

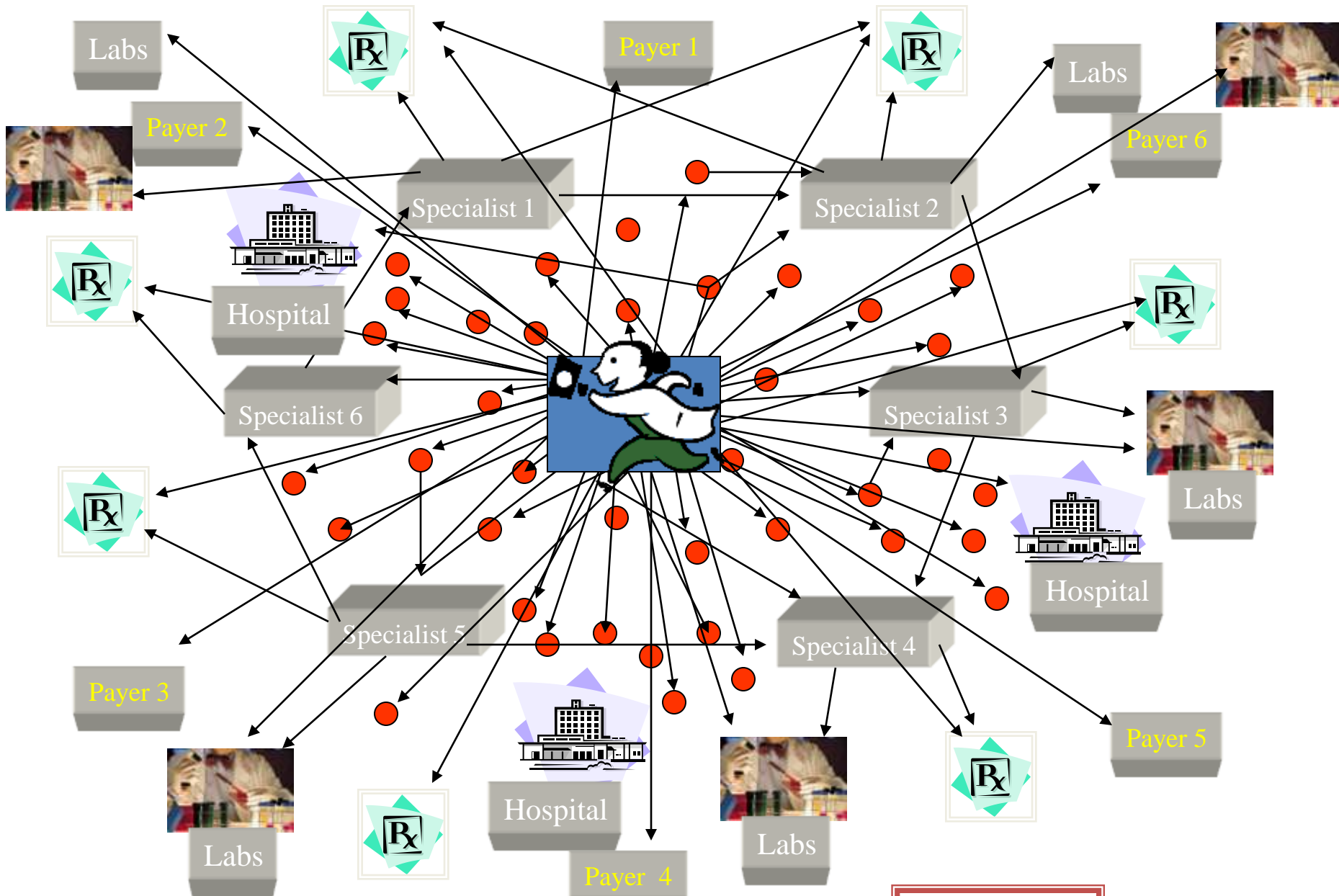
e-Medical Homes and Care Coordination: The Gap Between Theory and Practice

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e-Medical Homes and Care Coordination: The Gap Between Theory and Practice

- Research conducted by eHealth Initiative (eHI) Health and Technology Vector (H&TV) and Sanofi-Aventis
- Funded by: Sanofi-Aventis



