Identifying and Eliminating Unnecessary Variation in Care: The Missing Piece of ACO Success

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Our Task

- Ensure patients receive the right care at the right time at the right place by reducing overuse and underuse of services
- Achieve ACO financial viability
- Engage the professional community in a **respectful accountable** data driven process to promote optimal care
- Create clear, value driven, transparent goals that encourages the ACO and its partners to collaborate around a data driven process

Improving Value – Three Key Drivers

- Promoting prevention and reducing downstream costs — Long Term
- Improving the Efficiency and Effectiveness of chronic disease care — Intermed Term
- **Reducing overuse of unwarranted services** — Short Term

WHY Focus on Overuse?

- Overuse reduces bottom line dollars for reinvestment
- Overuse use reduction can be used to capitalize the interventions needed to improve chronic care outcomes
- Results are comparatively rapid
- If selected well – provides actionable, justifiable recommendations
- Engages practitioners in the discussion of what is appropriate care
- IT WORKS!!

How to Reduce Overuse of Unwarranted Services

- **Identify Variation** – What high cost conditions have the most variation?
- **Understand Variation** – What causes the variation and **is it clinically appropriate**?
- **Address Variation** – How to successfully reduce unnecessary variation?

Why Variation?

- Separating cost and quality has failed – V=Q+S/C
- Quality can be defined in terms of reducing overuse, misuse and underuse (IOM)
- Physicians respond to conversations around appropriateness
- One important marker of appropriateness is explaining variation in care that exists
- **Peer comparison data about measures anchored in evidence of benefit is the most powerful motivator of behavior change**

Beckman H. Ann Intern Med. 2011;154:430

What is Variation Analysis?

Variation analysis provides the ACO with clear, succinct and clinically based answers to five very important questions:

1. What Disease Conditions account for the Highest Cost?
2. What are the Key Cost Drivers within each Disease Condition?
3. What variation exists within each Key Cost Driver?
4. How does one select the right opportunities to Reduce Costs?
5. How does one achieve measureable savings while Maintaining or Improving Quality?

Why So Much Variation?

Basis of Decisions	Number of Decisions*	% of Total
Experience/Anecdote	441	37.1
Arbitrary/Instinct	175	14.7
Trained to do it	173	14.6
General Study	146	12.3
First Principles	146	12.3
Limited Study	61	5.1
Specific Study	34	2.9
Parental Preference	6	0.5
For Research	4	0.3
Avoid a Lawsuit	2	0.2
* Rounded to the nearest integer	1188	100.0

Darst JR, et al. Deciding without Data. Congenital Heart disease. 2010;5:339

What is Required for Meaningful Variation Analysis?

- A significant sized data base (Sufficient volume - > 50,000 lives)
- Access to a Diagnostic Grouper (Risk stratify)
- Early practitioner involvement
- Asking the right questions (Getting to action)
  - What do you want me to do differently?
  - Is it the right thing to do?
- Treating interventions as Quality Improvement

Cost Analysis Blueprint for Completed Episodes

Episode End Date Data Period: 12 Months

Dates of Service: 19 Months

Confidential **Illustrative Data**

Key:

Condition, ETG number		
Analyzed $	Multi-plier	Extrap $$
Inlier F		Comp F
Avg cost per episode		
inlier epi cnt		outlier epi cnt

Total Dollars Completed Inlier Episodes from Data Base: $3,247,699,010
Sum of top ETG dollars: $132,600,369

Percentage accounted for: 4%

Highest Cost ETG → Lower Cost ETG

Internal Medicine

Total dollars in top ETGs: $132,600,369 | % Specialty dollars in top ETGs: 35.3% | Total inlier dollars attributed to specialty: $375,980,726

1			2			3			4		
Hypertension (388100)			Diabetes (163000)			Hyperlipidemia, other (164700)			Asthma (438800)		
$52,925,879	2.575	$136,263,843	$40,367,350	2.892	$116,761,451	$24,603,498	2.705	$66,553,514	$14,703,642	2.533	$37,247,724
0.92		0.42	0.91		0.38	0.90		0.41	0.91		0.43
46% Rx; 28% management; 11% Lab			69% Rx; 17% management			70% Rx; 15% management			69% Rx; 16% management		
$759			$2,269			$490			$1,015		
69,768		6,225	17,794		1,738	50,260		5,348	14,488		1,396

Family Practice

Total dollars in top ETGs: $36,370,145 | % Specialty dollars in top ETGs: 30.4% | Total inlier dollars attributed to specialty: $119,594,523

1			2			3			4		
Hypertension (388100)			Diabetes (163000)			Hyperlipidemia, other (164700)			Asthma (438800)		
$14,124,240	2.549	$36,005,459	$10,514,147	2.892	$30,408,646	$6,746,546	2.688	$18,132,910	$4,985,211	2.487	$12,396,045
0.93		0.42	0.91		0.38	0.91		0.41	0.93		0.43
43% Rx			66% Rx; 19% management			67% Rx; 17% management			69% Rx; 17% management		
$646			$1,903			$446			$840		
21,881		1,717	5,525		539	15,142		1,504	5,935		452

Cardiovascular Disease

Total dollars in top ETGs: $31,727,779 | % Specialty dollars in top ETGs: 62.6% | Total inlier dollars attributed to specialty: $50,722,225

1			2			3			4		
Ischemic Heart Disease (386500)			Hypertension (388100)			Hyperlipidemia, other (164700)			Diabetes (163000)		
$14,734,997	3.156	$46,500,872	$8,731,280	2.623	$22,903,208	$6,992,502	2.586	$18,080,109	$1,269,001	2.939	$3,729,158
0.83		0.38	0.90		0.42	0.95		0.41	0.90		0.38
38% Rx; 18% diagnostic			46% Rx			88% Rx			72% Rx		
$2,733			$994			$1,035			$2,030		
5,392		1,120	8,784		964	6,757		389	625		72

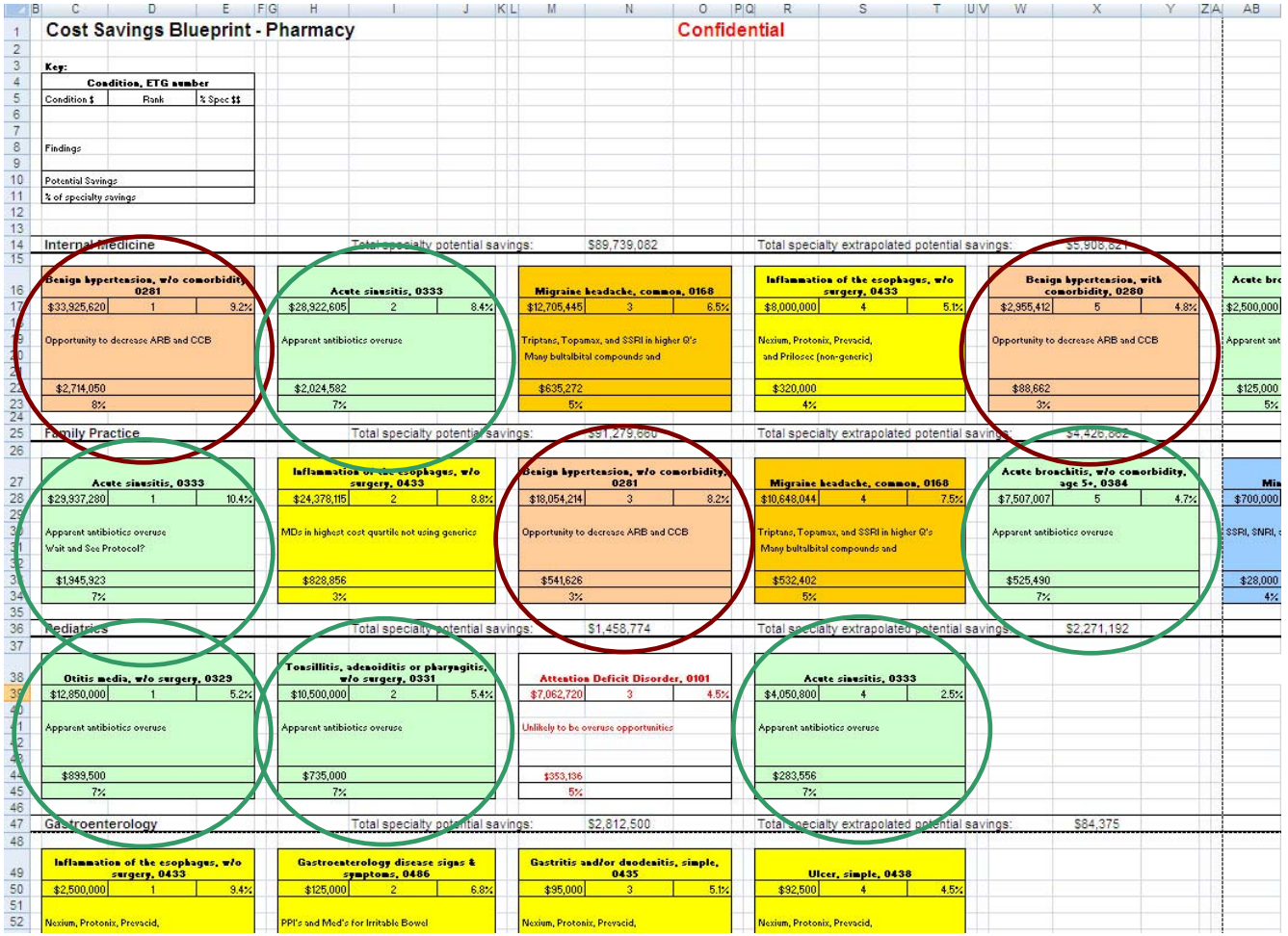
Orthopedic Surgery

Total dollars in top ETGs: $53,751,123 | % Specialty dollars in top ETGs: 45.5% | Total inlier dollars attributed to specialty: $118,100,785

