

Strategies for Improving Outcomes and Efficiency with Data Registries

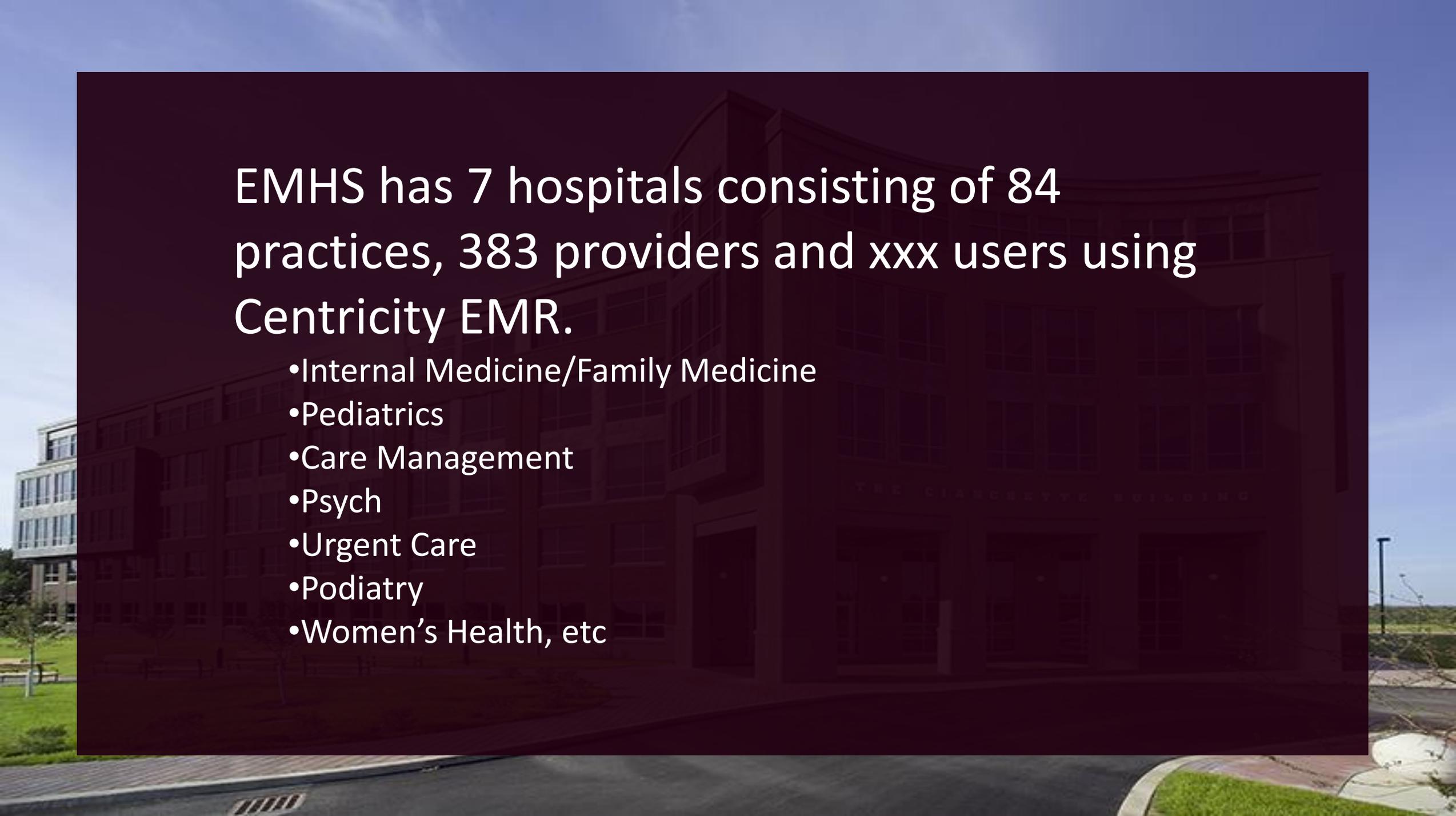
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Who is EMHS?