8/16/2011

● = Patients

Context and Background

- Electronic connectivity between Medical Homes and other providers is a critical component of the infrastructure for care coordination (CC)
- Business processes, staffing requirements, communication protocols between MHs and specialists are lacking or poorly defined
- A common definition of “Care Coordination” across practices is just beginning to emerge

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- **Objective:** To develop and test operational prototypes of intra and inter-practice care coordination
- **Target:** Complex patients with type 2 diabetes and cardiac comorbidities cared for by a PCP and a cardiologist
- **Setting:** EHR-enabled medical home settings and non-affiliated cardiology practices
- **Tools:** Electronic health records and other e-health technologies to enhance care coordination

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- **Development Goal:** To write technical specifications for a care coordination decision support tool generic to any electronic health records environment
- **Metrics:** To develop a set of metrics that specifically captures processes and intermediate outcomes of care coordination
- **Knowledge transfer:** To develop a strategy to disseminate lessons learned to other audiences

What is Care Coordination?

“Care coordination is a function that helps ensure that the patient’s needs and preferences for health services and information sharing across people, functions, and sites are met over time. Coordination maximizes the value of services delivered to patients by facilitating beneficial, safe, and high quality patients’ experiences and improved health care outcomes.”

National Quality Forum

What Are the Domains of CC?

1. Healthcare home
2. Proactive plan of care and follow-up
3. Communication
4. Information systems
5. Transition of care hand-offs



National Quality Forum

What is a Medical Home?

“The medical home is defined as an approach to providing comprehensive primary care... that facilitates partnerships between individual patients, and their personal providers, and when appropriate, the patient’s family. The provision of medical homes may allow better access to health care, increase satisfaction with care, and improve health.”

Joint Principles of the Patient Centered Medical Home
(March 2007)

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Medical Home

- Partners with patient and families
- Crafts and oversees care plan
- Knows all others treating patient
- Defines specialist roles
- Reconciles medications

Cardiologist

- Knows patient's medical home
- Responds to specific requests
- Keeps updated care plan (including between visits changes)
- Communicates with medical home



e-Medical Homes and Care
Coordination:
The Gap Between Theory and
Practice

Our method for identifying and filling gaps in actual coordination.



- Translate conceptual domains of CC into specific activities → metrics
- Develop detailed patient flow diagrams linking primary care sites and cardiology practices.
- Identify data sources (electronic or paper-based) needed to populate CC coordination metrics

Metric Development--Examples

A Healthcare home

D Information systems

B Proactive plan of care

E Transitions and Hand-offs

C Communications

Metric	Type	Data	Source
B1 Use of care plans	Process	% of records with care plans	NCQA PCMH
B3 Provider team names and roles	Process	% of visits w/ names & roles	Developed for project
C3 Out-going clinical information	Structure	% of referred patients w/ info	Meaningful use
D2 Referral tracking	Structure	Process in place	NCQA PCMH

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Two testing sites with different:

- needs for care coordination
- size
- patient mix
- staffing levels
- style of practice

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Taconic IPA

- Large association of practices serving 9 counties
- More than 500 providers
- Practice sizes range from Solo to more than 100 providers
- FQHC/Private Practice/Hospital Owned
- 237 primary care providers have achieved NCQA Level 3 recognition

Community Health Center, Inc.

- Twelve locations throughout the state
- Over 80,000 patients including over 2,000 adult patients with type 2 diabetes.
- Fifty-five percent are Hispanic in the agency's two largest centers (CHC New Britain and CHC Meriden)
- At the time no plans for NCQA MH accreditation