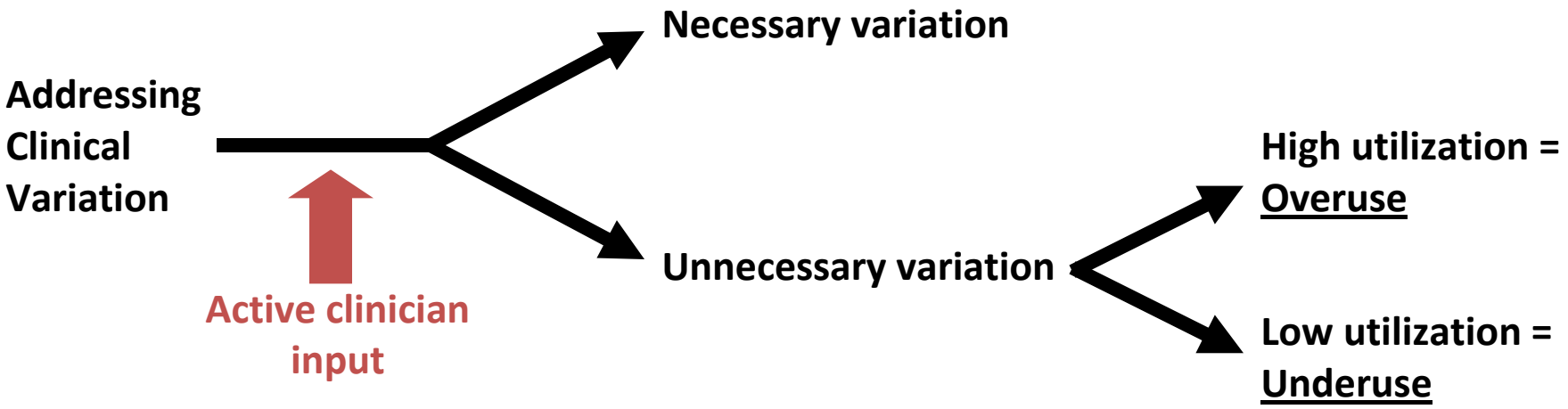
1	2	3	4
Joint degeneration, localized - thigh, hip & pelvis (712203)	Joint derangement - knee & lower leg (714302)	Joint degeneration, localized - knee & lower leg (712202)	Joint degeneration, localized - shoulder (712206)

Potential Savings Blueprint

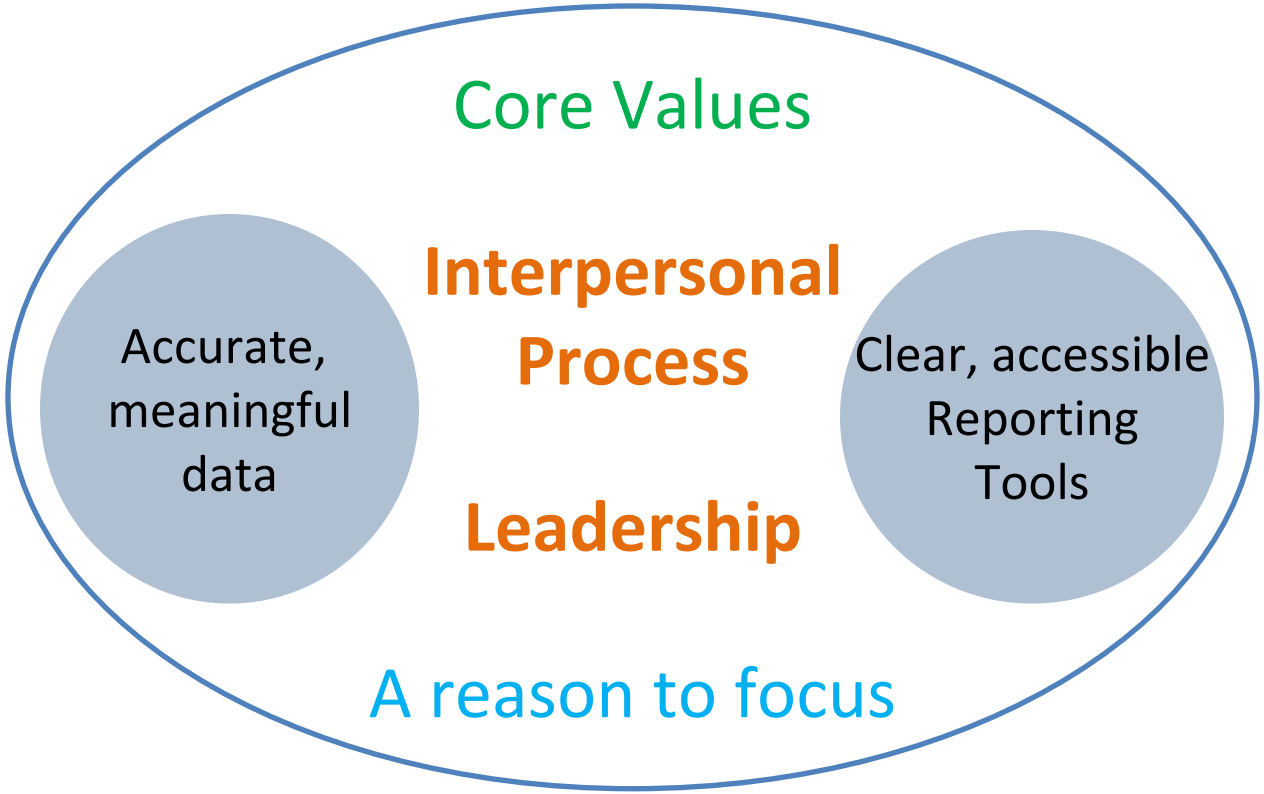
Ranked by Potential Savings…finding Actionable Projects

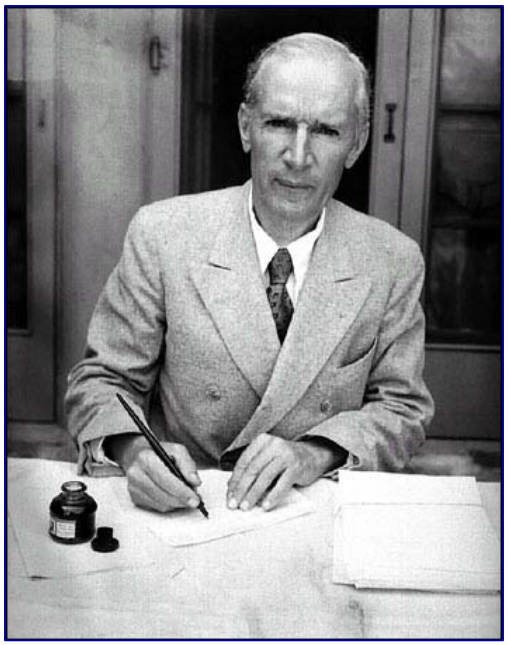


Choosing Clinically Appropriate Areas on which to Focus



Engaging Physicians in Change: All Are Required





“It is difficult to get a man to understand something when his salary depends on his not understanding it”

Upton Sinclair

“I, Candidate for Governor; and How I Got Licked”
Berkeley, CA University of California Press 1994. P. 109
Reprinted from the Original published in 1934

What do think motivates physician behavior change?

- Internal motivation
- External motivation

Self Determination Theory

- Developed by Ed Deci, Ph.D. and Richard Ryan, Ph.D.
- Proposes that internal motivation trumps external motivation
- Defines three areas responsible for internal motivation
  - Competence
  - Autonomy
  - Relatedness
  - In the context of synchronous core values

Promoting Internal Motivation: Competence

- Asking someone to accomplish something they believe is possible
- The need to feel that one can reliably produce desired outcomes and/or avoid negative outcomes

Autonomy

- Being given the chance to discover how to solve a problem; encouraged to own the solution
- Autonomy relates to the feeling that one is acting in accord with one's sense of self
- A sense of choosing rather than feeling compelled or controlled

Autonomy

- Without the possibility of choice, and the exercise of choice, a man is not a man but a member, an instrument, a thing.
- Autonomy requires that engagement in an activity is freely chosen in accordance with one's other goals and values

Relatedness

- The need to feel close to others and emotionally secure in one's relationships
- The sense that significant others care about one's well-being

