



Tomorrow's Doctors, Tomorrow's Cures®

**CORE** Coordinating Optimal Referral Experiences:  
*Implementing eConsults and Enhanced Referrals*

Association of  
American Medical Colleges

# Project CORE: Coordinating Optimal Referral Experiences

## *Implementing eConsults and Enhancing Referrals*

Scott Shipman, MD, MPH, Director of Primary Care Affairs and Workforce Capacity, Association of American Medical Colleges

Paul James, MD, Professor, Family Medicine, University of Iowa

Cathy Morrow, MD, Chair & Associate Professor of Community and Family Medicine, Dartmouth-Hitchcock

Sean Bryan, MD, FAAFP, Chair & Associate Professor, Department of Family Medicine, Greenville Health System



---

Learn

---

Serve

---

Lead



Association of  
American Medical Colleges

# Project CORE: Coordinating Optimal Referral Experiences

## *3 Problems at Interface of Primary care and Specialty Care*

1. **Poor access to specialty care for patients**
2. **Poor communication/ coordination between PCPs and specialist colleagues**
3. **Wide variations in care**

# Using Specialists Wisely...

Referral volume to specialists has more than DOUBLED in a decade (1999-2009)<sup>1</sup>



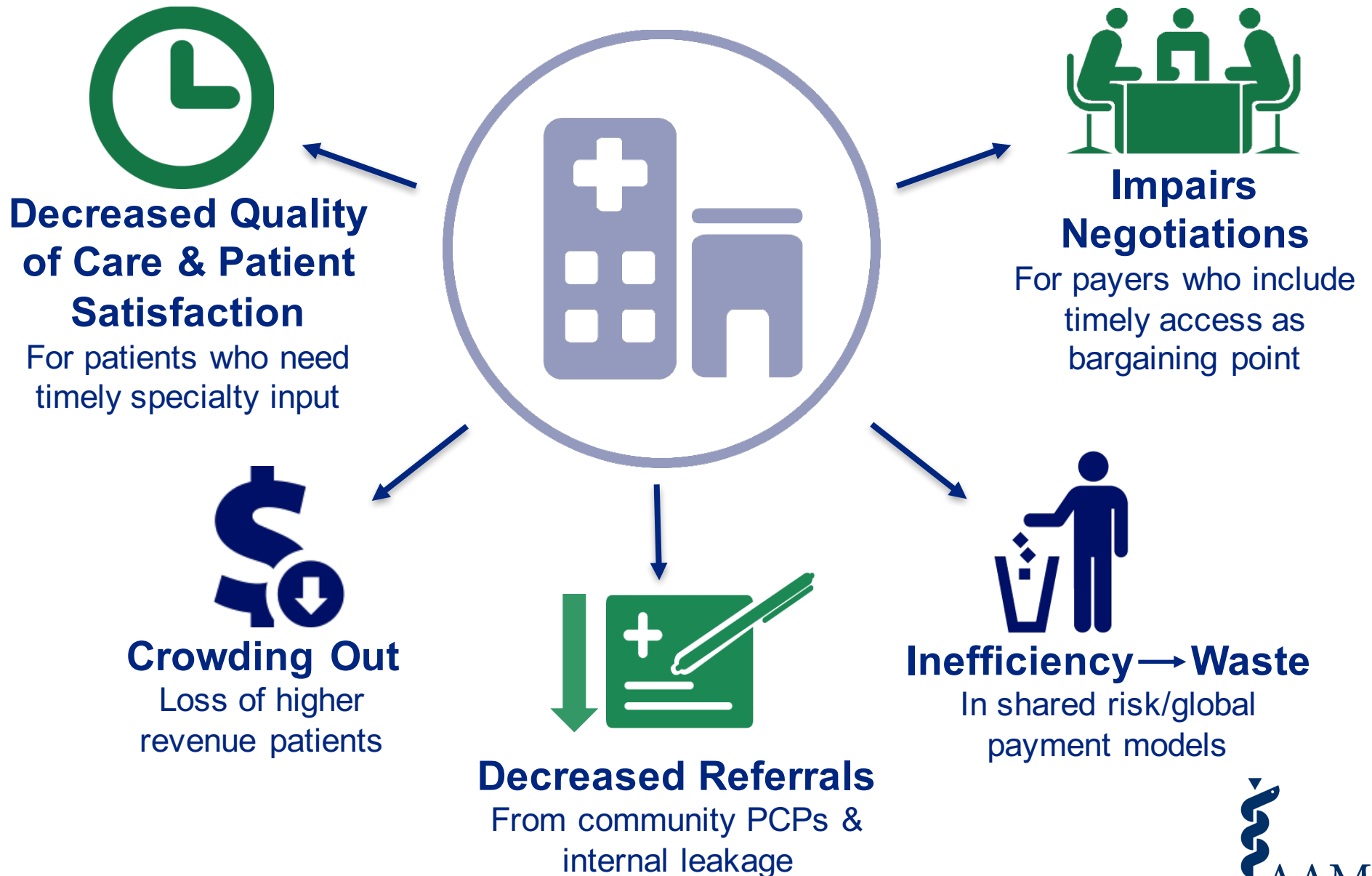
For common chronic conditions, more than 75% of visits to specialists are for established patients<sup>2</sup>



PCPs & specialists agree that many patients seen by specialists could be managed by primary care<sup>3</sup>

<sup>1</sup>Barnett 2012; <sup>2</sup>Hollingsworth 2011; <sup>3</sup>Gleason 2014

# Poor Access to Specialists: Implications for an AMC



# The Primary Care & Specialty Care Interface

Then:



**PC – Specialist  
Communication**

Now:



**Fragmentation**



**↓ Quality    ↑ Costs**

VIEWPOINT

# Patient Referrals

## A Linchpin for Increasing the Value of Care

**Zirui Song, MD, PhD**  
Department of  
Medicine,  
Massachusetts General  
Hospital, Boston,  
Massachusetts;  
Department of Health  
Care Policy, Harvard  
Medical School,  
Boston, Massachusetts;  
and National Bureau of  
Economic Research,  
Cambridge,  
Massachusetts.

**Thomas D. Sequist,  
MD, MPH**  
Department of Health  
Care Policy, Harvard  
Medical School,  
Boston, Massachusetts;  
Division of General  
Medicine and Primary  
Care, Department of  
Medicine, Brigham and  
Women's Hospital,  
Boston, Massachusetts;  
and Partners  
Healthcare System,  
Boston, Massachusetts.

**Michael L. Barnett,  
MD**  
Department of Health  
Care Policy, Harvard  
Medical School,  
Boston, Massachusetts;

**The success** of accountable care organizations (ACOs) under global payment may depend in part on a common yet poorly understood clinical decision: the patient referral in the outpatient setting. Fundamental to collaboration among physicians and other health care professionals, patient referrals have been largely ignored in the payment reform debate.

Referral rates in the United States more than doubled from 1999 to 2009, with about 10% of outpatient visits resulting in a consultation or visit to another physician.<sup>1</sup> Referrals seem to be both underused and overused, with clinical information often poorly transferred between physicians and frequent confusion between primary care physicians and specialists over the specialist's role.<sup>2</sup> Yet little is known about referrals. By systematically measuring and evaluating referrals in their physician networks, ACOs may be able to better target efforts to improve care coordination and reduce spending.