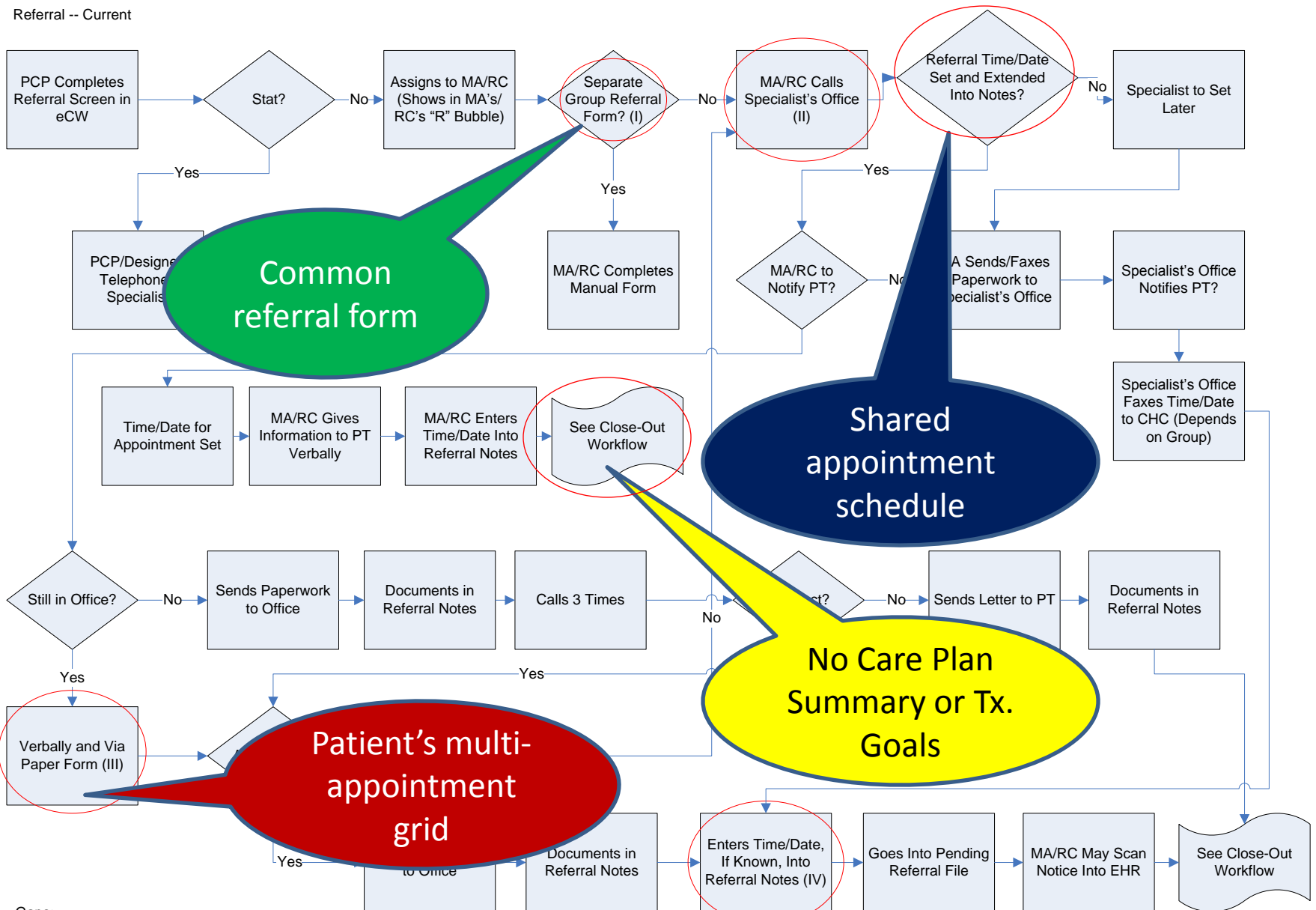


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Referral -- Current



Gaps:

- I.) Separate Referral Forms for Some Groups
- II.) Need to Share Appointment Calendar Between PCP and Specialist
- III.) Referral Form Not Given Consistently and Does Not Indicate Patient Responsibility if Appointment Not Kept or Changed
- IV.) Not Consistently Entered Into Notes



Our method for identifying and filling gaps in actual coordination.



Throughout intervention period

- ✓ Validate appropriateness and utility of CC metrics

- ✓ Record policies and procedures related to implementation of CC routines
- ✓ Describe roles and responsibilities of providers, staff and care coordinators
- ✓ Develop business specs for care coordination decision support tool
- ✓ After 6 months re-score CC metrics

CARE PLAN SUMMARY: JANE DOE

Date of birth: 2/24/1951
 34 Pratt Street, Rockville, CT 06107
 Home telephone #: 1-860-234-5678
 Cell phone #: 860-890-1234

email address: jane.doe@gmail.com

Disclaimer: This document is an aid to coordinate Jane Doe's care among the providers and caregiver(s) and the locations identified herein.