Relatedness

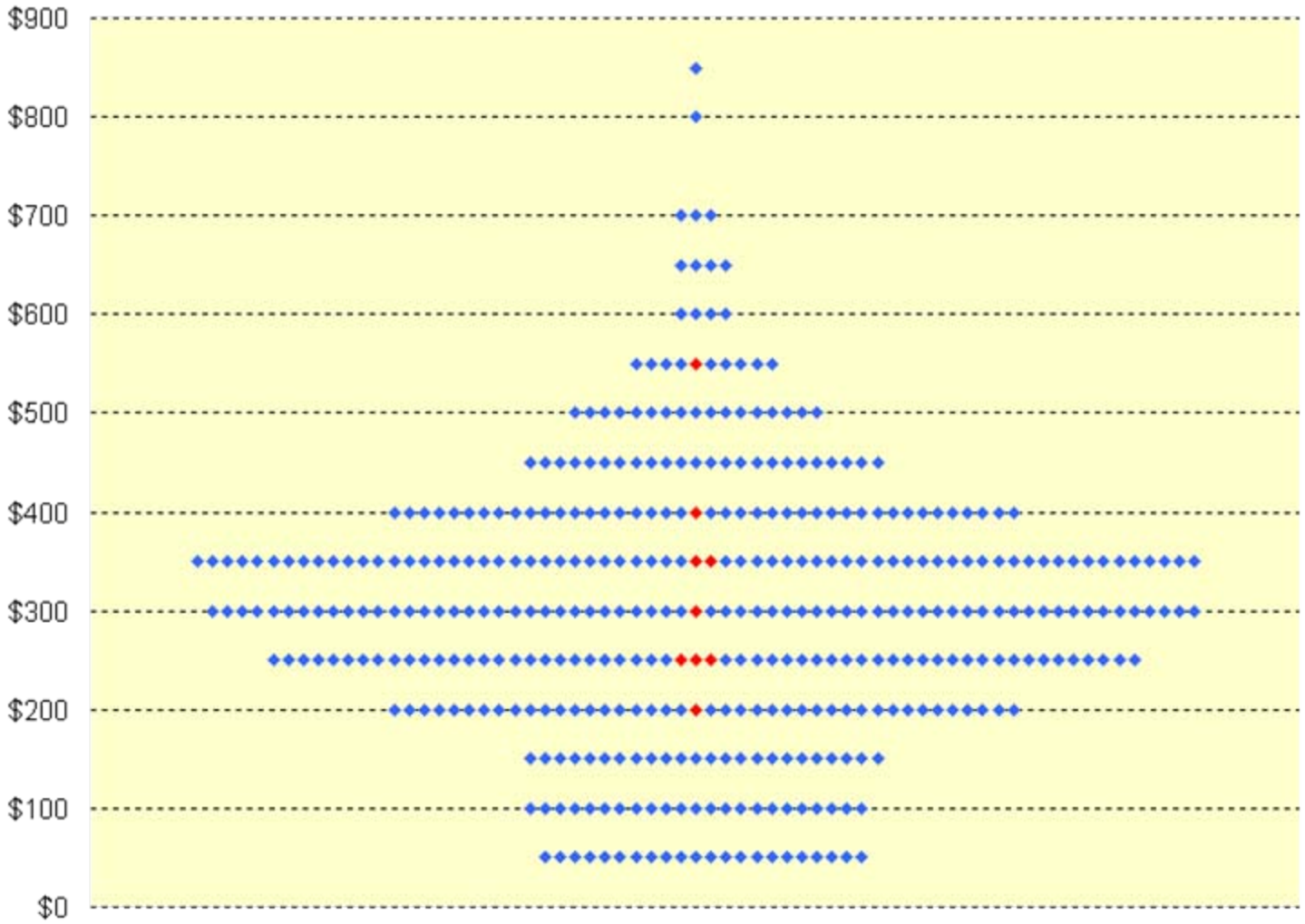
- Believing one is being asked to be part of a larger task, goal, community (Doing meaningful work)
- Context values – Believing in the team asking for the effort. Feeling that the community involved in the project shares reasons for participating and conducts its work responsibly

"Getting to Action"
Focus on the Unnecessary Variation

- Avoids focus on non-essential behaviors
- Moves physicians to a clinical discussion
  - "Here is the variation we observe."
  - "What are your thoughts on why there is so much variation?"
  - "What does our local expert panel recommend?"

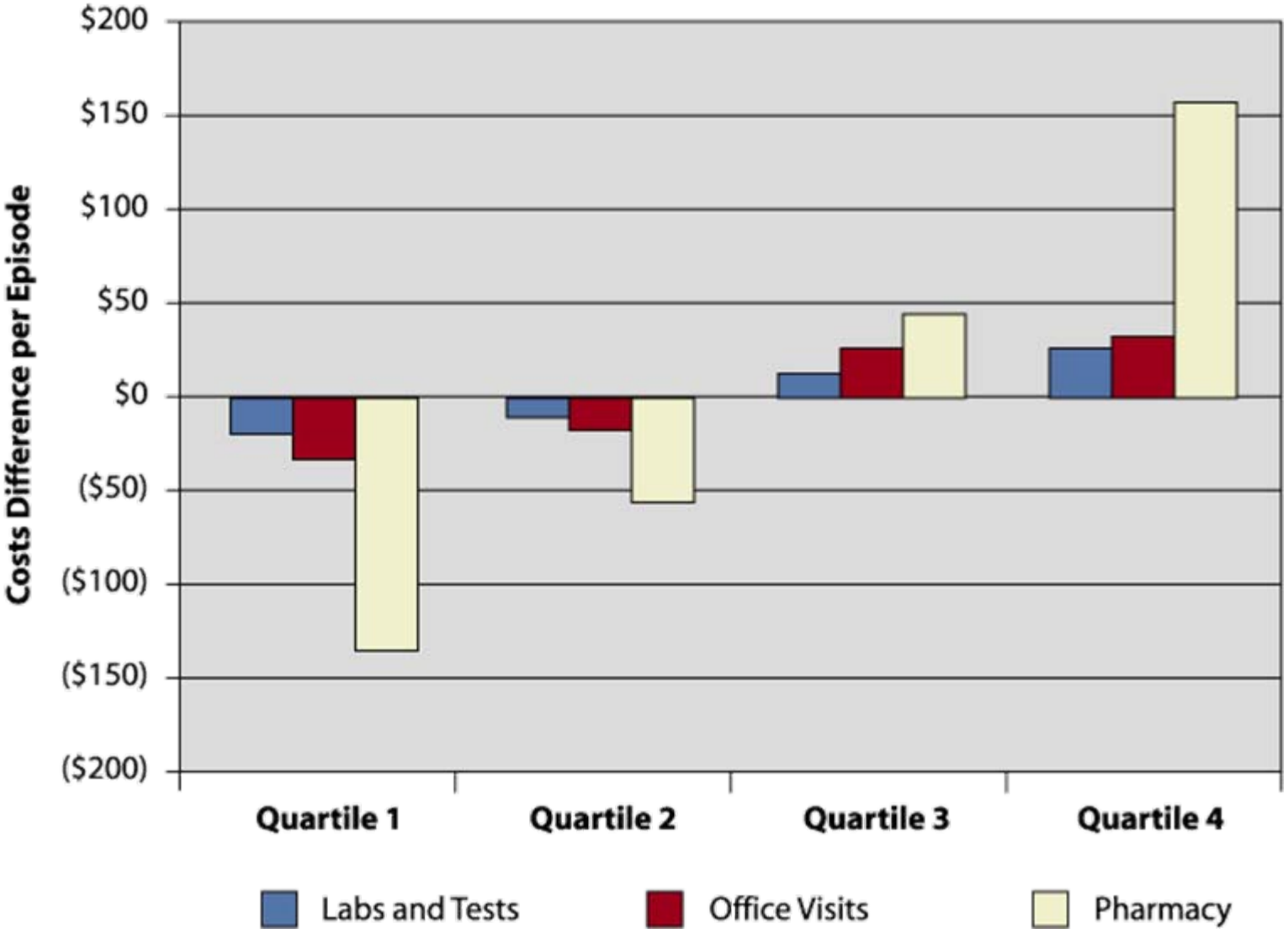
Internists HTN Rx Costs per Episode

1/1/2002-12/31/2003 data load

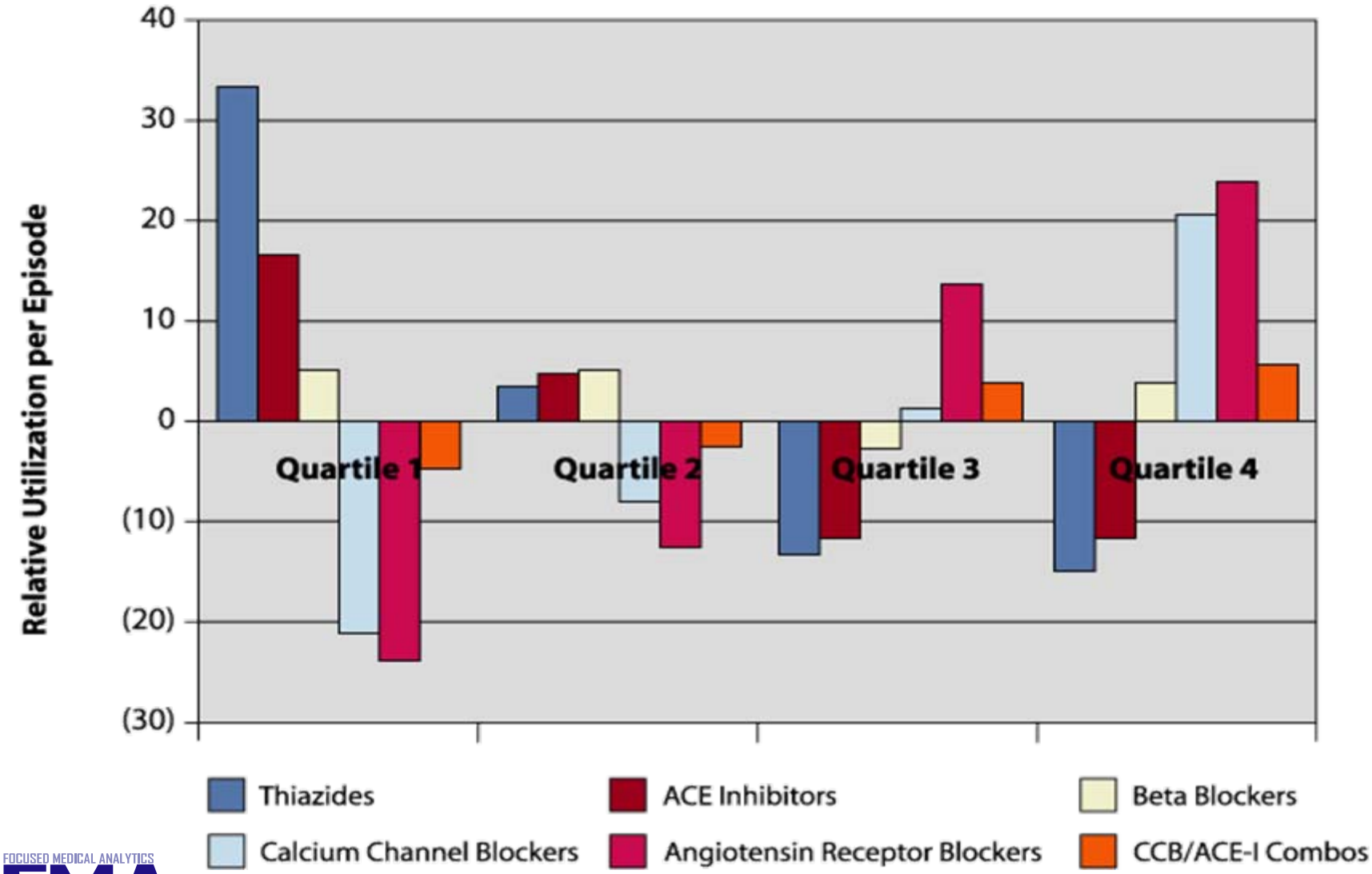


Advisory Committee members show in red.

