

**Interim Summary of the M3/M4 Curriculum Subcommittee
Regional Campus Expansion Committee
September 1, 2016**

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Our Goals

We summarized the charges our committee was given into the following:

- How can we ensure comparable experiences in third-year clerkships (M3) at all campuses?
- How can we ensure comparable experiences in fourth-year courses (M4) at all campuses?

To accomplish this, we determined that we would need to address the following domains:

- Clerkship coordination and oversight
- Faculty availability and development
- Clinical requirements
- Instructional requirements
- Assessment requirements

Our Approach

We began by addressing the comparability in M3. To accomplish this, we realized that additional data was necessary so we surveyed the current clerkship directors. These results are attached as an addendum. This data was discussed in our committee and informs much of the summary below. We have now begun to address comparability in fourth year and have been collecting data about course availability and requirements.

M3 Clerkship Coordination and Oversight

Currently, clerkship directors (who are based in Lexington) oversee their clerkship at all sites. They work with a site director at another campus (eg, the Rural Physician Leadership Program in Morehead, KY) to coordinate all activities of the clerkship. The Lexington-based clerkship director has final authority over the execution of the clerkship, with final oversight coming from the College of Medicine Curriculum Committee. Thus, clerkship directors require a substantial amount of dedicated time to accomplish the administration of their clerkship. Currently, 25% distribution of effort (DOE) is the standard for clerkship directors for four-week clerkships. This number varies on an individual basis, particularly for those clerkships which are much longer and have more elements to oversee. We asked the clerkship directors what DOE would be required for site directors for each clerkship at each campus. These were their responses:

MD 830: Peds	MD 831: EM	MD 832: Neuro	MD 833: Psych	MD 834: FM	MD 835: IM	MD 837: Surg	MD 838: Ob/Gyn
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DOE for site director	10-20%	Cannot estimate	40%	10%	10-15%	30%	5-10%	20%
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While answers varied, it is clear that a significant portion of each site director’s time will need to be allocated to administering the clerkship at that site (free of patient care duties). The mean for these answers was 19%, which is probably a reasonable estimate of the requirement for a site director. Regardless of the actual percentage chosen, it is clear there will need to be a significant adjustment in the clinical workload for these site directors.

In addition, a clerkship coordinator will be required for each clerkship. In surveying the clerkship directors, they stated that a full-time coordinator would be necessary for each clerkship at each campus. The specific responsibilities and volume of work will vary for each clerkship, but a coordinator will need to be identified who can be responsible for the following tasks:

- Coordinating students’ clinical experiences and communicating their schedule to them and their preceptors
- Arranging delivery of and tracking completion of Oasis evaluations
- Compiling evaluations and calculating final grades
- Proctoring the NBME subject exam
- Managing the Canvas course shell and clerkship documents
- Coordinating didactics/workshops
- Communicating with students about changes and responding to student questions/concerns

M3 Faculty Availability and Development

To ensure comparability, sufficient clinical faculty in each discipline who are willing and available to teach students will be necessary. We decided to estimate this need based on varying numbers of students per block to allow the Implementation Committee to determine the appropriate class size that would be feasible based on faculty availability. We asked the clerkship directors to estimate the number of faculty who would be required to teach a given amount of students per clerkship block. These were their responses, followed by our summarized ratio at the bottom:

	MD830: Peds	MD831: EM	MD832: Neuro	MD833: Psych	MD834: FM	MD835: IM	MD837: Surg	MD838: Ob/Gyn
<5 students/block	5 faculty	1:1 ratio per shift	I: 1 faculty O: 1-4 faculty	I: 2 faculty O: 1-4 faculty	5 faculty	4 faculty	3 faculty	2-3 faculty
5-10 students/block	10 faculty		I: 2-3 faculty O: 5-10 faculty	I: 2-4 faculty O: 5-10 faculty	5-10 faculty	8 faculty	5 faculty	4-6 faculty
10-20 students/block	20 faculty		I: 3-4 faculty O: 10-20 faculty	I: 4-8 faculty O: 10-20 faculty	10-20 faculty	12 faculty	8 faculty	8-10 faculty
Summary ratio faculty: students	1:1 ratio		I: 1:5ratio O: 1:1ratio	I: 1:3ratio O: 1:1ratio	1:1 ratio	1:1 ratio	1:2 ratio	1:2 ratio

Note: “I” denotes estimate if students’ assignments are primarily inpatient. “O” denotes estimate if students’ assignments are primarily outpatient.

