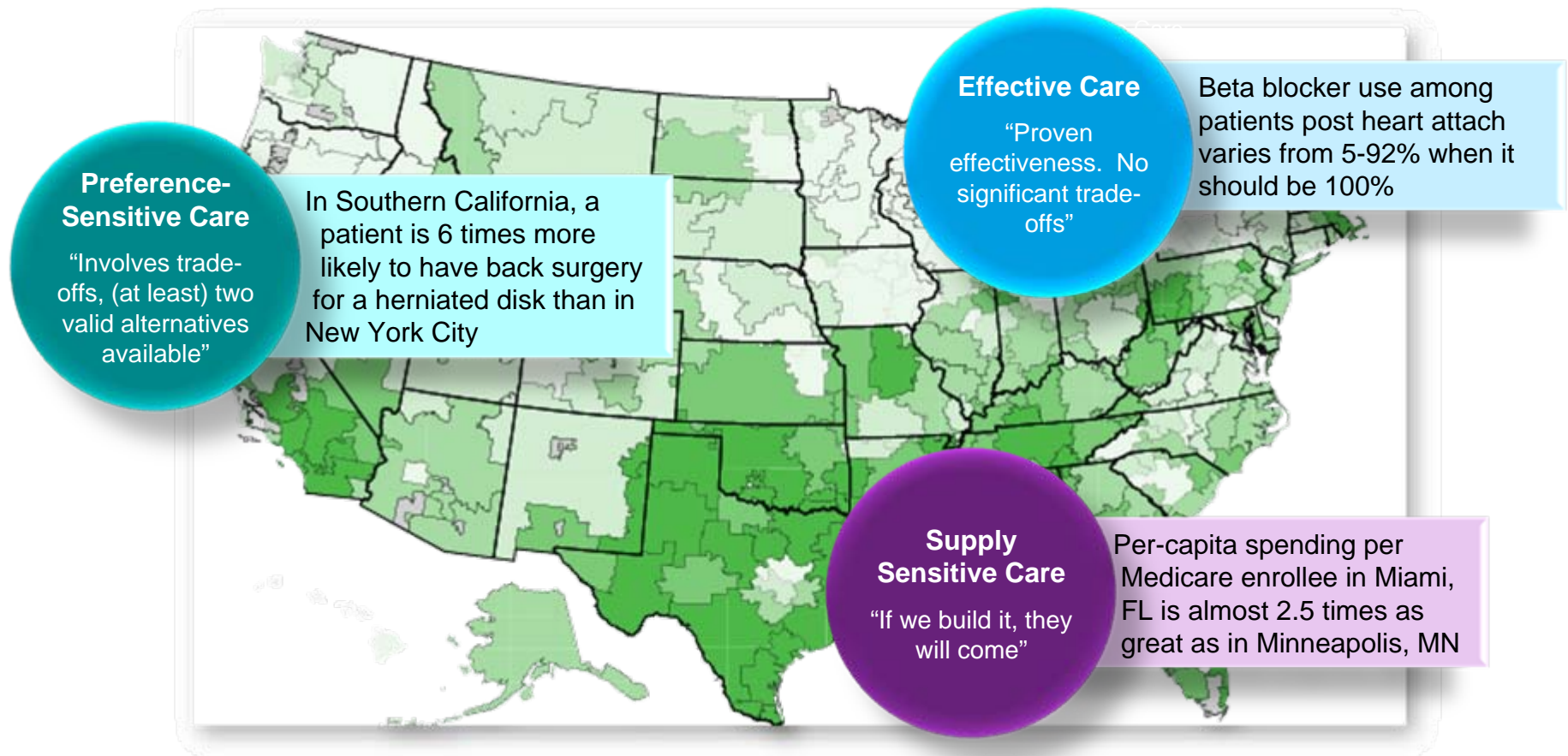# THE ILLUSIVE SEARCH FOR A CONNECTION BETWEEN THE QUALITY AND COST OF CARE

David Wennberg, Chief Science & Products Officer
Health Dialog
March 15, 2011
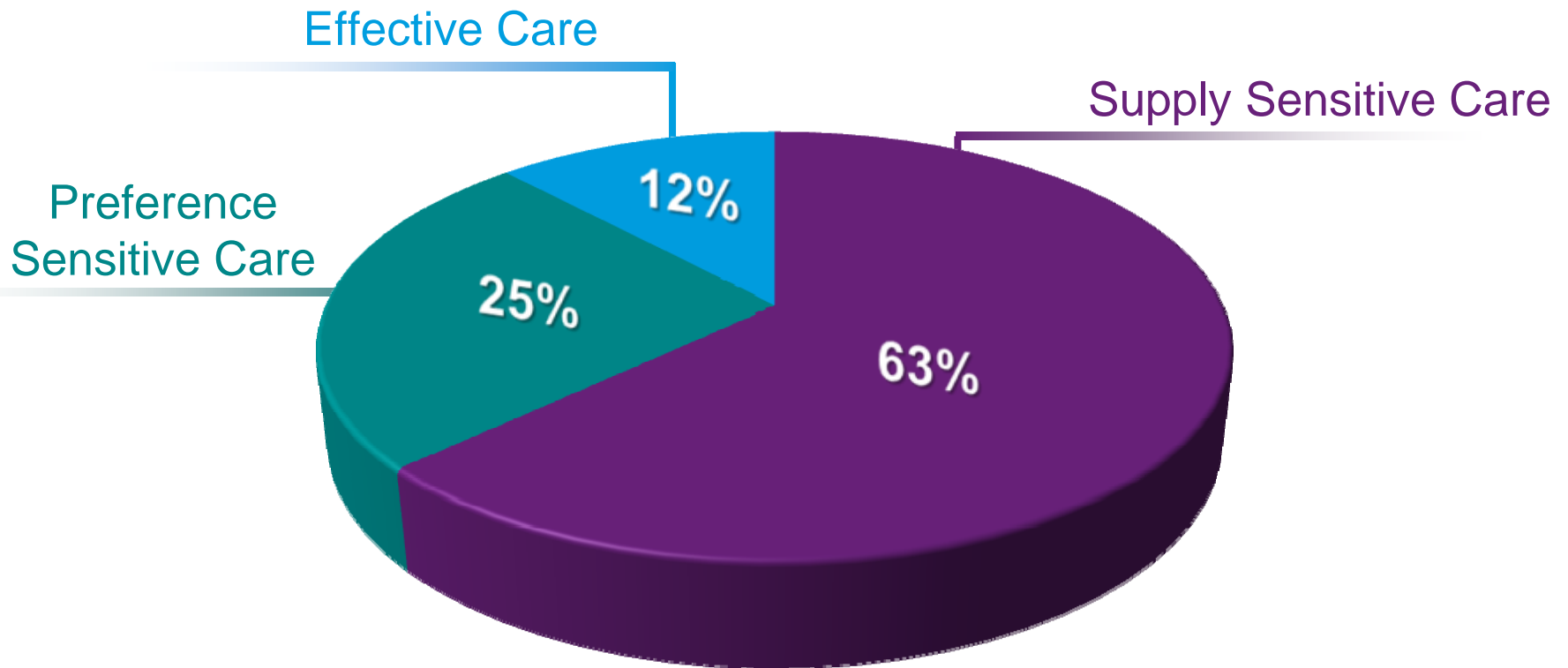
# Unwarranted Variation

Variations that cannot be explained on the basis of illness, scientific evidence or well-informed patient preferences

**Preference-Sensitive Care**

"Involves trade-offs, (at least) two valid alternatives available"

In Southern California, a patient is 6 times more likely to have back surgery for a herniated disk than in New York City

**Effective Care**

"Proven effectiveness. No significant trade-offs"

Beta blocker use among patients post heart attach varies from 5-92% when it should be 100%

**Supply Sensitive Care**

"If we build it, they will come"

Per-capita spending per Medicare enrollee in Miami, FL is almost 2.5 times as great as in Minneapolis, MN

# Where the money goes now

Effective Care

Supply Sensitive Care

Preference Sensitive Care

**12%**

**25%**

**63%**

The Dartmouth Institute for Health Policy and Clinical Practice

Health Dialog internal data

# Agenda

1. Finding the connection : Patients

2. Finding the connection : Physicians

3. Are PCMHs or ACOs a solution to the conundrum?

FINDING THE CONNECTION:

PATIENTS

# Patient segmentation: finding the opportunities

Patients are a lot like people…
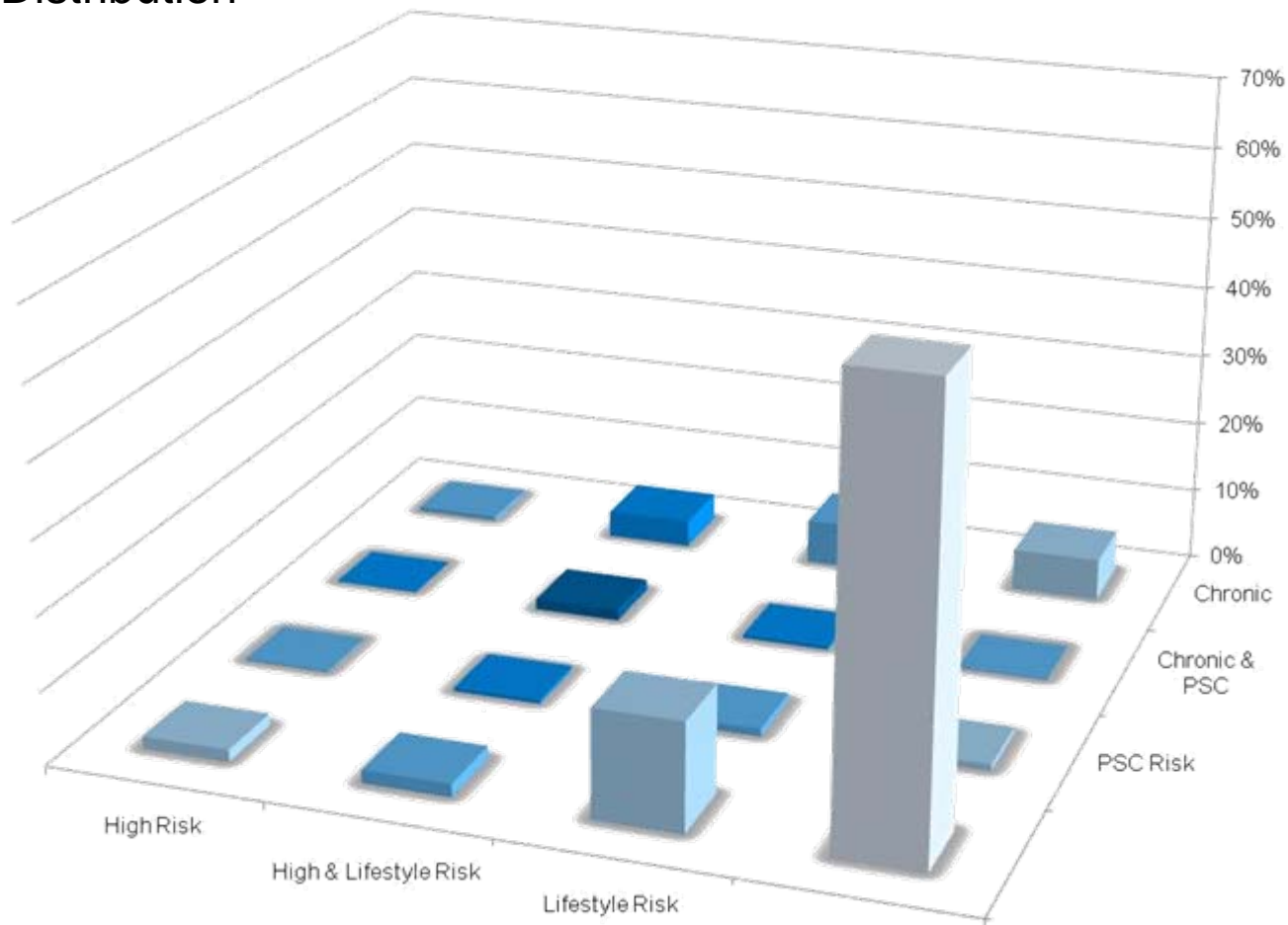they are all different

High Lifestyle Risk

- – Patients at high risk for any of the following lifestyle issues:

  - • Tobacco Use

  - • Overweight/Obesity

  - • Cardiometabolic Risk

High Financial Risk

Chronic Conditions

High Risk for

Elective Surgery

High Lifestyle Risk
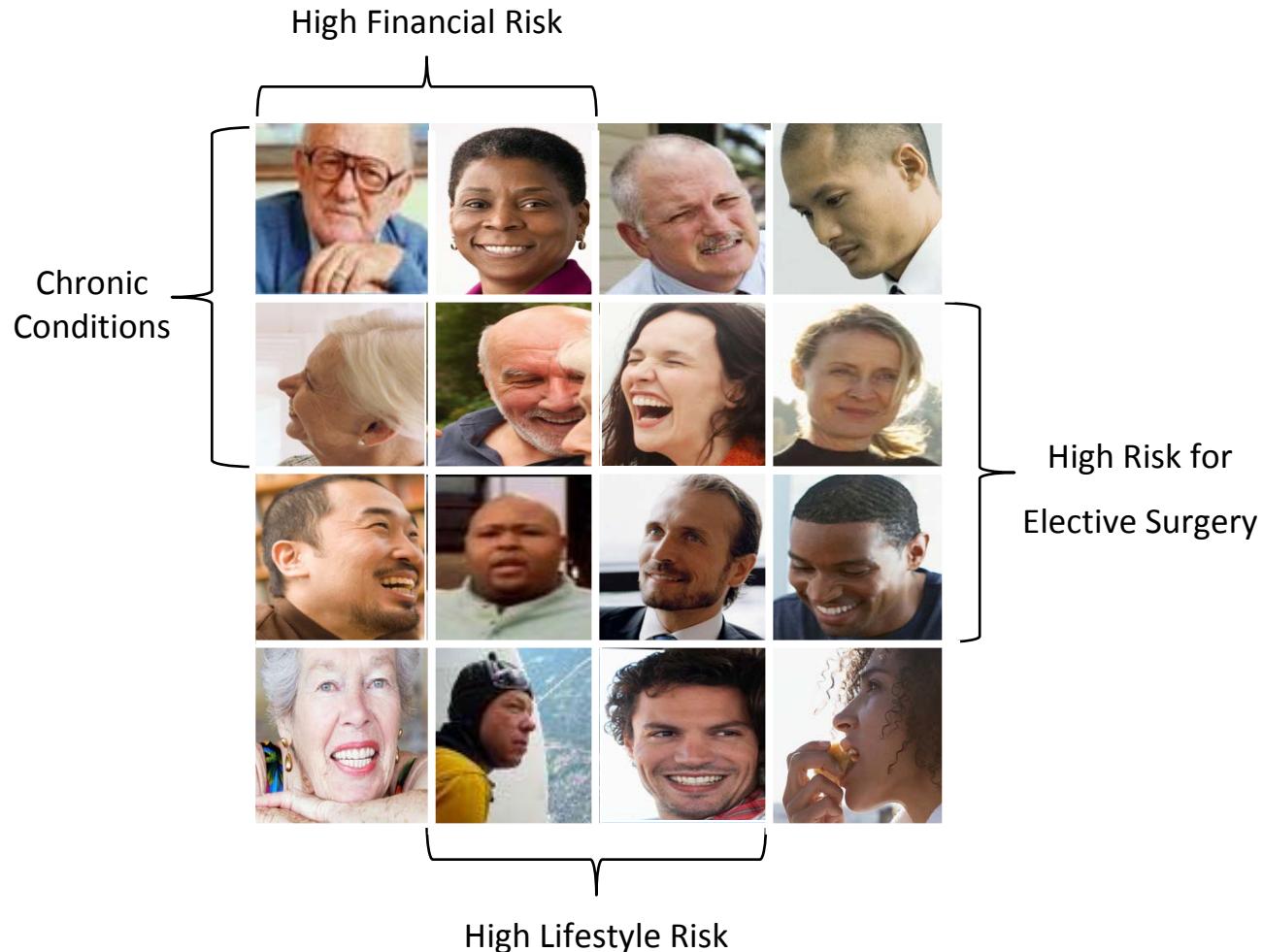
# Patients by segment

Patient Distribution



*Sample data – for illustrative purposes only*

# Chronic and high cost
## *Cells B and F*

- 5% of Patients, 25% of costs

- Multiple co-morbidities

- High utilization

**But, is it avoidable?**

| Opportunity At A Glance | | | | |
|---|---|---|---|---|
| Metric | Cell F | Cell B | All High Risk | Total Population |
| Patients | 3,720 | 9,175 | 24,176 | 250,359 |
| Avg Age | 59 | 54 | 52 | 34 |
| Avg. Predicted Cost | $14,705 | $10,987 | $11,417 | $2,476 |
| Engaged | 53% | 38% | 27% | 4.3% |
| Asthma | 23.5% | 30% | 18.6% | 8.3% |
| CHD | 54% | 21% | 18% | 3.3% |
| Diabetes | 70% | 72% | 40% | 8.8% |
| CKD | 6.5% | 4.2% | 3.4% | 0.5% |
| Hypertension | 86% | 75% | 61% | 18.5% |
| Depression | 28% | 21% | 22.3% | 3.7% |
| Overweight/Obesity | 87% | 88% | 64% | 24% |
| Cardiometabolic Risk | 88% | 83% | 11.5% | 4.4% |
| ER visits/1,000 | 837 | 704 | 763 | 329 |

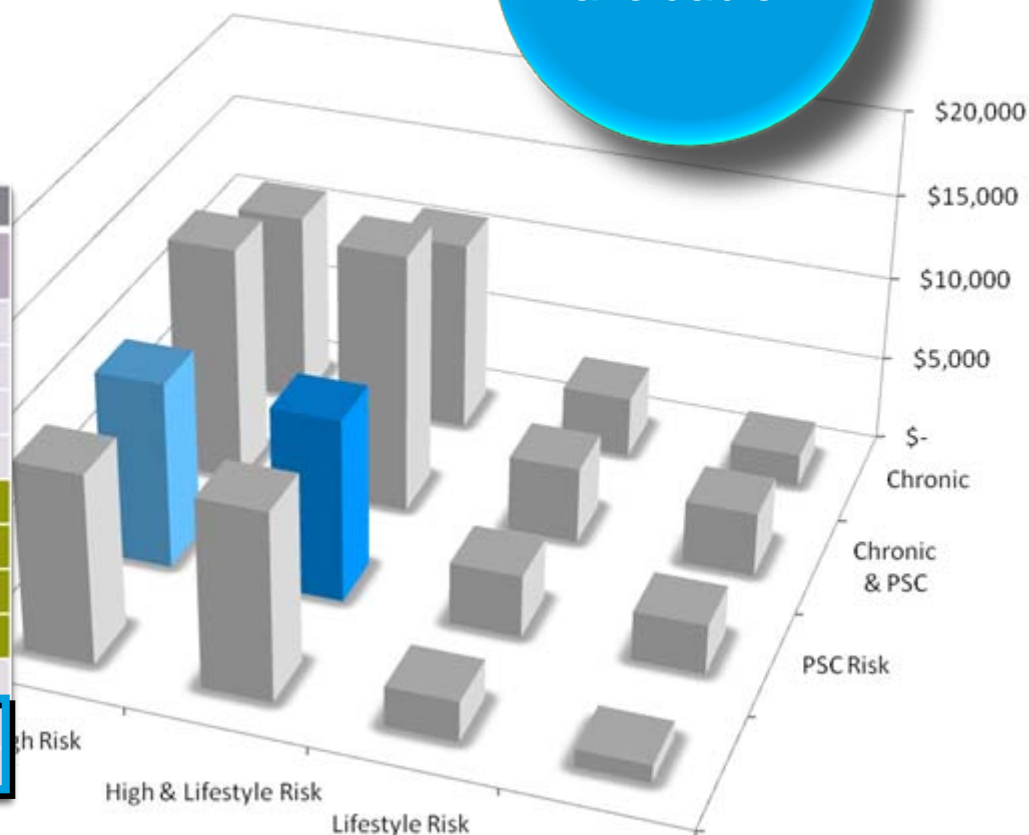*Sample data – for illustrative purposes only*

