Surveys to measure specialty care coordination within VA and across health care settings

Varsha Vimalananda, MD, MPH

April 14 2020

Center for Healthcare Organization and Implementation Research
Bedford VA Medical Center

Boston University School of Medicine

Poll question:

What interest(s) led you to join today (select all that apply)?

- ○ Survey methodology
- ○ Care coordination
- ○ Evaluations of the MISSION Act
- ○ HSR&D CDA work in progress
- ○ Other

- Surveys developed during VISN 1 CDA and VA HSR&D CDA (year 3)

Coordination of Specialty Care Surveys

CSC-Primary Care Clinician (CSC-PCC)

CSC-Specialist

CSC-Specialist 2.0 (private sector)

CSC-Patient

- For evaluations of specialty care coordination
  - Within VA
  - For VA-paid care in the community
  - In other health care settings

Part 1 Context

Part 2 Survey development

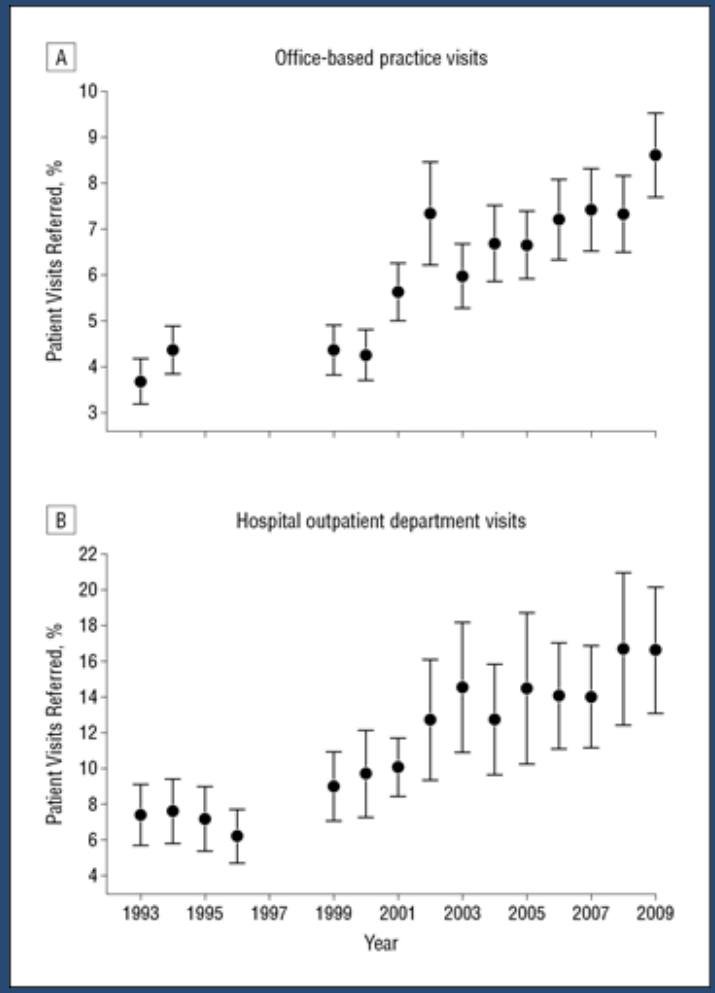
Part 3 Evaluating specialty care coordination within and outside of VA

Part 1

Context

Referrals to specialty care are extremely common

- From 1999-2009, 159% increase in referrals
- From 41 million to 105 million referrals yearly



Barnett ML, Song Z, Landon BE. Trends in physician referrals in the United States, 1999-2009. Archives of internal medicine. 2012 Jan 23;172(2):163-70.

Referrals fragment care

- Specialty care referrals split information across clinicians
- Therefore, every referral contributes to care fragmentation

Committee on Quality of Health Care in America, Institute of Medicine Staff. Crossing the quality chasm: A new health system for the 21st century. National Academies Press; 2001.

Fragmented care leads to adverse outcomes

- Can result in patient confusion, provider frustration, missed and unmet needs, duplicated tests, medication errors, and increased morbidity and mortality

- Exponential increase in risk with more sources of medical care, such that sicker patients are at greater risk

What patients want: A content analysis of key qualities that influence patient satisfaction. *J Med Pract Manage.* Mar-Apr 2007;22(5):255-261. Stille CJ, Jerant A, Bell D, et al. Coordinating care across diseases, settings, and clinicians: a key role for the generalist in practice. *Ann Intern Med.* Apr 19 2005;142(8):700-708. Fialova D, Onder G.. Group Health's MacColl Institute for Healthcare Innovation. Reducing Care Fragmentation: A Toolkit for Coordinating Care. 2011; http://www.improvingchroniccare.org. Schoen C, Osborn R, How SK, Doty MM, Peugh J. In chronic condition: experiences of patients with complex health care needs, in eight countries, 2008. *Health Aff (Millwood).* Jan-Feb 2009;28(1):w1-16.

