The Four-Year Residency in Family Medicine:

A Conversation With the Directors of the Nation's Most Fully Developed Programs

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Wendy Barr, M.D., M.P.H., M.S.C.E.

Introductions

- Alan Douglass, M.D., Director
  - Middlesex Hospital, Middletown CT
- Dan Casey, M.D., Director
  - John Peter Smith Hospital, Fort Worth TX
- Roger Garvin, M.D., Director
  - Oregon Health Sciences University, Portland OR
- Wendy Barr, M.D.,M.P.H., M.S.C.E., Director
  - Lawrence Family Health Center, Lawrence MA

Educational Objectives

- Recognize potential benefits of extended curricula and integration of individualized educational experiences into residency
- Identify potential challenges inherent in the transition to extended length of training.
- List speaker recommendations for maximizing success in curricular transition

Why 4 Years?

The Case for 4 Years

- **More to teach**
  - Residency structure substantially unchanged since 1969
  - Medicine and patients have become more complex
- **Current curricular box is too small**
  - Duty hours reduced available training time by over 20%
  - Current content no longer fits, and there is need for more
- **A worthwhile investment**
  - 4 year graduates are better prepared for practice
- **It’s possible**
  - Logistics are feasible
- **Applicants want it**
  - Demand is rising, particularly for curricular flexibility

Timeline

- **1966**- Willard Report "3 or 4 Years"
- **2004**-Future of Family Medicine Project
- **2007**- Preparing Personal Physician for Practice (P4)
- **2007**- Middlesex Hospital implements first fully integrated 4 year residency curriculum
- **2011**- FM Working Party LoT Summit
- **2011**- ABFM Board vote
- **2013**- Length of Training Pilot begins

What is a 4 Year Residency?

- **Preserved current 3 year content**
- **Expanded core curriculum**
  - Pediatrics, practice management, etc.
- **Expanded focus on comprehensive, longitudinal care**
  - Patient-Centered Medical Home (PCMH)
- **Added Areas of Concentration (AOC)**

…all bundled into a **continuous, fully integrated** package

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Conceptual Model

What a 4 Year Residency is Not…

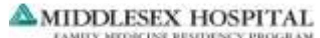
- Creating subspecialists
- Residency followed by "bundled" fellowship (3+1)
- Optional "design-your-own bonus year"
- Remediation time for marginal residents

4 Year Residency Objectives

- Offer broader and deeper, high quality education that meets resident future practice needs
- Attract and retain high quality residents and faculty
- Prepare residents for practice in a PCMH
- Transform the continuity teaching practice into a PCMH
- Prepare residents to manage populations effectively
- Improve chronic disease management and prevention outcomes
- Graduate residents who are better prepared for and more satisfied with their subsequent practice

The Middlesex Experience

Alan Douglass, M.D.



Innovations

- Expanded both breadth and depth of training
- 6 additional core blocks
  - 3 pediatrics (Developmental, Sports, Peds ER)
  - 3 practice management, homecare, pop health, and QI
- 28 weeks of track time in 3rd and 4th year
- NCQA Level 3 PCMH at all continuity sites
- Continuity practice in all settings throughout all years of training with increased clinical encounters

