

## SDC 3 – Guide to the Study Database

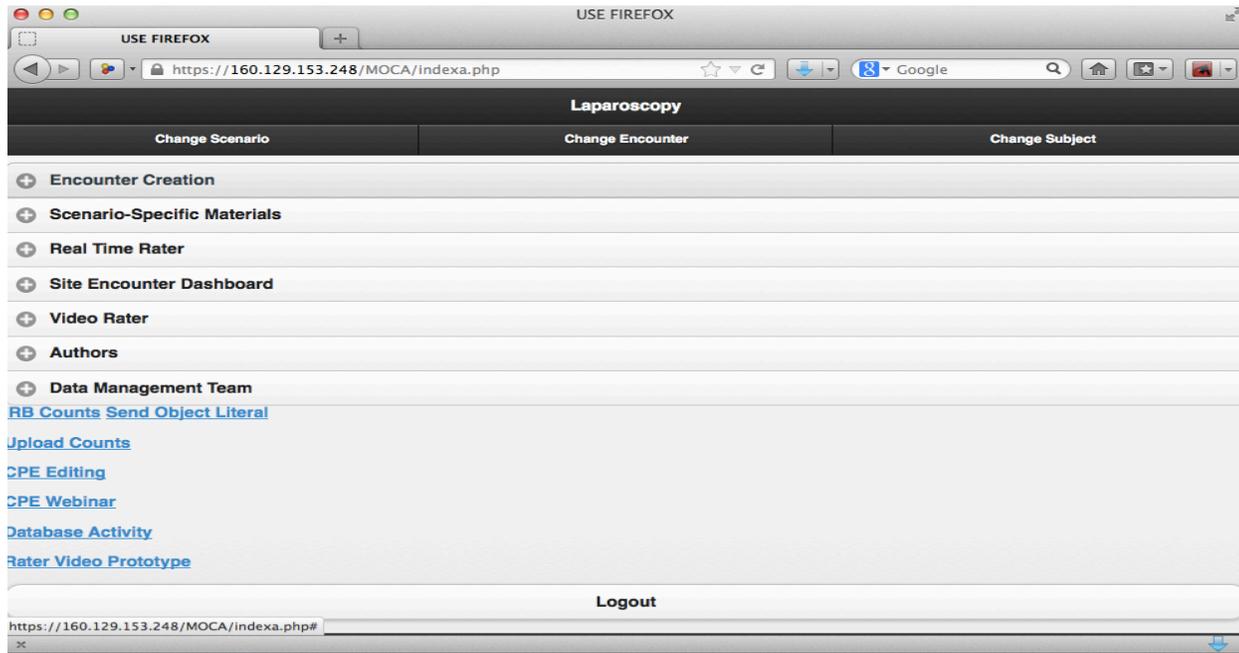
### Notes Regarding this Guide to our Study Database

This Guide was created as a study resource, prior to creating any manuscripts about our research; therefore, there are a few discrepancies between it and details contained within the publication.

1. Page 2: Duke is listed as a study site. They originally planned on participating, but did not enroll study participants.
2. Pages 2-5 refer to three ‘Subject Types’. We had made contingencies plans for the subject types defined in the Guide. This would have allowed us to collect performance data from encounters where one person was a consented study participant and the other was a MOCA course attendee who only consented to being recorded, and not to having their performance scored; similarly, we also thought of having confederates in the HS or FR roles. As recruitment was satisfactory for our study aims, these contingencies were not used, and they are not mentioned in the published manuscript.
3. The scenario names in the manuscript are different than those listed for the first time on page 10 of the Guide. For the study, we wanted to use scenario names that were fairly ambiguous, in case we slipped up in the presence of a study participant (i.e., if participants overheard us talking with the simulation team, we wanted them to hear that ‘We’re now going to do the Laparoscopy Scenario’ rather than ‘We’re going to do the Hemorrhage Scenario’). For the purposes of publication, of course, we wanted to use names for the scenarios that were as explicit yet succinct as possible. Thus, the:
  - a. ‘Laparoscopy’ or ‘Lap trocar’ scenario in the Guide is the ‘Severe hypovolemic shock from occult hemorrhage (Hemorrhage)’ scenario in the manuscript
  - b. ‘Gyn sedation’ is the ‘Local anesthetic systemic toxicity (LAST) following surgeon-administered field block’
  - c. ‘PACU ERCP’ is the ‘Malignant hyperthermia in the post-anesthesia care unit (MH)’
  - d. ‘SBO’ is the ‘Acute onset of unstable atrial fibrillation and myocardial infarction during surgery for a small bowel obstruction (MI)’
  - e. ‘Ortho’ is a pulseless electrical activity scenario that was pilot tested but not used in the study
  - f. ‘Eric’s debugging scenario’ was used to check the database’s functionality; it was not a simulation scenario

