The Visiting Nurse Service of New York Transitional Care Collaborative

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June 8, 2010, 11:15 – 11:45

Overview

- Background on VNSNY
- Our Experience with Rehospitalization
  - Trends
  - Patient Characteristics
  - Risk Model
- Internal Initiatives to Reduce Hospitalization
- Cross Setting Initiatives
- Wrap up and Questions

Visiting Nurse Service of New York

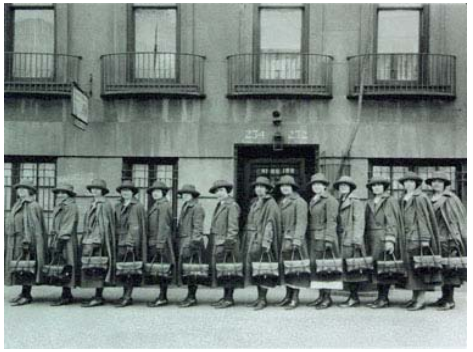
Medicare Readmissions Summit
Washington, DC

June 2010

Visiting Nurse Service of New York

- Founded in 1893 by Lillian D. Wald, VNSNY is the largest non-profit home health care agency in the U.S.
- Serves all five boroughs of NYC, plus Westchester and Nassau Counties
- Provides a range of services to an average daily census of 30,000 cases, from newborns to seniors
- 14,000 employees
- Complex patient population

The “Henry Street Family” (*c*. 1900)



Visiting nurses (date unknown)

About the NYC Environment

- 120 Hospitals; 6 Academic Medical Centers; >22,000 physicians
- High hospital utilization compared to nation
- Many residents lack a “medical home” due to high specialist penetration, driving higher us of ED and urgent care centers for primary care.

2009 State Scorecard on Health System Performance: Bottom Quartile

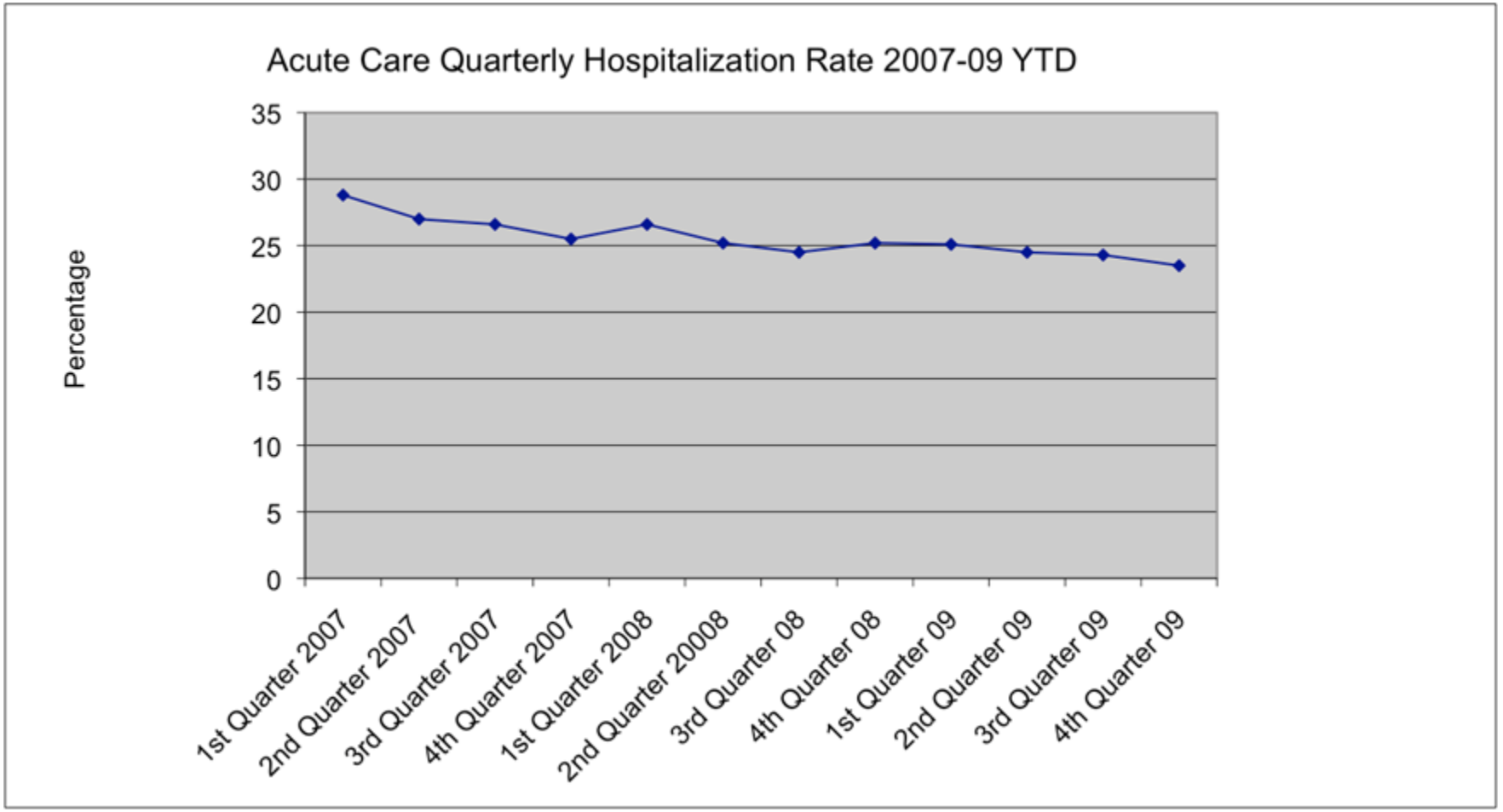
- Michigan
- **New York**
- District of Columbia
- New Jersey
- West Virginia
- Tennessee
- Illinois
- Kentucky
- Texas
- Arkansas
- Louisiana
- Oklahoma
- Mississippi