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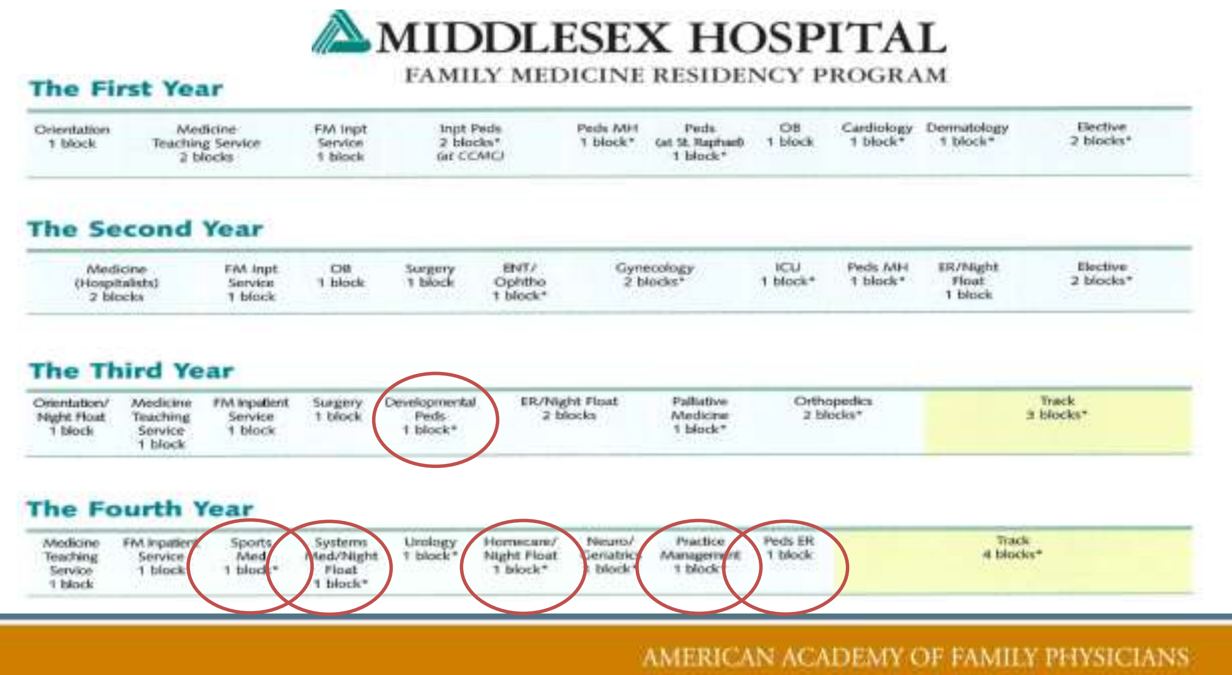

Areas of Concentration

- Academics and Leadership
- Behavioral Medicine
- Geriatrics and Palliative Medicine
- Global and Community Health
- Hospitalist Medicine
- Integrative Medicine
- Maternal Child Health
- Personalized Track

All residents complete a capstone Project in their AOC

MIDDLESEX HOSPITAL
FAMILY MEDICINE RESIDENCY PROGRAM

Current Outcomes

- 47 graduates of 4 year curriculum since 2009
- Markedly more clinical experiences
  - 2,800 continuity visits (1650 ACGME min)
  - 2,000 adult inpatient encounters (750 ACGME min)
  - 190 newborn encounters (40 ACGME min)
- All residents practice in NCQA Level 3 PCMH
- All utilize special skills acquired in their track in practice
- Marked rise in ABFM ITE and certification exam performance- from national mean to 1 SD above
- Dramatic rise in student interest and quality- interviews have tripled despite raising the quality bar- and much better Matches
- Strong market demand after graduation

