



Measure Up Pressure Down

American Medical Group Foundation

Plank 3: Blood Pressures Addressed During Every Visit

Achieving Breakthrough Chronic Disease Outcomes

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MediSync / PriMed Physicians



MediSync

About MediSync

- Manage (don't own) multiple medical groups
 - Assist them to achieve “breakthrough” performance financially and clinically
- Use Six Sigma and Lean to innovate medical group performance and operations
- Innovated management processes to 120+ medical groups nationwide



About PriMed Physicians

- Community based, physician owned and governed
- Greater Dayton, OH
- PCP Based Multi-specialty Medical Group
 - Family Practice, Internal Medicine, Pediatrics
 - + Cardiology, Electrophysiology, Neurology & Endo
- 55 physicians; ~100,000 patients
- Started prepping for value agreements in 2004
- Nov 1, 2012 almost all value contracts



What Doctors Do

1. Acute care
2. Chronic disease management
3. WRAP – Wellness, Risk Assessments & Preventive care

Cost of Chronic Disease

“Seventy-five percent of the (monies) spent on health care in the U.S. is for treatment of the chronically ill.”

- The Commonwealth Fund

“Big” Chronic Diseases

HTN

Diabetes

Lipids (CAD & Vascular Diseases)

Asthma

Heart Failure

COPD

Depression

Osteoporosis



“Normal” Quality/Cost Improvement In Virtually All Medical Groups

1. Remind physicians about evidence based standards, goals, pathways, etc.
 - Put quality “pop ups” in EHR
 - Generate a registry with lists of patients
2. Generate metrics and publish – (un)blinded
3. Hire additional staff to support the effort, remind the patients, remind the doctors (i.e. PCMH)
4. Link outcomes to pay

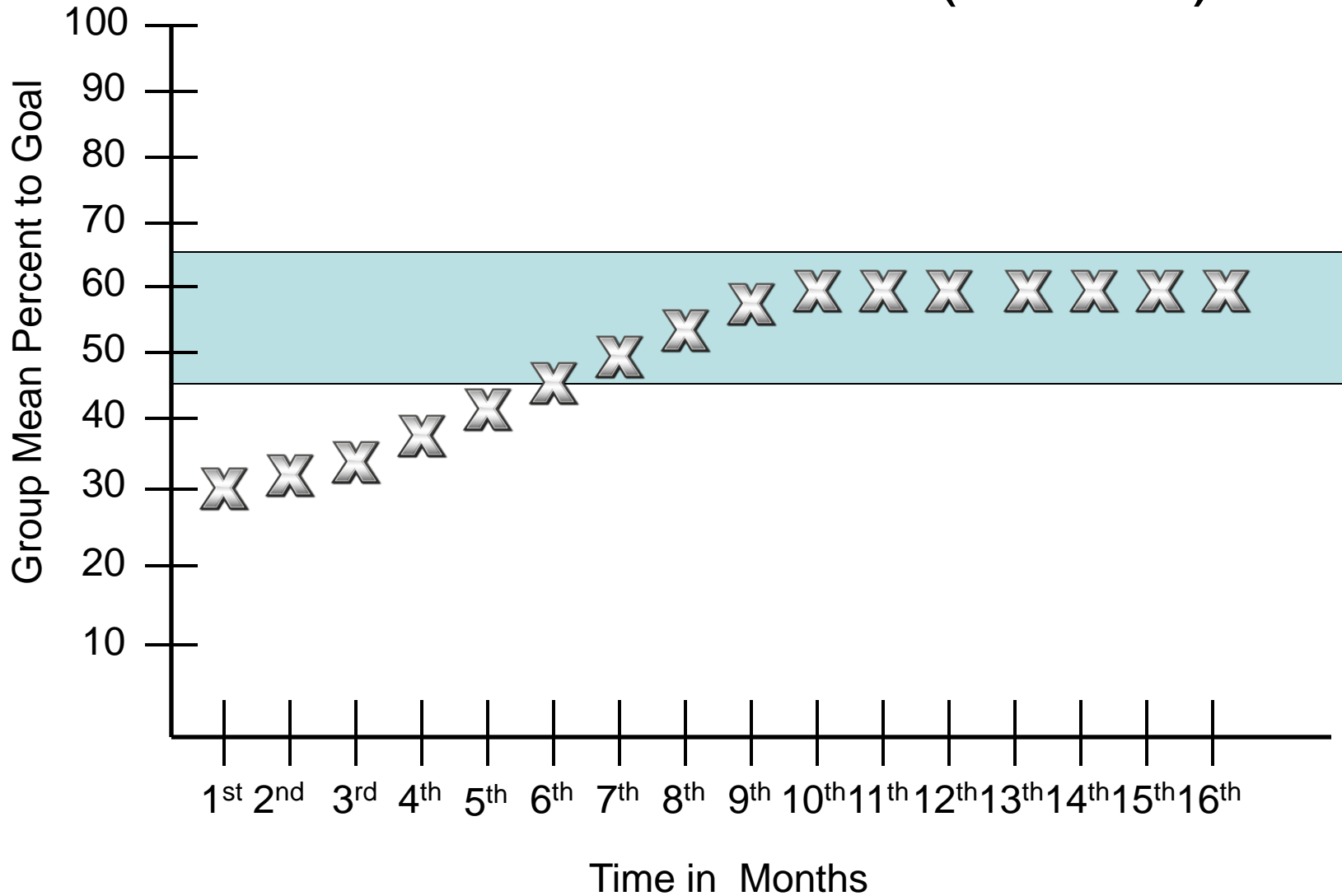


WHAT DO THE NORMAL METHODS
GAIN IN IMPROVEMENT?



MediSync

Medical Quality Goal: Move One Variable (i.e. BP)



The IHI and “All or None” Goals

Wisconsin Diabetes

1. BP \leq 129/79
2. A1c $<$ 7
3. LDL $<$ 100

Minnesota D5

1. BP \leq 139/89
2. A1c $<$ 7
3. LDL $<$ 100
4. On Aspirin or Anti-thrombotic Tx
5. Non-smoker

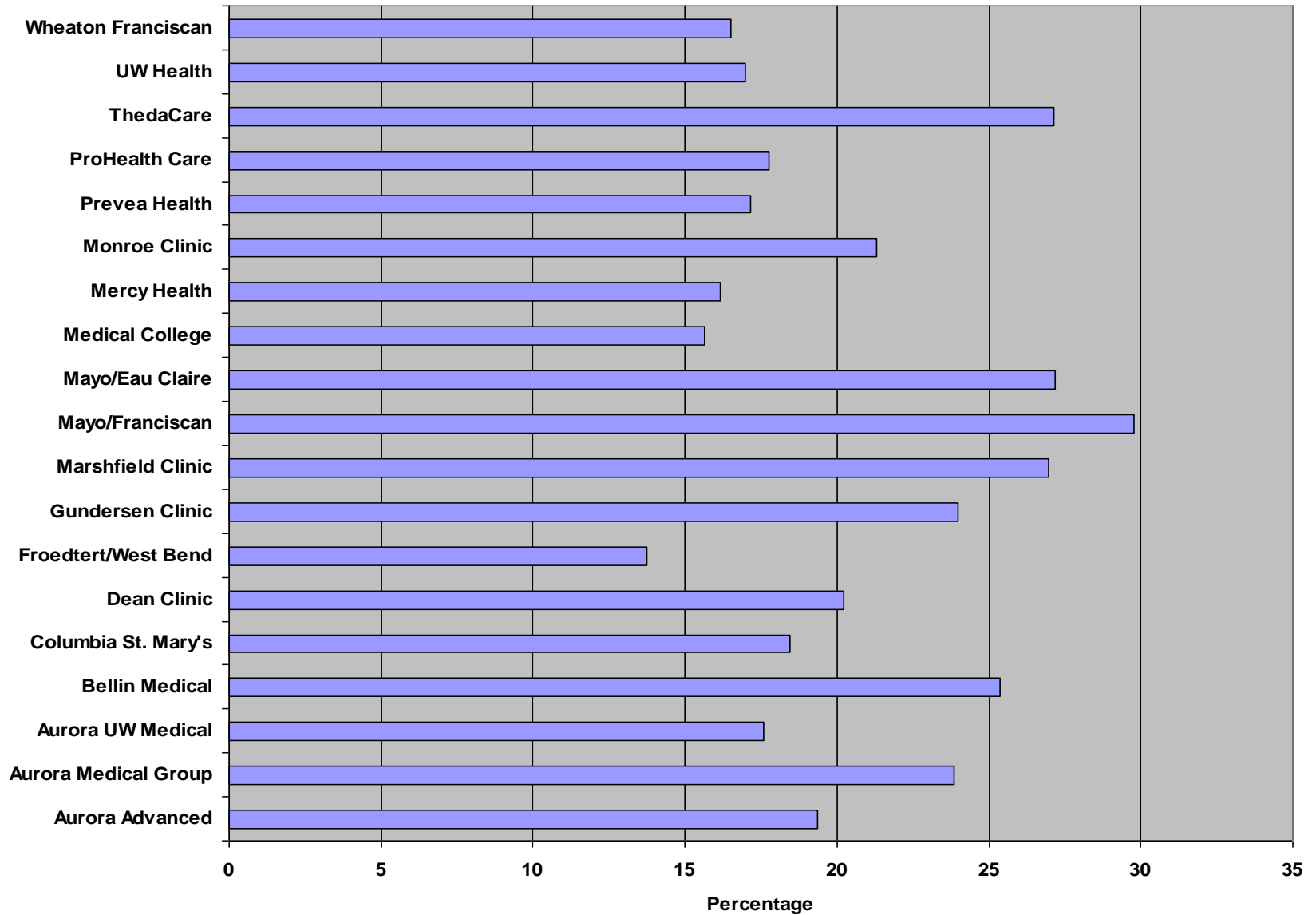


Three Goals @ 60% Each

»1 st Goal	60%
»2 nd Goal	36%
»3 rd Goal	21.6%



2010 Diabetes Outcomes (Using Wisconsin Measures)



The “All or None” Hurdle

1 goal @ 90% / 60% each	90%	60%
2 goals @ 90% / 60% each	81%	36%
3 goals @ 90% / 60% each	72.9%	21%
4 goals @ 90% / 60% each	65.6%	12%
5 goals @ 90% / 60% each	59%	7.5%

“Normal” Quality/Cost Improvement In Virtually All Medical Groups

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4. Link outcomes to pay

About Quality Theory & Tools

- Used in virtually all other economic sectors
- Sophisticated ways to help make quality improvements and cut costs
- Examples from every day life
- Examples: Six Sigma, Lean, TQI, etc.



