TM

The PRIME POCUS Learning Network

A national, family medicine-led approach to point-of-care ultrasound

Indiana Academy of Family Physicians | Faculty Development Summit

Ryan Paulus, DO FAAFP | Executive Director

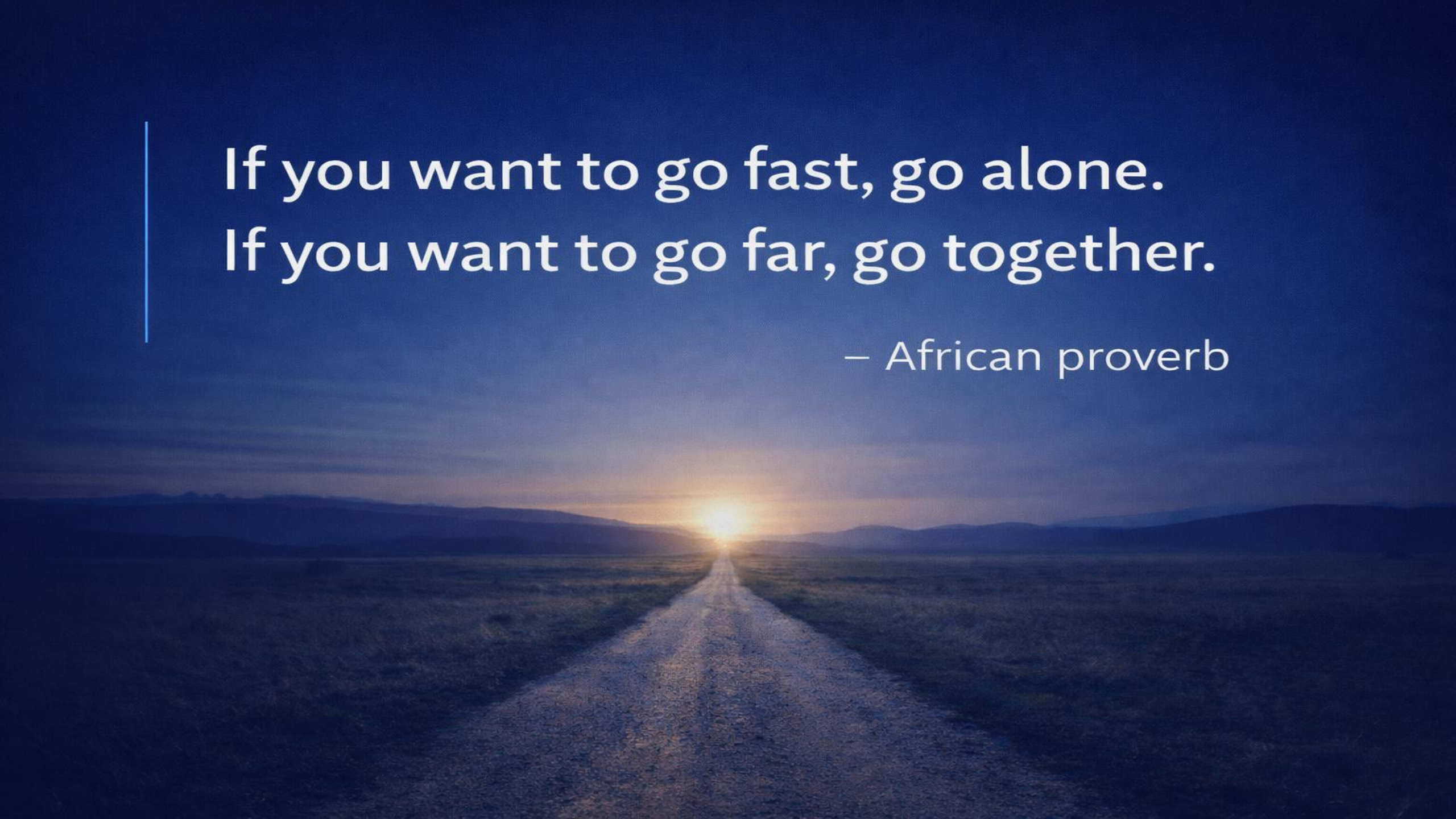
Ryan Paulus, DO

Assistant Professor · Core Faculty

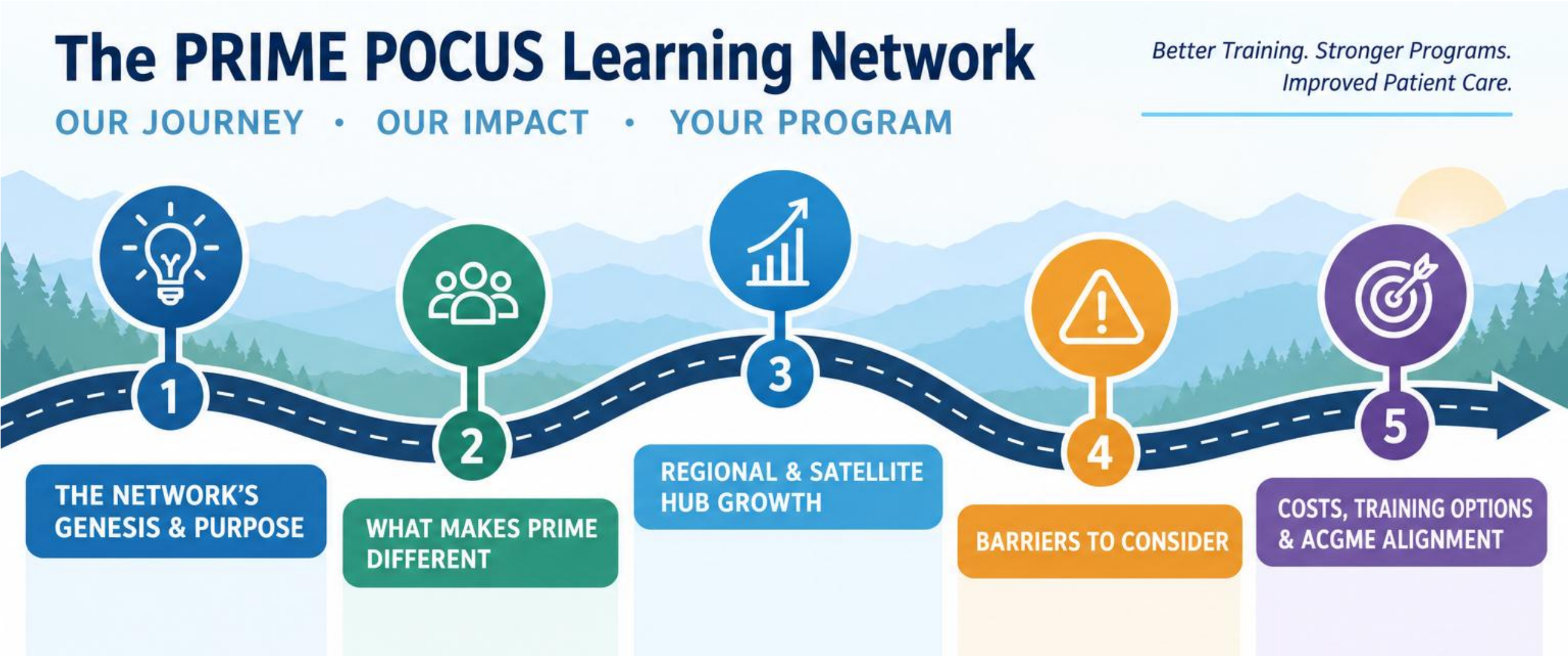
UNC School of Medicine

Department of Family Medicine

- **Ohio University College of Osteopathic Medicine**
- **Residency at UNC Chapel Hill**
- **UNC FMR Core Faculty**
  - Faculty lead for POCUS
  - Instructor at UNC School of Medicine
  - Rural primary care fellowship at UNC with a focus on POCUS
  - UNC Faculty Development Fellowship
- **STFM POCUS**
  - Founder/Program Director, STFM POCUS Certificate Program
  - Editor, STFM POCUS Modules
  - Founder/Co-chair, STFM POCUS Collaborative
  - Chair, STFM POCUS Task Force
- **PRIME POCUS Learning Network**
  - Executive Director

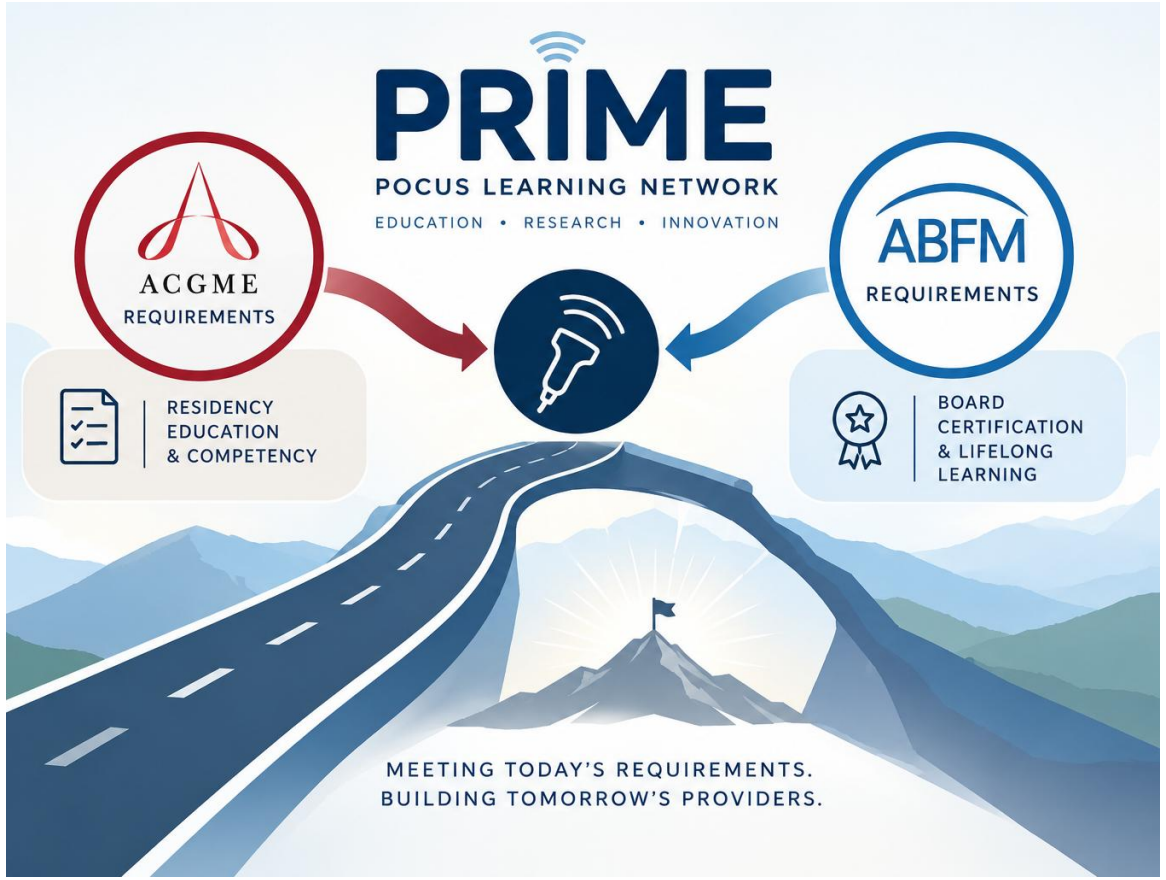

If you want to go fast, go alone.
If you want to go far, go together.
– African proverb