Referrals may be driven by a number of factors. Physician knowledge gaps due to specialization create a natural demand for referrals. Time pressures on outpatient clinicians may intensify this demand, because

number of physicians was 3.0 times greater in the same comparison, correlating with imaging, diagnostic tests, and minor procedures used on the order of 1 to 3 times as frequently.<sup>3</sup> Surveys of primary care physicians suggest that for a patient with a given clinical profile, the largest variation in clinical decision making between high- and low-spending regions was in the likelihood to refer.<sup>4</sup>

Referrals also affect prices. Given fee differences across private payers, shifting referrals from more expensive to less expensive clinicians and health care organizations may garner price discounts. Among early ACOs in Massachusetts, initial savings measured through claims were largely achieved by referring patients to physicians and facilities that charged lower prices, consistent with early efforts by these ACOs to control referral patterns.<sup>5</sup>

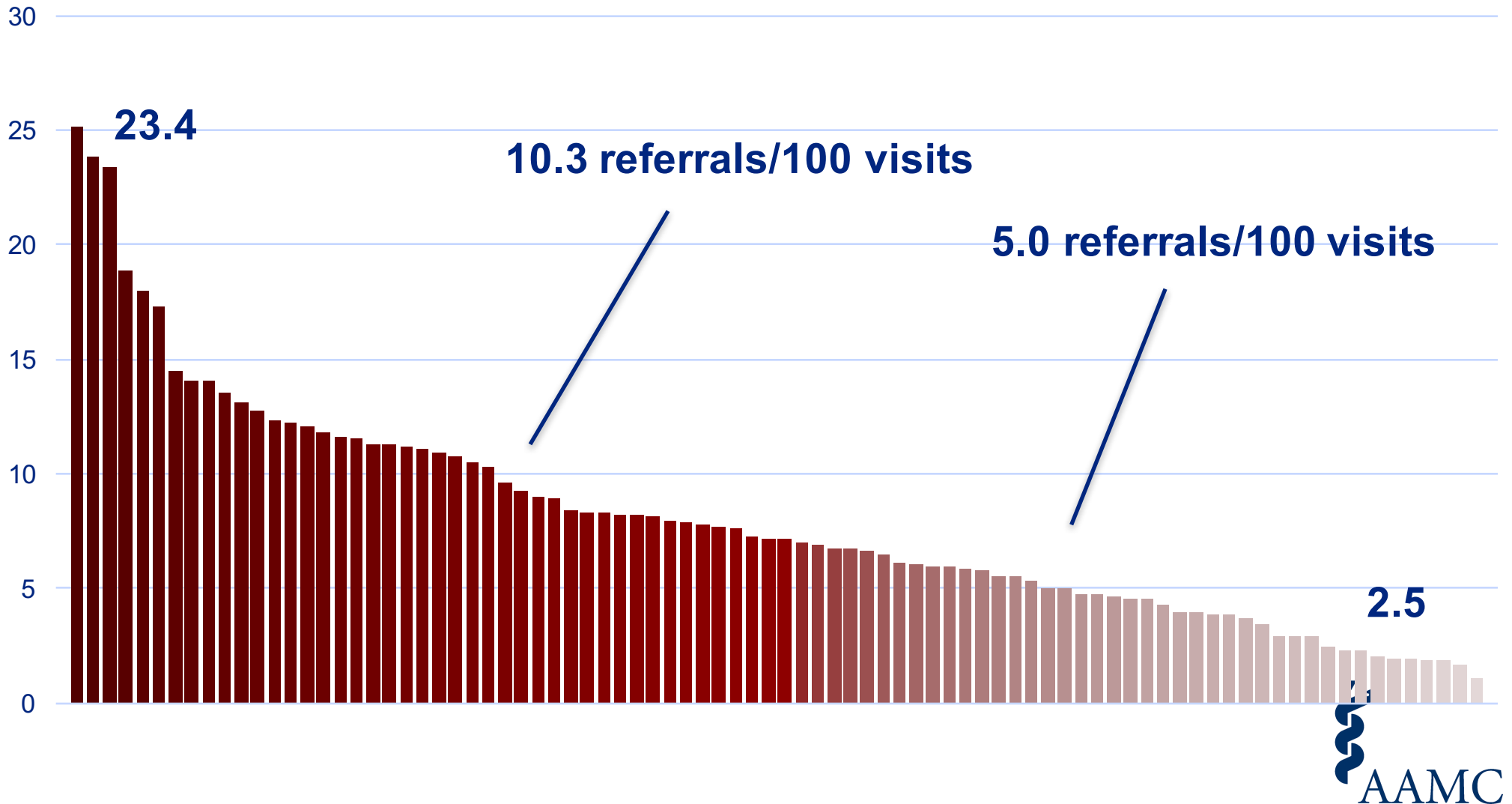
In addition, referrals may affect quality. Fragmentation of care increases with the number of physicians a patient sees, reflecting the challenges in communication and teamwork among physicians in a complex delivery system. Medicare beneficiaries with chronic diseases such as heart failure or diabetes see a median of 8 to 10 physicians in a year, and the typical primary care physician needs to coordinate care with hundreds of other physicians for a panel of patients.<sup>6</sup> Poor continuity of care is associated with more preventable hospitalizations, complications of

---

**Much can be learned from examining patterns of physician referrals within a single organization.**

# Referral Rates are Highly Variable Across PCPs

(Referrals/100 PC visits; each bar represents a single provider at one AMC)



