

## SHN MedRec National Teleconference

### Engaging Physicians in Medication Reconciliation: *Positive Recognition Program Increases Compliance with Medication Reconciliation by Resident*

#### Speakers:

Nathan Neufeld, D.O. and Kayode Williams, M.D.  
The Blaustein Pain Treatment Center  
The Johns Hopkins Hospital, Baltimore, MD

Reducing Harm | Improving Healthcare | Protecting Canadians



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# Medication Communication Failures Impact EVERYONE!

## PATIENT & FAMILY



- loss of life
- prolonged disability
- temporary harm
- complicated recovery
- loss of income
- confusion about treatment plan

## HEALTHCARE SYSTEM



- prolonged recovery time
- increased cost and staff time due to rework
- avoidable readmissions and Emergency department visits
- reduced access to health services

## SOCIETY



- loss of productivity
- workplace absenteeism
- increased cost
- loss of public confidence in the healthcare system

## Medication Safety: We all have a role to play.

Safe patient care depends on accurate information. Patients benefit when clinicians work with patients, families, and their colleagues to collect and share current and comprehensive medication information. Medication reconciliation is a formal process to do this at care transitions, such as when patients enter the hospital, are transferred or go home. We all have a role to play.

Accreditation Canada, Canada Health Infoway, the Canadian Medical Association, the Canadian Nurses Association, the Canadian Pharmacists Association, the Canadian Society of Hospital Pharmacists, Patients for Patient Safety Canada, the Royal College of Physicians and Surgeons of Canada, The College of Family Physicians of Canada, Canadian Patient Safety Institute and the Institute for Safe Medication Practices Canada **actively support strategies to improve medication safety and call on all healthcare professionals to contribute to effective communication about medications at all transitions of care to improve the quality and safety of our Canadian healthcare system.**



# Dr. Nathan J. Neufeld, D.O., Clinical Pain Fellow



Dr. Neufeld is a Clinical Pain Medicine Fellow in the Johns Hopkins University School of Medicine Department of Anesthesia and Critical Care Medicine 2012-2013. He was Chief Resident in the Johns Hopkins University School of Medicine Department of Physical Medicine and Rehabilitation and graduated from Touro University Nevada College of Osteopathic Medicine with a Doctorate of Osteopathy (D.O.). Additionally, he has been awarded the 2011 Hopkins Healer Award for exemplary patient care and did a fellowship in Patient Safety and Quality Fellow at the Johns Hopkins Armstrong Institute for Patient Safety and Quality.

# Dr. Kayode A. Williams, M.D./M.B.A/FFARCSI



Dr. Williams earned his medical degree from the College of Medicine University of Lagos, Nigeria in 1984, where he also earned a Diploma in Anesthesia in 1988. Following training at renowned medical institutions such as the Manchester Royal Infirmary, Dr. Williams completed his residency in anesthesiology in England in 1995.

From 2009 to 2011 he assumed the Directorship of the Blaustein Pain Center Johns Hopkins where he has helped lead the improvements in service excellence, patient safety, operations, residents and fellow education. In collaboration with faculty at the Carey Business School Johns Hopkins helped to develop a novel approach to evaluating disparate healthcare operations such as private practice and academic pain centers with a view to enhancing operational throughput and efficiency. The approach has also been utilized to examine the impact of resident education on service delivery in the academic setting also with a view to enhancing teaching models in the setting of service delivery. Dr. Williams has been on the faculty of the Johns Hopkins Carey Business School since 2011.



