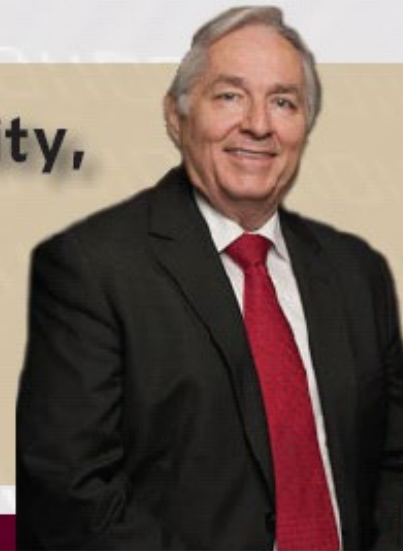




**Gartner Business Intelligence Excellence Award  
Semi-Finalist  
Southeast Texas Medical Associates, LLP**

*Dr. James L. Holly, MD  
CEO, Southeast Texas Medical Associates, LLP  
May 3, 2011*

**"Business Intelligence for Improving Quality,  
Outcomes, and Clinical Practices:  
Continuing the Health Transformation  
Journey at SETMA"**



**by Dr. James Holly, MD, CEO  
Southeast Texas Medical Associates (SETMA)**

# SETMA's Model of Care



1. Performance Tracking – one patient at a time
2. Performance Auditing – by panel or population
3. Analysis of Provider Performance Data
4. Public Reporting by Provider Name
5. Quality Assessment/Performance Improvement