Source: Commonwealth Fund State Scorecard on Health System Performance

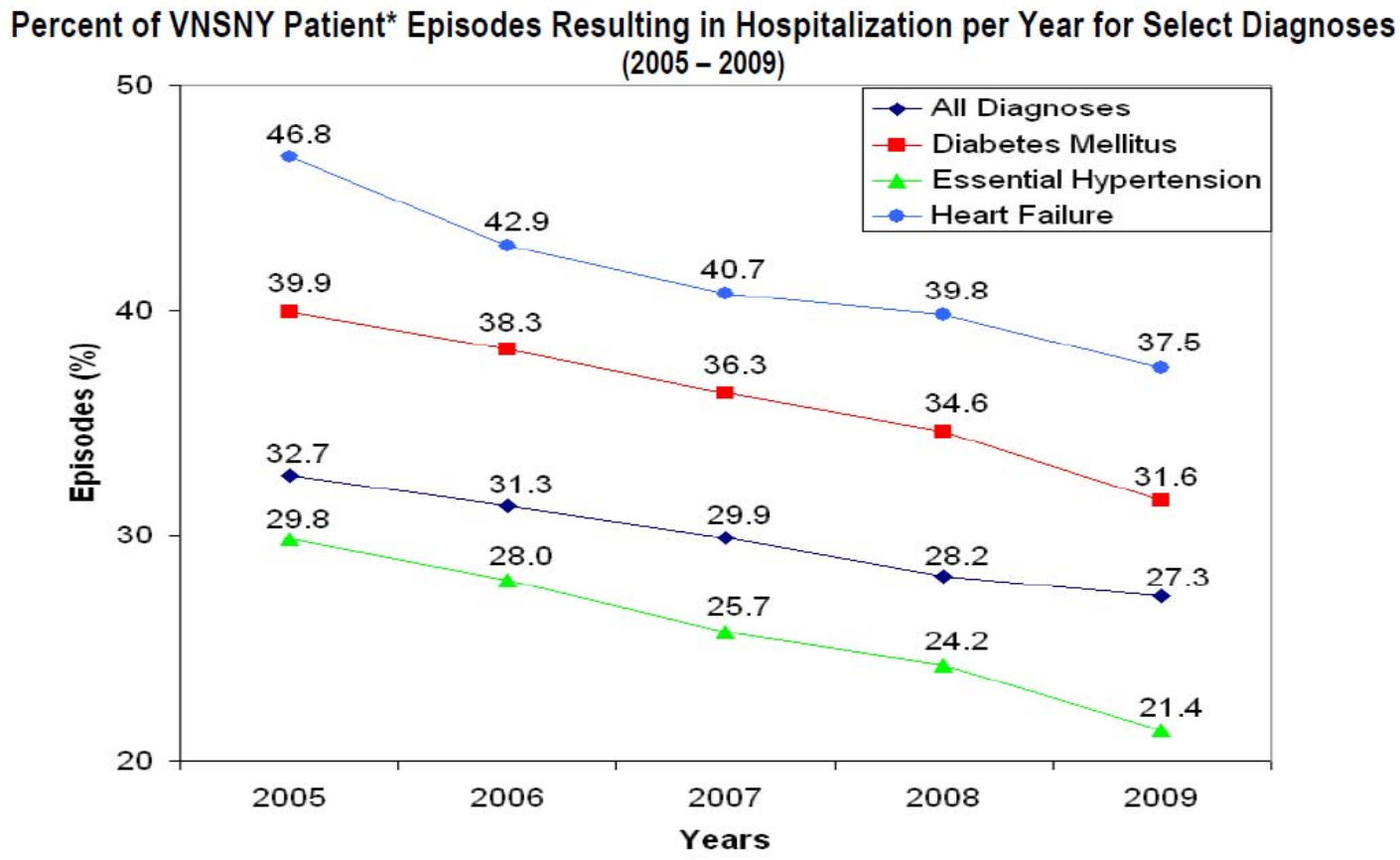
Medicare Beneficiaries

- 20% of Medicare beneficiaries rehospitalized in 30 days
- 35% of Medicare beneficiaries rehospitalized in 90 days
- *Source: SF Jencks. Re hospitalizations Medicare FFS. NEJM. Apr 2 2009 360(14)1418*

VNSNY Overall Hospitalization Rate
Acute Care Program



VNSNY Overall Hospitalization Rate by Diagnosis



* Includes all CHHA cases for which an OASIS was completed. Diagnosis taken at beginning of patient episode.

Patient Characteristics

	No Event of Hospitalization (N=36,984)	Had an Event of Hospitalization within First 60 Days (N=9,175)	P-Value
Age			
Age (mean)	70.31	71.01	0.0002
Gender			
Female (%)	64.3%	60.8%	<.0001
Race			
White (%)	50.7%	45.9%	<.0001
Hispanic (%)	20.5%	23.4%	<.0001
Payer			
Medicare FFS (%)	39.3%	40.1%	0.2007
Medicaid FFS (%)	8.8%	10.9%	<.0001
Dually Eligible (%)	19.5%	24.2%	<.0001
Medicare HMO (%)	9.0%	8.0%	0.004
Medicaid HMO (%)	5.4%	4.6%	0.0018
Private Insurance HMO (%)	15.1%	10.5%	<.0001
Other (%)	1.0%	0.3%	<.0001
No Charge (%)	1.8%	1.4%	0.0097

Patient Characteristics

	No Event of Hospitalization (N=36,984)	Had an Event of Hospitalization within First 60 Days (N=9,175)	P-Value
Education			
Higher then Graduate (%)	4.9%	4.2%	0.0024
Living Arrangement			
Alone (%)	33.9%	31.7%	0.0001
Previous Case History			
Had Previous Cases Prior 6 Months (%)	21.1%	32.2%	<.0001
# of Hospitalization Prior 6 Months	0.7741	0.9728	<.0001
Had Hospitalization Prior 30 Days (%)	72.5%	78.8%	<.0001
General Health Status			
Poor Prognosis (%)	9.0%	17.1%	<.0001
Rehab Guarded (%)	21.8%	33.2%	<.0001
Life Expectancy <=6 Months (%)	2.0%	4.2%	<.0001
Certified Visits By Physicians			
Nursing (mean)	27.49	31.66	<.0001
HHA (mean)	17.22	22.32	<.0001
Social Work (mean)	1.09	1.62	<.0001

Patient Characteristics

	No Event of Hospitalization (N=36,984)	Had an Event of Hospitalization within First 60 Days (N=9,175)	P-Value
Diabetes (%)	17.6%	22.2%	<.0001
Hypertension (%)	13.2%	10.9%	<.0001
CHF(%)	5.9%	9.7%	<.0001
Ischemic Heart Disease (%)	5.4%	5.3%	0.8138
COPD (%)	3.4%	5.0%	<.0001
Cardiac Dysrhythmias (%)	4.0%	4.5%	0.0312
HIV (%)	1.5%	2.6%	<.0001
CVA (%)	0.5%	0.5%	0.9903