# Engaging Physicians in Medication Reconciliation: Positive Recognition Program Increases Compliance with Medication Reconciliation by Resident Physicians in an Outpatient Clinic

**Nathan Neufeld, D.O. and Kayode Williams, M.D.**

**The Blaustein Pain Treatment Center**

**The Johns Hopkins Hospital, Baltimore, MD**

# Objectives

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- Change culture and engage physicians using positive reinforcement
- Successfully introduce models on increasing compliance, and
- Sustain results of change implementation

# What is your profession?



Physician



Nurse



Pharmacist



Technician



Manager



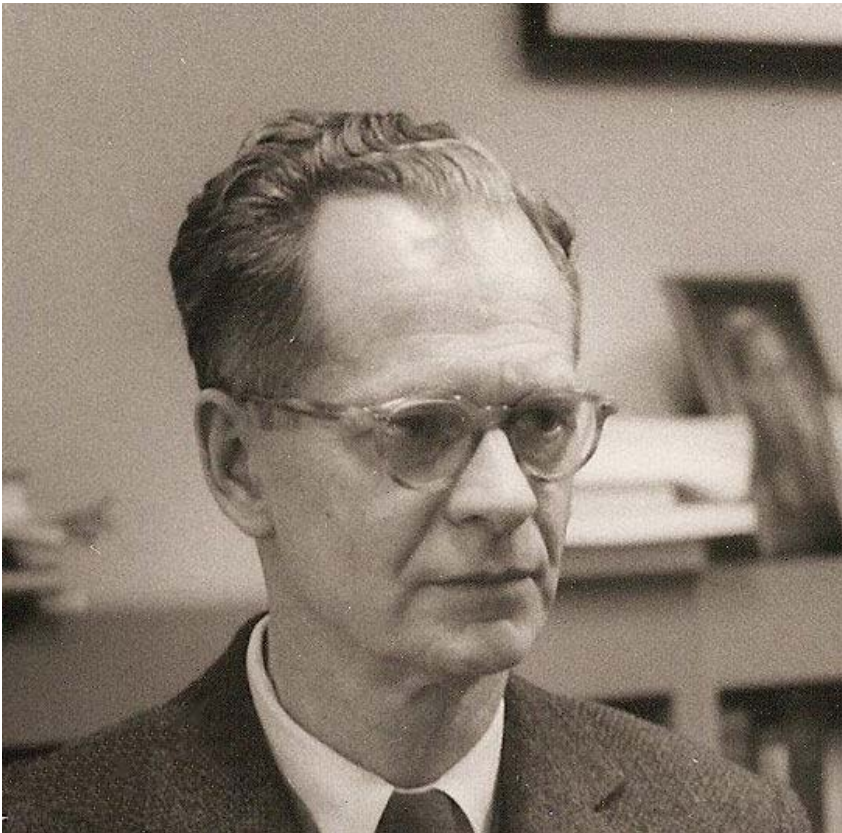
Administration



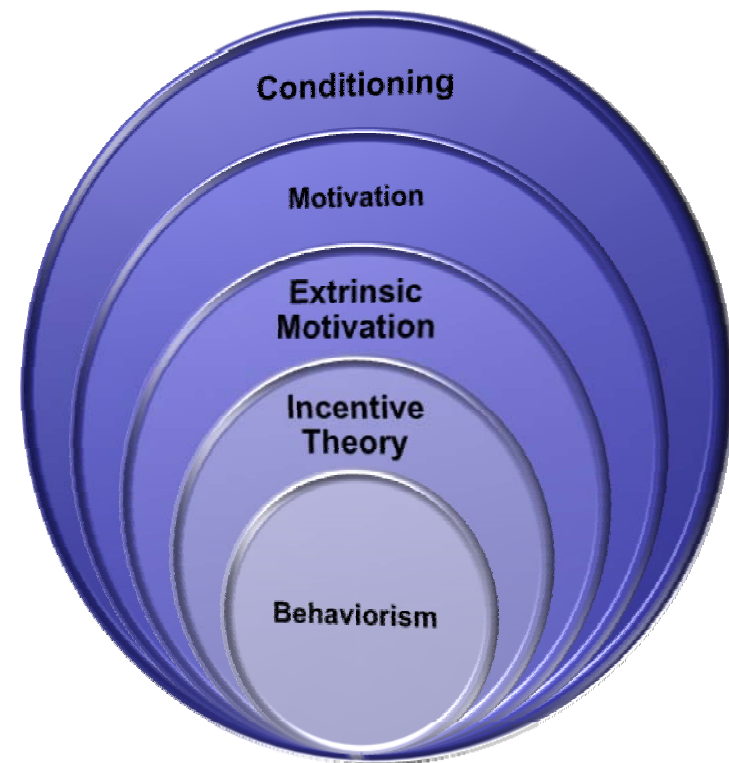
Other

# Psychology - Behaviorism

## B.F. Skinner



[http://upload.wikimedia.org/wikipedia/commons/3/3f/B.F.\\_Skinner\\_at\\_Harvard\\_circa\\_1950.jpg](http://upload.wikimedia.org/wikipedia/commons/3/3f/B.F._Skinner_at_Harvard_circa_1950.jpg)