# 'Other' high cost
## Cells I and J

- High cost (but not chronic)

- In pain and at risk for surgery

- High utilization

But, is it avoidable?

| Opportunity At A Glance | | | | |
|---|---|---|---|---|
| Metric | Cell I | Cell J | All High Risk | Total Population |
| Patients | 434 | 1,247 | 24,176 | 250,359 |
| Avg Age | 52 | 54 | 52 | 34 |
| Avg Predicted Cost | $10,301 | $10,682 | $11,417 | $2,476 |
| Engaged | 9.7% | 12.3% | 27% | 4.3% |
| Chronic Pain | 42% | 55% | 23% | 3.7% |
| Back Pain | 49% | 52% | 32% | 10.5% |
| Joint Pain | 49% | 73% | 29.8% | 9.0% |
| Risk for Back Surgery | 20% | 18% | 2.8% | 0.4% |
| Depression | 24% | 25.4% | 22.3% | 3.7% |
| Admissions/1,000 | 217 | 253 | 315 | 68 |
| ER visits/1,000 | 675 | 745 | 763 | 329 |

*Sample data – for illustrative purposes only*

# High cost, less served
## *Cells M and N*

- High cost (but not chronic or preference-sensitive)

- High prevalence of anxiety and depression

- High utilization

But, is it avoidable?

| Opportunity At A Glance | | | | |
|---|---|---|---|---|
| **Metric** | **Cell I** | **Cell J** | **All High Risk** | **Total Population** |
| Patients | 3,775 | 4,301 | 24,176 | 250,359 |
| Avg Age | 42 | 50 | 52 | 34 |
| Avg .Predicted Cost | $10,633 | $10,603 | $11,417 | $2,476 |
| Engaged | 3.3% | 3.9% | 27% | 4.3% |
| Depression | 16.5% | 25.2% | 22.3% | 3.7% |
| Anxiety | 6.4% | 10.1% | 6.7% | 1.9% |
| Migraine | 8.0% | 8.8% | 6.7% | 1.8% |
| Overweight / Obesity | 0.0% | 71.4% | 64.0% | 24.2% |
| Osteoporosis | 9.9% | 8.3% | 8.8% | 2.2% |
| Oncology | 15.1% | 13.0% | 10.5% | 1.7% |
| Admissions/1,000 | 285 | 329 | 315 | 68 |
| ER visits/1,000 | 732 | 857 | 763 | 329 |

*Sample data – for illustrative purposes only*

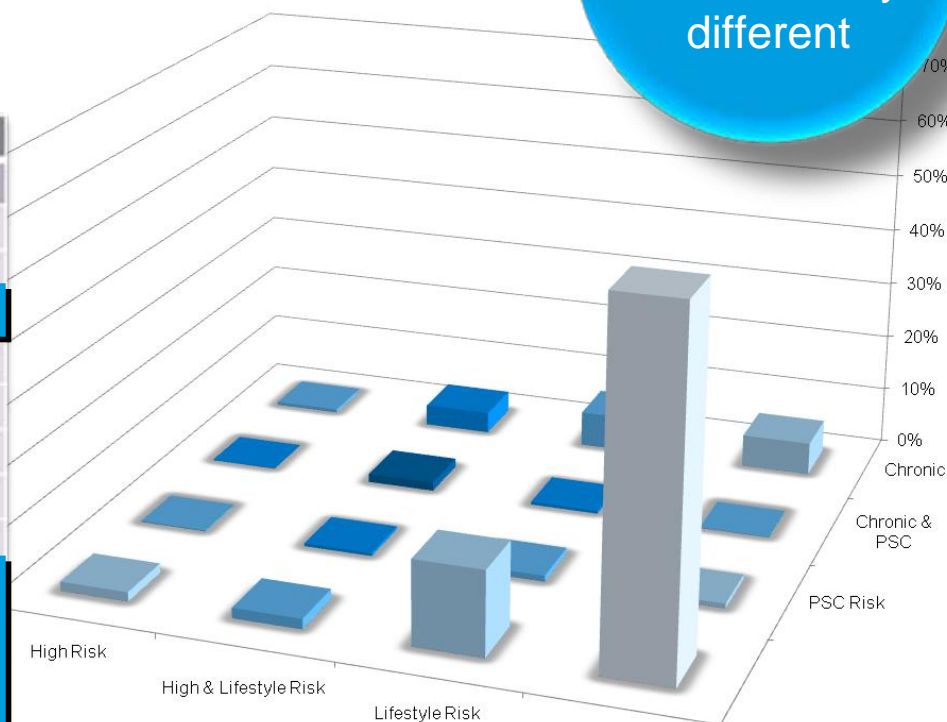# Clinical opportunities: patients with low predicted costs
## *Cells O and P*

- 80% of patients (20% of costs!)

- They are much younger

- Wellness is primary concern

Their needs are fundamentally different

| Opportunity At A Glance | | | |
|---|---|---|---|
| **Metric** | **Cell O** | **Cell P** | **All Others** |
| Patients | 42,251 | 59,920 | 44,464 |
| Total Population | 28.8% | 40.8% | 30.3% |
| Avg Age | 44 | 48 | 62 |
| Female | 42.9% | 63.5% | 54.7% |
| Avg .Predicted Cost | $1,231 | $1,240 | $5,547 |
| Hypertension | 32.9% | 8.1% | 59.0% |
| Cardiometabolic Risk | 22.7% | - | 46.7% |
| Overweight / Obesity | 4.7% | - | 5.2% |
| Cholesterol Screening Gap | 18.4% | 22.8% | 15.0% |
| Colorectal Screening Gap | 16.1% | 17.7% | 20.4% |
| Mammography Gap | 16.5% | 21.9% | 24.5% |
| Pap Test Screening Gap | 13.4% | 11.8% | 9.0% |

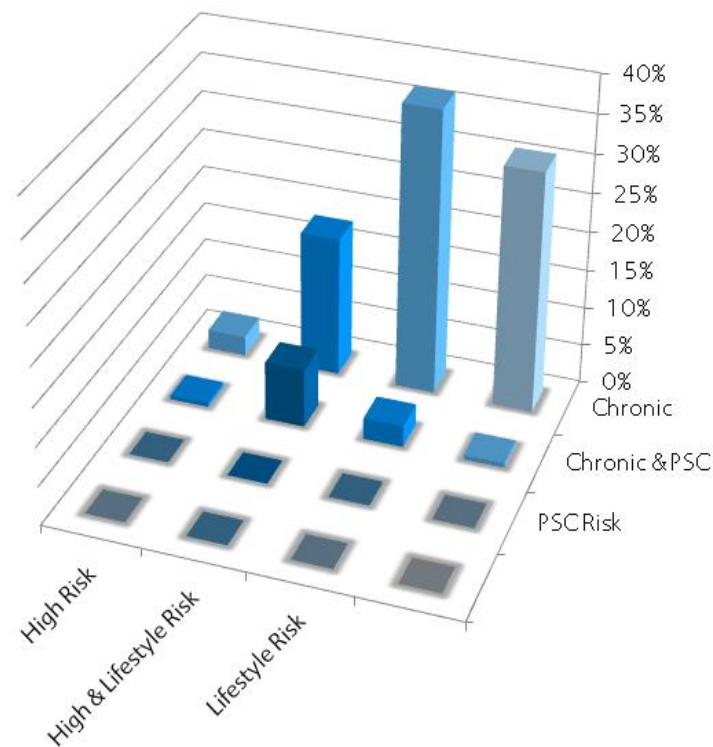# Clinical opportunities: patients with chronic conditions

*Cells A through H*

Prevalence of Gaps in Care by Cell
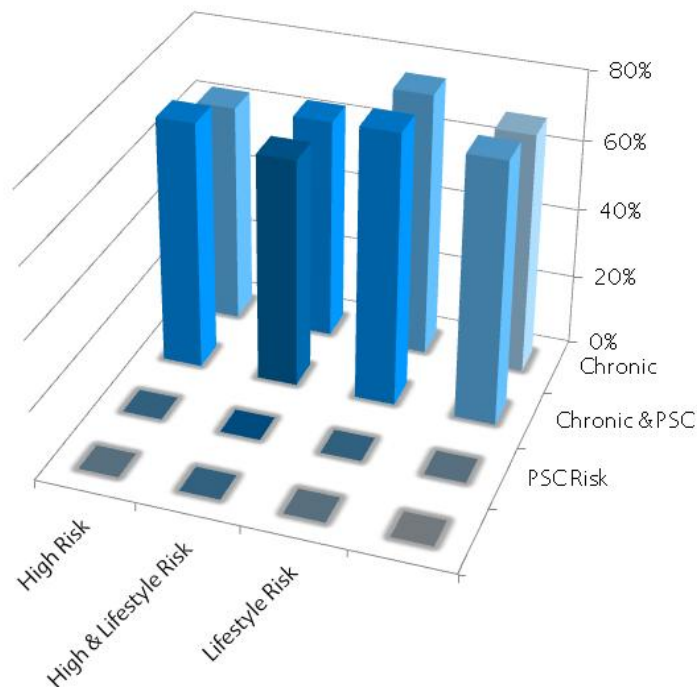
Distribution of Members with 1+ Gap in Care