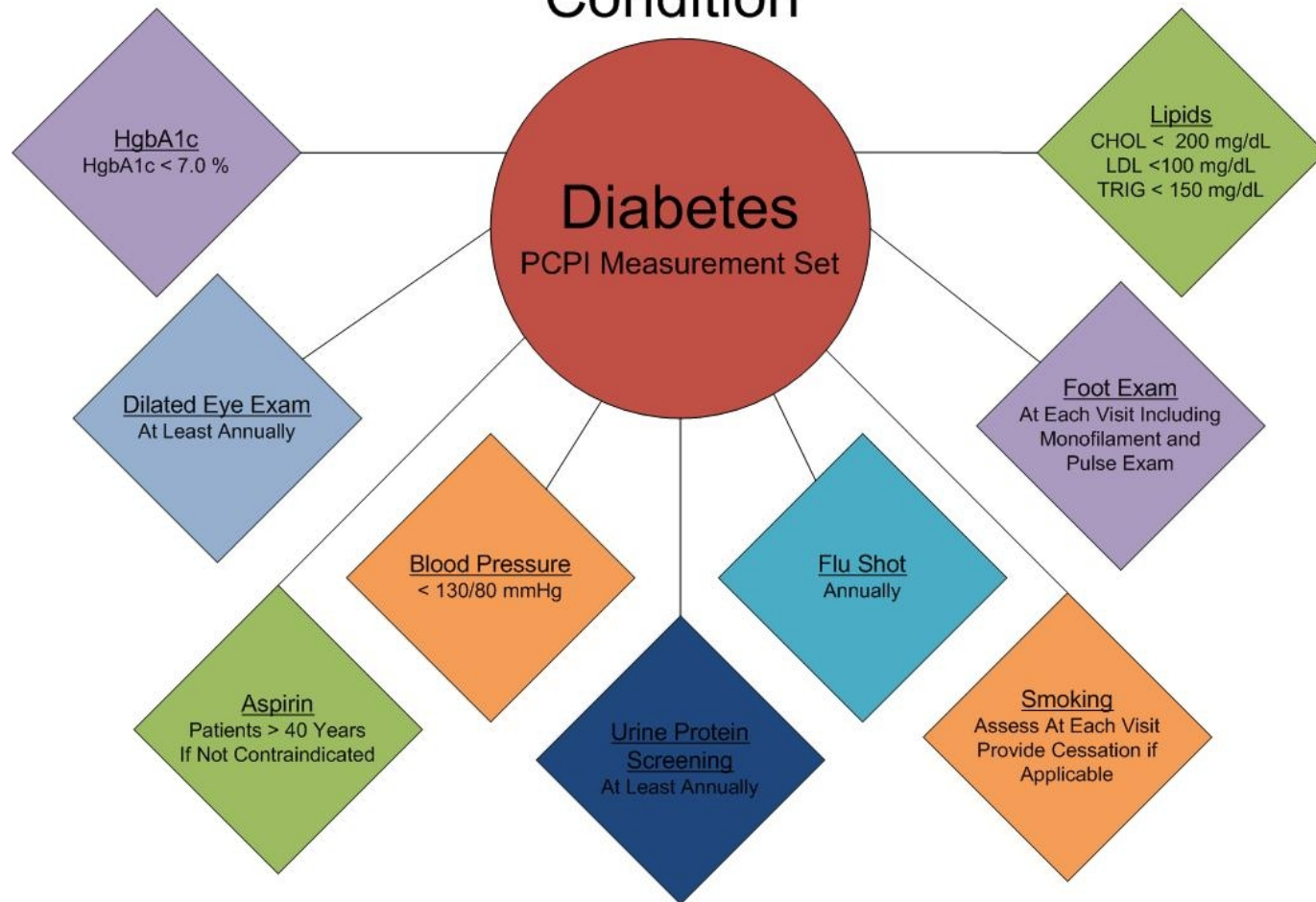
# Clusters and Galaxies



- A “*cluster*” is seven or more quality metrics for a single condition, i.e., diabetes, hypertension, etc.
- A “*galaxy*” is multiple clusters for the same patient, i.e., diabetes, hypertension, lipids, CHF, etc.
- Fulfilling a single or a few quality metrics does not change outcomes, but fulfilling “clusters” and “galaxies” of metrics at the point-of-care can and *will* change outcomes.

# Auditing Performance After the Visit

A “Cluster” -- Multiple Metrics on a Single Condition



# Auditing Performance After the Visit



A "Galaxy" -- Multiple "Clusters" Tracked on a Single Patient at a Single Visit



# Auditing Performance After the Visit



Unlike a single metric, such as “was the blood pressure taken,” which will not improve care, fulfilling and then auditing a “cluster” or a “galaxy of clusters” in the care of a patient ***will*** improve treatment outcomes and ***will*** result in quality care.



# Auditing Performance After the Visit



What is most often missing in quality improvement initiative is real-time, auditing with comparative display of results, and public reporting.

A screenshot of the Southeast Texas Medical Associates (SEMA) website. The header features the SEMA logo and the tagline "Healthcare Where Your Health is the Center". Below the header is a navigation bar with links: "About Us", "Letters", "In The News", "Providers", and "Your Life". A secondary navigation bar includes "Electronic Patient Management Tools", "Public Reporting", and "Medical Home". The "Public Reporting" section is expanded, showing a list of metrics: PQRI, NQF, HEDIS, NCQA, PCPI, SETMA Lipid Audit, AQA, COGNOS Project, SETMA Audit for CKD Stages I III, and Patient Satisfaction Survey. The "Featured Content of Website" section lists several articles, including "Gartner Business Intelligence Excellence Awards" and "SETMA's Transitions of Care". The footer mentions "2011 Gartner Business Intelligence Excellence Awards" and "SETMA A Semi-Finalist About Gartner".



# Auditing Performance After the Visit



SETMA employed IBM's Business Intelligence software, *COGNOS* to audit provider performance and compliance.

*COGNOS* allows all providers to:

1. Display their performance for their entire patient base
2. Compare their performance to all practice providers
3. See outcome trends to identify areas for improvement
4. See this at the point-of-care

# Auditing Performance After the Visit



- SETMA contracted with LPA Systems ([www.lpa.com](http://www.lpa.com)) to build our auditing tools.
- LPA designed a data warehouse to minimize the impact on our production servers.