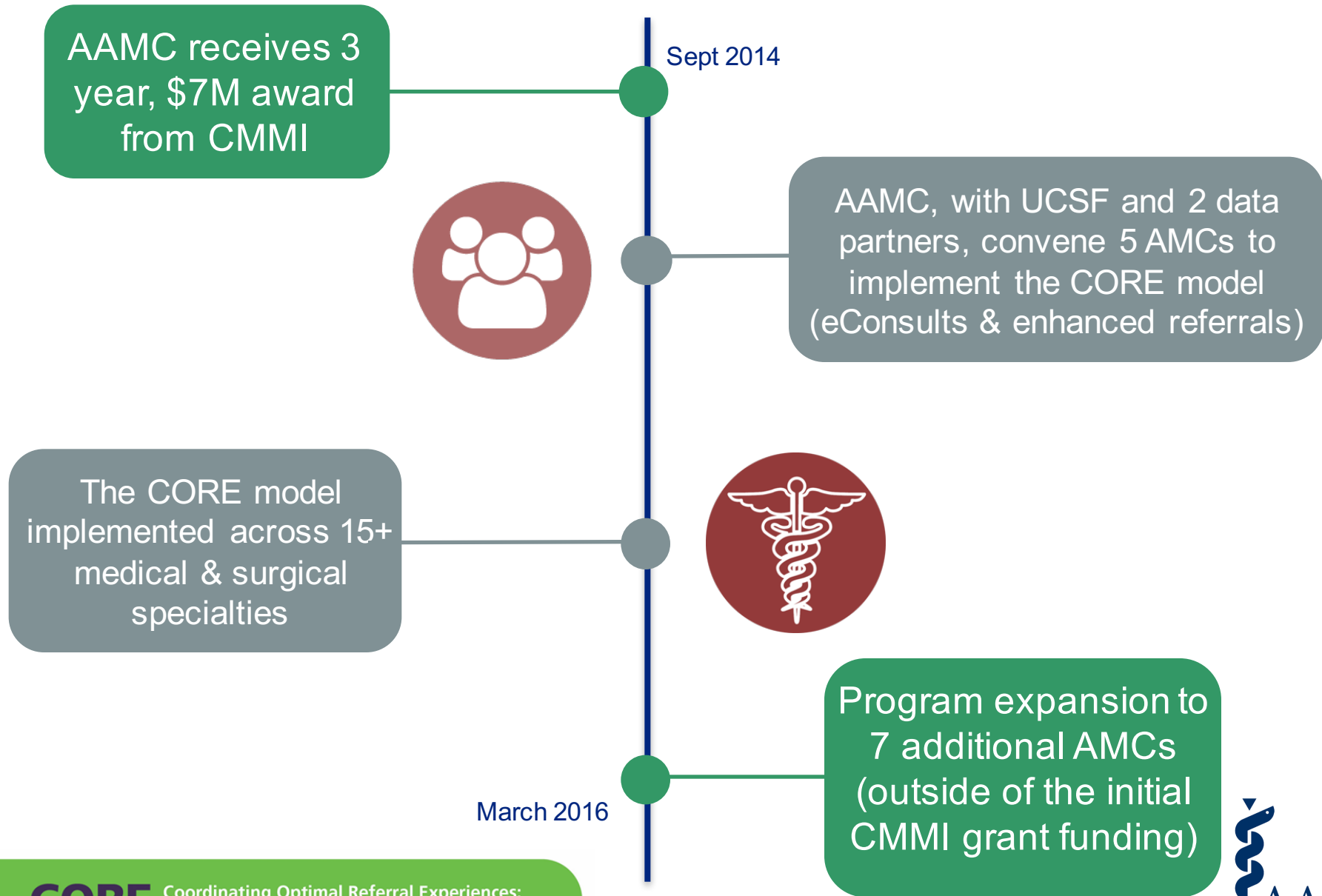


# Project CORE Goals

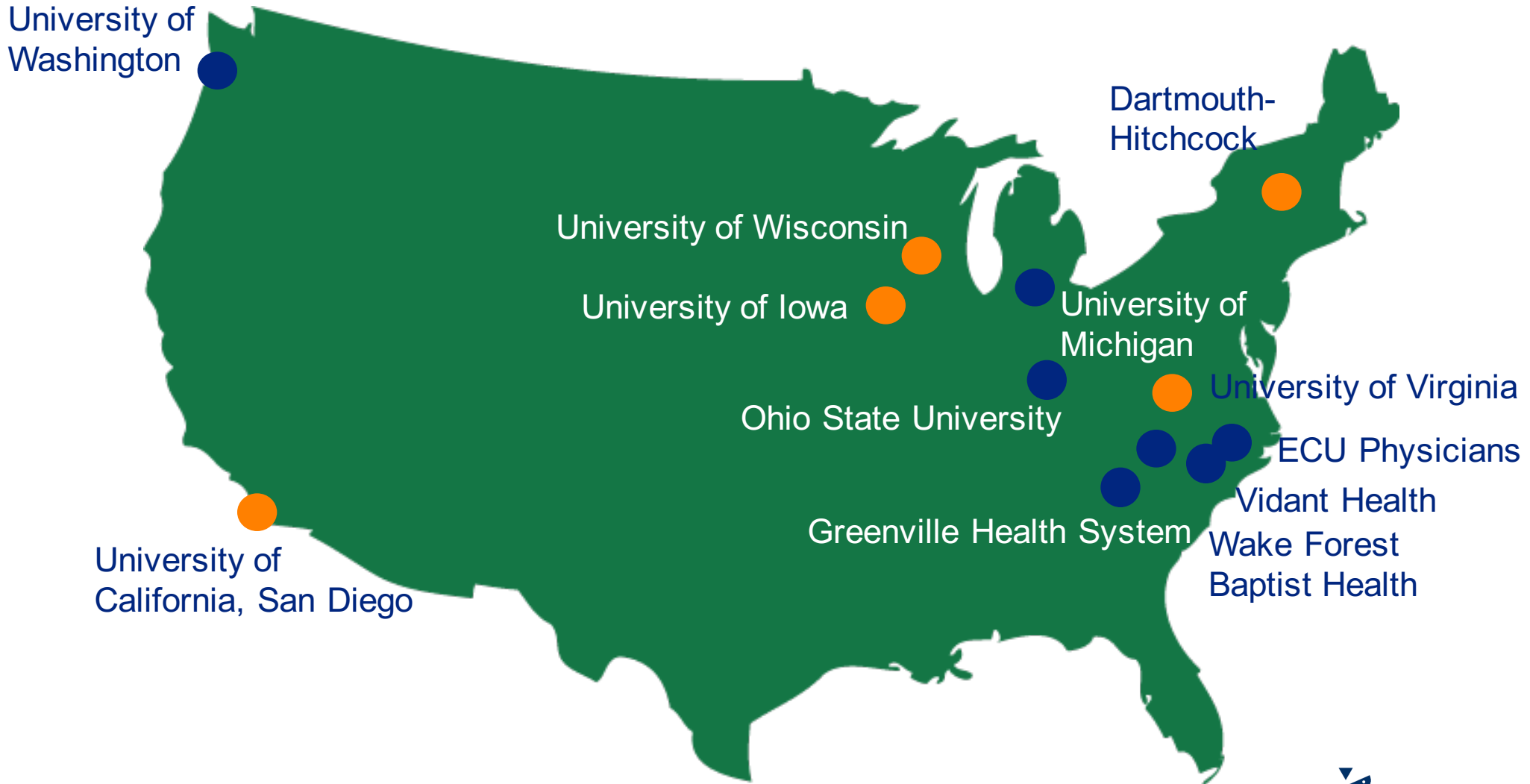
By improving care delivery at the primary care – specialty care interface, the CORE model seeks to:

- Improve **specialty access**
- Enhance **primary care comprehensiveness**
- Reduce **unwarranted variation** in referral thresholds
- Improve **communication and coordination** between primary care and specialists
- Improve **quality** and **convenience** for patients
- Control **costs of care**

# Evolution of the CORE Model



# 12 Participating AMCs



- CMMI Collaborative
- CORE2 Collaborative

# Elements of the CORE Model

1. **Improve communication** through optimized EMR workflows
2. **Improve coordination** through care coordination agreements
3. **Improve access** through introduction of eConsults
  - Align incentives for providers
4. **Improve clinical alignment** of PCP and specialist through point-of-care decision support
5. **Seek to create a culture** of trust, partnership between PCPs and specialists

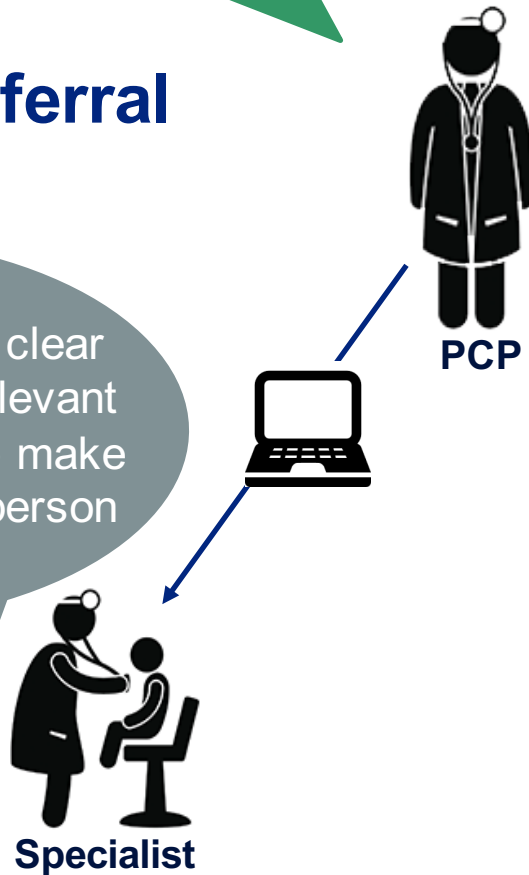
# Optimizing Care in the EMR

# Optimizing Care in the EMR

My patient needs to see a specialist about a specific clinical issue.

## Enhanced Referral

I appreciate having a clear clinical question and relevant data in the EMR to help make the most out of this in-person visit.



# Optimizing Care in the EMR

My patient needs to see a specialist about a specific clinical issue.

I have a clear clinical question for a specialist to help me manage my patient's care plan.

## Enhanced Referral

## eConsult

I appreciate having a clear clinical question and relevant data in the EMR to help make the most out of this in-person visit.

I reply to the PCP with my recommendation and next steps for the patient so that the PCP can continue managing the patient's care



Specialist



PCP



Specialist

# University of Iowa HealthCare

## Examples of **e-Consultations**

Paul James MD  
Professor and Chair



# Dermatology e-Consult

Clinical Question: Psoriatic lesions versus actinic keratosis.

This is a 62 y.o. male with long-standing history of mild psoriasis since childhood. He has significant solar damage over the forearms (L>R). Over the last 2 years he has noted new lesions on the forearms which he interprets as psoriasis but I am concerned about actinic keratosis.

# Left Arm Photos



# Consultant's Response

Keratotic papules on the left arm are concerning for actinic keratosis (arm that hangs out driver side window) but it is impossible to distinguish with absolute certainty in this case. The lesions on the right arm and elbows appear to be more consistent with psoriasis and benign keratoses. No lesions appear to be concerning for non-melanoma skin cancer at this time.