These numbers represent “faculty equivalents,” meaning that if two faculty are required, that could be accomplished by having two dedicated full-time faculty who teach students continually (5 days a week, all year) or by having four faculty who teach students approximately half the time. Similarly, if a faculty member is identified

who will provide full-time teaching, a “back-up” faculty member may need to be identified to teach students when the former is on vacation.

Based on the duration of each clerkship and the number of total students in a regional campus class, the approximate number of students who would be enrolled in each clerkship at a given time are:

	MD830: Peds	MD831: EM	MD832: Neuro	MD833: Psych	MD834: FM	MD835: IM	MD837: Surg	MD838: Ob/Gyn
Clerkship duration	8 weeks	4 weeks	4 weeks	4 weeks	4 weeks	12 weeks	8 weeks	4 weeks
10 student class size	2 students	1 student	1 student	1 student	1 student	3 students	2 students	1 student
20 student class size	4 students	2 students	2 students	2 students	2 students	5 students	4 students	2 students
30 student class size	5 students	3 students	3 students	3 students	3 students	8 students	5 students	3 students
40 student class size	7 students	4 students	4 students	4 students	4 students	10 students	7 students	4 students

By combining the above estimates, the number of dedicated full-time faculty (or “faculty equivalents”) required in each discipline who would be teaching students continually throughout the year according to different estimates of class size would be:

	MD830: Peds	MD831: EM	MD832: Neuro	MD833: Psych	MD834: FM	MD835: IM	MD837: Surg	MD838: Ob/Gyn
10 student class size	2 faculty	1 faculty/ shift	I: 1 faculty O: 1 faculty	I: 1 faculty O: 1 faculty	1 faculty	3 faculty	1 faculty	1 faculty
20 student class size	4 faculty	2 faculty/ shift	I: 1 faculty O: 2 faculty	I: 1 faculty O: 2 faculty	2 faculty	5 faculty	2 faculty	1 faculty
30 student class size	5 faculty	3 faculty/ shift	I: 1 faculty O: 3 faculty	I: 2 faculty O: 3 faculty	3 faculty	8 faculty	3 faculty	2 faculty
40 student class size	7 faculty	4 faculty/ shift	I: 1 faculty O: 4 faculty	I: 2 faculty O: 4 faculty	4 faculty	10 faculty	4 faculty	2 faculty

Note: “I” denotes estimate if students’ assignments are primarily inpatient. “O” denotes estimate if students’ assignments are primarily outpatient.

We hope that this information is useful to the Implementation Committee as they plan for the class size at each campus. We anticipate that the availability of full-time faculty who can teach students continually throughout the year in certain departments may limit the potential class size that is feasible.

M3 Clinical Requirements

All clerkships have Required Clinical Experiences (RCEs) that each student must meet to successfully complete the clerkship (eg, participate in a case of abdominal pain). If students are unable to complete a RCE, they must be provided with an alternative means to accomplish it. We asked the clerkship directors to identify any additional clinical experiences that would be necessary to accomplish comparability at each campus. Combining their answers with the RCEs, yields the following:

MD 830 (Peds): 15 RCEs, an interprofessional experience, a newborn nursery experience, an inpatient pediatrics experience
 MD 831 (EM): 5 RCEs
 MD 832 (Neuro): 6 RCEs
 MD 833 (Psych): 5 RCEs, an interprofessional experience
 MD 834 (FM): 12 RCEs
 MD 835 (IM): 27 RCEs, an interprofessional experience
 MD 837 (Surg): 12 RCEs, both general and subspecialty experience
 MD 838 (Ob/Gyn): 18 RCEs

As evident, it is largely the RCEs that will determine the types of clinical settings that will be necessary to accomplish a comparable clerkship at that campus.