# Types of Behavior Modification

	<b>Increased Frequency</b>	<b>Decreased Frequency</b>
<b>Presented</b>	Positive Reinforcement	Positive Punishment
<b>Taken Away</b>	Negative Reinforcement	Negative Punishment

# Positive Reinforcement

## Fred Luthans PhD



- Organizational Behavior Modification
- Applied to business models
- Performance outcomes

<http://alphaiota delta.com>

# Positive Reinforcement

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- Three ways to improve employee performance outcomes (Luthans)
  - Money
  - Performance feedback
  - Social recognition

# MEDICATION RECONCILIATION

# Necessary for Med Rec

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- Responsibility/Ownership
- Communication
- Record Capture
- Record Dissemination

# **OUR PROJECT: POSITIVE RECOGNITION PROGRAM**

Neufeld NJ, DO; Gonzales Fernandez M, M.D. Ph.D; Christo P, M.D. MBA; Williams K., M.D. MBA. "Positive Recognition Program Increases Compliance with Medication Reconciliation by Resident Physicians in an Outpatient Clinic". Am J Med Qual. 2012 May 16.

# Positive Recognition Program (PRP)

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- Our Medication Reconciliation Program addresses
  - Effort to obtain accurate information
  - Effort to rectify discrepancy from our records to what they are taking
  - Ownership of our medications
  - Responsibility of reconciliation as an action

# Clinic Med Rec Work Flow

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- **Prior to Encounter**
  - Patient writes out medications
- **Patient Encounter**
  - Patient and physician reconcile medications
- **Med List Documentation (by Physician)**
  - Individual medications are added to electronic record (PAM list)
  - Patient encounter documentation is dictated
- **Med Rec Audit (by Admin)**