# E- Consult Recommendations

1. At some point in the Fall (September - November), consider topical Efudex (fluorouracil 5% cream) treatment to the dorsal forearms and dorsal hands: apply twice daily for 2-3 weeks, then stop. Patient will experience redness, scaling, and discomfort- that is normal. Counsel patient to stop at any point if he develops significant irritation.
2. Recommend regular use of broad-spectrum sunscreens SPF>30.
3. Recommend liberal use of emollients- such as white petrolatum ointment (Vaseline), Aquaphilic, Vaniply ointment, Vanicream, CeraVe moisturizing cream, or Cetaphil moisturizing cream- applied at least twice daily and immediately after bathing or swimming.
4. Recommend triamcinolone 0.1% cream applied to the elbows twice daily for 2 weeks, then twice daily 2-3 days per week as needed. Do not apply to the face, armpits, or groin.

Dermatology Staff Physician(staff)

# Rheumatology e-Consult

My question is about diagnosis of early RA vs. other serious rheumatological disease.

This is a 36 y.o. female South Korean with classic history of bilateral PCP, MCP stiffness, swelling and pain. No warmth and exam is unrevealing. 2 year history of progression. FH is remarkable for mother and MGM with Rheumatoid Arthritis. X-rays and labs are unrevealing. Should I continue NSAIDs or referral now to consider DMARD?

# Rheumatologist's Assessment

I personally reviewed this patient's recent hand films and agree with the findings as recorded (normal films, no erosions). I also reviewed lab results and her recent clinic note documenting several years symptoms, progressive AM stiffness and pain affecting hands, but no objective swelling on exam. Positive family history of RA. Creatinine normal today, but otherwise no basic labs since 2013, at which time there was anemia. **ANA is pending.** Both RF and CCP are negative.

## **Assessment:**

- RA is unlikely given absence of objective swelling after 2 years of symptoms, normal ESR, CRP and negative RF and CCP
- A lupus arthritis could cause this degree of hand pain & stiffness without objective swelling.

# Rheumatology Recommendations

Agree with checking ANA (pending)

- recommend that you also check a CBC with differential to rule out cytopenia or unexplained anemia and Urinalysis with micro.

*[in general, if you have enough suspicion for lupus to order ANA, you should also check CBC with diff, creatinine, & urinalysis if they have not been done recently].*

***If all of the above are normal,*** I think you are fine to continue NSAID and regular follow-up without formal rheumatology consult (until or unless there are additional problems to raise concern for autoimmune disease. Occupational therapy consult may be helpful for hand pain ("evaluate and treat").

***If the ANA is positive:***

Please add-on the following labs: SSA, SSB, Smith, RNP, & dsDNA.

Will then convert this to formal consult for arthritis.

Please let me know if you have any questions.

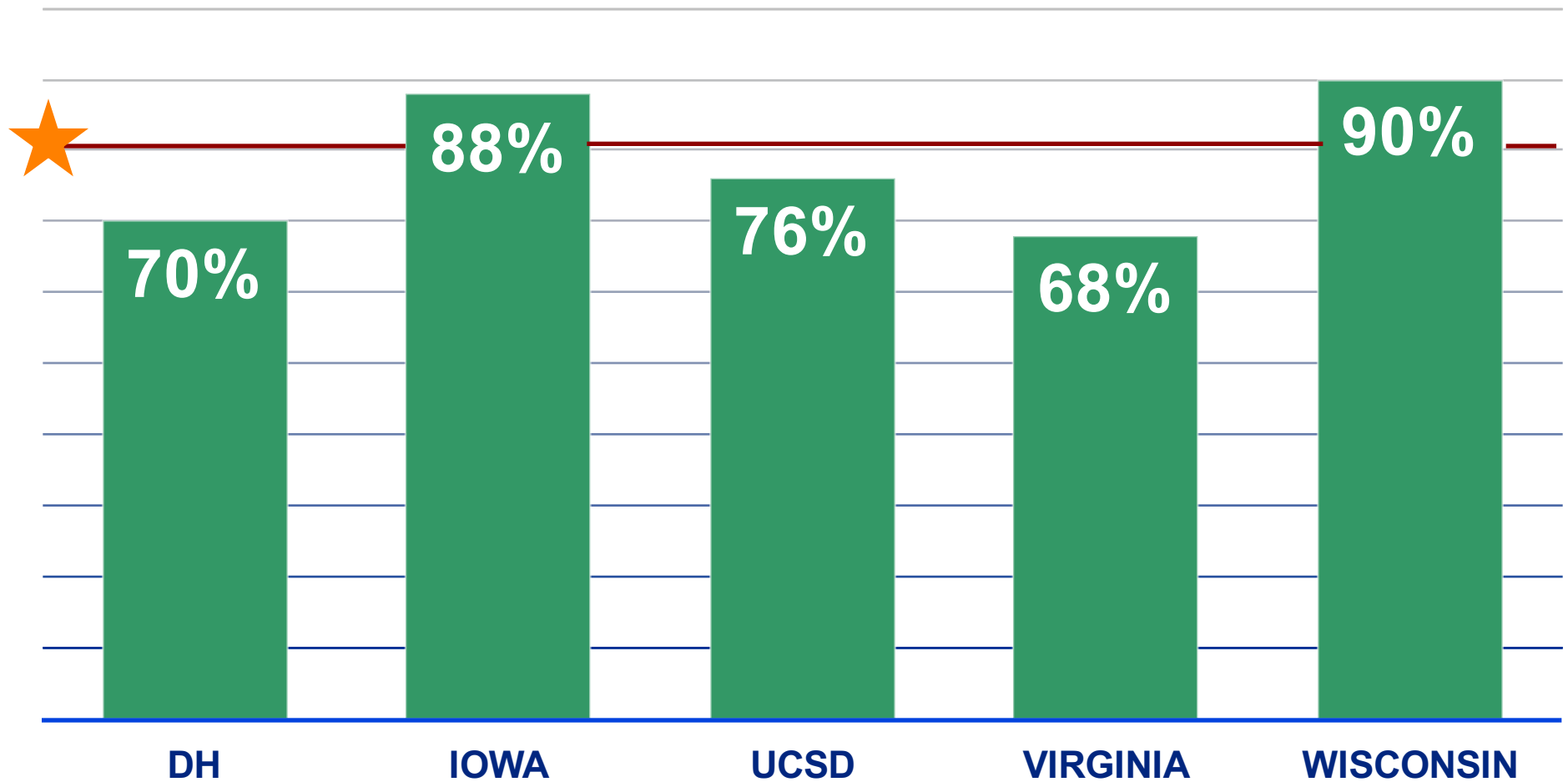
# Disclaimer

The service provided through the e-Consult service is different from the diagnostic services typically provided by a health care provider. The e-Consult is based on the information available to me and is furnished without the benefit of a comprehensive evaluation or physical examination. Therefore, I may not be aware of information that might affect my opinion of the patient's diagnosis and treatment. By deciding to engage this service, you acknowledge and agree that: (1) you are aware of these limitations and agree to assume the risk of these limitations; and (2) no warranty or guarantee has been made concerning any particular opinion, result, or cure of a condition addressed via the e-Consult service.