Eastern Maine Healthcare Systems is an integrated health delivery system serving the state of Maine. We offer acute care, med-surg hospitals, free standing acute psychiatric hospital, primary care and specialty care practices, long term care, home health and air emergency transport



EMHS has 7 hospitals consisting of 84 practices, 383 providers and xxx users using Centricity EMR.

- Internal Medicine/Family Medicine
- Pediatrics
- Care Management
- Psych
- Urgent Care
- Podiatry
- Women's Health, etc

Objectives

Leave with examples of how chronic disease oversight through the use of data registries have minimized staff hours.

Learn how this same practice has eliminated errors that can occur when pulling this data manually

Objectives (cont)

Leave with a better understanding of how the use of data registries can assist care management, quality staff and providers in panel management by increasing efficiency and improving patient outcomes

Objectives (cont)?

Leave with ideas on how to implement these strategies in your own practices and learn from mistakes we've already made/changes we've already implemented.

Why did we implement a registry?

Continuous quality improvement is a must. In 2007, EMHS recognized the need for more dynamic, flexible quality reporting.

Needs:

Close Care Gaps

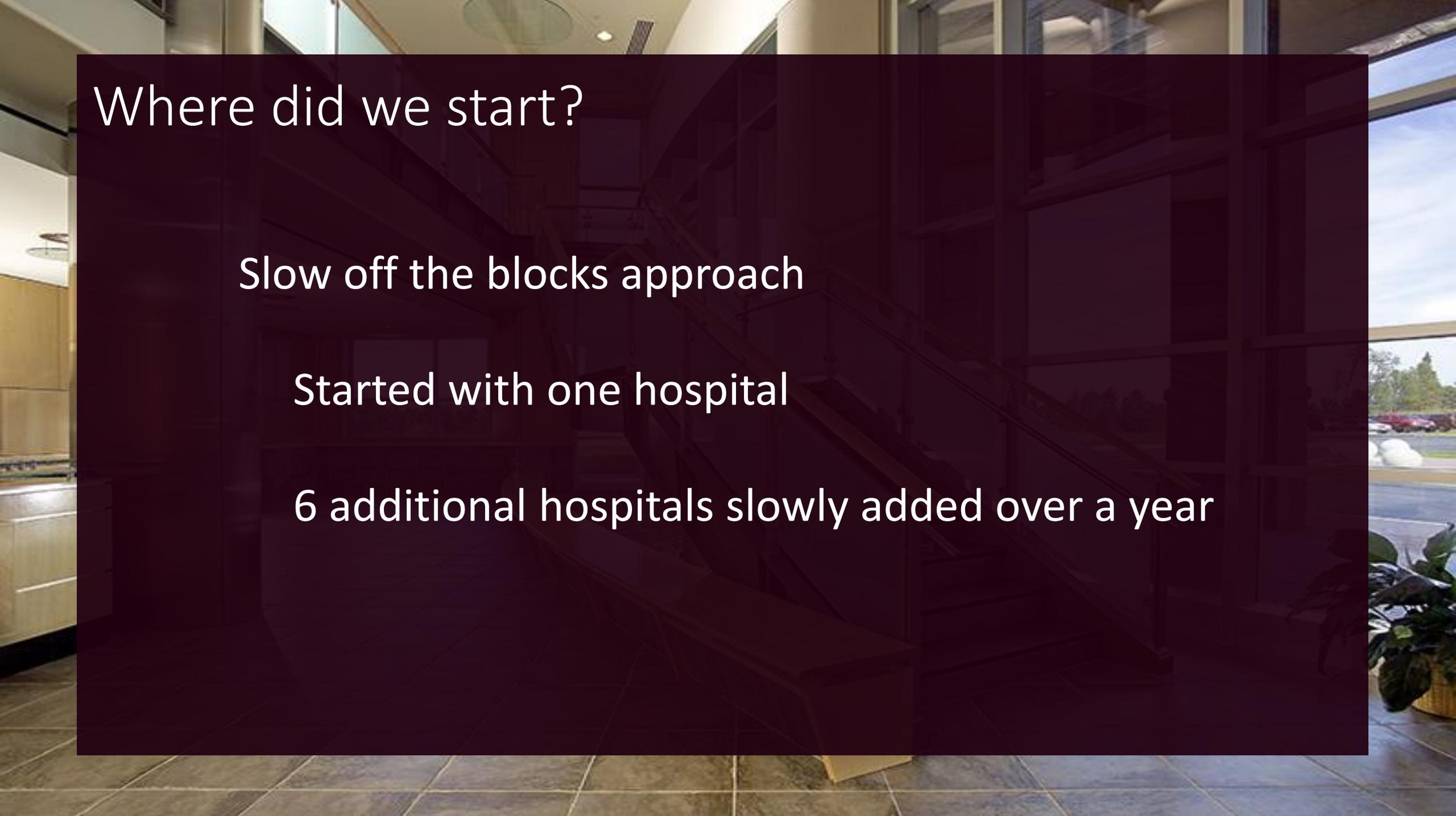
Monitor
populations

Improve Patient
Outcomes

Combat missed
quality indicators

Eliminate errors

Support staff
efficiency



Where did we start?

Slow off the blocks approach

Started with one hospital

6 additional hospitals slowly added over a year

Cardiovascular Disease Data - Orono Family Medicine	Total # Ischemic Vascular Disease	BP less than 140/90	BP recorded prev 365 days	Complete Lipid Panel	LDL or Calc LDL less than 130	LDL or Calc LDL less than 100					
Qtr. 1		Goal greater than 75%	Goal greater than 85%	Goal greater than 80%	Goal greater than 50%	Goal greater than 50%					
DATE: 3/31/11											
Comstock	27	81.48%	100.00%	66.67%	59.26%	44.44%					
Evans	31	67.74%	96.77%	64.52%	48.39%	41.94%					