What is Driving Costs?

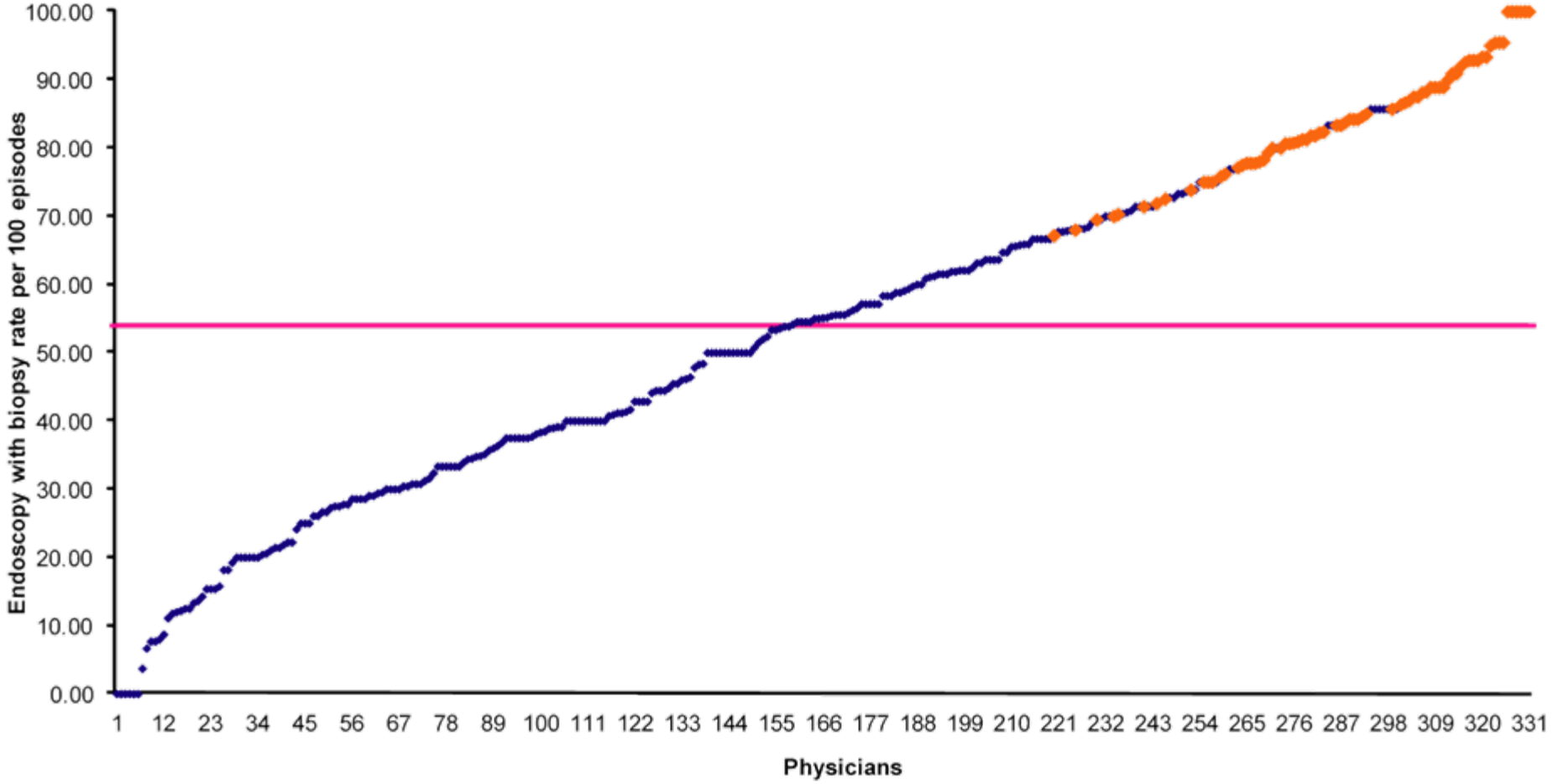


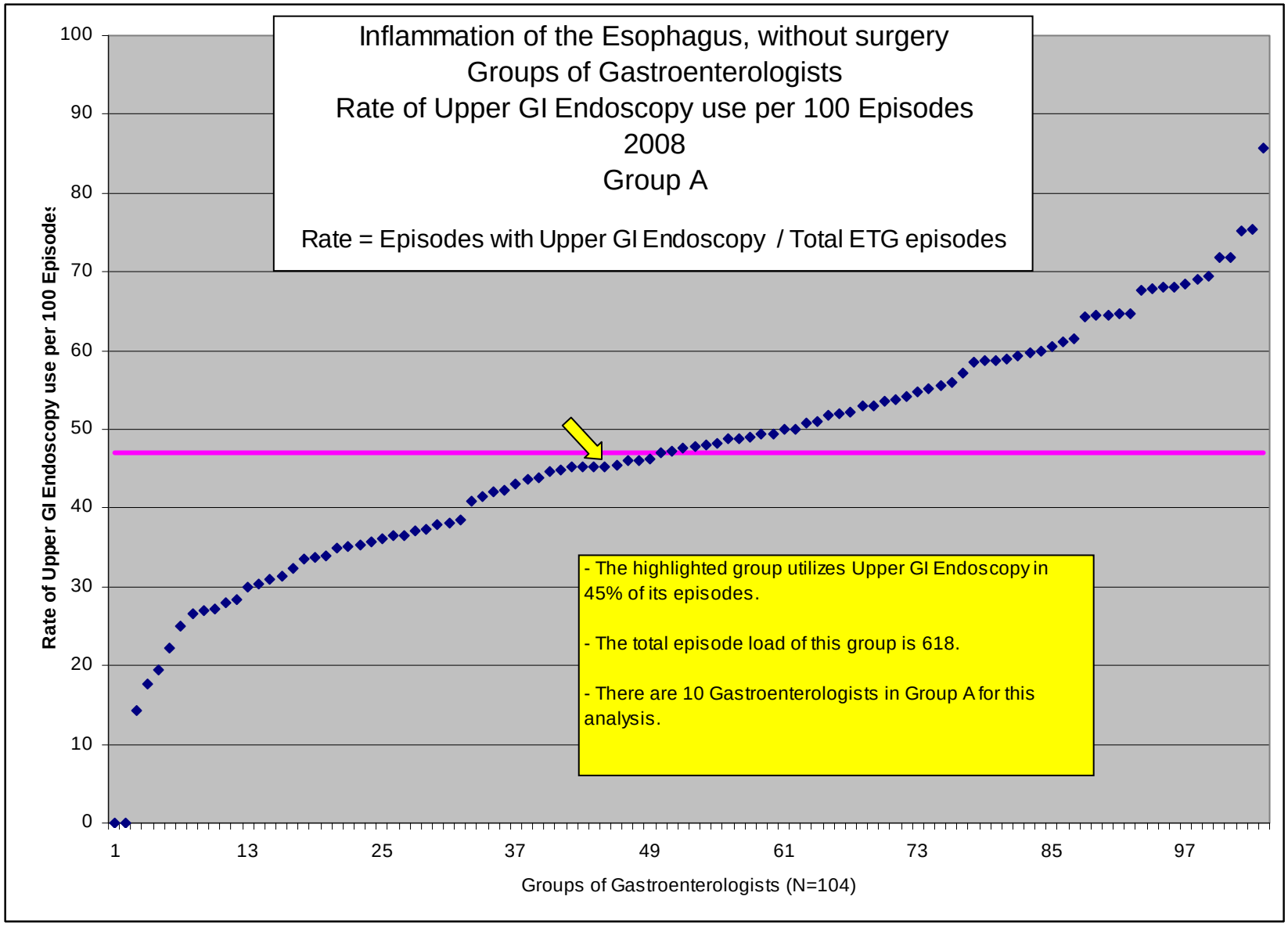
Analysis of Pharmacy Reveals Best Practice is Quartile 1