Opportunities to close clinical gaps in care are EVERYWHERE
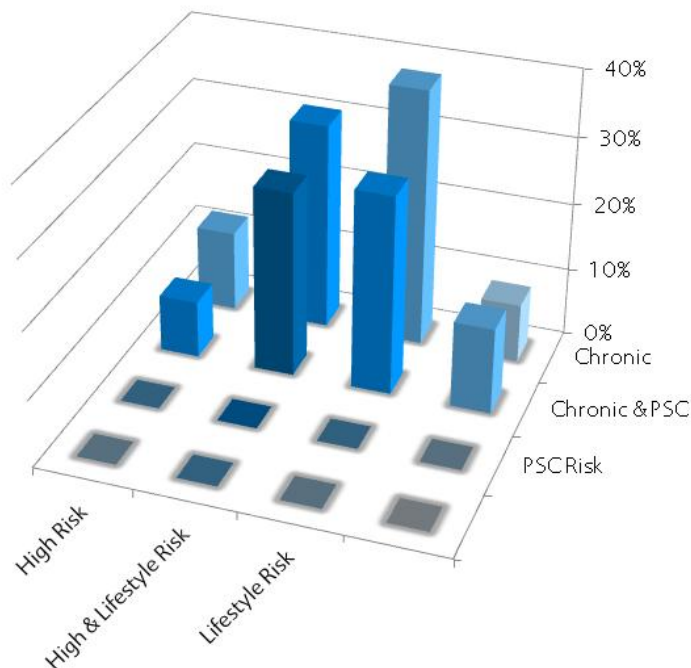
However MOST of the CLINICAL opportunities are not where the MONEY is……

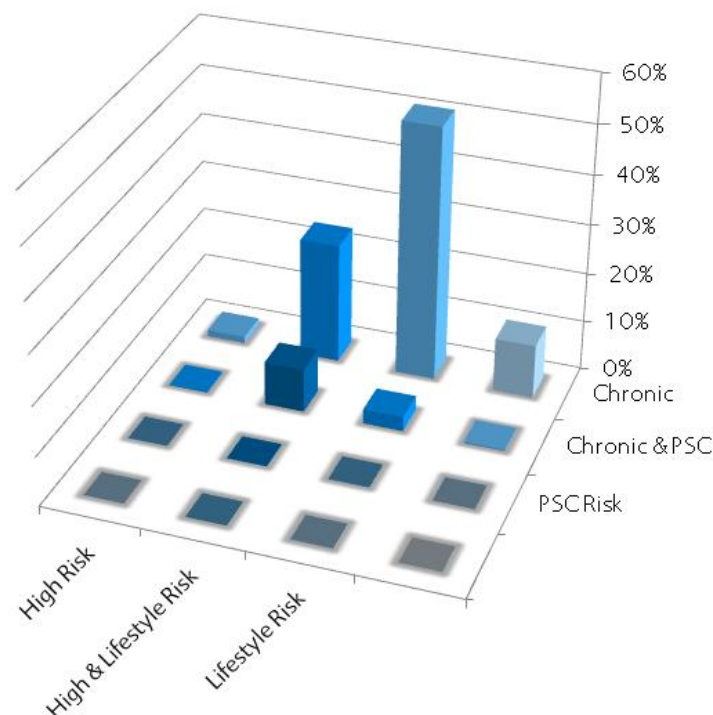# Clinical opportunities: patients with diabetes
## *Cells A through H*

Prevalence of Diabetes Eye Exam Gap by Cell

Distribution of Patients with Diabetes Eye Exam Gap



Opportunities to improve care for patients with diabetes are EVERYWHERE…..

However MOST of the CLINICAL opportunity is not where the MONEY is……
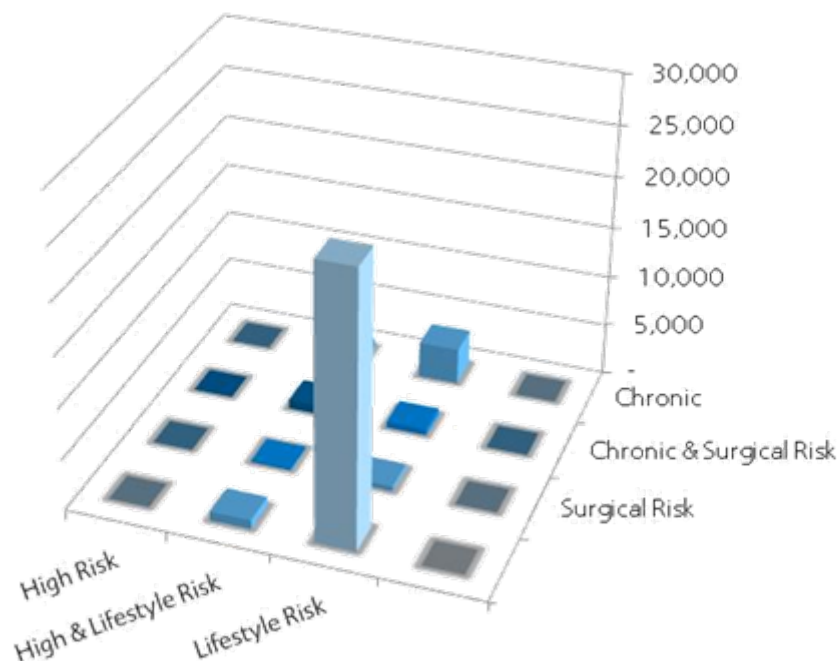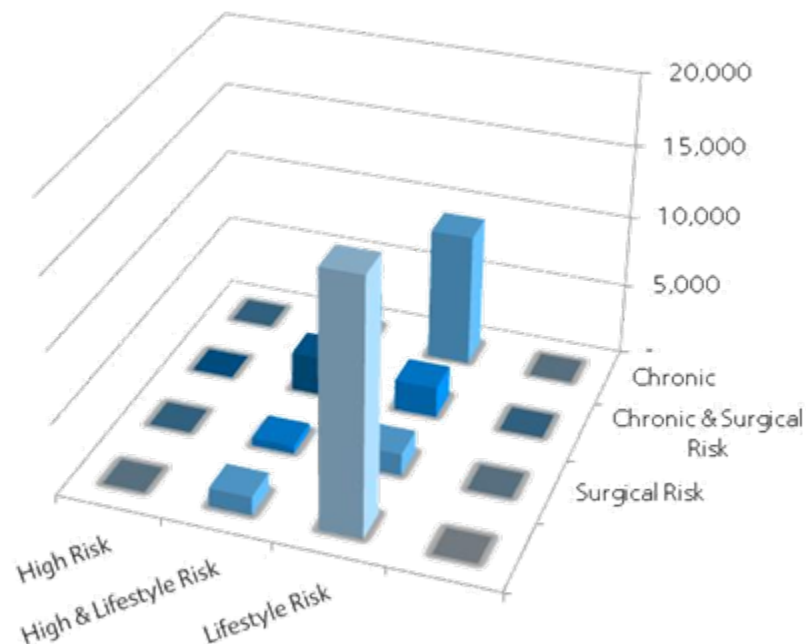
# Clinical opportunities: patients with emerging risk
## *Cells A through P*



Tobacco Users

Overweight/Obese Patients

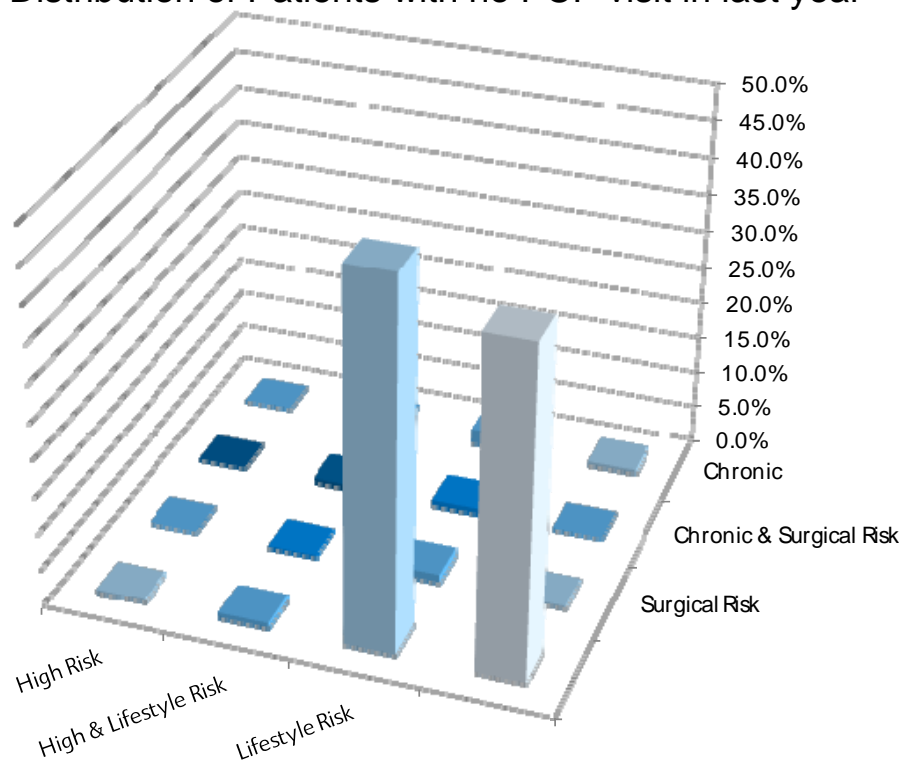80% of obese patients and 50% of tobacco users are in cell O

(not where the MONEY is……)