Roadmap



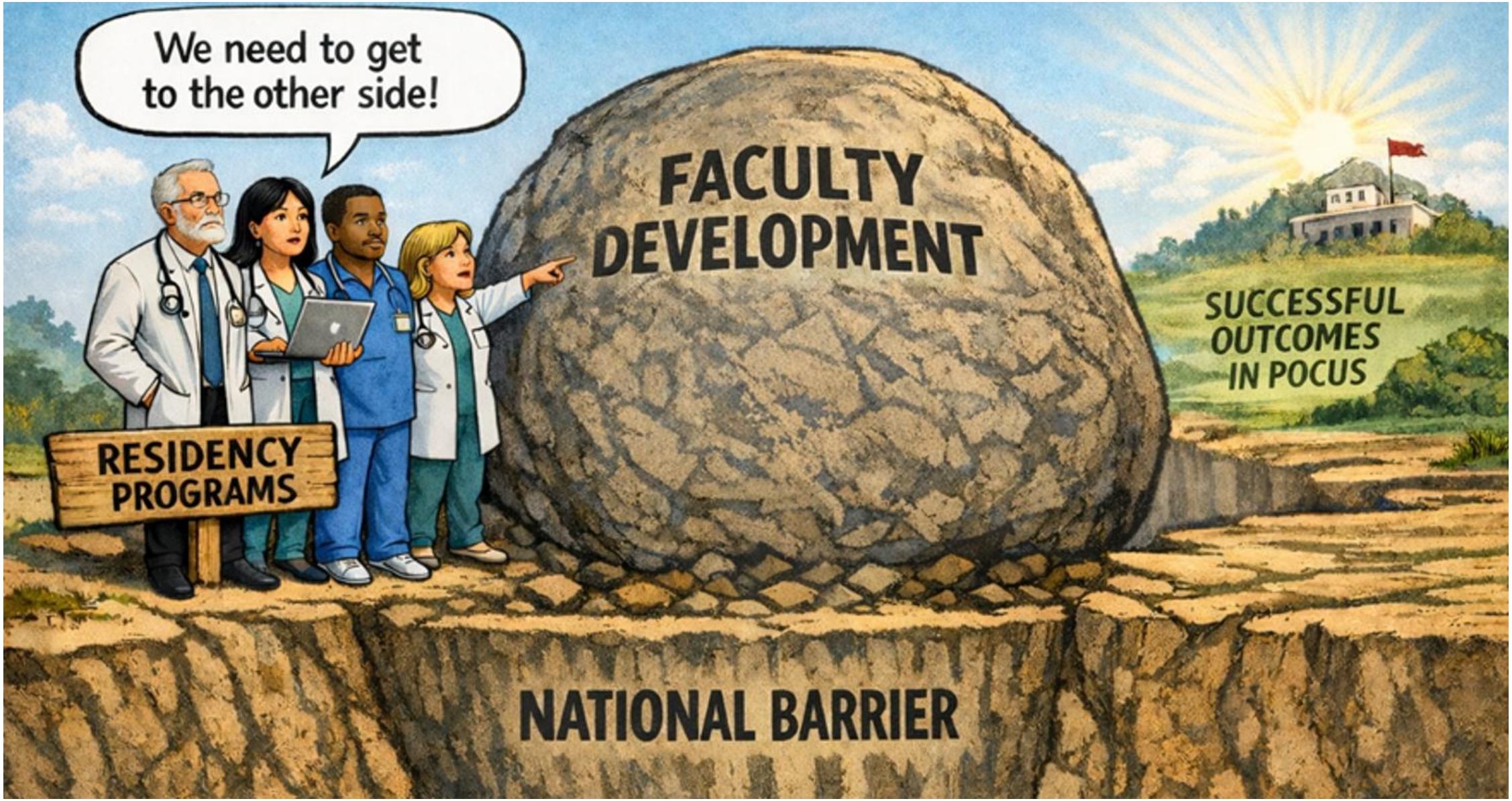
Network Genesis & Purpose

- **POCUS experience is now expected in every family medicine residency**
  - ACGME Family Medicine Program Requirements direct programs to ensure residents gain experience using point-of-care ultrasound in clinical care
- **POCUS competency requirement**
  - ABFM Competency-Based Board Eligibility (CBBE) requires program directors to attest to resident competence in POCUS
- **STFM Project FOCUS set the standard**
  - The national Task Force defined 52 core POCUS applications across five implementation tiers, with shared curricular and assessment frameworks



How do we implement the work of the Task Force?

Genesis & Purpose: Faculty Capacity Is the Real Barrier



Genesis & Purpose: The Primary Care Evidence Gap

- **Primary care POCUS evidence is thin**
  - Most evidence is borrowed from emergency medicine; family medicine data is limited (Andersen & Sorensen 2019)

- **But early results are promising**
  - Family physicians screened for AAA as accurately as hospital scans — 0.2 cm difference (Paulus 2025, JABFM)
  - A primary care DVT POCUS pathway cut DVT-related ED visits and lowered costs (Hui 2026)
  - Rural programs show cost savings and new billable services (JABFM 2025)
  - In general practice, POCUS changed diagnoses in ~50% of visits and cut referrals from 49% to 26% (Andersen 2020, BMJ Open)

PRIME is built to close this gap

A national network generating primary care–specific outcome and billing evidence

Genesis & Purpose: Family Medicine POCUS Had No Central Home

POCUS grew in scattered pockets across programs and specialties, with no academic home to lead it forward in family medicine.

This is the gap PRIME was built to fill.

PRIME POCUS Learning Network™

Point-of-Care Ultrasound Research, Innovation, and Medical Education

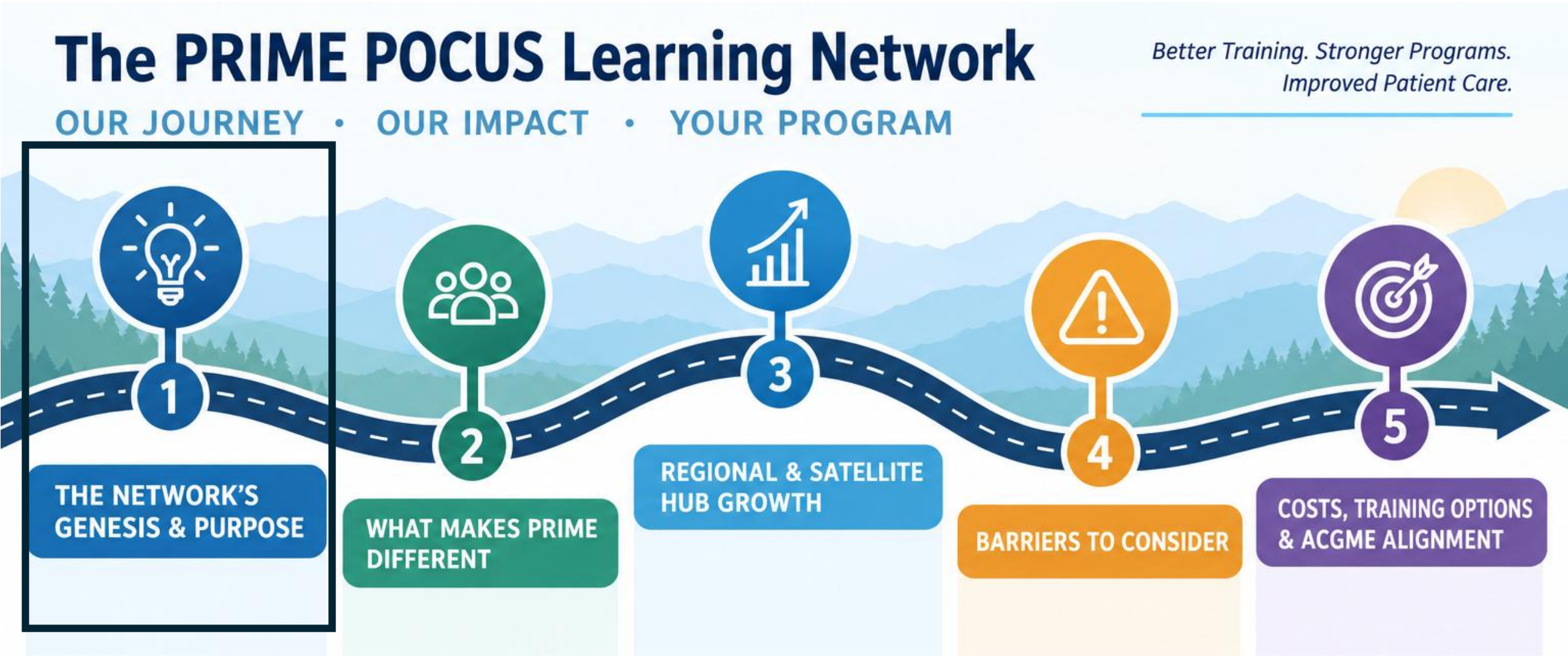
Advancing POCUS in Family Medicine

Educational Arm

Research Arm

Education • Research • Patient Care • Future of Family Medicine

Roadmap



The PRIME Difference

Family medicine. Built together.

Built by Family Medicine, for Family Medicine

- Designed and led by family medicine physicians who understand real-world practice

A National, Collaborative Network

- Not one program or institution—a shared network lifting the entire specialty

Advisory Committee Across 8 Family Medicine Organizations

- Guided by an advisory committee made up of representatives from 8 family medicine organizations

The Home for POCUS in Family Medicine

- A shared home for collaboration, learning, and growth in family medicine POCUS

Launched with ABFM Foundation startup support
Operating with a nonprofit mindset to serve the specialty

PRIME – Advisory Committee

- **Mission accountability:**
  - Anchored to the core purpose—improving bedside patient care through high-quality POCUS in family medicine
- **Family medicine–first lens:**
  - Ensures strategy, offerings, and investments consistently and directly benefit family medicine
- **Objective feedback + direction-setting:**
  - Provides feedback critique, refine, and guides priorities, products, and deliverables
- **National liaison + continuity:**
  - Serve as a bridge between PRIME and national family medicine organization
  - Maintain momentum for POCUS in family medicine beyond the STFM POCUS task force.