# Analyzing Provider Performance

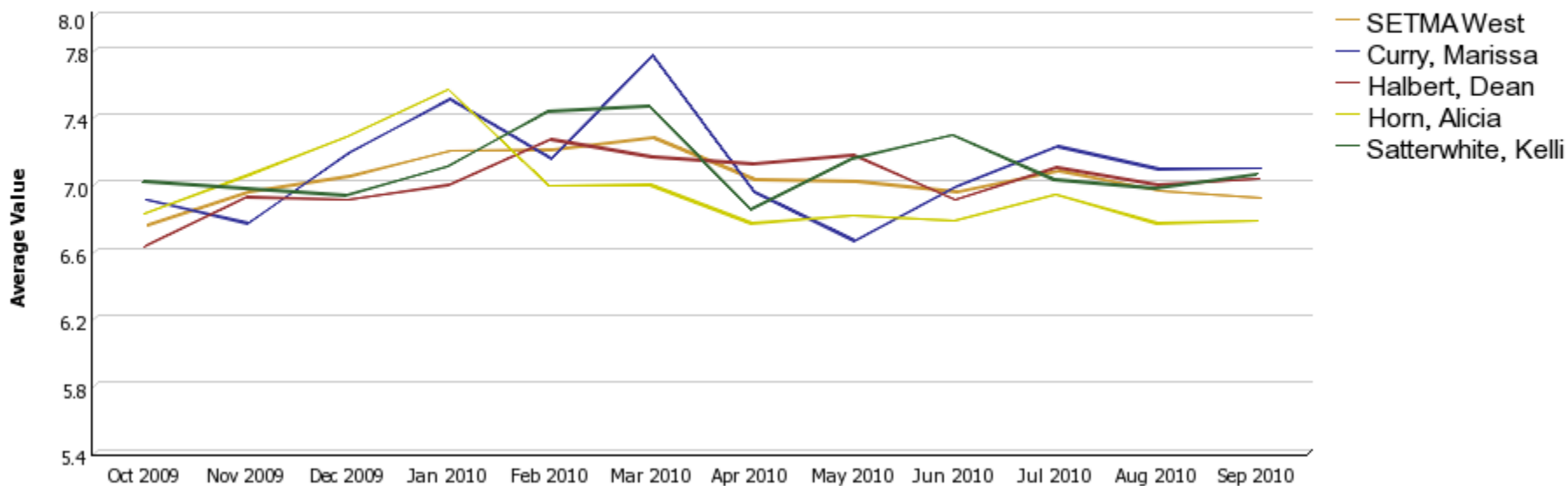


- LPA used SQL Server Integration Services (SSIS) to clean and scrub the hundreds of data points we needed for our audit rather than having to process the millions of data points contained in our EHR.
- SSIS scrubs and preloads our EHR data into the warehouse, which gives us both speed in reporting and confidence in the results in our COGNOS reports.

# Auditing Performance After the Visit



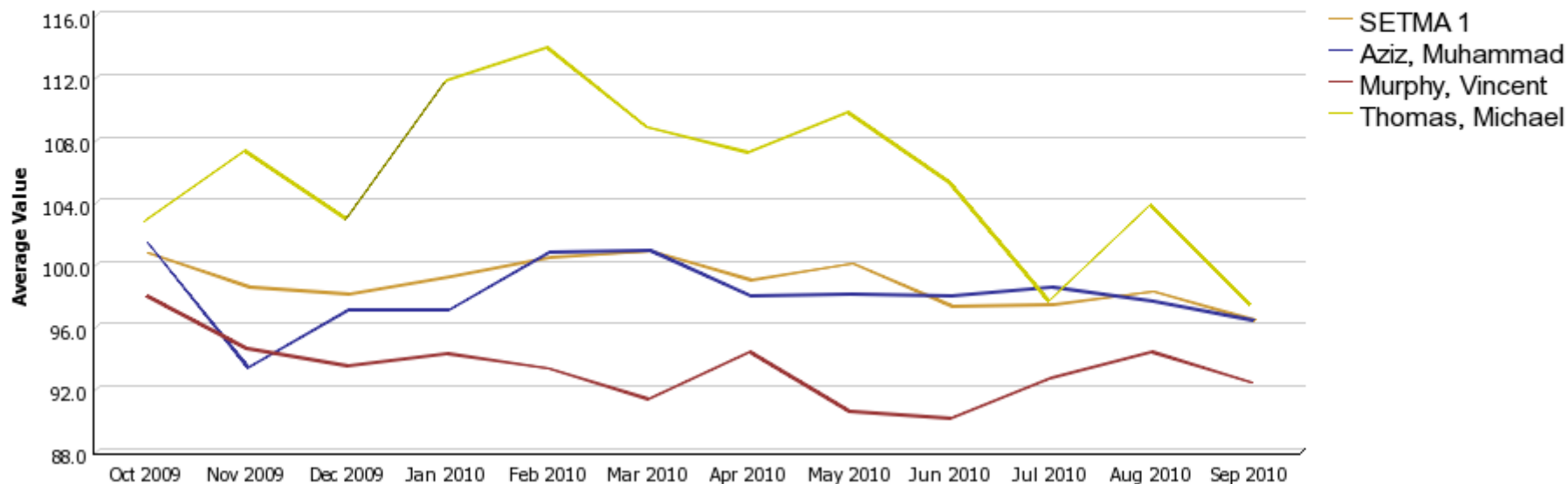
**Chronic Diabetes - HgbA1c Trending**



# Auditing Performance After the Visit



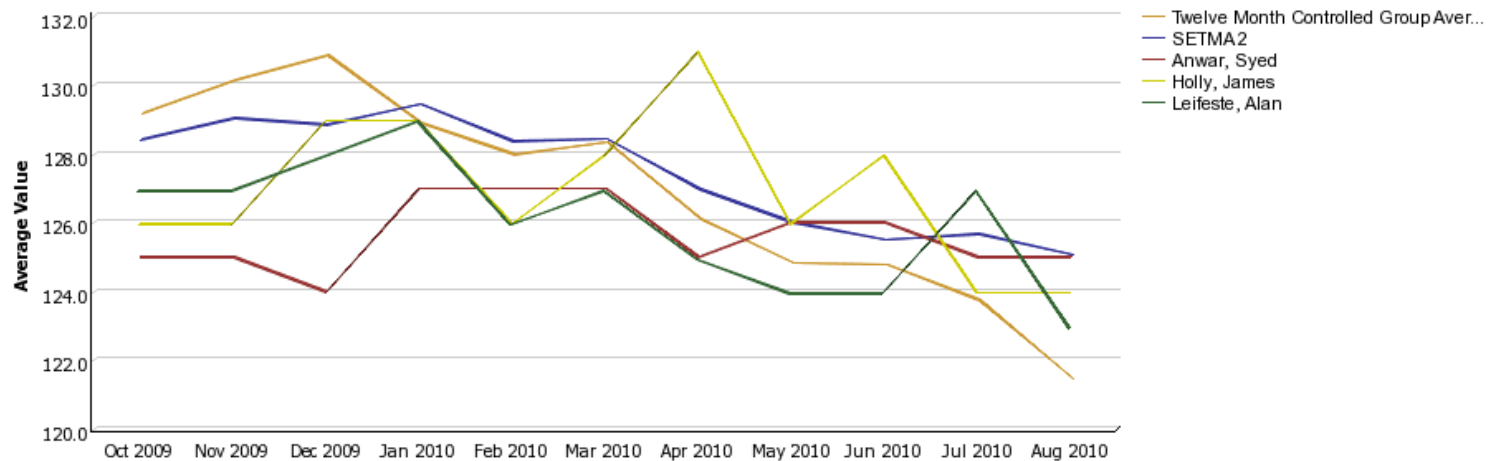
## Chronic Hyperlipidemia - LDL Trending