Care coordination intended to prevent these outcomes

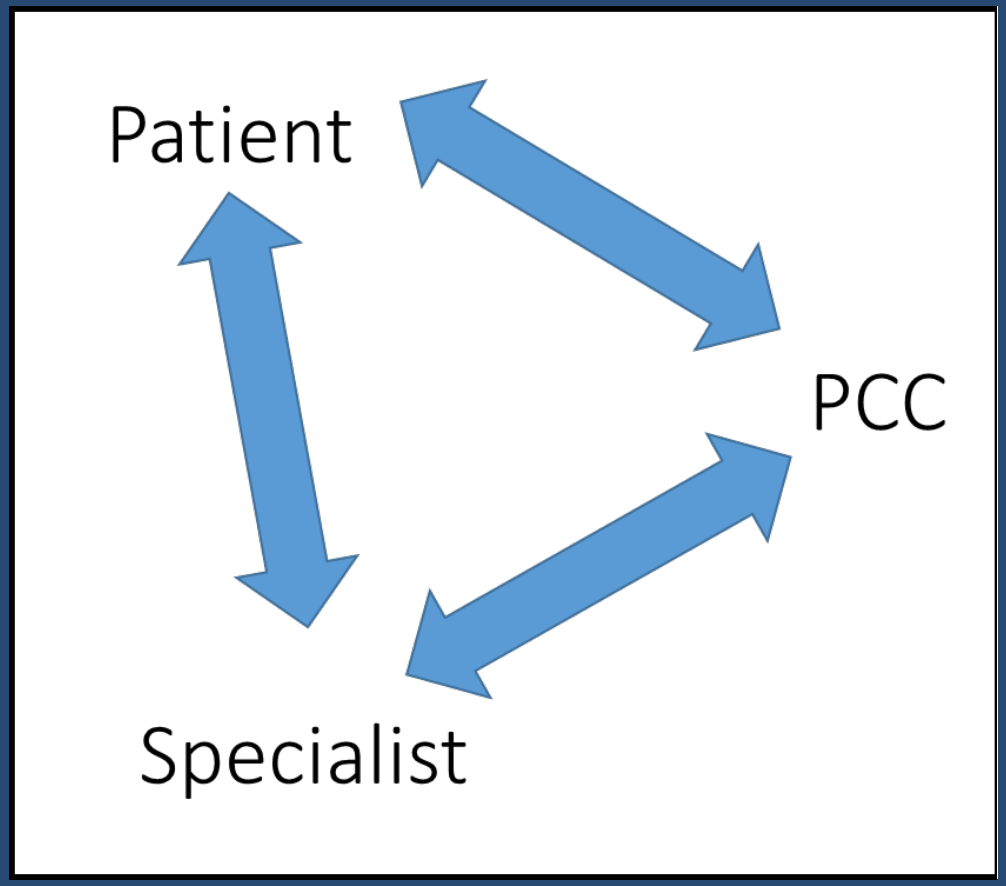
The deliberate organization of care
between two or more participants
(including the patient)
to facilitate appropriate delivery of health care services
and account for each other's actions

McDonald KM, Sundaram, V., Bravata, D.M., et al. *Care coordination.* Stanford, CA: Stanford-UCSF Evidence-based Practice Center;2007.

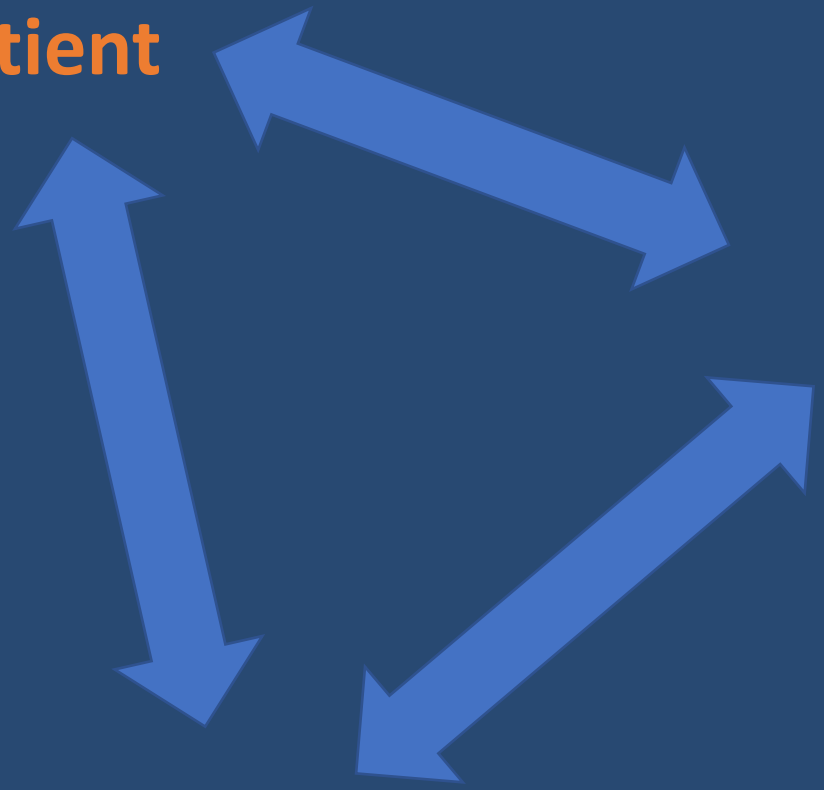
Who coordinates care?

In the VA, coordination largely delegated to PACTs

But for specialty care, coordination occurs along each side of the specialty care triad



- Discussion of referral beforehand
- Integration of specialist recommendations into overall care plan afterwards



- Clear and thorough bilateral communication about patient condition and contextual factors
- Patient understands condition and followup plan

- Complete and accurate transfer of information about patients' relevant history, workup, diagnosis and treatment
- Timely transfer of information before and after

What do we know about how coordination of specialty care is going?

Outside of VA

Within VA

Across health care systems

Failures in coordination outside of VA

- Referral requests from PCPs to specialists often lack needed patient information
- Consultation notes from specialists back to PCPs are frequently inadequate, late, and/or fail to guide determination of responsibility for next steps
- Lack of clarity on roles and responsibilities

Bourguet C, Gilchrist V, McCord G. The consultation and referral process. A report from NEON. Northeastern Ohio Network Research Group. *J Fam Pract.* Jan 1998;46(1):47-53; [10]Gandhi TK, Sittig DF, Franklin M, Sussman AJ, Fairchild DG, Bates DW. Communication breakdown in the outpatient referral process. *Journal of general internal medicine.* Sep 2000;15(9):626-631; [11]O'Malley AS, Reschovsky JD. Referral and consultation communication between primary care and specialist physicians: finding common ground. *Archives of internal medicine.* Jan 10 2011;171(1):56-65; [12]Forrest CB, Glade GB, Baker AE, Bocian A, von Schrader S, Starfield B. Coordination of specialty referrals and physician satisfaction with referral care. *Arch Pediatr Adolesc Med.* May 2000;154(5):499-506.