52 POCUS APPLICATIONS

DISTRIBUTED INTO THE 5 IMPLEMENTATION TIERS

TIER 1

MSK
Knee Effusion

OB/GYN
Fetal
Presentation

Renal/Bladder
Bladder Volume

Soft Tissue
Abscess
Abscess Drainage
Cellulitis / Edema

TIER 2

Abdomen
Free Fluid in Abdomen

OB/GYN
Intrauterine Pregnancy
Fetal Heart Rate

Pulmonary
Pulmonary Edema
Pleural Effusion

Renal/Bladder
Hydronephrosis

Soft Tissue
Foreign Body
Foreign Body Removal

Vascular
IVC
Collapsibility/Diameter
AAA

TIER 3

Abdomen
Cholelithiasis

Cardiac
Pericardial Effusion
HFrEF

MSK
Knee Joint Injection and Aspiration
Baker's Cyst
Ganglion cyst

OB/GYN
IUD Identification
Pregnancy Dating by CRL

Pulmonary
Pneumonia
Pneumothorax

Renal/Bladder
Foreign Body in Bladder (Foley Catheter)

Soft Tissue
Cyst (Epidermal Inclusion Cyst)
Lipoma

Vascular
Lower Extremity Proximal DVT

TIER 4

Abdomen
Cholecystitis
Gallbladder Sludge

MSK
Carpel Tunnel Syndrome
Achilles Tear
Bone Fracture

OB/GYN
Uterine Position
Placental Location
IUD Placement
Multiple Gestation
Amniotic Fluid
Measurement

Renal/Bladder
Simple Renal Cyst

Soft Tissue
Soft Tissue Mass
Removal
Hematoma

TIER 5

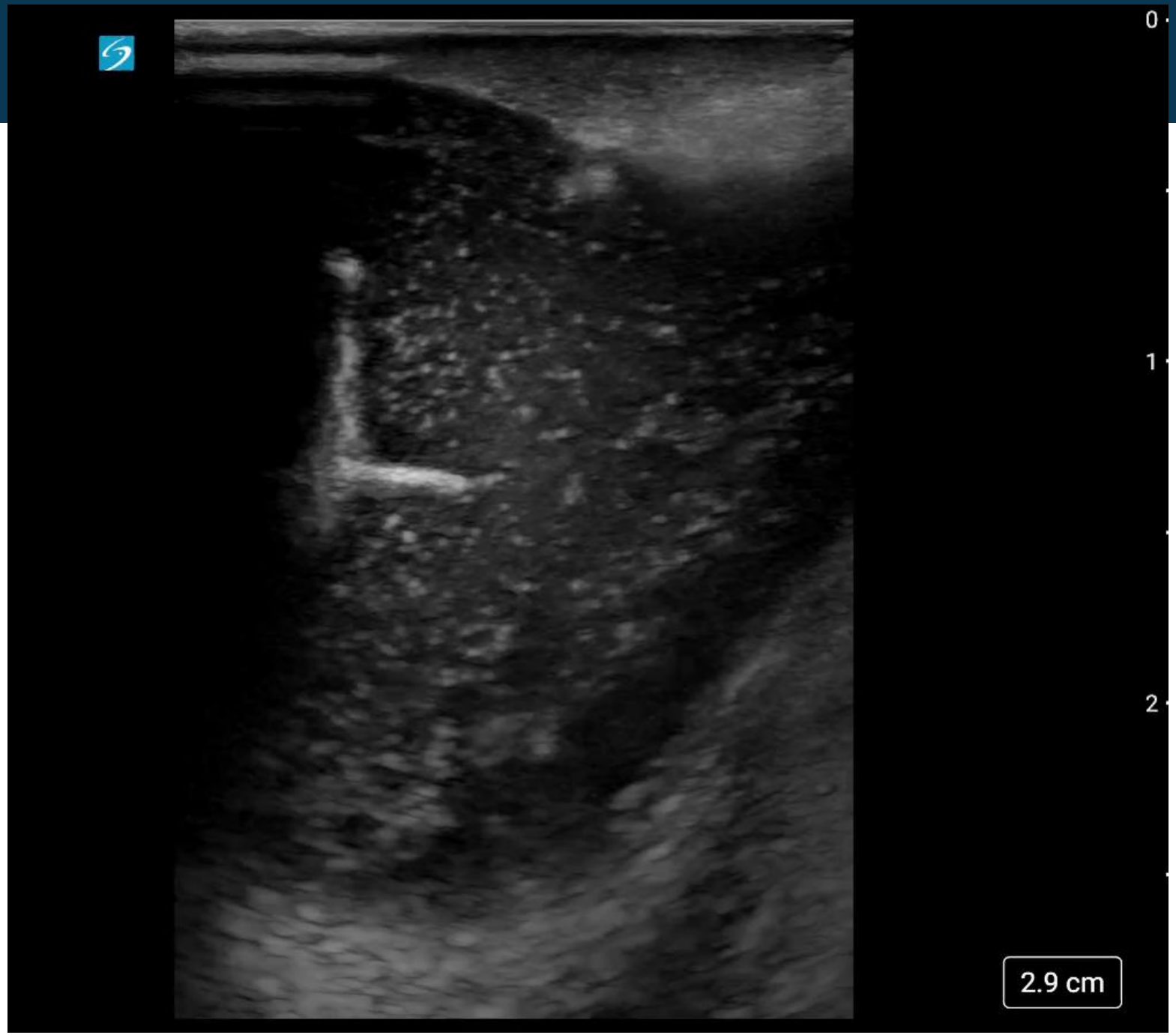
Abdomen
Paracentesis

Cardiac
Right Ventricular Strain
Left Ventricular
Hypertrophy
Dilated
Cardiomyopathy
Cardiac Tamponade

MSK:
Shoulder Effusion

Ocular
Retinal Detachment

Renal/Bladder
Nephrolithiasis



Our Research Agenda

Securing the network's research infrastructure and partnerships to power multi-site family medicine POCUS research.

Implementing POCUS in Primary Care

- Pilot study this summer: barriers & facilitators to implementation, using validated implementation frameworks
- Examines workflow, training, equipment, image storage, billing, and practice culture
- Informs larger network-wide implementation over time

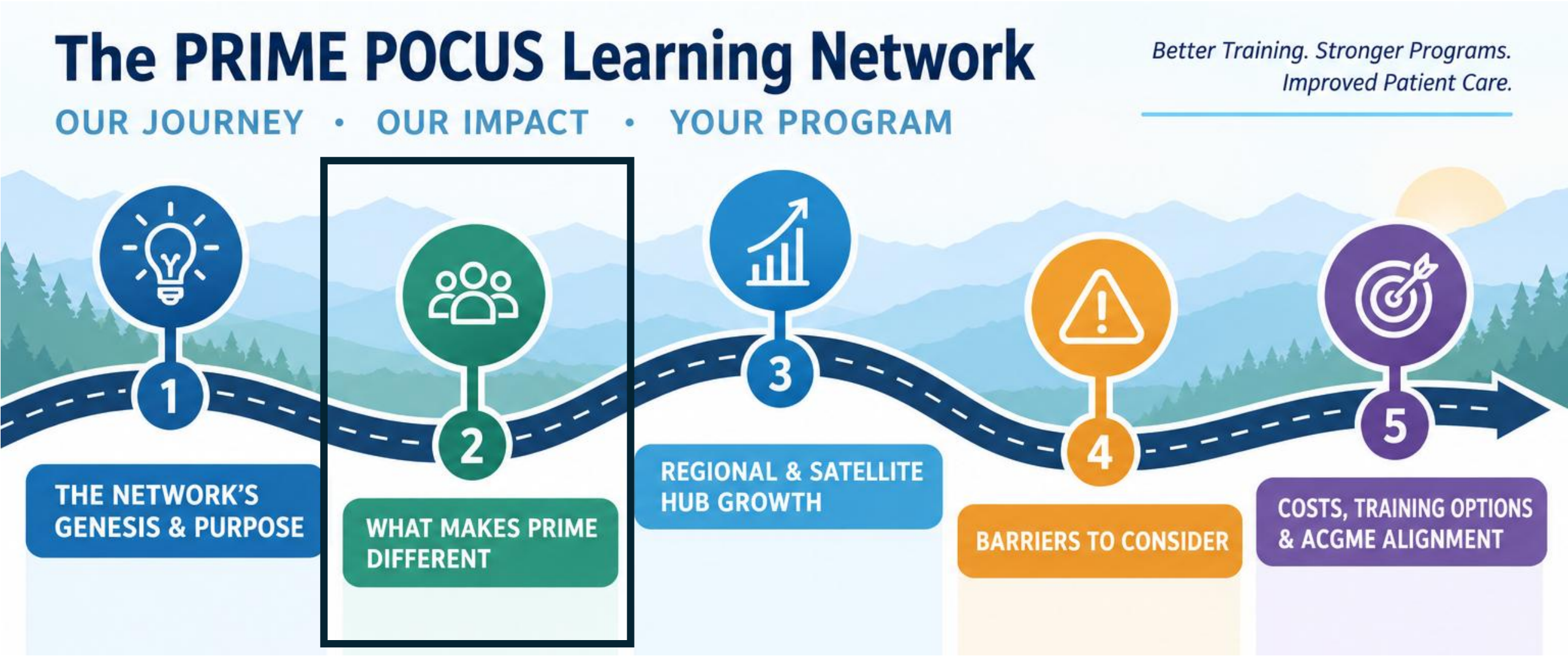
Artificial Intelligence & POCUS

- Early but exciting: AI for image acquisition, interpretation, feedback, and learner support
- A clinical AI trial is planned for later this year

Educational Research

- Validation of assessment tools
- Developing studies on our longitudinal training programs
- Research to inform ABFM selection of later tiers

Roadmap




NORTHWEST REGIONAL HUB
WWAMI WA
NORTHERN HUB
Minnesota MN
NORTHEAST REGIONAL HUB
UConn CT
MOUNTAIN WEST HUB
Colorado CO
MIDWEST REGIONAL HUB
The Ohio State OH
CENTRAL REGION HUB
Mizzou MO
WEST COAST HUB
UC San Diego CA
SOUTHEAST REGIONAL & FLAGSHIP HUB
UNC Chapel Hill NC
SOUTHERN HUB
Tulane LA
PRIME POCUS