What Six Sigma & Lean Taught Us

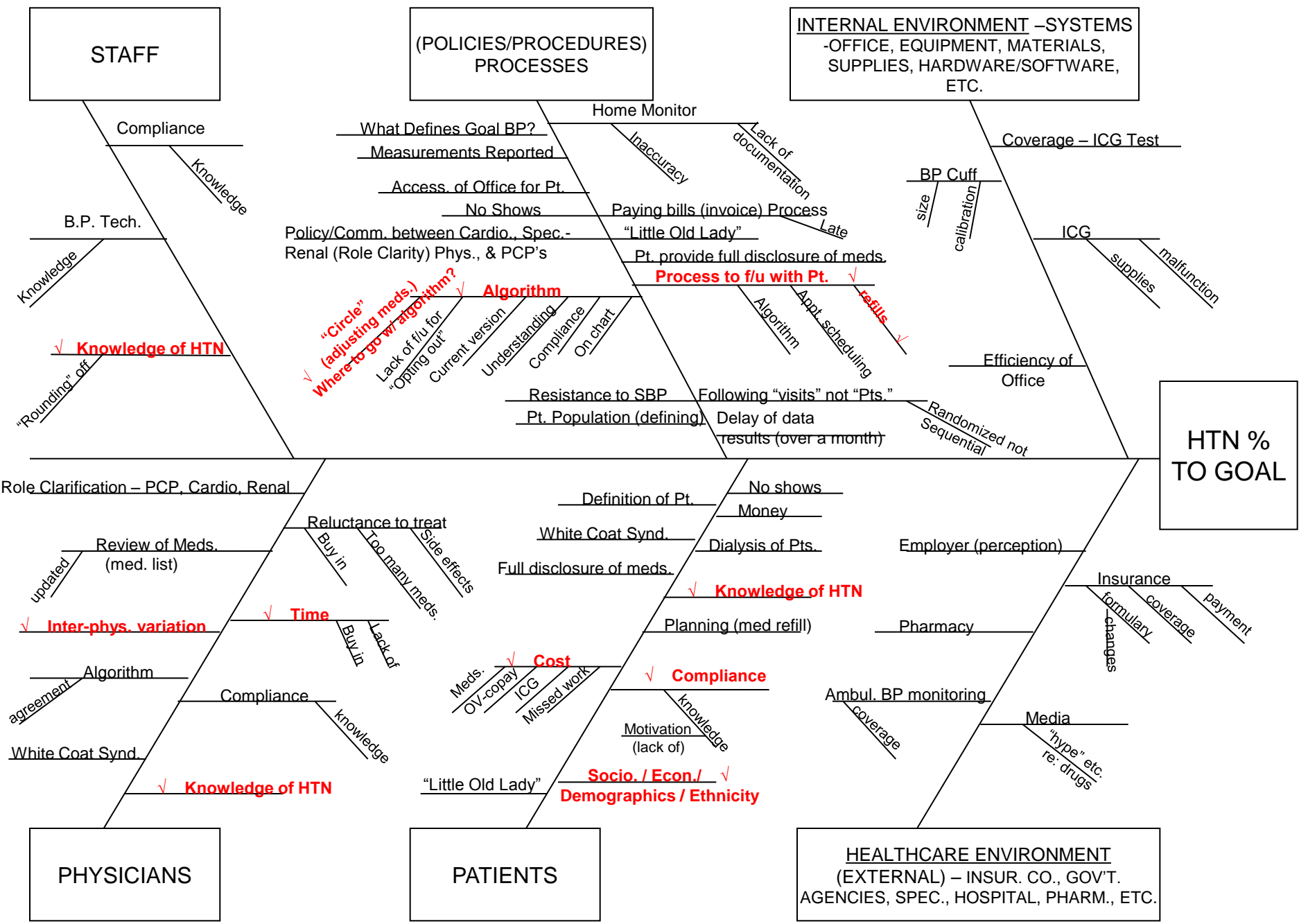
1. Process, process, process
2. If you can't measure it, you can't improve it
3. Process, process, process

NB -- A process is a defined set of steps designed to achieve a very specific goal

First Medical Quality Project: Create HTN Process

1. Use Six Sigma
2. Establish baseline performance – 42%
3. Start with an “Ishikawa” or “Fishbone”





Creating the HTN Process - 1

1. Use Six Sigma
2. Establish baseline performance
3. Start with an “Ishikawa” or “Fishbone”
4. Create a true process that
 - Addresses every HTN patient, every visit
 - Includes Impedance Cardiography
 - Guides drug selection and dosing



Creating the HTN Process - 1

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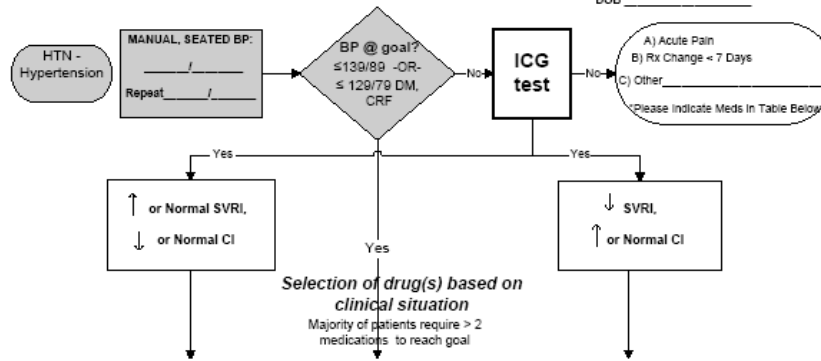


HTN - Clinical Process Flow

DATE _____

NAME _____

DOB _____



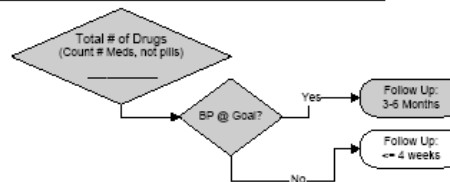
Med Adjustment			Current Meds	Med Adjustment		
Add New Rx	D/C	Change Dose	** JNC 7 guidelines recommends all Pts w/out a contraindication be on a Thiazide Diuretic	Change Dose	D/C	Add New Rx
		↑	<input type="checkbox"/> Thiazide Diuretic** <i>HF, CVD risk, DM, Recurrent stroke prevention</i>	↑		
		↑	<input type="checkbox"/> ACEI <i>HF, Post MI, CVD risk, DM, Chronic kidney disease, Recurrent stroke prevention</i>	↓		
		↑	<input type="checkbox"/> ARB <i>HF, DM, Chronic kidney disease</i>	↓		
		↓	<input type="checkbox"/> B Blocker <i>HF, Post MI, CVD risk, DM</i>	↑		
		↑	<input type="checkbox"/> Non-Selective B Blocker with (alpha) blocking activity <i>HF, Post MI</i>	↓		
		↑	<input type="checkbox"/> CCB <i>CVD risk, DM</i>	↓		
		↑	<input type="checkbox"/> Vasodilator	↓		
		↑	<input type="checkbox"/> Central/Alpha Agonist	↓		
		↑	<input type="checkbox"/> Diuretic (Non Thiazide)	↓ ↑		
			<input type="checkbox"/> Other:			

Lifestyle Modifications counseled? Y / N

Sleep Hx obtained? Y / N

Annual Test/Secondary Cause?