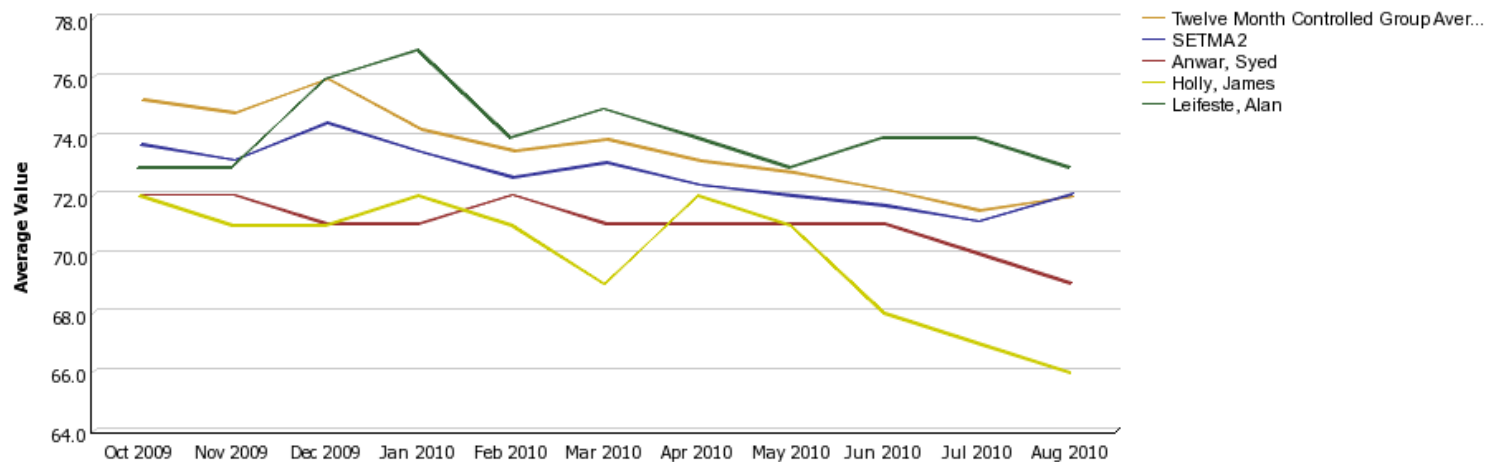
# Auditing Performance After the Visit



## Systolic Trending



## Diastolic Trending



# Auditing Performance After the Visit



Beyond how one provider performs (tracking and auditing), SETMA looks at data as a whole (analyzing) from which to develop new strategies for improving patient care.

We analyze patterns which may explain why one population is not to goal while another is. Some of the parameters, we analyze are:

- Frequency of visits
- Frequency of key testing
- Number of medications prescribed
- Were changes in treatments made, if patient not to goal
- Referrals to educational programs
- Etc.



# Analyzing Provider Performance



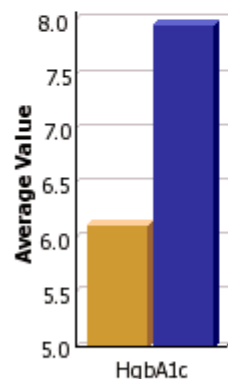
## Chronic Diabetes - Measures Comparison (Most Recent 12 Months)

Controlled Group ■

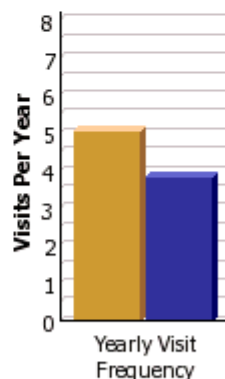
Population: **All SETMA**  
Time Basis: **Prior 12 Months**

