



Metro Nashville Public Schools

Advanced Health Analytics Tie Teacher Health to Educational Outcomes

**Reach those in Need,
Empower Providers, & Demonstrate
Outcomes**



Confidential & Proprietary

Metro Nashville Public Schools

- 42nd US urban school system -- 81,000 students.
- 140 work locations across 526 square miles.
- \$792 million operating budget.
- \$189 million (24%) attributed to health care costs, sick pay, disability, lost productivity, for actives & health care costs for retirees.
- Teacher's health plan governed by health insurance trust (9,200 active & retired teachers).
- Support staff covered by Metro Nashville Government (4,000 active employees).



MNPS VISION

TO SUCCEED WE MUST

- Provide an **excellent teacher** in every class, for every student, every year...

WE BELIEVE

- Quality school staff is essential to academic excellence...
- Metropolitan Nashville Public Schools will be the first choice for families.

EXCELLENCE INVOLVES BEING IN THE CLASSROOM

- 39,000 teaching days are lost due to illness.
- 44% of sick days incurred by <20% of teachers.

Our Journey

2006

- Established mission: “To look beyond health care cost alone to the impact of poor health on the total health & productivity paradigm.”

2009

- Opened 5 onsite medical clinics located within 15 minutes of any worksite
- Same day access with less than 15 minute wait
- Full primary care-staffed by Family Nurse Practitioners

2013

- Value-based plan design tied to clinical disease management
- WellScore®/Integrated Data Warehouse/Enhanced Analytics
- ROI/impact analysis

2014

- Introduced Plus Plan with HRA requirements
- Expanded analytics to include teacher performance
- Moved clinic management to Vanderbilt

2015+

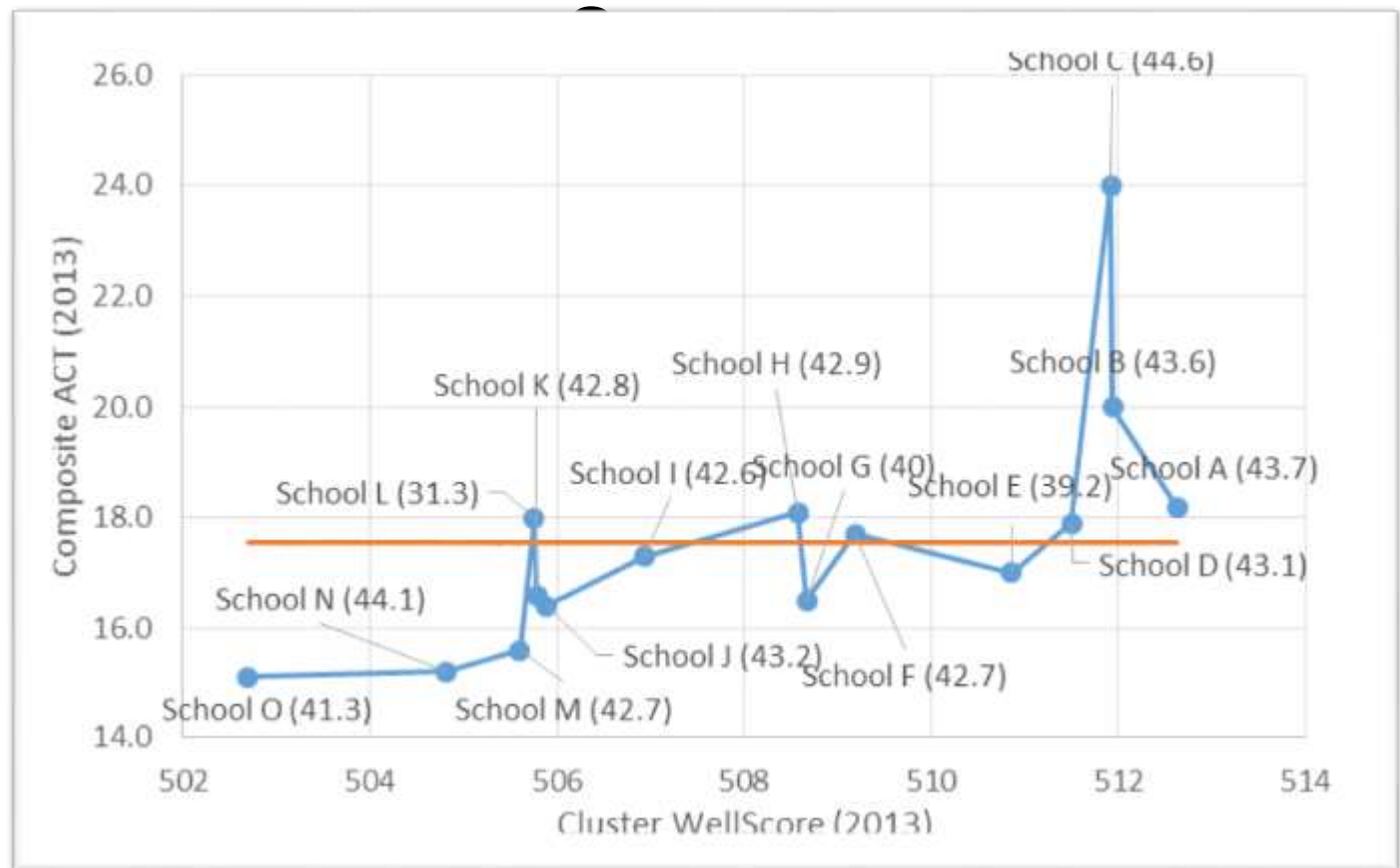
- Require biometrics
- Launch women’s health institute
- Expansion to include pharmacy, fitness, integrated health, & meeting rooms

MNPS Approach is Based on the Belief...

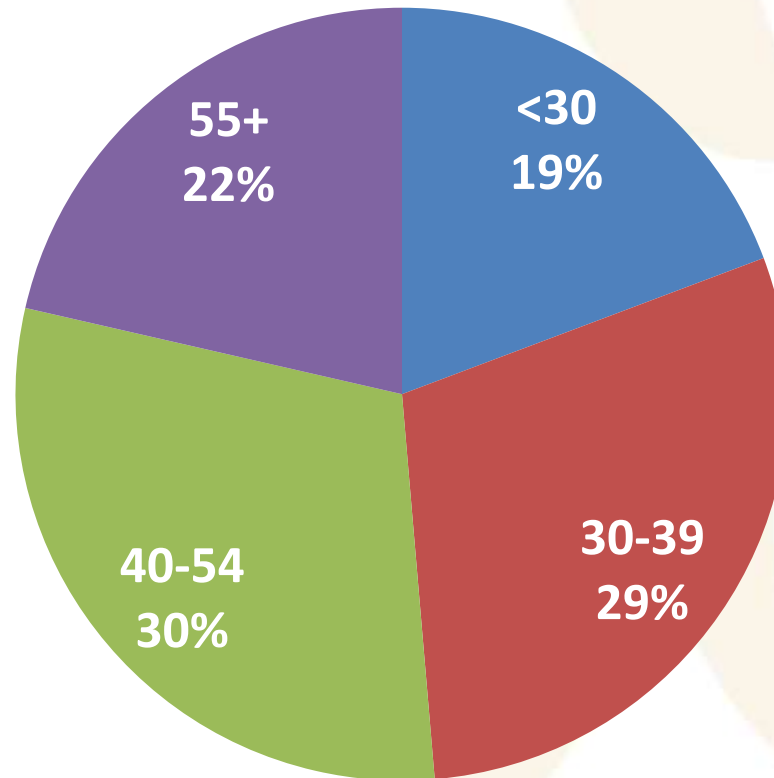
- Current fee based **medical system is flawed**; providers are paid for providing service- not improving outcomes.
- **Primary care providers are best suited** to engage the patient population and facilitate improvement.
- Due to the intertwined nature of medical conditions, mental and physical health, you have to **adopt a holistic approach to care**.
- By **removing obstacles** to care, patients will receive care earlier, and decrease exacerbations and lost time.
- ***By improving teacher health, we will be able to assist in the improvement of student education.***