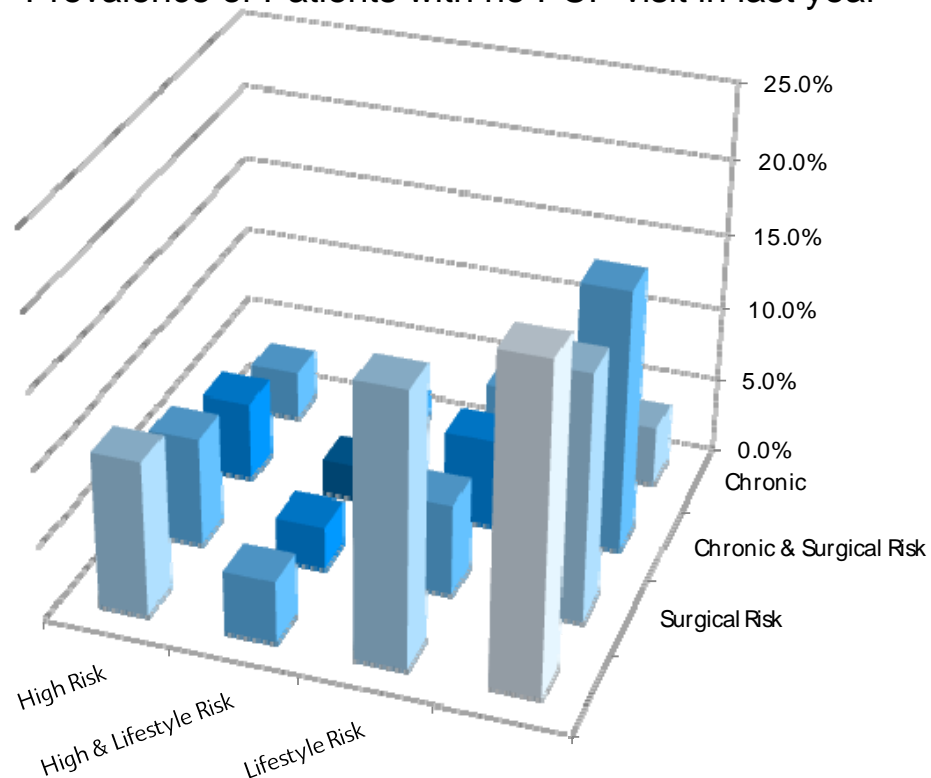# Clinical opportunities: patients with emerging risk
## *Cells O and P*

Distribution of Patients with no PCP visit in last year

Prevalence of Patients with no PCP visit in last year



Most patients without PCP visits are in the lowest risk (highest N) CELLS…..

However MANY HIGH RISK patients lack a MEDICAL HOME ……

# Yes Virginia, it is avoidable

- Largest study of population care management to date

- Bottom line:

  - Total costs reduced by over 3.6%

  - Total population admissions reduced by 10.1%

  - Net savings of $6.00 pmpm

# Results: Medical cost difference
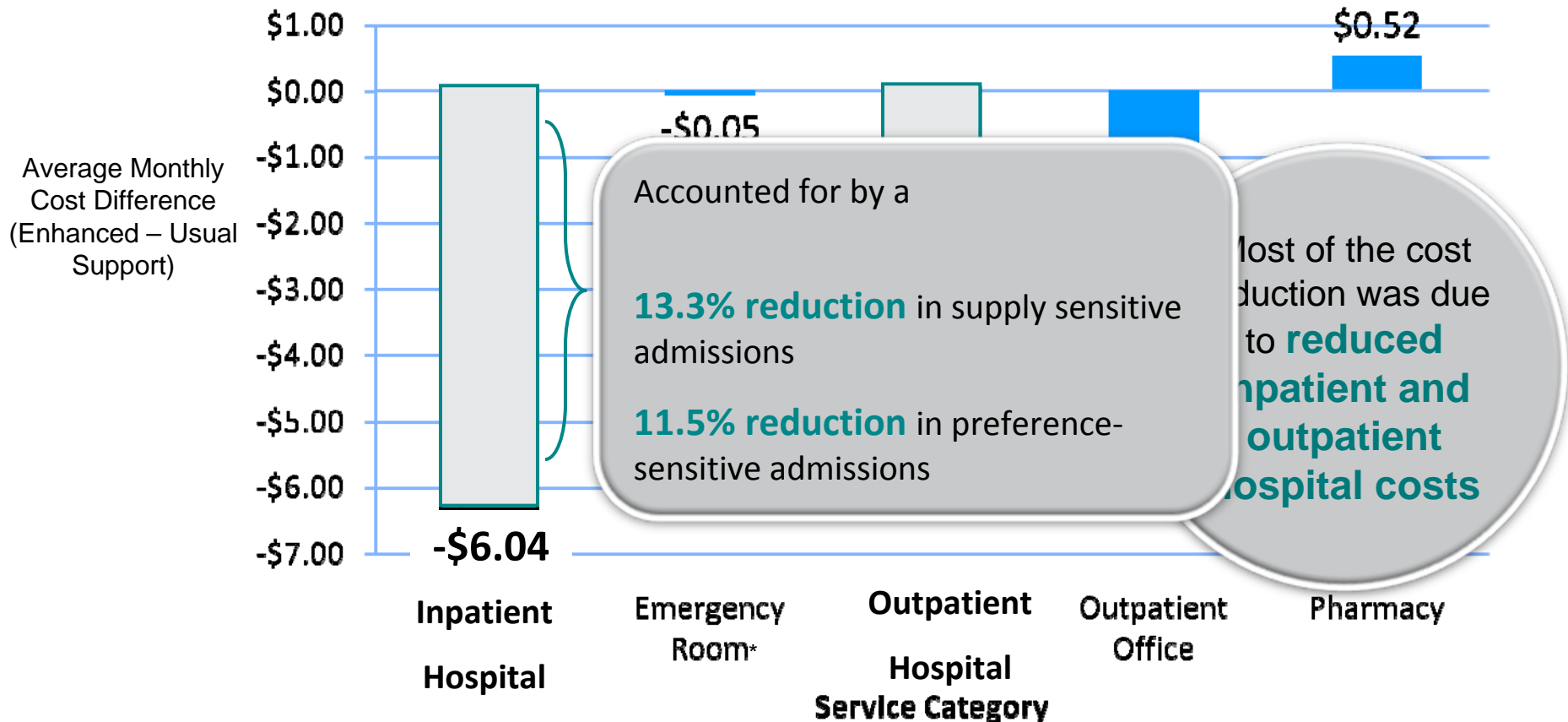
Average Monthly Cost Difference (Enhanced – Usual Support)

Service Category: Inpatient Hospital, Emergency Room*, Outpatient Hospital, Outpatient Office, Pharmacy

- Inpatient Hospital: -$6.04
- Emergency Room*: -$0.05
- Pharmacy: $0.52

Accounted for by a

**13.3% reduction** in supply sensitive admissions

**11.5% reduction** in preference-sensitive admissions

Most of the cost reduction was due to **reduced inpatient and outpatient hospital costs**

Wennberg DE, Marr A, Lang L, O'Malley S, Bennett GB.
A Randomized Trial of a Telephone Care-Management Strategy.  N Engl J Med 2010;363:1245-55.

# NEJM randomized trial results

*Impact on high variation and preference-sensitive admissions/1000*

Hospital admissions for intervention group Patients were lower than for control group in 12 out of 16 cells



Impactable Admissions

**Wennberg DE, Marr A, Lang L, O'Malley S, Bennett GB.**
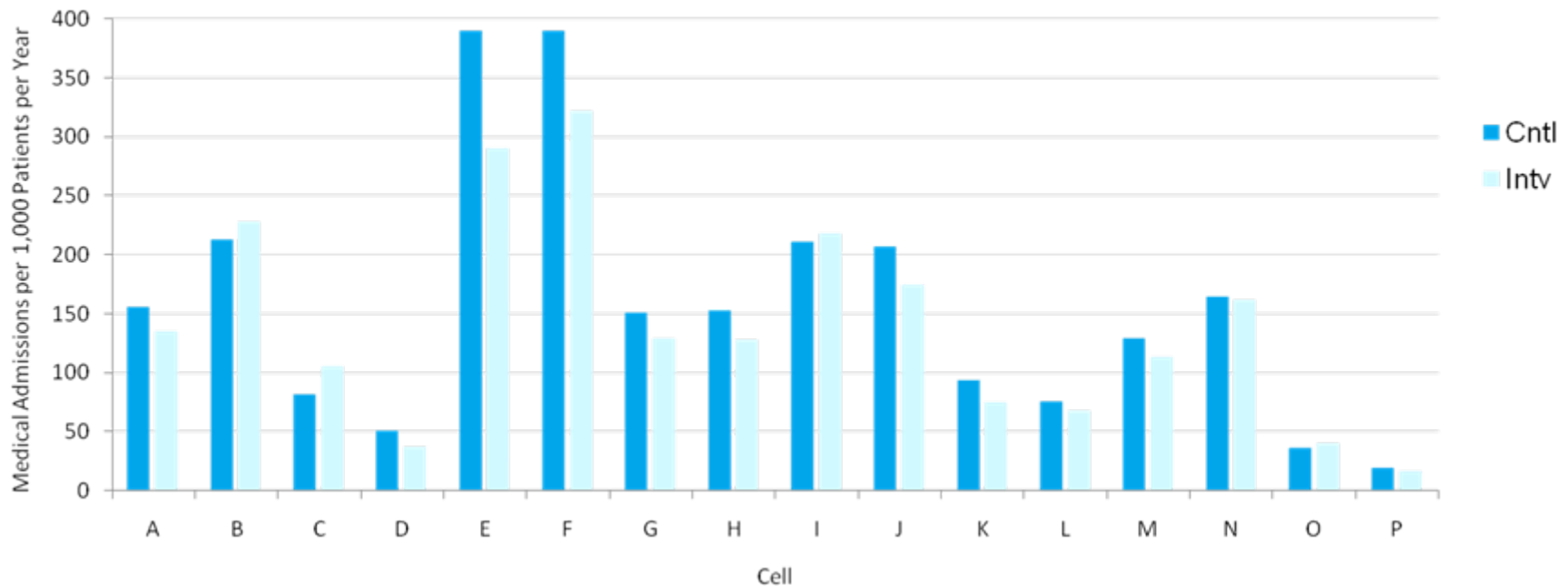**A Randomized Trial of a Telephone Care-Management Strategy.  N Engl J Med 2010;363:1245-55.**

# Agenda
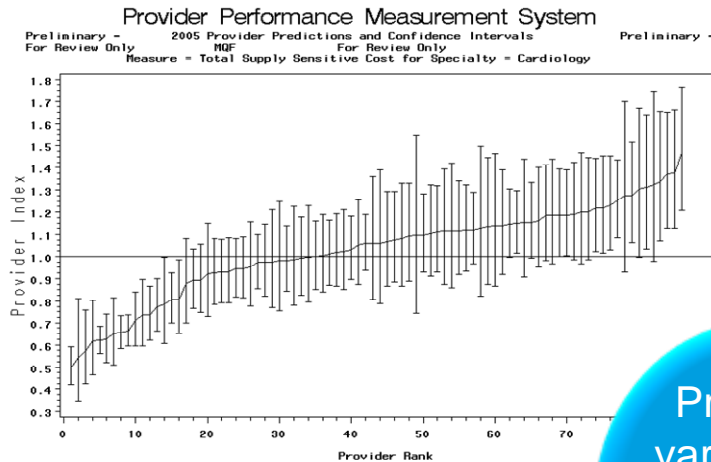
1. Finding the connection : Patients
2. Finding the connection : Physicians
3. Are PCMHs or ACOs a solution to the conundrum?

