Supplemental Digital Appendices

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Supplemental Digital Appendix 1

Intern Instructions for the Simulated Consultation, Consultation Observed Simulated Clinical Experience (COSCE), Advanced Communication Skills Boot Camp, University of Chicago Medicine, June 2016

You are a resident who has just re-evaluated a patient that you are covering. The patient needs a consultation from a specialist.

Your job is to use the information provided in the table to successfully consult the specialist. This includes communicating all of the pertinent information about these patients, along with the reason for the consultation.

Please go into the room and complete a consultation to the physician consultant waiting for you. As you do so, be mindful of your communication skills and adhere to the 5 Cs framework. A notecard to remind you of the 5 Cs framework has been provided for you.

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COSCE Case for
Internal Medicine, Surgery, and Psychiatry Interns

Identifying Information	**Clinical Scenario**	**Medications**	**On Reassessment…**	**To Do:**
Miller, Robert MR#: 1234567 Location: TS317 Allergies: PCN Date of Admit: 6/18/16 Code Status: FULL PCP: Altkorn	47 y/o M with h/o Crohn's disease s/p resection p/w partial SBO and AKI. *Additional Information: Prior to admission had 3 days of N/V, decreased flatus, crampy abdominal pain, and decreased urine output. Pmhx: as above. Pshx: small bowel resection in 2010. Current Physical Exam: BP 132/80, HR 80, RR 15, CV- RRR, no m/g/r, Pulm- CTA B, Abdomen- mildly distended and tender diffusely. Ext- no edema. Admission Labs/imaging: creatinine- 1.7. CT abdomen/pelvis – partial sbo.* 1. Partial SBO→ surgery actively following, NGT to LIS d/c'd today, starting clears 2. AKI→ 3d h/o N/V, Cr 1.7 from baseline of 0.9, with hydration 1.2 this morning, off IVF *3.* Prophylaxis→ LMWH SQ, NPO, IV PPI	Tylenol 650mg po q4-6hr PRN	Patient's creatinine increased to 2.3 on evening lab check.	[ ] Consult Renal regarding fluid recs and management of rising creatinine

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COSCE Case for Pediatrics Interns

Identifying Information	Clinical Scenario	Medications	On Reassessment…	To Do:
Williams, Jennifer MR#: 5678901 Location: K567 NKDA Date of Admit: 6/18/16 Code Status: FULL PCP: Park	8 y/o F with moderate persistent poorly controlled asthma p/w asthma exacerbation in setting of viral URI, transferred to floor from outside hospital ED. *Additional Information: 3 days prior to presentation at the outside hospital, patient developed cough and rhinorrhea. Later that same day, began wheezing and having shortness of breath. Pmhx: as above with prior intubation in 2012. Pshx: none. Current Physical Exam- T 37.0, HR 123, BP 102/63, CV- tachy and regular, Pulm- diffuse expiratory wheezing in all lung fields. Imaging- CXR: normal.* 1. Asthma exacerbation likely related to viral URI, required continuous albuterol for 3 hours, magnesium, atrovent, orapred at OSH ED, weaned to q2h albuterol during transfer to Comer floor. Arrived 1 hour prior.	Albuterol MDI 2 puffs Orapred 1mg/kg BID Flovent 110mcg 2 puff BID Singulair 5mg daily Multivitamin daily	Patient has increased work of breathing	[ ] Consult pulmonology to determine if patient will make q2h albuterol treatments or will need continuous nebulizers in the ICU [ ] Follow up respiratory viral panel

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COSCE Case for Emergency Medicine and OB/GYN Residents

Identifying Information	**Clinical Scenario**	**Medications**	**On Reassessment…**	**To Do:**
Williams, Jennifer MR#: 5678901 Location: TS367 NKDA Date of Admit: 6/18/16 Code Status: FULL PCP: Altkorn	28 y/o F with h/o uterine fibroids p/w vaginal bleeding and symptomatic anemia. *Additional Information: Patient endorses 3 weeks of heavy vaginal bleeding, passing clots. 2 days prior to arrival, dyspnea on exertion and lightheadedness noted. Pmhx: as above. Pshx: none. Current Physical Exam: T 37.0, HR 110, BP 105/55, CV- regular and tachy, Pulm- CTA B, Abd- non-tender, Pelvic- brisk, active bleeding from cervical os.* 1. Vaginal Bleeding→ likely related to uterine fibroids, Hgb on presentation 4.5 and patient symptomatic, transfused 3U PRBCs in the ED, awaiting repeat CBC; has 2 large bore peripheral IVs *2.* Prophylaxis→ SCDs	Tylenol 650mg po q4-6hr PRN	Patient's CBC shows a hemoglobin of 4.0 after 3U PRBCs	[ ] Consult IR regarding possible embolization