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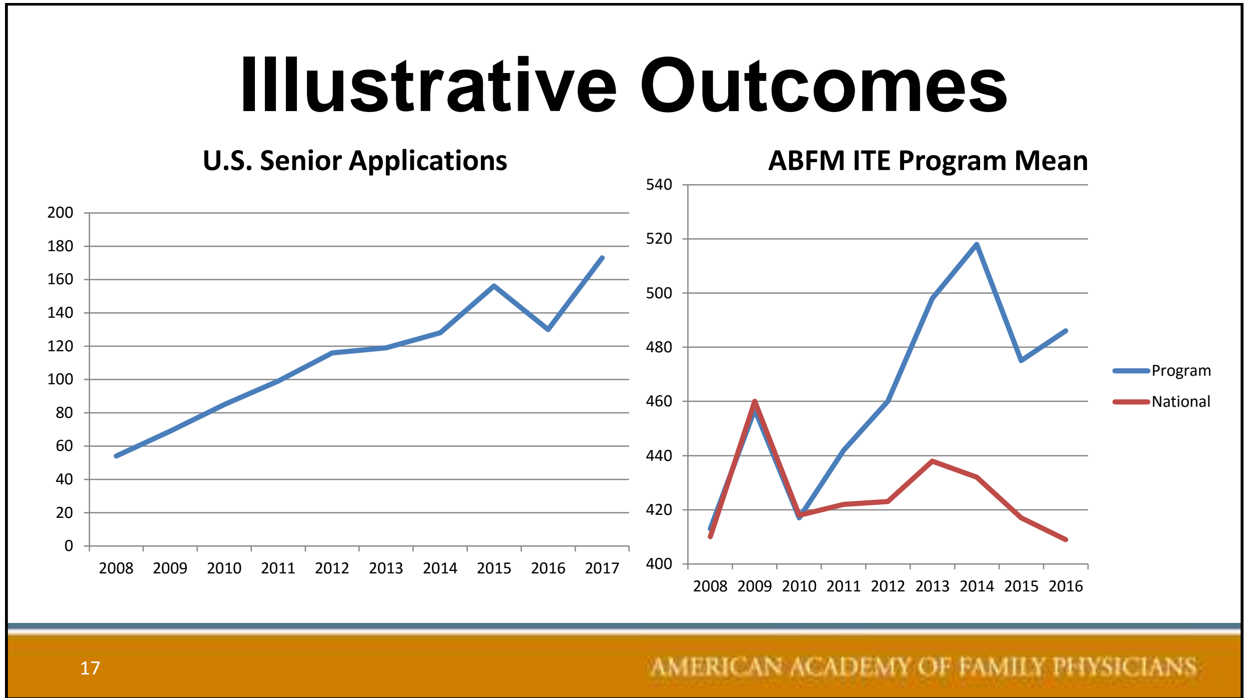
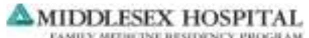


MIDDLESEX HOSPITAL
FAMILY MEDICINE RESIDENCY PROGRAM

Successes

- Smooth educational and structural change
- Widespread engagement among faculty, residents, staff
- 88-92% resident satisfaction 6 years running
- 100% of residents view their training as strong
- Markedly more functional clinical practice
- Improved financial performance
- Substantial rise in resident scholarship
- Residency compliment expansion
  - 8-8-8 to 6-6-6-6 to 7-7-7-7 to (perhaps) 8-8-8-8



Challenges

- Change predictably brought out long-standing issues
- Flexibility is a slippery slope- requires balance with structure, transparency and equity
- Communicating identity and value of PCMH
- EHR reporting difficulties slowed QI initiatives
- Resident scheduling complex and at times contentious
- Balancing track and core educational commitments, including time away
- Faculty workload management

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The JPS Experience

Dan Casey, M.D.

Innovations

Original P4 idea in 2006*: Longitudinally infuse prior fellowship curriculum into four years of training.*

Today*: Longitudinal tracks, individual learner centered, generalist foundation, goal to meet community health care needs*

2007 question:

Why were 50% of our graduates (2004/2005) entering fellowships?

- Why? A curriculum problem?
- Were we creating “FM subspecialists”?
- Where did all the *generalists* go?

Are community needs being met?

2017 answer

The.Residents.Wanted.More.

And they are focused on meeting community needs…filling gaps they have witnessed

Willard Report 1966

- *"…the program should be kept flexible in order that it might be tailored to the individual's background, future need, and level of progress…a satisfactory program will generally require 3-4 years after medical school, the exact time may vary with the organization, program and individual trainees particular needs."*
- JPS is the only program to set all these components in motion
- Our only modification--change from individual focus to add a communitarian approach
  - Social Justice implications of residency training

Our 2007 Transformation Two Ideas…

- Offer four years of training—*more* experiences
  - Overcome “*complexity”* in medicine and in the world…more information in the past two years than in the history of mankind
  - Overcome work hour restriction related experiences?
- Spread added curriculum over four years — maintain a “*generalist philosophy*”
  - “Robust Generalism”
  - Overcome the “*subspecialty mindset*”

2017 Result

- Tracks, tracks, and more tracks
  - Maternal Child Health—near 40 graduates with over 90% doing operative OB
  - Advanced Rural Procedures
  - Street Medicine
  - Primary Care HIV
  - Psychiatry with focus on underserved
  - Acute care—EM and Hospital
  - Primary Care Oncology
  - Adolescent

Block Diagram

- Begin 1-2 months of PGY 4 curriculum in PGY 2 year
- Continue 2-4 months of PGY 4 curriculum in PGY 3 year
- Generalist family medicine rotations in PGY 4 (fail with sports!)