# Positive Recognition Program (PRP)

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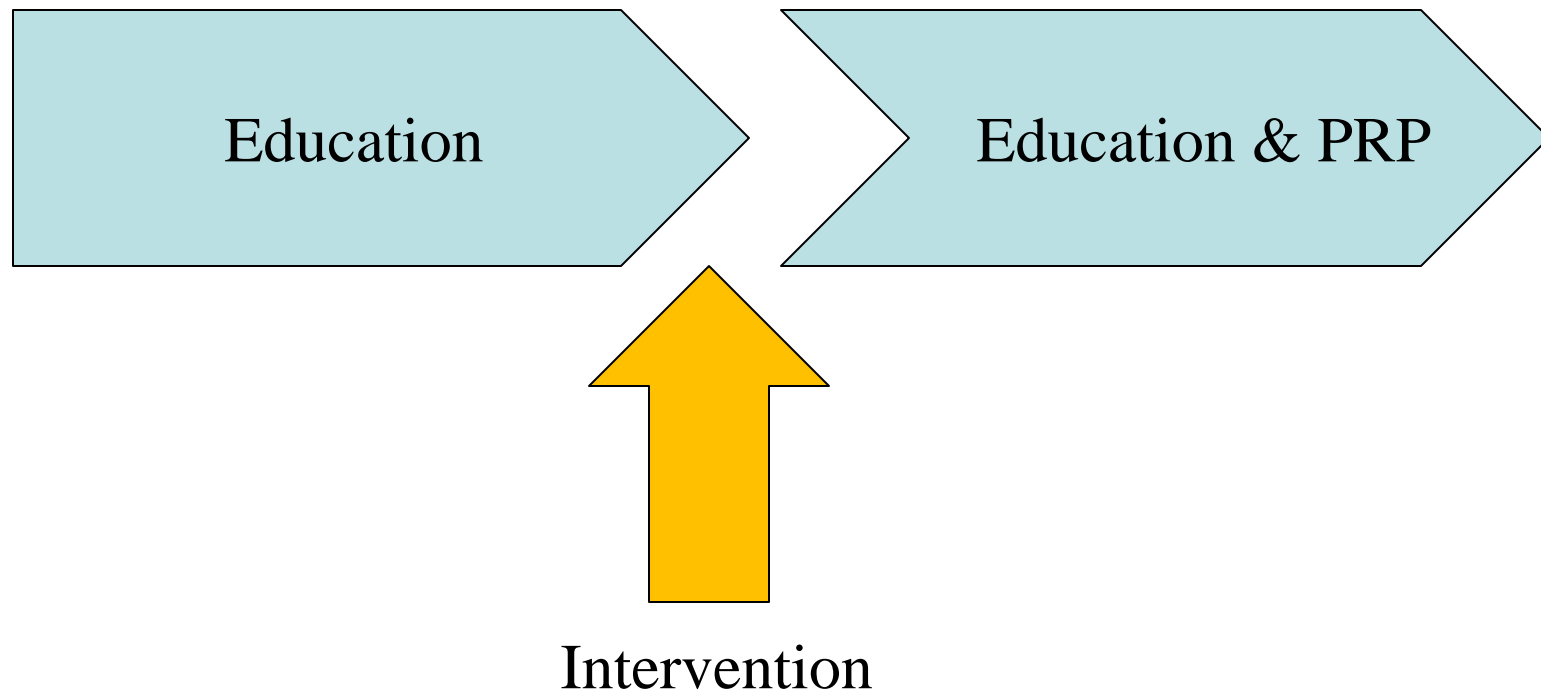
- Measurement of Chart Compliance
  - Comparison was made between dictated EPR note med list and PAM list
  - Performed by office administrator.
- Pre-Intervention Data collection 2008
  - Training occurred in a formal training program with senior faculty members.
  - Morning lectures on how to perform PAM List editing in EPR