Satellite Hubs

Satellite sites where we host workshops and strengthen the network

Northeast
UMass; Brown ; Vermont; Delaware

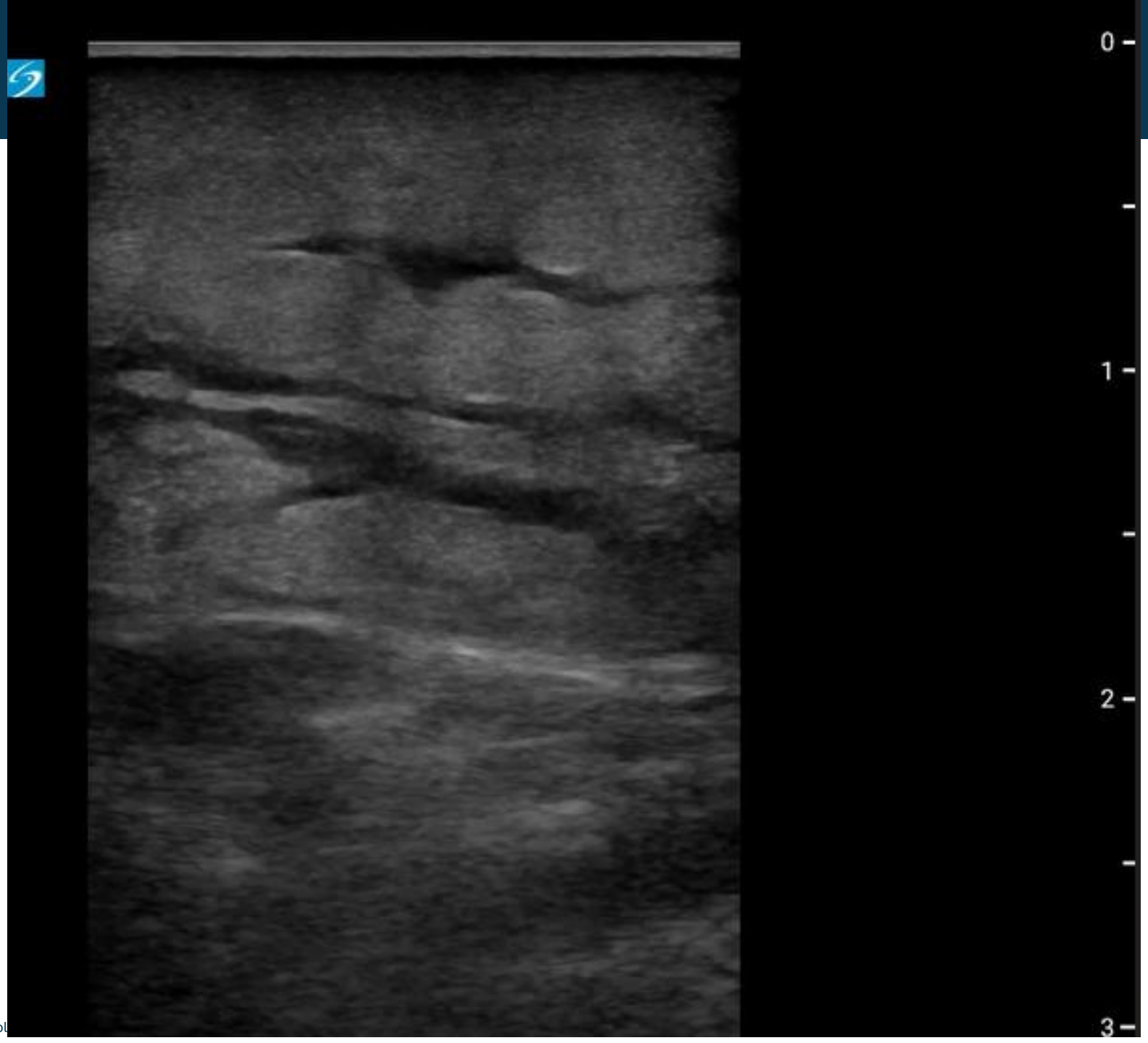
Midwest
Toledo; Michigan; Iowa
Exploring several sites near Chicago, IL

Southeast
MAHEC; Asheville
Two potential programs near Charlotte

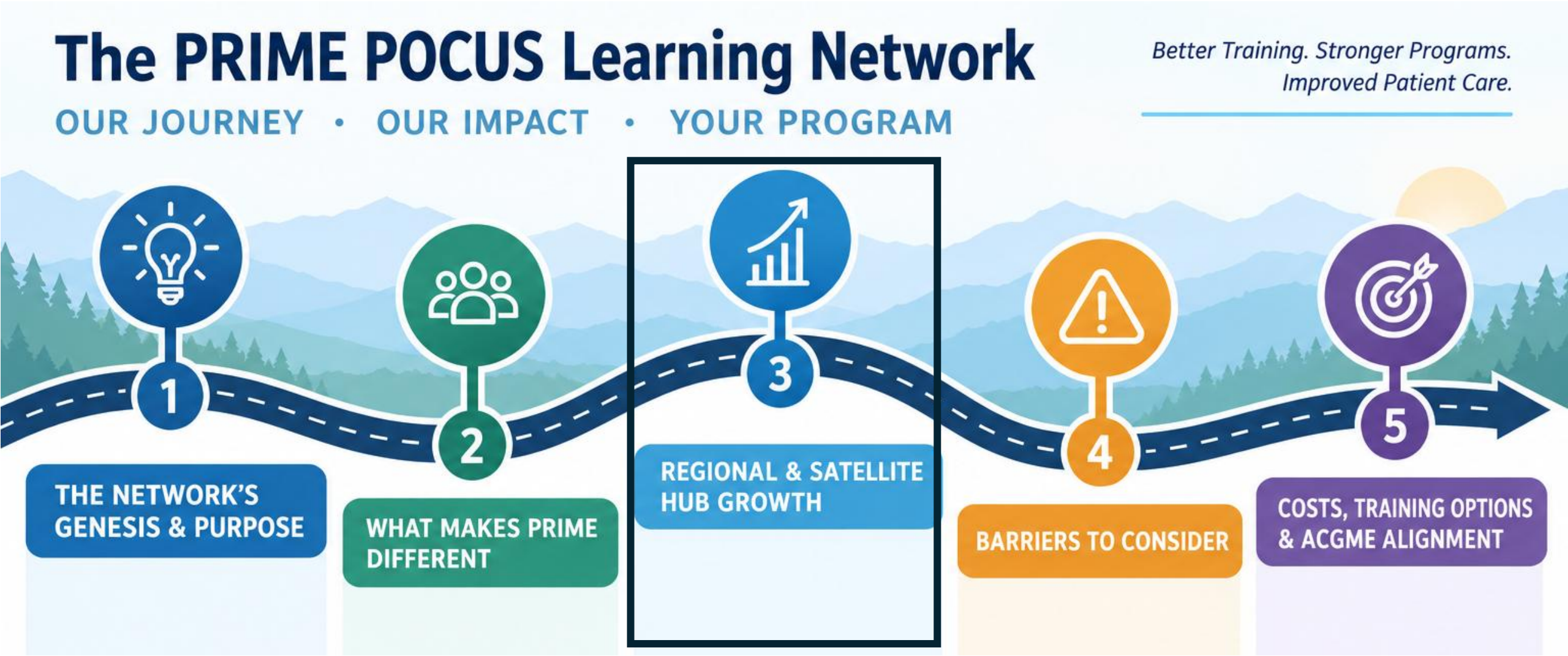
Pacific Northwest
University of Montana
WWAMI regional hub — likely several hubs within their network

Think your site would make a great satellite hub? Let us know.

** These are potential sites only and are not yet confirmed.*



Roadmap



The Modifiable Barriers at a Glance

1. **Faculty Development**
   Few FM faculty are POCUS-trained, and cognitive versus hands-on needs get conflated.

2. **Cost of Training**
   Course tuition, travel, protected time, and equipment add up quickly.

3. **Geography and Access**
   High-quality training clusters at large centers, far from many programs.

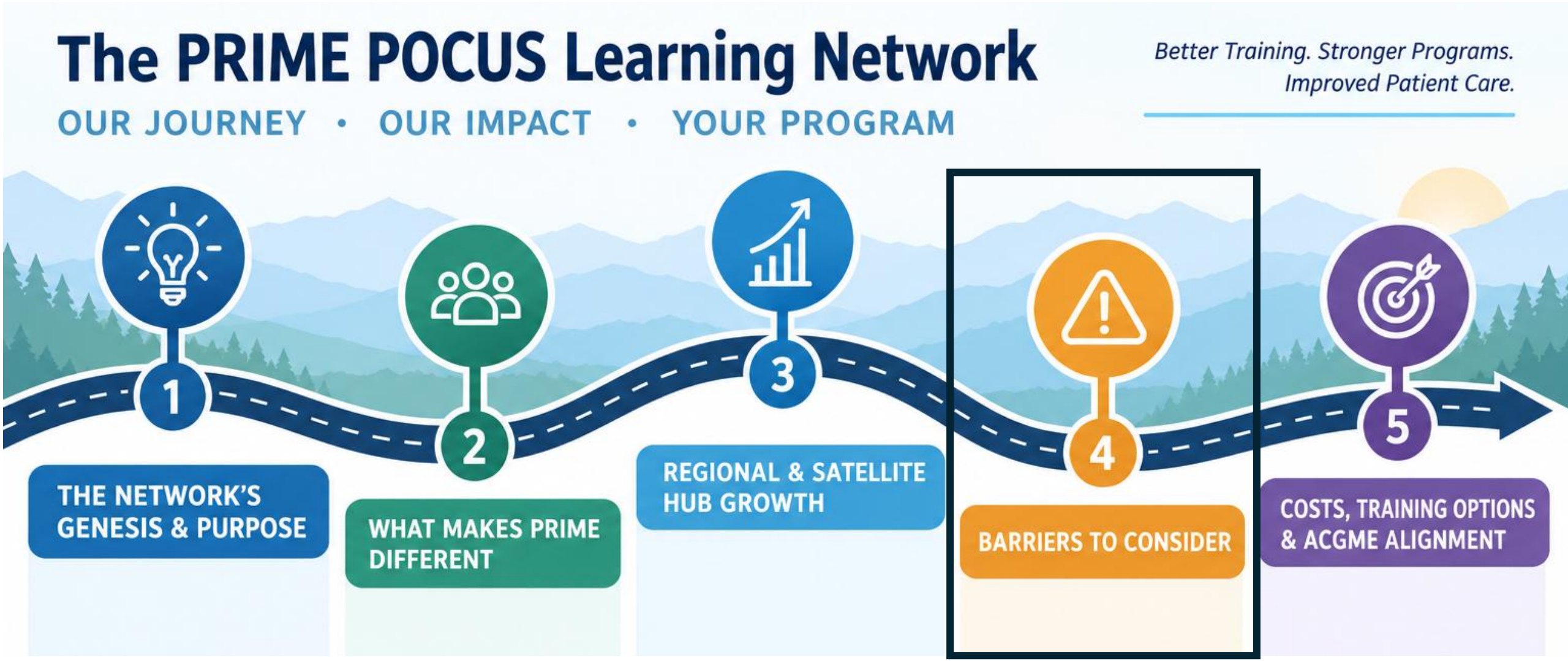
4. **Built for the Wrong Setting**
   Most curricula are borrowed from EM and IM, not built for family medicine.

5. **No Implementation Curriculum**
   Training stops at the scan, not billing, workflow, and QA in the clinic.

6. **No Standardized Competency Assessment**
   There is no validated, FM-specific way to confirm competency.

What other modifiable barriers exist?

Roadmap



From Barriers to Solutions

THE BARRIERS

1. Faculty not POCUS-trained
2. Cost of training
3. Travel and access
4. EM and hospital-focused content
5. No clinic implementation curriculum
6. No standardized competency assessment

PRIME

HOW PRIME HELPS

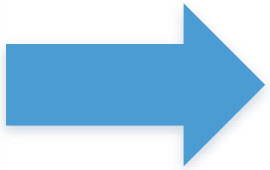
1. Longitudinal faculty development that builds champions
2. Low-price FM workshops, plus on-site hosting
3. Regional and satellite hubs, plus virtual learning
4. Project FOCUS: 52 FM-specific applications
5. 15-lecture clinical implementation curriculum
6. CAMPUS assessment and validated FM tools

Faculty Development: Clinical Skills

BARRIER 1 OF 6

The Barrier

- Lack of trained faculty was the top barrier in the 2019 CERA survey of FM program directors.
- Most programs are champion-dependent. When one motivated person leaves, the curriculum stalls.
- Skills decay quickly without deliberate practice, image review, and feedback, so a single course does not create lasting teaching capacity.