Maternal-Child Track (no CAQ)

	PGY 1	PGY 2	PYG 3	PGY 4
Prior Rural Extra OB	2 months	2 months	1 month	
Maternal Child Track	3 months	2-3 months	6 months	6 months

Sports Medicine Track (CAQ)

	PGY 1	PGY 2	PGY 3	PGY 4
FM Rotations	12 months	10 months	8 months	6 months
Sports Medicine		2 months	4 months	10-11 Months Elective available

Outcomes- Recruitment Quadrupled

Match Year	2006	2007 P4	2008 P4	2009 P4	2010 P4	2011 P4	2012 P4	2013 LoT	2014 LoT	2015 LoT	2016 LoT	2017 LoT
US Sr. Apps	146	151	170	172	237	266	316	309	421	464	514	614

Outcomes-Academics

Intraining Exam	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Points above/below National Average	-10	-8	+3	+30	+36	+44	+35	+45	+53	+59	+53	+53

The Mean Part 2 USMLE score of the residency is 240

Successes

- Recruiting, not just quantity
- “Engagement/Ownership” of education with the individualized approach
- Back to the rural and underserved areas with more skills…well, if not taken by residency programs!
- Distributive Justice within Medical Education

Challenges

- Fourth year funding
- Large program size helps with individualization but balancing requests always requires extra effort and an egalitarian approach

The Oregon Experience

Roger Garvin, M.D.

Innovations

- 6 months of Areas of Concentration
- Capstone Project
- Far more continuity clinic visits
- Robust PCMH implementation
- Longitudinal curriculum in:
  - Leadership, PCMH, information mastery, population health, behavioral medicine, geriatrics

Innovations

- Revised didactic format
- Increased use of simulation
- Increase team based learning
- Transitions of care curriculum – in all possible directions.

Patient First Scheduling

- 2+2 blocks – inpt and outpt
- Longitudinal learning cohorts
- Clinic based curriculum
- Increased availability to patients in all settings

Ambulatory Week

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	FM Clinic	Sports	Longitudinal curriculum	FM Clinic	Sports
PM	FM Clinic	Sports	Wednesday conference	FM Clinic	Sports
EVE		FM Clinic			

Clinic Week

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	FM Clinic	FMC based Curriculum	Central Longitudinal curriculum	FM Clinic	FMC based Curriculum
PM	FM Clinic	FMC based Curriculum	Wednesday conference	FM Clinic	FMC based Curriculum
EVE		FM Clinic			

AOC Week PGY 4

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	FM Clinic	AOC	Longitudinal curriculum	FM Clinic	AOC
PM	FM Clinic	AOC	Wednesday conference	FM Clinic	AOC
EVE		FM Clinic			

Block Diagram

	1	2	3	4	5	6	7	8	9	10	11	12	13
PGY 1	Clinic Orient-ation	INPT A ED	INPT A ED	INPT B OB	INPT B OB	Surgery Clinic	NICU Clinic	Peds Sports	Peds Sports	Kaiser Clinic	Kaiser Clinic	FM-OB Clinic	FM-OB Clinic
PGY 2	Rural Rural	Rural clinic	OB OB	Addiction clinic	MICU MICU	ED Clinic	INPT A Geri	INPT A Geri	FM-OB Clinic	FM-OB Clinic	NF Elect	NF Elect	ED Clinic
PGY 3	INPTB Clinic	INPTB Clinic	Ob surg	Ob surg	NF Sports	NF Sports	GM2 AOC	Elect Elect	GM2 AOC	PedED AOC	PedED AOC	Pall Derm	Pall Derm
PGY 4	Elective Elective	Kaiser AOC	Kaiser AOC	Adoles AOC	Adoles AOC	NF AOC	Cover-age Block	INPT C AOC	INPT C AOC	PEDs AOC	PEDS AOC	NF AOC	AOC