# Positive Recognition Program (PRP)

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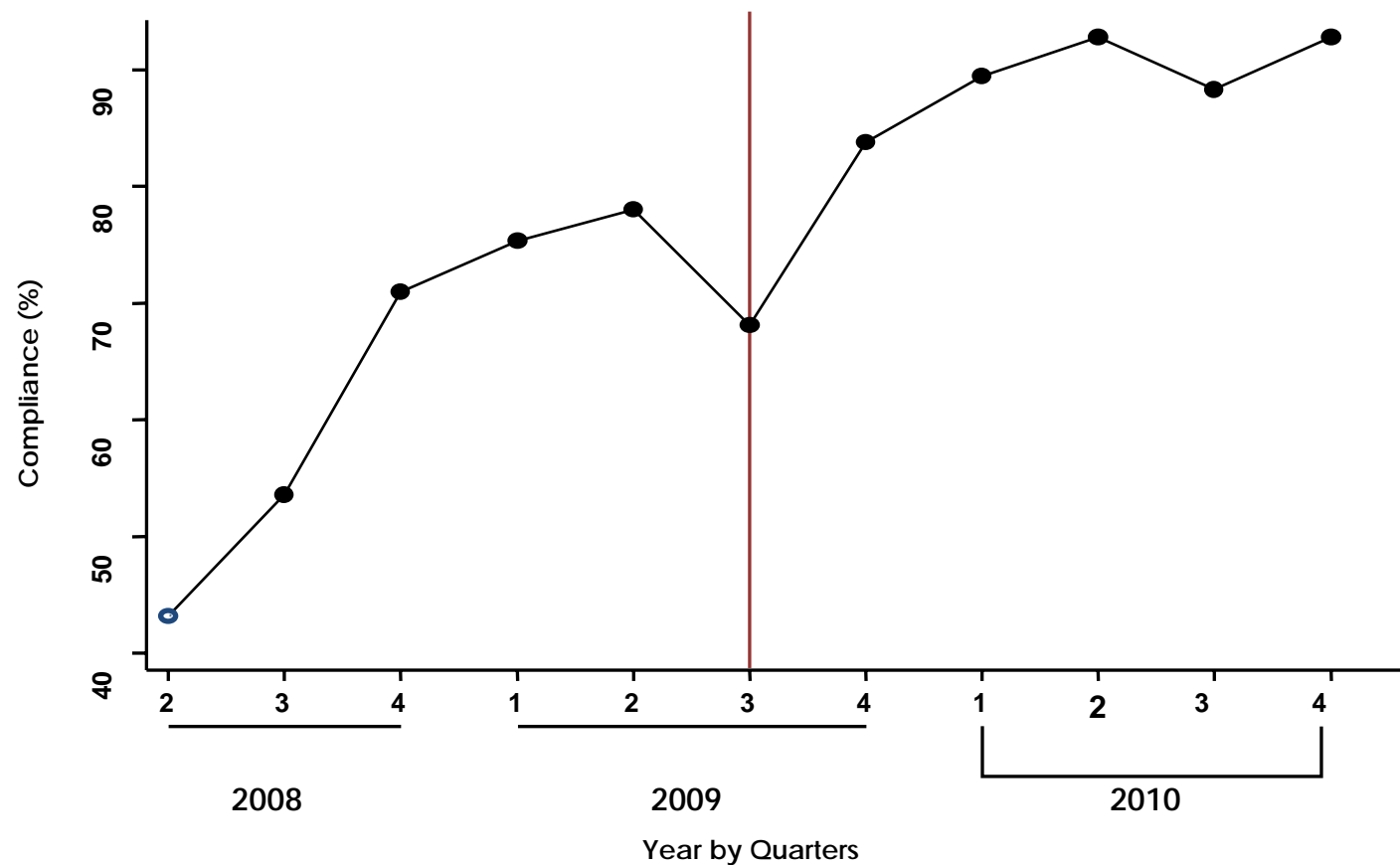
- Intervention with the PRP started October 2009
  - Each month's new residents were educated about importance and how to reconcile medications.
  - They were informed that public recognition would be given if the compliance exceeded a goal of 90% or prior months record
  - Public recognition was defined as an email to the Chair of the Department of Anesthesiology and the director the residency program. With explanation of accomplishment.