# Program Impact

# Primary Care Faculty Usage of eConsults

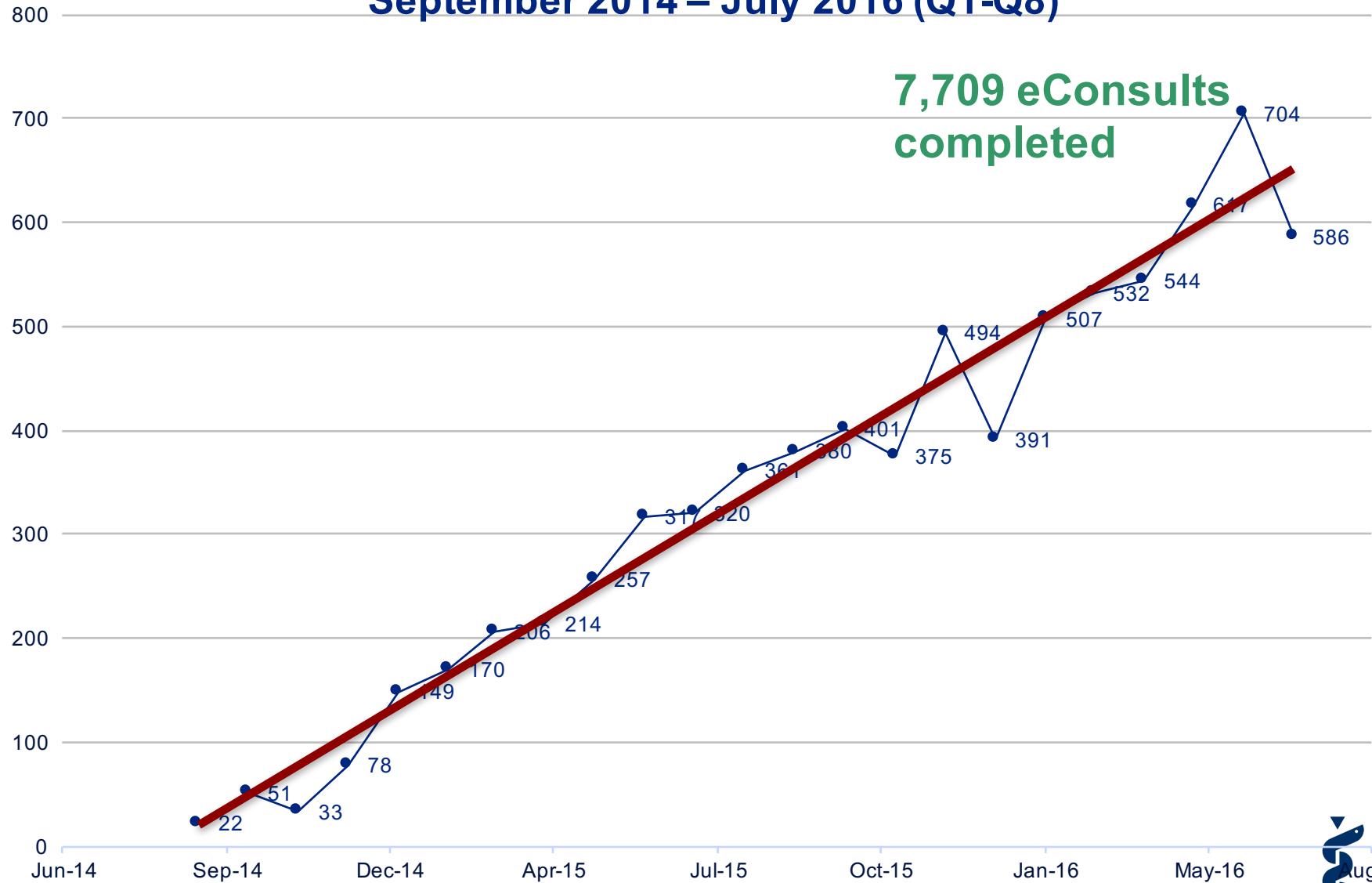


*\*Cumulative use through July 2016*

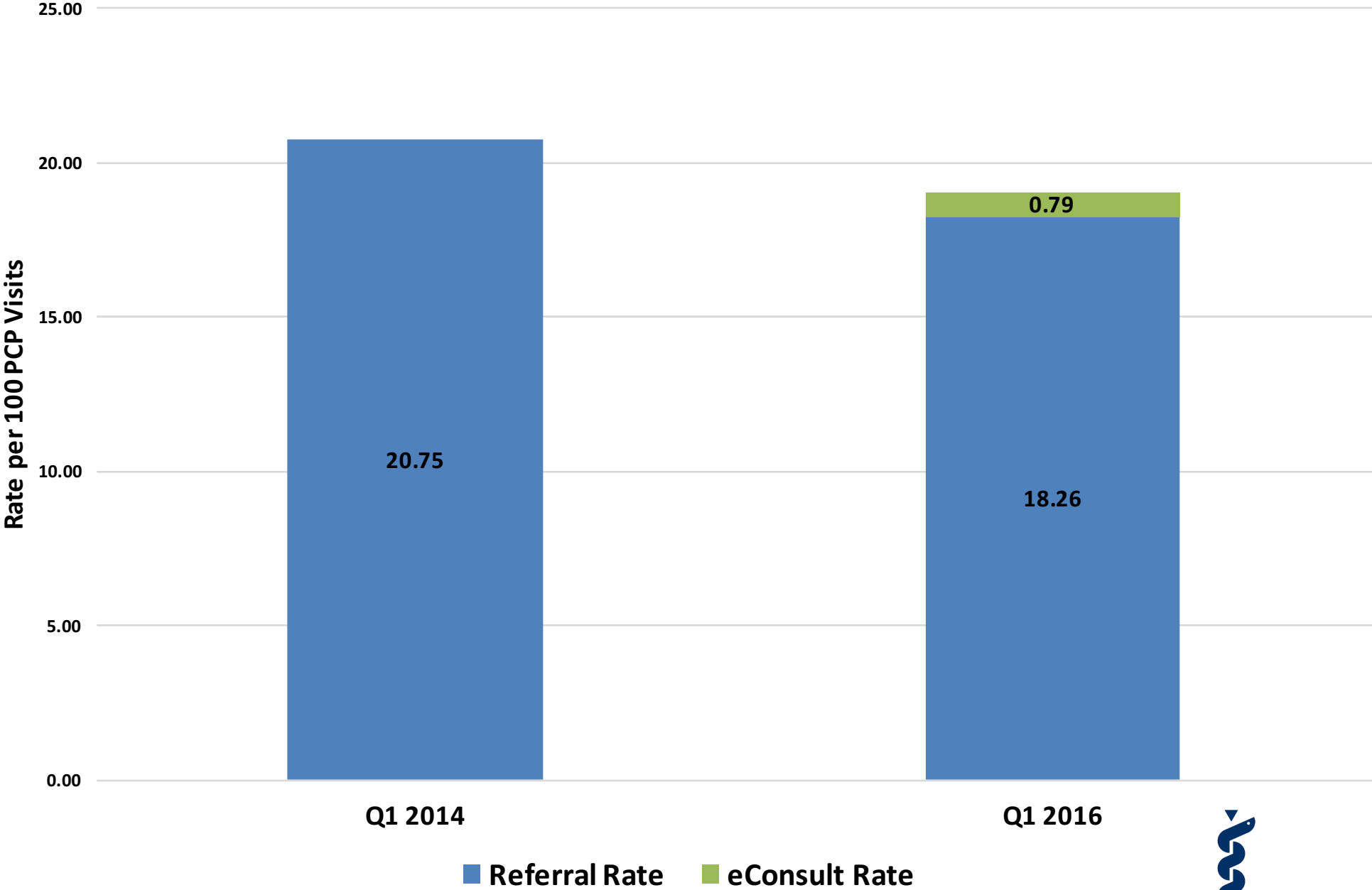
*Source: AMC Monthly Reports (July 2016)*

# CMMI Collaborative: eConsult Volume

September 2014 – July 2016 (Q1-Q8)