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Supplemental Digital Appendix 2

Instructions for Faculty Serving as Standardized Consultants (Receivers of Consultation Calls From Interns), Simulated Consultation, Consultation Observed Simulated Clinical Experience (COSCE), Advanced Communication Skills Boot Camp, University of Chicago Medicine, June 2016

Please view the "Consultation Module" that all incoming residents will complete. This will take less than 10 minutes and can be accessed through the following link: [*INTERNAL LINK PROVIDED]*

In addition, please look over the sample cases (attached below) relevant to the consultation OSCE that you will be volunteering in.

The Day of the Boot Camp

Please arrive ten minutes prior to your assigned time. Please review attached map for the location of the center, and **please bring your white coat with you**. As the "Standardized Consultant," you will receive the consult provided by the resident via telephone. Each resident will be given a total of **10 minutes** to review the door chart and complete the consultation while adhering to the 5 Cs framework for consultation communication. As the receiver, you are encouraged to engage in active listening, which may include taking notes and asking a question to clarify the case. In structuring their consultation according to the 5 Cs framework, the resident should demonstrate openness to receiving and incorporating recommendations from the consultant; at the appropriate time, please provide recommendations for the case (suggested recommendations for each case are included below).

Additionally, during this time, you will be evaluating the resident on their ability to communicate the consultation effectively. You will use 2 evaluation tools, the "5 Cs Checklist" and "Global Rating Scale", both attached below. After the simulation, you will be given **5 minutes** to provide feedback to the resident. Finally, after the session, you may turn in your evaluation form to the staff at the simulation center.

Thanks again, and please don't hesitate to let us know if you have any questions!

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COSCE Case For
Internal Medicine, Surgery, and Psychiatry Interns

Identifying Information	Clinical Scenario	Medications	On Reassessment…	To Do:
Miller, Robert MR#: 1234567 Location: TS317 Allergies: PCN Date of Admit: 6/18/16 Code Status: FULL PCP: Altkorn	47 y/o M with h/o Crohn's disease s/p resection p/w partial SBO and AKI. *Additional Information: Prior to admission had 3 days of N/V, decreased flatus, crampy abdominal pain, and decreased urine output. Pmhx: as above. Pshx: small bowel resection in 2010. Current Physical Exam: BP 132/80, HR 80, RR 15, CV- RRR, no m/g/r, Pulm- CTA B, Abdomen- mildly distended and tender diffusely. Ext- no edema. Admission Labs/imaging: creatinine- 1.7. CT abdomen/pelvis – partial sbo.* 4. Partial SBO→ surgery actively following, NGT to LIS d/c'd today, starting clears 5. AKI→ 3d h/o N/V, Cr 1.7 from baseline of 0.9, with hydration 1.2 this morning, off IVF *6.* Prophylaxis→ LMWH SQ, NPO, IV PPI	Tylenol 650mg po q4-6hr PRN	Patient's creatinine increased to 2.3 on evening lab check.	[ ] Consult Renal regarding fluid recs and management of rising creatinine

Standardized Consultant Recommendations: You are the renal fellow. Please ask the resident to send a urinalysis and urine electrolytes. In addition, ask that a urine specimen be left at the bedside so that your team can perform urine microscopy.

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COSCE Case for Pediatrics Interns

Identifying Information	Clinical Scenario	Medications	On Reassessment…	To Do:
Williams, Jennifer MR#: 5678901 Location: K567 NKDA Date of Admit: 6/18/16 Code Status: FULL PCP: Park	8 y/o F with moderate persistent poorly controlled asthma p/w asthma exacerbation in setting of viral URI, transferred to floor from outside hospital ED. *Additional Information: 3 days prior to presentation at the outside hospital, patient developed cough and rhinorrhea. Later that same day, began wheezing and having shortness of breath. Pmhx: as above with prior intubation in 2012. Pshx: none. Current Physical Exam- T 37.0, HR 123, BP 102/63, CV- tachy and regular, Pulm- diffuse expiratory wheezing in all lung fields. Imaging- CXR: normal.* 2. Asthma exacerbation likely related to viral URI, required continuous albuterol for 3 hours, magnesium, atrovent, orapred at OSH ED, weaned to q2h albuterol during transfer to Comer floor. Arrived 1 hour prior.	Albuterol MDI 2 puffs Orapred 1mg/kg BID Flovent 110mcg 2 puff BID Singulair 5mg daily Multivitamin daily	Patient has increased work of breathing	[ ] Consult pulmonology to determine if patient will make q2h albuterol treatments or will need continuous nebulizers in the ICU [ ] Follow up respiratory viral panel