Fagles	48	87.50%	97.92%	64.58%	60.42%	47.92%					
Hawkins	35	88.57%	97.14%	71.43%	65.71%	48.57%					
Kallen-Breen	6	33.33%	33.33%	16.67%	16.67%	16.67%					
Rampe	75	66.67%	100.00%	72.00%	78.67%	62.67%					
Rawcliffe	36	80.56%	97.22%								
Stewart	24	75.00%	95.83%								
EOFM	282	76.24%	96.81%								
				Anti-thrombolytic	Smoke Status	Smoking Advice	BMI	Depression Screen			
				Goal greater than 80%	Goal greater than 80%	Goal greater than 80%	Goal greater than 80%	Goal greater than 10%			
				85.19%	100.00%	100.00%	96.30%	96.30%			
				77.42%	100.00%	83.33%	90.32%	83.87%			
				81.25%	100.00%	100.00%	97.92%	83.33%			
				85.71%	100.00%	100.00%	85.71%	85.71%			
				83.33%	50.00%	0.00%	33.33%	33.33%			
				85.33%	100.00%	100.00%	97.33%	100.00%			
				86.11%	100.00%	77.78%	94.44%	83.33%			
				70.83%	100.00%	77.78%	87.50%	79.17%			
				82.62%	98.94%	89.66%	92.55%	87.94%			

IS and quality staff were the only users of the tool to start

By 2012, all quality reporting was done within the data registry

Once the report writer was comfortable using the tool, report requests were slowly moved from crystal reports to the data registry.

In addition to quality analysts, others started using the tool

Practice Managers

Providers

Care Managers

Then came...



Meaningful Use – Stage 1

GE released Crystal reports for Meaningful Use
Stage 1

Providers were not satisfied just knowing their
numbers

Meaningful Use – Stage 1

Report need was complex

Worked hand in hand with vendor to develop MU Stage 1 reports to spec, while still utilizing our own workflows

Meaningful Use – Stage 1

We rolled out a dynamic, user friendly tool that users could run reports on the fly by measure or provider

We successfully attested for Stage 1 for:

2012 = 103 providers

2013 = 189 providers

2014 = 180 providers

Meaningful Use – Stage 2

CQR was deployed at no additional cost.

EMHS had concerns and decided to only use CQR for quality measures, but not functional.

Meaningful Use – Stage 2

We came up with a plan with our registry vendor to create Stage 2 reports.