Current Outcomes

- First 4 year class graduated 2016
- Diversifying AOCs with resident input
- Research section engagement in the capstone projects
- Improved comfort with beginning practice

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Successes

- Excellent interest by applicants
- Excellent results in the Match
- Challenged and engaged faculty
- New partners are wanting to be sure they have access to these graduates

Capstone Projects

Kamala Nyamathi	Transgender Health Curriculum
Lindsay Braun	Adolescent Medicine Training in a Family Medicine Residency
Kristin Gilbert	The Effects of Psychosocial Adversity, Adult Attachment and Resilience on Health
Kira Paisley	Providing Preventive Healthcare to Women at Southwest Community Health Center
Carl Rasmussen	Developing a Rural Area-of-Concentration
Emily Waterman	Provider Assessment of Completed Surgical Abortions at Very Early Gestations
Anthony Cheng	Feasibility of a Telemedicine Model for Inpatient Palliative Care Consults
Jason Kroening-Roche	Behavioral Health Integration in Oregon Coordinated Care Organizations
Jessica Johnson	Implementation of the Kaiser Neonatal Sepsis Calculator in a Family Medicine Residency Program
Rita Lahlou	Southwest Community Health Center Medical Student Curriculum Development

Challenges

- Lots of moving parts
- Constant assessment of effect of changes
- Funding
- Underestimated capstone needs

The Lawrence Experience

Wendy Barr, M.D., M.P.H., M.S.C.E.

LFMR Mission

The mission of the Lawrence Family Medicine Residency is to create and nurture learning environments where physicians are inspired to develop expertise in family medicine and to dedicate themselves to the care of individuals, families and communities, especially those who are underserved.

Innovations

- Goal to provide full spectrum training for family physicians working in resource poor/underserved settings

New Curriculum
- HIV/Hep C
- Addiction
- Integrative Medicine
- Leadership

3 Year Curriculum
- Continuity Clinic
- Adult Medicine
- Pediatrics
- Maternity Care
- Spanish
- Outpatient Curriculum

Enhanced 3 Year Curriculum
- Community Medicine
- Behavioral Health
- Health Systems Management/QI

A O C

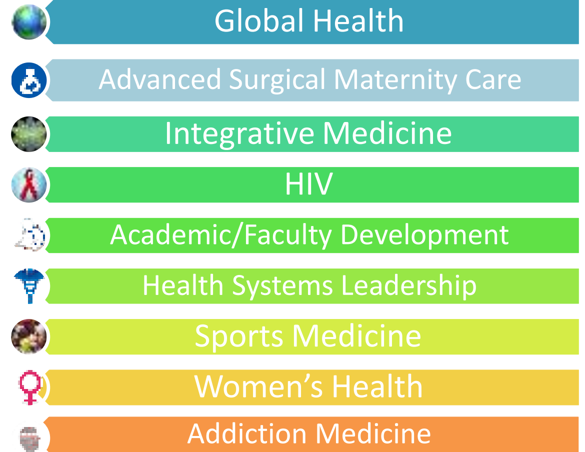
Block Diagram

- **R1**: Adult Medicine (10 wks) | AM NF (2 wks) | Maternity Care (4wks) | MC/PD NF (4 wks) | Pediatrics (4 wks) | Outpatient Longitudinal (18 wks) | Spanish Elective (2wks) | Spanish/ Intro to FM (4 wks) | Vacation (4 wks)
- **R2**: Adult Medicine (4 wks) | ICU (4 wks) | AM NF (4 wks) | Maternity Care (4 wks) | MC/ PD NF (2 wks) | PD (2 wks) | Neo (2 wks) | Peds ED (2 wks) | ED (4 wks) | Outpatient Longitudinal (16 wks) | Elective (4 wks) | Vacation (4 wks)
- **R3**: Adult Medicine (6 wks) | AM NF (2 wks) | MC (2 wks) | MC/PD NF (4 wks) | Pediatrics (4 wks) | ED (4 wks) | UMASS Sports Med (4 wks) | Outpatient Longitudinal (10 wks) | Longitudinal AOC (4wks) | AOC (4 wks) | Elective (4 wks) | Vacation (4 wks)
- **R4**: Adult Medicine (4 wks) | FM NF (2 wks) | MC (2 wks) | MC/ PD NF (2 wks) | Peds ED (2 wks) | Clinic Chief/PCMC (6 wks) | Outpatient Longitudinal (16 wks) | Longitudinal AOC (4wks) | AOC (8 wks) | Elective (2 wks) | Vacation (4 wks)

