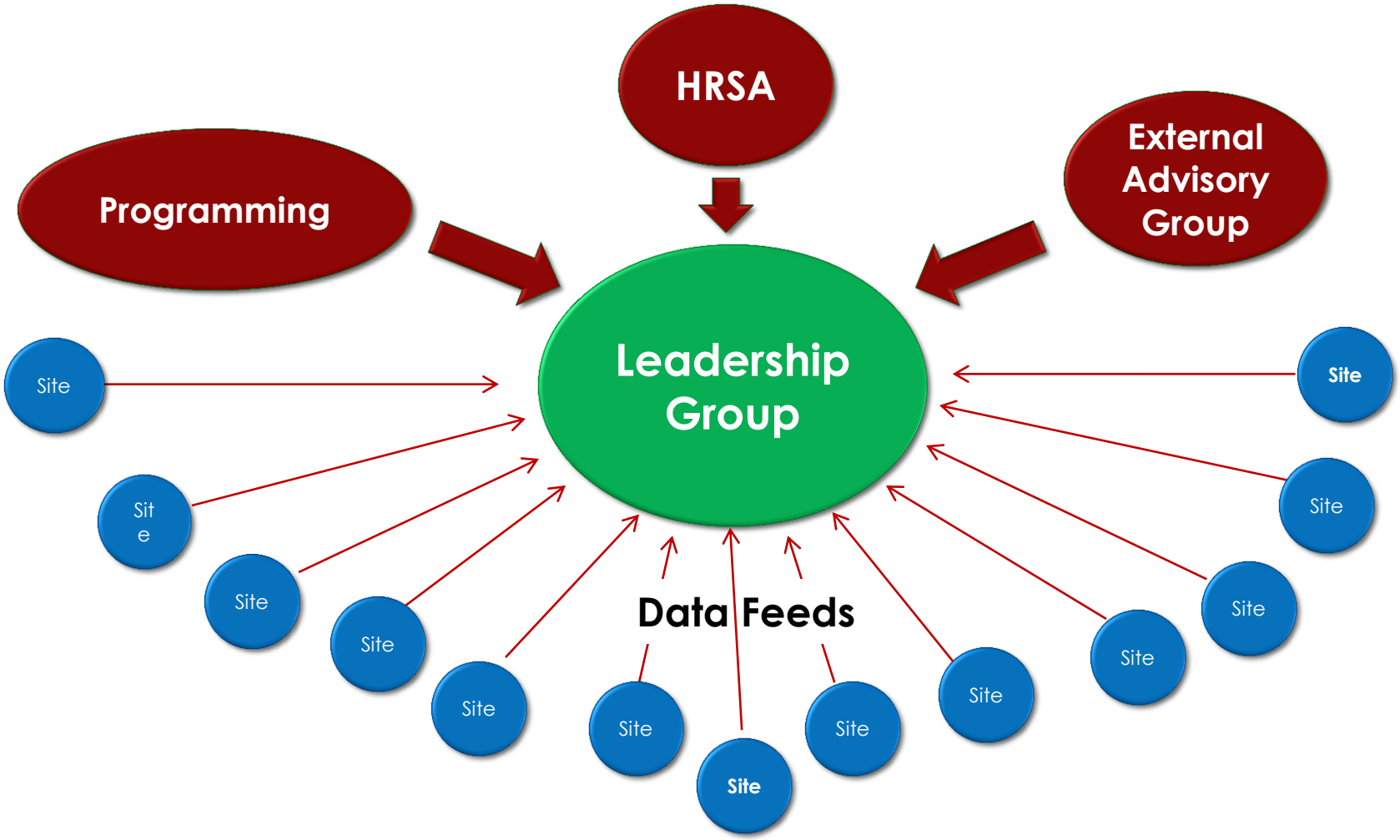
BOPS in the Medical Home		Champion(s): *A. Racine*		Setting Model: *Pediatrics & Family Medicine*	
ASQ - 3	**Eligible Visits**	**Number of Screens**	**Percentage**	**Goal**	**Variance**
Screening at 12 Month Visits	171	142	83%	95%	12%
Follow Up for Positive Scores					
MCHAT					
Screening at 18 Month Visits	223	142	64%	95%	31%
Follow Up for Positive Scores					
ASQ:SE					
Screening at 24 Month Visits	195	102	52%	95%	43%
Follow Up for Positive Scores					

Age Ranges	Visit Types	Variance
12 Months: 12-14 Months of Age	HCM Visits: All office visits filtered by ICD-9 codes: V20.2, V21.2, V70.0, V70.3, V70.5 and V70.9	Green: Goal Meet
18 Months: 16-20 Months of Age		Yellow: Rate ≤ 20% Away from Goal
24 Months: 22-26 Months of Age		Red: Rate > 20% Away from Goal