Failures in coordination within VA

- Very similar to problems outside VA. In addition…
- 36% of CPRS referrals discontinued; lack of clear, standardized, and widely understood referral policies; clarity on roles and responsibilities; and staff to respond
- Many PACT RNs overwhelmed with coordination tasks, report lack of role clarity and too few support staff
- Contentious relationships between referring and consulting clinicians

Singh H, Esquivel A, Sittig DF, et al. Follow-up actions on electronic referral communication in a multispecialty outpatient setting. *Journal of general internal medicine.* Jan 2011;26(1):64-69. Hysong SJ, Esquivel A, Sittig DF, et al. Towards successful coordination of electronic health record based-referrals: a qualitative analysis. *Implement Sci.* 2011;6:84. Rodriguez HP, Giannitrapani KF, Stockdale S, et al. Teamlet structure and early experiences of medical home implementation for veterans. *JGIM.* Jul 2014;29 Suppl 2:S623-631. Vimalananda V, Dvorin K, Fincke BG, Tardiff N, Bokhour BG. Patient, PCP, and specialist perspectives on specialty care coordination in an integrated health care system. The Journal of ambulatory care management. 2018 Jan;41(1):15.

Cross-system care brings new challenges

- Many of the mechanisms used to coordinate VA care are absent for Community Care
  - a single administrative system
  - clinical information within a single EHR
  - care from clinicians who may have strong working relationships
  - an online platform for patients to coordinate with all their clinicians

- CC-specific mechanisms available, but uptake and helpfulness unknown

Cross-system care brings new challenges

- In qualitative studies of cross-system care under MISSION and the VA's earlier CHOICE program, patients and clinicians report system-level difficulties in health information exchange and a reliance on patients to coordinate their own care

Lampman MA, Mueller KJ. Experiences of rural non-VA providers in treating dual care veterans and the development of electronic health information exchange networks between the two systems. *J Rural Soc Sci.* 2011;26(3):201-209. Gaglioti A, Cozad A, Wittrock S, et al. Non-VA primary care providers' perspectives on comanagement for rural veterans. *Mil Med.* 2014;179(11):1236-1243. Nayar P, Nguyen AT, Ojha D, Schmid KK, Apenteng B, Woodbridge P. Transitions in dual care for veterans: non-federal physician perspectives. *J Community Health.* 2013;38(2):225-237. Nayar P, Apenteng B, Yu F, Woodbridge P, Fetrick A. Rural veterans' perspectives of dual care. *J Community Health.* 2013;38(1):70-77. Rinne ST, Resnick K, Wiener RS, Simon SR, Elwy AR. VA Provider Perspectives on Coordinating COPD Care Across Health Systems. *J Gen Intern Med.* 2019;34(Suppl 1):37-42. Benzer, J.K., Singer, S.J., Mohr, D.C., McIntosh, N., Meterko, M., Vimalananda, V.G., Harvey, K.L., Seibert, M.N. and Charns, M.P., 2019. Survey of Patient-Centered Coordination of Care for Diabetes with Cardiovascular and Mental Health Comorbidities in the Department of Veterans Affairs. Journal of general internal medicine, 34(1), pp.43-49.. 2011;48(2):109-122.

Poor care coordination and poor outcomes

- Link between poor cross-system coordination and worse quality of care among Veterans demonstrated for VA/Medicare dual users:
  - pharmacy utilization
  - hepatitis C
  - gynecologic malignancy
  - ambulatory care-sensitive hospital admissions

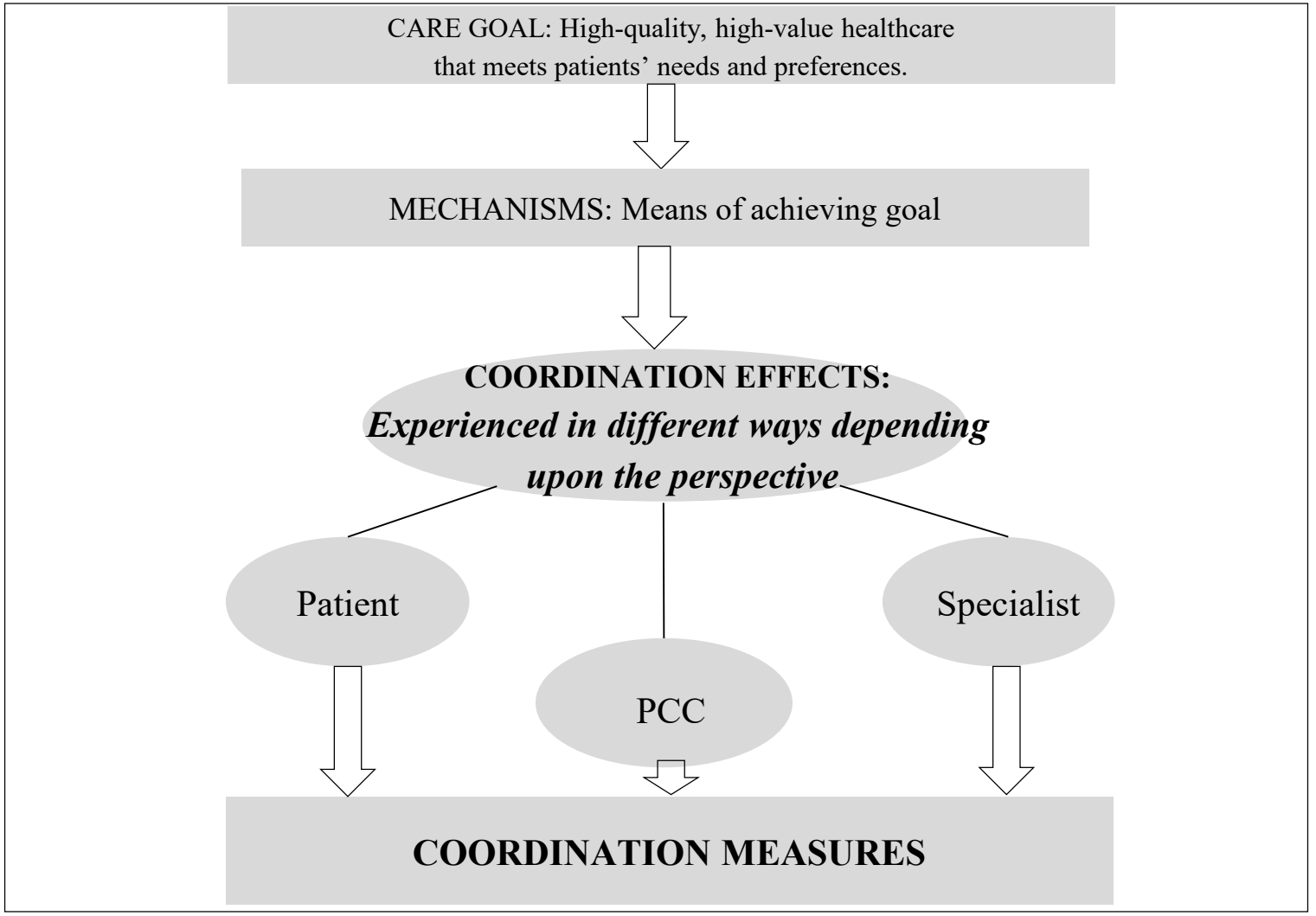
Gellad WF, Cunningham FE, Good CB, et al. Pharmacy use in the first year of the Veterans Choice Program: a mixed-methods evaluation. *Medical care.* 2017;55:S26-S32. Tsai J, Yakovchenko V, Jones N, et al. "Where's my choice?" An examination of veteran and provider experiences with hepatitis C treatment through the Veteran Affairs Choice Program. *Medical care.* 2017;55:S13-S19. Zuchowski JL, Chrystal JG, Hamilton AB, et al. Coordinating care across health care systems for Veterans with gynecologic malignancies: a qualitative analysis. *Medical care.* 2017;55:S53-S60. Pizer SD, Gardner JA. Is fragmented financing bad for your health?. INQUIRY: The Journal of Health Care Organization, Provision, and Financing. 2011 May;48(2):109-22.