Risk Model

- A Logistic regression analysis was performed to predict the likelihood of hospitalization within the first 60 days of admission

$$\ln\left(\frac{\hat{p}}{1-\hat{p}}\right) = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \ldots + \beta_0$$

- Empirically tested and clinically validated

Levels of Risk

		Probability of Hospitalization
LOW:	**Very Low:**	**[0.000, 0.043]**
	Low:	**[0.430, 0.079]**
	Low Moderate:	**[0.079, 0.124]**
MODERATE:	**Moderate:**	**[0.124, 0.211]**
	Moderate High:	**[0.211, 0.357]**
HIGH:	**High:**	**[0.357, 0.442]**
	Very High:	**[0.442, 1.000]**

Rosati, R., & Huang, L. (2007)

Risk Stratification and Potential Demand for Transitional Care

Example

Hospital X Disharges to VNSNY	Very High Risk	High Risk	Moderate to High Risk	Moderate Risk	Low to Moderate Risk	Low Risk	Very Low to Low Risk
735	**55 (7%)**	**79 (11%)**	**214 (29%)**	112 (15%)	140 (19%)	116 (16%)	19 (3%)

Risk Levels based on Predictive Model

Communicating Risk Levels to Clinicians

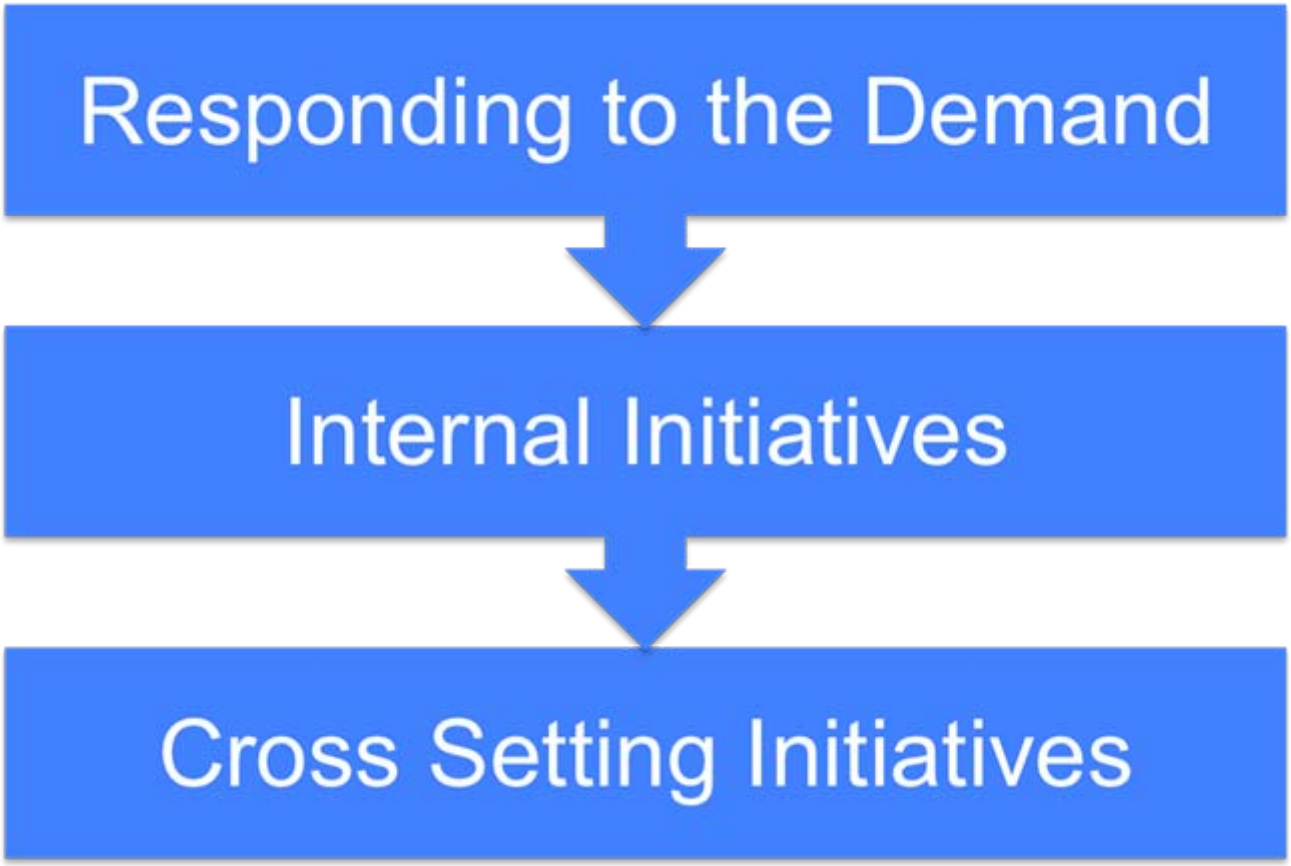
Example

From: tom.smith@vnsny.org
Sent: Friday, October 13, 2009 4:54 PM
Subject: Hospitalization Model Email Alert

The following patients were recently admitted. Please review the risk sores. Clink on the risk level to see how patient scored on individual risk factors.

Case Number	Patient Name	Admit Date	Risk Level
9999999	TC	10/10/2009	High
9999888	JM	10/10/2009	High
9999777	RN	10/10/2009	Mod-High
9999786	AD	10/10/2009	Mod-High
9999892	SM	10/10/2009	Low-Mod
9999787	CR	10/10/2009	Low-Mod
9999000	NM	10/10/2009	Low-Mod
9999120	TY	10/10/2009	Low

Transitional Care at VNSNY



What is Transitional Care?

"A set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location."