FINDING THE CONNECTION:

PHYSICIANS

# Provider segmentation: finding the opportunities

### Avoidable Costs



### Coronary Artery Disease Gap
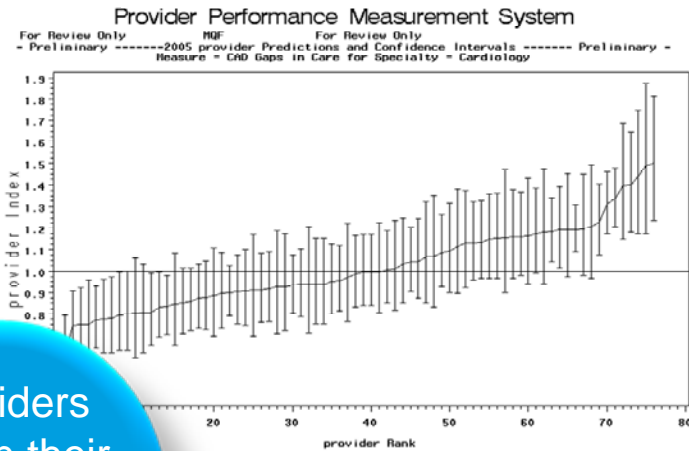


### Total Cardiac Testing
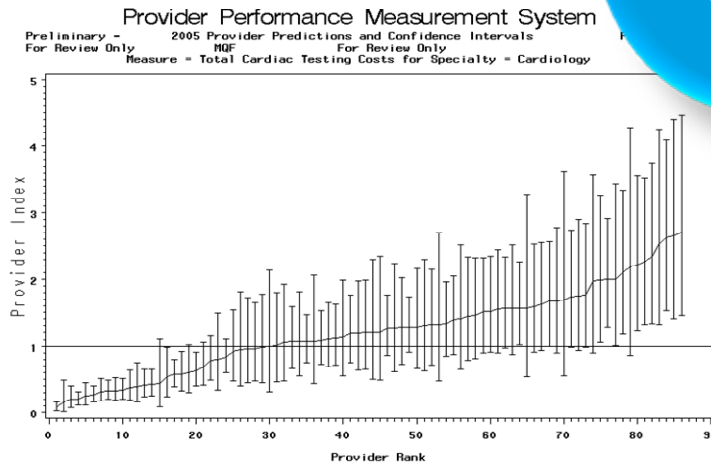


### Total Quality Score
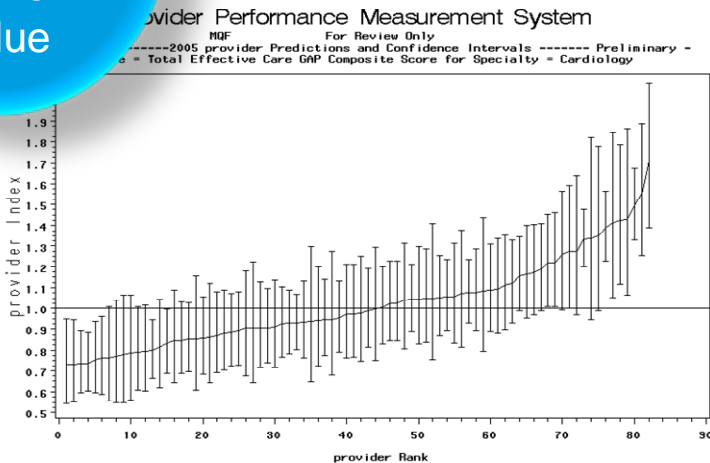


Providers vary in their ability to deliver value

# Provider segmentation: quality and efficiency NOT correlated

## QUALITY AND EFFICIENCY

Composite quality and efficiency scores for Group Physicians compared to their peers.



### Top/Bottom Performing Physicians

*The physicians in the group with top and bottom overall quality and efficiency scores.*

| EFFECTIVE CARE | | SUPPLY SENSITIVE CARE COST | |
|---|---|---|---|
| **Top Performance** | | **Top Performance** | |
| 1. Sam Jones | 92% | 6. Pat Abercrombie | $1,095 |
| 2. Peter Smith | 88% | 7. David Kimball | $1,106 |
| 3. Jill Howard | 87% | 5. David Downs | $1,125 |
| 4. Ed March | 87% | 9. Kerry Hamill | $1,189 |
| 5. David Downs | 85% | 10. Roland Katz | $1,199 |
| GROUP MEAN | 78% | GROUP MEAN | $1,675 |
| **Bottom Performance** | | **Bottom Performance** | |
| 9. Kerry Hamill | 61% | 2. Peter Smith | $2,012 |
| 10. Roland Katz | 60% | 11. Elaine Cooper | $2,311 |
| 11. Elaine Cooper | 59% | 14. Aubrey Reinbolt | $2,315 |
| 12. Ella Baff | 53% | 15. Fred Meyers | $2,478 |
| 13. John Badanes | 53% | 16. Lynn Fontaine | $2,563 |

● = Group Members

#'s are referenced in the table below

# Provider segmentation: how am I doing?

## ABOUT YOUR PATIENTS

**Adult PCP Patients**

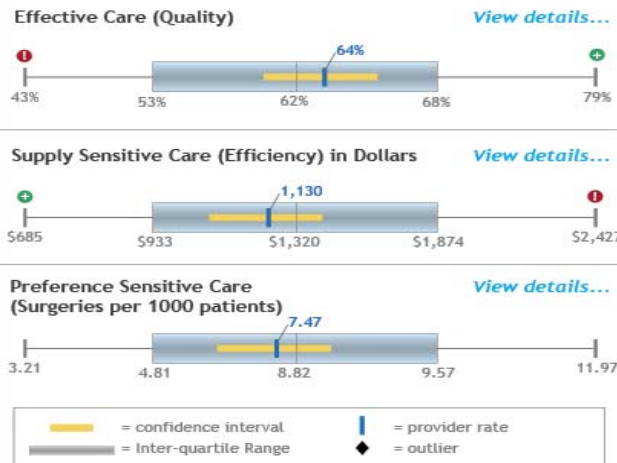| | You | Peers |
|---|---|---|
| Patients | 345 | 275 |
| Average Age | 33 | 35 |
| % Male | 49 | 47 |
| % Chronic | 8.4 | 7.5 |
|   % Asthma | 1.2 | 1.2 |
|   % CAD | 1.6 | 1.3 |
|   % COPD | 1.8 | 1.5 |
|   % Diabetes | 1.8 | 2.0 |
|   % Heart Failure | 2.0 | 1.5 |
| Risk Index | 1.05 | 1.0 |

*Click > Go to...*
*to learn more about your*
*performance scores*

## PERFORMANCE SUMMARY

*Your overall performance compared to your peers.*

**Effective Care (Quality)** — *View details...*

43% — 53% — 62% — 64% — 68% — 79%

**Supply Sensitive Care (Efficiency) in Dollars** — *View details...*

$685 — $933 — 1,130 — $1,320 — $1,874 — $2,427

**Preference Sensitive Care (Surgeries per 1000 patients)** — *View details...*

3.21 — 4.81 — 7.47 — 8.82 — 9.57 — 11.97

= confidence interval    | = provider rate
= Inter-quartile Range    ♦ = outlier

## QUALITY AND EFFICIENCY

*Your composite quality and efficiency scores compared to your peers.*

Adjusted Supply Sensitive Care (Efficiency) Score: $2,700 — $1,320 — 0

Effective Care (Quality) Gap in Care: 0% — 38% — 76%

High Quality High Cost — Low Quality High Cost — High Quality Low Cost — Low Quality Low Cost

Jane A. Quinn, MD

● = You    • = Your Group Members

## KEY RISK ADJUSTED UTILIZATION MEASURES    > Go to ...

*Your use of services compared to your peers.*

| | You | Peers | Significantly Different from Peers |
|---|---|---|---|
| **(PER 1000 PATIENTS)** | | | |
| Admissions | 73 | 59 | ❗ |
| Hospital days | 293 | 289 | |
| Emergency Dept visits | 159 | 188 | |
| Prescriptions | 9 | 12 | |
| **(OTHER)** | | | |
| # of PCPs seen per patient | 1.4 | 1.9 | |
| # of Specialists seen per patient | 2.7 | 3.8 | |
| Physician Visits per patient | 8.9 | 11.8 | |
| % Generic Prescriptions | 73 | 68 | |

❗ = Your performance on this measure is significantly worse than your peers
⊕ = You performance on this measure is significantly better than your peers