How PRIME Helps

- **PRIME Scholars Program:** a longitudinal faculty-development pathway
- **Cognitive Curriculum:** longitudinal, asynchronous, virtual model
- **À la carte workshop + longitudinal package:** standalone hands-on workshop then add an ongoing longitudinal package that sustains skills

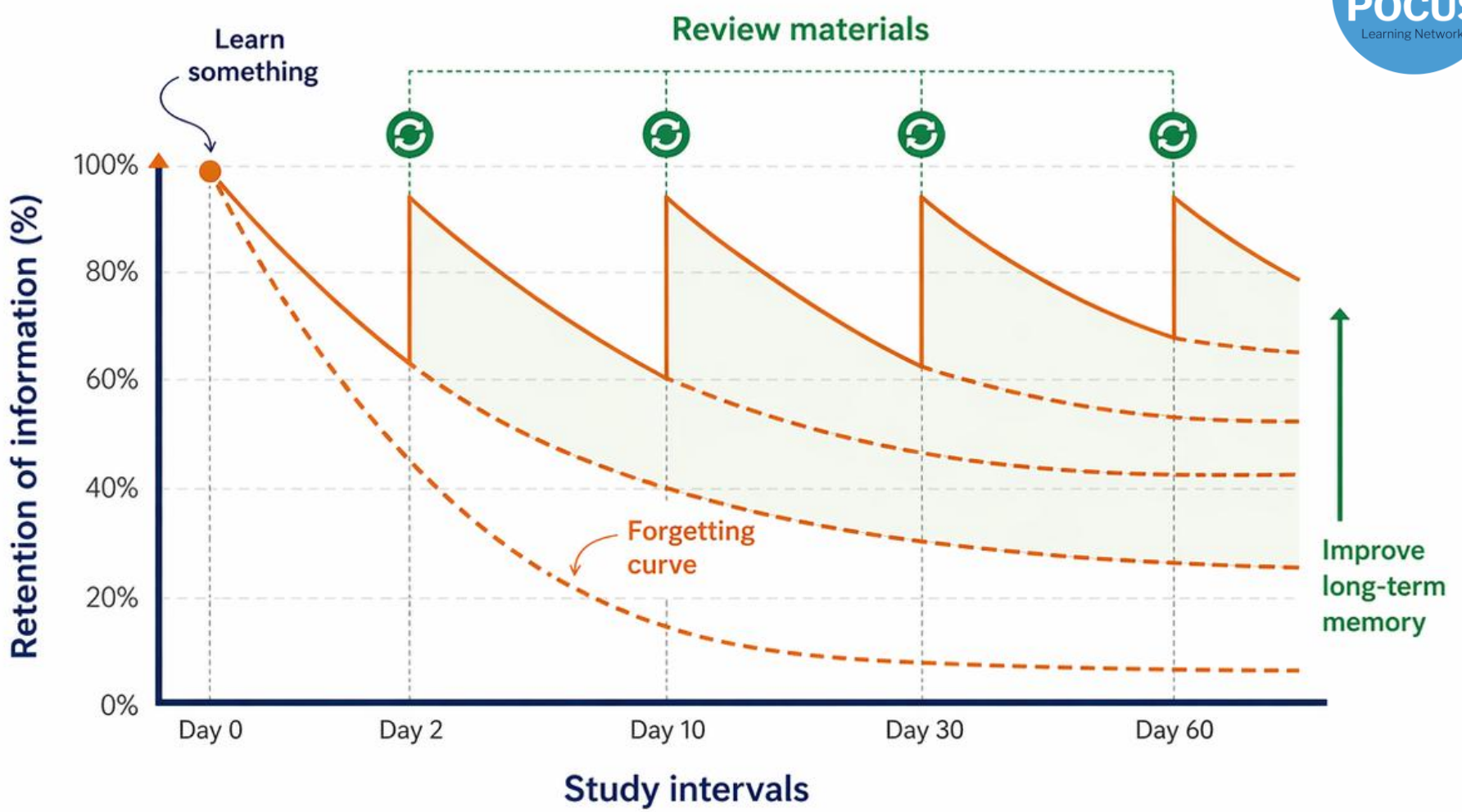
What Does the Evidence Say?

That the best way to do this is probably in a longitudinal blended model

- **Hahn 1988:** 14-month program – radiologists rated 94% of studies acceptable
- **Kelm 2015:** Longitudinal ultrasound curriculum improved knowledge retention in residents vs. those without the longitudinal piece
- **Town 2016:** Assessment score trend – baseline 63.7%, post-workshop 84.5%, 12 months later 73.0%
- **Harel-Sterling 2023:** Can you teach a hands-on skill online? Yes for knowledge/image interpretation, but not consistently for image acquisition – **blended model** appeared effective
- **Anderson 2024:** High satisfaction with longitudinal training in a blended model
- **Buhumaid 2025:** Increased confidence and competency in a longitudinal blended model

Ebbinghaus – The Forgetting Curve

Reviewing at increasing intervals helps move information from short-term to long-term memory.



Key Takeaway:
Spaced repetition strengthens memory, improves retention, and builds lasting knowledge.

Two Pathways. One Goal.
Become a Confident, Sustained POCUS User.

You are here.

Your goal:
Become a confident, competent, and sustained POCUS user.

I want to:

- Become more competent in POCUS
- Increase my confidence
- Use ultrasound more in my practice
- Strengthen my skills over time

PATHWAY 1
Workshop-Based Model

Build skills. Get support. Keep growing.

1. Attend a Workshop
Gain foundational knowledge and hands-on skills.

2. Return to Your Environment
Apply what you learned with support from local mentorship and colleagues.

3. Equipment/Resources
Use available tools and resources to build confidence and consistency.

4. Continue to Grow
Deepen your skills through practice, feedback, and ongoing support.

5. Attend Additional Workshops
Reinforce learning and advance your skills over time.

Best for someone who has a supportive local POCUS environment with a local mentor. Growth comes through asynchronous learning, repeat workshops, and local mentor support.

PATHWAY 2
Structured Longitudinal Training Model

Structured. Spaced. Sustained.

1. Initial Workshop
Comprehensive introduction with hands-on training.

2. Monthly Longitudinal Sessions
Live or virtual sessions using spaced repetition to reinforce knowledge and skills.

3. Apply & Get Feedback
Practice in your environment with ongoing mentorship and peer support.

4. Additional Workshops
Targeted advanced training to build on your progress.

5. Continued Repetition
Reinforce, refine, and retain through consistent, spaced learning.

6. Formalized Assessment
Demonstrate competence and celebrate your achievement.

Best for someone seeking a structured pathway and a clearly laid-out process, especially if they lack a local POCUS environment that supports ongoing growth.

CONFIDENT, SUSTAINED POCUS USER

- Deliver better patient care
- Use POCUS with confidence
- Collaborate and support your team
- Drive ultrasound excellence in your practice

Whether you choose the workshop-based or structured longitudinal path, both pathways are designed to help you build confidence, competence, and consistency every step of the way.

PRIME POCUS Learning Network™

Longitudinal Faculty Development

A 9-month hybrid pathway to build competence, confidence, and clinical integration across all 52 tiered applications (Tiers 1–5).

WHY LONGITUDINAL TRAINING?

- Repetition, feedback, and clinical integration take time
- Spaced repetition builds retention and pattern recognition
- Interpretation and decision-making skills prepare faculty to supervise residents
- Community and accountability support ongoing practice

HYBRID MODEL INCLUDES:

- Monthly education reviews
- Image review
- Progressive hands-on workshops
- Small-group mentorship
- Online learning
- Monthly assessments

Ends with formal competency assessment (CAMPUS Exam)

PROGRAM STRUCTURE AND TIMELINE

Month 1	Regular 2-Day PRIME POCUS Learning Network Workshop
Month 2	Virtual Session – Tier 1-3 Case Based Learning
Month 3	Virtual Session – Tier 1-3 Case Based Learning
Month 4	Virtual Session – Tier 1-3 Case Based Learning
Month 5	Flipped Classroom 2-Day Workshop – Tiers 1-5
Month 6	Virtual Session – Tier 4-5 Case Based Learning
Month 7	Virtual Session – Tier 4-5 Case Based Learning
Month 8	Comprehensive virtual review session – All Tiers
Month 9	Assessment (in-person)

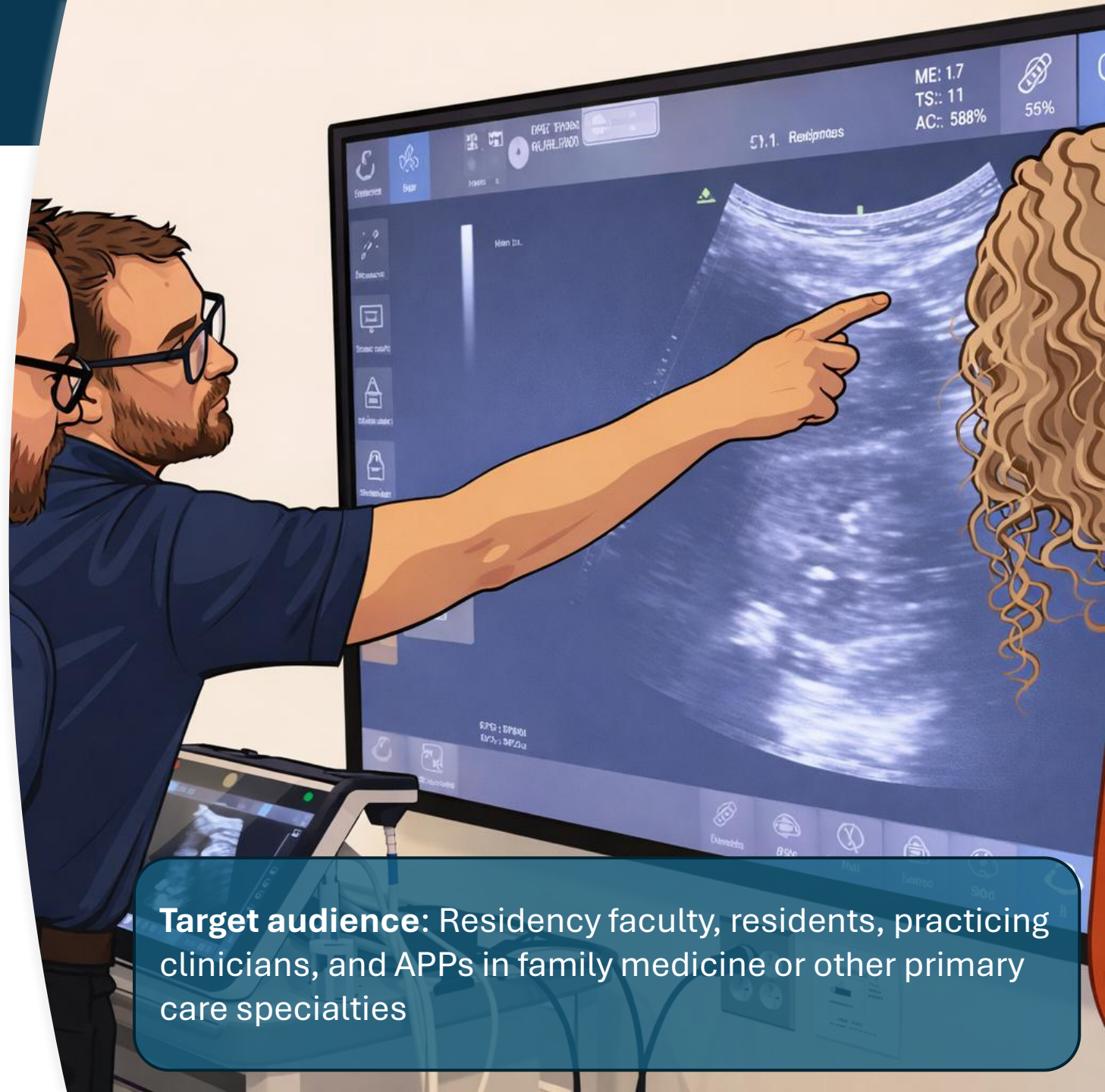
Throughout the 9 months:
Monthly assessments, upload images for review, and complete online learning activities to reinforce knowledge and track progress.