Implementation Structure



Evaluation Structure

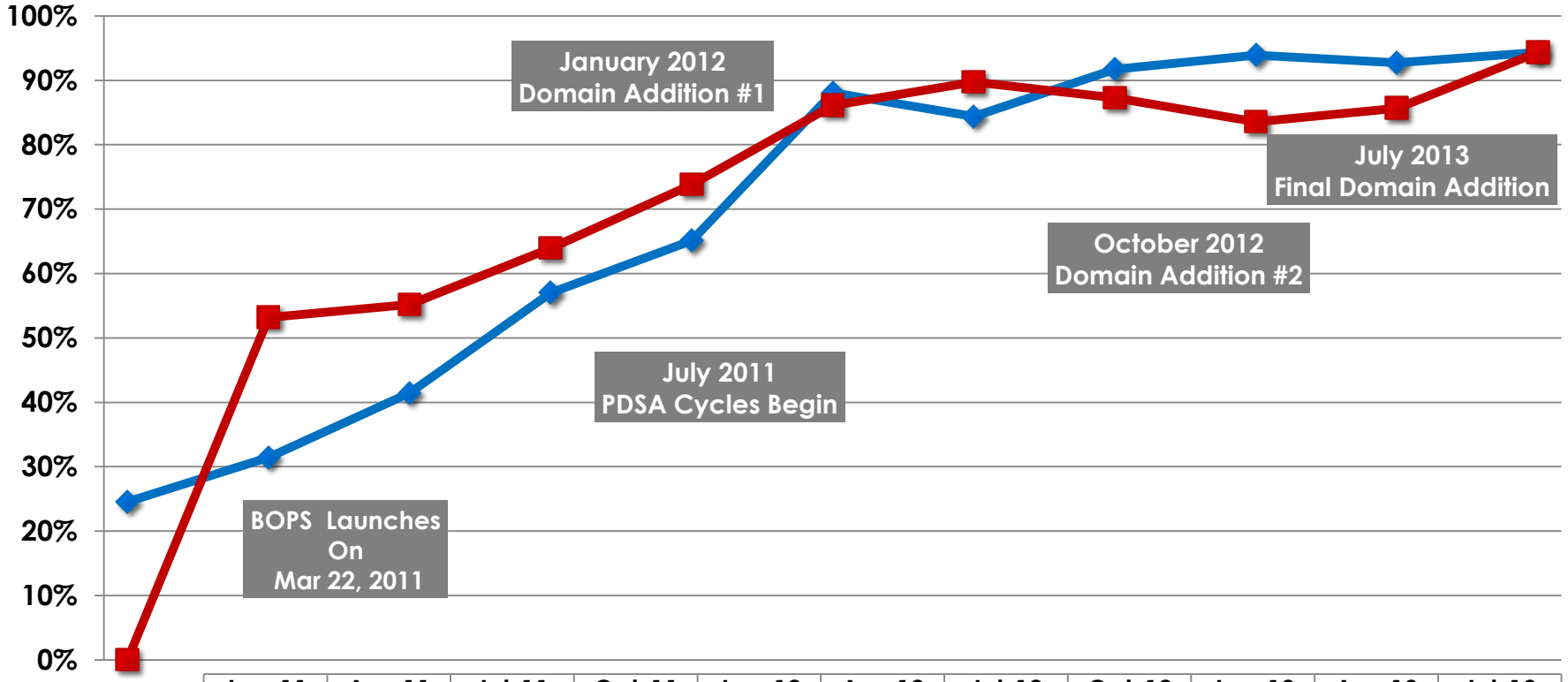


RESULTS

Annotated Run Charts

2011-2013

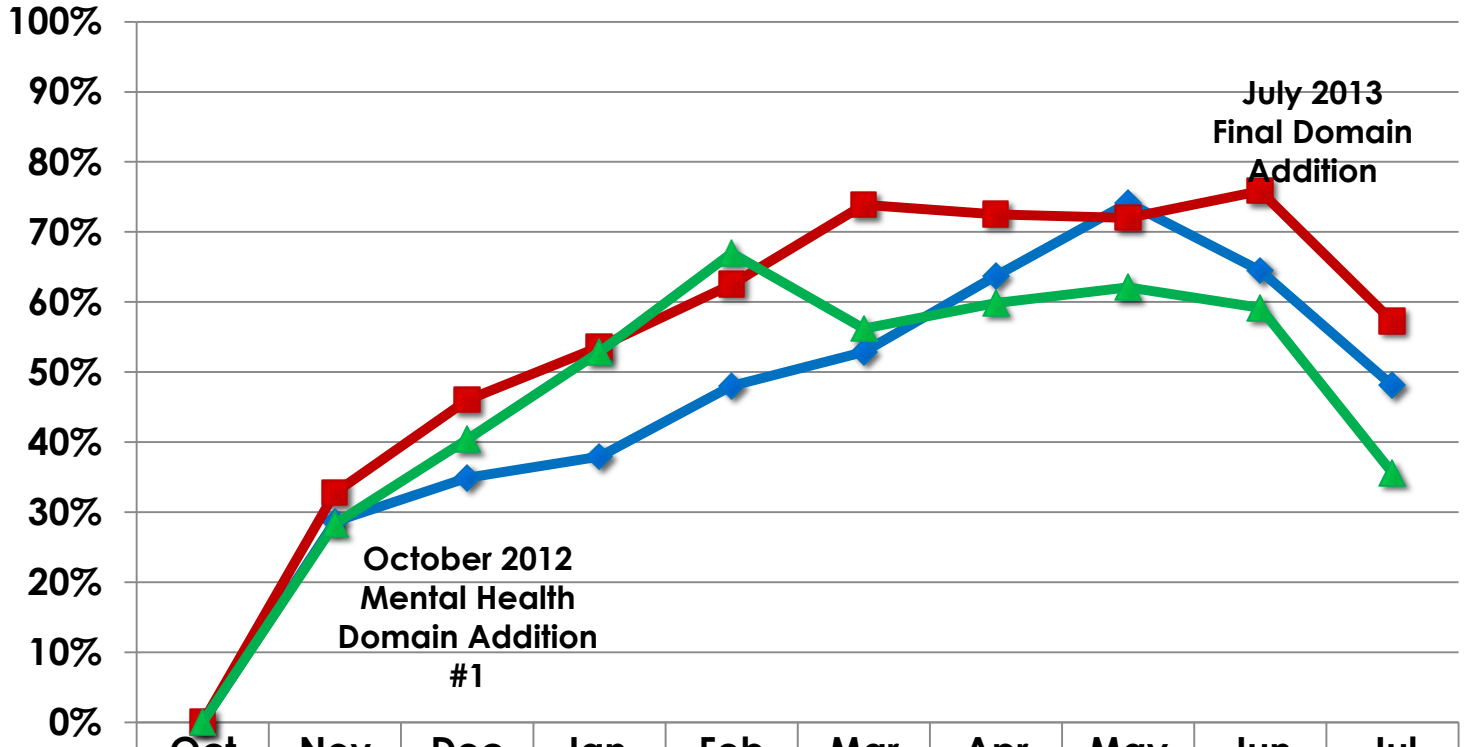
Newborn IMDS Test Results Recorded & Reviewed with Families



	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
Recorded	25%	31%	41%	57%	65%	88%	84%	92%	94%	93%	94%
Reviewed	0%	53%	55%	64%	74%	86%	90%	87%	84%	86%	94%

Volume	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
Recorded	199	179	154	180	234	252	240	239	243	263	246
Reviewed	71	72	74	109	146	210	210	216	218	238	222