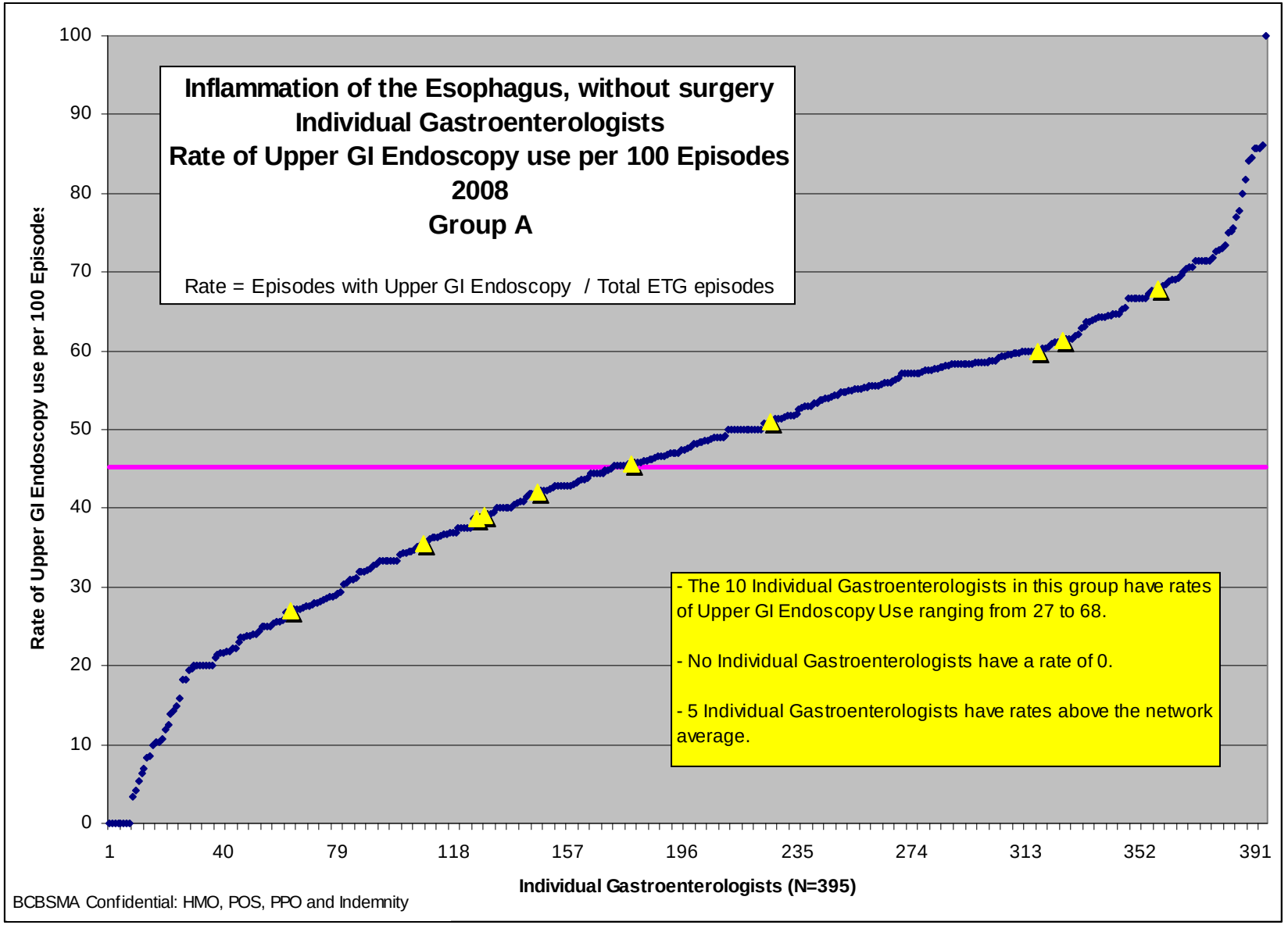


Gastroenterology
Inflammation of esophagus, w/o surgery etg 433
Endoscopy with Biopsy Rate per 100 episodes
Dates of Service: 12 Months
High tendency to use endoscopy with biopsy in an episode (orange)

ILLUSTRATIVE DATA







BCBSMA Confidential: HMO, POS, PPO and Indemnity

ETG 473300 Gastroenterology

Inflammation of esophagus

ILLUSTRATIVE DATA

High percentage services: Surgery

BY CPT CODE

quartile	service	brief service description	services per 100 episodes	services/ episode occurred	Occurred in/# of episodes	total services	quartile episodes	total costs	total cost per quartile episode	difference per quartile episode	episodes this service occurred	Avg Cost (unit price)	% of total services (all codes)
Q1	43235	Upper gi endoscopy; diagnostic w collection of specimen	10.32	1.02	0.10	87	843	$59,610	$80.85	-$0.07	85	$685.17	3.2%
Q2	43235	Upper gi endoscopy; diagnostic w collection of specimen	10.85	1.01	0.11	112	1,032	$90,466	$100.23	$19.31	111	$807.73	4.2%
Q3	43235	Upper gi endoscopy; diagnostic w collection of specimen	8.67	1.02	0.08	89	1,027	$82,292	$91.62	$10.70	87	$924.63	3.3%
Q4	43235	Upper gi endoscopy; diagnostic w collection of specimen	3.77	1.00	0.04	38	1,009	$44,414	$50.33	-$30.59	38	$1,168.79	1.4%
Q1	43239	Upper gi endoscopy; with biopsy (single/multiple)	44.48	1.01	0.44	375	843	$308,578	$418.53	-$185.11	371	$822.88	14.0%
Q2	43239	Upper gi endoscopy; with biopsy (single/multiple)	55.04	1.03	0.54	568	1,032	$531,148	$588.47	-$15.17	553	$935.12	21.1%
Q3	43239	Upper gi endoscopy; with biopsy (single/multiple)	57.74	1.05	0.55	593	1,027	$592,249	$659.36	$55.72	566	$998.73	22.1%
Q4	43239	Upper gi endoscopy; with biopsy (single/multiple)	56.69	1.05	0.54	572	1,009	$632,811	$717.09	$113.45	547	$1,106.31	21.3%
Q1	45378	Colonoscopy; diagnostic w/wo collection of specimen	3.68	1.00	0.04	31	843	$25,193	$34.17	$1.35	31	$812.68	1.2%
Q2	45378	Colonoscopy; diagnostic w/wo collection of specimen	4.07	1.00	0.04	42	1,032	$36,519	$40.46	$7.64	42	$869.49	1.6%
Q3	45378	Colonoscopy; diagnostic w/wo collection of specimen	2.82	1.00	0.03	29	1,027	$24,400	$27.17	-$5.65	29	$841.38	1.1%
Q4	45378	Colonoscopy; diagnostic w/wo collection of specimen	2.68	1.04	0.03	27	1,009	$26,149	$29.63	-$3.19	26	$968.48	1.0%
Q1	45380	Colonoscopy; with biopsy (single/multiple)	1.78	1.00	0.02	15	843	$10,569	$14.34	-$23.21	15	$704.62	0.6%
Q2	45380	Colonoscopy; with biopsy (single/multiple)	3.10	1.00	0.03	32	1,032	$33,794	$37.44	-$0.11	32	$1,056.06	1.2%
Q3	45380	Colonoscopy; with biopsy (single/multiple)	3.41	1.00	0.03	35	1,027	$32,602	$36.30	-$1.25	35	$931.49	1.3%
Q4	45380	Colonoscopy; with biopsy (single/multiple)	4.16	1.00	0.04	42	1,009	$51,468	$58.32	$20.78	42	$1,225.44	1.6%
						2,687		**$2,582,264**			**2,610**		**100.0%**

Doctor Code	% of physician episodes surgical	% orthopedic specialty episodes surgical	% episodes with arthrodesis	% episodes with decompression	% episodes laminectomy	% episodes laminotomy	average episode dollars with surgery	average episode dollars without surgery	average all neck and bac episode dollars
285	18	15	7.2%	2.4%	6.7%	4.3%	$14,576	$3,021	$5,132
287	19	15	7.4%	2.8%	7.4%	1.9%	$20,339	$4,252	$7,231
288	19	15	11.6%	3.5%	3.5%	5.5%	$16,531	$3,297	$5,752
289	19	15	6.3%	0.0%	0.0%	0.0%	$16,783	$3,154	$5,709
290	19	15	5.6%	4.4%	4.4%	3.3%	$9,948	$3,212	$4,484
312	23	15	14.8%	8.5%	7.7%	4.9%	$19,168	$2,810	$6,553
313	23	15	0.0%	0.0%	0.0%	0.0%	$12,695	$3,205	$5,395
314	23	15	0.0%	0.0%	0.0%	0.0%	$32,818	$2,626	$9,593
315	23	15	18.2%	11.6%	7.6%	2.5%	$24,512	$3,952	$8,728
316	23	15	0.0%	0.0%	0.0%	0.0%	$16,610	$2,772	$6,001
317	24	15	0.0%	0.0%	6.9%	13.8%	$9,250	$2,607	$4,211
335	29	15	19.7%	4.6%	11.6%	13.3%	$19,676	$3,145	$8,018
336	30	15	25.7%	4.8%	6.4%	4.4%	$15,852	$2,965	$6,795
337	32	15	0.0%	0.0%	0.0%	0.0%	$20,544	$3,524	$8,899
338	33	15	0.0%	0.0%	0.0%	0.0%	$14,194	$2,718	$6,543
339	45	15	30.8%	14.6%	13.1%	20.8%	$21,772	$3,438	$11,618
340	45	15	42.7%	29.3%	25.3%	15.3%	$25,192	$3,839	$13,377

Choosing the Right Project(s)

- Linked to community/organizational goals/objectives
- Meaningful anticipated $$ savings
- Directed towards specialties or types of services (meds vs. procedures vs. E&M) viewed as likely to succeed