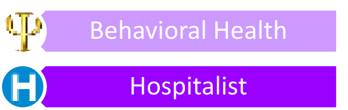
Outpatient Longitudinal Curriculum

Curricular Area in Hours	R1	R2	R3	R4	Total
Gynecology	50	50			100
Ortho/Sports Med	50	50			100
Geriatrics	50	45	30	55	180
Surgery	50	50			100
Behavioral Health	50	25	25	25	125
Outpatient Peds/Adolescent	50	25	50	75	200
HSM	50	50	50	50	200
Community Medicine	50	50	50	50	200
Dermatology		25		25	50
Palliative Care		25		25	50
HIV			50		50
Addiction Medicine			50		50
Integrative Medicine				50	50
Subspecialty Care				50	50
AOC			100	100	200

Areas of Concentration



- AOCs in Development



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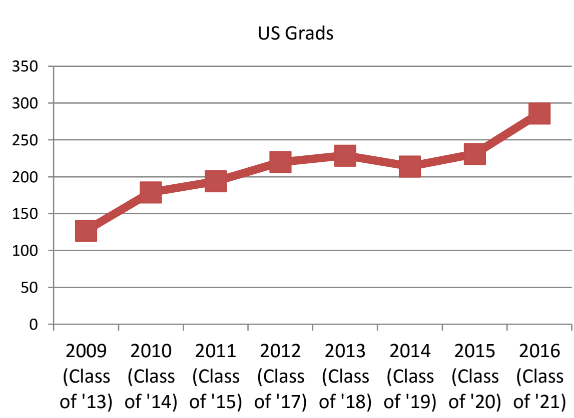
Current Outcomes

- Improved Recruitment
  - 50% increase in US Grad applicants (trend of increased Step 2 scores)
- Class of 2016 – 4 graduates (chose to switch to LoT4 as R2s)
  - All using AOC skills in new positions
- Class of 2017 – 10 anticipated graduates
- Increase in resident scholarly activities
  - Presentations
  - QI projects → system changes
  - Community projects
- Financial viability of self-funding R4 year



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Successes

- Maintaining traditional scope of practice while expanding population health skills
- Global health and inpatient experience without sacrificing time at "home" in the PCMH
- Enhanced program wide community medicine engagement on multiple levels

Challenges

- Transitioning the curriculum
  - Schedules
  - Resident expectations
  - Change Management
- Balancing AOC specialization pressure versus generalist curriculum
- Meeting increased resident expectations (its 4 years – not 5)
- Faculty workload management – making a large number of curriculum changes over a 5 year period

Conclusions

Conclusions

- The 4 year residency is a valuable alternative to the traditional 3 year model
- Benefits identified include:
  - Improved resident satisfaction
  - Improved resident recruitment
  - Improved resident knowledge base
  - Improved quality of patient care
  - More clinical experience and better preparation for practice

Conclusions

- Curricular flexibility through AOCs is valuable to both individuals and programs, but must be balanced with transparency and clear expectations
- Focus on PCMH is particularly valuable
- Change and "building the airplane in the air" is challenging, but well worth the effort

Questions?

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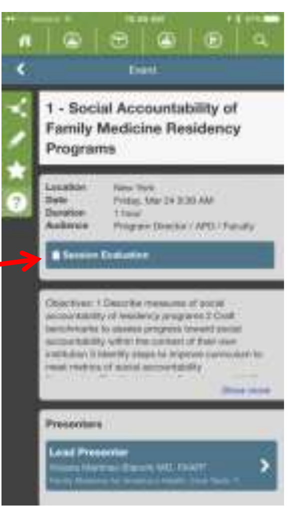
Please…

Complete the session evaluation.



Thank you.