Overarching research goal is to improve coordination of specialty care

- If no improvement:
  - Is there no relationship between coordination for that triad member and the outcome?
  - Was coordination never achieved?

- Need a measure!

Care Coordination Measurement Framework (Modified)



- Measure coordination directly
- Account for triad member
- Enable comparisons between the three triad members

McDonald KM, Sundaram, V., Bravata, D.M., et al. *Care coordination.* Stanford, CA: Stanford-UCSF Evidence-based Practice Center;2007.

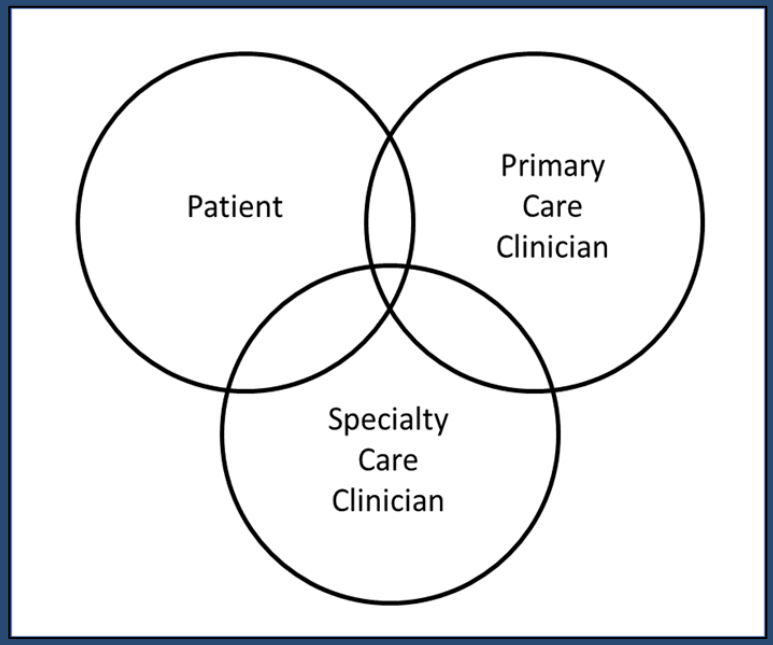
COORDINATED SPECIALTY CARE

STRUCTURES

Payment models
Organizational structure
Health IT
Medical home
Patient portals

PROCESSES

Communicate
Negotiate responsibility
Facilitate transitions
Monitor and respond to change



- Clinical outcomes
- Cost
- Patient experience
- Clinician experience

Part 2

Survey development

Overview of survey development

1. Establish domains of coordination for each triad member
2. Develop and refine candidate items
3. Data collection
4. Psychometric analyses
   - Scale development
   - Scale evaluation
5. Validation

Above steps completed for the 3 clinician surveys

Patient survey underway

Step 1. Establish domains of coordination for each triad member

Methods

- Extensive literature review

- Qualitative study: interviews with PCCs (N=13), endocrinologists (N=12); focus groups with patients (N=2)

Vimalananda VG, Dvorin K, Fincke BG, Tardiff N, Bokhour BG. Patient, Primary Care Provider, and Specialist Perspectives on Specialty Care Coordination in an Integrated Health Care System. J Ambul Care Manage. 2018 Jan/Mar;41(1):15-24.

Five overarching domains

- Mutually respectful relationships
- Clarity and agreement on roles and responsibilities
- Timely and helpful communication
- Timely and accurate data transfer
- Organizational context supports these

Vimalananda VG, Dvorin K, Fincke BG, Tardiff N, Bokhour BG. Patient, Primary Care Provider, and Specialist Perspectives on Specialty Care Coordination in an Integrated Health Care System. J Ambul Care Manage. 2018 Jan/Mar;41(1):15-24.

The subdomains look different for each

- Clinicians focused on coordination with each other
  - Ex: Specialists want clear referral questions, PCCs want thorough consult notes

- Patients perceive coordination happening at the system, clinician, and patient level
  - Ex: Specialist seems to know the important information about the medical history.
  - Ex: Patients understand what they need to do to take care of the condition after the specialist visit.