Selected Group ■

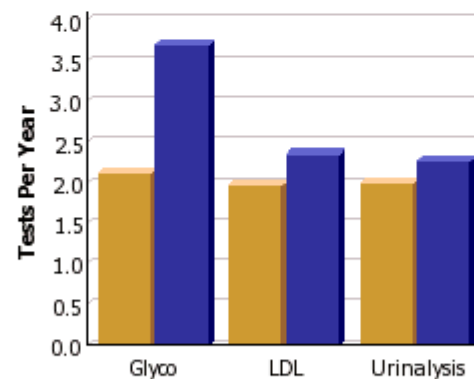
Practice: **SETMA 1, SETMA 2, SETMA West**  
Provider: **None**  
Controlled or Not Controlled: **Not Controlled**



	HgbA1c Avg	Standard Deviation
Controlled	6.1	0.7
Selected	8.0	1.7



	Visit Frequency
Controlled	5.1
Selected	3.8



	Yearly Glyco Tests	Yearly LDL Tests	Yearly UA Tests
Controlled	2.1	2.0	2.0
Selected	3.7	2.4	2.3

# Analyzing Provider Performance



## Chronic Hypertension - Measures Comparison (Most Recent 12 Months)

Controlled Group

Population: **All SETMA**

Time Basis: **Prior 12 Months**

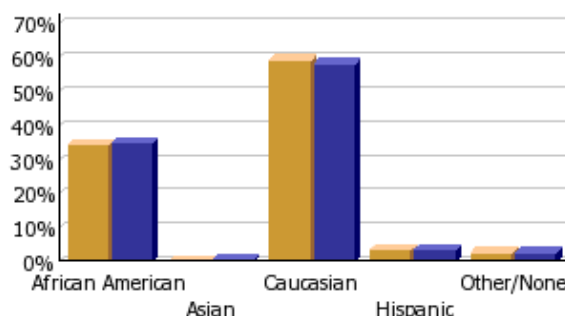
Selected Group

Practice: **SETMA 1, SETMA 2, SETMA West**

Provider: **None**

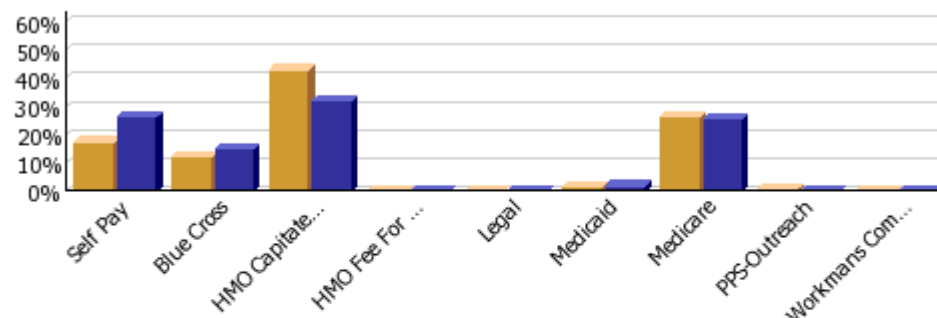
Controlled or Not Controlled: **Not Controlled**

### Ethnicity



	African American	Ethnicity Asian	Caucasian	Hispanic	Other/None
Controlled	34.6%	0.1%	59.3%	3.4%	2.6%
Selected	34.9%	0.8%	58.3%	3.4%	2.7%

### Financial Class



	Self Pay	Blue Cross	HMO Capitated	HMO Fee For Service	Legal	Medicaid	Medicare	PPS-Outreach	Workmans Comp
Controlled	17.3%	11.8%	43.0%	0.0%	0.0%	1.2%	26.2%	0.5%	0.0%
Selected	26.0%	14.7%	32.0%	0.0%	0.0%	1.6%	25.4%	0.1%	0.0%

# Analyzing Provider Performance

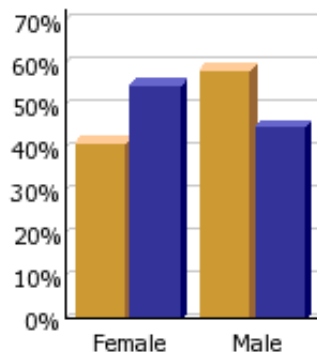


## Chronic Hyperlipidemia - Measures Comparison (Most Recent 12 Months)

Controlled Group Time Basis: **Prior 12 Months**  
 Controlled Group Constrained to: **All SETMA**  
 Practice: **SETMA 1, SETMA 2, SETMA West**  
 Provider: **None**