M3 Instructional Requirements

We asked the clerkship directors to list any teaching experiences that occur in their clerkship and to specify whether each experience would need to be conducted locally at each campus or whether it could be conducted in Lexington and then broadcast to each campus. These were their responses:

	Needs to be conducted at each site	Could be shared/broadcast from Lexington
MD 830: Peds	Small groups Murmur workshop	Daily lectures Radiology lecture On-line cases
MD 831: EM	4 workshops (Vascular Access, Airway, Ultrasound, Simulation) ACLS training	3 workshops (EMS, Resilience, Toxicology)
MD 832: Neuro	LP workshop	7 flipped classroom sessions Didactic lectures Review session
MD 833: Psych	N/A	N/A
MD 834: FM	Didactic lectures 3 workshops (Radiology, Musculoskeletal, EBM)	On-line cases
MD 835: IM	Small groups Review session	Didactic lectures On-line cases
MD 837: Surg	9 workshops (Airway, ENT, Scope Training, Orthopedics, Scrub & Gown, Suturing/Knot-Tying, Basic Skills, Radiology, Chest X-Ray)	Didactic lectures On-line cases
MD 838: Ob/Gyn	Breast and pelvic exam workshop	Didactic lectures Review session

From this data, it is evident that additional faculty will be required to conduct workshops and small group sessions beyond the faculty that are required for clinical teaching. This may be accomplished by having a dedicated faculty

member for each clerkship who conducts these sessions (possibly the site director) or by having multiple faculty sharing the responsibility for these sessions.

In addition, we assessed the use of simulation in the clerkships and the projected use as more Entrustable Professional Activities (EPAs) are incorporated into the curriculum in the next few years. As this involves skill-based teaching, these experiences would need to be conducted locally at each campus. Therefore, each campus will need simulation equipment and facilities. The following is a summary of the projected simulation needs for M3 within the next few years:



High-fidelity mannequin <ul style="list-style-type: none"> • Emergency patient management • Team-based training 	MD-830, MD-831, MD-832, MD-835, MD-837, MD-838
Airway trainer <ul style="list-style-type: none"> • Bag mask ventilation • Intubation 	MD-830, MD-831, MD-837
Breast exam trainer	MD-838
Central line trainer	MD-831
Chest compressions trainer	MD-831
Chest procedure trainer <ul style="list-style-type: none"> • Chest tube placement • Needle decompression 	MD-837
Intramuscular injection trainer	MD-834
Laparoscopy trainer	MD-837
Lumbar puncture trainer	MD-832
Male genital exam trainer	MD-837
Nasogastric tube trainer	MD-837
Obstetrical delivery trainer	MD-838
Pelvic exam trainer	MD-834, MD-838
Peripheral IV trainer	MD-831, MD-837
Rectal exam trainer	MD-837
Suturing trainer	MD-837, MD-838
Urinary catheter trainer	MD-837
US diagnosis trainer	MD-831, MD-837
Venipuncture trainer	MD-830, MD-831

M3 Assessment Requirements

Each clerkship includes an examination at the end. For all but one, this is a National Board of Medical Examiners (NBME) Subject Exam that has to be administered by an approved proctor. NBME requires one proctor for every 20 students, so the number of proctors will vary based on the size of the rotation group being tested each time (which will be determined by the class size). To accomplish this, proctors will need to be trained and approved at each campus. A campus may choose to have one primary person who proctors all clerkships at the campus or they may choose to have the coordinator for each clerkship help with this. As these are web-based exams, computer testing facilities and IT support, who will certify computer workstations and troubleshoot problems, will also need to be arranged.

In addition, some clerkships utilize Objective Structured Clinical Examinations (OSCEs), most of which involve standardized patients. At the conclusion of M3, every student is required to pass the Clinical Performance Examination (CPX) which includes content for all clerkships. Starting in the spring of 2019, there will be an M3 capstone course, which will include didactic and workshop teaching as well as the CPX and other standardized assessments of competence. Given the extensive use of standardized patients in M3 (and elsewhere in the curriculum), a standardized patient program will need to be developed at each campus.

The following are the current assessment requirements for each clerkship:

MD 830 (Peds): NBME exam, standardized patient OSCE

MD 831 (EM): Locally-developed exam
 MD 832 (Neuro): NBME exam, neuro exam OSCE
 MD 833 (Psych): NBME exam, planned OSCE
 MD 834 (FM): NBME exam
 MD 835 (IM): NBME exam, standardized patient OSCE, locally-developed midterm exam
 MD 837 (Surg): NBME exam, locally-developed midterm exam
 MD 838 (Ob/Gyn): NBME exam
 Clinical Performance Examination (CPX), a standardized patient OCSE