Step 2. Develop and refine candidate survey items

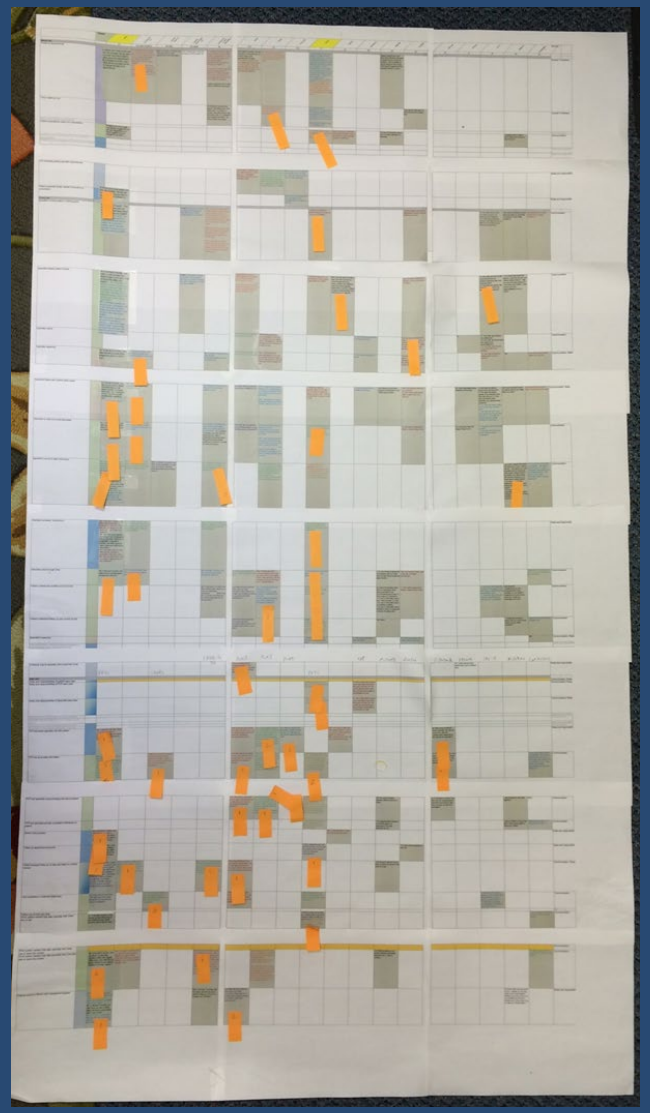
Identify for candidate measures for adaptation

- Narrowed down candidates
  - N=100
  - Measures from patient, PCC or specialist perspective
  - Adult ambulatory care, non condition-specific
  - Some evidence of reliability and validity testing
  - Excluded coordination with non-triad members such as nurses, pharmacists

- N=15 patient perspective
- N=4 clinician perspective

Item identification

- Mapped subdomains to existing items and developed new items



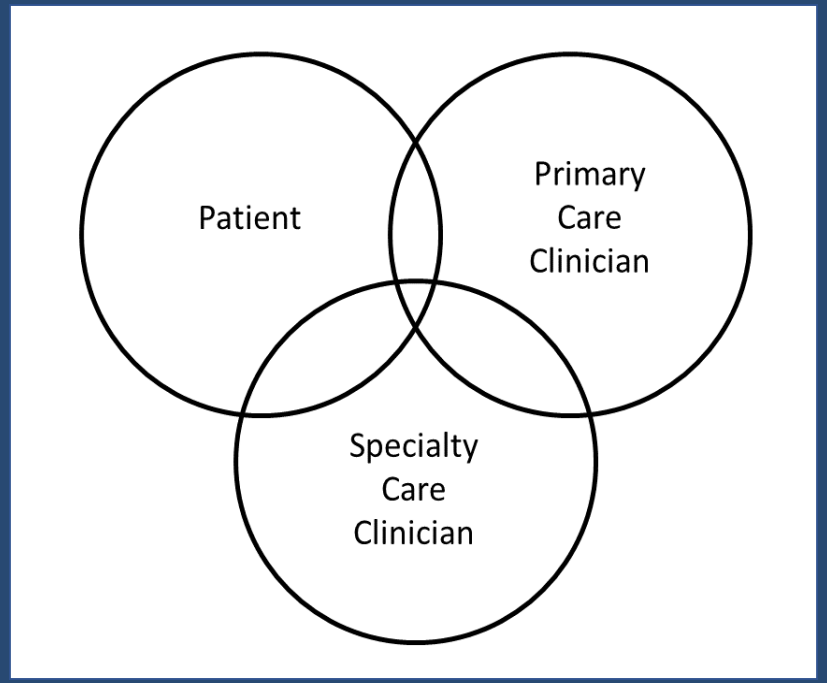
Item refinement

- Expert Panel review and cognitive interviews with VA and non-VA researchers, clinicians, and patients
  - Relevance to VA and non-VA
  - Clarity and coverage of domains
  - Appropriate response scale
  - Relevance to all medical subspecialties

Coordination of Specialty Care
Drafts of 3 Surveys

- CORE
  - Coordination items (N=23-45)

- PERIPHERY
  - Demographics
  - Practice characteristics
  - Job satisfaction and burnout
  - Mechanisms to coordinate



Step 3. Data collection
Step 4. Psychometric analysis

Survey of Specialty Care Coordination - Medical Specialist Version

SECTION 2: YOUR INTERACTIONS WITH VA PRIMARY CARE PROVIDERS

Please think only about the VA outpatient consult requests you've received from VA PCPs in the past three months.

5. How often was the reason for the consult request sufficiently clear, such that you understood what the referring PCP was asking of you?

- ○ Never
- ○ Rarely - less than 10% of the time
- ○ Occasionally - about 30% of the time
- ○ Sometimes - about 50% of the time
- ○ Frequently - about 70% of the time
- ○ Usually - about 90% of the time
- ○ Always

14%

Prev Next

32. Listed below are some mechanisms commonly used to coordinate specialty care withPCPs and their teams. If you used them in the last 3 months, how helpful were these mechanisms in promoting coordination of outpatient VA specialty care?

	Not available to me	Available but did not use in the last 3 months	Not at all helpful	A little helpful	Somewhat helpful	Very helpful	Extremely helpful
Service agreements (care coordination agreements) with primary care	○	○	○	○	○	○	○
Templates your service provides to PCPs for making consult requests	○	○	○	○	○	○	○
Templates created by you or your service for structuring consult notes to PCPs	○	○	○	○	○	○	○

	CSC-PCC		
Mode	Online		
Sample size	7979 VA PCCs		
Response rate	24%		
Methods	EFA, CFA		
Scale structure	20 items, 6 scales*		
Percent of variance in overall coordination explained by scales	67%		

* Relationships, Communication, Data Transfer, Role Clarity, Role Agreement, Making Referrals

† Relationships, Communication, Data Transfer, Roles and Responsibilities

	CSC-PCC	CSC-Specialist	
Mode	Online	Online	
Sample size	7979 VA PCCs	1576 VA medical sub-specialists	
Response rate	24%	25%	
Methods	EFA, CFA	MTA, CFA	
Scale structure	20 items, 6 scales*	13 items, 4 scales†	
Percent of variance in overall coordination explained by scales	67%	49%	