Today's Date: 12/05/2009	Primary Insurance: Medicaid
Today's visit with: Dr. Goodman (PCP)	Cultural preferences: Spanish, Jehovah's Witness
Last PCP visit: 10/05/09	Caregiver: Self (860-789-1234)
Last Visit with Cardiologist: 5/28/2009	Drug allergies: Penicillin

First Contact Health Care Team¹

Patient: Jane Doe, 860-789-1234	I read and I agree with Principal Care Goals: Date _____
PCP: John Goodman, MD 860-432-1000	I read and I agree with Principal Care Goals: Date _____
PC-Team Nurse: Mary Smith, RN ² 860-432-1000	I read and I agree with Principal Care Goals: Date _____
VNA Nurse: Barbara Good, RN 860-878-3000	I read and I agree with Principal Care Goals: Date _____
Cardiologist: Peter Hardy, MD 860-987-2000	I read and I agree with Principal Care Goals: Date _____
Other Specialist: _____	I read and I agree with Principal Care Goals: Date _____
Care Coordinator: Deb Ward, RN 860-432-1000	

Patient's Self-management

Goal: _____

Conditions	Consultant ³ (Affiliation)	Principal Care Goals ⁴	Status as of (date)	Progress Indicator	
				Last Checked	Today
Health Risks (Baseline)	John Goodman, MD				I
Tobacco (1 pack/day)	Nora Marlborough, CHEd, CHC	quit	1pk/day		
Weight (210 lbs)	Kyle Lowery, RD, CHC	170 lbs ⁵	179 lbs		

¹ Names included here are at the discretion of the PCP/Team Nurse and requires no less than 3 encounters/year

² Main point of contact for health questions at the Community Health Center

³ If blank: primary care provider or staff at the PCP clinic

⁴ These are some of the most important care goals but not the only ones. Your doctors will continue to work with you and/or your caregiver to put together a comprehensive, coordinated care plan.

⁵ Not necessarily the ultimate goal but attainable within 6-12 months

Conditions	Consultant ³ (Affiliation)	Principal Care Goals ⁴	Status as of (date)	Progress Indicator	
				Last Checked	Today
Activity Level (sedentary)		30 min. 3Xs/week	30 min. 2Xs/week		
Prevent infection (Every winter)		Administer Flu vaccine	Up to date		
Early Detection breast cancer (Yearly)	Clinton Radiology	Mammogram	Up to date		
Early Detection or Prevention of Colon Cancer (Per PCP recommendation)	Willy Colon, MD Hartford Medical Group- GI	Colonoscopy (or sigmoidoscopy or FOBT)	Pending		
Early Detection Cervical Cancer (Every three years)	John Goodman, MD	PAP	Up to date		
Depression screening (yearly)		PHQ-2	Pending		
Lipitas (170mg/dl)		LDL: 100 mg/dl	140 mg/dl		
Systolic blood Pressure (160mmHg)		135 mmHg	155 mmHg		
Diastolic blood Pressure (100mmHg)		80 mmHg	88 mmHg		
Medications		Taking them as Prescribed	Rx Reconciliation done and adherence assessed		
Type 2 Diabetes	John Goodman, MD				
Glycemic control-HbA1c (8.5)		HbA1c: 7.0	8.0		
vision		Prevent blindness	Retinal Eye Exam current		
kidney function		Prevent damage	Microalbumin test current		

Conditions	Consultant ⁶ (Affiliation)	Principal Care Goals ⁴	Status as of (date)	Progress Indicator	
				Last Checked	Today
Circulation in legs		Prevent blockage	Skips Plavix often ⁶		
Circulation in the brain		Prevent a Stroke	Follows self-care regimen		
Coronary Artery Disease	Peter Hardy, MD (Middlesex Cardiology Group) ⁷				
Symptom Control		No chest pain at rest or with daily activity	Follows self-care regimen		
Improve exercise		tolerance to brisk walk without chest pain	Completed supervised exercise regimen at the WMCA		NA
Prevention of heart attack		Follow lifestyle recommendation and take drugs as prescribed	Follows self-care regimen		