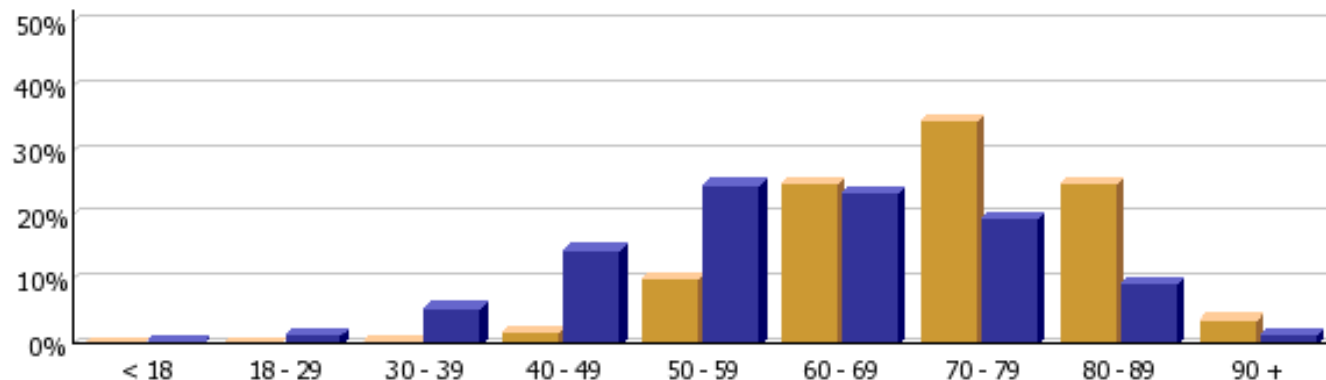
Controlled Group  
 Selected Group

### Gender



	Female	Male
Controlled	41.4%	58.5%
Selected	55.0%	45.0%

### Age



	< 18	18 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80 - 89	90 +
Controlled	0.0%	0.0%	0.2%	1.8%	10.0%	24.8%	34.7%	24.9%	3.7%
Selected	0.2%	1.4%	5.5%	14.5%	24.7%	23.4%	19.5%	9.3%	1.4%

# Analyzing Provider Performance



Raw data can be misleading. For example, with diabetes care, a provider may have many patients with very high HgbA<sub>1c</sub>s and the same number with equally low HgbA<sub>1c</sub>s which would produce a misleadingly good average. As a result, SETMA also measures the:

- Mean
- Median
- Mode
- Standard Deviation

# Analyzing Provider Performance



SETMA's average HgbA<sub>1c</sub> has been steadily improving for the last 10 years. Yet, our standard deviation calculations revealed that a subset of our patients were not being treated successfully and were being left behind.

By analyzing the standard deviation of our HgbA<sub>1c</sub> we have been able to address the patients whose values fall far from the average of the rest of the clinic.

# Public Reporting of Performance



One of the most insidious problems in healthcare delivery is reported in the medical literature as “treatment inertia.” This is caused by the natural inclination of human beings to resist change. As a result, when a patient’s care is not to goal, often no change in treatment is made.

To help overcome this “treatment inertia,” SETMA publishes all of our provider auditing (both the good and the bad) as a means to increase the level of discomfort in the healthcare provider and encourage performance improvement.

# Public Reporting of Performance



## NQF Diabetes Measures



### NQF - Diabetes Measures

E & M Codes: Clinic Only

Encounter Date(s): Jan 1, 2011 through Mar 31, 2011

Location	Provider	Dilated Eye within 12 Months	Micral Strip within 12 Months	Foot Exam within 12 Months
SETMA 1	Aziz	55.7%	75.3%	73.0%
	Duncan	52.8%	79.7%	78.9%
	Henderson	54.5%	78.6%	94.8%
	Murphy	50.0%	87.6%	84.4%
	Sims	44.6%	83.8%	51.4%
	Thomas	81.8%	76.6%	85.7%
	<b>SETMA 1 Totals:</b>	55.0%	80.7%	80.2%
SETMA 2	Ahmed	69.0%	63.1%	99.7%
	Anthony	56.8%	86.9%	96.2%
	Anwar	67.1%	92.7%	82.1%
	Cricchio	61.2%	80.8%	92.3%
	Holly	80.0%	94.3%	88.6%
	Leifeste	67.8%	86.3%	81.5%
	Wheeler	60.0%	84.8%	84.8%
	<b>SETMA 2 Totals:</b>	65.4%	78.0%	92.1%
SETMA West	Curry	70.2%	87.2%	91.5%
	Deiparine	57.9%	63.8%	89.5%
	Halbert	44.9%	60.0%	83.4%
	Horn	51.0%	81.9%	94.8%
	Qureshi	51.0%	71.9%	97.9%
	Satterwhite	51.1%	78.7%	88.3%
	Vardiman	57.3%	53.7%	78.0%
	<b>SETMA West Totals:</b>	53.4%	70.2%	89.0%
<b>SETMA Totals:</b>		59.8%	76.6%	88.5%