- U/A Y / N
- Renal/K+ Y / N
- ECG Y / N
- FSG Y / N



Physician's clinical judgment supersedes this form

REV: 01/10/06

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5. Solve controversy with statistics
Example: ICG



Hemodynamic Status Report

Name: _____ **Age:** 60 **Height:** 5 ft 6 in
ID: _____ **Sex:** Female **Weight:** 175 lb
BSA: 1.89 m²

30 Beat Average

Page 1 of 1

Parameter	Description	Value	Low	Normal	High
HR	Heart Rate	80	58		86
SBP	Systolic Blood Pressure	166	100		140
DBP	Diastolic Blood Pressure	81	60		90
MAP	Mean Arterial Pressure	111	84		100
CI	Cardiac Index	2.4	2.5		4.2
CO	Cardiac Output	4.4	4.7		7.9
SI	Stroke Index	29	35		65
SV	Stroke Volume	55	66		123
SVRI	Systemic Vascular Res. Index	3563	1337		2483
SVR	Systemic Vascular Resistance	1895	742		1378
TFC	Thoracic Fluid Content	27.1	21.0		37.0
LCWI	Left Cardiac Work Index	3.4	3.0		5.5
LCW	Left Cardiac Work	6.4	5.4		10.0

Inside Expert's DOE Analysis

Usefulness of ICG

C
C
C

Y-hat Model		BP@Goal			Active
Factor	Name	Coeff	P(2 Tail)	Tol	
Const		0.47645	0.0000		
A	StatusCoded	-0.00136	0.7305	0.8938	X
B	AlgFollow edCoded	-0.00487	0.1671	0.9781	X
C	ICG_RightCoded	0.47597	0.0000	0.8767	X
R ²		0.8710			
Adj R ²		0.8709			
Std Error		0.1742			
F		6205.1690			
Sig F		0.0000			
F _{LOF}		2.5130			
Sig F _{LOF}		0.0398			
Source		SS	df	MS	
Regression		564.8	3	188.3	
Error		83.7	2757	0.0	
Error _{Pure}		83.4	2753	0.0	
Error _{LOF}		0.3	4	0.1	
Total		648.5	2760		

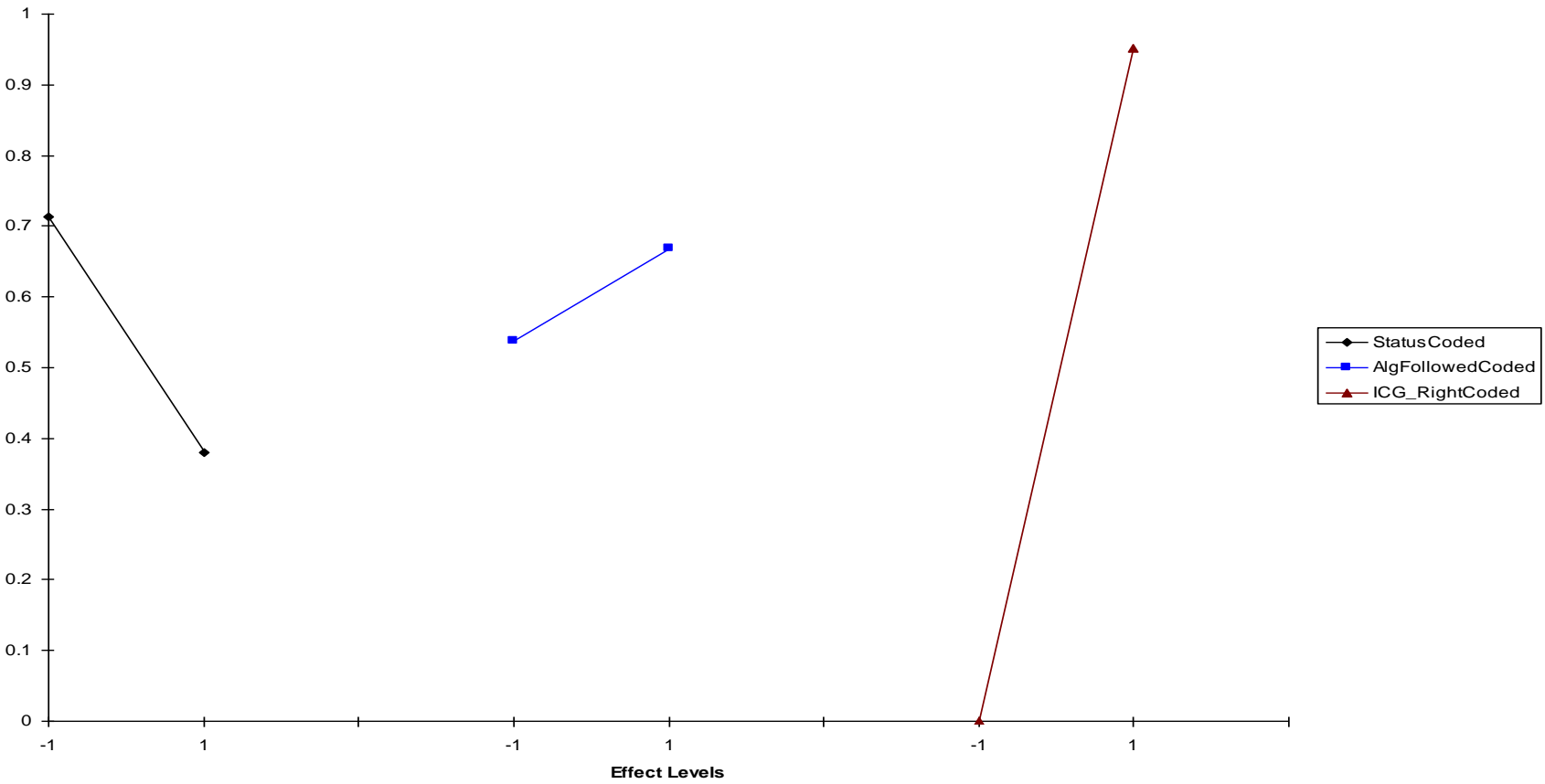
Factor	Name	Low	High	Exper
A	StatusCoded	-1	1	0
B	AlgFollow edCoded	-1	1	0
C	ICG_RightCoded	-1	1	0

Multiple Response Prediction				
	Y-hat	S-hat	99% Confidence Interval	
			Lower Bound	Upper Bound
BP@Goal	0.4765	0.1742	-0.046	0.999

Inside Expert's DOE Analysis

Usefulness of ICG

PriMed
Y bar Marginal Means
SBP & DBP Combined at BP Goal
Dec 05

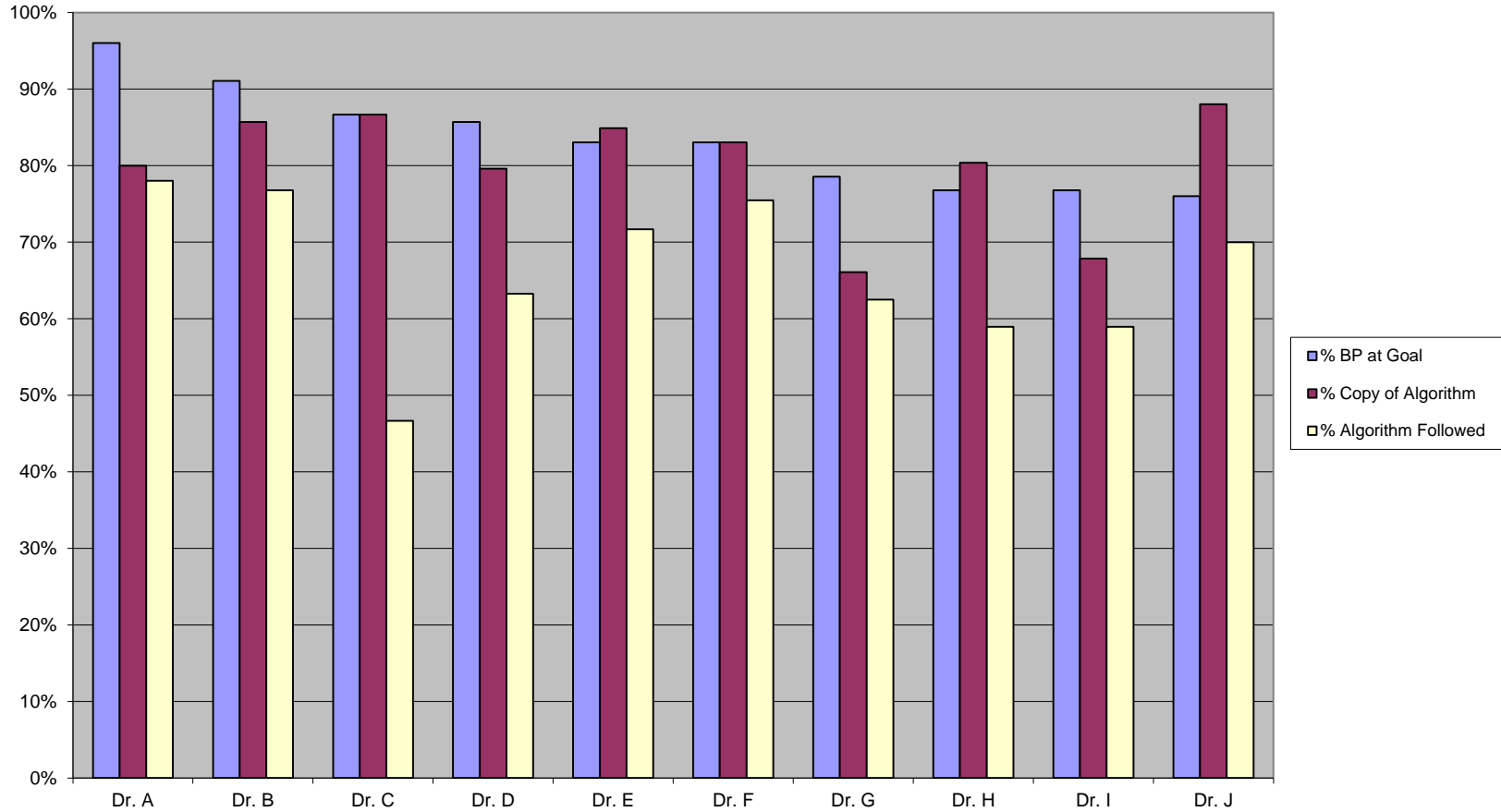


Creating the HTN Process

5. Measure use of HTN Process and outcomes
6. Unblinded publication of data
 - What do you do with docs who do not use HTN Process?