# Positive Recognition Program (PRP)



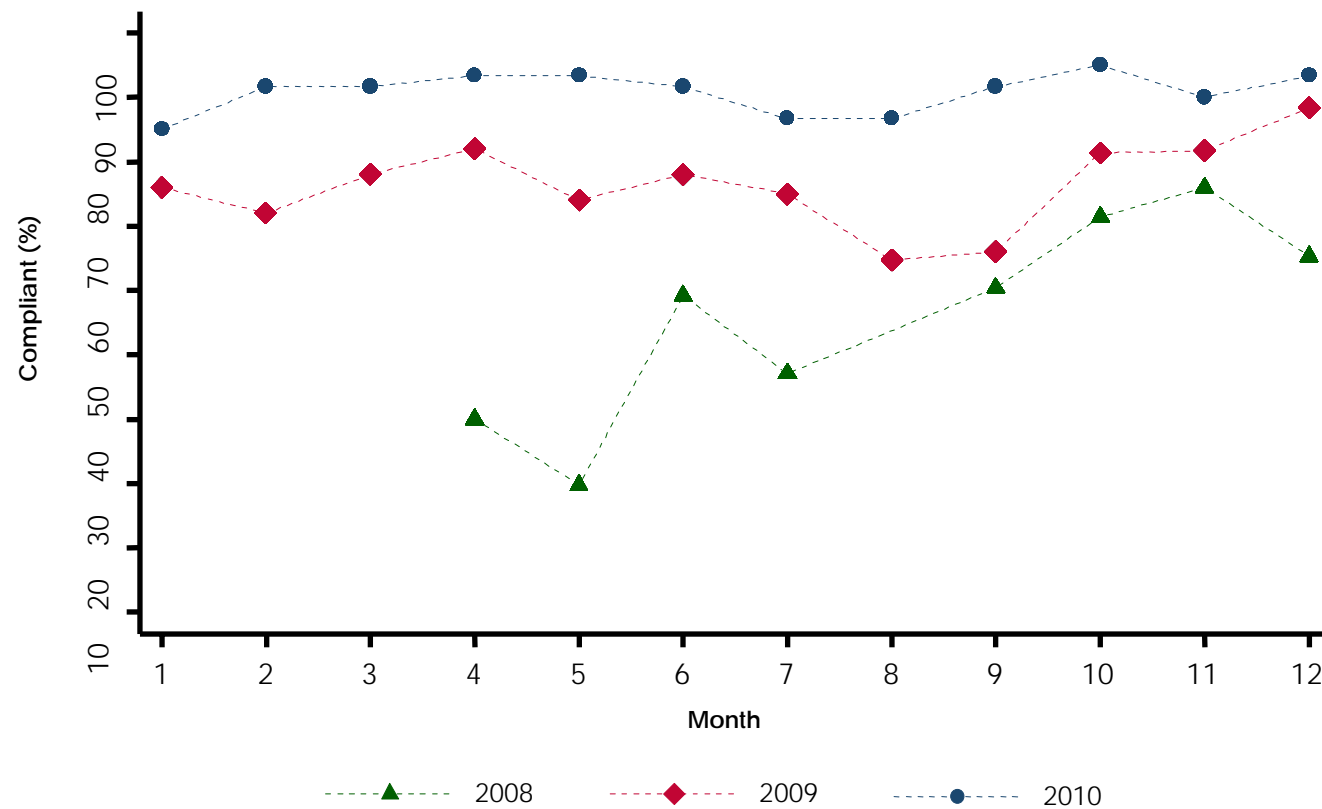
# Positive Recognition Program (PRP)

Proportion of Charts Compliant with Medication Reconciliation by Year and Quarter



# Positive Recognition Program (PRP)

Proportion of Charts Compliant with Medication Reconciliation by Year and Month