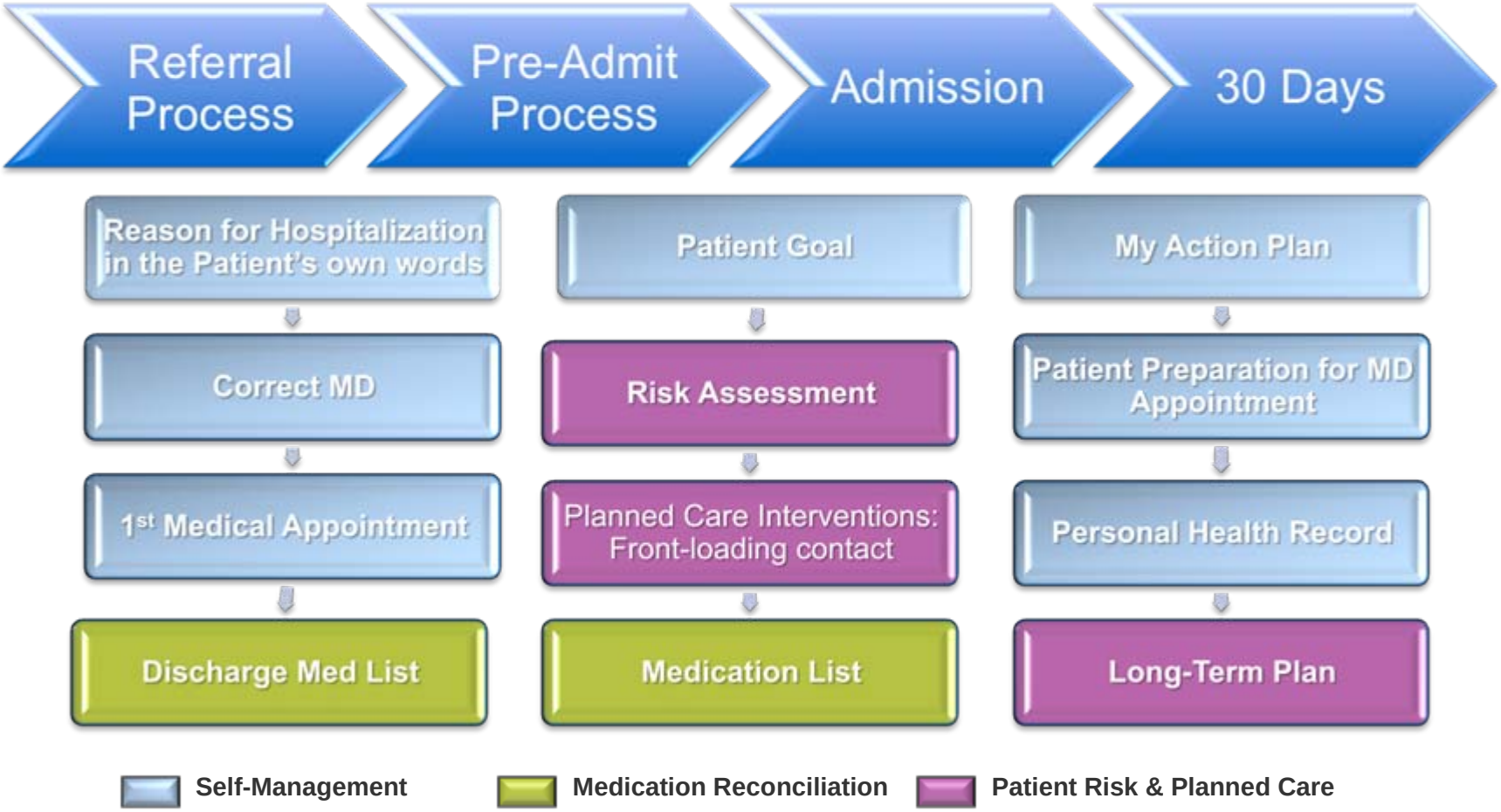
Eric Coleman, MD

Source: Coleman EA, Boult CE Improving the Quality of Transitional Care for Persons with Complex Care Needs. Journal of the American Geriatrics Society. 2003;51(4):556-557

VNSNY Transitional Care Learning Collaborative

- Developed bundle of interventions (guides and tools) to be integrated at every care level, including risk assessment and frontloading patient contacts (nurse visits and phone calls)
- Spread strategy for all staff to be trained in Transitional Care Standards, Protocols and Tools
- Established Transitional Care as ‘Core Competency’ for all staff

Moving from Best Practices to Standards and Protocols



Transitional Care Tools

- My Action Plan
- Self Management Support (goal setting)
- My Medication Record
- Telephone Care Management
- SBAR Communication

Rapid Response to Decline in the Home

'My Action Plan'

Your Team's Number is: _____

"My Action Plan"

…se or physician any time your medical condition changes. A nurse is on call 24 hours a day, including nights, weekends and holidays.

General Problems

- No bowel movement in 3 days
- New skin problems
- Change in balance, coordination, strength
- Change in mental status or behavior
- Pain medication is not effective
- Nausea or vomiting
- Running out of medication
- Fall
- Dizziness
- Diarrhea
- Fever

Urinary Problems

- Foul odor to urine
- Catheter not draining
- Back or flank pain
- Unable to urinate
- Bloody or cloudy urine
- Change in urine color
- Body aches

Signs of wound infection

- Increased redness
- More or different drainage
- Wound or area is more painful
- Temperature of 100 or more
- New odor from a wound
- Temperature is outside my target of _____.

Diabetic Problems

- Sudden weakness
- Uncontrollable thirst
- Sudden dizziness
- Increased urination
- Sweating spells
- Uncontrollable hunger
- Frequent headaches
- Itching
- Drowsiness
- Blood sugar level greater than _____ or less than _____.

Heart/Lung Problems

- Productive or frothy cough
- New congestion
- Increased shortness of breath
- Increased swelling in legs or feet
- Increased weakness
- Weight gain of 3 or more pounds in 1 day or 5 or more pounds in one week. My current weight is _____.
- Blood pressure above my target blood pressure of _____.
- Heart rate is outside my target heart range of _____.
- Oxygen saturation level is outside target of _____.

If you take Coumadin

- Bleeding from nose, gums, rectum
- Bruising
- Tarry stools
- Falls

Call 911 if you (have):

- Fall and are bleeding.
- Fall and have a broken bone.
- Severe or prolonged bleeding.
- Severe or prolonged pain.
- Are unable to wake the patient.
- New onset of slurred speech.
- Sudden weakness in arms or legs.
- Chest pain that medication does not help.
- Increased difficulty breathing not relieved by rest or medications.