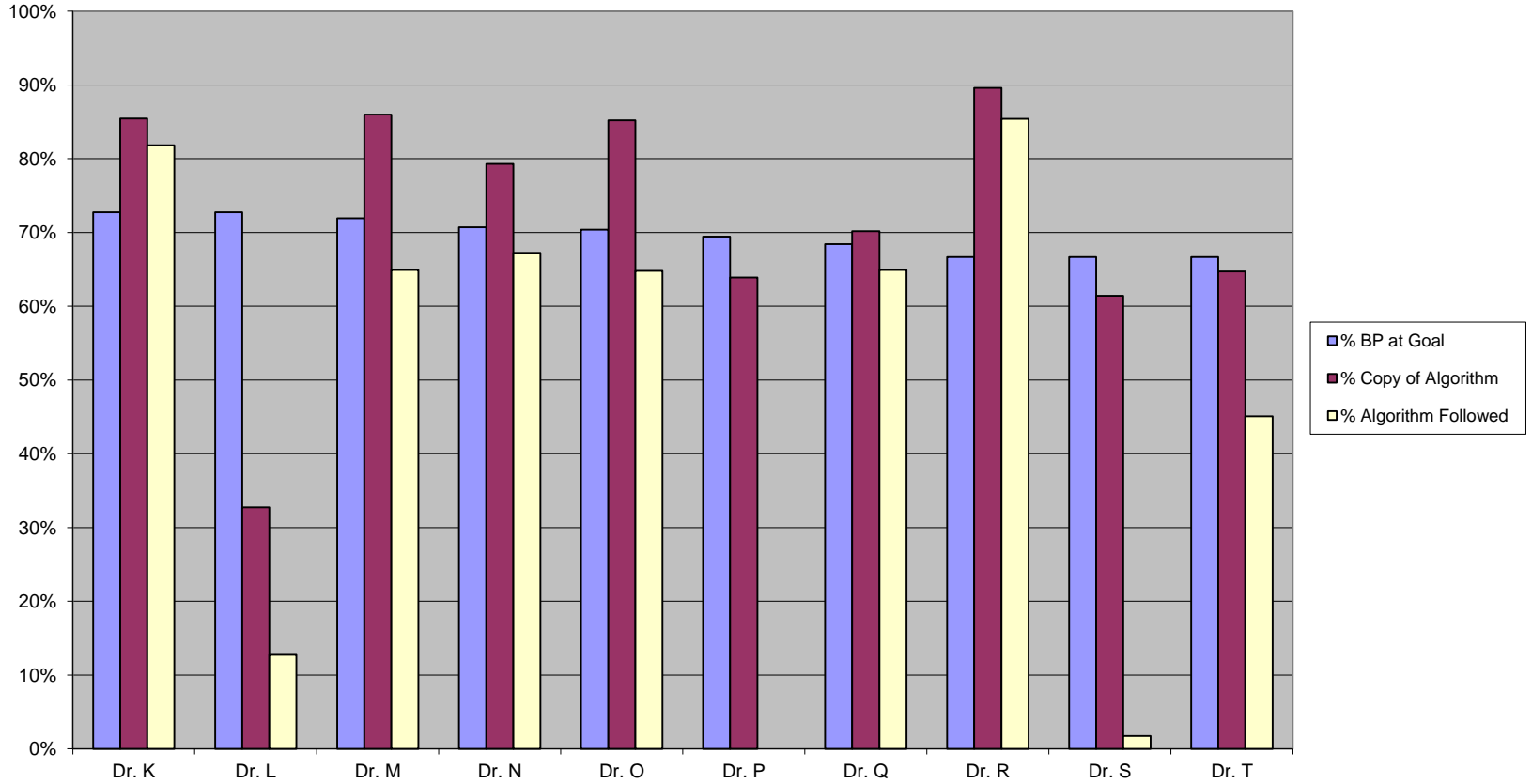
PriMed
% HTN to Goal vs. % Copy of Algorithm vs. % Algorithm Followed
August 2005

Average:
% HTN to Goal = 83%
% Algorithm Followed = 66%



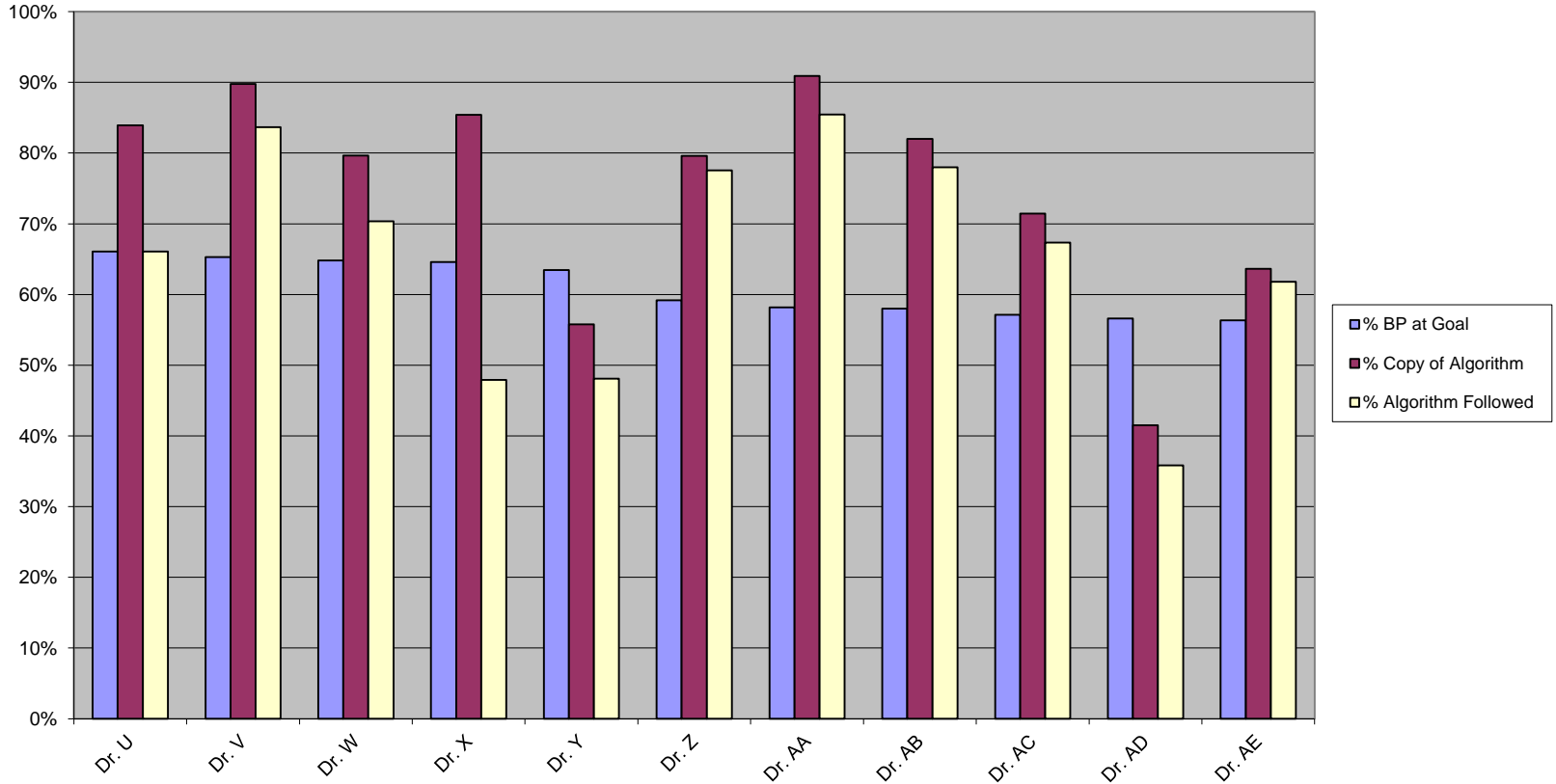
PriMed
% HTN to Goal vs. % Copy of Algorithm vs. % Algorithm Followed
August 2005

