LEARNING GOALS & OBJECTIVES:
To participate in laboratory diagnostics as well as ultrasound performance and interpretation. How to treat and manage various illnesses and injuries including tropical diseases. Furthermore, the student will have the opportunity to observe limitations encountered in medical care in the developing world. The student will work closely with the attending on duty and learn to conduct an initial assessment of a patient in the developing world and perform stabilization techniques.

Students will focus on how to order appropriate diagnostic tests and formulate a differential diagnosis while adapting to the many differences in the healthcare systems in Nicaragua and the US.

Students will also have the opportunity to shadow physicians in Chinandega, Nicaragua. Optional 8am-12pm shifts are available on Saturdays as well. During each shift, the student will interact with patients and learn how to perform a focused H&P.

This course is a four-week clinical elective at the PMI Nicaragua Medical Center in El-Viejo, Nicaragua, sponsored by the Palmetto Medical Initiative. The course will involve Monday through Friday clinical shifts of 8 hours (9am-5pm) in the outpatient, urgent care, and emergency medicine settings in El-Viejo, Nicaragua, as well as the Emergency Department of the University Medical Center in Leon, Nicaragua. Students will also have the opportunity to shadow physicians in Chinandega, Nicaragua. Optional 8am-12pm shifts are available on Saturdays as well. During each shift, the student will interact with patients and learn how to perform a focused H&P. The student will focus on how to order appropriate diagnostic tests and formulate a differential diagnosis while adapting to the many limitations encountered in medical care in the developing world. The student will work closely with the attending on duty and learn how to treat and manage various illnesses and injuries including tropical diseases. Furthermore, the student will have the opportunity to participate in laboratory diagnostics as well as ultrasound performance and interpretation.

EVALUATION / FEEDBACK METHODS:
Students will be evaluated using the following methods.
1. Clinical Performance Evaluation (PC, PR, MK, CS, PL, SL) with direct observation of clinical and patient care skills evaluated by the attending physician. (MK, PC, PR, CS)
2. Chest pain, abdominal pain, diabetes, hypertension, cellulitis, trauma, and non-infectious diseases (MK, PC, PR, CS, PL, SL)
3. The students will be evaluated on their ability to follow the patient through the course of their time at MKMC which could include an admission. (PR, CS, PL, SL)
4. Active participation in group discussion as evaluated by the attending physicians or MKMC staff. (MK, PC, PR, CS, SL, PL)
5. Participation in weekly didactic sessions as evaluated by the course director. (MK, PR, CS, PL, SL)

INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES:
Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Lectures, rounds, and discussion consisting of two pre-trip lectures of 1 hour each, assigned readings and one post-trip lecture of 1-2 hrs. including a post-rotation debriefing session with course director
2. Patient contact and patient load
3. Post-elective case presentation to peers and faculty.
4. Active participation in group discussion as evaluated by the attending physicians or MKMC staff. (MK, PC, PR, CS, SL, PL)

PATIENT ENCOUNTERS:
Students will be expected to work-up patients with conditions from all organ systems, including:
1. Malaria, Typhoid and other Tropical or Infectious Diseases common to the area
2. Chest pain, abdominal pain, diabetes, hypertension, cellulitis, trauma, and non-infectious diseases

Does this rotation accept visiting students? ☐ YES ☑ NO

COURSE DESCRIPTION:
This course is a four-week clinical elective at the PMI Nicaragua Medical Center in El-Viejo, Nicaragua, sponsored by the Palmetto Medical Initiative. The course will involve Monday through Friday clinical shifts of 8 hours (9am-5pm) in the outpatient, urgent care, and emergency medicine settings in El-Viejo, Nicaragua, as well as the Emergency Department of the University Medical Center in Leon, Nicaragua. Students will also have the opportunity to shadow physicians in Chinandega, Nicaragua. Optional 8am-12pm shifts are available on Saturdays as well. During each shift, the student will interact with patients and learn how to perform a focused H&P. The student will focus on how to order appropriate diagnostic tests and formulate a differential diagnosis while adapting to the many limitations encountered in medical care in the developing world. The student will work closely with the attending on duty and learn how to treat and manage various illnesses and injuries including tropical diseases. Furthermore, the student will have the opportunity to participate in laboratory diagnostics as well as ultrasound performance and interpretation.