"Actionable"
Procedure Level Potential Savings

Scale: 0 Low, 4 High

Procedure Oriented Projects	Specialties	ETG description	Potential Savings	Experience	Success of Changing Behavior	Level Of Difficulty
Upper GI endoscopy	GI, FP, IM	Inflammation of Esophagus	$2.20 pmpm	2+	3+	2+
Chiropractic services	Chiropracter	Neck & Back	$2.19 pmpm	0	-	-
Spinal Injections	FP, IM, Ne, NeSURG,	Neck & Back	$1.20 pmpm	3+	3+	2+
Back Surgery	Ortho	Neck & Back	$.93 pmpm	1+	-	3+
MRI	Ortho, FP, IM	Neck & Back	$1.20 pmpm	4+	4+	2+
Arthroplasty	Ortho	Knee	$2.40 pmpm	3+	1+	4+
non-invasive cardiology	Card, FP, IM	Ischemic heart disease	$1.00 pmpm	4+	2+	2+
nasal endoscopies	Otolaryngology	Chronic sinusitis	$1.60 pmpm	4+	3+	2+
lithotripsy	Urology	Kideney stones	$.94 pmpm	0	-	2+

"Actionable"
Drug Level Potential Savings

Scale: 0 Low, 4 High

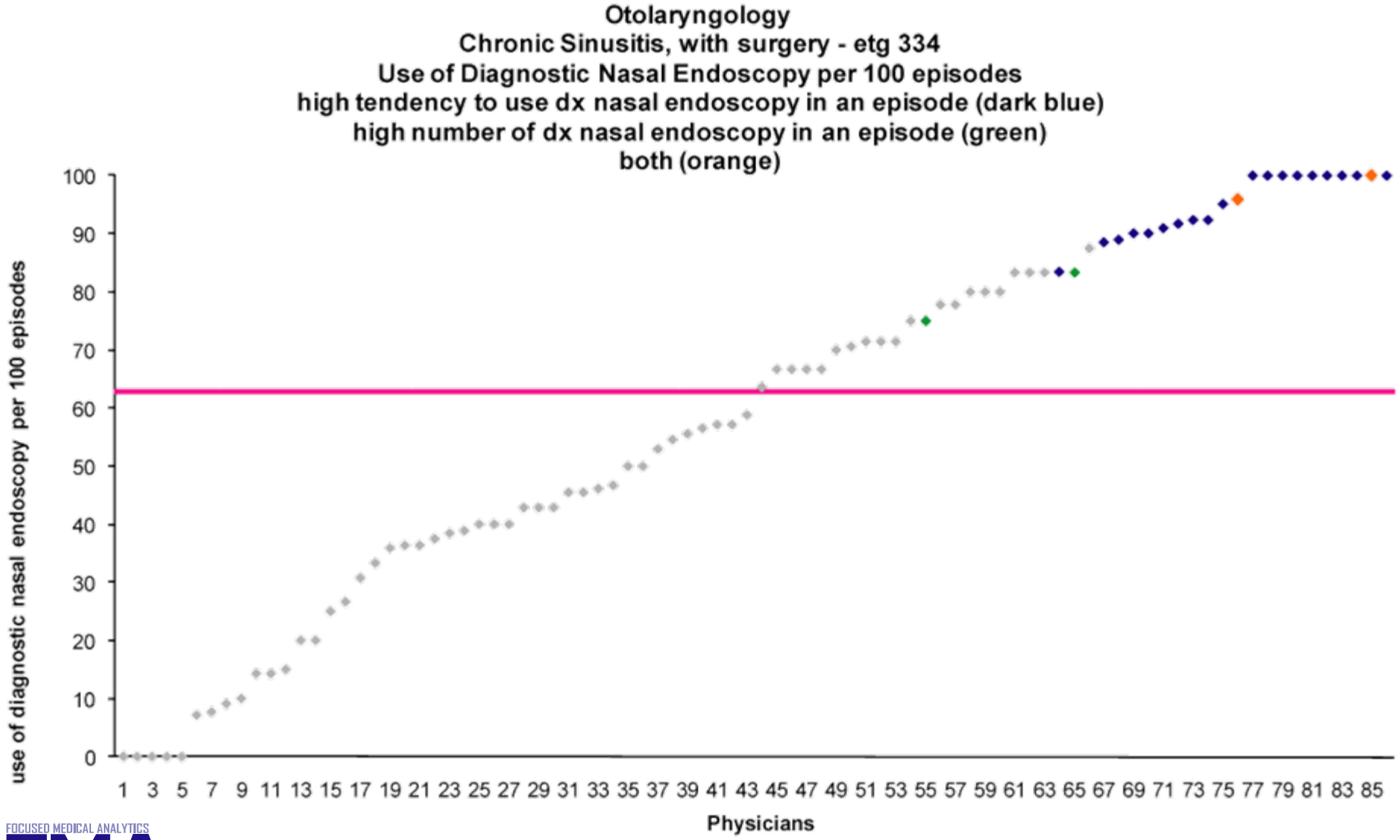
Drug Level Projects	Specialties	ETG description	Estimated Savings	Experience	Success of Changing Behavior	Level Of Difficulty
Generic ACE & ARBs	FP, IM	Hypertension	$6.00 pmpm	3+	2+	1+
Move brand/high cost statin to simvastatin	FP, IM, Card	Hyperlipidemia and hypo-function thyroid gland	$8.47 pmpm	3+	3+	1+
PPIs brand to generic	FP, IM	Inflammation of esophagus	$4.67 pmpm	3+	2+	1+
Brand hypoglycemic agents vs. generic alternatives	FP, GP, IM, Endo	Diabetes	$4.68 pmpm	0	-	-
Narcotics Impact	FP,IM, Ne, NeSUrg	Neck & Back	$.65 pmpm	3+	3+	2+
Triptans	Ne, FP	Migraine headache	$.41 pmpm	0	-	-
High cost antibiotics	FP, IM	Acute and Chronic Sinusitis	$.60 pmpm	4+	4+	1+

Choosing the Right Project(s)

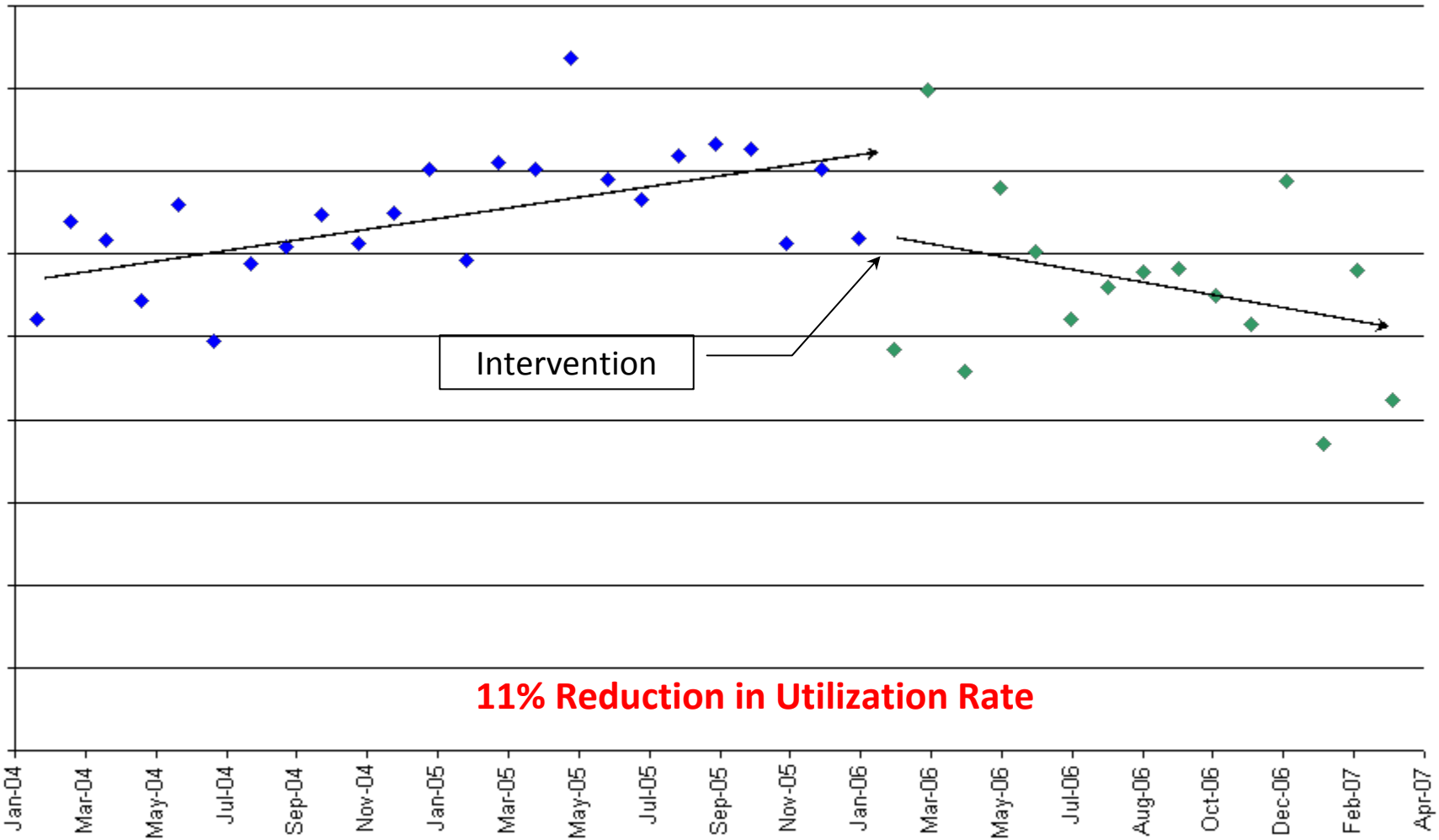
- Focus where there is overlap with multiple products (Medicaid, Commercial, Medicare)
- Evidence based recommendations encourage eliminating overuse
- Clinical champion(s) available
- Choose projects with **actionable interventions**

So What: Does it Work?