In-person Workshops

- One Day workshop
  - Focus on Tiers 1-2
- Two Day Workshop
  - Focus on Tiers 1-3
- Three Day Workshop
  - Focus on Tiers 1-5

Not a "Show and Tell Workshops"

- Gagne's Conditions of Learning Theory
- Case-based Learning
- Space Repetition
- Leave with practical knowledge on how to use POCUS in practice



Target audience: Residency faculty, residents, practicing clinicians, and APPs in family medicine or other primary care specialties

Cognitive POCUS Curriculum

- **Target Audience:**
  - Residency teaching faculty who will not learn the hands-on practical component of POCUS
  - Those who want to have a longitudinal learning experience to supplement hands-on training

- **Curriculum** geared towards Project FOCUS Tiers
  - Online curriculum for indirect learning
  - Monthly image/case review of your tier with POCUS expert

- **Assessment:**
  - Oral boards
  - Written assessment at the end

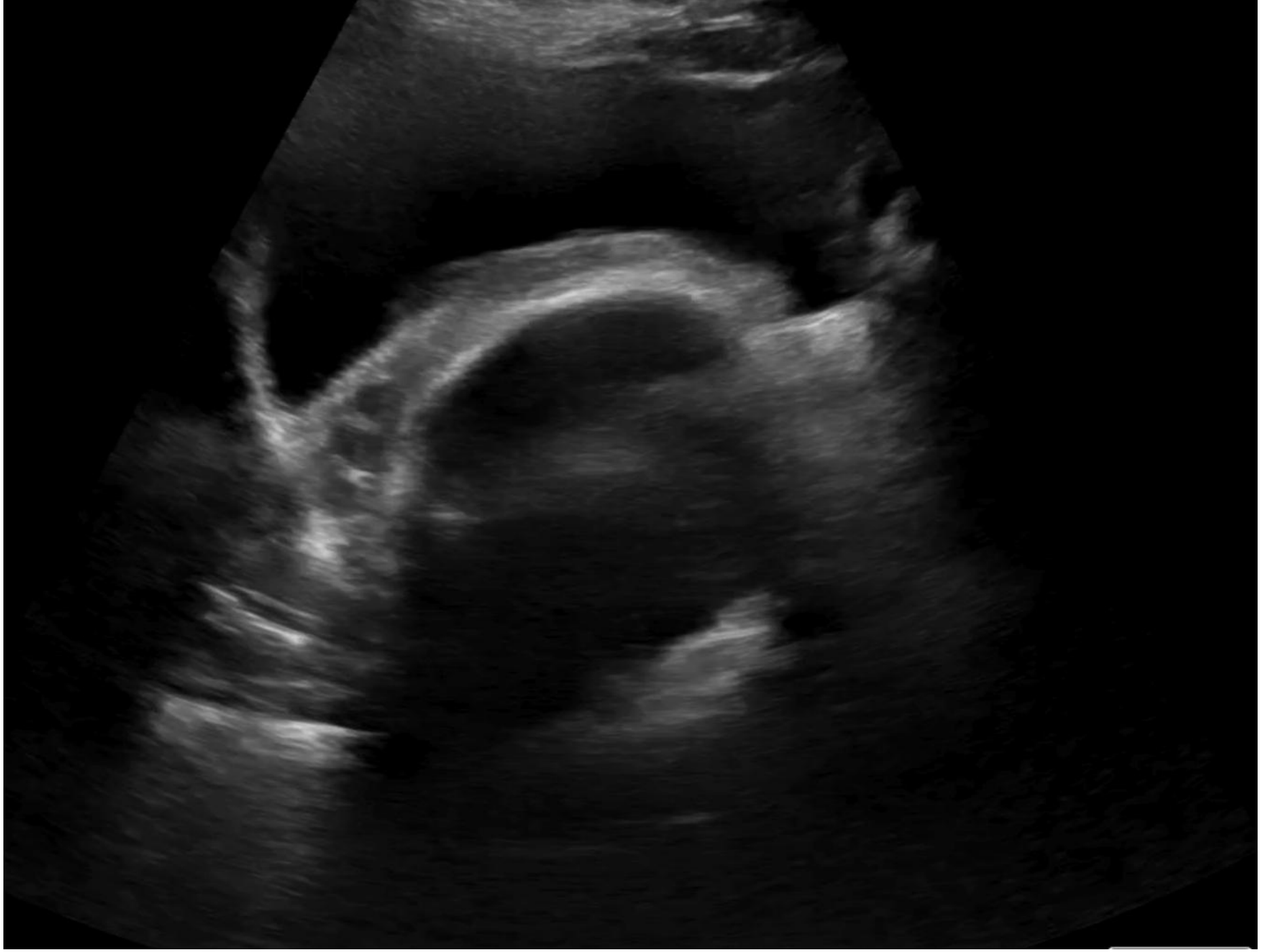
Evidence support **image interpretation** can be taught this way

Residency Memberships

Members of the PRIME Learning Network — in partnership with ResiLearn — gain access to:

- Educational Content Library
- Implementation Content Library
- Meetings with an expert POCUS consultant on education or clinical integration
- Faculty savings and larger resident discounts for hands-on workshops
- Discounts for residents and faculty on the cognitive POCUS curriculum/PRIME Scholars Program
- Open tools at primepocus.com: a literature scan, question and assessment tools, and a revenue estimator

One membership covers your entire residency — all residents, not per-resident pricing.

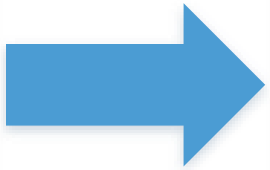


The Cost of Training

BARRIER 2 OF 6

The Barrier

- Hands-on POCUS training is genuinely expensive: course tuition, travel, lodging, and protected or backfill time for clinical faculty.
- Commercial CME courses run high per person, and cost multiplies when a program trains several faculty and a cohort of residents.



How PRIME Helps

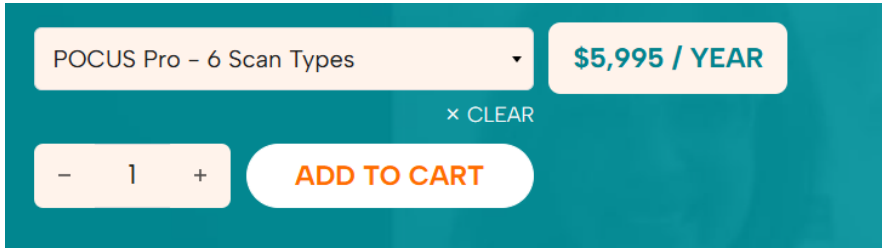
- Educational trainings at a transparent price
- Priced to break even -> most affordable price you can find
- An on-site hosted option brings the workshop to your program, so you train a whole cohort without sending everyone to travel.

PRIME POCUS Pricing

PRICE TRANSPARENCY: PRIME VS. THE MARKET

PRIME POCUS

Offering	Price
One-day workshop	$725
Two-day workshop	$1,350
Three-day workshop	$1,800
PRIME Scholars Program	$4,750
Residency membership	$1,000



POCUS Essentials: Physician

~~$1,595.00~~ ~~$1,695.00~~

Early Bird Before September 13, 2026
$1,600 Physicians
$1,600 Advanced Practice Professionals
$1,600 MDTs

Regular Fee Begins September 13, 2026
$1,700 Physicians
$1,700 Advanced Practice Professionals
$1,700 MDTs

Access through Sep. 01, 2029 (Sat)

Member	$355
Member - New Physician	$305
Member - Resident	$235
Member - Student	$235
Member - Transitional	$235
Other Healthcare Professional	$355
Nonmember	$455

Purchases may be subject to applicable sales tax.

Cost

Physician: $1,600.00 ($1,500 with early

NP: $1,200.00 ($1,100 with early bird dis

PA: $1,200.00 ($1,100 with early bird dis

Geography and Access

BARRIER 3 OF 6

The Barrier

- Travel and time away compound the cost and limit how many faculty and residents can attend.

How PRIME Helps

- Nine regional hubs, plus a growing set of satellite hubs, distribute training across the country.
- On-site hosted workshops bring the training directly to your location.