# Public Reporting of Performance



## NQF Diabetes Measures



### NQF - Diabetes Measures - Blood Pressure Control

E & M Codes: Clinic Only  
Encounter Date(s): Jan 1, 2011 through Mar 31, 2011

Location	Provider	Blood Pressure on Last Visit			
		< 120 / 70	< 130 / 80	< 140 / 90	> 140 / 90
SETMA 1	Aziz	18.4%	50.0%	79.3%	20.7%
	Duncan	27.6%	68.3%	95.1%	4.9%
	Henderson	25.3%	58.4%	85.1%	14.9%
	Murphy	23.4%	57.8%	86.2%	13.8%
	Sims	24.3%	50.0%	70.3%	29.7%
	Thomas	18.2%	57.1%	79.2%	20.8%
	<b>SETMA 1 Totals:</b>	22.9%	57.1%	83.8%	16.2%
SETMA 2	Ahmed	27.1%	62.6%	90.0%	10.0%
	Anthony	35.2%	84.5%	97.7%	2.3%
	Anwar	9.4%	79.1%	95.3%	4.7%
	Cricchio	24.5%	67.8%	89.5%	10.5%
	Holly	25.7%	88.6%	94.3%	5.7%
	Leifeste	27.0%	61.1%	87.7%	12.3%
	Wheeler	20.0%	60.0%	79.2%	20.8%
	<b>SETMA 2 Totals:</b>	24.7%	68.6%	90.6%	9.4%
SETMA West	Curry	17.0%	64.9%	88.3%	11.7%
	Deiparine	13.8%	46.7%	77.6%	22.4%
	Halbert	25.4%	54.6%	81.5%	18.5%
	Horn	25.2%	59.4%	98.7%	1.3%
	Qureshi	17.7%	68.8%	91.7%	8.3%
	Sattenwhite	14.9%	63.8%	87.2%	12.8%
	Vardiman	8.5%	31.7%	70.7%	29.3%
	<b>SETMA West Totals:</b>	18.9%	55.6%	85.3%	14.7%
<b>SETMA Totals:</b>		22.8%	62.5%	87.6%	12.4%

# Public Reporting of Performance



## NCQA Diabetes Recognition



### NCQA Diabetes Measures

Encounter Date(s): January 1, 2011 to March 31, 2011

Location	Provider	Encounters	A1c >9.0 <= 15%	A1c < 8.0 >= 60%	A1c < 7.0 >= 40%	BP > 140/90 <= 35%	BP < 130/80 >= 25%	Eye Exam >= 60%	Smoking Cessation >= 80%	LDL >= 130 <= 37 %	LDL < 100 >= 36%	Nephropathy >= 80%	Foot Exam >= 80%	Total Points
SETMA 1	Aziz	259	10.0%	79.2%	58.3%	23.2%	52.1%	57.9%	97.6%	11.2%	66.4%	73.0%	74.1%	80
	Duncan	190	10.5%	85.3%	67.4%	11.6%	64.7%	57.4%	85.4%	14.7%	66.3%	86.3%	81.1%	90
	Henderson	207	8.7%	82.1%	69.6%	15.5%	59.4%	56.0%	94.6%	12.6%	61.4%	80.7%	95.7%	90
	Murphy	337	5.6%	89.3%	68.0%	16.9%	55.2%	47.5%	77.5%	12.5%	70.9%	86.4%	85.8%	80
	Sims	122	11.5%	81.1%	62.3%	28.7%	49.2%	43.4%	87.5%	19.7%	54.9%	85.2%	61.5%	85
	Thomas	109	11.0%	71.6%	46.8%	20.2%	58.7%	82.6%	100.0%	12.8%	61.5%	78.9%	83.5%	95
SETMA 2	Ahmed	797	19.1%	62.1%	39.5%	9.2%	63.1%	67.6%	75.3%	11.7%	64.7%	63.1%	99.7%	68
	Anthony	293	12.3%	80.2%	62.5%	2.7%	85.0%	59.0%	81.1%	10.9%	72.0%	89.1%	96.2%	90
	Anwar	375	9.3%	82.4%	65.6%	3.5%	80.5%	64.3%	96.3%	14.7%	60.3%	94.1%	80.5%	100
	Cicchio	378	14.3%	67.2%	50.5%	11.1%	67.7%	58.7%	71.6%	11.6%	64.6%	79.9%	91.8%	75
	Holly	60	6.7%	83.3%	68.3%	3.3%	83.3%	81.7%	100.0%	16.7%	66.7%	95.0%	90.0%	100
	Leifeste	271	8.5%	80.4%	69.0%	11.1%	65.7%	70.1%	66.1%	10.0%	64.9%	88.6%	81.5%	90
	Wheeler	162	8.6%	85.8%	75.9%	23.5%	58.0%	61.7%	73.9%	14.8%	62.3%	87.0%	84.6%	90
SETMA West	Curry	116	13.8%	74.1%	51.7%	12.1%	62.9%	72.4%	81.0%	17.2%	60.3%	87.1%	93.1%	100
	Deiparine	192	8.9%	74.5%	53.1%	24.0%	45.8%	59.9%	92.3%	11.5%	55.7%	66.1%	90.1%	85
	Halbert	302	13.9%	75.8%	61.3%	19.9%	56.6%	42.4%	97.5%	16.9%	56.0%	57.9%	84.8%	85
	Horn	192	3.1%	82.3%	66.7%	1.6%	60.4%	49.0%	82.1%	15.6%	51.0%	81.8%	95.3%	90
	Satterwhite	116	14.7%	68.1%	47.4%	14.7%	63.8%	53.4%	90.3%	23.3%	44.8%	76.7%	87.1%	85

# Quality Assessment & Performance Improvement



**Quality Assessment and Performance Improvement (QAPI)** is SETMA's roadmap for the future. With data in hand, we can begin to use the outcomes to design quality initiatives for our future.