Cross Setting Transitional Care

VNSNY & Hospital Partner Initiatives		
Initiative	***Partner***	***Focus***
Heart Failure Transitions Program.	**NY Hospital Queens, Bellevue and New York University Medical Center.**	**Reduce avoidable hospitalizations among patients with Heart Failure within 30 days.**
E.R. Transitions Program.	**Mount Sinai Hospital, New York Presbyterian Hospital.**	**Avert potential admissions or, if admitted, then flag patient for referral to home care and early discharge.**
Transitional Care Nurse Practitioner	**Mount Sinai Hospital**	**NP integrates care across continuum and serves as transitional PCP until 1st MD appointment.**
UHF Transitional Care Collaborative	**Maimonides / Lutheran, NYU, Beth Israel Hospitals.**	**Improve caregiver / patient experience during in care during transitions.**

Highlight – The VNSNY/ Mount Sinai Transitional Care NP Initiative

Visiting Nurse Service of New York
Hospitalization Rate : 29.8%

↓

Manhattan Region Home Care
Hospitalization Rate : 31.0%

↓

Mt Sinai Medical Center
High Referral and
Hospitalization Rate 30.6%

→

Teams 21 and 06 (East Harlem)
Hospitalization Rate : 35.5%

Target Population

Mt Sinai Hospital Discharges followed by Internal Medicine (IMA)
(avg monthly census – 120)

Referred to 2 VNSNY Teams

Implementation Phases

- Phase One : NP Role as Cross Setting Integrator & Transitions Consultant
- Phase Two : VNSNY Teams Implement Transitional Care Standards & Add a Home Care Coordinator in ED
- Phase Three : NP as Cross Setting Integrator & Transitional Primary Care Provider

Phase I – 2004 to 2007

	Transitional Care Description	Insights
Phase I Planning (2004 Planning)	Tested model using home care NP as "integrator". Focused on rapid response to condition decline & improving PCP communication.	Regular cross setting improvement team meetings were held and were critical (Hosp, IMA, VNSNY)
Testing 2005-07	Developed risk assessment at start of home care (predictive model).	Results not sustainable without coordinated interventions across all settings.
	Reduced 30 day rehospitalizations of IMA patients on VNSNY teams (avg. monthly census 125)	Data tracking – not sustainable. Need to share data sources.
	Reduced time to 1st medical appointment post discharge to within 2 weeks (vs. 30 days).	ED may provide higher leverage for earlier assessment and intervention.

Transitional Care NP Role

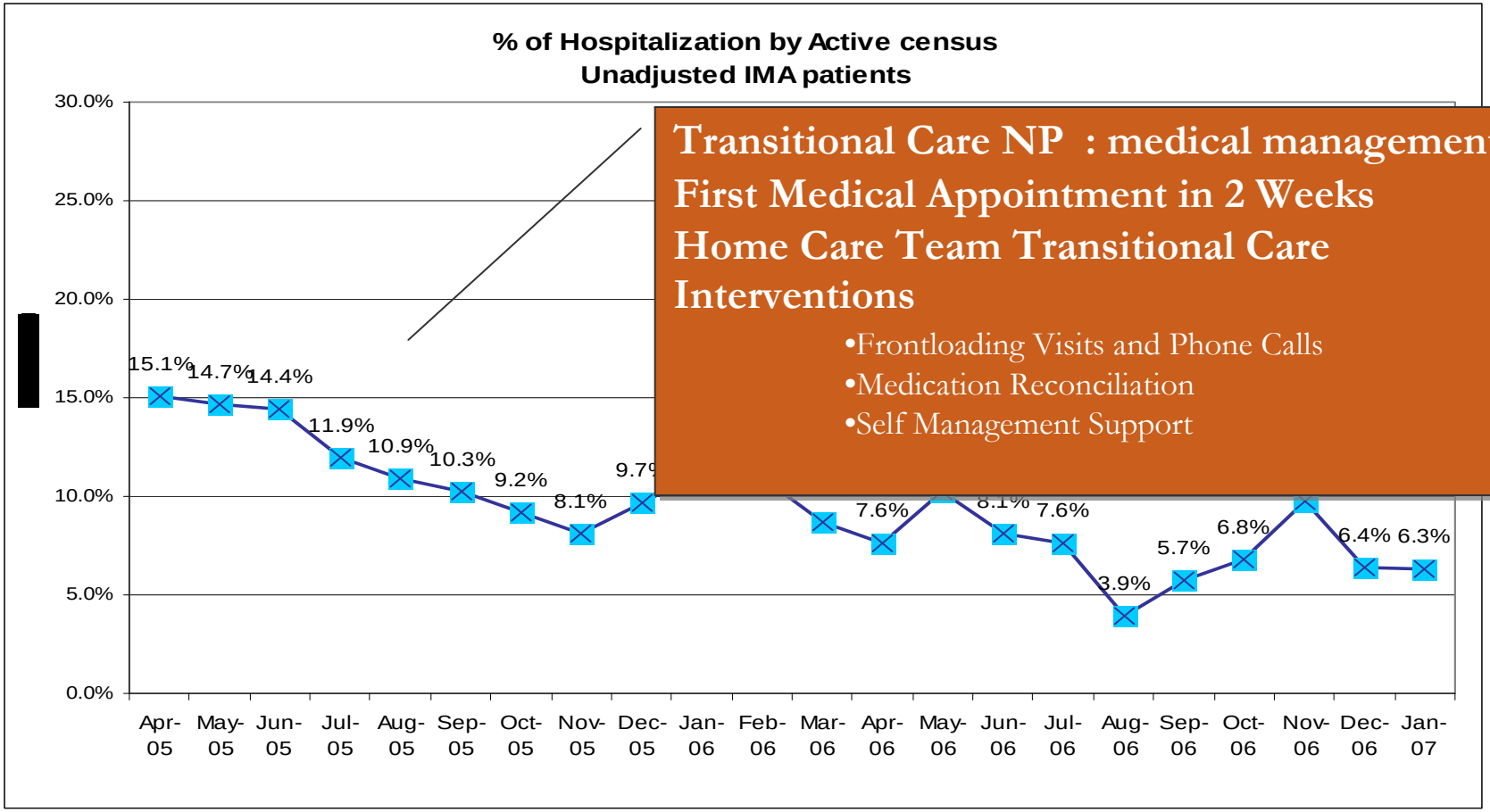
Phase One:

52 high risk patient home visits by NP , discharged from Mt Sinai Hospital followed by IMA physician

- Diabetes primary diagnosis. Average age 68
- **39 resulted in same day NP med and/or treatment change . (Avg. # of meds 8 – 15)**
- **20 patients – wrong MD identified**
- 27 treatment plans signed by PCP within 30 days