Built for the Wrong Setting

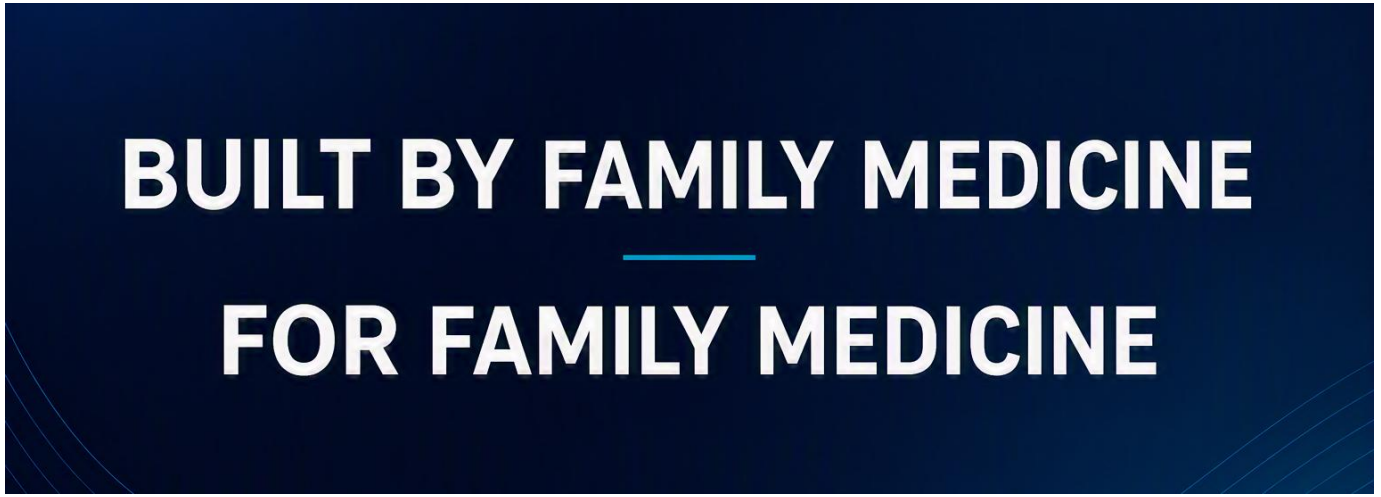
BARRIER 4 OF 6

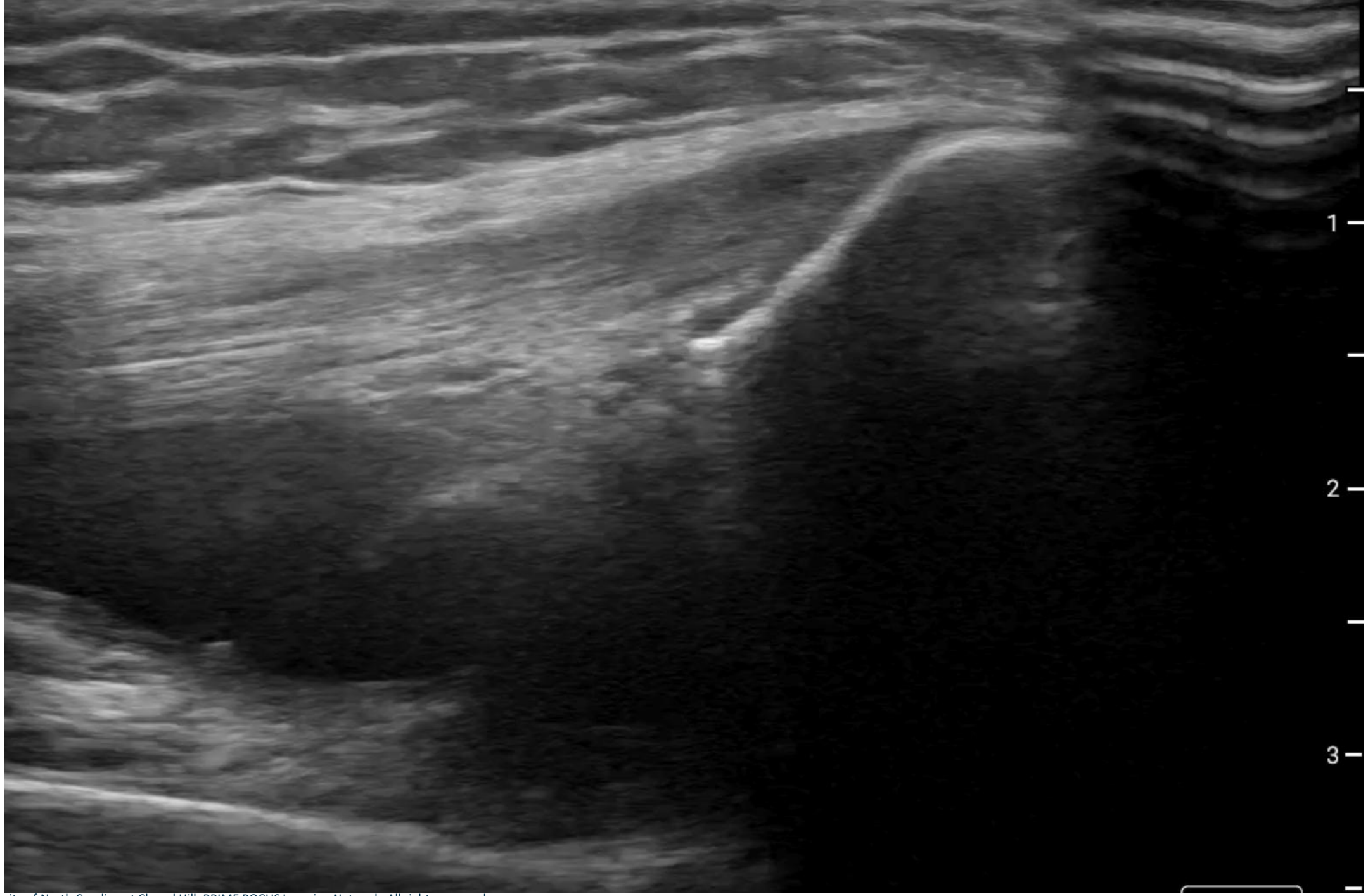
The Barrier

- Most available curricula are borrowed from emergency medicine or internal medicine, weighted toward acute and inpatient applications.

How PRIME Helps

A curriculum built on Project FOCUS: 52 applications across 5 tiers, chosen for family medicine rather than borrowed from another specialty.





How do you train those who will never be scanners?

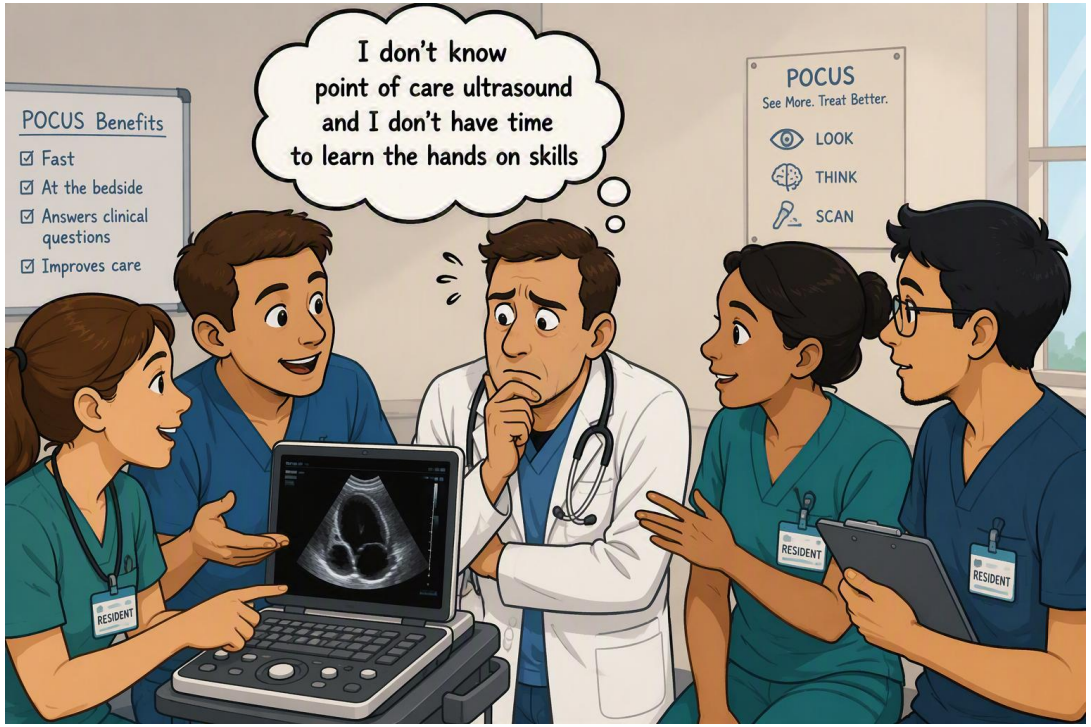
BARRIER 5 OF 6

The Barrier

- Minimal training for those who will never become “scanners”

How PRIME Helps

- An online learning platform built for family medicine.
- Self-paced modules paired with monthly virtual sessions in a flipped-classroom model.

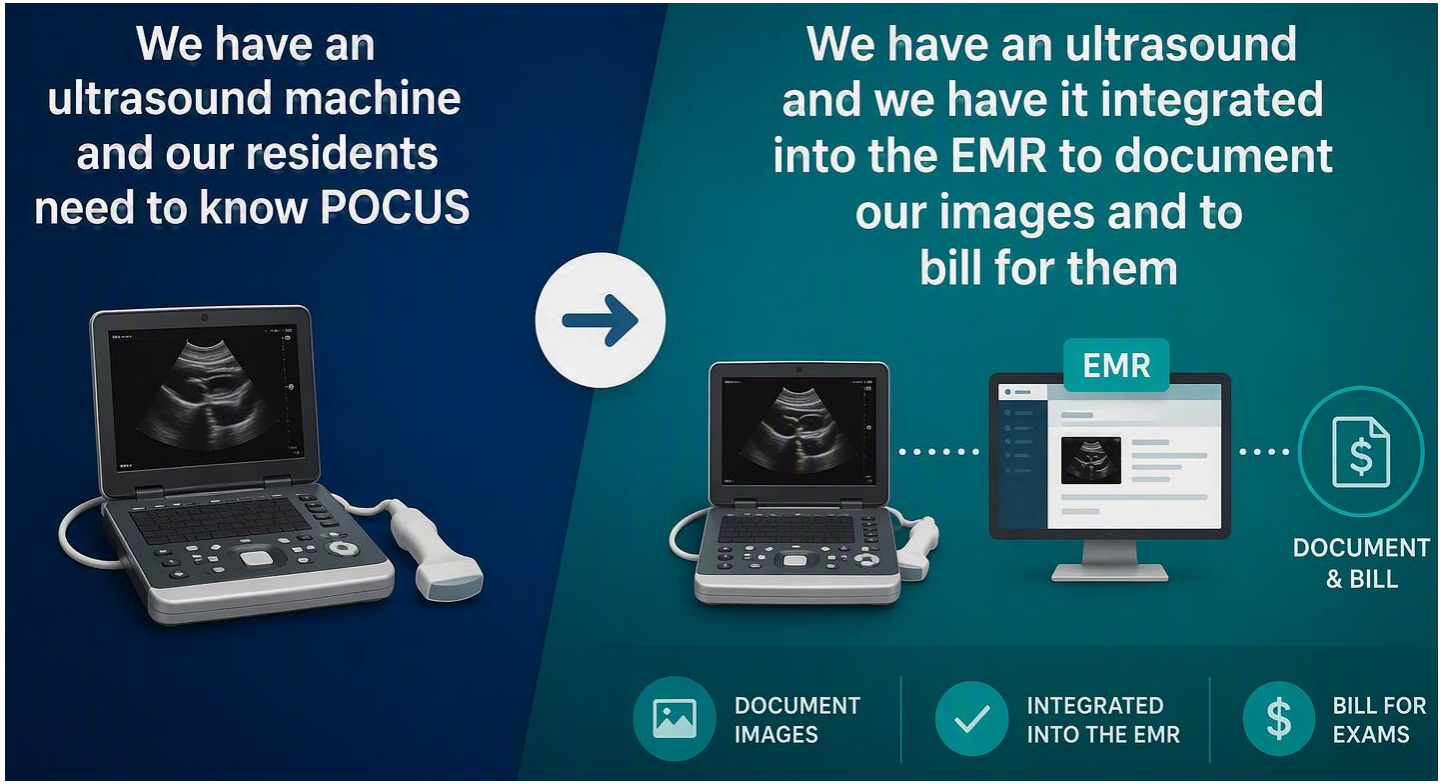


No Curriculum for Clinic Implementation

BARRIER 5 OF 6

The Barrier

- The next major bottleneck: how do we operationalize this in a primary care clinic?



How PRIME Helps

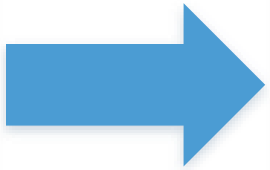
- A Clinical Implementation Video Library covering the business case, cart versus handheld, middleware, EHR and DICOM, workflow design, documentation, CPT and billing, privileging, QA, and sustainability.
- Practical guidance on designing the clinic workflow from order to bill.
- Partnership with one of the FM organizations

No Standardized Competency Assessment

BARRIER 6 OF 6

The Barrier

- There is no validated, family medicine-specific way to confirm that a learner is competent.
- Scan counts are a proxy for opportunity, not evidence of ability.
- Without a shared benchmark, every program judges competence on its own, which makes credentialing and privileging harder.



How PRIME Helps

- The CAMPUS assessment provides a structured, multi-modal way to evaluate competency with direct observation of:
  - Image acquisition
  - Image interpretation
  - Clinical reasoning
- The PRIME research arm is validating FM-specific assessment tools through Project FOCUS Phase Two, working toward a standardized residency assessment.