Medication List

Active Medications	Dose (How much to take)	What is for	Who Prescribed?	Who can change?	Who Refills?
Baby Aspirin (Eayer Low)	81 mg (1 pill) day in the morning	improve circulation, thin blood	Dr. Goodman	Dr. Goodman	Dr. Goodman,
Metformin (Glucophage)	850mg (1 pill) day in the morning	Diabetes	Dr. Goodman	Dr. Goodman	Dr. Goodman
Glargo insulin (Lantus)	20 UNITS (1 injection) at night	Diabetes	Dr. Goodman	Dr. Goodman	Dr. Goodman
Clopidogrel (Plavix)	75 mg (1 pill) day	Heart	Dr. Hardy	Dr. Hardy or Dr. Goodman	Dr. Goodman
Lovastatin (Mevacor)	20 mg (1 pill) day at	Cholesterol	Dr. Goodman	Dr. Hardy or Dr. Goodman	Dr. Goodman

⁶ Also requires good blood pressure control, weight loss and quitting smoking

⁷ The specialist works in close coordination with the PCP. All members of the care team agree on treatment goals

Our method for identifying and filling gaps in actual coordination.



- Using the metrics as guidance identify gaps in CC and design process improvements or structural changes needed to reduce or eliminate CC gaps.
- Score baseline metrics for 60 patients with diabetes and heart disease prior to the implementation of CC interventions
- Implement care coordination interventions

Assembling Care Coordination

- Active partnership with patient
- Workflows
- Staffing and roles
- Care planning
- Business issues
- Enabling technology



Assembling Care Coordination

- Sixty patients for each site, with type 2 diabetes and heart disease.
- Data collected before and after six-month demonstration period.
- Multi-model data collection methodology
 - 30 care coordination metrics
 - Number of recorded referrals was too small to measure.
 - Examined patients' EHRs, attachments to electronic records, manual registries and separate scheduling systems.
- Care coordinators from each site provided anecdotal accounts of how patients benefitted from care coordination.
- PCPs and cardiologists from each site interviewed before and after demonstration period.



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Key Findings

During six months, improvements in:

- Care planning
- Content of manual communications
- Intra-office coordination
- More advanced and effective use of EHRs
- Stepped-up patient coaching
- Substantive upgrades in referral requests to specialists
- Enlarged nursing role
- Information sharing with patients and families



Key Findings



Intra-office coordination moved much more than inter-office coordination

Taconic IPA

Onsite coordinator changed patient care directly:
nimble and individualized

Community Health Center, Inc.

Central coordinator changed EHR and care team: **systematic and sustainable**

Key Findings

Community Health Center, Inc.