Average:
% HTN to Goal = 70%
% Algorithm Followed = 49%



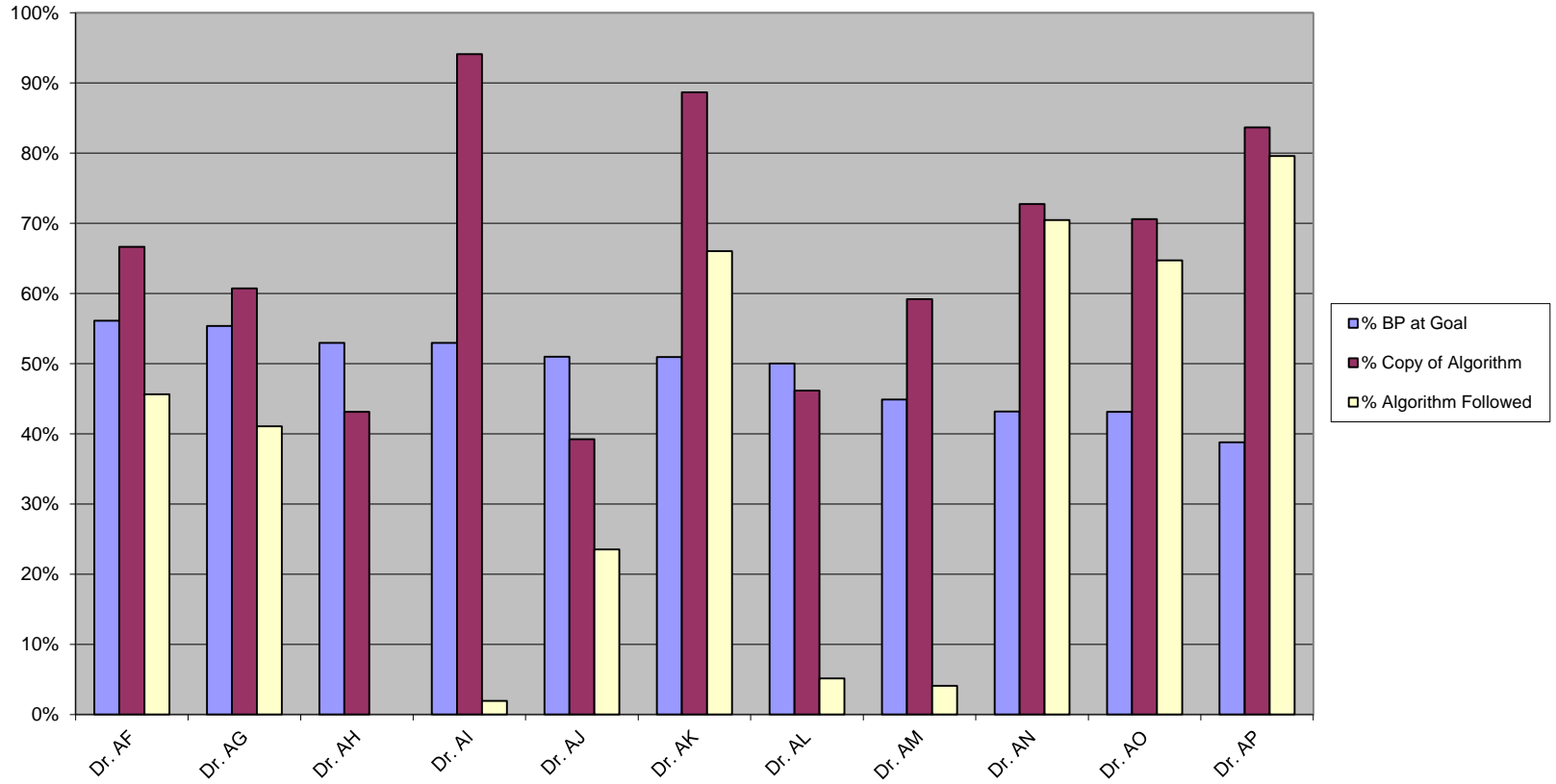
PriMed
% HTN to Goal vs. % Copy of Algorithm vs. % Algorithm Followed
August 2005

Average:
% HTN to Goal = 61%
% Algorithm Followed = 66%



PriMed
% HTN to Goal vs. % Copy of Algorithm vs. % Algorithm Followed
August 2005

Average:
% HTN to Goal=49%
% Algorithm Followed=37%



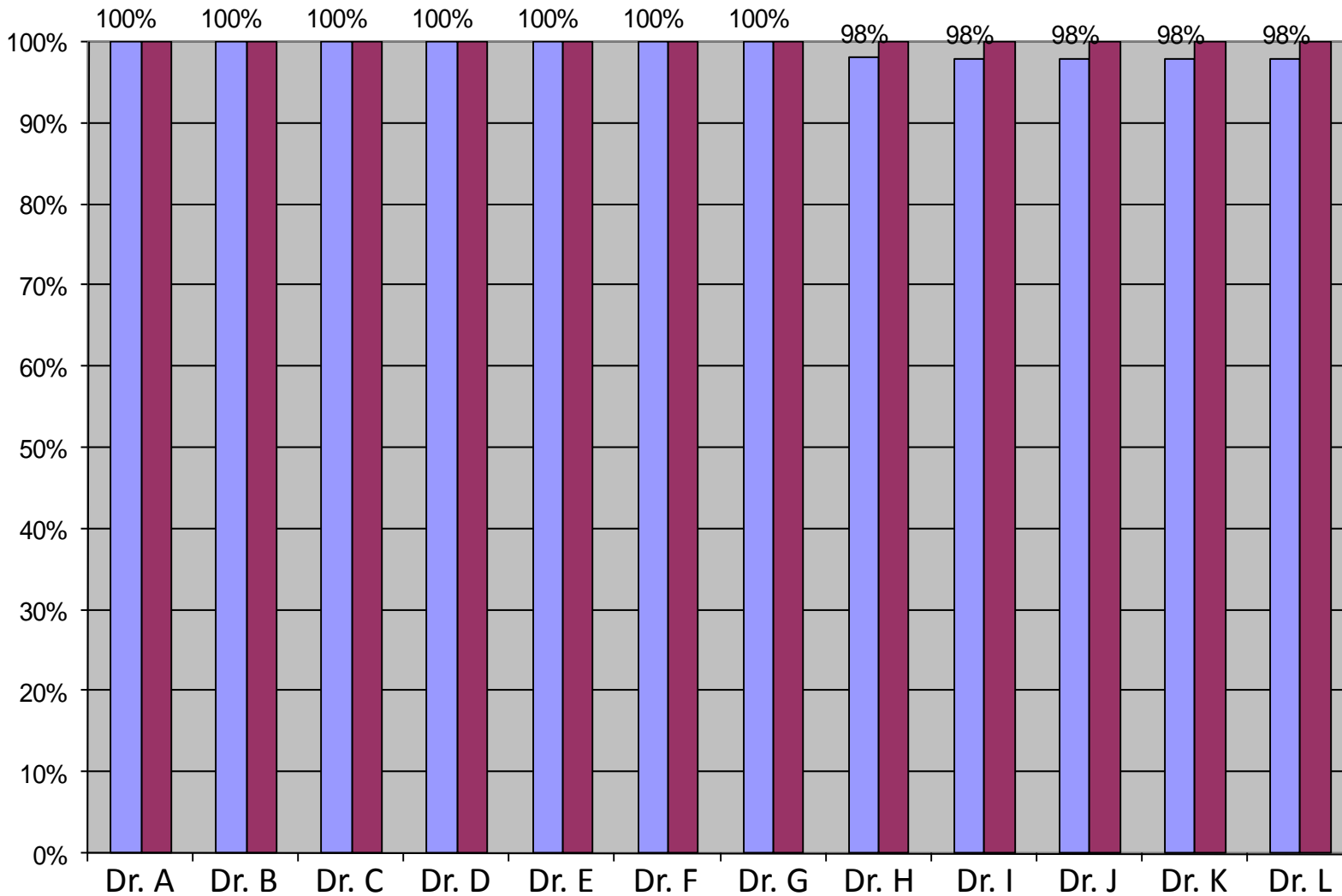
Creating the HTN Process

5. Measure: HTN Process use and outcomes
6. Publish results
 - What do you do with docs who do not use HTN Process?
7. Link HTN Process compliance to physician compensation
 - NOT based upon outcomes, based upon participation in the process
9. Constant work on “group culture”