Standardized Consultant Recommendations: You are the pulmonology fellow. Please suggest that the patient needs to be transferred to the ICU for close monitoring and to be re-started on continuous nebulizer treatments.

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COSCE Case for Emergency Medicine and OB/GYN Interns

Identifying Information	Clinical Scenario	Medications	On Reassessment…	To Do:
Williams, Jennifer MR#: 5678901 Location: TS367 NKDA Date of Admit: 6/18/16 Code Status: FULL PCP: Altkorn	28 y/o F with h/o uterine fibroids p/w vaginal bleeding and symptomatic anemia. *Additional Information: Patient endorses 3 weeks of heavy vaginal bleeding, passing clots. 2 days prior to arrival, dyspnea on exertion and lightheadedness noted. Pmhx: as above. Pshx: none. Current Physical Exam: T 37.0, HR 110, BP 105/55, CV- regular and tachy, Pulm- CTA B, Abd- non-tender, Pelvic- brisk, active bleeding from cervical os.* 3. Vaginal Bleeding→ likely related to uterine fibroids, Hgb on presentation 4.5 and patient symptomatic, transfused 3U PRBCs in the ED, awaiting repeat CBC; has 2 large bore peripheral IVs *4.* Prophylaxis→ SCDs	Tylenol 650mg po q4-6hr PRN	Patient's CBC shows a hemoglobin of 4.0 after 3U PRBCs	[ ] Consult IR regarding possible embolization

Standardized Consultant Recommendations: You are the interventional radiology (IR) attending. Please suggest that the resident begin transfusing a 4th unit of PRBCs and check coags while you prepare the IR suite for the embolization procedure.

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Supplemental Digital Appendix 3

Data From Consultant Surveys, Pre and Post Implementation of the Consultation Observed Simulated Clinical Experience (COSCE), March 2016 and March 2017

Items	March 2016 Pre-Survey (n = 41/94)	March 2017 Post-Survey (n = 39/99)	Pre vs Post comparison *P* value
Consultation quality	**No. (%) selecting "Agree" or "Strongly Agree"**		**Chi-square**
Satisfaction with quality of consultations received by residents	14 (34)	19 (49)	.2
Perceived resident preparation when requesting consultations	11 (27)	21 (54)	.01
Barriers to effective communication	**No. (%) selecting as most common reason**		**Chi-square**
Lacks specific question	11 (27)	10 (26)	> .6
Not the primary team (e.g., float, cross-cover)	9 (22)	8 (21)	
Did not perform adequate workup prior to consult	5 (12)	8 (21)	
Does not relay appropriate information	7 (17)	8 (21)	
Gap in medical knowledge	3 (7)	2 (5)	
Other	6 (15)	3 (7)	
Quality of consults by elements of the 5Cs model[a]	**Mean rating (SD) on 5-point Likert-type scale**		***t* test**
Contact	2.41 (1.10)	3.03 (1.14)	.02
Communicate	2.63 (0.83)	3.33 (0.96)	< .01
Core question	2.54 (0.87)	2.97 (1.09)	< .05
Collaborate	3.44 (1.07)	3.82 (0.97)	.10
Close the loop	2.78 (0.99)	3.47 (1.00)	< .01
Average rating	2.76 (0.70)	3.33 (0.79)	< .01
Frequency of observed suboptimal consultation communication strategies	**No. (%) answering "At least once during rotation" (%)**		**Chi-square**
Requests for curbside consultations	33 (81)	29 (74)	> .5

[a]5Cs model rating scale 1 = Poor, 2 = Below average, 3 = Average", 4 = Above averge, 5 = outstanding. Source of 5Cs model: Kessler CS, Afshar Y, Sardar G, Yudkowsky R, Ankel F, Schwartz A. A prospective, randomized, controlled study demonstrating a novel, effective model of transfer of care between physicians: The 5 Cs of consultation. Acad Emerg Med. 2012;19(8):968-74.

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