2 EMHS analysts worked with vendor to develop the code for all Stage 2 reports.

Specific to our workflow

Successfully attested

MU reports can be viewed by all providers and office staff
(as applicable)

Menu Items	Met	Not Met
(Stage 2) Objective 3 -CPOE Stage II  	230	47
(Stage 2) Objective 4 -eRx Stage II  	232	45
(Stage 2) Objective 8A -Patient Electronic Access Stage II  	230	47
(Stage 2) Objective 6 -Patient Education Stage II  	213	64
(Stage 2) Objective 7 -Med Recon Stage II  	214	63
(Stage 2) Objective 9 -Use Secure EMessage Stage II  	15	262
(Stage 2) Objective 3 - CPOE Stage II - Radiology  	225	52
(Stage 2) Objective 5 - Summary of Care - Electronic  	93	184
(Stage 2) Objective 3 - CPOE Stage II - Laboratory  	227	50
(Stage 2) Objective 8B -Patient Electronic Access Stage II  	212	65

Excel

Detailed Met/Not Met Reports

(Stage 2) Objective 9 -Use Secure EMessage Stage II : Alycia Allen, NP-C

NPI: [REDACTED]

Total Count: 358

Met Count: 3

Not Met Count: 355

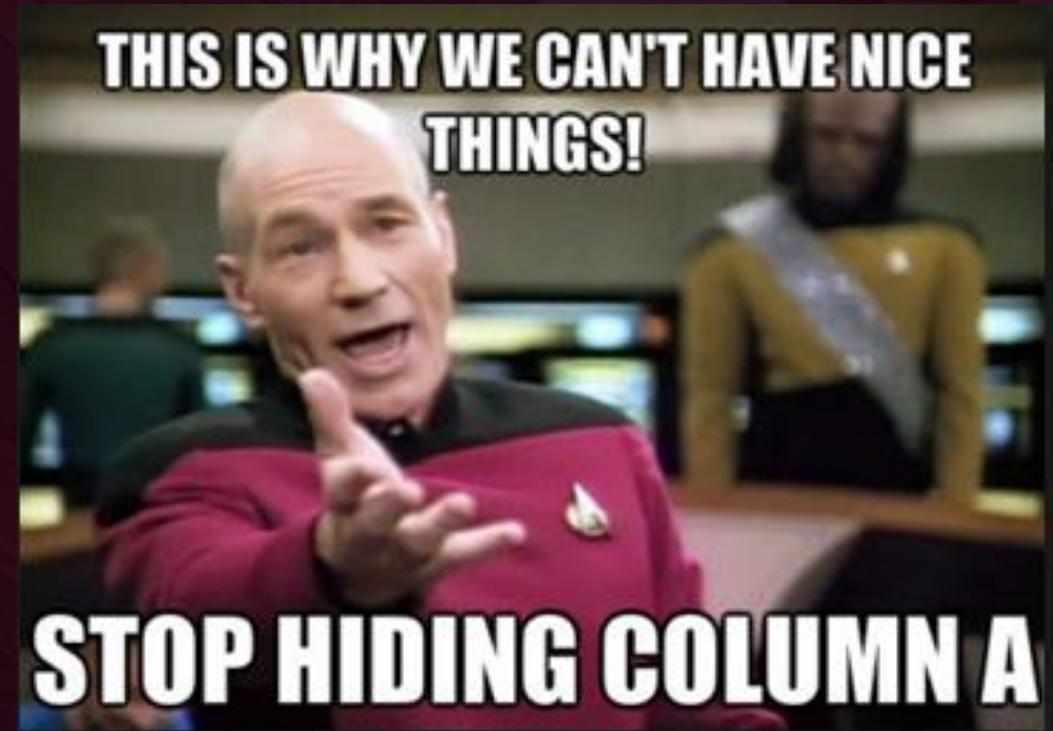
MRN	Metric Name	Name	DOS	Medication	Num
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Aug 25 2016 6:22AM		Not Met
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Jul 14 2016 12:52PM		Not Met
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Jun 30 2016 11:54AM		Not Met
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Jun 2 2016 10:14AM		Not Met
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Aug 29 2016 8:08AM		Not Met
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Jul 6 2016 6:25AM		Not Met
[REDACTED]	Objective 9 -Use Secure EMessage Stage II	[REDACTED]	Jun 27 2016 6:37AM		Not Met