Correlation Between Teacher Health & Educational Achievement

Teacher WellScore & Student ACT

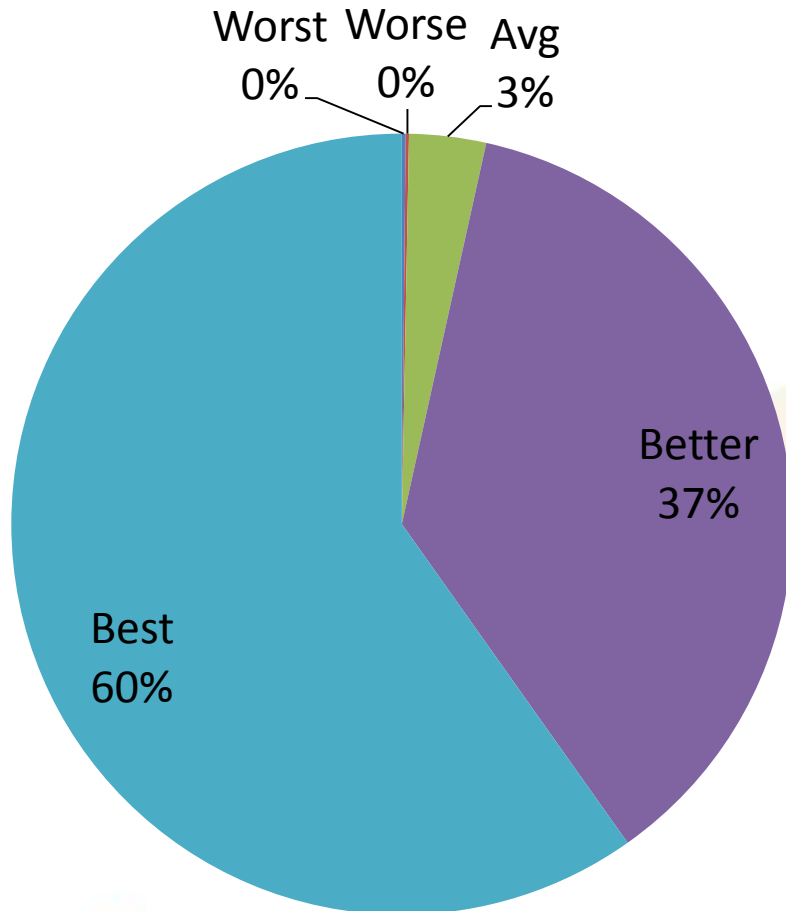


Classroom Teachers by Age Group

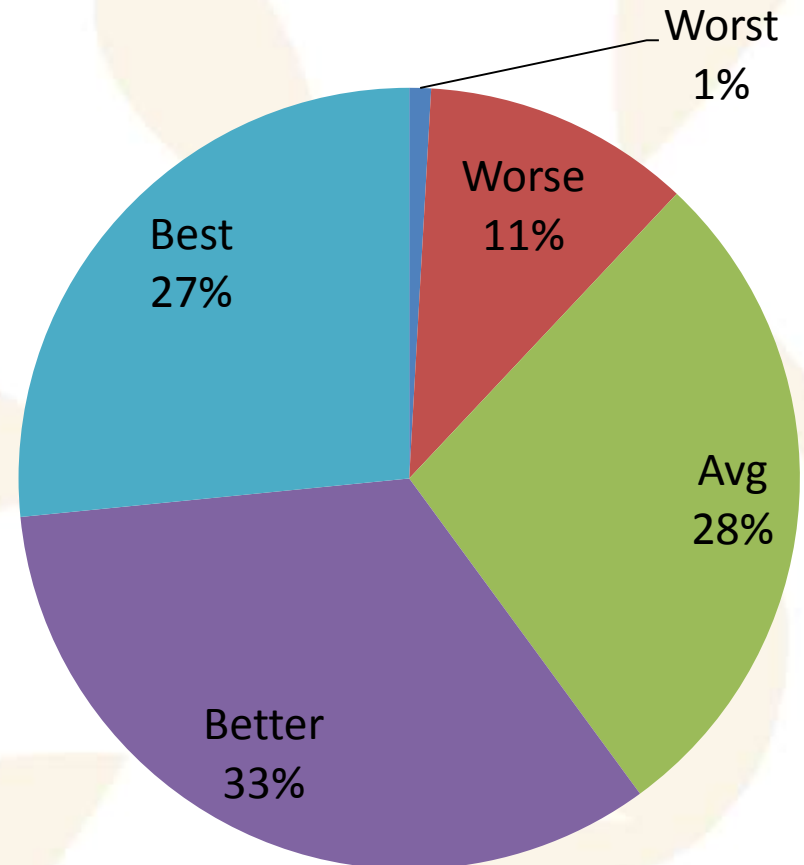


Performance Gap

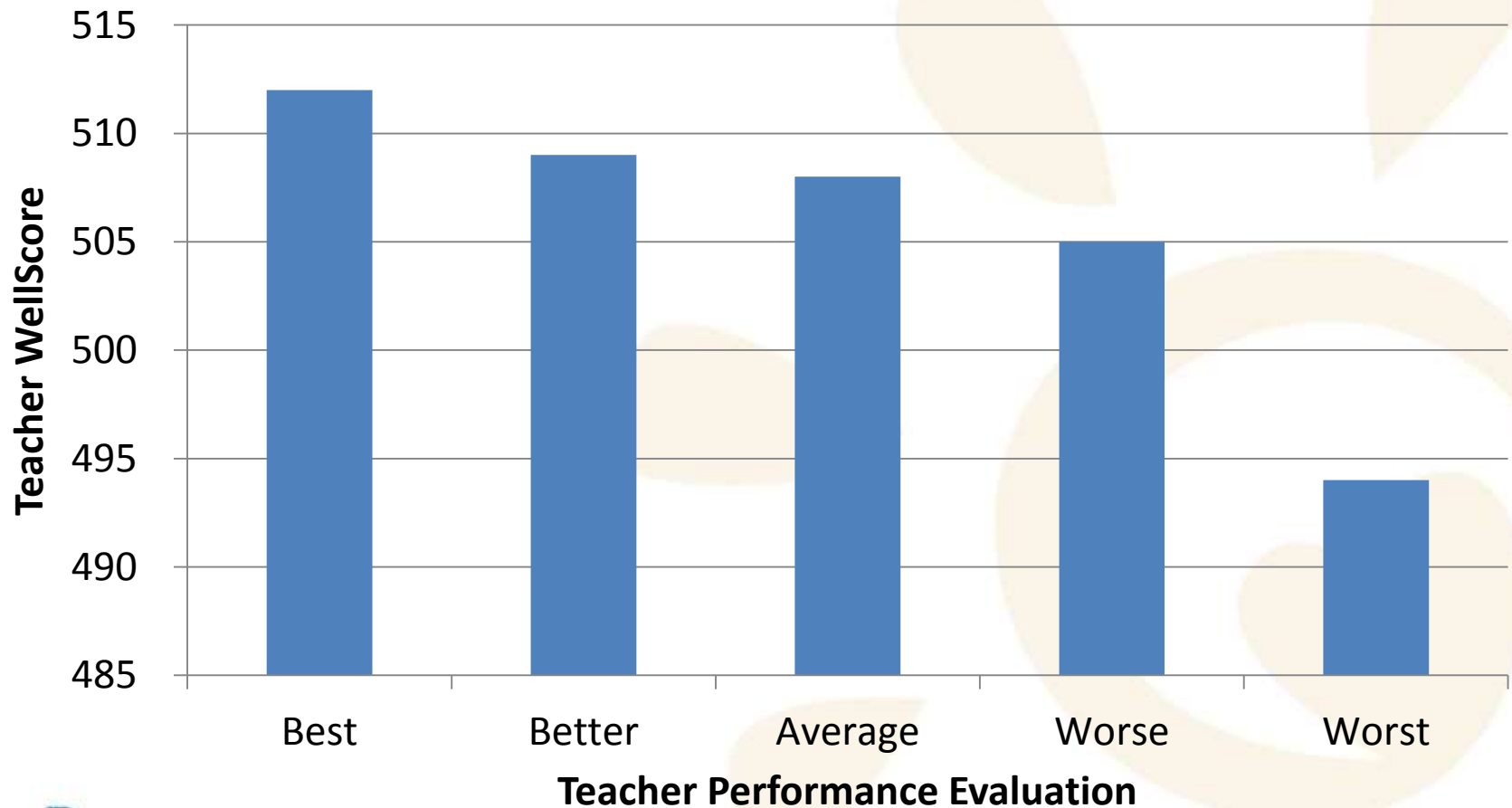
97% Self Assess Above Average



60% Appraised Above Average



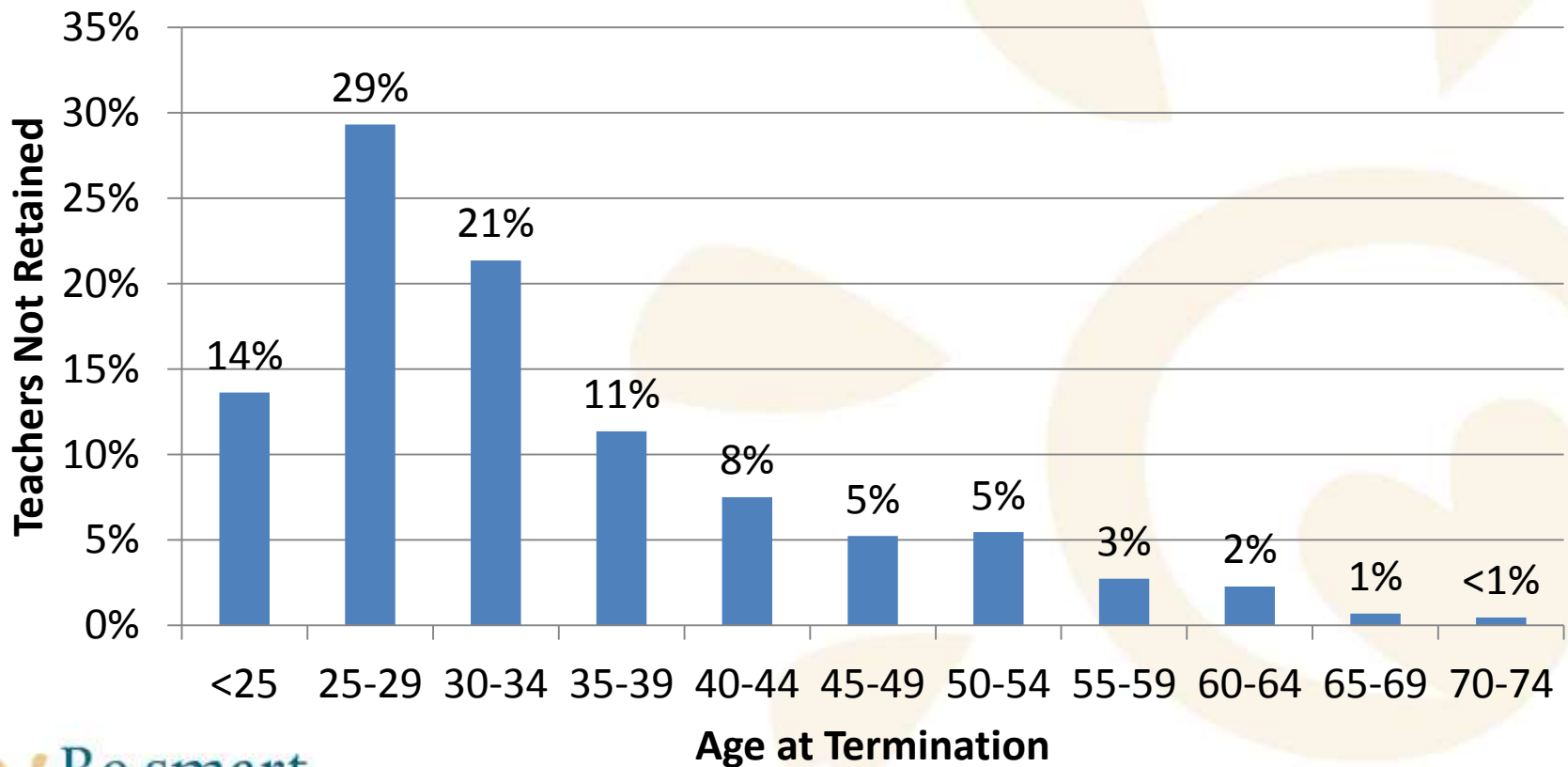
The Healthier the Teacher— The Better the Performance Evaluation



Teacher Retention by Age Group

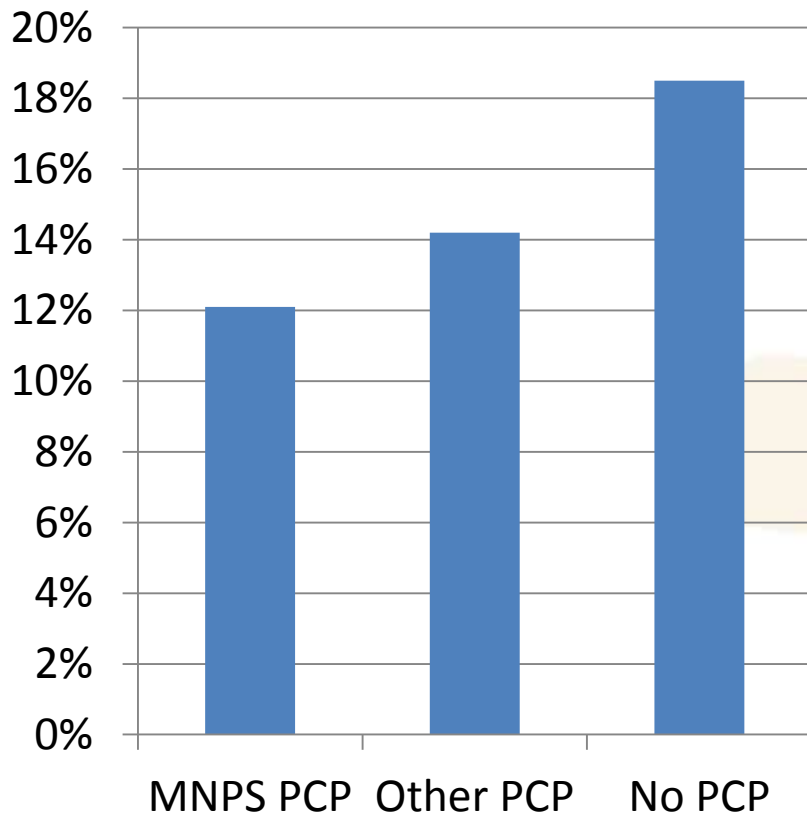
Excluding Retirements

Not Retained 2012-13



Impact of Primary Care on Retention

% Not Retained by PCP