# Referral and eConsult Rate for Live Program Specialties at 1 AMC



# Provider Satisfaction Survey

**PCP Survey:** I am highly satisfied with this eConsult response.

89% of PCPs agreed with the statement. Results based on 316 PCPs at 5 AMCs

89%



**Specialist Survey:** Was this eConsult question appropriate?

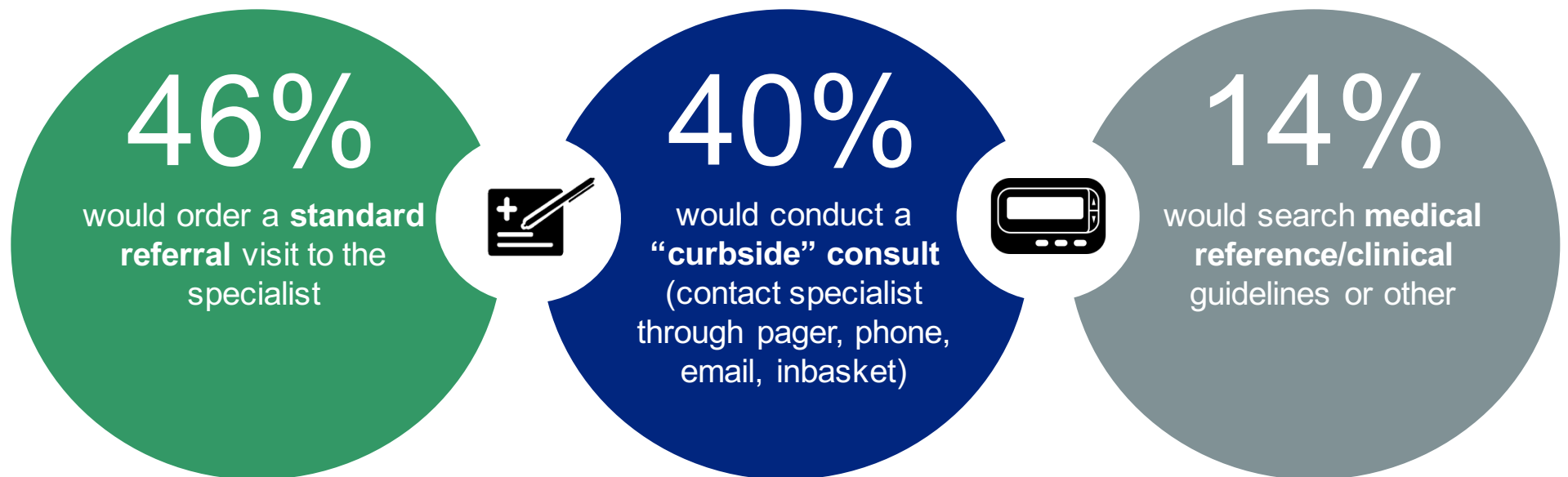
89% of specialist eConsultants said Yes. Results based on 693 responses from specialist eConsultants at 5 AMCs

89%



# Primary Care Physician Survey

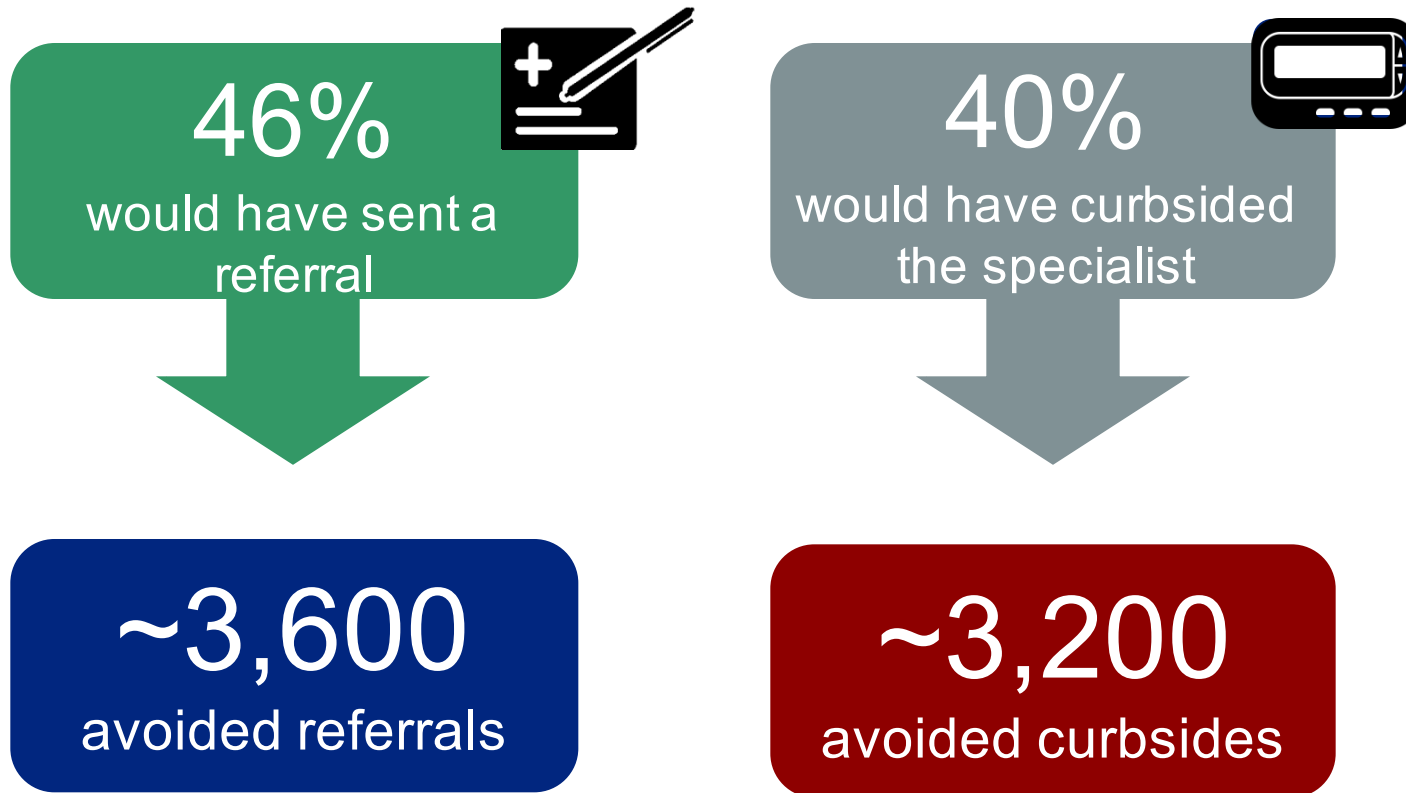
*In the absence of an eConsult option, what would you have done?*