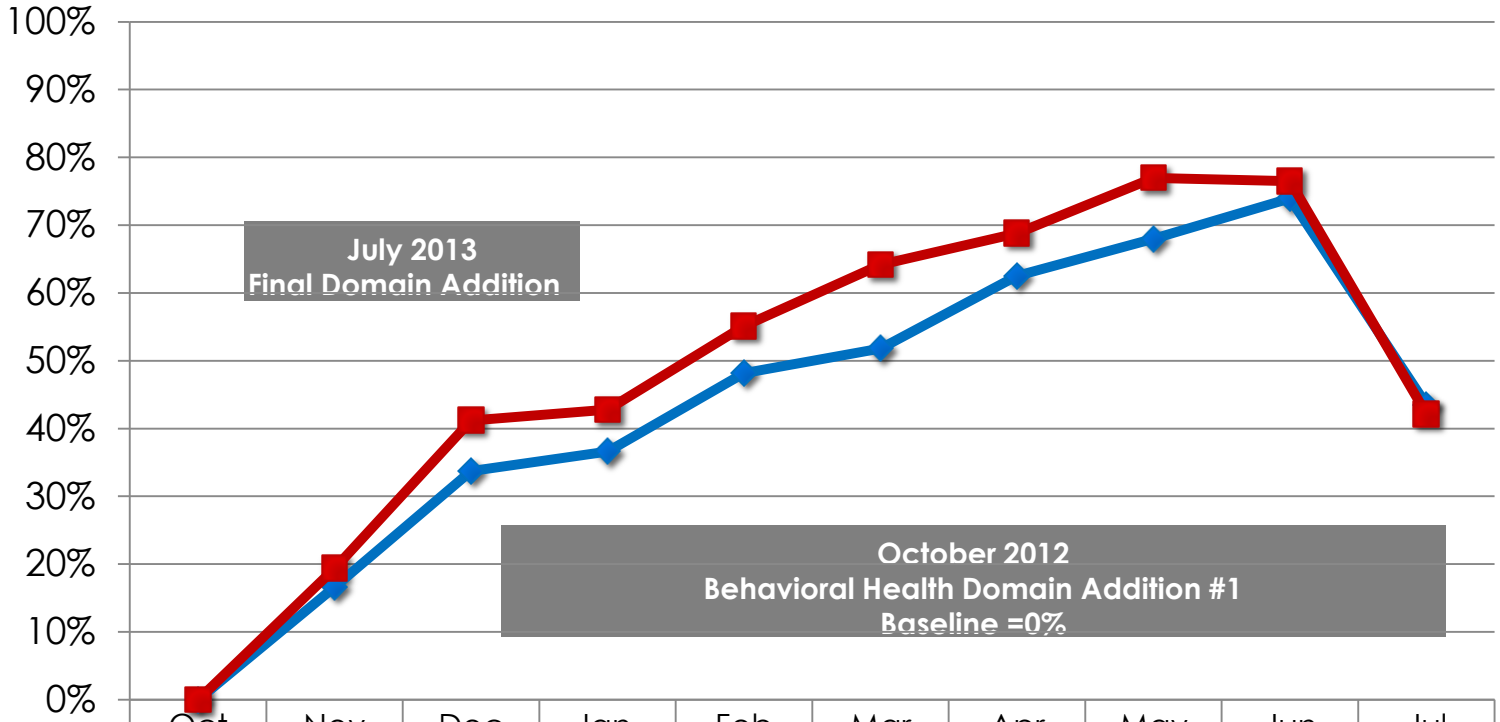
Early Childhood Developmental/Social Emotional Screening



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
ASQ3	0%	29%	35%	38%	48%	53%	64%	74%	64%	48%
MCHAT	0%	33%	46%	54%	63%	74%	72%	72%	76%	57%
ASQSE	0%	28%	40%	53%	67%	56%	60%	62%	59%	36%

Volume	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
12-14M	0	178	126	174	127	123	160	120	121	235
16-20M	0	168	150	168	144	153	189	150	178	241
22-26M	0	172	126	149	116	103	117	122	108	184

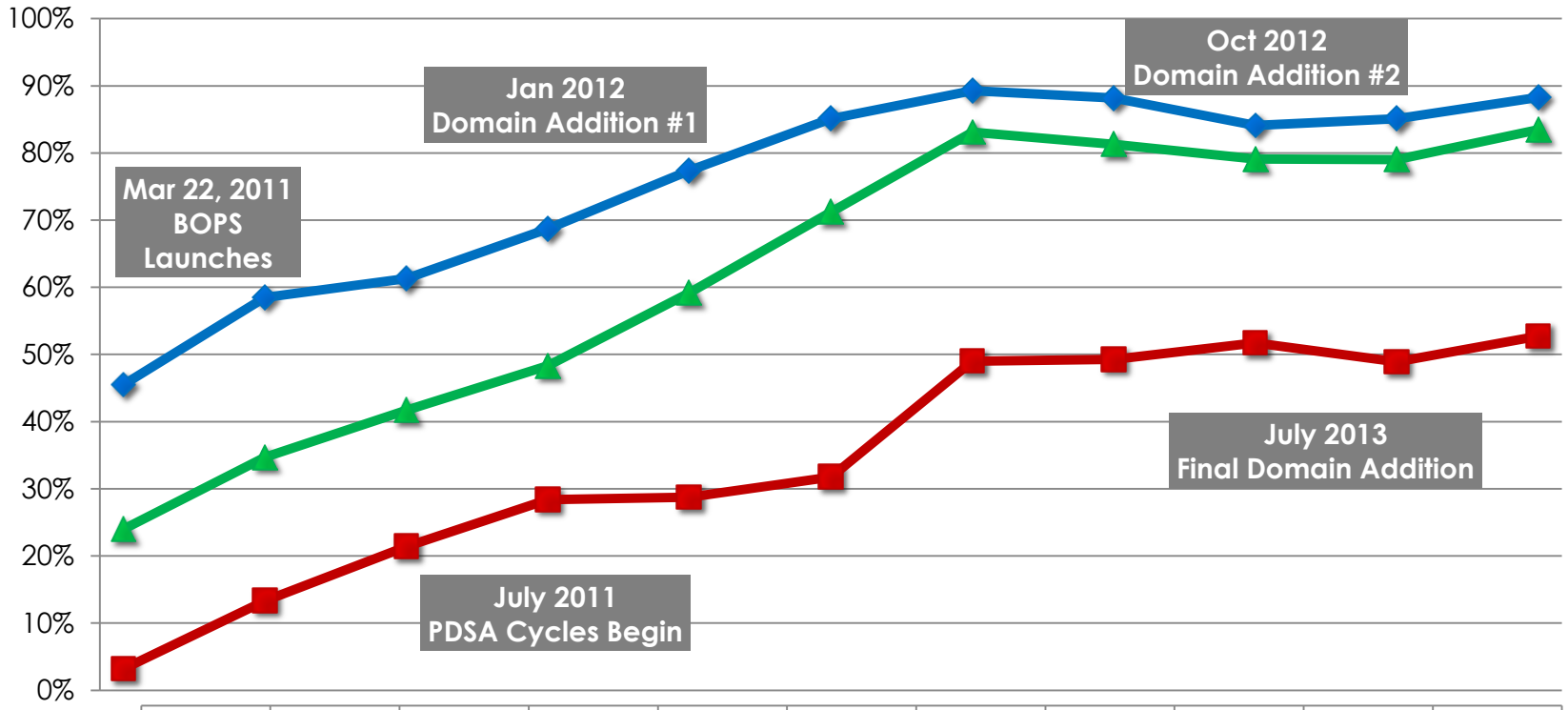
Routine Mental Health Screening for 4-18 Year Olds



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
PSC-17	0%	17%	34%	37%	48%	52%	63%	68%	74%	44%
Y-PSC-17	0%	19%	41%	43%	55%	64%	69%	77%	77%	42%

Volume	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13
4-11 Y	0	811	629	814	602	633	667	675	626	1765
12-18 Y	0	547	432	521	392	424	468	473	400	1334