EDUCATIONAL METHODOLOGIES AND ROTATION ACTIVITIES:
Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:
1. Lectures, rounds, and discussion consisting of two pre-trip lectures of 1 hour each, assigned readings and one post-trip lecture of 1-2 hrs. including a post-rotation debriefing session with course director
2. Patient contact and patient load
3. Post-elective case presentation to peers and faculty.

PATIENT ENCOUNTERS:
Students will be expected to work-up patients with conditions from all organ systems, including:
1. Malaria, Typhoid and other Tropical or Infectious Diseases common to the area
2. Chest pain, abdominal pain, diabetes, hypertension, cellulitis, trauma, and non-infectious diseases

EVALUATION / FEEDBACK METHODS:
Students will be evaluated using the following methods.
1. Clinical Performance Evaluation (PC, PR, MK, CS, PL, SL) with direct observation of clinical and patient care skills evaluated by the attending physician. (MK, PC, PR, CS)
2. Chest pain, abdominal pain, diabetes, hypertension, cellulitis, trauma, and non-infectious diseases (MK, PC, PR, CS, PL, SL)
3. The students will be evaluated on their ability to follow the patient through the course of their time at MKMC which could include an admission. (PR, CS, PL, SL)
4. Active participation in group discussion as evaluated by the attending physicians or MKMC staff. (MK, PC, PR, CS, SL, PL)
5. Participation in weekly didactic sessions as evaluated by the course director. (MK, PR, CS, PL, SL)
6. The student will be required to present a case report or original paper of their choosing during one didactic session and will be evaluated by their peers, the EM residents, and the faculty present at EM conference. (MK, PC, PR, CS, PL, SL)

Will students be expected to participate in call? □ YES □ NO

**ADDITIONAL INFORMATION:** This course requires the following:
1. Approval by the COM Associate Dean for Curriculum – Clinical Sciences and the COM Selectives and Electives Committee. **Permission to participate in this elective may be denied or revoked after original permission is granted if for any reason concerns arise regarding safety or quality of the educational experience.**
2. Coordination of travel with the MUSC Global Health Center and registration of travel according to MUSC International Travel policy and restrictions, which includes registration with S.O.S. travel contracting group
3. Completion of a separate application and waiver of liability prior to departure through the Palmetto Medical Initiative, which serves as host during the rotation. This can be found at [www.palmettomedical.org](http://www.palmettomedical.org)
4. Vaccines are required for travel into Nicaragua; please see the CDC website on travelers’ health and/or visit the MUSC Travel Medicine Clinic for more details

*Scholarship money may be available to cover costs associated with this elective, please see your COM Deans Office Representative for details.*
**Course Director:** Edward O’Bryan, MD  
Email: obryanec@musc.edu  
**Course Coordinator:** Christine Talbot-Bond  
Telephone #: 843-792-2427  
Email: talbotbo@musc.edu

### COURSE DESCRIPTION:

The course consists of 18 eight-hour shifts at the Palmetto Medical Initiative (PMI) Masindi-Kitara Medical Center (MKMC) in Masindi, Uganda. During each shift, the student will interact with patients and learn how to perform a focused H&P. The student will focus on how to order appropriate diagnostic tests and formulate a differential diagnosis while focusing on the many limitations of health and order/interpret appropriate diagnostic tests (including imaging/lab studies) related to the differential diagnosis (MK, PL, SL).  

#### LEARNING GOALS & OBJECTIVES:

At the completion of this clinical rotation students should be able to do the following:

1. Conduct an initial assessment of a patient in the developing world and perform stabilization techniques (MK, PC, CS, PR)
2. Establish a differential diagnosis including potential tropical diseases, zoonotic diseases, and diseases related to inadequate public health and order/interpret appropriate diagnostic tests (including imaging/lab studies) related to the differential diagnosis (MK, PL, SL)
3. Manage acutely ill and/or injured patients as well as inpatients (MK,PC,PR,CS)
4. Perform procedural skills if desired (i.e., I.V. access, blood drawing, sutures, I&Ds, wound care, fracture splinting) (MK, PC, PL)
5. Participation/reading blood smears, lab interpretation, ultrasound interpretation, and patient case discussions (MK,PR,PL,SL)

### INSTRUCTIONAL METHODOLOGIES AND ROTATION ACTIVITIES:

Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:

1. Lectures, rounds, and discussion including two pre-trip lectures of 1 hour each and one post-trip lecture of 1-2 hrs. including a post-rotation debriefing session with course director
2. Patient contact and patient load

### PATIENT ENCOUNTERS:

Students will be expected to work-up patients with conditions from all organ systems, including:

1. Malaria, Typhoid and other Tropical or Infectious Diseases common to the area
2. Chest pain, abdominal pain, diabetes, hypertension, cellulitis, trauma, and non-infectious diseases

### EVALUATION / FEEDBACK METHODS:

Students will be evaluated using the following methods.