Laryngoscopy Case Mix Curve



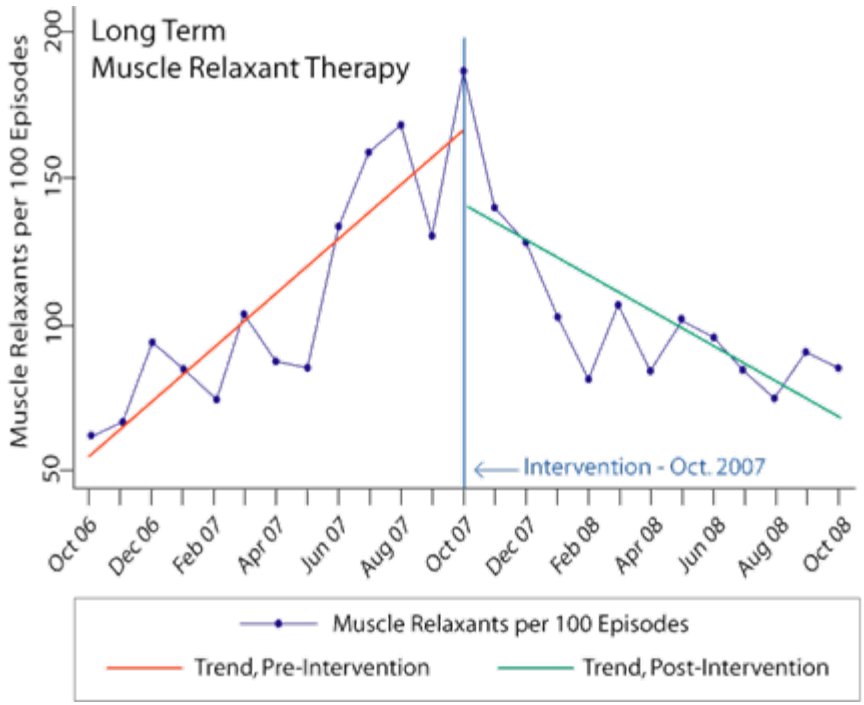
Outcome on ENT Fiberoptic Laryngoscopy

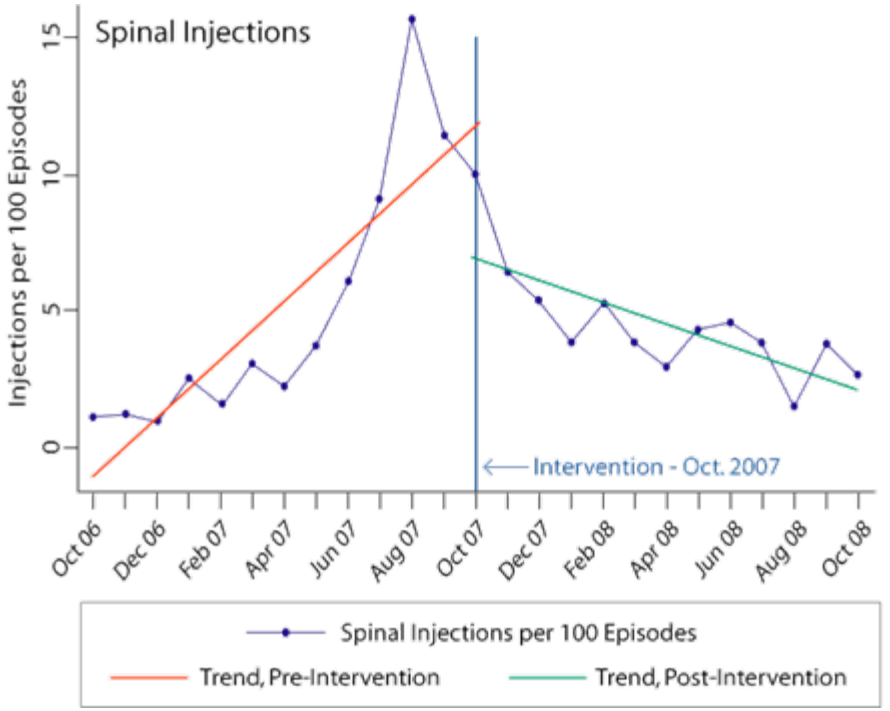


Greene RA, Beckman HB, Mahoney T. Beyond the Efficiency Index: Finding a better way to reduce overuse and increase efficiency in physician care. Health Affairs. 2008;27:w250-w259. (Published online May 20, 2008:10.1377/hlthaff.27.4.w250.