Health Maintenance / Panel Management

BICS - Health Maintenance / Screening	Raw #s	All %	All Trend	Updated
BICS - Bone Density	4058 / 6094	66.59 % 		09/12/2016
BICS - Bone Density Declined	901 / 6094	14.79 % 		09/12/2016
BICS - Bone Density Not Done or Declined	1455 / 6094	23.88 % 		09/12/2016
BICS - Colorectal Screening	11646 / 17922	64.98 % 		09/12/2016
BICS - Patients Not Seen 18 mos	15655 / 120937	12.94 % 		09/12/2016
BICS - Pap Smear Declined	2192 / 15143	14.48 % 		09/12/2016
BICS - Pap Smear Not Done or Declined	12951 / 15143	85.52 % 		09/12/2016
BICS - Colonoscopy Screening	11646 / 17922	64.98 % 		09/12/2016
BICS - Colonoscopy Screening Declined	3989 / 17922	22.26 % 		09/12/2016
BICS - Colonoscopy Screening Not Done or Declined	3912 / 17922	21.83 % 		09/12/2016
BICS - Colonoscopy Screening or Hemoccult	11646 / 17922	64.98 % 		09/12/2016
BICS - Hemoccult Screening	1216 / 17922	6.78 % 		09/12/2016

Once every 6 months, a quality analyst exported data and manually created grids

Led to errors from typos, or lack of experience with excel



Use of Dynamic, Interactive Grids

NextAppt	Smoking Status	Smoking Advice	Diabetic Eye Exam Date	DM Eye Exam (last 365)	Diab Foot Exam Date	Diab Foot Exam (last365)	Depression Screening (last 365)	BMI	BMI Date	LDL Date	LDL Value (last 365)	BP Date	BP Systolic (last 365)	BP Diastolic (last 365)	HGBA1C Date	HGBA1C Value
10/10/2016	Current every day smoker	yes			4/15/2016	yes	4/15/2016	41.59	4/15/2016	3/11/2016	121	4/15/2016	118	72	4/15/2016	7.5
	Former smoker		4/22/2016	No Retinopathy	3/16/2015		9/22/2015	29.97	9/22/2015	4/18/2016	134	9/22/2015	126	88	4/18/2016	11.1
	Never smoker		6/18/2015		6/1/2016	yes	6/1/2016	33.80	6/1/2016	5/25/2016	84	6/1/2016	128	82	5/25/2016	6.9
	Never smoker		7/22/2016	See Text	7/8/2016	yes	6/1/2016	27.16	7/8/2016	6/16/2016	132	7/8/2016	124	68	6/16/2016	5.7
9/16/2016	never smoker	done	5/12/2013		11/14/2013			19.37	2/3/2009	3/14/2012		2/22/2016	112	78	2/18/2016	5.7
2/1/2017	Former smoker				8/1/2016	yes	8/1/2016	36.97	8/1/2016	7/28/2016	68	8/1/2016	118	56	7/28/2016	7.0
	Former smoker quit in 2012							26.71	3/21/2015	7/23/2014		3/21/2015			2/5/2015	8.0
12/13/2016	Never smoker		5/17/2016	See Text	9/1/2016	yes	9/1/2016	32.17	5/27/2016	5/19/2016	74	9/1/2016	118	80	9/1/2016	7.2
9/30/2016	Former smoker		6/8/2016	See Text	7/26/2016	yes	7/26/2016	41.98	8/12/2016	9/12/2014		7/26/2016	132	78	7/26/2016	8.5

The benefit?

Close care gaps

Efficiently monitor our population at higher level

Save countless staff hours

Dedicate more time caring for patients

What did the quality analysts think of the grids?