# Positive Recognition Program (PRP)

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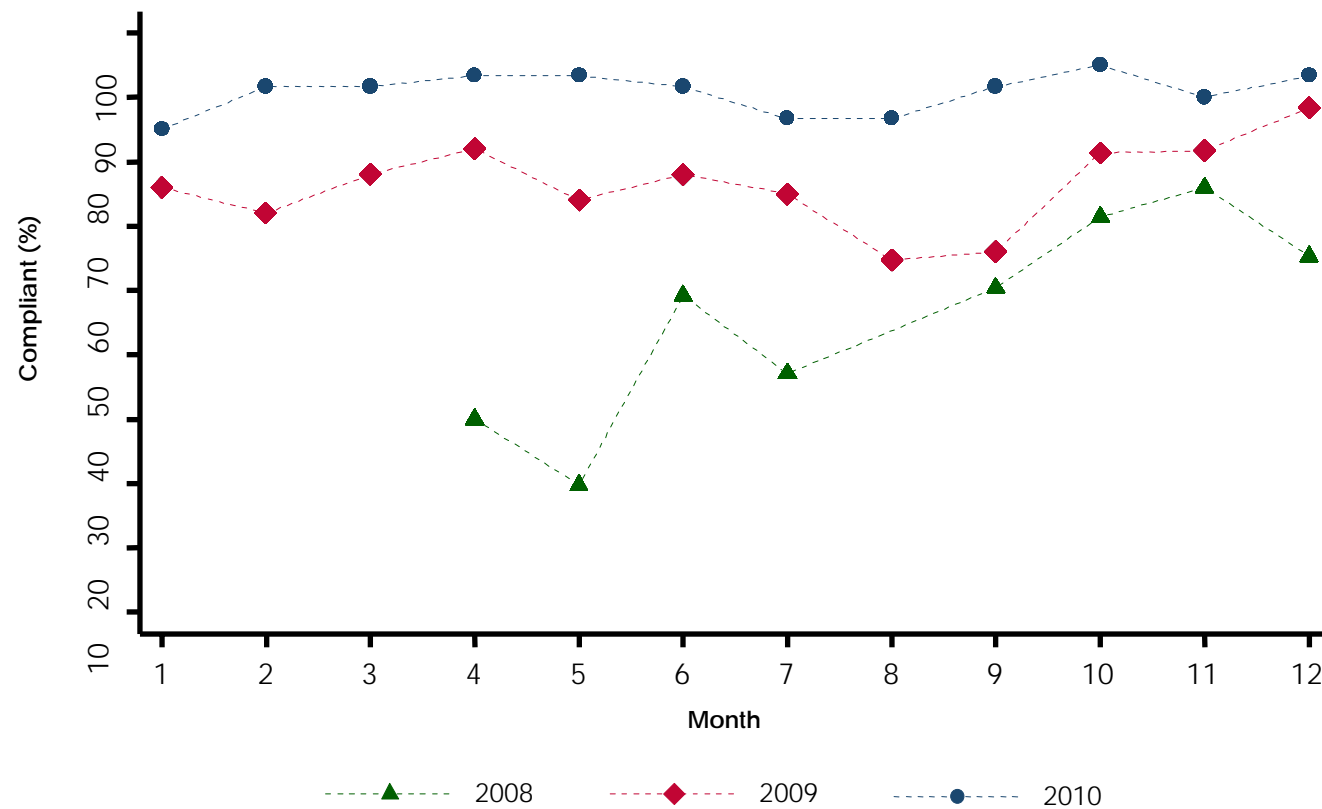
- Conclusion
  - A 4-fold increase in compliance was found when the pre- and post-intervention data were compared.
  - When logistic regression was used to adjust for adaptation of resident physicians over time and year, the odds of reconciling were 82% higher post intervention.