Reduce Hospitalizations

Mt Sinai Internal Medicine and VSNNY



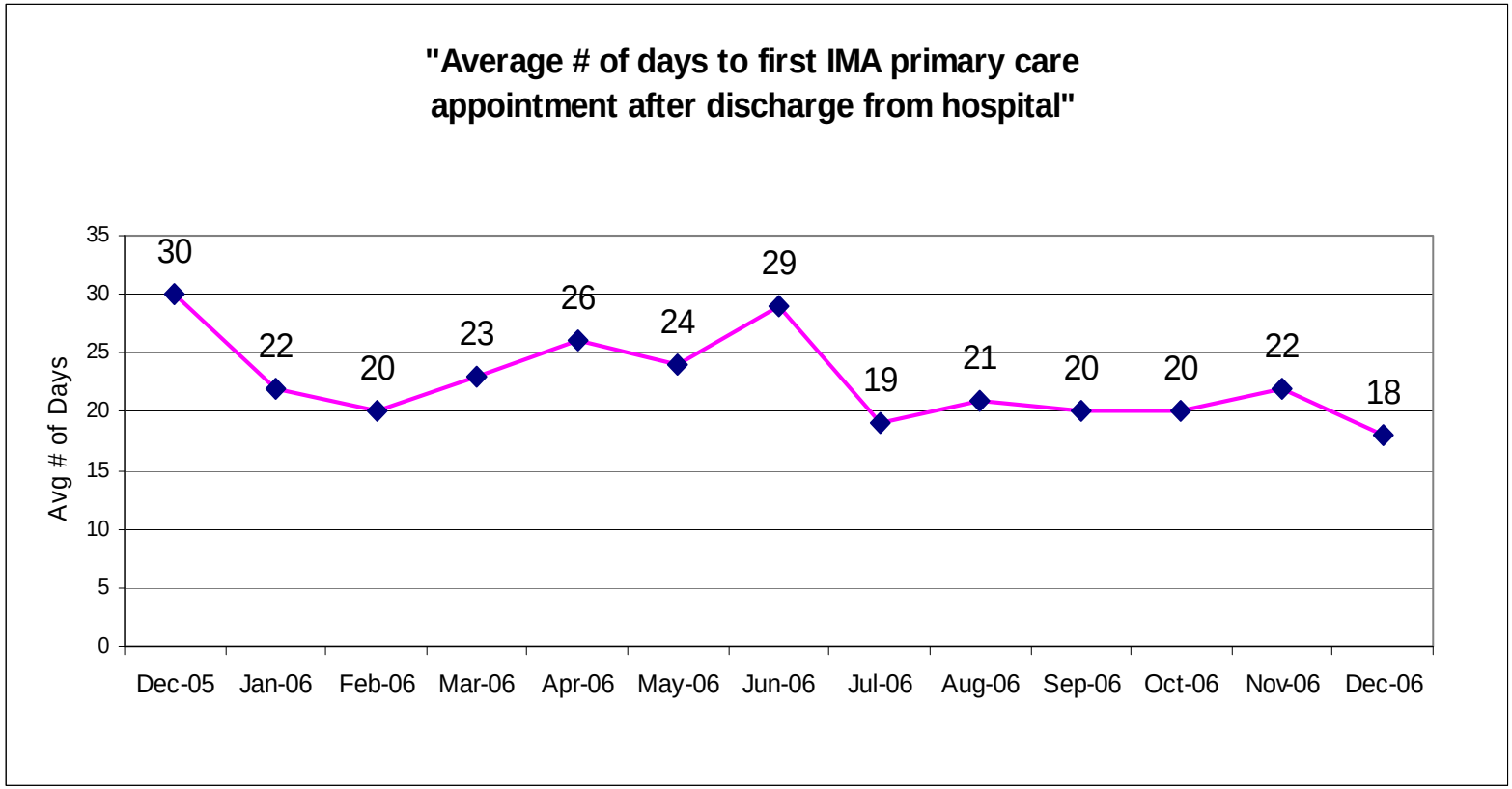
Transitional Care NP : medical management

First Medical Appointment in 2 Weeks

Home Care Team Transitional Care Interventions

- Frontloading Visits and Phone Calls
- Medication Reconciliation
- Self Management Support

Number of Days to 1st Medical Appointment Post D/C



Phase II - 2008

	Transitional Care Description	Insights
Phase II (2008)	Home Care Coordinator (RN) in ED –12% of patients evaluated were discharged home. Embedded screening tool in EHR. Developed home care team competencies in transitional care. 2% reduction in Mt Sinai hospitalization rate for home care patients.	Patients not eligible for home care could benefit from brief NP transitional care. Data tracking – not sustainable. Need to share data sources. NP skills could add value to ED interventions. ED staff supportive of model. Improves quality of care.

Phase III - Current

- NP provides transitional primary care as enhancement to 30-90 day home care episode for ‘at risk’ patients from the time of discharge until the first follow up appointment with primary care provider.

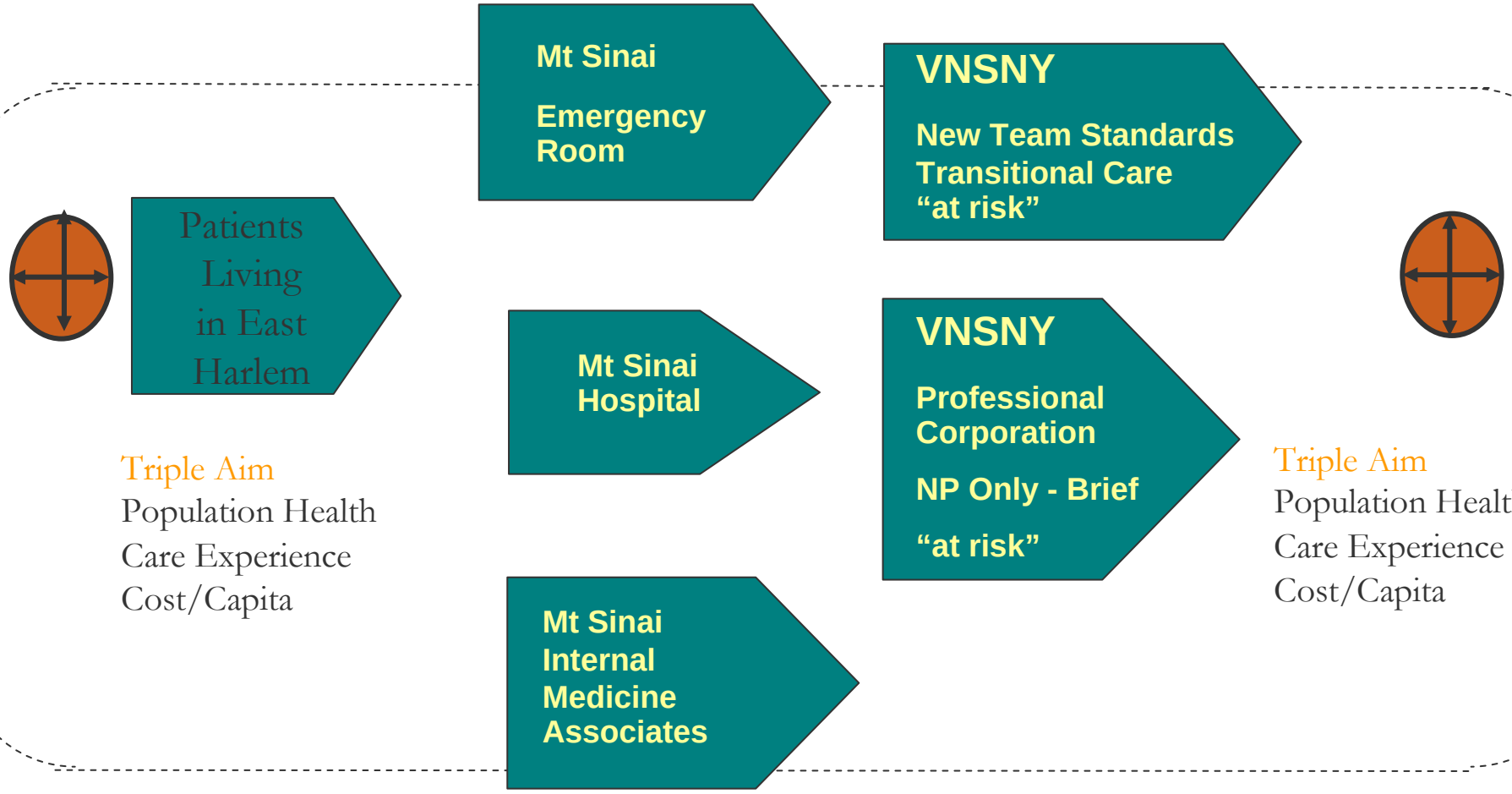
- “NP only” provides transitional primary care and other coaching/support services for at risk patients from discharge until first follow up appointment