M4 Comparability

We are now beginning to address the issues involved in ensuring comparability in M4. This includes provision of acting internship (AI) experiences, electives, and the Transition to Residency course. The requirements for M4 are:

- MD 840: Transition to Residency
- A primary acting internship (AI)
- Either a secondary AI or another primary AI
- 5 electives

The AIs offered at the Lexington campus are:

Primary AI	Secondary AI
FM 850: AI in Family Medicine	ANS 850B: Anesthesiology AI
MED 870: AI in Medicine	ER 843: Emergency Medicine
MED 872: AI in Medicine/Pediatrics	ER 875: Pediatric Emergency Medicine
NEU 850: AI in Neurology	ER 890: Emergency Medicine Off-Site
ORT-SUR 851: AI in Orthopedic Surgery	MED 871: AI in Critical Medicine
PED 850: Neonatal Intensive Care	NSG 864: AI in Neurosurgery
PED 859: AI in Pediatrics	OBG 850: Gynecologic Oncology
PED 878: Pediatric Intensive Care	OBG 851: Gynecologic Subspecialties
PSC 841A: Adult Psychiatry, Inpatient AI	OBG 854: Clinical Clerkship in Obstetrics (Labor & Delivery)
SUR 852: AI in Pediatric Surgery	OBG 855: Clinical Clerkship in Gynecology
SUR 853: AI in Otolaryngology	OBG 863: High Risk Obstetrics (MFM)
SUR 854: AI in Urology	RBM 850: AI in Rehabilitation Medicine
SUR 855: AI in Plastic Surgery	RBM 852: Pediatric Orthopedic Rehabilitation
SUR 857: AI in Transplant Surgery	SUR 865: Surgical Intensivist
SUR 862A: AI in General Surgery: Oncology	
SUR 862B: AI in General Surgery: Gastrointestinal	
SUR 862C: AI in General Surgery: VA Hospital	
SUR 862D: AI in General Surgery: Vascular	
SUR 862E: AI in General Surgery: Good Samaritan	
SUR 863: AI in Cardiothoracic Surgery	
SUR 869: AI in Trauma Surgery	
SUR 876: AI in Oral and Maxillofacial Surgery	

In addition, there are 75 electives offered at the Lexington campus.

We have begun the process of addressing M4 comparability by assessing the current availability of open AI positions at the Lexington campus and will discuss this data as well as the requirements for an AI course at the next committee meeting. We will also be discussing the components involved in replicating MD 840 at another campus. The next step will be to discuss elective opportunities at the campuses. While every AI and every elective may not be offered at every campus, the goal will be to have a complete M4 experience available to students at each campus.

APPENDIX 1

CLERKSHIP DIRECTOR QUESTIONNAIRE

July 2016

Faculty needs:

1. What is the approximate minimum number of faculty in your discipline needed for your clerkship to function effectively at a given site, assuming the following number of students in your clerkship at a time?

- Less than 5 students** _____ **number of faculty**
- 5-10 students** _____ **number of faculty**
- 10-20 students** _____ **number of faculty**
- More than 20 students** _____ **number of faculty**

PEDS: Typically outpatient pediatricians will only take 1 student at a time. So it would depend on how many students are rotating at a time. I think Morehead sends the students to two offices over the 8 week time so you would need 2 per student unless a preceptor was willing to have them for 8 weeks. A 1:1 ratio is probably best.

EMERG MED: For the 45ish students in the Blocks at Chandler we require approx. 7 faculty members to conduct our clerkship administrative tasks and 7 workshop activities. EM is slightly different in the clinical environment because students are paired with faculty staffing models in the 24 hour setting. At Chandler there is a minimum of 2 attendings present 24 hours. 3 faculty members are available 12p-10p and 4 are available 10p-1a. We accommodate up 2-3 students per shift (1 of the 3 is in pediatrics).