## PERFORMANCE IMPACT    > Go to...

*The impact of your performance compared to your peers.*

| Effective Care (Quality) | Patients | Rate | Peers | Diff | Opportunity for Change |
|---|---|---|---|---|---|
| Breast Cancer Screening (%) | 125 | 73 | 81 | 8 | 10 (Patients) |
| Diabetes – HbA1c Testing (%) | 27 | 80 | 87 | 7 | 2 (Patients) |
| CAD - Beta Blocker Post MI (%) | 14 | 92 | 98 | 6 | 1 (Patients) |
| **Supply Sensitive Care (Efficiency)** | | | | | |
| Advanced Imaging Cost (Dollars) | 345 | 45 | 28 | 17 | 5,693 |
| Outpatient Visit Cost (Dollars) | 345 | 346 | 305 | 41 | 14,007 |
| Specialist Visits (Visits) | 345 | 5.8 | 4.7 | 1.1 | 380 |
| **Preference Sensitive Care (Surgeries per 1000 patients)** | | | | | |
| Cardiac Revascularization | 45 | 22 | 19 | 2.4 | 1 (Patients) |
| Lumbar Back Surgery | 98 | 14 | 11 | 2.6 | 1 (Patients) |
| Knee Surgery | 75 | 9 | 6 | 2.4 | 1 (Patients) |

# Provider segmentation: where can I do better?

| Measure | | # of Patients | You | Your Peers | Significantly Different from Peers |
|---|---|---|---|---|---|
| **Atrial Fibrillation** | ❶ 0% — 70% 83% 96% 100% 92% ➕ | 402 | 92.2% | 82.7% | |
| Cardioversion for Patients with Atrial Fibrillation | | 4 | 50% | 49.3% | |
| Initial INR Check for Patients Receiving Warfarin | | 25 | 72.0% | 54.1% | |
| On-Going INR Check for Patients Receiving Warfarin | | 349 | 98.0% | 87.9% | |
| Post-Cardioversion Anticoagulation Drugs for Patients with Atrial Fibrillation | | 3 | 0.0% | 27.6% | |
| Warfarin for Patients with Atrial Fibrillation and New Stroke | | 3 | 75.0% | 57.3% | |
| Warfarin for Patients with Atrial Fibrillation and New TIA | | 1 | 100.0% | 57.0% | |
| Warfarin for Patients with Atrial Fibrillation, Age Over 65 | | 1 | 0.0% | 63.4% | |
| Warfarin for Patients with Atrial Fibrillation, Age Under 65 | | 49 | 73.5% | 68.8% | |
| **Benign Prostatic Hyperplasia** | ❶ 0% 50% 70% 85% 100% 50% ➕ | 12 | 50.0% | 70.3% | |
| Alpha-1 Adrenergic Check for Patients with BPH | | 12 | 58.0% | 68.8% | |
| BPH Medication Check | | 12 | 42.0% | 71.0% | |
| Post-Surgical Check for Patients with BPH | | 2 | 0.0% | 74.6% | |
| **Breast Cancer** | ❶ 0% 67% 78% 95% 100% 83% ➕ | 15 | 82.8% | 78.4% | |
| Breast Cancer Radiation Therapy Initiation | | 7 | 28.6% | 18.7% | |
| Breast Mass Follow-up | | 15 | 100.0% | 90.5% | |
| Breast Mass Ultrasound Follow-up | | 7 | 100.0% | 70.2% | |

continued next page...

▬ = Inter-quartile range   ▬ = confidence interval   ❙ = provider rate   ◆ = outlier

❶ = Your performance on this measure is significantly worse than your peers
➕ = You performance on this measure is significantly better than your peers

# Provider segmentation: what about my colleagues?



**GROUP PERFORMANCE SUMMARY REPORT:** INTERNAL MEDICINE

*Adult Patients (18 and over) for Year Ending Dec. 31, 2007*
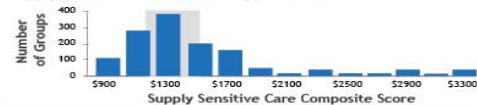
## ABOUT THE PLAN

**Adult PCP Patients**

| | 2007 | 2006 |
|---|---|---|
| Groups | 561 | 550 |
| Doctors | 3,450 | 3,426 |
| Patients | 724,256 | 739,581 |
| Average Age | 33 | 33 |
| % Male | 49 | 49 |
| % Chronic | 8.4 | 8.6 |
| % Asthma | 1.2 | 1.2 |
| % CAD | 1.6 | 1.7 |
| % COPD | 1.8 | 1.8 |
| % Diabetes | 1.8 | 1.8 |
| % Heart Failure | 2.0 | 2.1 |

## PERFORMANCE SUMMARY

*Distribution of Groups in the this Report.*
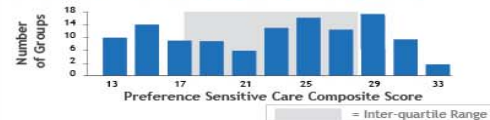
## QUALITY AND EFFICIENCY GROUPS

*Distribution of Groups' Quality and Efficiency Performance.*
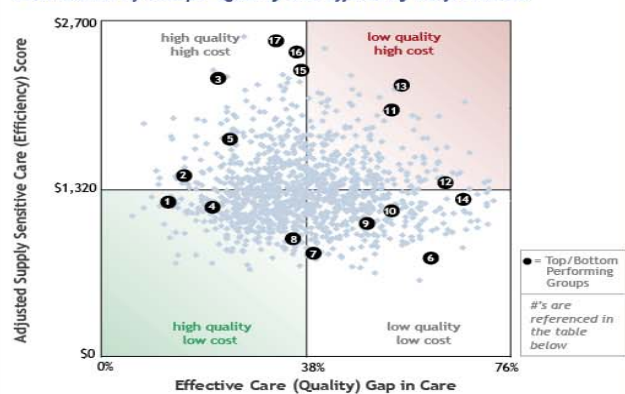
## KEY RISK ADJUSTED UTILIZATION MEASURES

*Use of services among Groups in this Report.*

| | Min | 25th% | Median | 75th% | Max |
|---|---|---|---|---|---|
| **(PER 1000 PATIENTS)** | | | | | |
| Admissions | 53 | 62 | 73 | 79 | 88 |
| Hospital days | 171 | 224 | 289 | 352 | 402 |
| Emergency Dept visits | 98 | 125 | 189 | 192 | 205 |
| Prescriptions | 6 | 8 | 9 | 10 | 12 |
| **(TOTAL)** | | | | | |
| # of PCPs seen per patient | 1.1 | 1.3 | 1.4 | 1.5 | 1.9 |
| # of Specialists seen per patient | 2.2 | 2.4 | 2.7 | 3.1 | 3.5 |
| Physician Visits per patient | 5.7 | 6.2 | 8.9 | 9.2 | 9.4 |
| % Generic Prescriptions | 52 | 62 | 73 | 84 | 90 |

## TOP/BOTTOM PERFORMING GROUPS

*The groups in the Plan with top and bottom overall quality and efficiency scores.*

### EFFECTIVE CARE

**Top Performance**

| | |
|---|---|
| 1. Eastham Medical Group | 92% |
| 2. Meadow Internal Medicine | 88% |
| 3. Hill Physician Group | 87% |
| 4. Hobson Medical Associates | 87% |
| 5. Downtown Doctors | 85% |
| **PLAN MEAN** | **78%** |

**Bottom Performance**

| | |
|---|---|
| 6. Chinatown Medical Group | 61% |
| 11. Mercer Medical Associates | 60% |
| 12. Coopertown Doctors | 59% |
| 13. London Medical Group | 53% |
| 14. Eastlake Associates | 53% |

### SUPPLY SENSITIVE CARE COST

**Top Performance**

| | |
|---|---|
| 6. Chinatown Medical Group | $1,095 |
| 7. Davidson Place Associates | $1,106 |
| 8. Western Hills Medicine | $1,125 |
| 9. Southeastern Corner Group | $1,189 |
| 10. Georgetown Medical Group | $1,199 |
| **PLAN MEAN** | **$1,675** |
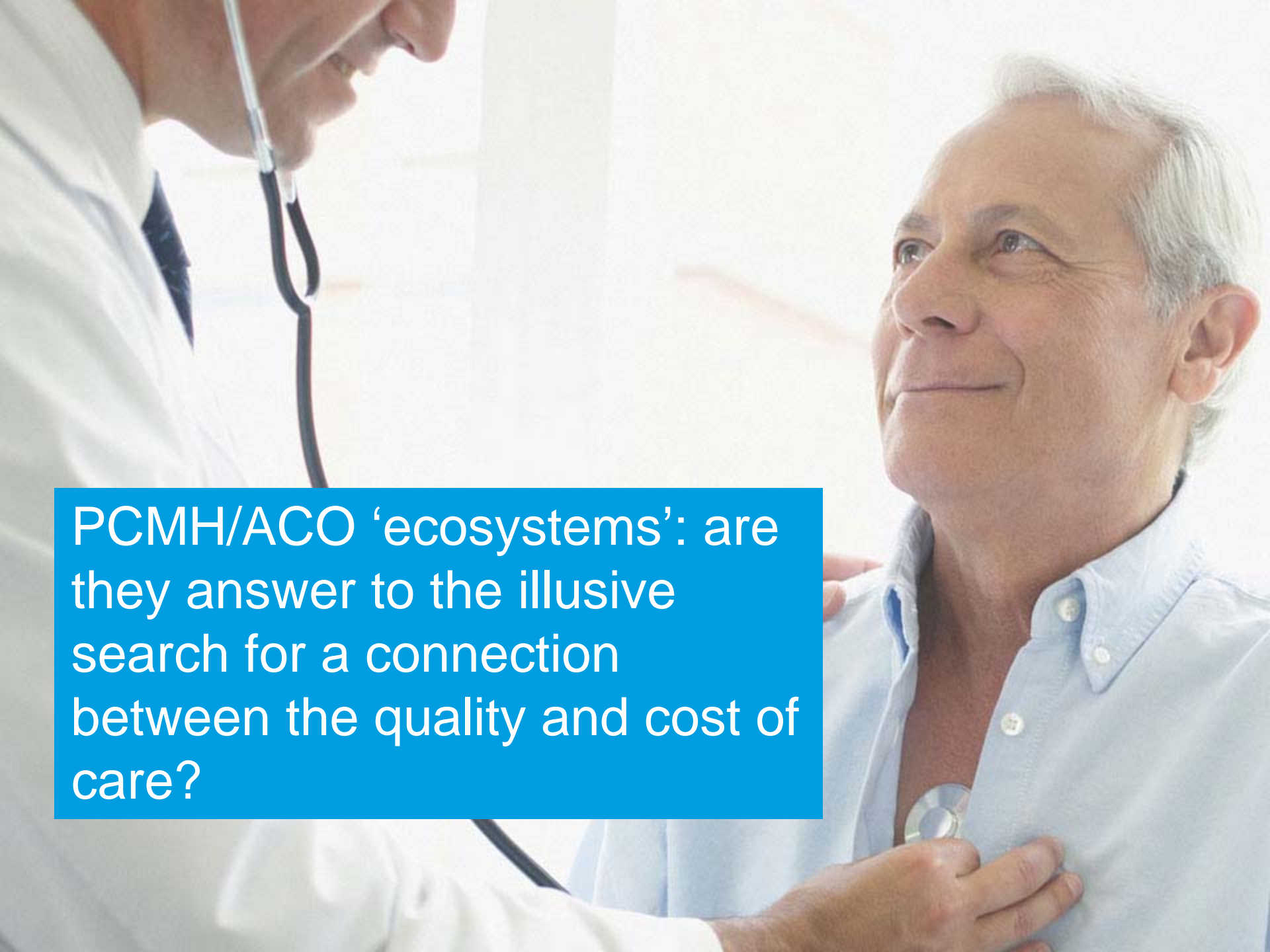
**Bottom Performance**