Sexual History Documentation for Adolescent Patients, 2011-2013

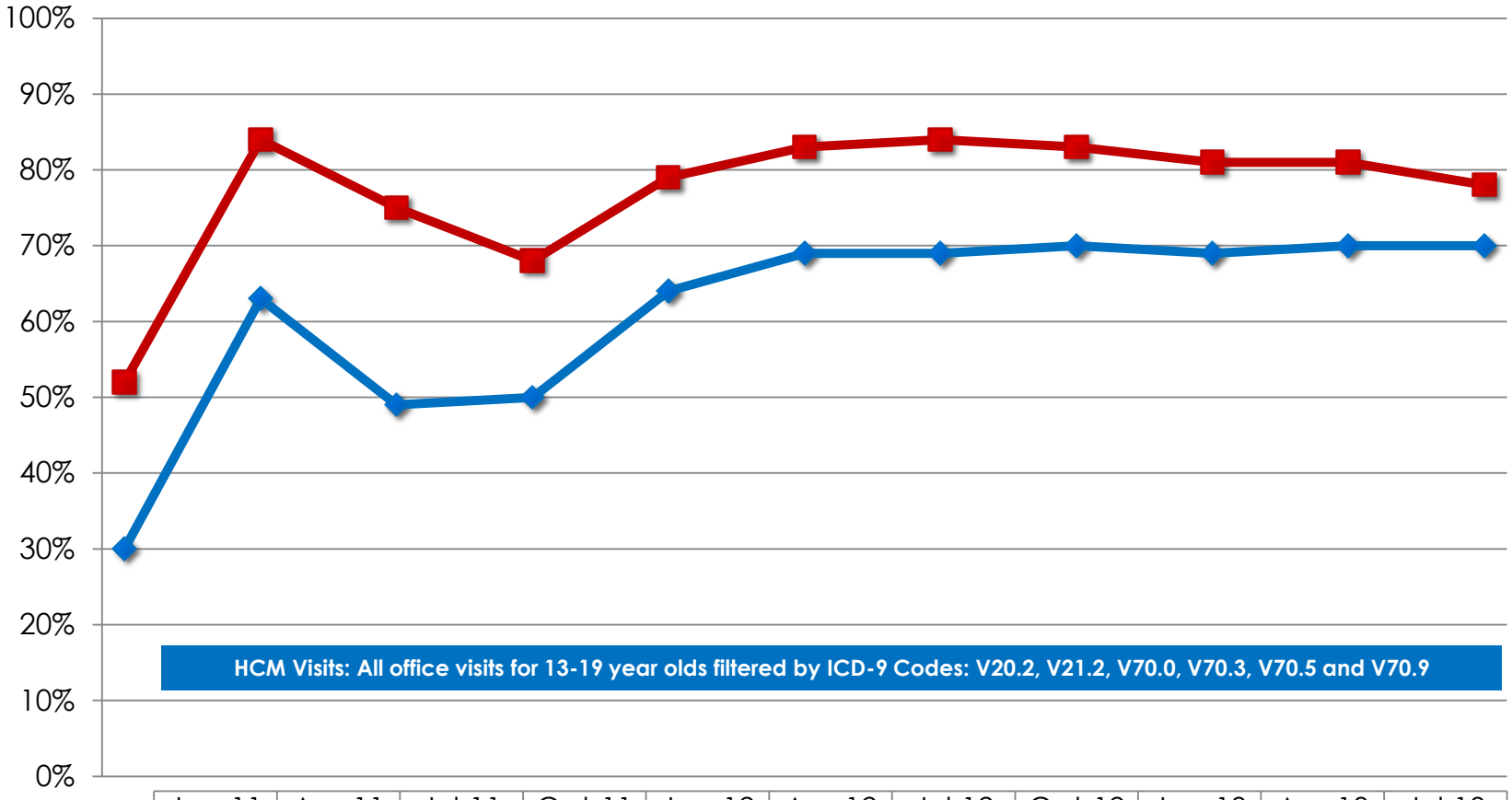


	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
HCM	46%	59%	61%	69%	77%	85%	89%	88%	84%	85%	88%
ENH	3%	13%	21%	28%	29%	32%	49%	49%	52%	49%	53%
ALL	24%	35%	42%	48%	59%	71%	83%	81%	79%	79%	83%

1. HCM Visits: All office visits for 13-19 year olds filtered by ICD-9 Codes: V20.2, V21.2, V70.0, V70.3, V70.5 & V70.9
2. ENH Visits: All non-HCM office visits for 13-19 year olds who have not had an HCM visit in the past 12 months.
3. All Visits: All office visits for 13-19 year olds in a given reporting month.

Volume	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
HCM	583	645	776	710	784	981	1370	1180	1072	1015	1271
ENH	382	514	484	590	561	376	316	313	376	336	244
All	1507	1803	1780	1932	2087	2037	2246	2178	2280	2105	2125

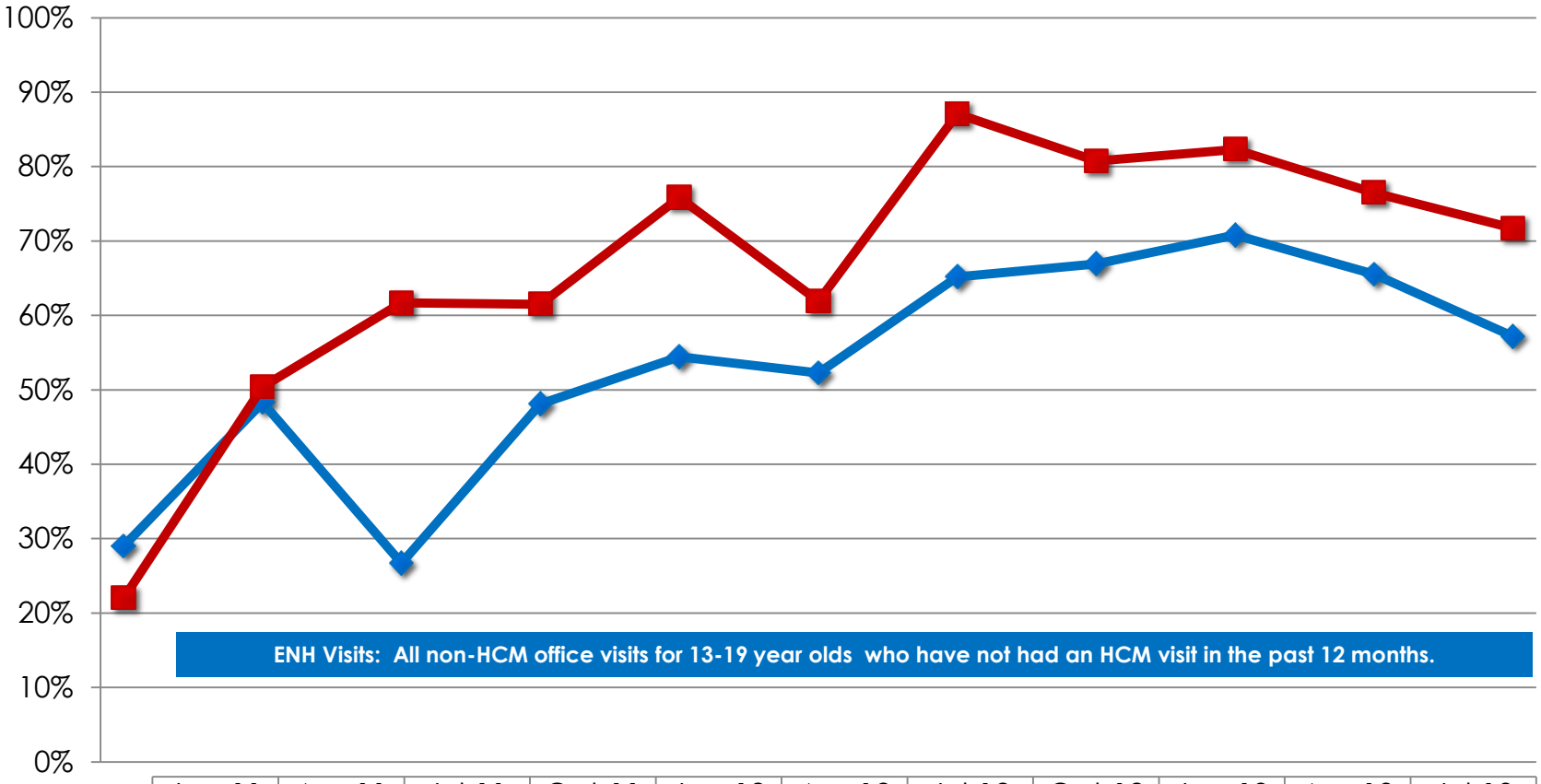
STI Screening for Adolescents Documented as Sexually Active HCM Visits