* Relationships, Communication, Data Transfer, Role Clarity, Role Agreement, Making Referrals

† Relationships, Communication, Data Transfer, Roles and Responsibilities

	CSC-PCC	CSC-Specialist	CSC-Patient
Mode	Online	Online	Paper
Sample size	7979 VA PCCs	1576 VA medical sub-specialists	3600 patients in VA specialty care
Response rate	24%	25%	-
Methods	EFA, CFA	MTA, CFA	-
Scale structure	20 items, 6 scales*	13 items, 4 scales†	-
Percent of variance in overall coordination explained by scales	67%	49%	-

* Relationships, Communication, Data Transfer, Role Clarity, Role Agreement, Making Referrals

† Relationships, Communication, Data Transfer, Roles and Responsibilities

ACP collaboration: Validate in the private sector

- American College of Physicians (ACP) requested use of the CSC measures to evaluate their CMS-funded coordination intervention pilot study

- Adapt for non-VA medical subspecialists
  - Interviews: relationships and data transfer differ in a non-integrated health care setting

ACP collaboration: Validate in the private sector

- ACP
- American College of Allergy, Asthma and Immunology
- American College of Cardiology
- American Association of Clinical Endocrinologists
- Endocrine Society
- American Society of Hematology
- Renal Physicians Association

	CSC-PCC	CSC-Specialist	CSC-Patient	CSC-Specialist 2.0
Mode	Online	Online	Paper	Online
Sample size	7979	1576	3600	Over 50,000 private sector subspecialists
Response rate	24%	25%	-	45% (subcommittees), 37% (incentivized survey), 1-2% (link in newsletter)
Methods	EFA, CFA	MTA, CFA	-	MTA, CFA
Scale structure	20 items, 6 scales*	13 items, 4 scales	-	18 items, 4 scales
Percent of variance in overall coordination	67%	49%	-	45%

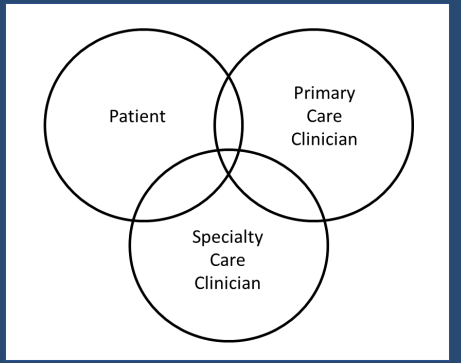
* Relationships, Communication, Data Transfer, Role Clarity, Role Agreement, Making Referrals

† Relationships, Communication, Data Transfer, Roles and Responsibilities

CSC-PCC scales and items		CSC-Specialist scales and items	
Communication		**Communication**	
Q35	When you tried to communicate directly with the consulting specialist, how often could you reach the specialist in a timely manner?	Q13	When you tried to communicate directly with the referring PCC, how often could you reach the PCC in a timely manner?
Q36	How often was the consulting specialist helpful in providing you further information or other assistance when you requested it?	Q14	How often was the PCC helpful in providing you further information or other assistance when you requested it?
Q37	When you needed help from the consulting specialist's office staff or clinic staff, how often were you able to get the help you needed in a timely manner?	Q19	When you needed help from a primary care team member other than the referring PCC, how often were you able to get the help you needed in a timely manner?

CSC-PCC scales and items		CSC-Specialist scales and items	
Making Referrals		**Roles and Responsibilites**	
		Q5	How often was the reason for the consult request sufficiently clear, such that you understood what the referring PCC was asking of you?
Q14	Please indicate the extent to which you agree with this statement: “This specialty service has clearly described expectations for which elements of the patient's history, physical exam, or prior testing should be included in the consult request itself.”	Q6	How often did the consult request itself include sufficient clinical history and other information to meet your immediate needs?

CSC family of surveys



- Complementary
- Questions that are common and others that are unique to each triad member
- CORE
  - scales for broad assessments and comparisons
  - individual items offer a detailed map of strengths and weaknesses
- PERIPHERY
  - demographics, practice characteristics, mechanisms to coordinate

Part 3

Using the surveys to evaluate coordination within and outside of VA

Coordination as experienced by PCCs at CBOCs vs. VAMCs

Scale	VAMC mean score (N~500)	CBOC mean score (N~700)
Relationships	5.20	5.24
Communication	4.96	4.90
Role Agreement	5.55	5.56
Role Clarity	4.97	4.96
Data Transfer	6.08	6.08
Making Referrals	3.45	3.43

Association of shared EHR with coordination
(N=576 private sector medical subspecialists)

- "With about how many of your referring PCCs do you share an electronic health record?"
  - None (or very few), Some, All (or most)
  - Analysis of variance (ANOVA) for association of a shared EHR with each coordination domain and overall coordination
  - Tukey post-hoc comparisons between each level of shared EHR and Cohen's *d* to estimate effect size