SURGERY:

- Less than 5 students 3 number of faculty
- 5-10 students 5 number of faculty
- 10-20 students 8 number of faculty
- More than 20 students 4 students per faculty

PSYCH: Less than 5 students 2 number of faculty

5-10 students 2-4 number of faculty

10-20 students 4-8 number of faculty

More than 20 students 8+ number of faculty

NEURO: Less than 5 students 1 number of faculty

5-10 students 2-3 number of faculty

10-20 students 3-4 number of faculty

More than 20 students 5+ number of faculty

FAMILY MED: Less than 5 students 5 number of "full-time equivalent" faculty

5-10 students 5-10 number of "full-time equivalent" faculty

10-20 students 10-20 number of "full-time equivalent" faculty

More than 20 students 20+ number of "full-time equivalent" faculty

Both block and longitudinal Family Medicine clerkships are based on a 1:1 faculty:student ratio for preceptorship and will require at least one FTE faculty time per student (available throughout the course duration). Due to the continuous nature of the course and competing faculty commitments, more than one FTE is generally needed to cover for time taken during leave, hospital service and administrative responsibilities. A lower ratio would leave students without a preceptor and reduce valuable learning opportunities.

INTERNAL MED: Less than 5 students 4 number of faculty

5-10 students 8 number of faculty

10-20 students 10 number of faculty

More than 20 students 1:1.5 ratio number of faculty

OB GYN: Less than 5 students 2-3 number of faculty

5-10 students 4-6 number of faculty

10-20 students 8-10 number of faculty

More than 20 students unknown number of faculty

2. What is the optimal percentage of DOE (distribution of effort) for a clerkship director at a site to devote to the administration of your clerkship?

PEDS: Probably 0.1 to 0.2 depending on the number of students

EMERG MED: This is difficult for us to ascertain as both the clerkship director and assistant clerkship director at the Chandler site have other education based duties calculated into the DOE (residency planning, other undergrad medical education commitments). Perhaps this question is better served to the chair.

SURGERY: It varies according to the number of students as follows:

<10 students 5% DOE

>10 students 10% DOE

PSYCH: 10%

NEURO: 40% (depends on # of students)

FAMILY MED: Family Medicine clerkship director 20%

Family Medicine clerkship co-director/ site director 10-15%

INTERNAL MED: 30% (Psychiatry group recommends 50)

OB GYN: 20%

3. What support staff needs do you envision for a clerkship director at a site?

PEDS: Someone to help with scheduling and grades

EMERG MED: Dedicated clerkship coordinator for scheduling, correspondence and troubleshooting student needs. There also needs to be an agreement with a local EMS agency for prehospital ride along experiences. Currently both the Chandler and RPLP sites also provide ACLS training for students.

SURGERY: Dedicated support staff team who can coordinate between locations, ensuring the clerkship experience is comparable and other LCME requirements are being met. Individuals should be trained to proctor NBME and other exams. Expertise in Canvas, Excel, Word, and PowerPoint are a must. Support staff should be available for after-hours/urgent issues (due to the inevitable nature of a clerkship). Organization and communication are critical for these roles.

PSYCH: Clerkship coordinator to provide local administrative support

NEURO: Full (vs. Part) time clerkship coordinator (depending on # of students)

FAMILY MED: 1 .0 FTE staff member support is needed to support the clerkship site director with:

Orientation, clerkship conferences, workshops, exam proctoring

Student placement on campus

Communication with AHEC for community placements including housing

Curriculum implementation and evaluation

Program management including LMS management, grading, tracking and reporting

A longitudinal clerkship may require less or more than 1.0 full-time equivalent depending on the number of students involved.

0.5 FTE additional staff support would be needed for site visits and engagement to retain, recruit and develop Voluntary faculty as well as to facilitate the appointment and reappointment process through AHEC.

INTERNAL MED: 2 administrators/site

OB GYN: 1 staff member

Clinical and educational needs:

4. Other than the required clinical experiences for your discipline (attached below), what other educational experiences are necessary to ensure comparable experiences for our medical students at the various sites? Please include teaching activities (such as lectures, workshops, small groups) and clinical activities (such as required subspecialty exposure or inter-professional experiences). (Clerkship-specific RCEs follow on their questionnaires)

PEDS: We have telemedicine conference every Tuesday that could be led at each site by a faculty member where the students present cases to each other. We are planning on recording our noon lectures for students to access later.

Small group case presentations – should be done locally

Daily lectures – could be broadcast

Radiology lecture – could be broadcast

Murmur workshop – needs to be done locally

Interprofessional experience (1/2 day shadowing a nurse) – needs to be arranged locally

EMERG MED: There are 7 workshops plus an EMS ride along (separate from the EMS workshop) that we incorporate currently as part of the students' grade. These include: EMS, Toxicology, Vascular Access, Airway, Ultrasound in Trauma, Simulation, Medical Student Resilience.