	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
HIV	30%	63%	49%	50%	64%	69%	69%	70%	69%	70%	70%
GCC	52%	84%	75%	68%	79%	83%	84%	83%	81%	81%	78%

HCM Visits for Sexually Active Adolescents											
Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
117	152	181	170	228	264	427	333	301	252	339

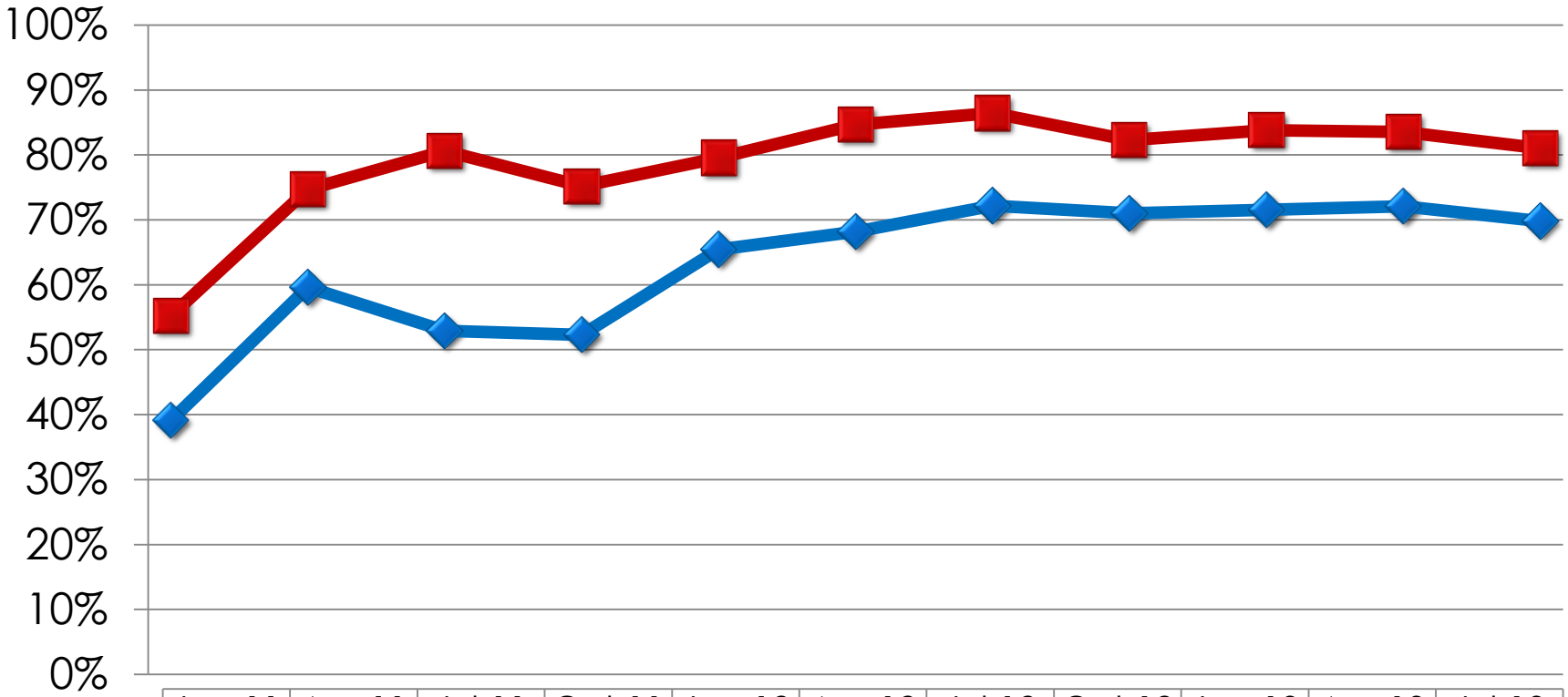
STI Screening for Adolescents Documented as Sexually Active
Eligible Non-HCM Visits



	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
HIV	29%	48%	27%	48%	54%	52%	65%	67%	71%	66%	57%
GCC	22%	50%	62%	62%	76%	62%	87%	81%	82%	76%	72%

ENH Visits for Sexually Active Adolescents										
Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
9	25	35	69	76	69	90	83	93	101	83

STI Screening for Adolescents Documented as Sexually Active
All Adolescent Visits



	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
HIV	39%	60%	53%	52%	65%	68%	72%	71%	72%	72%	70%
GCC	55%	75%	81%	75%	80%	85%	86%	82%	84%	84%	81%

All Visits for Sexually Active Adolescents										
Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
141	254	300	336	487	526	742	623	651	603	640

Methods

The domains:

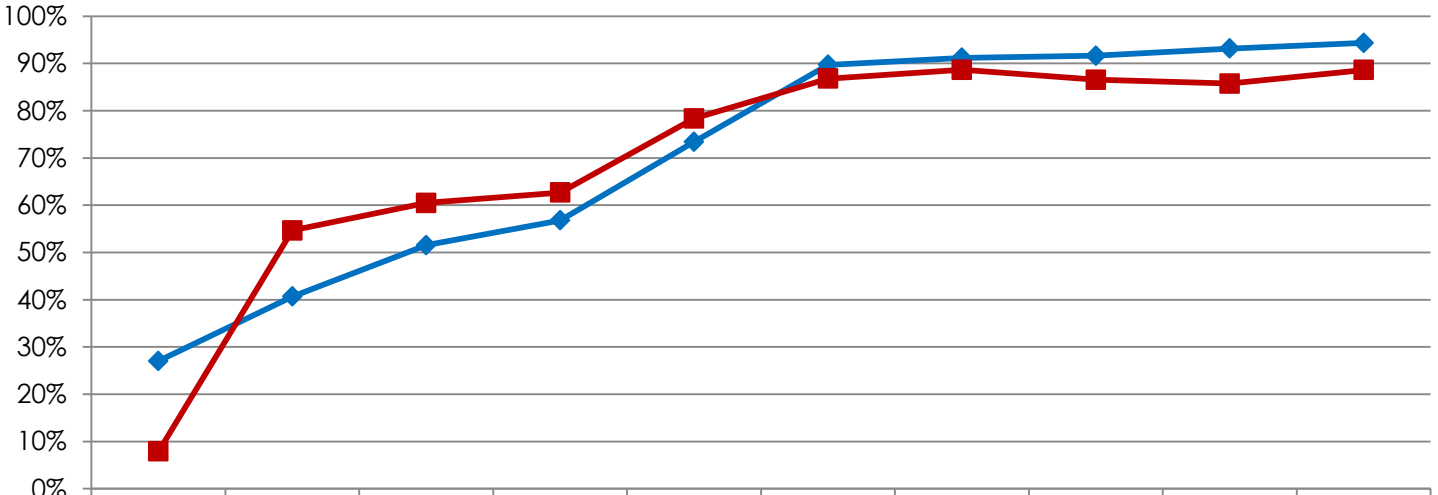
- First two are improvement focused
  - Should be doing them, established processes
- Second two are implementation and then improvement focused
  - New processes need to be established before improving rates

Look at the time it takes for the rate of improvement to plateau

Does that time shorten as the teams get more experience in working collaboratively?

Quarterly change in screening rates

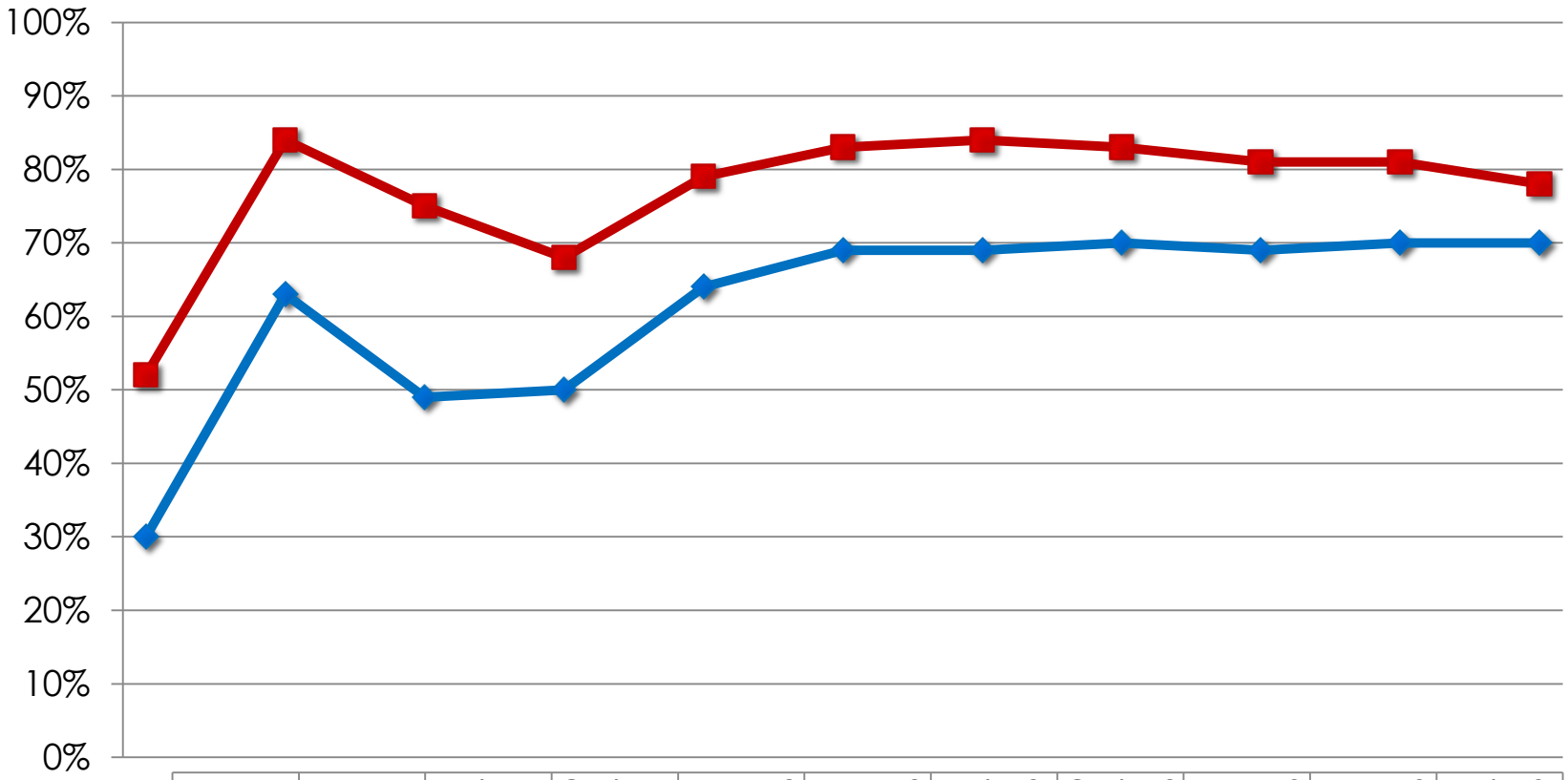
Quarterly Newborn Domain Rates



	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Recorded	27%	41%	52%	57%	73%	90%	91%	92%	93%	94%
Reviewed	8%	55%	60%	63%	78%	87%	89%	87%	86%	89%

QUARTERLY ELIGIBLE VOLUME			
	Time	Recorded	Reviewed
Q1	1/31/11- 3/31/11	558	201
Q2	4/30/11 - 6/30/11	510	246
Q3	7/31/11 -9/30/11	524	294
Q4	10/31/11- 12/31/11	572	363
Q5	1/31/12- 3/31/12	714	524
Q6	4/30/12 - 6/30/12	701	594
Q7	7/31/12 -9/30/12	692	616
Q8	10/31/12-12/31/12	722	644
Q9	1/31/13- 3/31/13	729	645
Q10	4/30/13 - 6/30/13	712	649