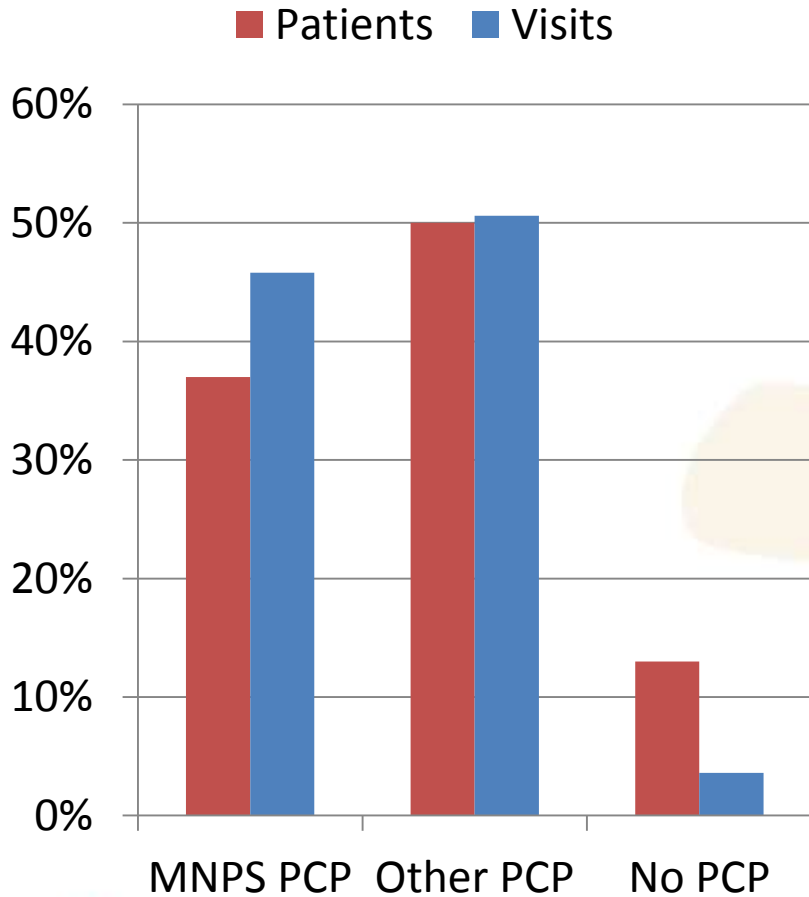


- Teachers attached to MNPS primary care providers are 6% less likely to leave MNPS
- Younger teachers are attaching to MNPS PCP
- Average ages:
 - MNPS PCP 39.8
 - Other PCP 42.7
 - No PCP 36.4

Women's Health Initiative

- Retention is improved when the teacher is attached to primary care.
- MNPS PCPs should be emphasized--documented improved quality and cost savings.
- Focusing on women's health to target 25-34 females.
- A collaborative relationship with Vanderbilt Women's Health could be a key component.
- MNPS needs to become the gold standard in achievements in women's health.