SURGERY: Ideally, all of our mandatory hands-on workshops (Airway Workshop, ENT Workshop, Scope Training, Orthopaedics Workshop, Scrub & Gown, Suturing/Knot-Tying, Basic Skills, Radiology, and Chest X-Ray) would be available to all students. Six weeks of a general surgery rotation and two weeks of a subspecialty rotation is acceptable (RPLP model), but four weeks of a general surgery rotation and two 2-week subspecialties is preferred (Lexington model).

PSYCH: Inter-professional experiences - students should have the opportunity to interact with social workers, MHT's, psychiatric nurses and other mental health professionals to gain a better understanding of the inter-disciplinary manner in which mental health care is delivered

NEURO:

- Flipped classrooms sessions including 7 neurology topics (stroke, dementia, headache, epilepsy, multiple sclerosis, movement and neuromuscular)
- Adult and pediatric emergencies (currently given by residents)
- LP workshop
- Shelf review session.

FAMILY MED:

- Chronic Disease Management didactic session
- Radiology case review workshop
- Musculoskeletal (common shoulder and knee problems) workshop
- EBM Workshop
- Health care delivery system – didactic session

INTERNAL MED: We made these very basic so that the students in Morehead would have no trouble. Western KY should not have any problems with this list. We currently broadcast the other activities to Morehead – Prev Med, ECGs, CXRs, Ethics, Med Rec, Breaking Bad News, Medical Jeopardy, Shelf Review. Students at Morehead do not get the same ICU experience as students at UK – I think this is fine as long as they get some familiarity with ventilators/shock/pressors (but not required experience as above).

OB GYN:

- 12 hour didactics (mix of traditional lecture and flipped classroom) and 2 hour review session – all could be broadcast
- Breast/pelvic exam skills workshop – would need to be done locally

**5. Of the activities listed above, which ones would need to be conducted locally at each site?
Examples might include skill based workshops or inter-professional experiences.**

PEDS: We have a requirement that all students do a week of newborn nursery here, it would be nice if we could assure newborn nursery experience. RPLP already shadows nurses like we do for an inter-professional activity. Inpatient peds would be ideal.

EMERG MED: EMS workshop, Resilience and Toxicology are currently provided by the faculty at Chandler. The other workshops are provided by faculty at the RPLP site based on the objectives listed in course syllabus.

SURGERY: See above.

PSYCH: Inter-professional experiences

NEURO: all of the above

FAMILY MED:

- Chronic Disease Management workshop
- Radiology case review workshop
- Musculoskeletal (shoulder, knee etc.) workshop
- EBM Workshop
- Health care delivery system

All activities would be held at each regional site locations (Bowling Green, Lexington and Morehead) because conferences and didactics sessions work best when performed in person with small groups. All sites will share the same curriculum and content developed by the Lexington Main Campus site director. The Lexington clerkship director would need to travel to conduct assessments, evaluations, faculty development and provide administrative oversight of the Bowling Green and Morehead sites.

INTERNAL MED: FIRM groups are another experience that would need to be replicated locally. Med Jeopardy doesn't work well for off-campus students but they seem to enjoy it anyway

OB GYN: see above

6. What minimal requirements would be necessary to replicate these activities at other sites, in terms of faculty needs, facility and human resources, technology, etc.?

PEDS: Need a conference room for students to meet. A facilitator for small group cases. Ability to stream the lectures. See above for further details

EMERG MED: These are probably best asked to the RPLP site clerkship director for details. Students get training by anesthesia for their Airway requirements. EM faculty provide training in Vascular Access and Ultrasound.

SURGERY: At a minimum, faculty, residents, or staff to lead the various workshops, supplies/materials/space for the workshops, administrative support staff to coordinate the activities.

PSYCH: For IPE at other sites, students on Psychiatry clerkships would need to interact with nurses, psychologists or social workers during their rotation. This is already happening at Morehead as well as in Lexington. We don't anticipate any issue with this in Bowling Green for Psychiatry is practiced as an interdisciplinary field.