Examples of health maintenance “grids” we have built:

Diabetic

Pediatric Persistent Asthma

Hypertension

Preventive Care Health Maintenance

Medication Monitoring

EMHS - Medication Monitoring	Raw #s	All %
Medication Monitoring Protocol Audit (Met entire protocol)	774 / 4368	17.72 % 
Medication Contract	2944 / 4368	67.40 % 
Drug Screen	2466 / 4368	56.46 % 
Pill Count	1112 / 4368	25.46 % 
PMP Website Checked	2614 / 4368	59.84 % 
Controlled Substance Management not on Problem List	4091 / 28051	14.58 % 
Controlled Substance Management Removed from Problem List in Last 365 Days	8356 / 8356	100.00 % 
EMMC: Controlled Substance Management not on Problem List	2775 / 9131	30.39 % 

Care Management and the Registry

Population identification – used as a referral source

Assist practices with the clinical impact

Primary Care Case Management	Raw #s	All %	All Trend	Updated
EMMC - CHF ACE ARB EF < 40 All	585 / 634	92.27 % 		09/12/2016
EMMC - CHF ACE ARB All	3908 / 5192	75.27 % 		09/12/2016
EMMC - CHF Beta Blocker All	4527 / 5192	87.19 % 		09/12/2016
EMMC - CHF Smoke Status All	4962 / 5192	95.57 % 		09/12/2016
EMMC - CHF Smoke Advice All	211 / 532	39.66 % 		09/12/2016
EMMC - CHF LVF Assessment All	2618 / 5192	50.42 % 		09/12/2016
EMMC - COPD Smoke Status All	7433 / 7679	96.80 % 		09/12/2016

Care Management and the Registry

Track care management panel volumes

Any field can be reported in registry



How does our ACO benefit from the registry?

Xxx Orgs and xxx lives part of Beacon Health ACO

Data drops monthly from our registry

Pulls into an excel scorecard

By measure, by Org, by Period,
by Population



Without the registry, this data collection would take 2 full weeks a month, full time of a staff member. (1/2 FTE!)

With the registry? 5 Minutes!

Monthly Population Health meetings

Performance Improvement Plans required for those not meeting the measures

Metric	Description	Current Month		Medicare Target	Beacon Target
0066	ACE/ARB Therapy for Patients with CAD and DM and/or LVSD (LVEF < 40%)			90.00%	90.00%
0421	BMI Screening and Follow-Up	100.00%	●	90.00%	92.00%
2372	Breast Cancer Screening	100.00%	●	90%	80.00%
0034	Colorectal Cancer Screening	100.00%	●	90%	80.00%
0710	Depression Remission at Twelve Months				
27&41	DM Bundle (All or Nothing Scoring)	100.0%	●	36.50%	40.00%
0055	DM: Eye Exam	100.0%	●		70.00%
0059	DM: Hemoglobin A1c greater than 9%	0.0%	●	10.00%	9.00%
0419	Documentation of Current Medications in the Medical Record	88.9%	●		100.00%
0101	Falls: Screening for Future Fall Risk	100.0%	●	82.30%	73.38%
0083	HF: Beta-Blocker Therapy for LVSD			90.00%	90.00%
0018	HTN: High Blood Pressure	50.0%	●	90.00%	79.65%
0041	Influenza Immunization			90.00%	90.00%
0068	IVD: Use of Aspirin or Another Antithrombotic			90.00%	90.00%
0043	Pneumonia Vaccination Status for Older Adults	100.0%	●	90.00%	90.00%
0418	Screening for Clinical Depression and Follow-Up Plan	100.0%	●	90.00%	51.81%
C001	Screening for High BP and Follow-Up Documented	100.0%	●	90.00%	90.00%
C009	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	100.0%			
0028	Tobacco Use: Screening and Cessation Intervention	100.0%	●	90.00%	90.00%