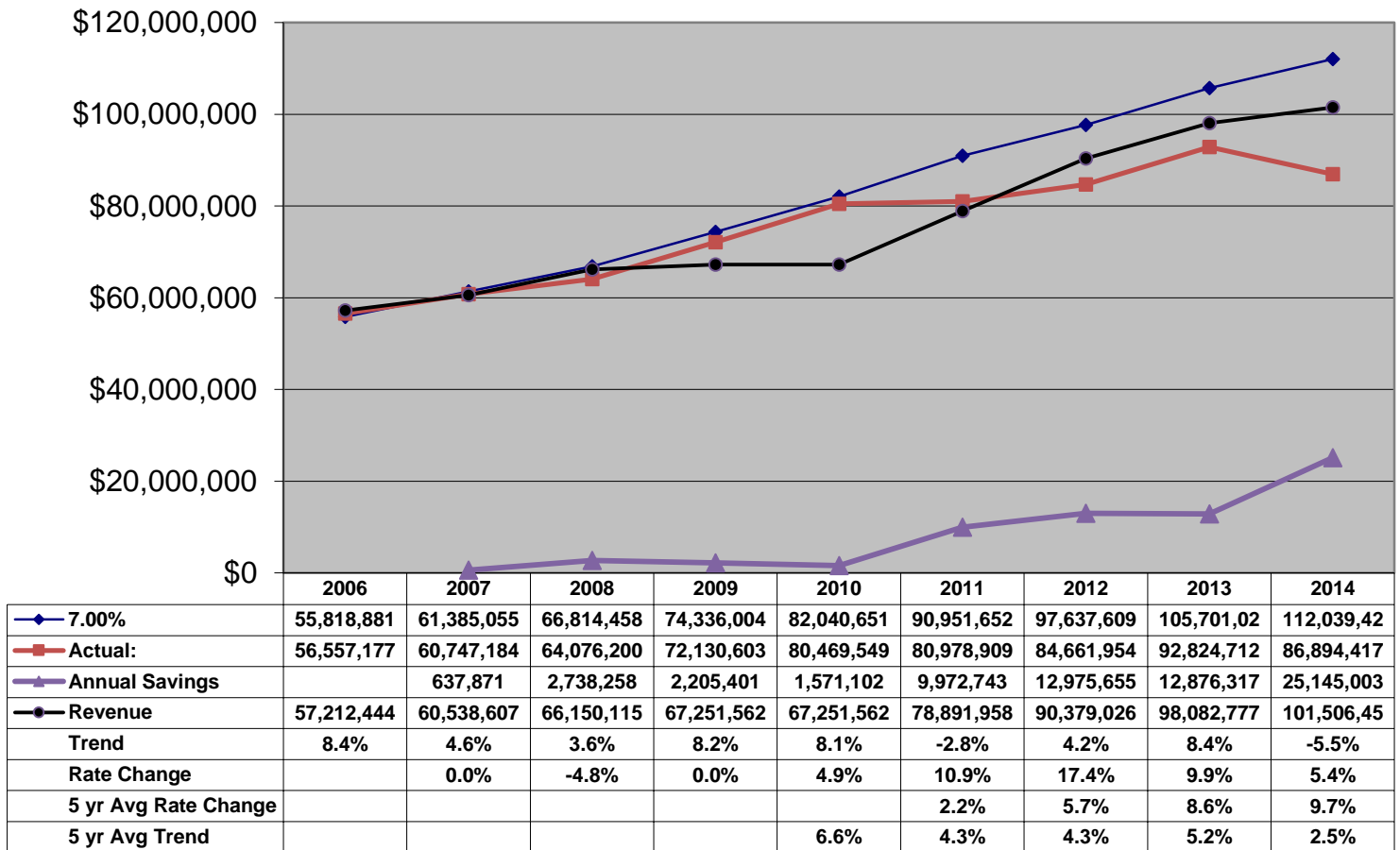
MNPS Primary Care Clinic Utilization



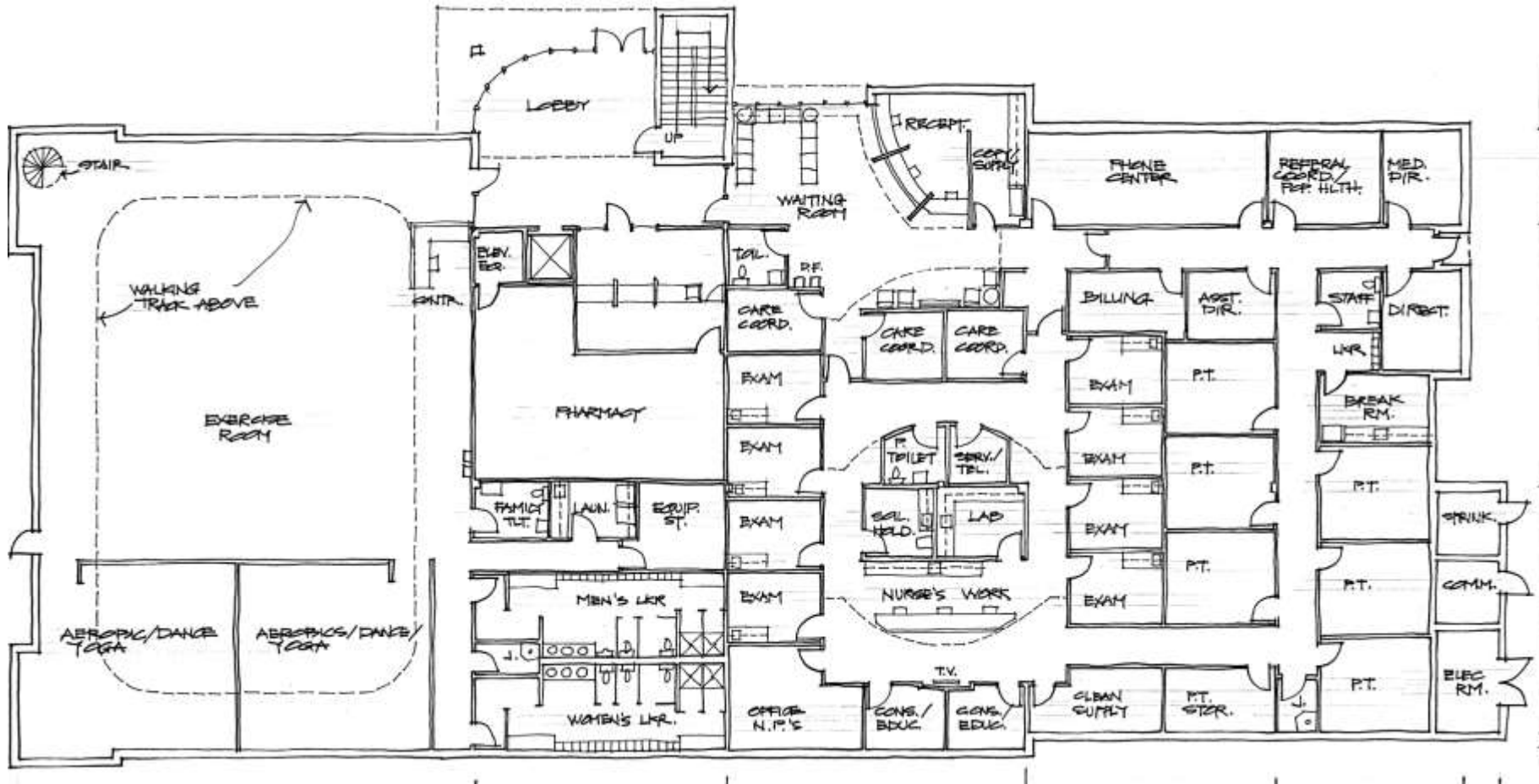
- MNPS PCP provides 46% of primary care, and is considered the medical home by 37% of teachers.
- 13% of active teaches are considered medically homeless – not attached to primary care.
- Medically homeless can be “ticking time bombs.”