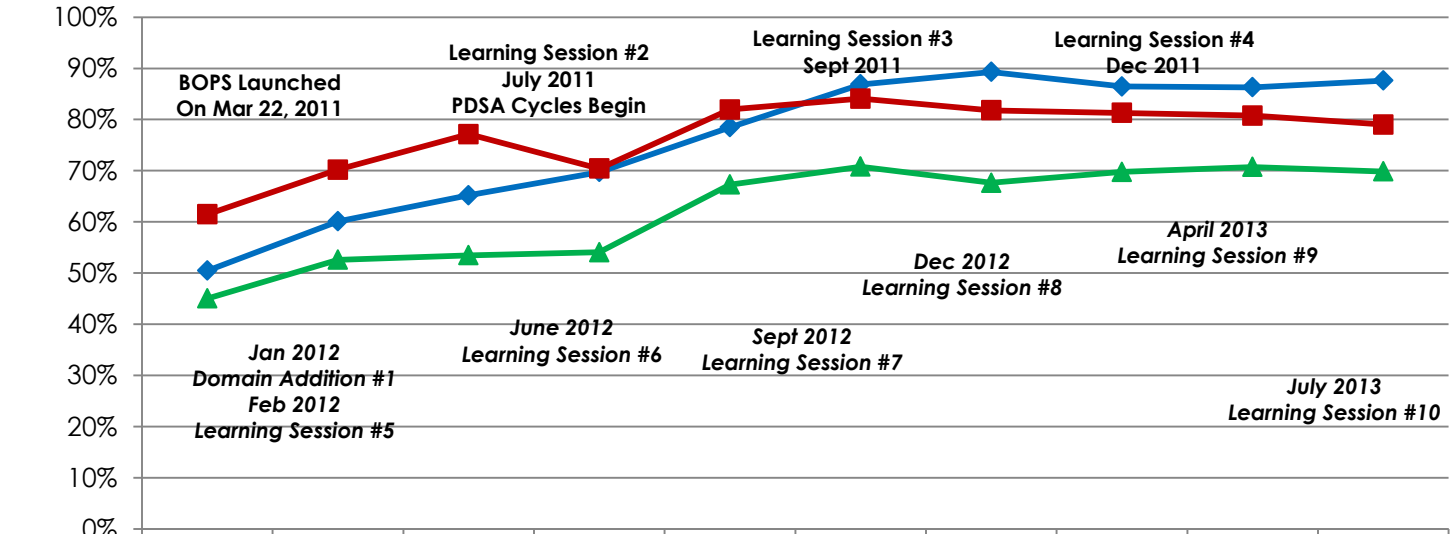
STI Screening for Adolescents Documented as Sexually Active HCM Visits



	Jan-11	Apr-11	Jul-11	Oct-11	Jan-12	Apr-12	Jul-12	Oct-12	Jan-13	Apr-13	Jul-13
HIV	30%	63%	49%	50%	64%	69%	69%	70%	69%	70%	70%
GCC	52%	84%	75%	68%	79%	83%	84%	83%	81%	81%	78%

HCM Visits: All office visits for 13-19 year olds filtered by ICD-9 Codes: V20.2, V21.2, V70.0, V70.3, V70.5 and

Quarterly Adolescent Health Rates at HCM Visits

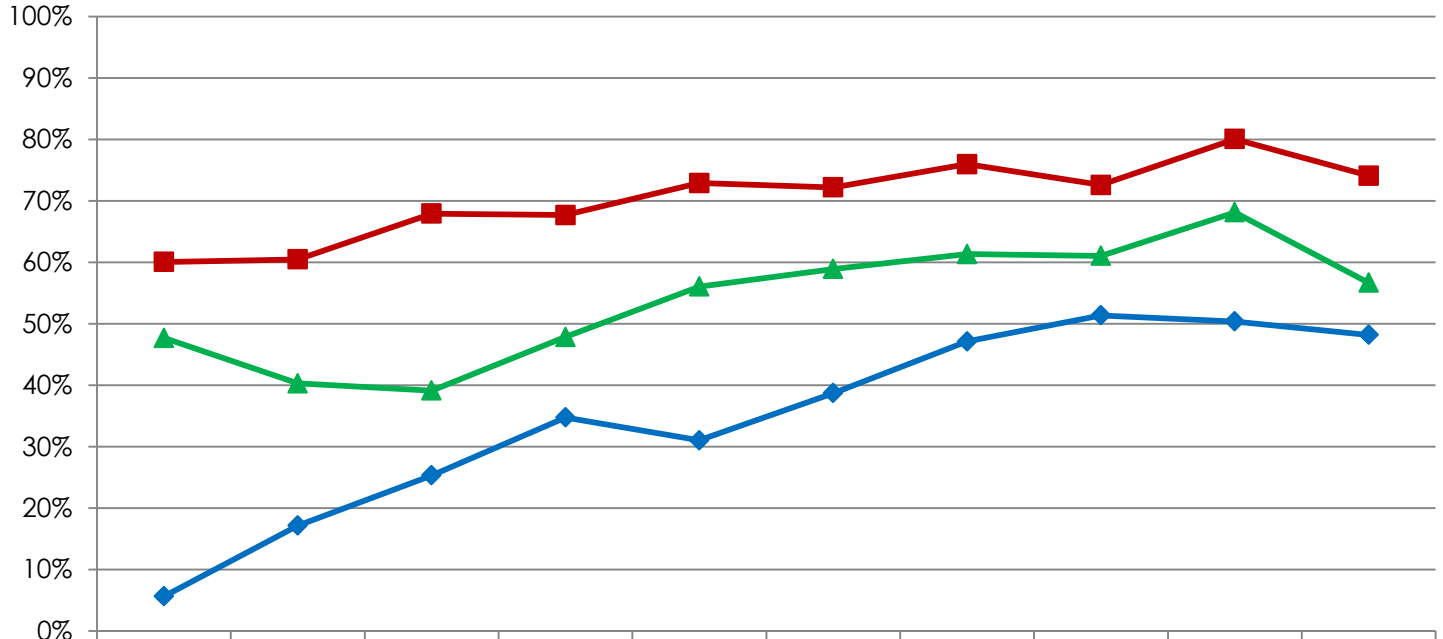


	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
SHR	50%	60%	65%	70%	78%	87%	89%	86%	86%	88%
GCC	61%	70%	77%	70%	82%	84%	82%	81%	81%	79%
HIV	45%	53%	53%	54%	67%	71%	68%	70%	71%	70%

Total Quarterly Eligible Volume

	Time	SHR	GCC	HIV
Q1	1/31/11- 3/31/11	1934	378	378
Q2	4/30/11 - 6/30/11	2231	529	529
Q3	7/31/11 -9/30/11	2630	578	578
Q4	10/31/11- 12/31/11	1906	473	473
Q5	1/31/12- 3/31/12	2544	732	732
Q6	4/30/12 - 6/30/12	3150	941	941
Q7	7/31/12 -9/30/12	4026	1167	1167
Q8	10/31/12-12/31/12	3223	927	927
Q9	1/31/13- 3/31/13	2799	825	825
Q10	4/30/13 - 6/30/13	3135	836	836