2. Direct observation of clinical and patient care skills evaluated by the attending physician. (MK, PC, PR, CS)
3. The students will be evaluated on their ability to follow the patient through the course of their time at MKMC which could include an admission. (PR, CS, PL, SL)
4. Active participation in group discussion as evaluated by the attending physicians or MKMC staff. (MK, PC, PR, CS, SL, PL)
5. Participation in weekly didactic sessions evaluated by the course director. (MK, PR, CS, PL, SL)
6. The student will be required to present a case report or original paper of their choosing during one didactic session – duration of no more than five minutes – and will be evaluated by their peers, the EM residents, and the faculty present at EM conference. (MK, PC, PR, CS, PL, SL)
7. In order to continue to improve the rotation, you will be required to critique both the course and the attendings, residents, and/or
MKMC staff with whom you worked. These evaluations need to be completed no later than two weeks after the completion of the rotation. (PL)

Will students be expected to participate in call? □ YES □ NO

**ADDITIONAL INFORMATION:** This course requires the following

1. Approval by the COM Associate Dean for Curriculum – Clinical Sciences and the COM Selectives and Electives Committee. **Permission to participate in this elective may be denied or revoked after original permission is granted if for any reason concerns arise regarding safety or quality of the educational experience.**

2. Coordination of travel with the MUSC Global Health Center and registration of travel according to MUSC International Travel policy and restrictions, which includes registration with S.O.S. travel contracting group

3. Completion of a separate application and waiver of liability prior to departure through the Palmetto Medical Initiative, which serves as host during the rotation. This can be found at www.palmettomedical.org

4. Vaccines are required for travel into Uganda; please see the CDC website on travelers’ health and/or visit the MUSC Travel Medicine Clinic for more details

**Scholarship money may be available to cover costs associated with this elective, please see your COM Deans Office Representative for details.**
**Course Director:** Edward O’Bryan, MD  
Email: obryanec@musc.edu

**Course Coordinator:** Christine Talbot-Bond  
Telephone #: 843-792-2427  
Email: talbotbo@musc.edu

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### Course Description:
This rotation is structured to give students a broad-based experience in development, organization, and implementation of Public Health Initiatives in the setting of the developing world. The student will become an integral part of the Public Health team at the Masindi-Kitara Medical Center (MKMC) in Masindi, Uganda, and will participate in public health community outreach as well as public health teaching and training within the medical center that serves a population of over 600,000 people. The student will work closely with the current and future United States Peace Corps Members stationed at the medical center as well as participate in new public health opportunities through the United States Agency for International Development (USAID) Diagnostic and Public Health Center being constructed currently at MKMC. The student will also have the opportunity to participate in ongoing public health research as well as craft new research opportunities in both a public health and clinical setting (optional). Furthermore, should the rotation fall on one of the four annual Palmetto Medical Initiative (PMI) short-term mission weeks, the student may participate in remote mobile outreach clinics as well where they will have a specific pre-determined public health agenda and focus.

### Learning Goals & Objectives:
At the completion of this clinical rotation students should be able to do the following:

1. Demonstrate analysis, synthesis, and integration of pertinent public health data.
2. Formulate a comprehensive, ordered public health intervention plan.
3. Demonstrate an ability to build a positive, proactive relationships with patients.
4. Demonstrate professional demeanor and ethical behavior.
5. Demonstrate the ability to incorporate best medical practice into existing cultural beliefs.
6. Apply knowledge of the pathophysiology, epidemiology, and natural history of public health issues specific to Sub-Saharan Africa.
7. Demonstrate and apply knowledge of the epidemiology, and natural history of public health management of patient populations.
8. Present pertinent public health data gathered from research, current initiatives, and best practice to MKMC staff as well as public health patients.
9. Demonstrate effective and professional interpersonal and communication skills in interactions with patients and families, including an awareness of psychosocial factors related to public health deficits.
10. Identify public health knowledge deficits. Change future practices based on deficits.
11. Demonstrate appreciation and collaboration with other members of the public health team including Peace Corps Staff, USAID Staff, nursing, and community leaders.
12. Identify issues related to the cost-effectiveness of public health interventions.