Bottom Line Impact

Annual Benefits Cost - Fiscal Year



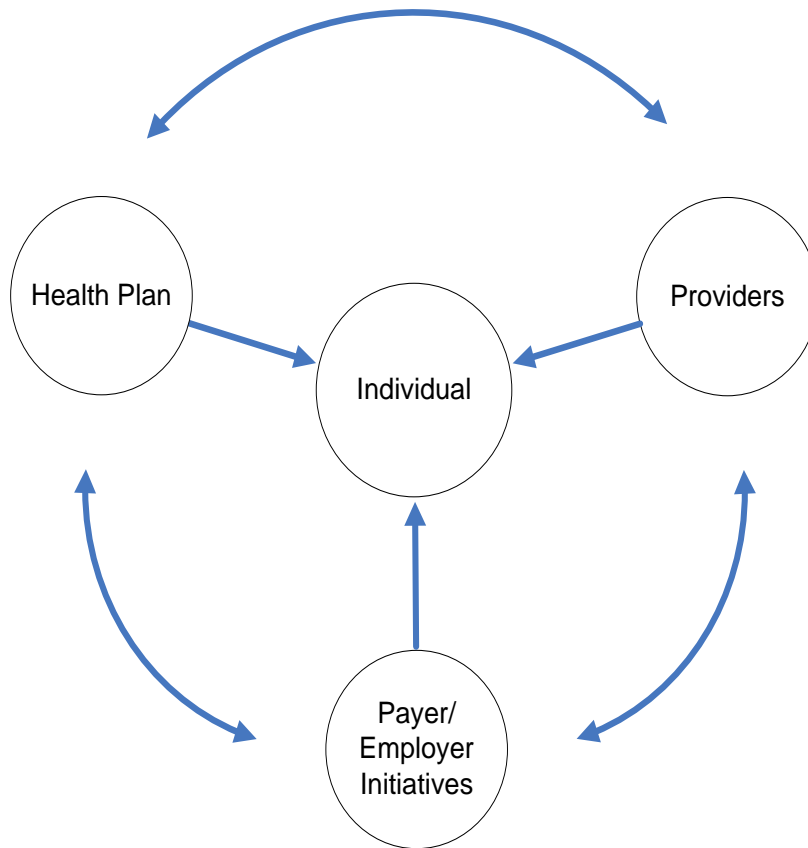
The Next Phase



Clinically Intelligent Analytics™ Drive Improvements

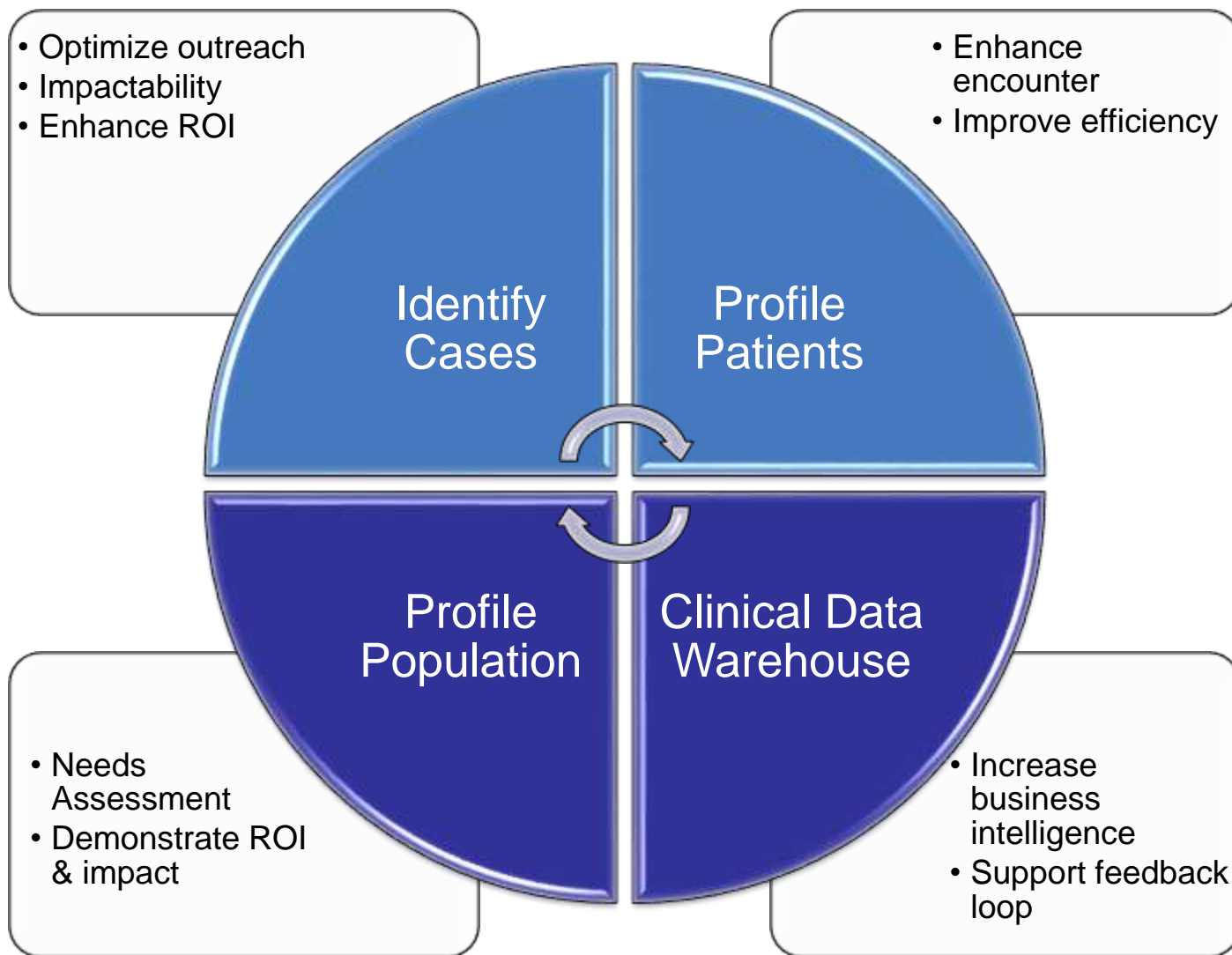
Improve Health, Control Costs, &
Drive Educational Outcomes

Clinically Intelligent Analytics™



- Population health orientation
 - Wellness & lifestyle
 - Prevention
 - Chronic condition management
 - Worksite clinics
- Bridge perspectives
 - Population health
 - Care of individuals
- Support innovation
 - Identify
 - Empower
 - Demonstrate
- Tie health to productivity & business outcomes

Strategic Value of Data



Strategic Value of Health



What's Your WellScore®?

Measuring Clinical Risk & Opportunity

Biometric Values

- Vital signs: Body Mass Index, Blood Pressure, O₂ Sat., etc.
- Lab Results: Glucose, HbA1c, HDL, LDL, Triglycerides, etc.