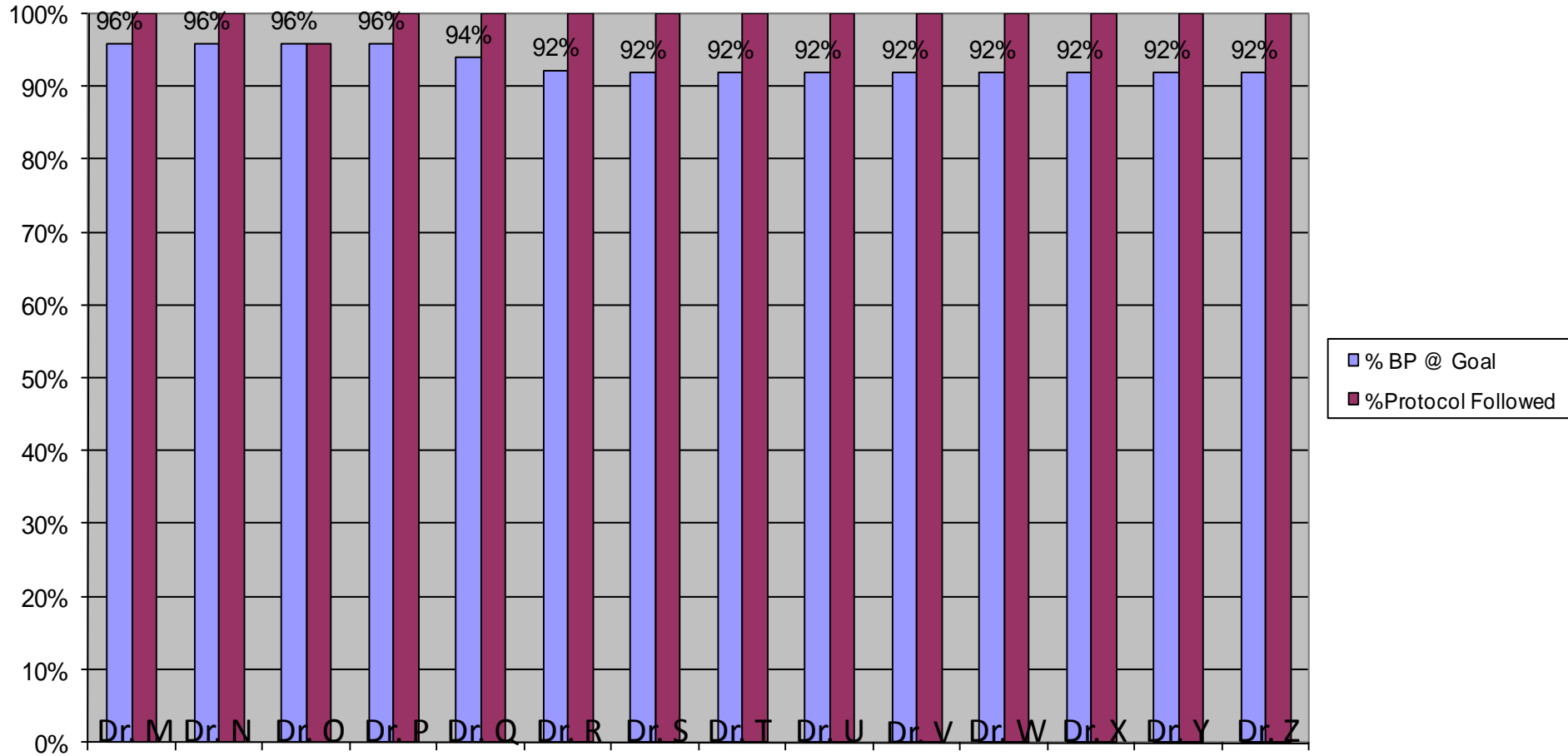
**% BP@Goal
PriMed
Quartile 1
September 2009**

Averages:
% BP@Goal = 99%
% Protocol Followed = 100%



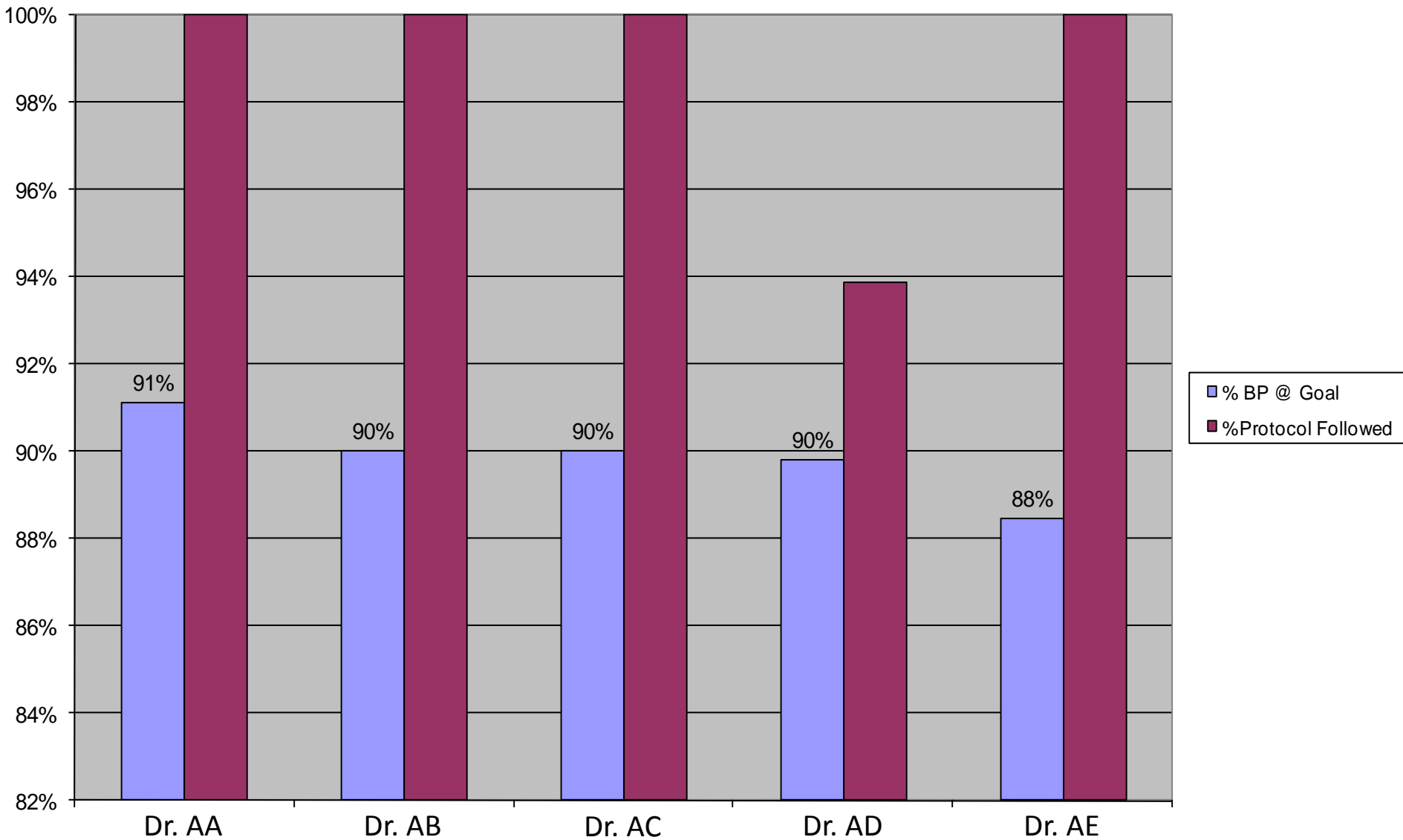
**% BP@Goal
PriMed
Quartile 2
September 2009**

Averages:
% BP@Goal = 93%
% Protocol Followed = 100%



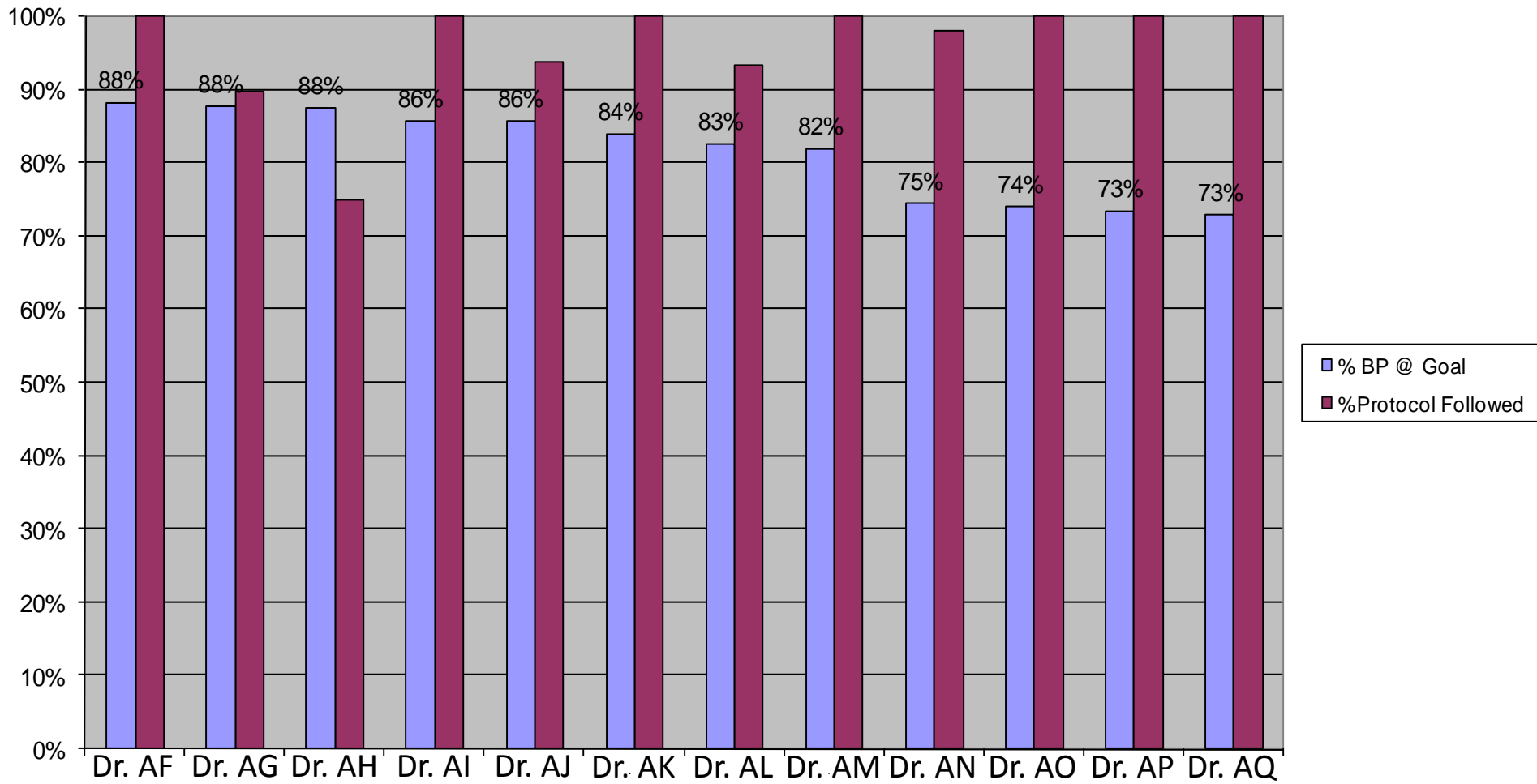
**% BP@Goal
PriMed
Quartile 3
September 2009**