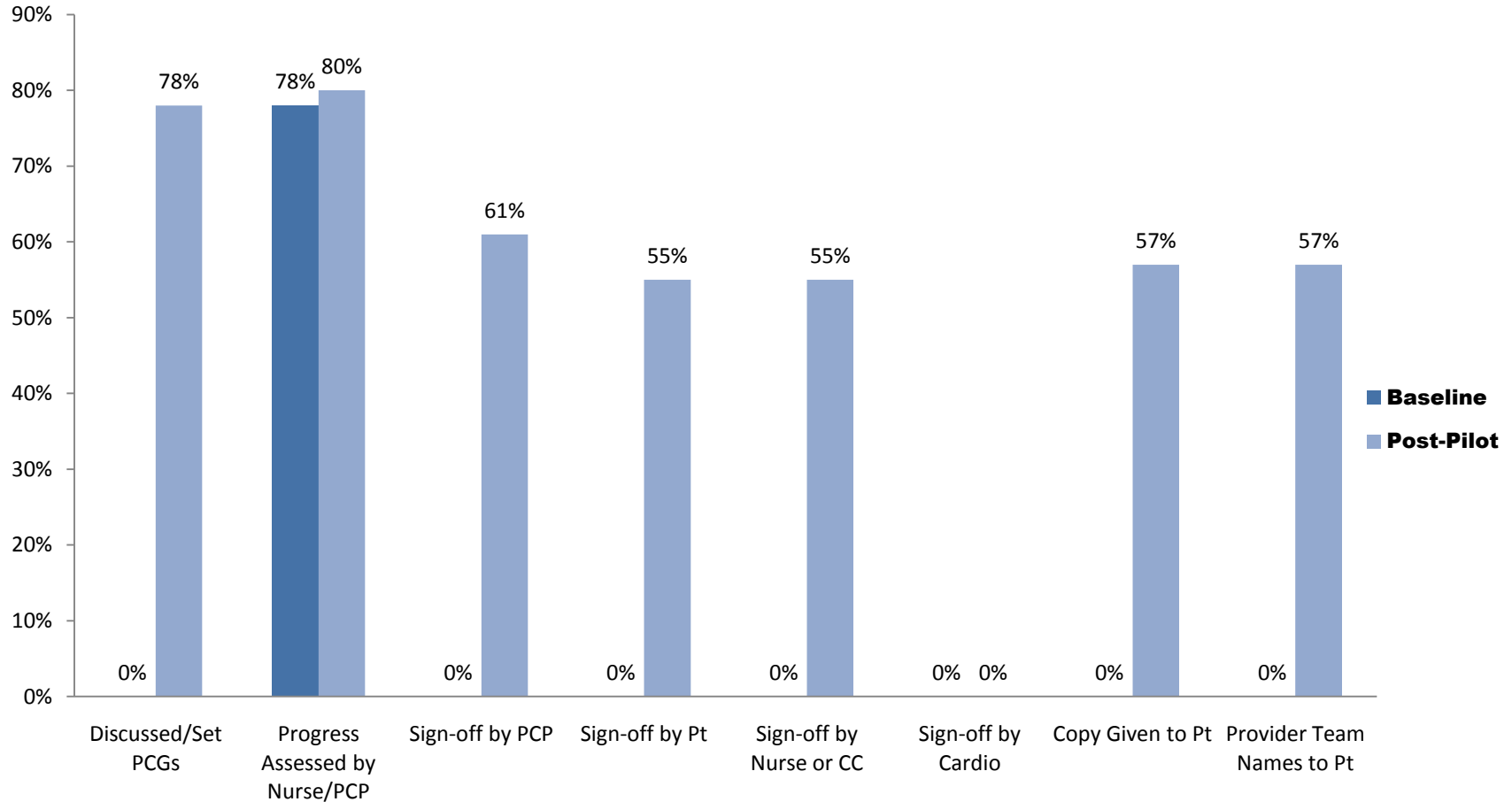
- Mature medical home processes and high scores on many of the CC metrics at baseline, including medication reconciliation
- Improved processes:
 - adopted a common referral form for cardiology
 - raised the percent of referrals that included specific instructions to cardiologists
- Changes produced increase in:
 - Rates of information given to the patient at each visit
 - Care goals set
 - Goals signed off by providers and patients, and
 - Summaries received by primary care physicians from cardiologists