Lifestyle Choices

- Nutrition & physical activity
- Engagement

Prevention

- Primary prevention
- Gaps in care & chronic disease management

Diagnosed Conditions

- Chronic & acute conditions
- Number & complexity of concurrent conditions

Medication Use

- Gaps in therapy (adherence)
- Medication management/polypharmacy

Physician Use

- Appropriate primary care engagement
- Coordination of specialist activity

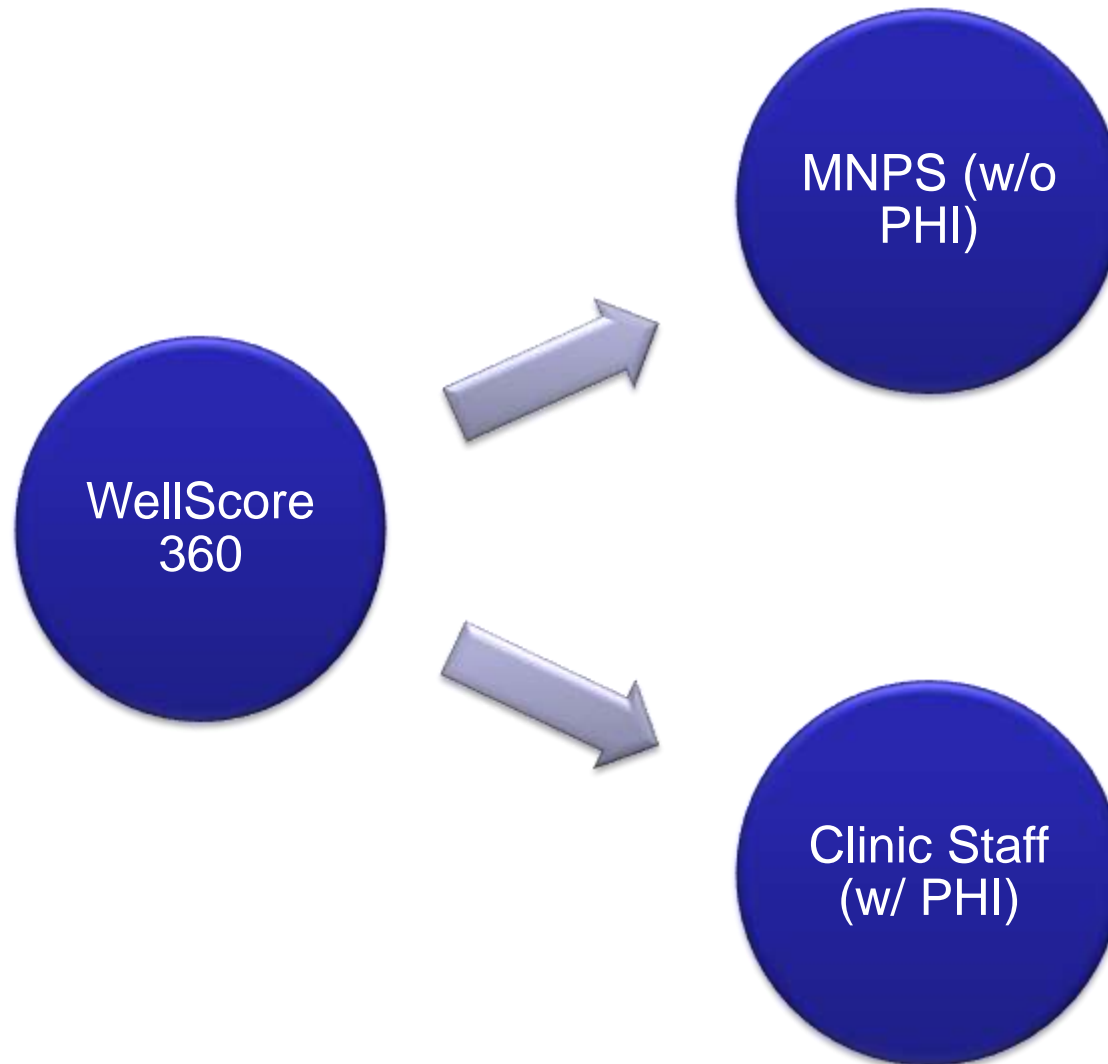
Inpatient, ER, Urgent Care Center Use

- Frequent flier identification & management
- Appropriate follow through

Productivity

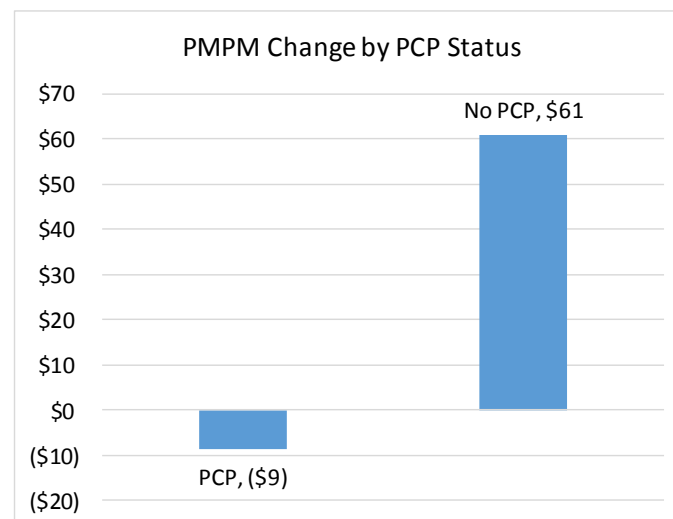
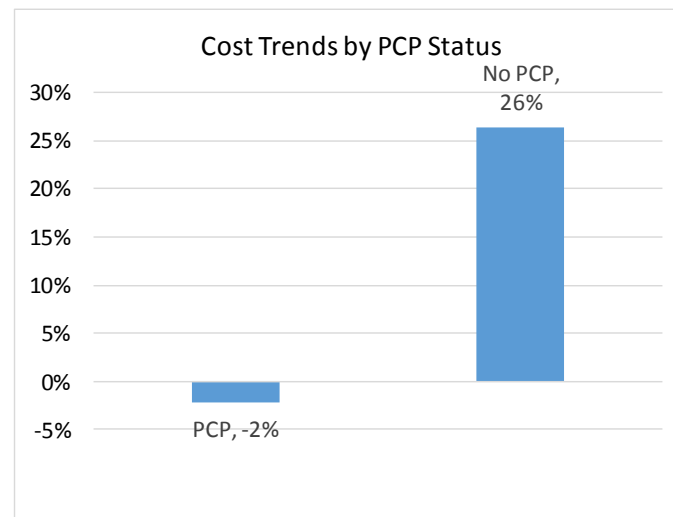
- Sick days, worker's compensation, etc.
- Performance evaluations

Population Health Management: Dual Focus



Value of PCP Relationships: Cost Trends

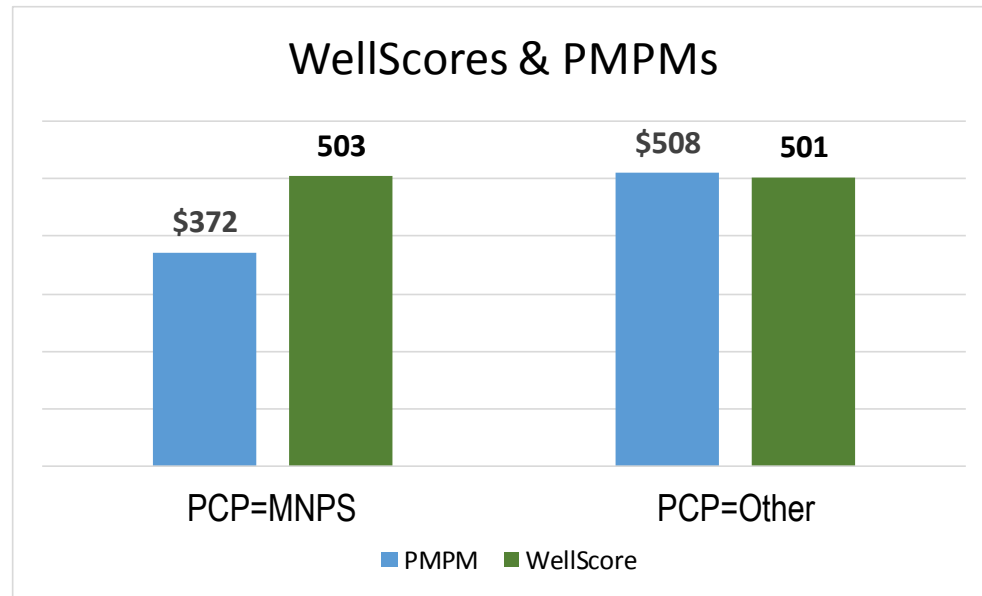
- Higher cost is the long-term consequence of being medically homeless.
- Connecting members to PCPs slows the rate of increase in costs for medical, pharmacy, & dental benefits.
- False economies: Medically homeless includes underserved, “ticking time bombs.”