- VNSNY Home Care Consultant (RN) assigned to the Mount Sinai Medical Center ED assesses for and coordinates transitional home care with NP.

Specific Aims

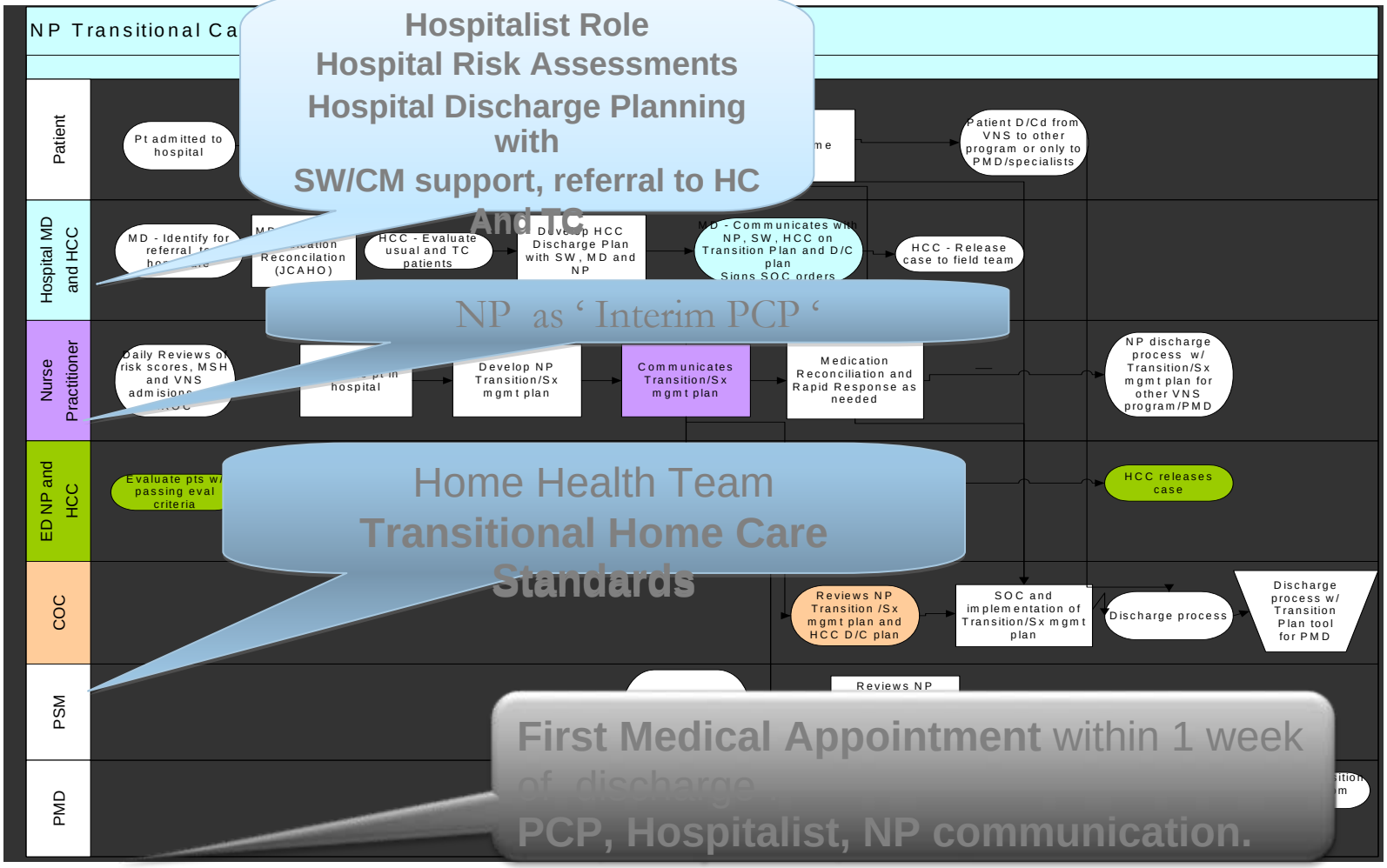
- **Reduce 30 day re-hospitalization of Mt Sinai patients and patients mutually served by VNSNY and MSH**
- **Reduce average number of days to 1st medical appointment post hospital discharge.**
- **Increase the number of patients assessed for high risk for re-hospitalization at:**
  - **Hospital admission (opportunity)**
  - **Hospital discharge (current project)**
  - **Admission to Home care (predictive model- current project)**
  - **Primary care risk assessment (opportunity)**