Association of a shared EHR with coordination

(N=576 private sector medical subspecialists)*†‡

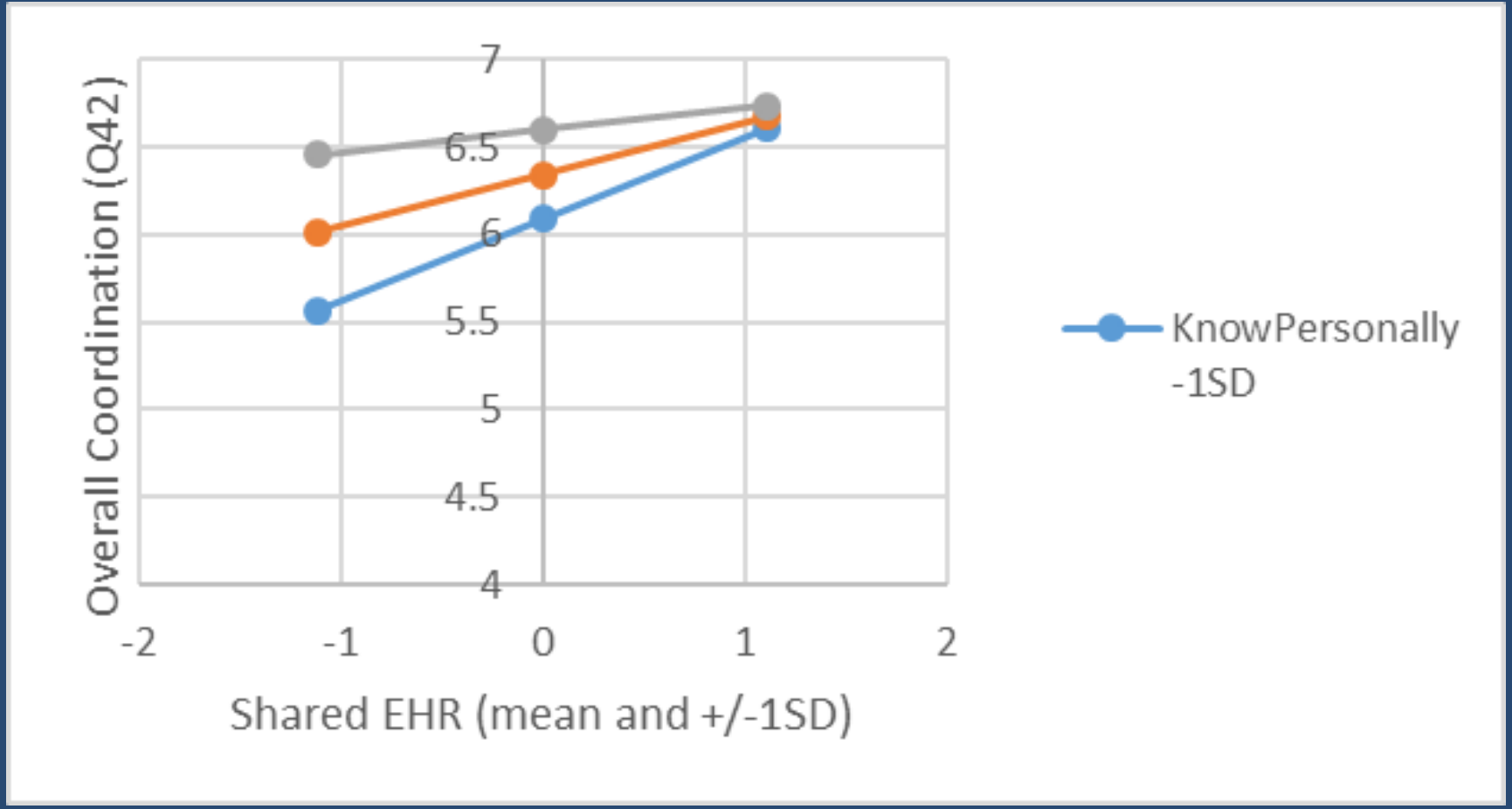
	Relationships			Roles and Responsibilities			Communication			Data Transfer			Overall Coordination		
	N	**Mean**	SD	N	**Mean**	SD	N	**Mean**	SD	N	**Mean**	SD	N	**Mean**	SD
None (or few) N=195	182	**4.99**	0.84	192	**4.27[a]**	0.93	176	**4.36**	1.04	186	**3.84[a]**	0.93	176	**6.19[a]**	1.79
Some N=288	271	**4.98**	0.81	285	**4.18[a]**	0.89	256	**4.33**	1.07	279	**4.12[b]**	0.92	265	**6.15[a]**	1.73
All (or most) N=93	90	**5.15**	0.79	93	**4.57[b]**	0.90	86	**4.50**	1.11	90	**5.16[c]**	0.89	86	**7.13[b]**	1.72
P-value		***0.188***			***0.002***			***0.4302***			***<.0001***			***<.0001***	

*Item text: "With about how many of referring primary care clinicians do you share an electronic health record (EHR)?"

†Scale scores theoretical range 1-7

‡Pairwise comparisons were conducted for all significant omnibus effects. Means with different superscripts differ significantly from one another.

Impact of shared EHR and knowing PCCs personally on specialists' overall experience of coordination with PCCs



Mechanisms to improve referrals to specialty care (N=497 VA medical subspecialists)

- Referral templates associated with referrals that were more frequently:
  - Appropriate (aOR 1.5, 95%CI 1.0-2.4)
  - Clear (aOR 1.6, 95%CI 1.0-2.5)
  - Complete (aOR 1.9, 95%CI 1.1-3.2)

- Service agreements associated with no referral characteristic

Vimalananda et al. Tools to improve referrals from primary care to specialty care. Am J Manag Care. 2019 Aug 1;25(8):e237-e242.