Value: Cost & Outcomes

Bottom-line Impact of MNPS Clinics

- Value is created by improving health outcomes, lowering costs, or both.
- MNPS PCPs provide quality care & achieves outcomes consist with community-based physicians at a much lower cost.



- Bottom-line Impact: \$2.8 million for CY 2012
 \$1.7 million for CY 2013

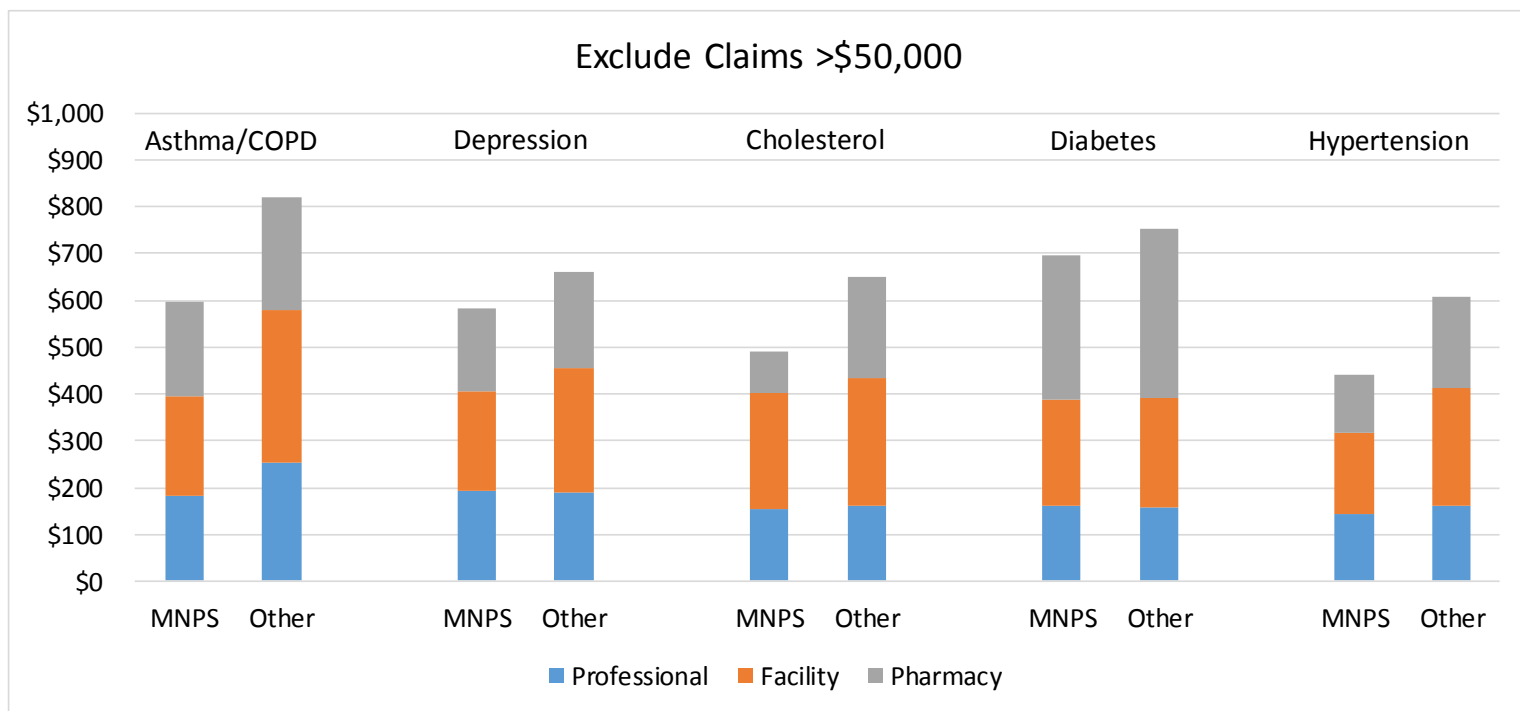
Sources of Savings:

Lower Utilization Outside of Primary Care

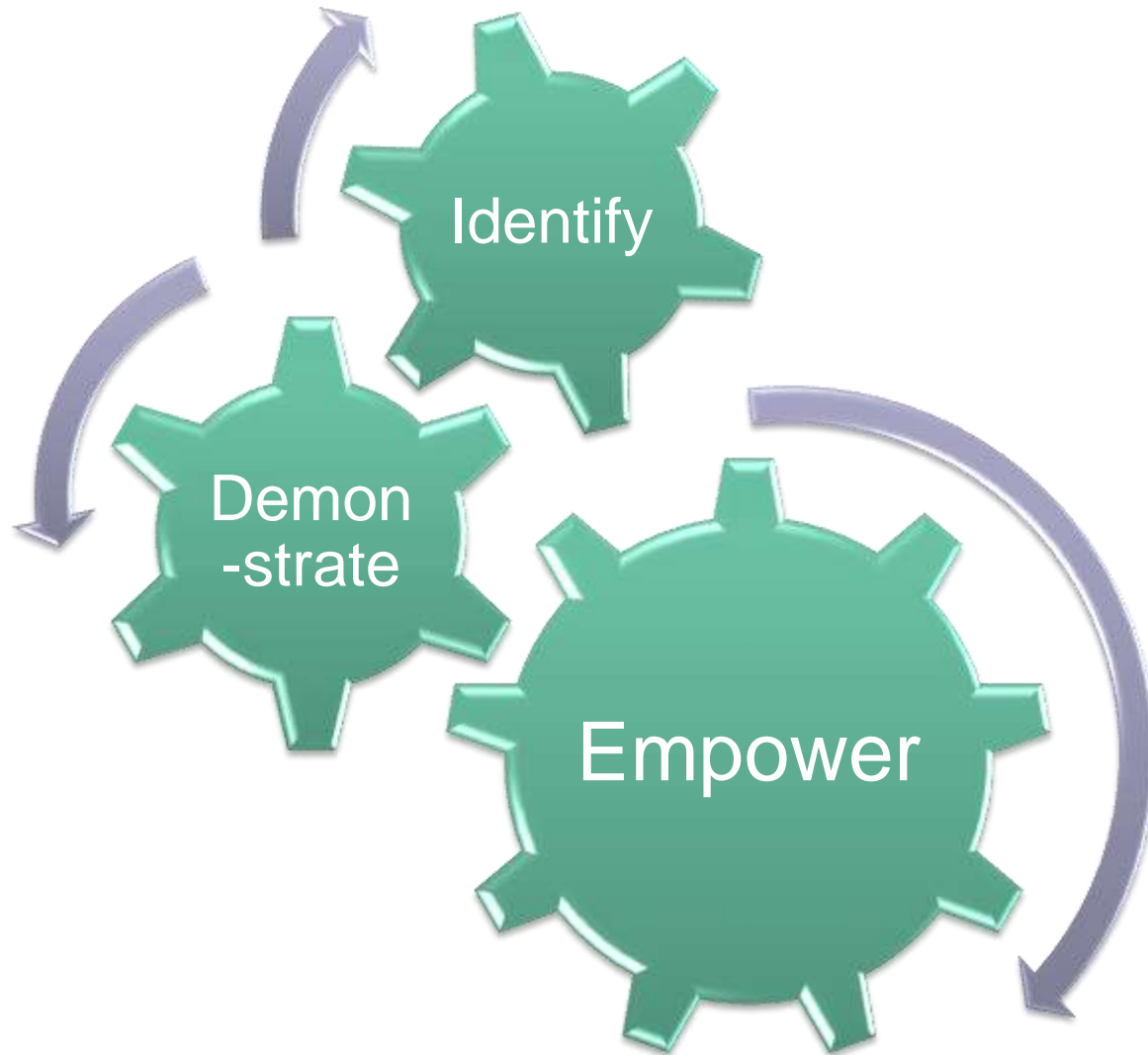
	PCP=MNP S	PCP=Other	%
Facility-Based Services			
○ Inpatient (Admits/1,000)	52	64	-19%
○ Outpatient (Visits/1,000)	2,540	4,381	-42%
○ ER (Visits/1,000)	143	187	-24%
○ UCC (Visits/1,000)	107	266	-60%
Professional Services			
○ Anesthesia (Visits/1,000)	165	229	-28%
○ Medicine (Visits/1,000)	6,778	7,994	-15%
○ Surgery (Procedures/1,000)	1,435	1,681	-15%
○ Radiology (Procedures/1,000)	987	1,427	-31%
○ Laboratory (Tests/1,000)	2,559	3,009	-15%
Pharmacy			
○ Outpatient Rx (Scripts/1,000)	11,148	16,685	-33%

Chronic Conditions Management

Overall PMPM costs are lower for members attributed to a UCHS PCP for Asthma/COPD (-27%), Depression (-12%) Cholesterol (-25%), Diabetes (-8%), & Hypertension (-28%).