*\*Results based on 316 responses from PCPs at 5 sites*

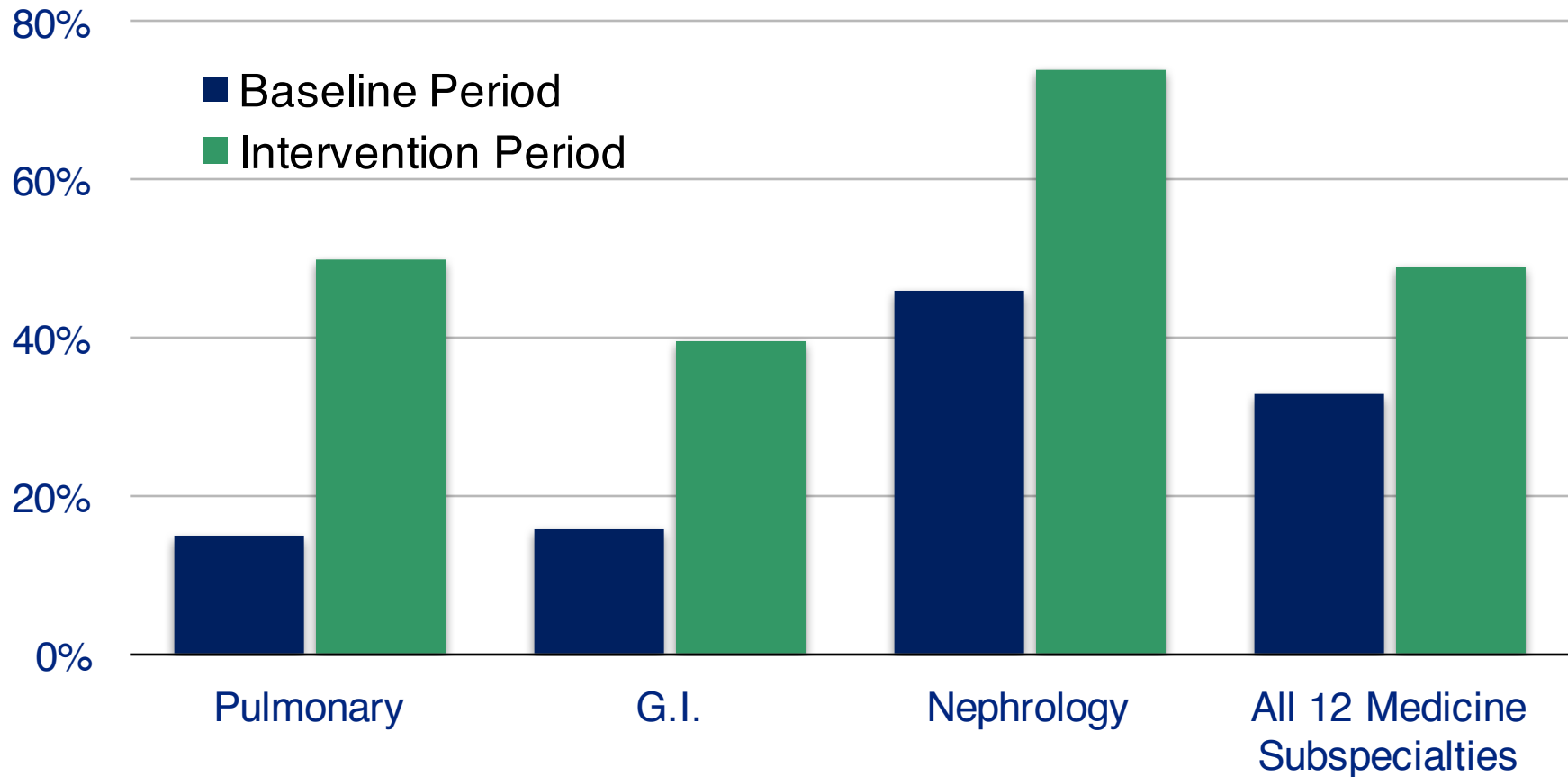
# Impact of eConsults

*~8,000 eConsults completed by PCPs thru August 2016*



# UCSF Results: Access

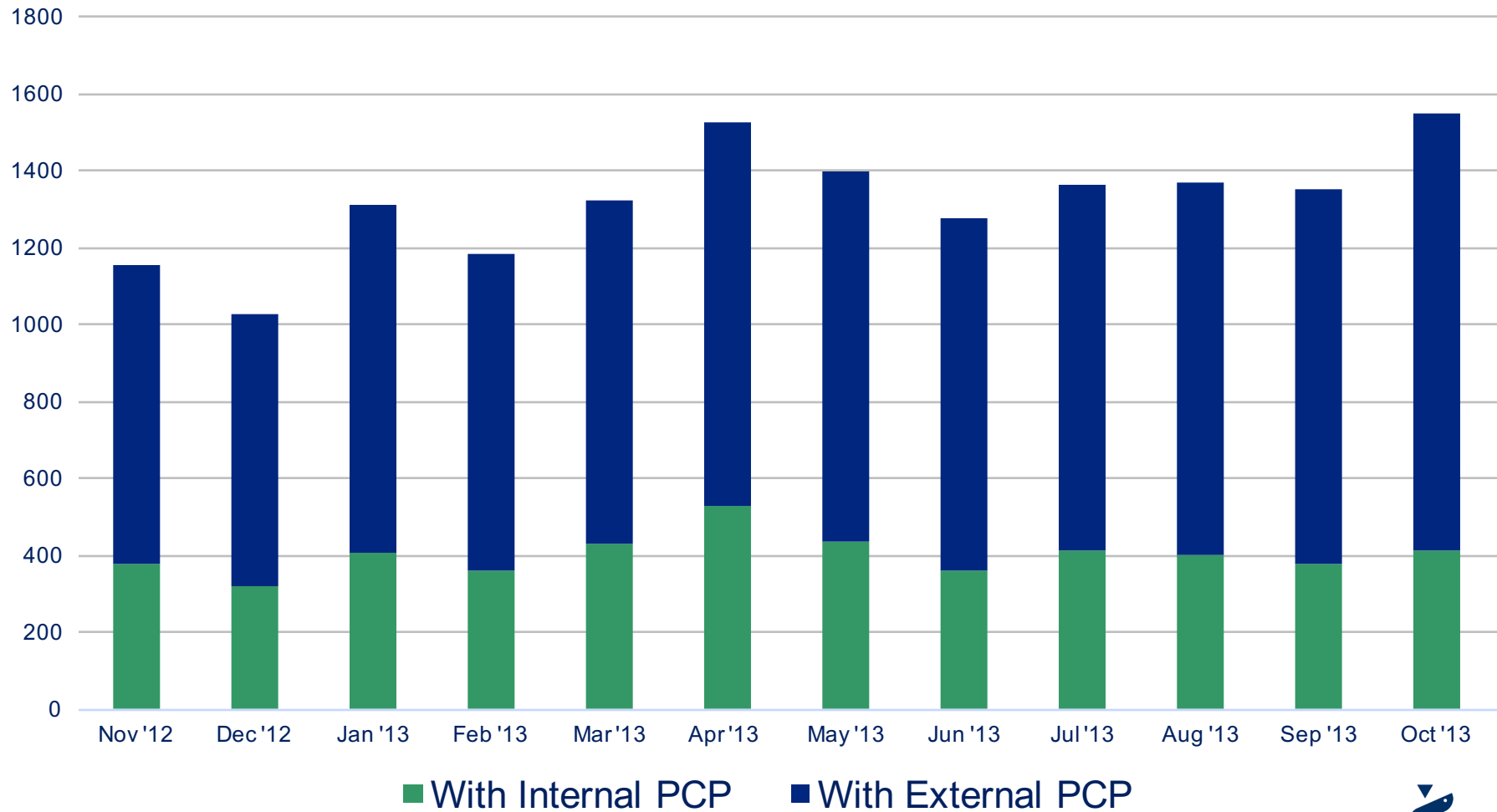
Specialty care in  $\leq 14$  days





# UCSF Results: Increased External Referrals

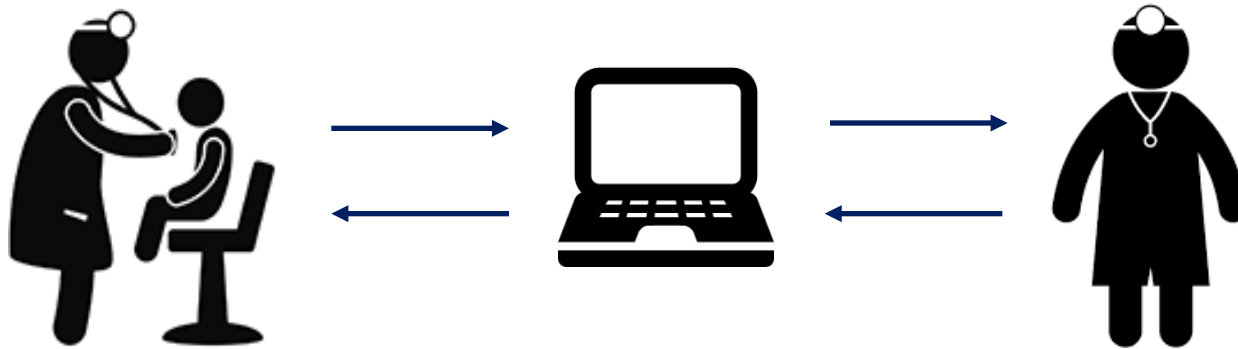
Arrived New Patient Visits to UCSF Medicine Specialties



# What We're Hearing...

“This model is right for our patients, our organization, and healthcare in general.”

– *Academic Health System CEO & President*



“I have found it a very helpful way to get answers to my questions & learn at the same time, while getting my patients’ needs addressed.”

– *AMC Primary Care Physician*

“eConsults reduce the length of waiting for in-person consultations...it is the future of medicine...”