### Instructional Methodologies and Rotation Activities:
Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:

1. Lectures, discussion, public health project implementation
2. Coordination with Peace Corps Workers, MKMC staff and local community leaders to assess effectiveness of public health interventions.
3. Attendance at weekly public health outreaches with Peace Corps and MKMC staff, as well as twice weekly public health teaching sessions at MKMC.
4. Attendance at a mandatory “mini-course” (usually 2-3 hours long) to cover important aspects of public health, global and travel medicine prior to travel.
5. Complete a 2-3 page paper on a public health issue addressed while on rotation.
6. Attendance at a mandatory lecture and debriefing meeting (2 hrs) with course director within one week of returning from rotation.

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**Does this rotation accept visiting students?**

- [ ] YES  
- [x] NO

**Course Coordinator:** Christine Talbot-Bond  
Telephone #: 843-792-2427  
Email: talbotbo@musc.edu

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**Block 1:** 7/6/15 – 7/31/15  
**Students:** 1

**Block 2:** 8/3/15 – 8/28/15  
**Students:** 1

**Block 3:** 8/31/15 – 9/25/15  
**Students:** 1

**Block 4:** 9/28/15 – 10/23/15  
**Students:** 1
PATIENT ENCOUNTERS: Students will be expected to work-up patients with conditions from all organ systems, including:
2. Direct observation of public health presentation skills as evaluated by the attending physician. (MK, PC, PR, CS)
3. Feedback and evaluation of writing assignment (MK)
4. Active participation in group discussion as evaluated by the course director and public health staff. (MK, PC, PR, CS, SL, PL)
5. Participation in the weekly public health didactic sessions as evaluated by the faculty as well as potential residents and Peace Corps workers. (MK, PR, CS, PL, SL)
6. The student will be required to present a public health case report or research topic of their choosing during one didactic session – duration of no more than five minutes – and will be evaluated by their peers, the EM residents, and the faculty present at conference. (MK, PC, PR, CS, PL, SL)
7. In order to continue to improve the Public Health Rotation, you will be required to critique both the course and the attendings, residents, and/or Peace Corps Volunteers with whom you worked. These evaluations need to be completed no later than two weeks after the completion of the rotation. (PL)

EVALUATION / FEEDBACK METHODS: Students will be evaluated using the following methods.
2. Direct observation of public health presentation skills as evaluated by the attending physician. (MK, PC, PR, CS)
3. Feedback and evaluation of writing assignment (MK)
4. Active participation in group discussion as evaluated by the course director and public health staff. (MK, PC, PR, CS, SL, PL)
5. Participation in the weekly public health didactic sessions as evaluated by the faculty as well as potential residents and Peace Corps workers. (MK, PR, CS, PL, SL)
6. The student will be required to present a public health case report or research topic of their choosing during one didactic session – duration of no more than five minutes – and will be evaluated by their peers, the EM residents, and the faculty present at conference. (MK, PC, PR, CS, PL, SL)
7. In order to continue to improve the Public Health Rotation, you will be required to critique both the course and the attendings, residents, and/or Peace Corps Volunteers with whom you worked. These evaluations need to be completed no later than two weeks after the completion of the rotation. (PL)

Will students be expected to participate in call? ☐ YES ☒ NO

ADDITIONAL INFORMATION: This course requires the following
1. Approval by the COM Associate Dean for Curriculum – Clinical Sciences and the COM Selectives and Electives Committee. Permission to participate in this elective may be denied or revoked after original permission is granted if for any reason concerns arise regarding safety or quality of the educational experience.
2. Coordination of travel with the MUSC Global Health Center and registration of travel according to MUSC International Travel policy and restrictions, which includes registration with S.O.S. travel contracting group
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**Scholarship money may be available to cover costs associated with this elective, please see your COM Deans Office Representative for details.**