Organization →

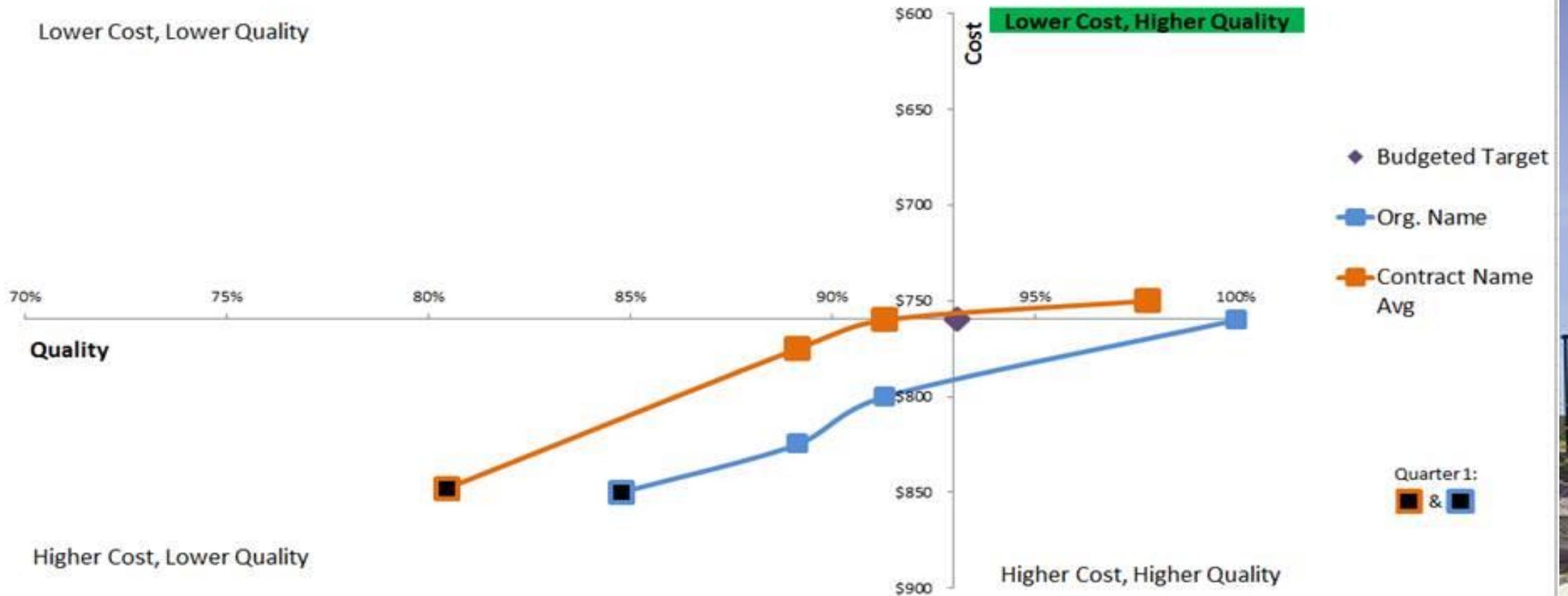
Population →

Month → **Aug-2016** **August, 2016**

● Meets or exceeds highest target
 ● Meets or exceeds lowest target
 ● Does not meet target

4500 covered lives Cost/Quality Value			Budgeted Target	Org. Name Qtr 1	Org. Name Qtr 2	Org. Name Qtr 3	Org. Name Qtr 4	Contract Name Avg. Qtr 1	Contract Name Avg. Qtr 2	Contract Name Avg. Qtr 3	Contract Name Avg. Qtr 4
Triple Aim	(Satisfaction, Safety, Preventive, & At Risk)	Earned Quality Pts	48.4	39.0	41.0	42.0	46.0	37.0	41.0	42.0	45.0
	(Satisfaction, Safety, Preventive, & At Risk)	Possible Quality Pts	52	46	46	46	46	46	46	46	46
		Quality %	93%	85%	89%	91%	100%	80%	89%	91%	98%
		Cost (PMPM)	\$759.59	\$ 850	\$ 825	\$ 800	\$ 760	\$ 848	\$ 775	\$ 760	\$ 750