Data Drives Results



- From volume to value
- Focus resources
- Enhance operational efficiency
- Improve outcomes
- Lower costs

Use WellScore to Focus Resources

Reach Out to 'Impactable' Opportunities

All Active Employees		506
Active Employees	Least Healthy	Most Healthy
School Clusters (N=14)	494	512
Schools/Worksites (N=140)	461	543
Individuals (N=9,000)	309	675

“Hot Spot” Report

- 50 parameters provide comprehensive view of factors driving health & wellbeing.
 - Biometrics
 - Medication adherence
 - Preventive care
 - Medical home
 - Avoidable hospital use
 - Diabetes management
 - Health management behaviors
 - Perceived wellbeing
 - Worksite factors
 - Disease registry

Hot Spot-Sample Metrics

				Primary Medical Home					
Measure Type		Count	WellScore	PCP= UCHS		PCP= Other		PCP= None	
Demographic		9,219	495	2,104 23%		4,522 49%		2,593 28%	
Measure Type	Measure	Count	% Meas'd	Okay	Oh My	Oh Crap	OH CRAP+	% Not Okay	
Biometrics	Blood Pressure	3,495	38%	40%	48%	10%	2%	60%	<div></div>
	BMI/Body Fat	4,833	52%	37%	25%	29%	8%	63%	<div></div>
	Glucose	704	8%	75%	16%	7%	2%	25%	<div></div>
	LDL	1,154	13%	43%	34%	16%	7%	57%	<div></div>
	HbA1c	504	5%	81%	8%	6%	6%	19%	<div></div>
Medication	Asthma/COPD	382	4%	46%	15%	21%	18%	54%	<div></div>
	Cholesterol	822	9%	66%	16%	10%	8%	34%	<div></div>
	Depression	1,547	17%	70%	14%	9%	7%	30%	<div></div>
	Diabetes	477	5%	70%	15%	10%	6%	30%	<div></div>
	Hypertension	1,188	13%	77%	13%	7%	3%	23%	<div></div>
Prevention	Primary Care-Prevention	8,443	92%	44%	56%	0%	0%	56%	<div></div>
Hospital Use	Avoidable Inpatient	54	1%	0%	87%	13%	0%	na	
	ER-Avoidable/Divertable	747	8%	0%	35%	60%	5%	na	
Diabetes Care	Diabetes LDL Controlled	200	2%	58%	42%	0%	0%	42%	<div></div>
	Diabetes Blood Pressure Controlled	305	3%	57%	43%	0%	0%	43%	<div></div>
	Diabetes HbA1c Controlled	222	2%	60%	40%	0%	0%	40%	<div></div>
Health Management	Tobacco User-Cigarettes	4,579	50%	93%	7%	0%	0%	7%	<div></div>
	Nutrition-High Fiber	4,579	50%	75%	24%	1%	0%	25%	<div></div>
	Nutrition-High Fat/Cholesterol	4,579	50%	16%	64%	19%	1%	84%	<div></div>
	Physical Activity-Heavy	4,579	50%	54%	32%	14%	0%	46%	<div></div>
	Physical Activity-Light/Moderate	4,579	50%	67%	18%	11%	5%	33%	<div></div>
Perceived Wellbeing	Social Ties	4,577	50%	75%	25%	0%	0%	25%	<div></div>
	Personal Loss or Misfortune	4,579	50%	79%	17%	4%	0%	21%	<div></div>
	Tension, Anxiety, Depression	4,579	50%	44%	56%	0%	0%	56%	<div></div>
Worksite	Personal Illness Absences	4,547	49%	21%	42%	35%	2%	79%	<div></div>
	Personal Illness Performance Impair	424	4%	86%	14%	0%	0%	14%	<div></div>

Action for Cluster/School WellScores

- Care Coordinators review the cluster reports & focus on lower scores.
- Clinics out reach to all population segments:
 - Patients who use the clinics as their medical home.
 - Patients who use who use community-based providers.
 - People who are medically homeless.
- Are low scores caused by not seeing a healthcare provider, not filling prescriptions, not living a healthy lifestyle, worksite issues, family stress, etc.?
 - Focus resources
 - Align programs & interventions

Actions for Individuals

Clinicians review in depth 360 degree profiles of individuals to identify candidates for outreach.

- Is the individual is adhering to medications.
- Are medications are working.
- Is the patient is on the correct medications
- Is patient is overusing emergency room or urgent care.
- Has the patient been hospitalized.
- Does the patient have a primary medical home.
- Are chronic conditions being managed according to evidence-based standards.
- Are lifestyle, worksite, or stress issues a factor.



Clinically Intelligent Analytics:

Individual Center

Plan: **Memorial Hospital**

Last Name: * First Name: **U** Age Range: To:

WellScore: To: **490** Points: To: Meas. Count: **25** To: Pri. Meas. Count: **2** To:

Health Mgt Pgm Types: ☐ Online ☐ Self-tracking ☐ Personal ☐ Uncategorized

Premium Rate:

Open Goals:

Has Attributed PCP: Attrib PCP Preferred Group:

Any Preferred Group Visit:

+ Advanced Criteria ☐ Include Advanced Criteria **Expand All**

Refresh List **Clear** **Save Config** **Restore Config** **Download Displayed Individuals**

Create Outreach Opportunities / Workflow
for top **1** individuals in list below.

Opportunity Description:

Opportunity Referral:

Screening Event Follow up

Opportunity Template:

- No Template -

☒ Create spreadsheet

Create Workflow

WellScore Individual ID:

Go To Profile

Page 1 of 28 --- #Rows displayed: 300 Click on Header column to sort.

Profile	Workflow	Last Name	First Name	Age	Sex	Coverage Start	WellScore
Profile	Create	Sims	Shannon	78	F	11/21/2010	422
Profile	Create	Mills	Sharon	61	F	11/21/2010	422
Profile	Create	Myers	Tracy	96	F	11/21/2010	430
Profile	Create	Snyder	Jacob	92	M	11/21/2010	388
Profile	Create	Moore	Linda	82	F	11/21/2010	422
Profile	Create	Ware	Christopher	95	M	11/21/2010	410
Profile	Create	Thompson	Cheryl	91	F	11/21/2010	406
Profile	Create	Hamilton	Nicholas	79	M	11/21/2010	407
Profile	Create	Carpenter	Susan	82	F	11/21/2010	394



Clinically Intelligent Analytics: Demo

Individual Profile

Individual Name: **Shannon Sims**

Create Opportunity

+ Demographics

+ Plan Data

+ Key Opportunities/Problems

- WellScore Risk Factor Summary

Period	WellScore	Points	Measure Count	Primary Measure Count
2013Y1	422	600	56	16
2012Y1	447	2375	49	13
2011Y1	437	2650	37	14

Type	Measure	2013Y1 Metric	Indicator	Modifier	2012Y1 Metric
Biometric	Blood Pressure	150/80	Abnormal Value	Not Applicable	
Biometric	Pulse	78	Normal Values	Not Applicable	
Biometric	BMI/Body Fat	40/NR	High Risk	Not Applicable	
Biometric	O2 Saturation	95	Normal Values	Not Applicable	
Biometric	Glucose	128	Abnormal Value	Not Applicable	
Diagnosed Conditions	Asthma/COPD		Current		
Diagnosed Conditions	Cancer		Past		
Diagnosed Conditions	Cholesterol		Current		
Diagnosed Conditions	Chronic Kidney Disease				
Diagnosed Conditions	Chronic Urinary Tract Infections		Current		
Diagnosed Conditions	Dehydration, Hypervolemia, Other Endocrine				
Diagnosed Conditions	Dementia				
Diagnosed Conditions	Depression		Past		
Diagnosed Conditions	Diabetes		Current		
Diagnosed Conditions	Heart Diseases, CAD/CHF		Current		

Are my health &
wellness programs
adding value?

Are my people any
healthier than
they were a year
ago?

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