NEURO:

- Neurologists to facilitate 1 hr flipped classroom sessions
- Students would be able to watch the prerecorded lectures done on main campus.
- LP mannequin to practice safe LP technique
- Neurologist to grade OSCE

FAMILY MED:

1.0 FTE Faculty site director with 15-20% DOE for instruction without patient care

- access to office for student advising and meetings
- time for faculty development including attendance at STFM Medical Student Education meeting
- expertise in population health, EBM, MSK

1.0 Staff support with access to printing, copying, faxing, phone and computer

0.5 FTE staff AHEC liaison for student placement support

Meeting space for weekly or monthly student conferences depending on block or longitudinal course that has the following:

- Projection capability
- AV system (computer, audio)
- Phone system for teleconferences
- Onsite tech support for remote conferencing

Financial support from COM for FMCases, Teaching Physician (STFM) and NBME exam

1.0FTE Preceptor board certified MD/DO faculty per student

- compensation and benefits for instruction with patient care d/t competition from other institutions who provide monetary compensation
- faculty appointment

Affiliation agreements with site locations (hospitals/medical offices)

Housing resources

INTERNAL MED: Administrative and technical support to schedule and assist with connections.

OB GYN: Simulations/videos

7. Which activities would be appropriate to transmit from Lexington for your clerkship? Examples might include a didactic lecture or PowerPoint presentation.

PEDS: Didactic lectures and Grand Rounds

EMERG MED: We have allocated multiple electronic preparatory resources via Canvas for general objectives as well as workshop preparation. Some of the workshops could be transmitted via teleconference (ex. Toxicology)

SURGERY: Didactic lectures (if quality streaming technology/tech support is available at all locations.)

PSYCH: None needed

NEURO:

- Pre-recorded lectures
- To date, most conferences have been transmitted to off campus students but there are a small #. Not sure this is feasible with exponential # increase.
- Teaching sessions are probably ok to transmit (these are brand new this year, only 1 block in)

FAMILY MED: Resources that can be shared from main campus for remote use include:

- Course materials shared through canvas:
 - Powerpoints for orientation activities
 - Quizzes
 - Readings
- fmCASES (online)
- NBME preparation materials (online)
- AAFP teaching resources (online)
- TeachingPhysician (online)

Some faculty development, training and clerkship planning sessions could be provided by teleconference.

INTERNAL MED: same as above - Administrative and technical support to schedule and assist with connections.

OB GYN: Tuesday student lectures

8. Other than the end-of-third-year CPX, does your clerkship use SPs or OSCEs? If so, please briefly describe.

PEDS: We have an OSCE at the end that is part of their grade, this uses SPs

EMERG MED: We are transitioning our Simulated Patient Encounter workshop to low-fidelity simulation (via iSimulate technology) and workshop-based task trainers. Thus, this experience would not require the use of an SP clinic or formal sim center.

SURGERY: Not currently

PSYCH: No, but we are strongly considering doing so for the 1718 academic year.

NEURO: Yes, osce done at mid-point (3rd monday of clerkship) where students must demonstrate 10 minute normal neruro exam on each other. No SPs. They just partner up.

FAMILY MED: No, however we have considered this and had hoped to incorporate this in the future. We would need more time during the clerkship and additional funding for OSCE's.

INTERNAL MED: Moving our OSCE to midpoint. Will have Morehead students commute this year but we need to develop SP programs locally.

OB GYN: Our clerkship holds a breast/pelvic exam skills exam on the last day following the shelf exam

9. Do you use simulation in any part of your clerkship (including high-fidelity simulators, such as mannequins, or low-fidelity task simulators, such as for procedures)? Please describe.

PEDS: None currently, but would like to do high-fidelity simulation for codes in the future

EMERG MED: See above answer re: OSCEs and SPs

SURGERY:

- Basic Skills Workshop: peripheral IV arm mannequin, a NG tube mannequin, male and female Foley mannequins, and various supplies
- Airway Workshop: Mannequin, endotracheal tubes, laryngoscopes, lmas, oral airways, Ambu bag, tube stylet, 10cc syringe
- Breast: Ultrasound machine, multiple biopsy devices, and breast phantoms.
- Radiology: TBD
- Splinting/Casting: Simulation (students practice on one another)
- Scope training workshop- we use an actual laparoscope and a “box” to practice.
- Future needs include a rectal exam task trainer

PSYCH: We're not aware of any Psychiatry clerkships across the US which use simulation of any kind. Not sure what that would be.

NEURO: Each rotation students have a resident-led Lumbar Puncture workshop. Prior to this, students are required to watch the NEJM lumbar puncture tutorial available on YouTube. The students then meet with a senior resident who demonstrates a proper lumbar puncture on the LP mannequin. Students are then guided on how to conduct a proper lumbar puncture, and often, students are able to practice multiple times.