Another Example

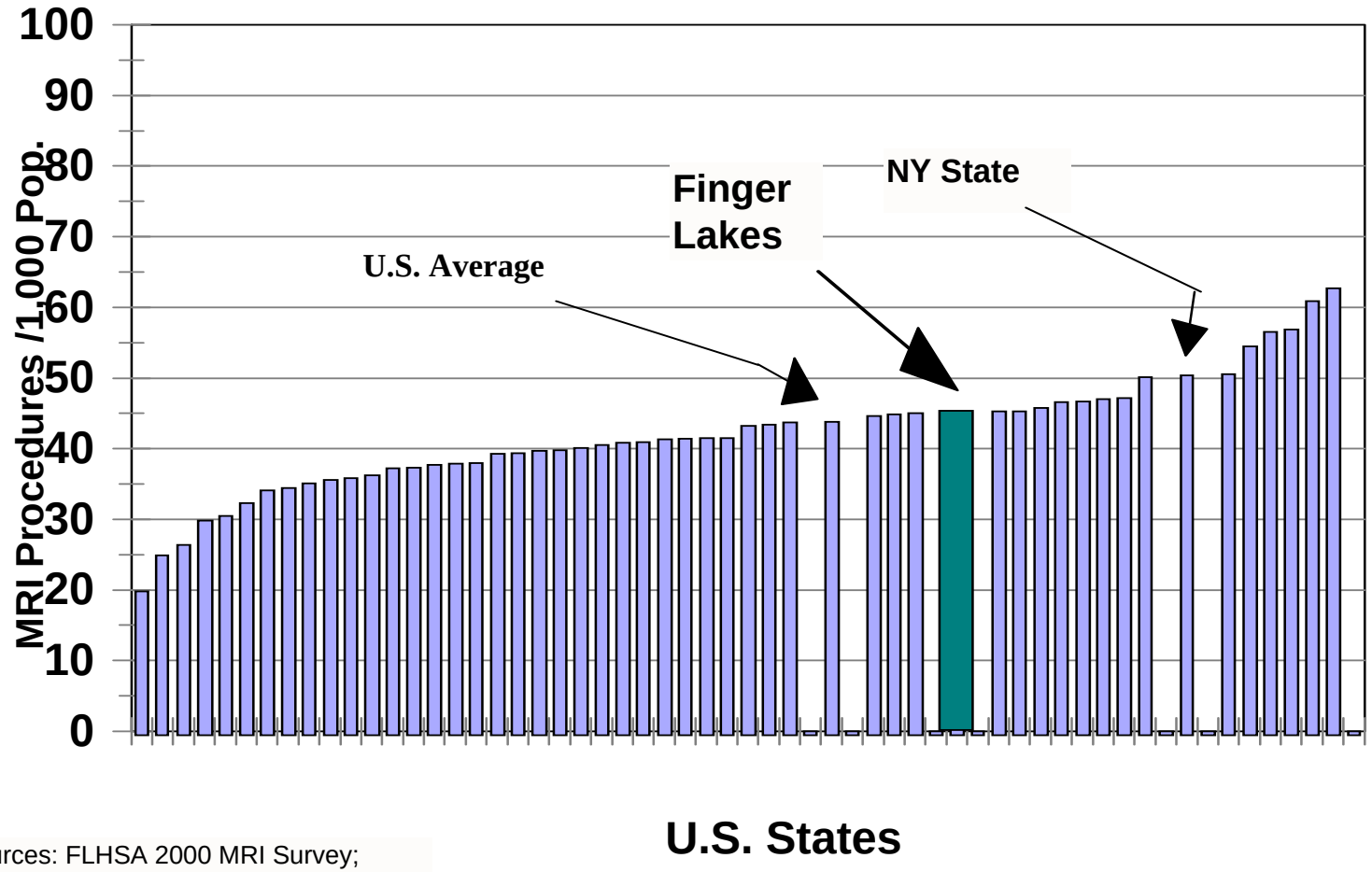
$.32 pmpm Reduction





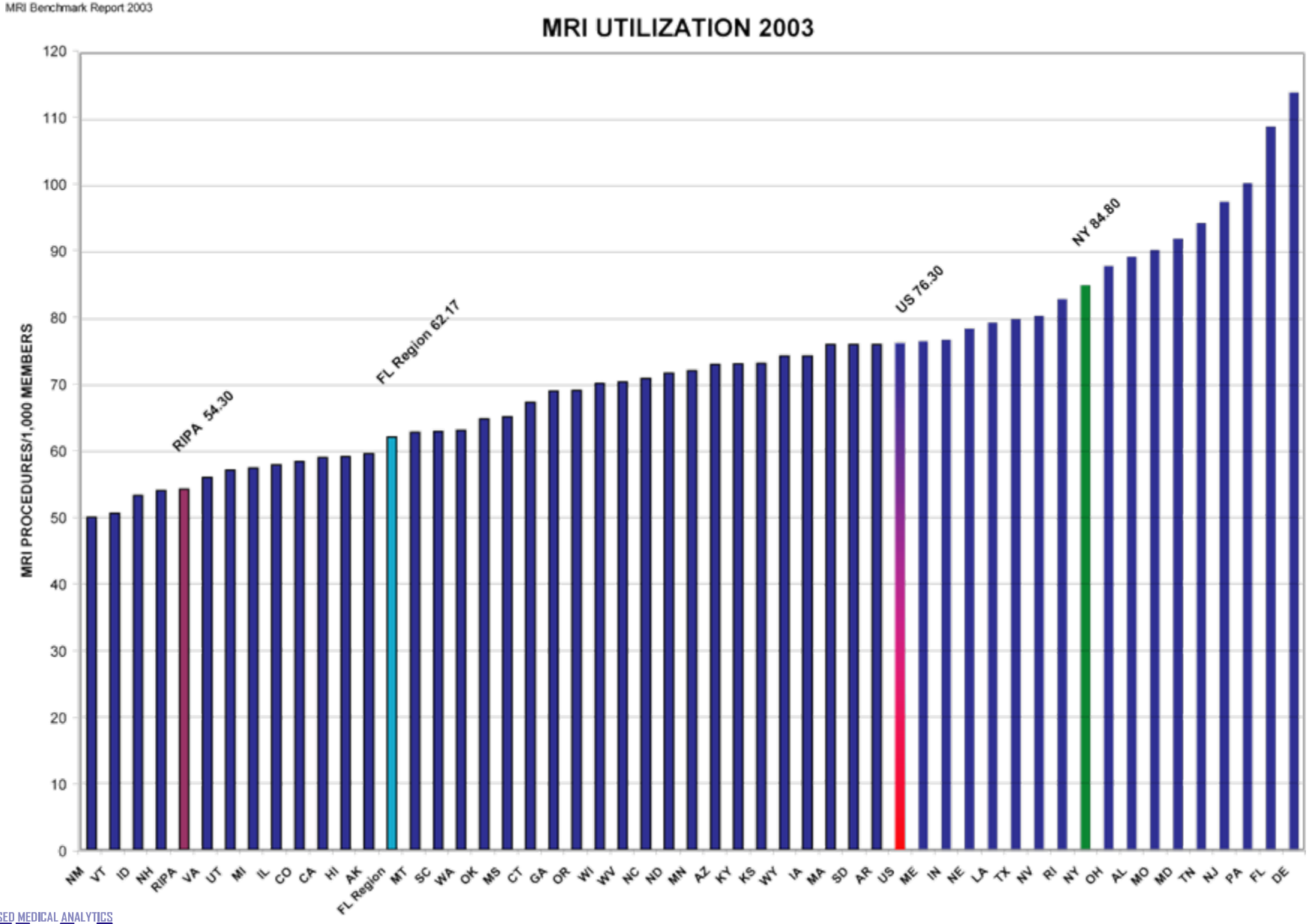
Chris Cammisa, **Gregory Partridge**, Cynthia Ardans, Katrina Buehrer, Ben Chapman, and **Howard Beckman**. Engaging Physicians in Change: Results of a Safety Net Quality Improvement Program to Reduce Overuse *American Journal of Medical Quality 1062860610373380, first published on September 27, 2010 doi:10.1177/1062860610373380*

1998-99 MRI Utilization
Finger Lakes and U.S. States



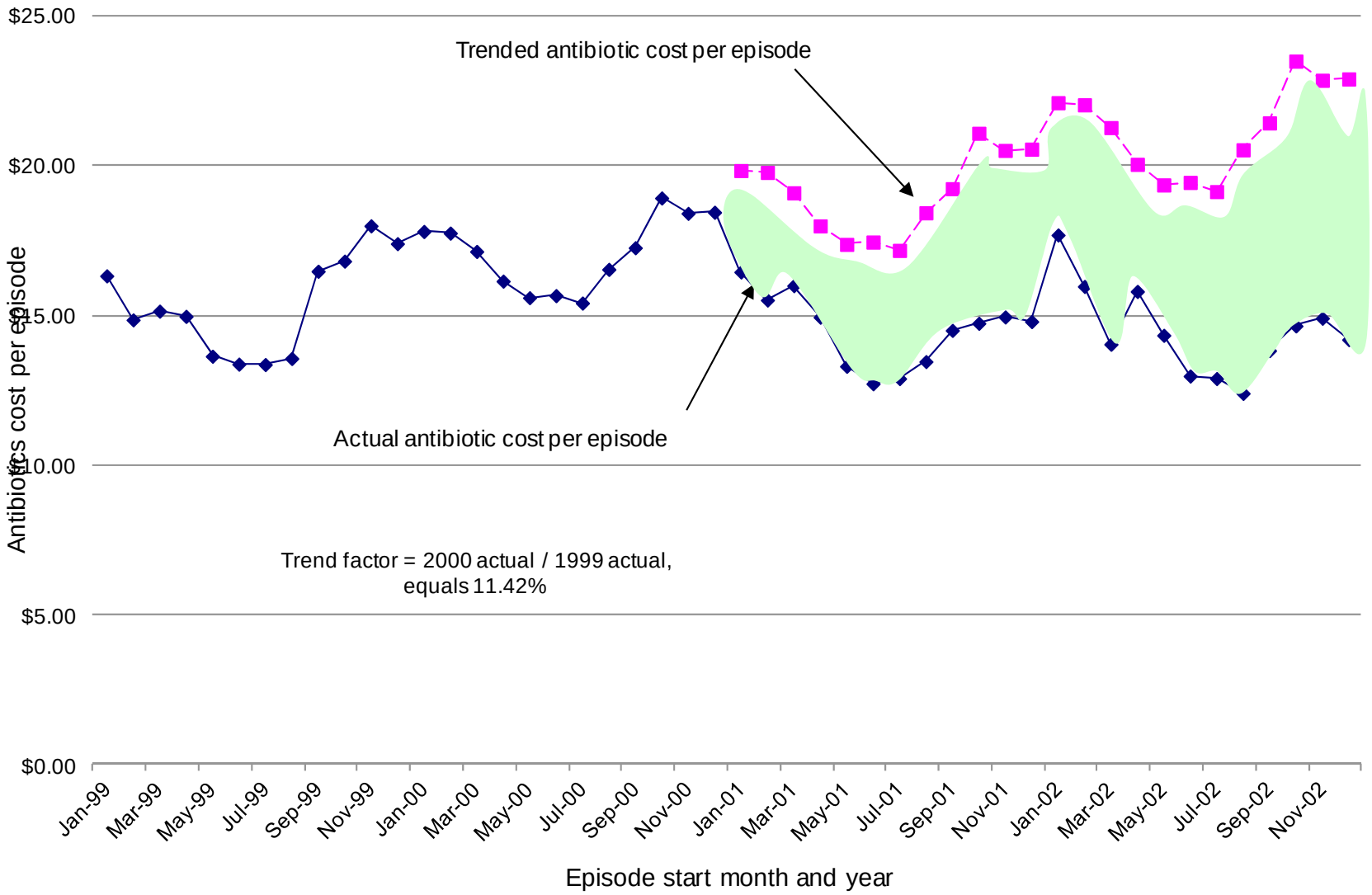
Data Sources: FLHSA 2000 MRI Survey;
1998-99 TMG National MRI Survey

DATA SOURCE: FINGER LAKES HEALTH SYSTEM AGENCY
IMV LIMITED, MEDICAL INFORMATION DIVISION,
MRI Benchmark Report 2003

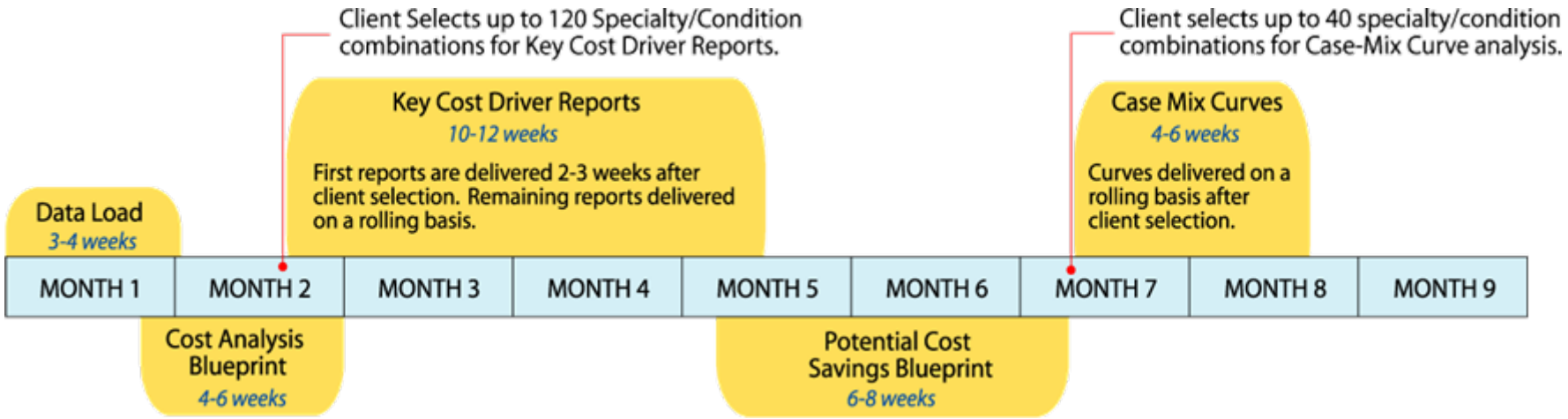


Antibiotic Savings

(all minor upper respiratory infections)



Estimated Timeline for Data Deliverables



Summary

- Reducing overuse is the short term method to reliably reduce overuse while improving value
- Reducing unnecessary practice variation is achievable, predictably successful and cost effective
- Early meaningful involvement of the physician community is essential
- Conducting the work as QI, not a tournament is foundational

References

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