| | |
|---|---|
| 3. Hill Physician Group | $2,012 |
| 13. London Medical Group | $2,311 |
| 15. Browns Medical Associates | $2,315 |
| 16. Stanford Associates | $2,478 |
| 17. Colfax Medical Group | $2,563 |

# Agenda

1. Finding the connection : Patients

2. Finding the connection : Physicians
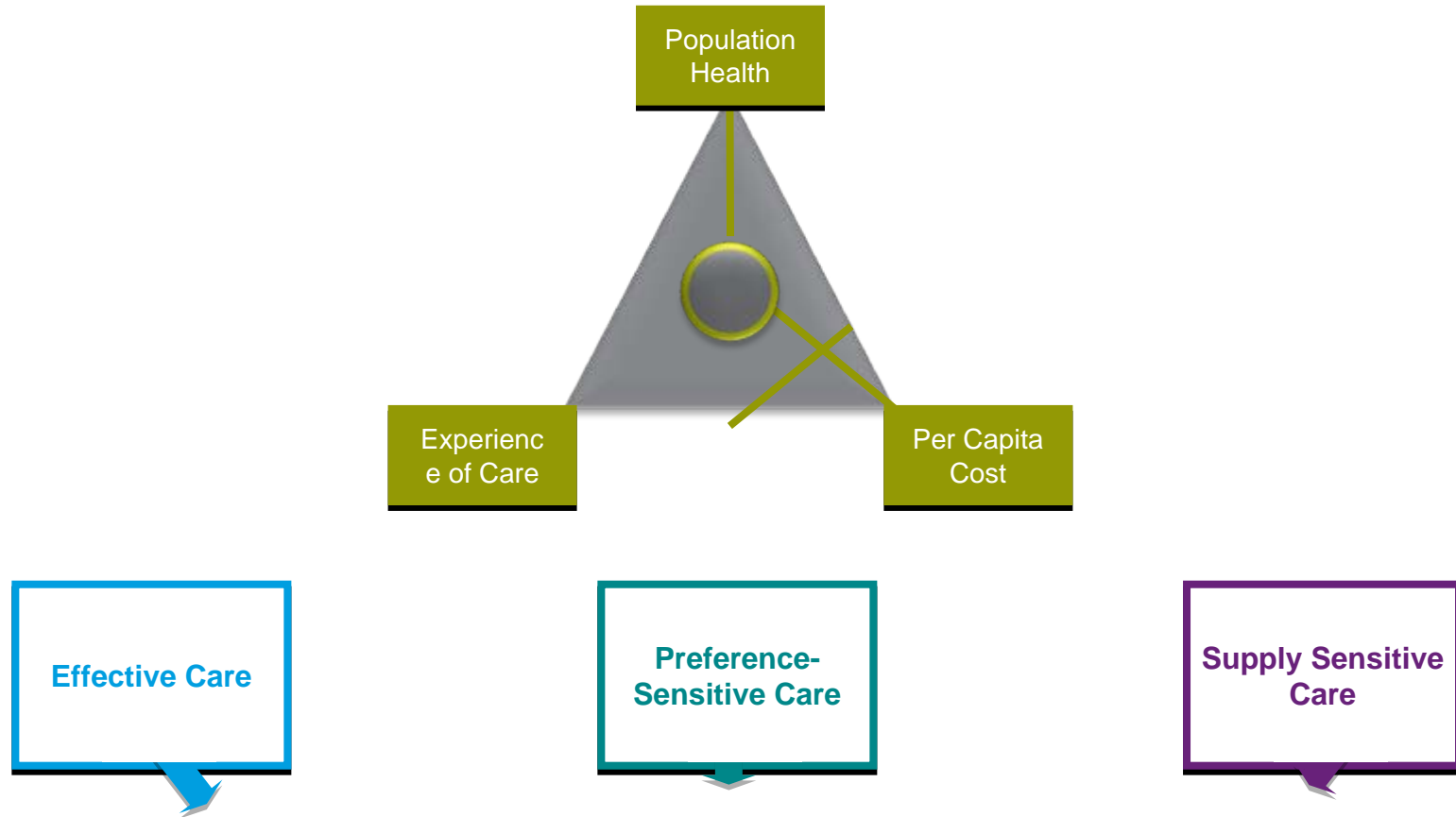
3. Are PCMHs or ACOs a solution to the conundrum?

PCMH/ACO 'ecosystems': are they answer to the illusive search for a connection between the quality and cost of care?

# The Vision – The Triple Aim
# The Strategy – Accountable Care



"The care people want and nothing more;
care people need and nothing less"

# The PCMH/ACO 'ecosystems': the answer to the illusive search for a connection between the quality and cost of care?

Payment model(s) that incent behavior:

- Effective care

- Preference sensitive care

- Supply sensitive care

Health care systems designed to optimize patient care and 'win' under new payment models

Population based care,

one patient at a time
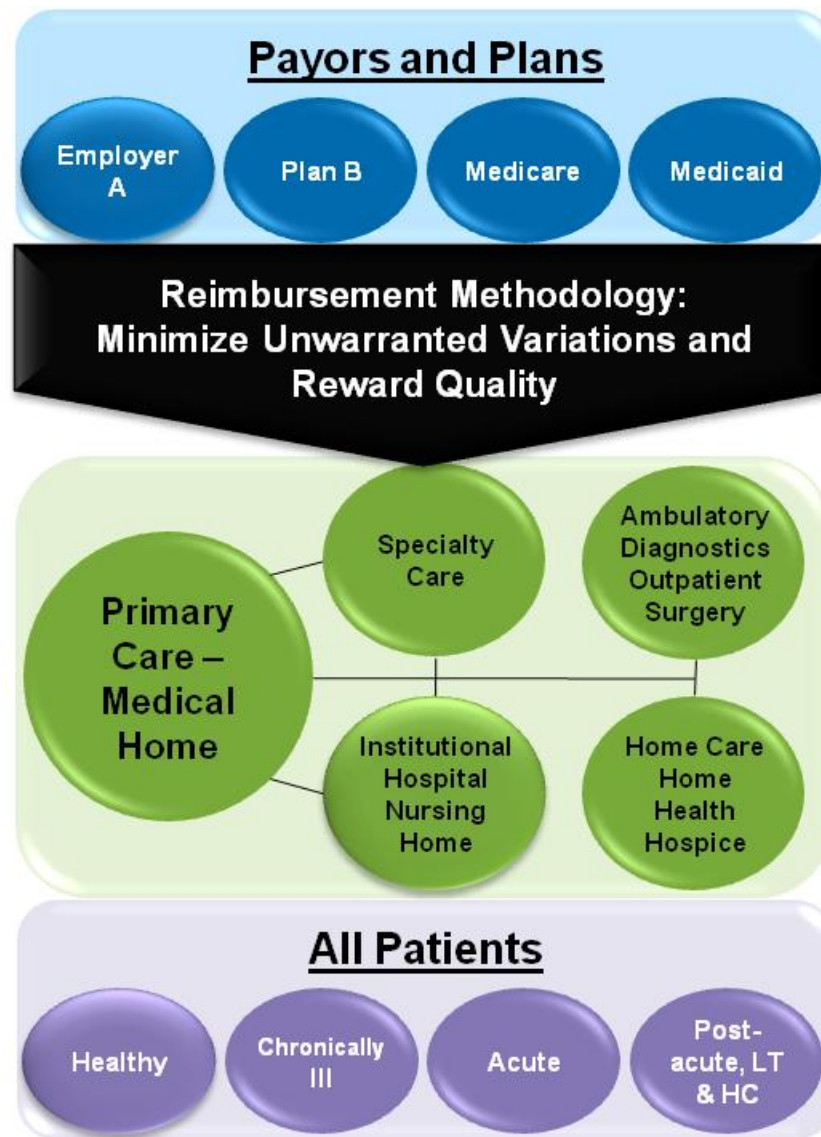
# Where the money should go

Accountable Care