



# A Four Week Residency Preparation Course: “Boot Camp”

## Description and Early Outcomes

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### BACKGROUND

- Literature pertaining to residency preparation courses (RPCs) or “boot camps” dates back to at least 2004<sup>1</sup>
- There is growing acceptance of RPCs<sup>2</sup>
  - Better prepares medical students for day one of internship
  - Mitigate safety concerns around a “July Phenomenon”<sup>3</sup>
- RPC soon to be required for all graduating students from Michigan Medicine, so there was a mandate to develop a course for Family Medicine
- Previously described RPCs for primary care were  $\leq 2$  weeks, but we believe this would be the first 4 week transition course in Family Medicine (FM)<sup>4-6</sup>

### METHODS

- Course Outline
  - Created using an iterative process
    - Utilized focus groups of interns and residency leadership within our department
  - Matched the most desired skills and knowledge with faculty well equipped to instruct in those areas
- Course Content
  - Medical knowledge review
  - Clinical simulations of procedures
  - Suturing, with students given suture kits & video resources for practicing suture/knot tying
  - Mock paging curriculum
    - Piloted with six paging cases
    - Created and previously vetted by faculty and students in our institution’s Departments of Ob/Gyn, Internal Medicine, and Pediatrics
    - Addressed the breadth of Family Medicine, including inpatient and outpatient settings
- Assessments
  - Pre/post survey of students’ knowledge
    - 100 item test from Aquifer Family Medicine
  - Pre/post survey of student’s attitudes
    - Brief survey
  - Performance feedback, qualitative & quantitative
    - Mock paging cases, including
      - rapport with the caller (a nurse confederate)
      - addressing critical issues
      - avoiding pitfalls
    - Simulated procedure competence
    - Pre/post time measurements of two handed tie and instrument tie

Figure 1. Schedule

Date	Time	Topic
Mon/5	8A-9A	Intro, Orientation
	9A-12P	Pre-test (Aquifer)
	1-2P	Approach to Respiratory Emergencies
	2-5P	Respiratory Cases & Colonoscopy
Tues/6	9A-10A	Approach to Paging
	10A-12P	Screening (HME)
	1P-2P	Resilience
	2P-4P	NG Tube and IV placement
	4P-5P	Intro to Individual Development Plan
Wed/7	10A-12P	Lumbar Puncture
	1P-3P	Billing/coding Basics
Thurs/8	8A-12P	Thoracentesis (with IM)
	1-2:30P	Resident as Teacher
	2:30-5P	Self-directed learning (e.g., develop chalk talks)
Fri/9	8A-12P	Co-precepting (Chelsea) KM, ES, SW
	1P-5P	Co-precepting (Chelsea) YB, BD, MK
Mon/12	10A-12P	ACLS Intro
	1:30-5	ACLS Cases
Tues/13	9A-12P	NBME Health System Science Exam
	1P-3P	Efficiency, Intern Survival Skills
	3P-5P	Self-directed learning (e.g., iSim)
Wed/14	8A-10A	Fam. Med. Grand Rounds
	10A-12P	FM Resident Conference
	1P-5P	FAST/Abdominal Ultrasound
Thurs/15	9A-10:30	Professionalism
	10:30-12	Communication Skills (with staff and agenda setting w/ pts.)
	1P-4P	Perineal Repair and OB Ultrasound
Fri/16		MATCH DAY – no residency prep activities scheduled
Mon/19	10A-12P	Note Writing
	1P-5P	Co-precepting (Chelsea) CL, NZ
Tues/20	10A-12P	Paracentesis
	1P-5P	Self-directed learning (e.g., Aquifer cases)
Wed/21	9A-11A	Difficult Conversations (Breaking Bad News)
	11A-12P	EBM Overview
	12:50-1:50	Briarwood All Team Meeting
	2-3P	Chalk Talks
Thurs/22	9A-10A	Outpatient Management of Chronic Disease
	10-10:30	Break/Room Change
	10:30-12	Anx/Dep/Mental Illness
	1P-5P	Self-directed learning
Fri/23	9-10	Shock
	10-11:30	Central Lines
	11:30-1:30	Individual feedback
	1:30-3	Paging Debriefing
	3-5	Self-directed learning
Mon/26	10A-12P	OB Triage, Day 1 L&D
	1P-2P	Death Exam
	2P-3P	Delirium
	3P-3:40	Signout/Cross Coverage
	3:40-4:20	Stress Testing + Pre-operative Exam
	4:20-5P	Bugs and Drugs
Tues/27	9A-12P	Self-directed learning
	1P-5P	Self-directed learning
Wed/28	8A-10A	Fam. Med. Morbidity and Mortality Conf.
	10A-12P	FM Resident Conference
	1P-2P	Cervical Cancer Screening
	2P-3P	Vaginitis
	3P-4P	Contraception 101
	4P-5P	Self-directed learning
	5P-6P	NBME Health System Science Review
Thurs/29	10A-11A	PCMH/Population Management
	11A-12P	Well Child Exam
	1P-4P	Wrap up, post test (Aquifer)
Fri/30		Good Friday and start of Passover
		Self-directed learning

### RESULTS

#### Demographics

- 8 total student participants
  - All fourth year medical students
  - 4 male, 4 female
- All applied to Family Medicine
- All matched to Family Medicine

#### Mock Paging Curriculum

- No students performed
  - any “must not do” interventions
  - all of the “must do” and “should do” interventions
- Students received
  - direct feedback from callers and group debrief
  - materials detailing what would have been expected

#### Selected Pre- and Post-Course assessments (total N = 8)

##### Pre- and Post-Course Test Results on Aquifer FM Cases

	N	Pre-Test mean	Post-Test mean	P value
	8 (100%)	73.5	76.0	0.42

##### Pre- and Post-Course Survey Results--Rating scale 1 (not at all) to 5 (extremely prepared)

	N	Pre-Course Mean	Post-Course Mean	P value
Preparedness for intern year	4 (50%)	3.5	3.25	0.39
Ability to effectively evaluate/manage most inpatient cross-cover issues	4 (50%)	2.0	3.5	0.058

##### Pre- and post-course measurements of suture tying

	N	Pre-Course Mean (s)	Post-Course Mean (s)	P value
Instrument tie	7 (87.5%)	79.9	47.4	0.0998
Two-handed tie	7 (87.5%)	40.4	13.6	0.13

#### Student Course Evaluations

Narrative feedback included several themes:

-Students wanted more lectures and less simulation time

“More outpatient chronic disease lectures,” “Lectures that act as a review of medical school would actually be pretty useful,” “Combine the Sim Center...into just a couple sessions”).

-Students liked teaching and learning from each other

“Chalk talks were really useful. Doing 2-3 rounds might be great”

-Students were not fond of the Aquifer exam or cases

(“Eliminate the pre-/post-testing as it did not feel useful,” “There was substantial downtime...I personally did not like the [Aquifer] modules”).

- Students liked mock paging, but did not like being on-call the majority of the rotation

“The paging curriculum was fantastic”

### CONCLUSIONS

- RPCs are appreciated by students and teaching faculty alike<sup>2</sup>
- We created a novel four week long pilot course that can serve as a launching point for further development and study
- Future iterations are expected to contain more paging cases and more didactics, including students presenting to each other in the form of brief “chalk talks”

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