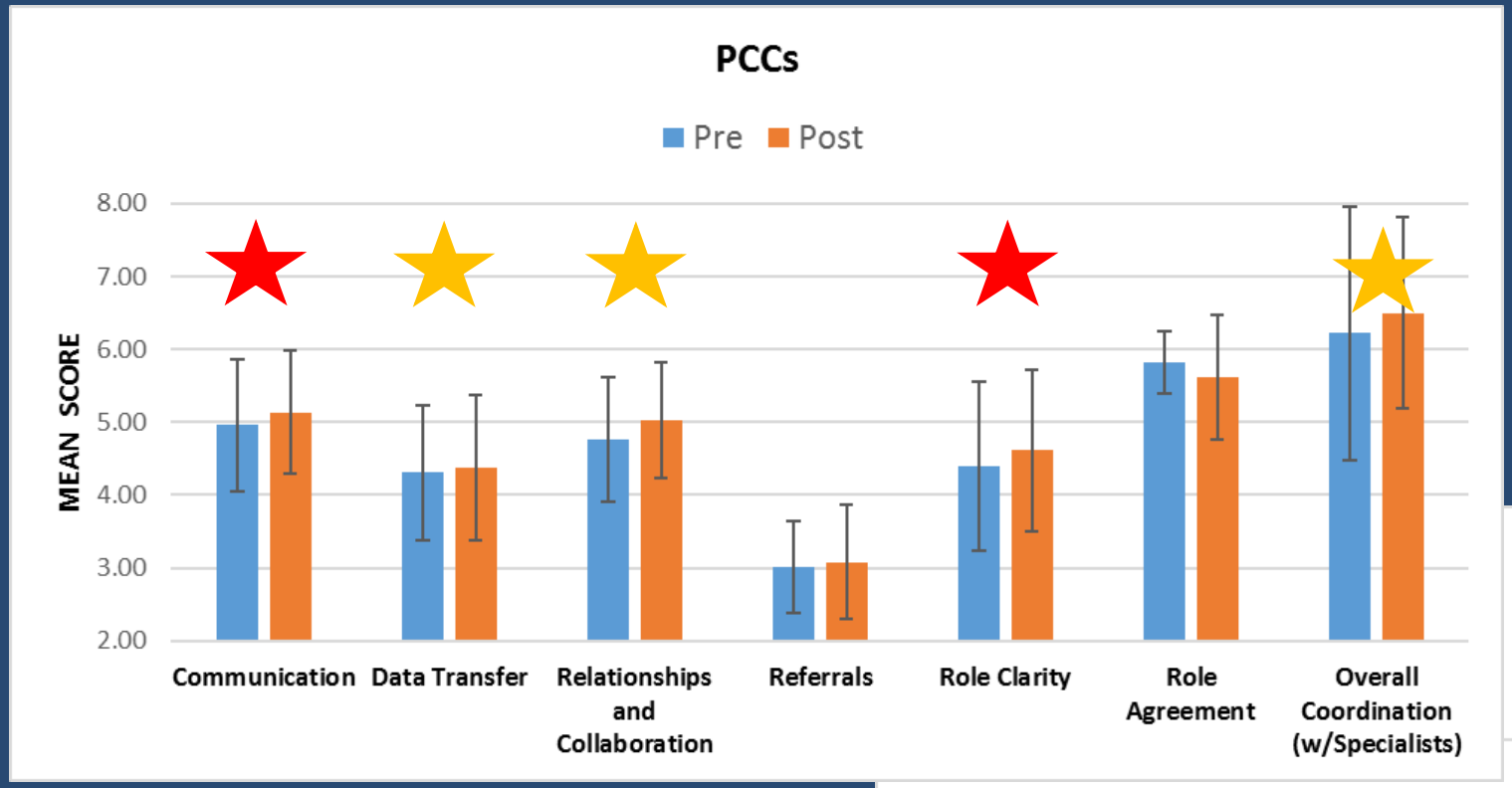
ACP pilot study – survey sensitivity to change

- Funded by Centers for Medicare and Medicaid Services

- Supported implementation of ACP toolkit to support high value, patient-centered care coordination between primary care and subspecialty/specialty practices

ACP pilot study – survey sensitivity to change

- Enrolled 20 primary care and 13 specialty care practices in one New England state
- Learning collaborative and expert coaching
- Support for 4 practice-level action steps over 6 months



PCCs
pre N=18
post N=12

Wilcoxon matched-pairs signed-ranks tests of significance for differences

r-values for effect size

Specialists
pre N=11
post N=6

Near-term work

- Complete CSC-Patient
- Adapt for use outside of medical specialty care
- Toolkit to guide choice of interventions based on scale scores

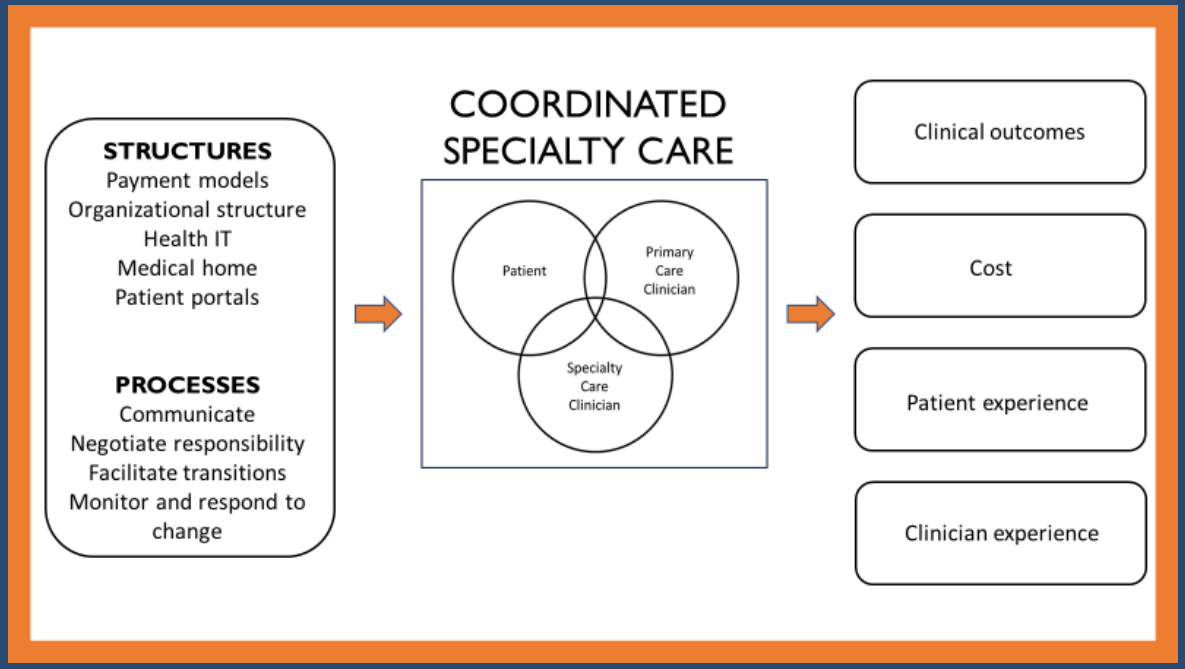
Evaluations of specialty care coordination under the MISSION Act

- HSR&D FOP to compare specialty care coordination in VA vs. CC
  - Focus on clinicians
  - Mechanisms associated with better coordination

- CSC-Specialist 2.0 is incorporated into the Office of Community Care's (OCC's) contracts with both Optum and Triwest; to be administered quarterly

Coordination of Specialty Care surveys

- Capture triad's assessment of the central elements of coordination
- Reveal how coordination is influenced by context and impacts outcomes
- Guide improvements



Mentors at CHOIR, BUSPH and BUSOM: Mark Meterko, PhD
B. Graeme Fincke, MD
Barbara Bokhour, PhD
Steven Simon, MD
Dan Berlowitz, MD

RA: Amanda Solch, MSW

Analyst: Shirley Qian, MS

CHOIR
Center for Healthcare Organization and Implementation Research