Key Findings

Taconic IPA

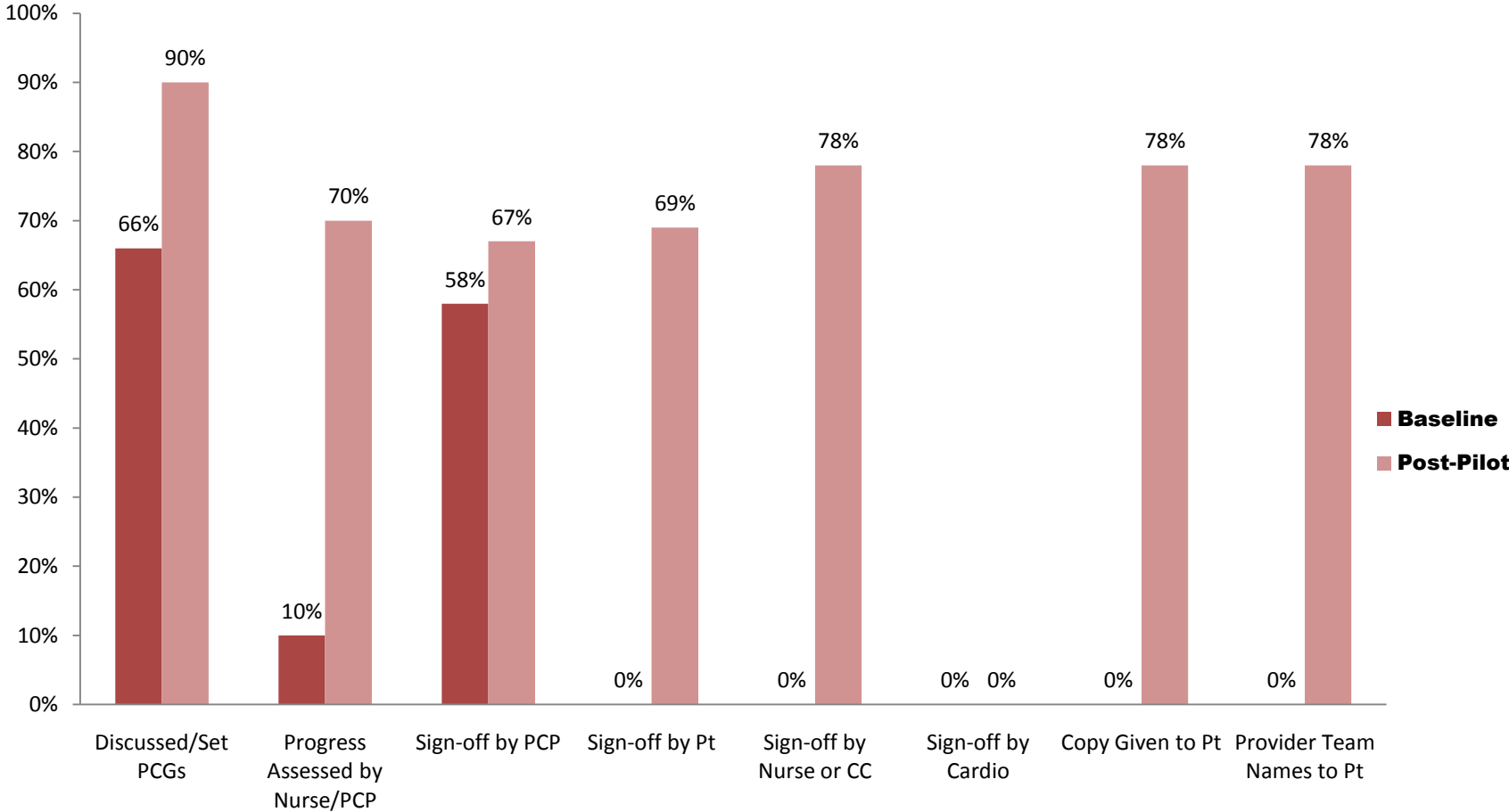
- Started at a different baseline on systematic processes; it made improvements in:
 - Setting care goals
 - Reconciling medications
 - Having patients and providers sign-off on goals
 - Giving information to the patient
 - Adoption of early MH-Cardiology care coordination
- Improved the percent of patients whose cardiologist summaries were received by the primary care physician.

Pre – Post Data on Care Coordination for Community Health Center, Inc. (CHC)



PRINCIPAL CARE PLAN GOALS

Pre – Post Data on Care Coordination for Taconic IPA (TIPA)



PRINCIPAL CARE PLAN GOALS



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Lessons Learned

Lessons Learned About Care Coordination



Patients: Stratifying the most complex may make CC affordable

Medical Home

- CC includes care planning tool
- You **can** engage the patient
- Workflow trumps IT
- Nurses make CC work

Communication

- EHRs make CC possible, in part
- People still move data between EHRs
- Additional EHR functionalities “wish list”

Specialist

- Clinical integration (cardiology- diabetes) needs new tools and mind set
- Need incentives to coordinate with PCP

Lessons Learned About Care Coordination

- Initiating change is a major task in itself
 - Care coordination processes not built or fully utilized
 - Some providers had to be convinced
- Most significant improvements were building foundations of care coordination, including identification of “principal care team”, care planning tools, and medication reconciliation
- Smaller improvements in inter-office coordination between PCPs and cardiologists
- EHRs have some CC functions but need more and easier ones
- Presence of a care coordinator improved information transfer and patient engagement
- Care coordination is fully nurse dependent (with physician support).
 - A distinct and separate function from nursing
 - More than a physician function within medical home

Lessons Learned: Care Coordination Barriers

- Lack of incentives and bridging technology for cardiologists to use Care Plan Summaries they perceived as not important to the cardiac condition.
- Cardiologists thought information about diabetes in Care Plan Summaries was not helpful.
- Care Coordination requires ongoing explicit three-way communication between patient, PCMH and cardiologist.

PCMH



Patients



Cardiologists



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Questions & Answers