2011-2012

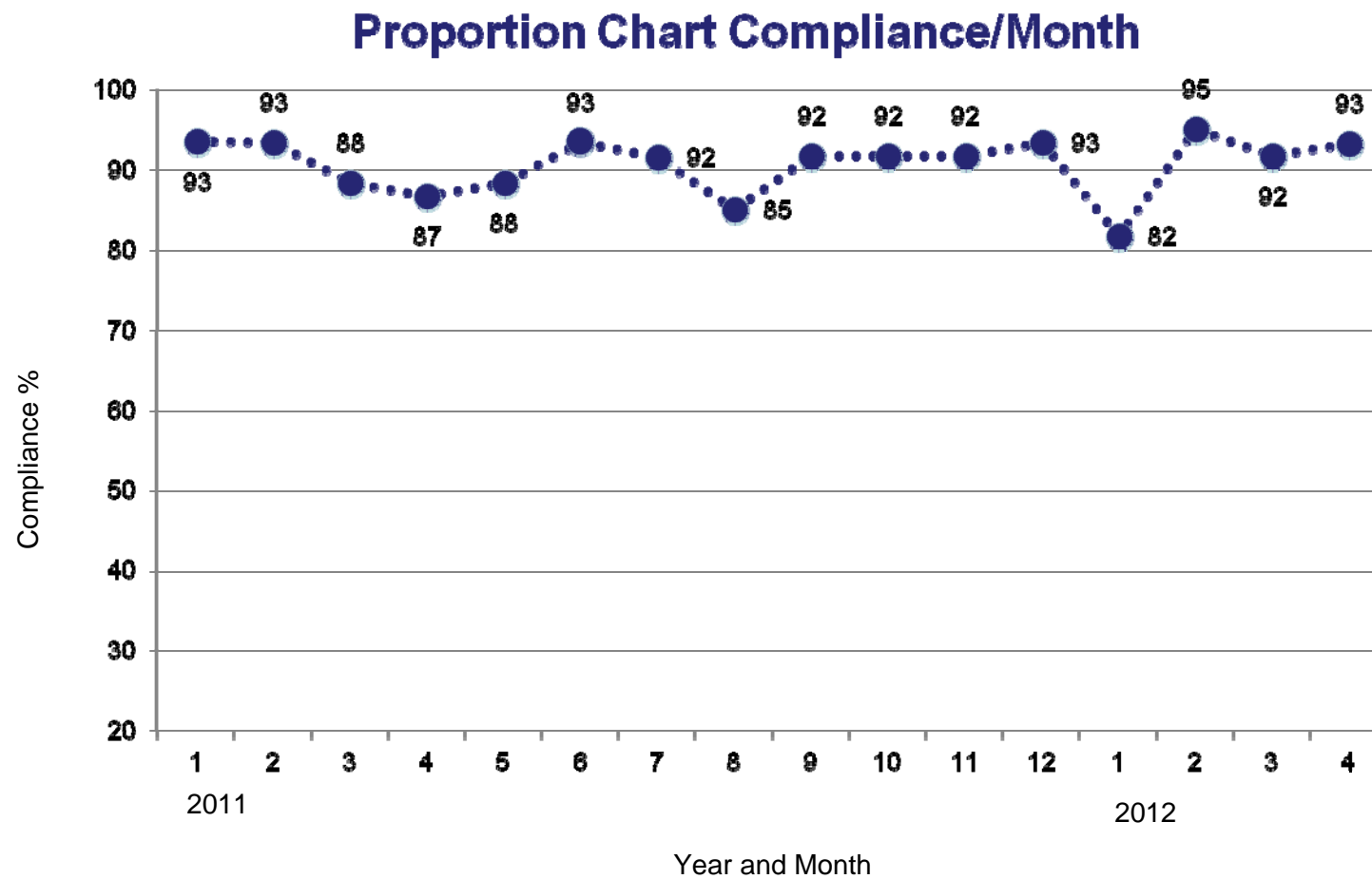
# SUSTAINABILITY

# Positive Recognition Program (PRP)

Proportion of Charts Compliant with Medication Reconciliation by Year and Month



# PRP 2011-2012



# Results

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- Average of all months Pre-Intervention  
= 65 %
- Average of all months Post-Intervention  
= 90 %
- Average of all since study  
= 91 %

# Positive Recognition Program (PRP)

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- Conclusion
  - A 4-fold increase in compliance was found when the pre- and post-intervention data were compared.
  - When logistic regression was used to adjust for adaptation of resident physicians over time and year, the odds of reconciling were 82% higher post intervention.
  - Able to maintain >90% compliance standard over 2 years of implementation

# Positive Recognition Program (PRP)

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- Future
  - Accepted for Oral presentation at the International Society for Quality in Geneva, Switzerland.
  - Systemic implementation at Johns Hopkins Hospital Clinics.

# Future Research

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- Collaboration possibilities to demonstrate transferability within other institutions
- Possibility of developing a regional network to enhance medication reconciliation across multiple institutions

# Positive Recognition of our team

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- Nathan Neufeld, DO
- Marlís González Fernández, MD, PhD
- Paul J. Christo, MD, MBA
- Kory Termine, MHSA
- Kim June SMOC
- Kayode A. Williams, MD, MBA

# Acknowledgements

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- S. N. Raja, MD, (Director)
- S. P. Cohen, MD, (Faculty)
- M. E. Erdek, MD, (Faculty)
- Susan Franklin, RN, MN (Regulatory Affairs)
- Rebecca German, PhD, (Statistical Assistance)
- Kau Korto, PA-C, (Staff)
- D. Schwengel, MD, (Residency Program Director)
- J. Ulatowski, MD, PhD, (Chairman Department of Anesthesiology and Critical Care Medicine)

# Questions?

1. About our project?
2. About how this can work for you?

# Upcoming MedRec National Webinars

1200-1300 ET

November 13, 2012: topic to be determined

January 8, 2013: topic to be determined

March 5, 2013: topic to be determined

Suggested topics include:

- Nursing and Pharmacy Roles in MedRec
- Accreditation Canada ROP Updates

# We encourage you to report medication incidents



## Practitioner Reporting

[https://www.ismp-canada.org/err\\_report.htm](https://www.ismp-canada.org/err_report.htm)



## Consumer Reporting

[www.safemedicationuse.ca/](http://www.safemedicationuse.ca/)