We can analyze our data to identify disparities in care between

- Ethnicities
- Socio-Economic Groups
- Age Groups
- Genders

# Quality Assessment & Performance Improvement



SETMA's Model of Care along with the technology of COGNOS -- this pairing of medicine and technology -- can transform the delivery of healthcare and is worthy of being adopted by others.

# Quality Assessment & Performance Improvement



By expanding SETMA's COGNOS Project, we are also designing a quality improvement initiative for the elimination of preventable readmissions to the hospital.

# www.jameshollymd.com



Please visit us at [www.jameshollymd.com](http://www.jameshollymd.com) where you will find all of our public reporting, electronic patient management and medical

h

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Healthcare Where Your Health is the Only Care

Enter



A photograph of a family of four on a beach. A man in a white shirt and blue jeans is holding a young child in a red shirt. A young girl in a blue outfit is standing to the left, and another child in a blue outfit is bending over to play in the sand. The ocean waves are breaking in the background.



SOUTHEAST TEXAS  
SETMA  
MEDICAL ASSOCIATES, LLP

SETMA I 2929 Calder	SETMA II 3570 College	SETMA West 2010 Dowlen	833-9797
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Letters

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Your Life Your Health ▾

Patients ▾

I-CARE Initiative

Electronic Patient Management Tools ▾

Public Reporting ▾

Medical Home ▾

NCQA PC-MH Application ▾

NextMD

"Healthcare improvement will result from transformation, not reformation. Reform comes from external pressure; transformation comes from internalized values and energy." -

James L. Holly, MD, CEO, SETMA, LLP

## Featured Content of Website and of SETMA's Work

- Gartner Business Intelligence Excellence Award – SETMA One of Three Semi-Finalist for 2011
- SETMA's Transitions of Care Letter to Don Berwick, Administrator of CMS, April, 2011
- Address to the Spring meeting of the Society for Academic CME, April, 2011
- Address to the staff of the Office of the National Coordinator HIT, HHS, March 31, 2011
- Address to the Patient-Centered Primary Care Collaborative Stakeholders' Workshop, March 30, 2010
- SETMA's Pilgrimage to a Patient-Centered Medical Home, The Doctor's Office, HealthLeader's Media, March 2011
- James L. Holly, MD, Healthcare Informatics Magazine Blog, February 2011
- SETMA Awards and Recognitions

## Your Life Your Health - 04/14/2011

### 2011 Gartner Business Intelligence Excellence Awards

#### SETMA A Semi-Finalist

#### About Gartner

Gartner, Inc. (NYSE: IT) is the world's leading information technology research and advisory company. Gartner delivers the technology-related insight necessary for its clients to make the right decisions, every day. From CIOs and senior IT leaders in corporations and



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## Healthcare Where Your Health is the Only Care

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- Pa

- Electronic Patient Management Tools ▾
- Public Reporting ▾
- Medical Home ▾
- NCQA PC-MH

ICD-9 Coding	>	result from transformation, not reformation. Re
Suites of Templates	>	s from internalized values and energy." - Jar
Disease Management Tools	>	d of SETMA's Work
Hospital Based Tools	>	
Preventive Health Tools	>	Excellence Award – SETMA One of Three Semi-Finalis
Nursing Home	>	letter to Don Berwick, Administrator of CMS, April, 201
Specialized Tools	>	of the Society for Academic CME, April, 2011
Electronic Tickler File	>	ce of the National Coordinator HIT, HHS, March 31, 2
HCC & RxHCC Risk	>	ed Primary Care Collaborative Stakeholders' Worksh
Chronic Conditions Tutorial	>	t-Centered Medical Home, The Doctor's Office, Heal
Association of Medication and Diagnosis	>	e Informatics Magazine Blog, February 2011
Framingham Cardiovascular Risk	>	ns
Medication Module	>	2011
Renal Failure	>	Excellence Awards

...ing information technology research and advisory compa

... make the right decisions, every day. From CIOs and seni

...rs in high-tech and telecom enterprises and professional s

... clients in 11,000 disti

# The Future



The future of quality metrics and the auditing of provider performance are constantly evolving. SETMA's COGNOS Project allows us to both participate in the future and to define it; and, ultimately to pay attention to the things that matter and the things that will result in improved health for all of our patients.