2016 Value Diagram



Recording Communication in the EMR

Send letters from the registry

Open an existing metric to find patients that to NOT meet a particular measure

Create a letter that pulls in results and/or instructions

Record in the EMR the text of the letter

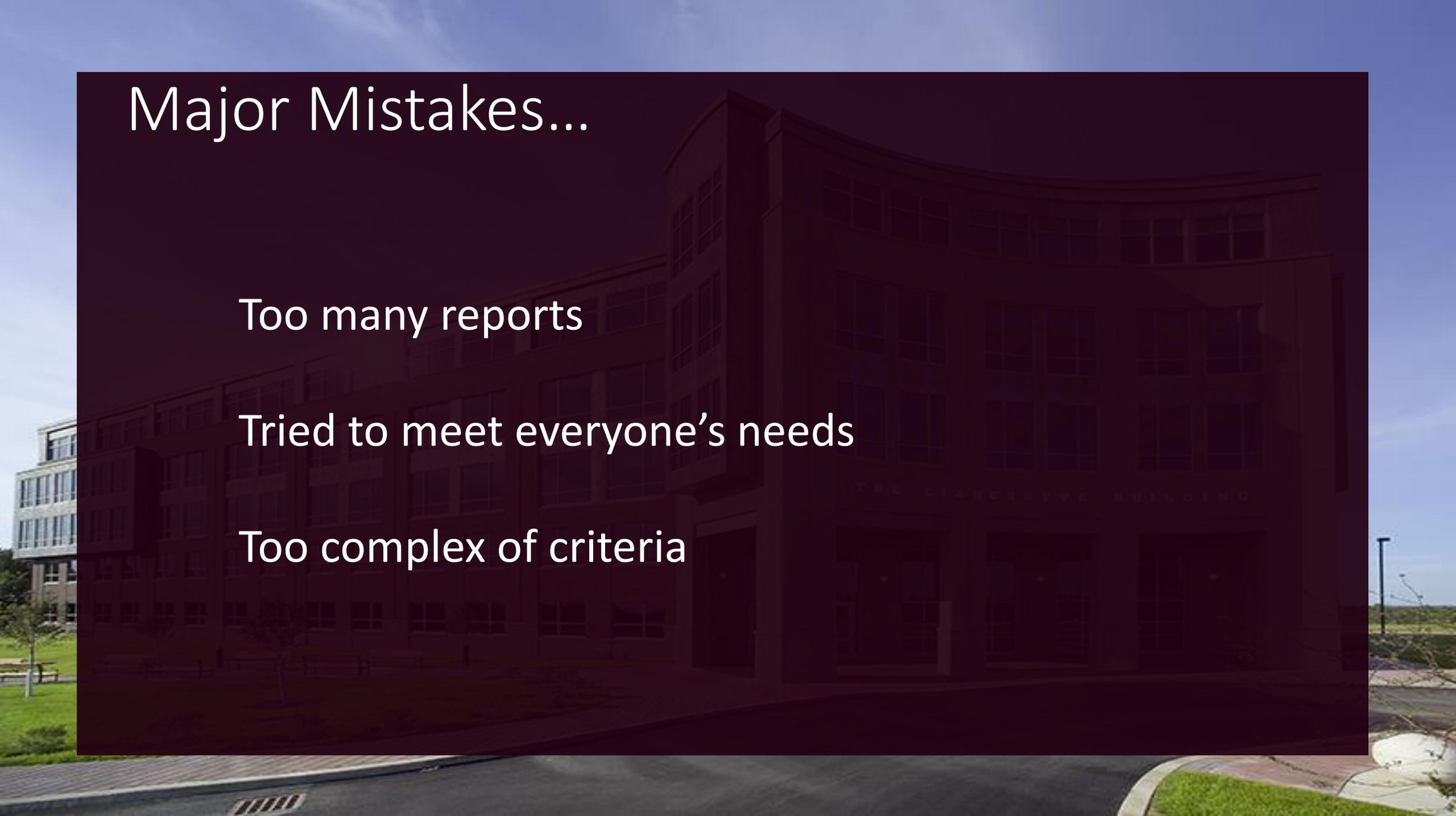
Record in the EMR an observation term for reporting purposes

Major Mistakes...

Too many reports

Tried to meet everyone's needs

Too complex of criteria



What Should We Look for in a Registry?

Flexibility

Ability to do your own development

Quick access to the data by provider

A vendor that's easy to work with

A simple user interface

Registry → EMR interface

Takeaways

A registry is a valuable resource addition to your EMR

Find a vendor you can work with

Streamline reports as much as possible

Engage your users in the build – If they have ownership in the data, they will use it.



Thank you!