Averages:
% BP@Goal = 90%
% Protocol Followed = 99%



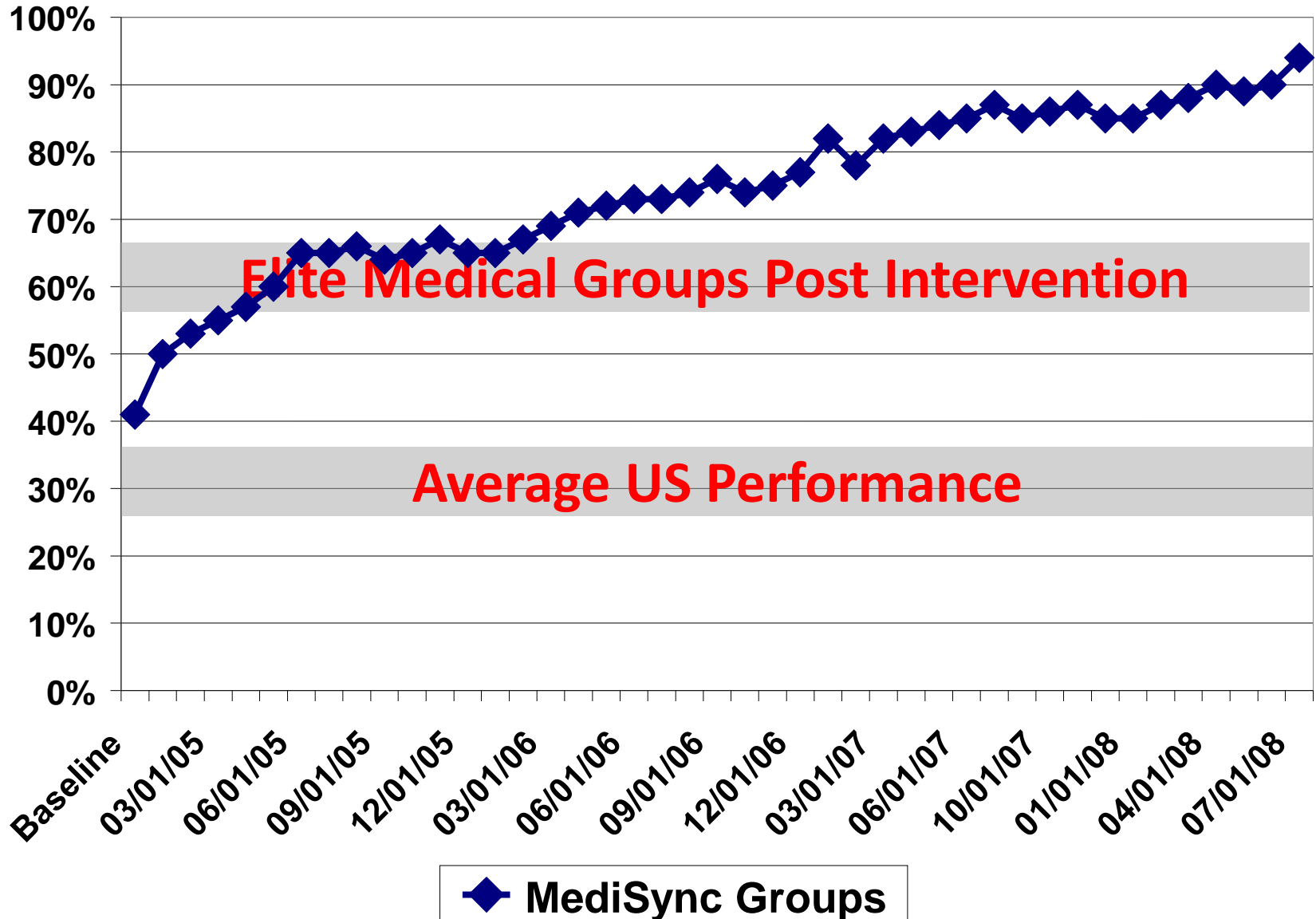
**% BP@Goal
PriMed
Quartile 4
September 2009**