CAMPUS ASSESSMENT

Competency Assessment in Primary Care Ultrasound

1 BEFORE THE ASSESSMENT DAY → **2 ASSESSMENT DAY** → **3 AFTERNOON SESSION**

WRITTEN TEST

Completed before assessment day

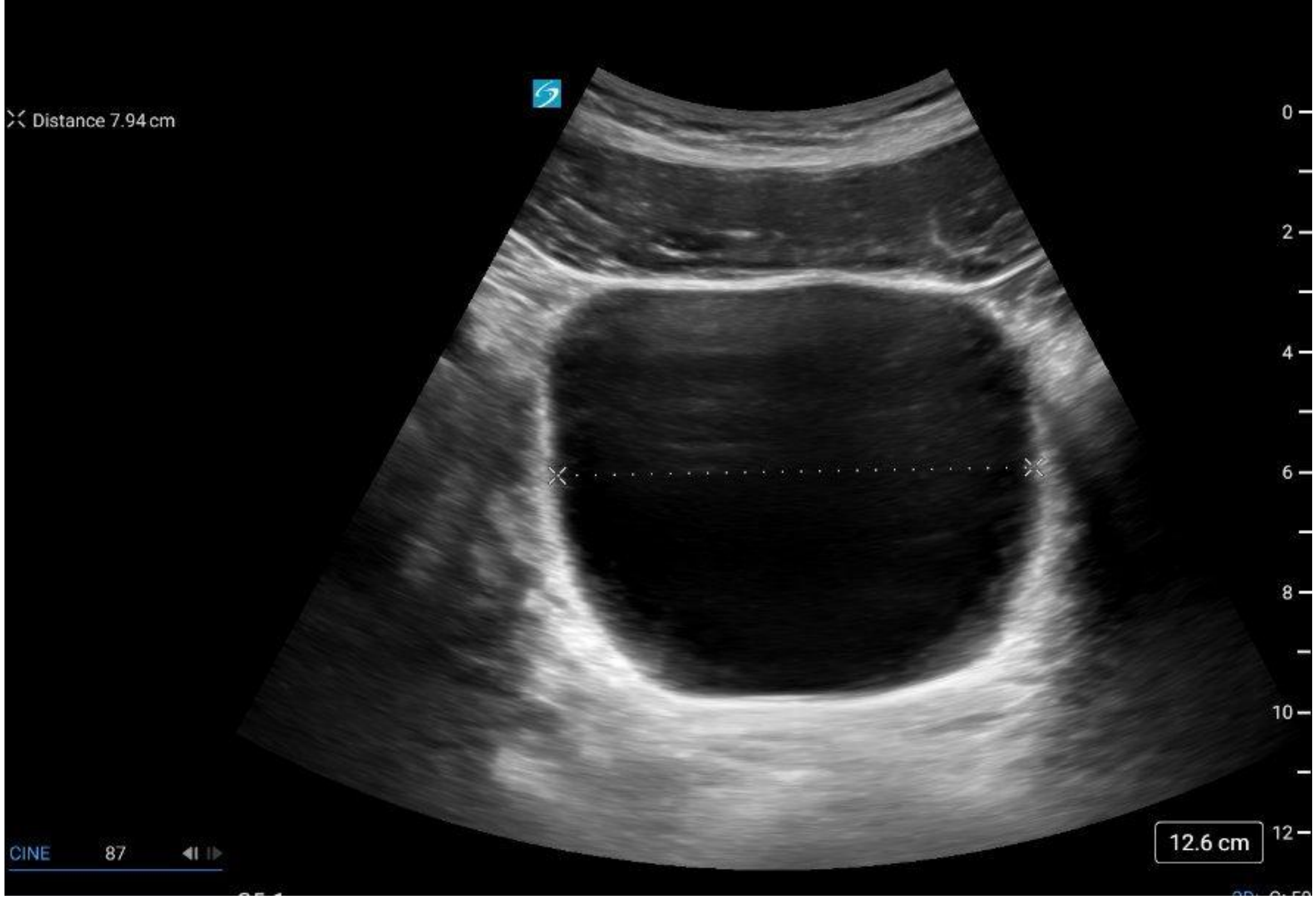
MORNING HANDS-ON OSCE

Demonstrate views for 52 Tiers 1–5 applications

AFTERNOON ORAL BOARDS

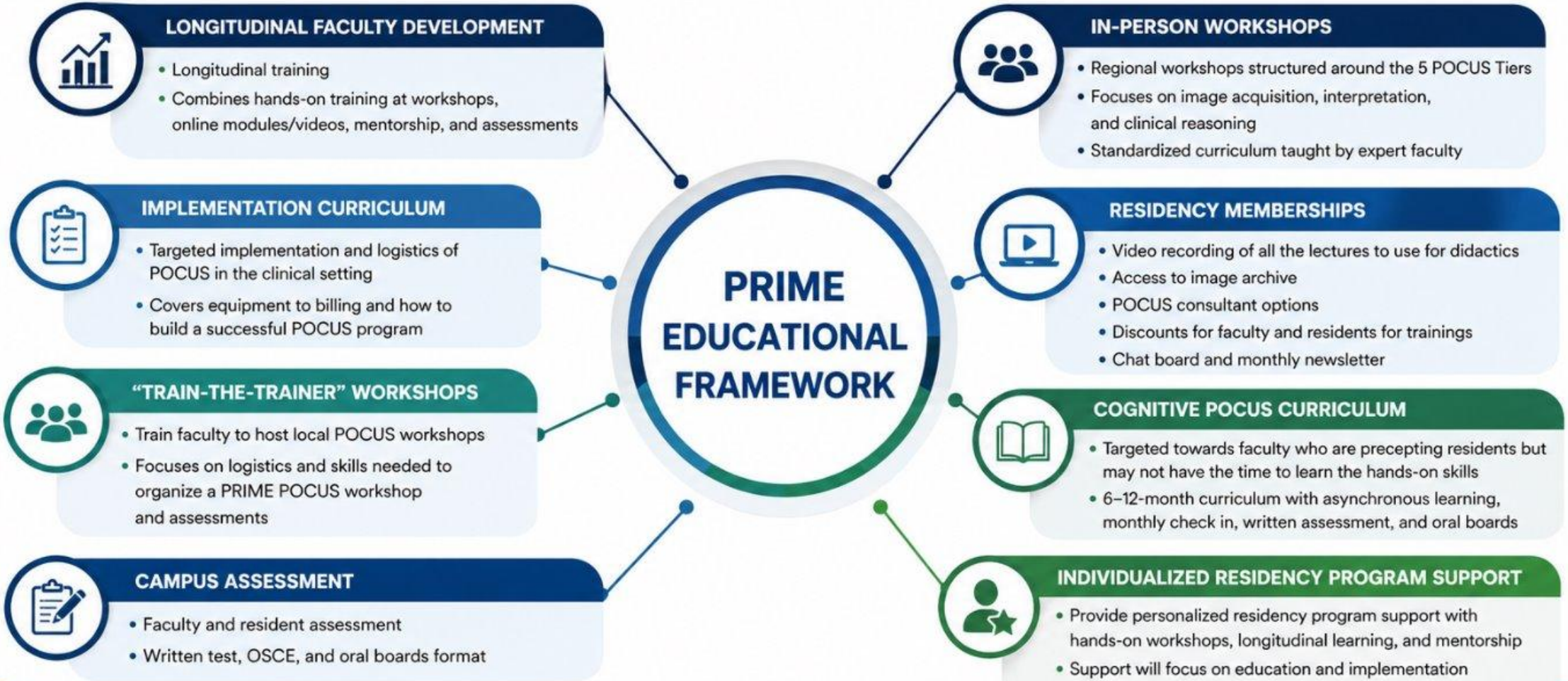
Solve clinical cases using POCUS imaging

GOAL: Assess competence in image acquisition, interpretation, and clinical integration across all 52 POCUS applications.

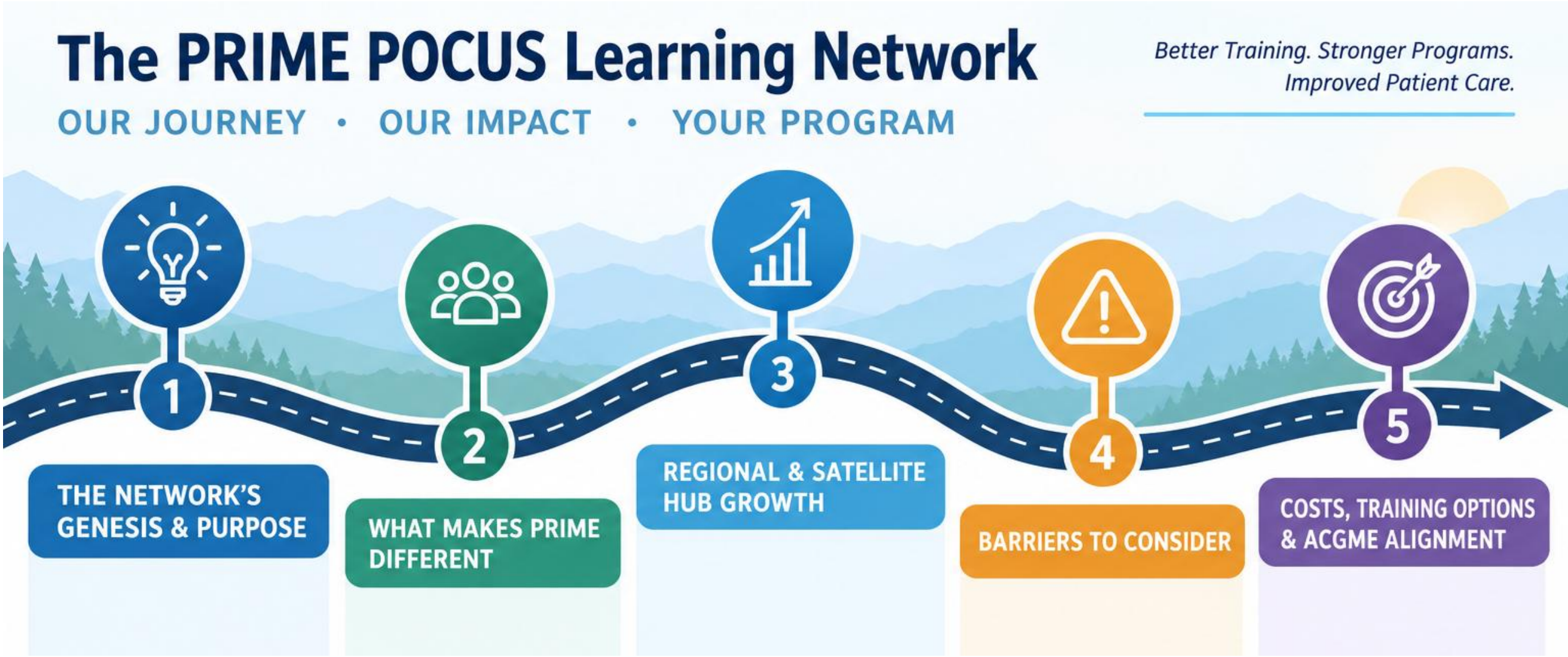


PRIME EDUCATIONAL FRAMEWORK

Building Faculty Expertise. Strengthening POCUS Education. Improving Patient Care.



Roadmap




PRIME POCUS
Learning Network™
BETTER TOGETHER.
FURTHER TOGETHER.
EDUCATION
COMMUNITY
INNOVATION
BETTER CARE
Stronger Together.

PRIME POCUS Learning Network™

Questions?

primepocus.org

primepocus.com

TM