Complexity of Transitional Care Coordination – Defining Processes Roles, Technology Integration *within and across settings*



Phase III

Defining Processes and Roles Across Settings



Collaborative Agreement and Credentialing VNSNY and Mount Sinai Hospital

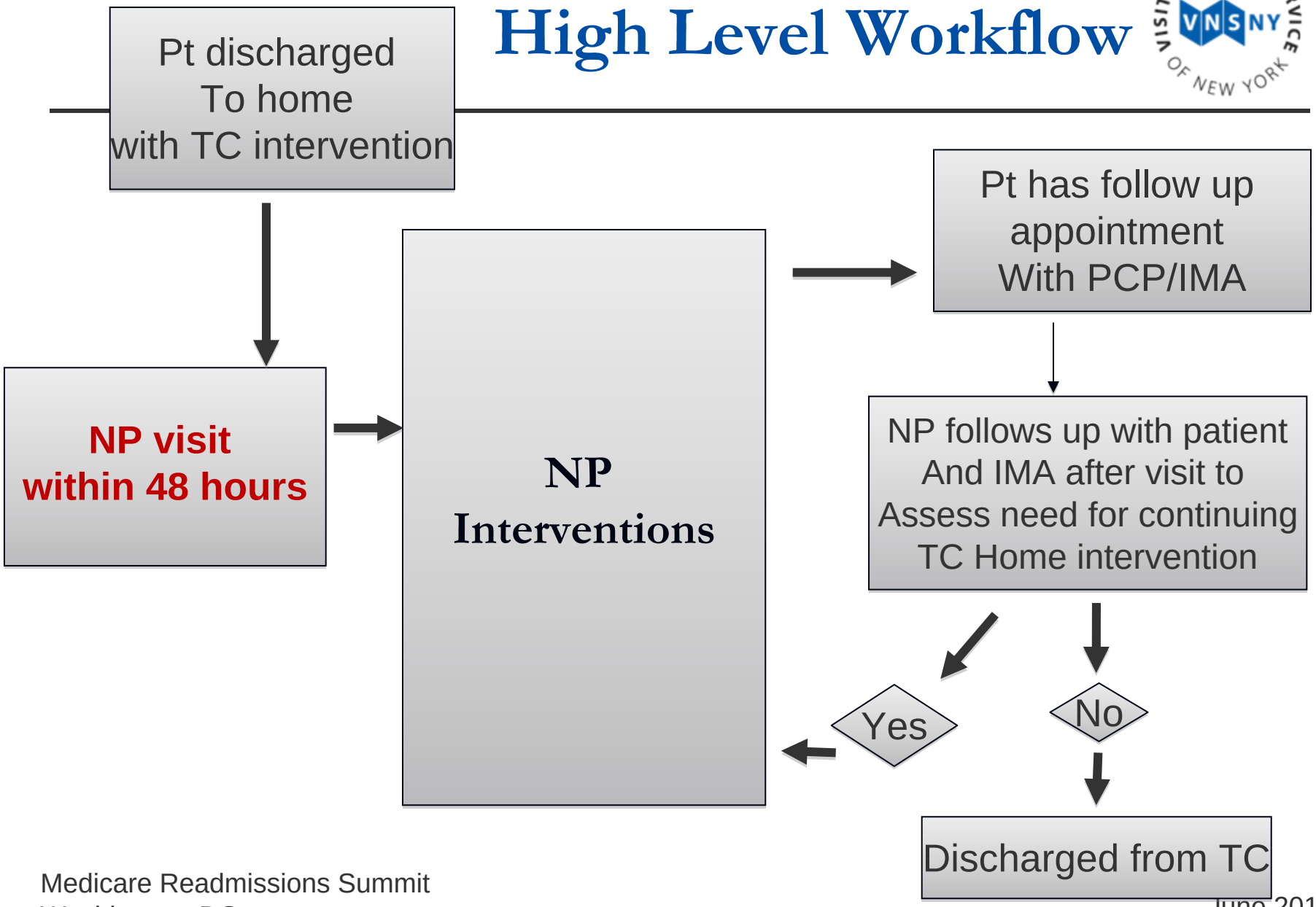
- Collaborative practice agreement with Hospitalist
- Hospital Department of Nursing Education oversees credentialing process and orientation
- Customized scope of practice according to practice area.
  - write treatment orders in the home
  - modify and individualize medication regimen
  - Respond to changes in condition
- Access to hospital databases

Phase III - Target Population

Risk for Readmission within 30 days

- Any ER visit in last 30 Days and/or 2 or more hospitalizations in 6 months
- Six or more medications
- More than 2 co-morbidities
- Living alone / no involved caregiver
- Requiring assistance in one or more ADLs
- Documented history of non-adherence
- Mental or Emotional condition / Confusion / Dementia

NP post discharge High Level Workflow



NP Interventions

- **Medication reconciliation**
- **Change and adjust meds and treatment plan PRN**
- **Document Inpatient and Outpatient Interventions**
- **Collect and document metrics**
- **Support follow up w/ PCP/IMA clinic**
- **Coordinate with Home Care (if applicable),**
- **Evaluate needs -**
  - **PT/OT/SW/SLP**
  - **DME**
  - **Need for Home Care**
  - **Home Safety**
  - **Caregiver Support**
  - **Hospice/Palliative Care**

Case Study

- **91 yo female living alone with no services admitted to hospital after syncopal episode**
- **Diagnosed With Stage 4 lung CA and PE**
- **Home with PT and HHA eval and TC plan to coordinate Palliative care and Hospice**
- **Readmitted within 24 hours due to home environment**
- **New discharge disposition – referred to Hospice**

Case by Case Learning: Developing Reliable Processes and Standards to Close Transitional Care Gaps

Potential Drivers of Readmission:

- Gaps-End of life/prognosis discussions
- Gaps-Family discussions about goals of care
- Gaps-Collaboration with PCP and medical follow up plan
- Delays in referral to Transitional Care NP (day of discharge)
- Gaps-Home Care team implementation of TC standards, protocols

Lessons Learned
Structure, Leadership, Resources

- Leadership Commitment Across Settings
- Weekly/Monthly Cross Setting Improvement Team Meetings
- Quality and Measurement Resources
- “Integrated Database”-all settings contribute to measurement and monitoring

Lessons Learned
Structure, Leadership, Resources

- NP Relationship building across settings
- Manual tracking – by NP – time consuming but important for learning , building model, evaluating
- Competing Incentives Across Settings
- Cost / Benefit

Thank You

Questions and Comments

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