FAMILY MED: No although we have also considered this for MSK and GYN procedures that are commonly performed in outpatient FM. This was something we had hoped to implement in the future with additional time and funding.

INTERNAL MED: No

OB GYN: Currently doing breast and pelvic exam teaching and formative feedback using task trainers. We would like to use Ob mannequin simulator in the future.

Summary:

10. What are the biggest challenges that you see in providing a comparable clerkship experience at another site(s)?

PEDS: There is minimal inpatient peds outside of UK. I am still not sure how we say RPLP is equivalent. It will also be nearly impossible for me to have more AIs here at UK for the 4th year.

EMERG MED: Due to the volume of students in Lexington versus another site, there is difficulty matching the clinical time for students (typically more for rural students, less in Lexington bc of physical setting) and workshop time (more opportunities with academic faculty in Lexington).

SURGERY: Quality of teaching, recruiting individuals to lead workshops, and lack of livestreaming infrastructure/tech support. Dr. Paula Arnett of RPLP would be able to shed some light on the challenges one might expect.

PSYCH: Ensuring adequate number of faculty to supervise and teach students.

NEURO:

Comparability of sites, community hospital vs. Tertiary care center experience.

Most community neurologists do hospital consults and primarily have outpatient practices so those students see much more outpatient neurology than main campus students where experience is mostly inpatient

Communication between main campus and regional sites!!!!

Too big of a job for main campus clerkship directors to manage main campus students and large # of offsite students. Currently, it is challenging to coordinate 1-3 off site students.

FAMILY MED:

1) Clerkship block duration:

The greatest challenge is for students to have enough exposure to family medicine to understand the scope and depth of this field – a tremendous challenge for a 4 week clerkship. With the concentration of faculty at the university, we are able to compress some of the teaching into didactics supplemented by rotation in our various FM outpatient clinics (procedure clinic, Sports Medicine Clinic, Integrative Medicine Clinic, etc.) at Turfland. In this brief duration, students in the community will likely not have the breadth of exposure and there will be less faculty support to teach about the broader spectrum of family medicine, thereby leaving students with a truncated experience despite the fact that it meets the minimum recommended requirements. A minimum of 6 weeks is common nationally for Family Medicine clerkships in order to increase student participation in outpatients clinics, and to see and apply the knowledge and skills they develop in didactic sessions. Additionally, with the emphasis placed on clinical skills examinations, this duration of clerkship would allow the implementation of a pre- and post-course clinical exam to help focus the teaching for each group as their baseline skillset varies throughout the year.

2) Recruitment of Voluntary Faculty:

The second challenge is adequacy of an interested and qualified preceptor pool. MD834 is a dispersed clerkship with 2/3 of students getting their clinical experiences with voluntary faculty. With the expansion of sites there will be an increased need to recruit qualified and interested voluntary faculty

who are willing to become continuously and profoundly involved in medical student education. This also will require the clerkship director and site directors to coordinate and implement an expanded voluntary faculty development plan. There is always a threat of losing preceptors to competing educational institutions that pay for student experiences.

3) Development of an M3 Clerkship Voluntary Faculty teaching cohort

The third major challenge is oversight of the quality of education. There is a need for qualified clinical faculty and staff with protected time to recruit, retain and develop Voluntary Faculty. Their objective would be to engage and collaborate with Voluntary faculty in order to adequately communicate the core curriculum and course activities, share student evaluations and feedback and help them develop an ongoing plan for continuous participation in the clerkship. We anticipate that with expansion there will be need for additional staff person to coordinate this part of the program. The experiences that students get at each site is also variable and dictated by the interests and scope of practice of local physicians. In most cases, this adds diversity to minimum required experiences, exposes students to health systems outside the academic center and to community health. However, the task of documentation to demonstrate comparability of experiences (e.g. through case logging) becomes a burdensome exercise for students. Therefore, a centralized system that can track the types of patients seen by each voluntary faculty might help us characterize the practices to confirm equivalency.

INTERNAL MED: I think we can do this as we've been working with the RPLP for several years. We really need some better telecommunication system – higher definition, speedier, and more reliable.

OB GYN: Broadcasting lectures and timely completion of student evaluations