Quarterly Adolescent Sexual Health Rates at ENH Visits

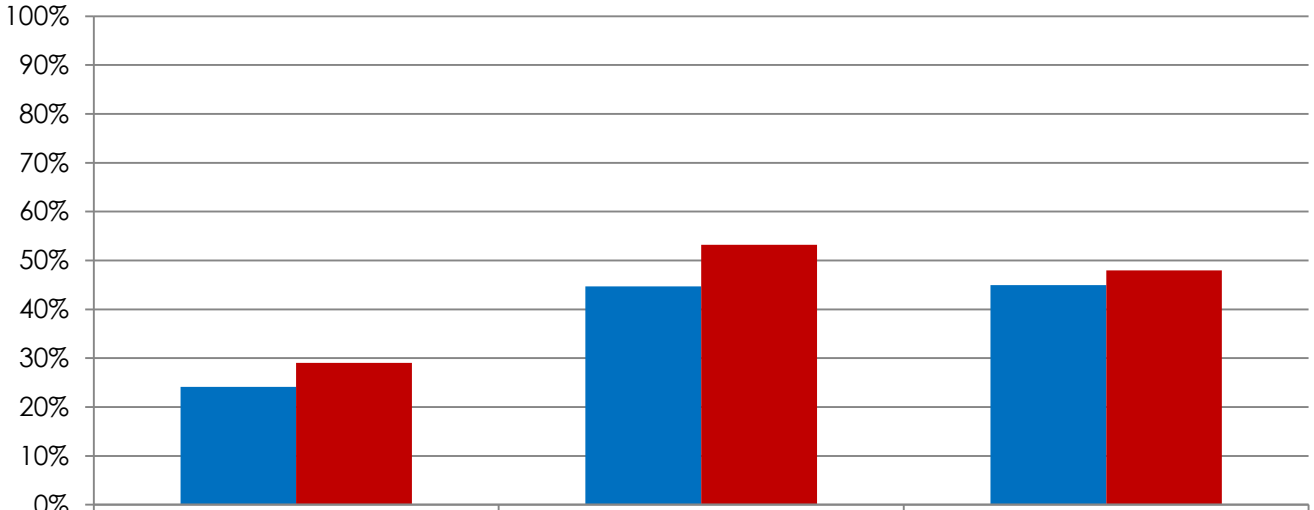


	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
SHR	6%	17%	25%	35%	31%	39%	47%	51%	50%	48%
GCC	60%	60%	68%	68%	73%	72%	76%	73%	80%	74%
HIV	48%	40%	39%	48%	56%	59%	61%	61%	68%	57%

Total Quarterly Eligible Volume

	Time	SHR	GCC	HIV
Q1	1/31/11- 3/31/11	1422	49	49
Q2	4/30/11 - 6/30/11	1645	109	109
Q3	7/31/11 -9/30/11	1640	168	168
Q4	10/31/11- 12/31/11	1799	277	277
Q5	1/31/12- 3/31/12	1615	253	253
Q6	4/30/12 - 6/30/12	958	224	224
Q7	7/31/12 -9/30/12	825	230	230
Q8	10/31/12-12/31/12	892	250	250
Q9	1/31/13- 3/31/13	998	249	249
Q10	4/30/13 - 6/30/13	954	282	282

Quarterly Mental Health Screening Rates, 4-18 Y

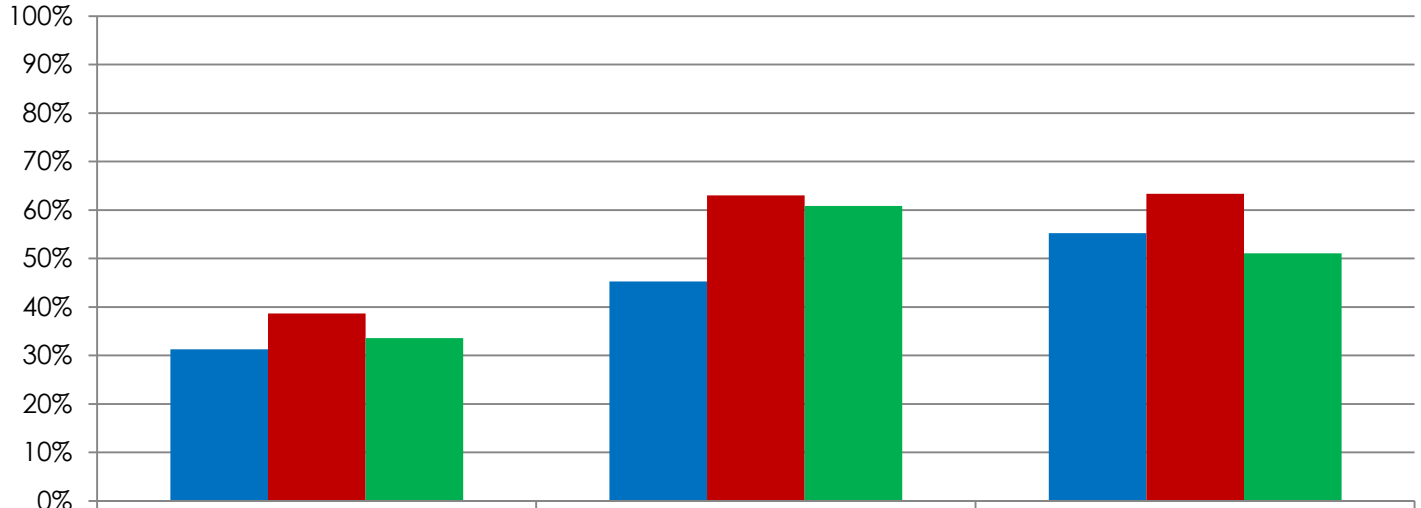


	Q1	Q2	Q3
PSC-17	24%	45%	45%
Y-PSC-17	29%	53%	48%

Quarterly Eligible Volume

	Time	4-11 Y Visits	12-18 Y Visits
Q1	10/31/12- 12/31/12	1440	979
Q2	1/31/13- 3/31/13	2049	1337
Q3	4/30/13 - 6/30/13	2977	2068

Quarterly Early Childhood Developmental / Social Emotional Screening Rates



	Q1	Q2	Q3
12-14 M	31%	45%	55%
16-20 M	39%	63%	63%
22-26 M	34%	61%	51%

Quarterly Eligible Volume				
	Time	**12-14 M**	**16-20 M**	**22-26 M**
Q1	10/31/12- 12/31/12	304	318	298
Q2	1/31/13- 3/31/13	424	465	368
Q3	4/30/13 - 6/30/13	487	600	425

Learning Plateau Times

Domain	Plateau Time
Newborn	Q6
Early Childhood	Plateau not yet reached
School Aged and Adolescent Mental Health	Plateau not yet reached
Adolescent	Q6 for HCM visits, Q7 for ENH visits

Conclusions

1. Learning Happens
2. It is modest
3. It continues
4. It varies quarter to quarter
5. It is affected by competing demands
6. Learning collaborative sessions stimulate surges in activities
7. Learning collaborative sessions serve to maintain focus on improvements (no backsliding)