Averages:
%BP@Goal = 82%
% Protocol Followed = 96%

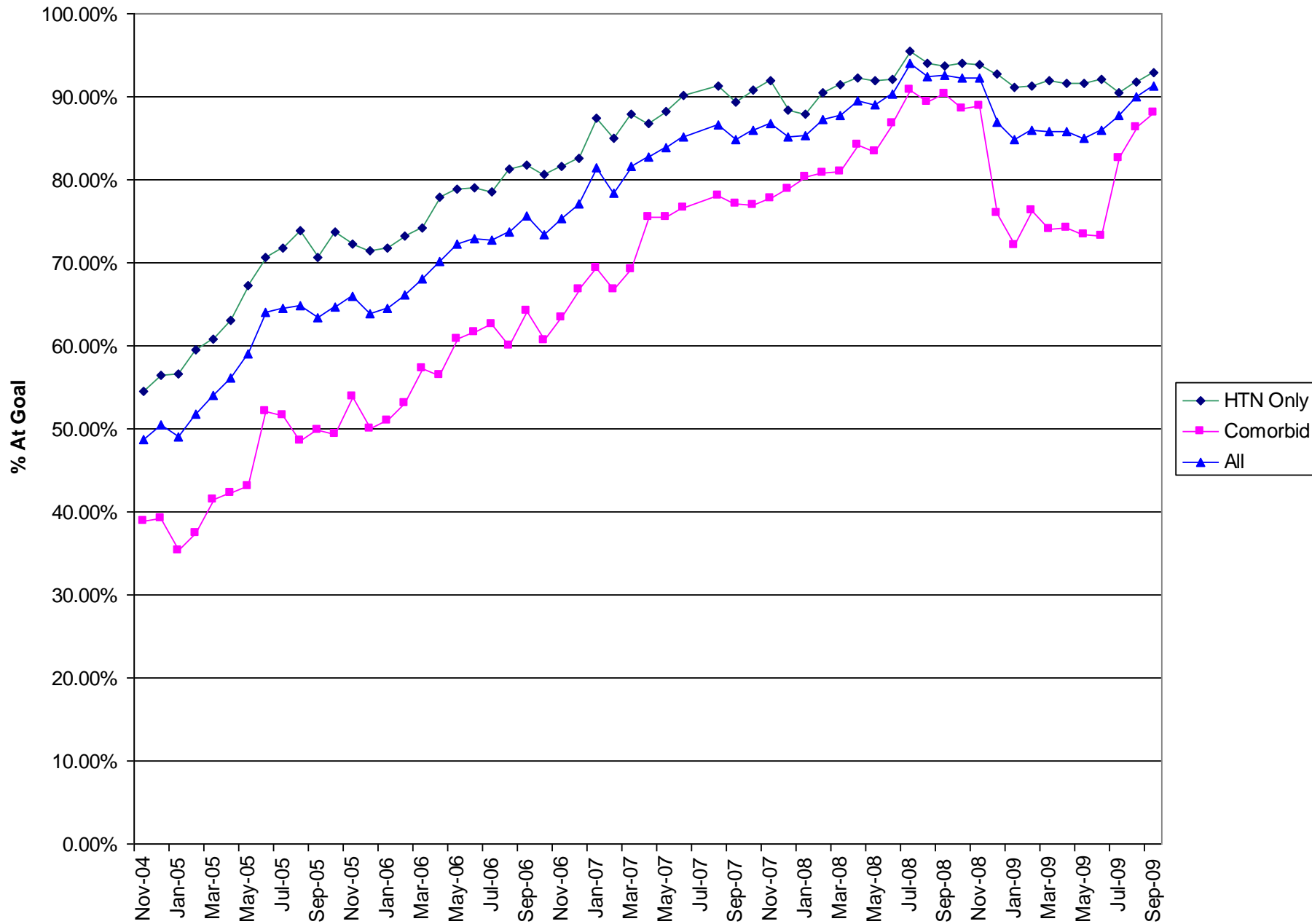


Percent of Patients Reaching JNC-7 BP Goal

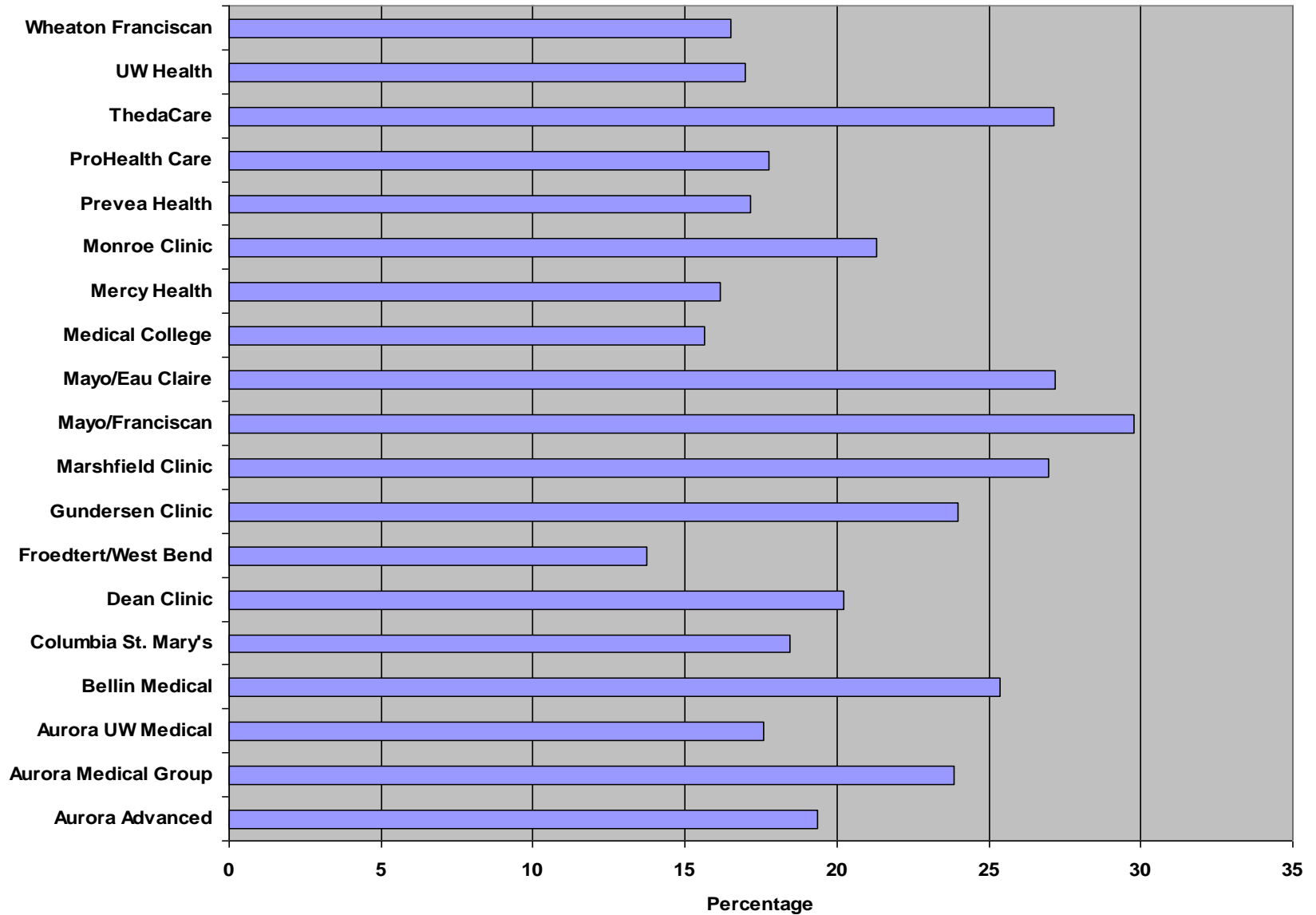
HTN Outcomes With or Without Co-Morbidities



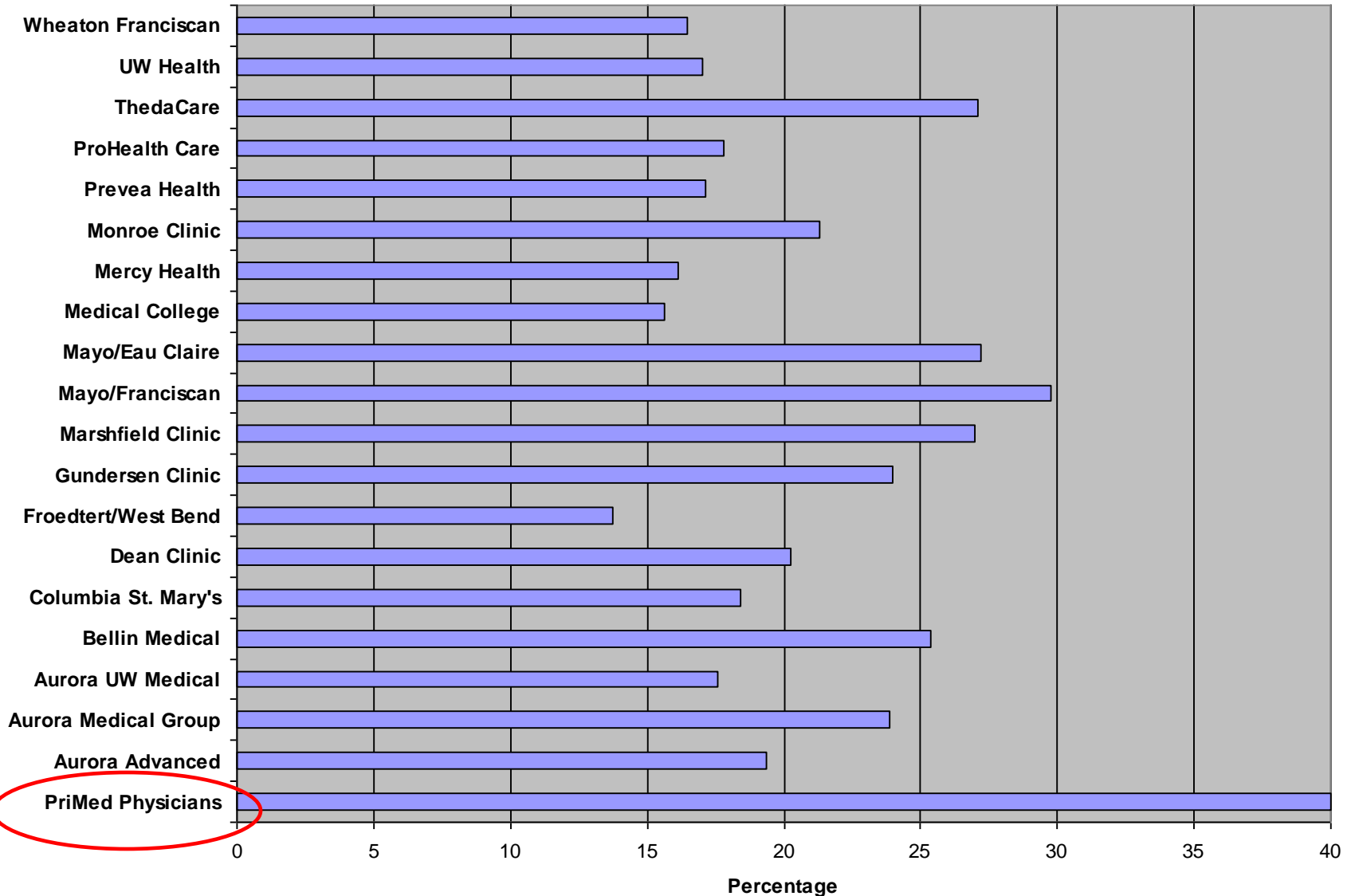
HTN vs Comorbid



2010 Diabetes Outcomes (Using Wisconsin Measures)




















2010 Diabetes Outcomes (Using Wisconsin Measures)



PriMed Physicians

2012 D5 Results by Office

Clinics		<u>[The D5]</u> <u>Optimal Care</u>	<u>(1)</u> <u>Blood Pressure</u>	<u>(2)</u> <u>Bad Cholesterol</u>	<u>(3)</u> <u>Blood Sugar</u>	<u>(4)</u> <u>Tobacco-free</u>	<u>(5)</u> <u>Daily Aspirin Use</u>
Bar Charts by Component:							
<u>PriMed Physicians</u>	[]	50%	87%	71%	78%	88%	99% 
<u>PriMed Physicians</u>	PriMed Centerville FP	72%	95%	88%	88%	90%	100% 
<u>PriMed Physicians</u>	PriMed Beavercreek FP	58%	92%	75%	87%	88%	100% 
<u>PriMed Physicians</u>	PriMed Woodbury	58%	82%	80%	88%	88%	100% 
<u>PriMed Physicians</u>	PriMed Vandalia	55%	97%	77%	77%	88%	100% 
<u>PriMed Physicians</u>	PriMed Patterson Woods	48%	92%	68%	77%	90%	100% 
<u>PriMed Physicians</u>	PriMed Springboro FP	47%	95%	67%	73%	87%	100% 
<u>PriMed Physicians</u>	PriMed Internal Medicine	33%	85%	72%	70%	90%	100% 
<u>PriMed Physicians</u>	PriMed Miamisburg	28%	80%	57%	74%	87%	96% 
<u>PriMed Physicians</u>	PriMed Wright Dunbar	23%	68%	52%	67%	87%	97% 
Overall Rate		29%	75%	56%	70%	82%	97% 

What Makes PriMed Different?

- It is NOT that:
 - Dayton patients are more eager to make lifestyle change or adhere to Rx therapies
 - PriMed doctors are better educated



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MediSync