– *AMC Specialist*

# eConsults

Cathleen E. Morrow MD  
Chair and Associate Professor  
Department of Community and Family Medicine  
Geisel School of Medicine at Dartmouth  
Dartmouth Hitchcock Medical Center



**Dartmouth**  
GEISEL SCHOOL OF MEDICINE

# Joy in Practice!

- Timely answers to nagging questions that would keep you awake at night
- Reduction of the worry-quotient
- Patient convenience, appreciation
- More likely to ask: not interrupting colleagues, knowledge that specialist is accruing RVU's, more focused education
- Increased specialty awareness of PC provider needs

# The Medical Center View

- Increase access to specialty services: particularly important for the over-burdened ones
- Increase appropriate live consults
- Cost of care, value
- Increase connectivity between in and outpatient spaces.

**UWHealth**  
University of Wisconsin  
Hospital and Clinics

  
**THE OHIO STATE UNIVERSITY**  
WEXNER MEDICAL CENTER

**UCSF**  
University of California  
San Francisco

 **University of Michigan  
Health System**

 **UNIVERSITY OF IOWA  
HEALTH CARE**

**UW Medicine**  
UNIVERSITY OF WASHINGTON  
MEDICAL CENTER

 **GREENVILLE  
HEALTH SYSTEM**

 **Wake Forest University Baptist  
MEDICAL CENTER®**

 **UNIVERSITY  
of VIRGINIA  
HEALTH SYSTEM**

 **VIDANT™  
Medical Center**

 **East Carolina  
UNIVERSITY**

 **Dartmouth-Hitchcock  
MEDICAL CENTER**

  
**UC San Diego  
MEDICAL CENTER**

 **AAMC**



GREENVILLE  
HEALTH SYSTEM

**COR**  
**E**

Coordinating Optimal Referral  
Experiences:  
Implementing Consult and Enhanced Referrals

# Project CORE at GHS: Why, How and Challenges

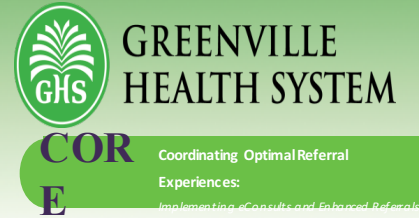
September 27<sup>th</sup>, 2016

Sean Bryan, MD, FAAFP

Associate Professor and Chair, Dept. of Family Medicine

Sean Bryan, MD, FAAFP | [SBryan@ghs.org](mailto:SBryan@ghs.org) | +1 (864) 797-6112

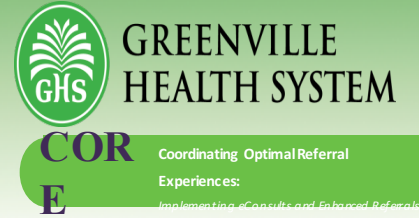
# Business Needs



- Become a high performing multi-specialty group
- Follow more evidence based medicine protocols
- Reduce unnecessary utilization of care
- Improve standardization where appropriate
- Improve patient-centered communication between primary care and specialists while reducing fragmentation of care between providers
- Position GHS to succeed in the transition to value based alternative payment models
- Better population health management by improving patient access to specialty care, as well as reduce the cost of care for patients



# Business Objectives



- Reducing total cost of care for primary care patients
- Improving quality of care through enhanced timeliness of specialist input and improved continuity of care within the primary care setting
- Increasing patient satisfaction by improving access to specialists for specialty care

# Getting the Support Necessary



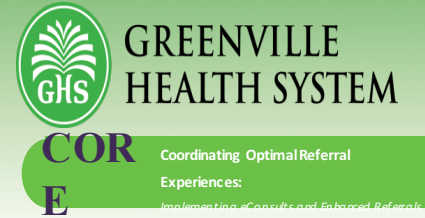
- Obtained commitment from GSH leadership - COO, CIO, CMIO, and Chairs by showing the benefits and success obtained by other AMCs, and the alignment with:
  - PCMH
  - Medical neighborhoods
  - The IHI Triple Aim
  - GHS' strategic vision:
    - “*To transform health care for the benefit of the people and communities we serve*”
- Chairs, Vice Chairs and Primary Care lead physicians in Family Medicine and Internal Medicine actively marketing the initiative to:
  - Colleagues
  - Administration

# Challenges



- Other Health System Strategic Priority
  - Change in the current governance structure from governmental to private not for profit
- Epic implementation / IT resources availability
  - 5 hospitals went live on Epic in February 2016
  - 2 hospitals and many practices go-live on Epic on October 1, 2016
- Primary Care Lead Physician challenges
  - Large territory to cover
  - Many new hires
  - Protected time
    - Family Medicine Vice Chair for Clinical Affairs had too many competing priorities to handle this role alone
    - Chair of Internal Medicine has agreed to support up to 0.25 FTE for newly identified Primary Care Lead Physician

# Current Status



- PCP lead and operation team identified and are actively participating in the project
- Epic team member expected to join the team in November, after the last Epic go live
- Team of specialists and PCPs are reviewing and tweaking the Cardiology and Endocrinology eConsult and Enhanced Referral templates supplied by UCSF
- Investigating what will be the 3<sup>rd</sup> and 4<sup>th</sup> specialties to go-live so review of templates can begin, considering Neurology and Pulmonology
- Planned go-live for the first two specialties: February 2017

# Scaling & Sustaining the CORE Model



Identify next cohort of AMCs

To create an “innovation implementation” collaborative



AAMC work with CMS

On reimbursement and a sustainable payment model



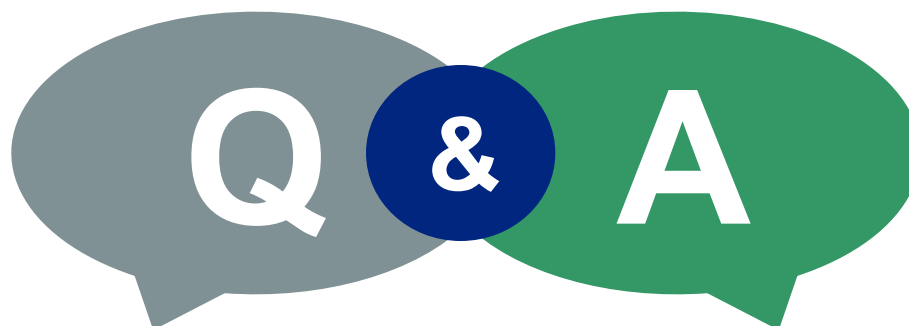
Broaden model to inpatient care

To facilitate transition of care to community-based care team



Expansion at current AMCs

To include children’s hospitals and external, community PCPs



**THANK YOU!**

To learn more or to request additional information, visit  
[www.aamc.org/projectcore](http://www.aamc.org/projectcore) or email  
[projectcore@aamc.org](mailto:projectcore@aamc.org).

Scott Shipman, MD, MPH  
[sshipman@aamc.org](mailto:sshipman@aamc.org)



Tomorrow's Doctors, Tomorrow's Cures

---

Learn

---

Serve

---

Lead

Association of  
American Medical Colleges

# Implementing CORE : a few lessons

Assembling the team

“Selling” the model to key stakeholders

EMR build

Identifying specialist eConsultants

Customizing templates

Training providers

Shifting the culture

Data and quality assurance

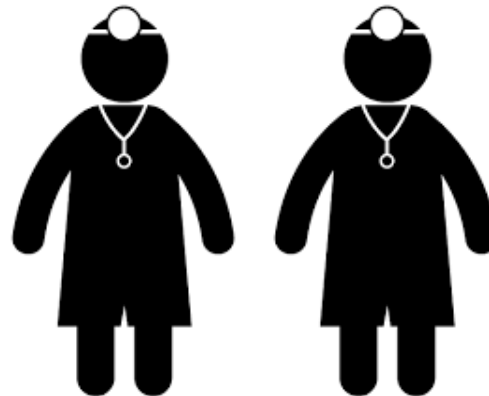


# Innovation in Action

As of 2016, across the participating AMCs, over 1.2 million primary care patients can benefit from Project CORE through **timely clinical input, greater convenience, improved access, and lower costs.**



**12**  
**AMCs**



**2,000**  
**Primary Care**  
**Providers**



**1.2 Million**  
**Primary Care**  
**Patients**