**Login to the MOCA database**

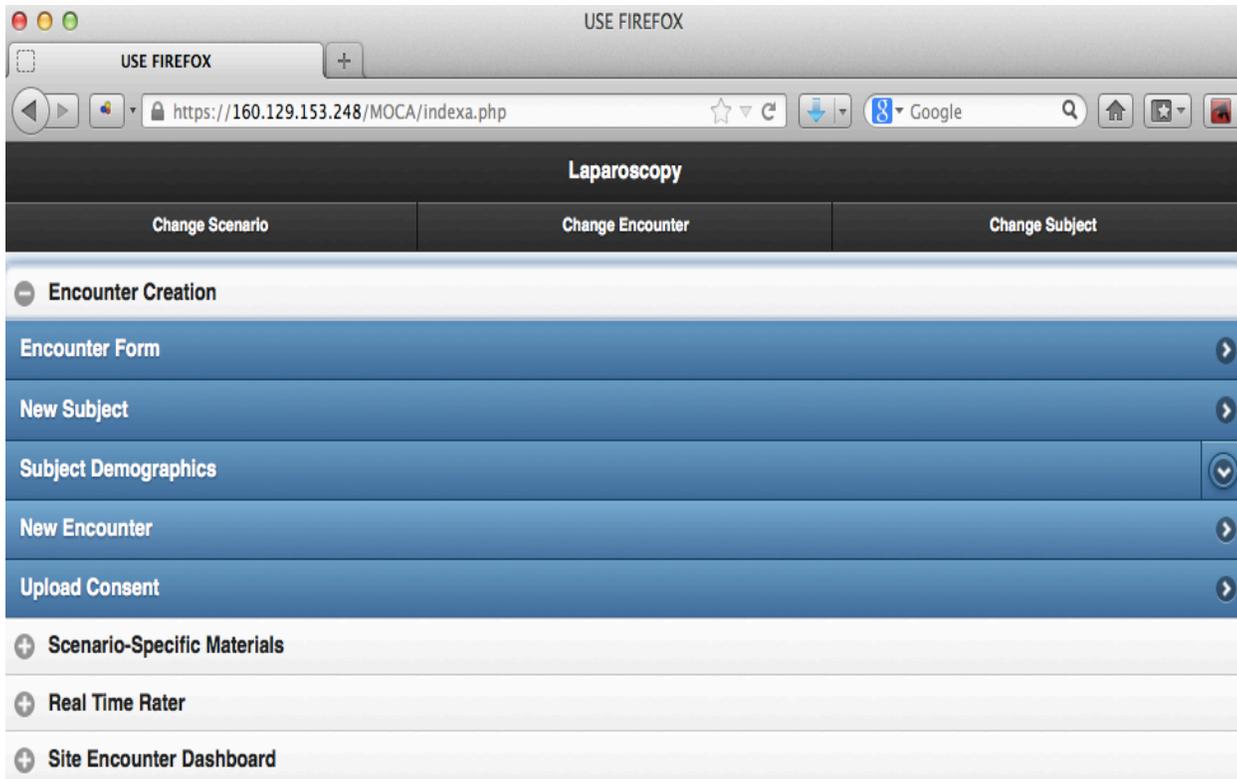
**https://160.129.153.248/MOCA/index.php**



**A. ENCOUNTER CREATION**

**Tabs**

- Encounter Form
- New Subject
- Subject Demographics
- New Encounter
- Upload Consent



### **I. Encounter Form**

**[Print this form out first to use as a worksheet the day of the course.](#)**

The real time raters may use this form as a work sheet. This also serves as the site's hard copy for each encounter ID. It is for your records. You don't have to upload it. Rather, you will enter data from it in different sections of the database.

Information logged in the form -

- a. Date
- b. Site: (CMS | Cooper | Duke | Mayo | Northwestern | Pitt | PSU | Stanford | UCLA | Vandy)
- c. Facilitator (First Name Last Name)
- d. Scenario: (Laparoscopy | D&C | ERCP PACU | SBO)
- e. Encounter start time (24 hr HH:MM)
- f. Encounter ID (from database):
- g. Hotseat ID (HS; from database):
- h. First Responder ID (FR; from database):
- i. Notes for debriefing

### **II. New Subject**

- a. Register potential study participants in database to generate **Subject IDs** (database tool)
- b. Click "New Subject"
- c. Enter subject's name and email address.
- d. Enter **Subject Type**: Indicate if this subject is a **Subject** – A Board Certified Anesthesiologist (BCA) participant who enlisted in the MOCA course and has consented to participate in the study. They have fulfilled the site requirements for study consent and they consent to participate in two scenario encounters (one as HS and one as FR) and from whom we are collecting all applicable study data.

**MOCA Participant**- A BCA in the MOCA course, but who has not consented to be a full study participant. This BCA could be either in the role of an FR or HS who agrees to allow us to study their course colleague and thus be videotaped but not be individually rated. Also, this individual is not required to provide demographic or other study-related data.

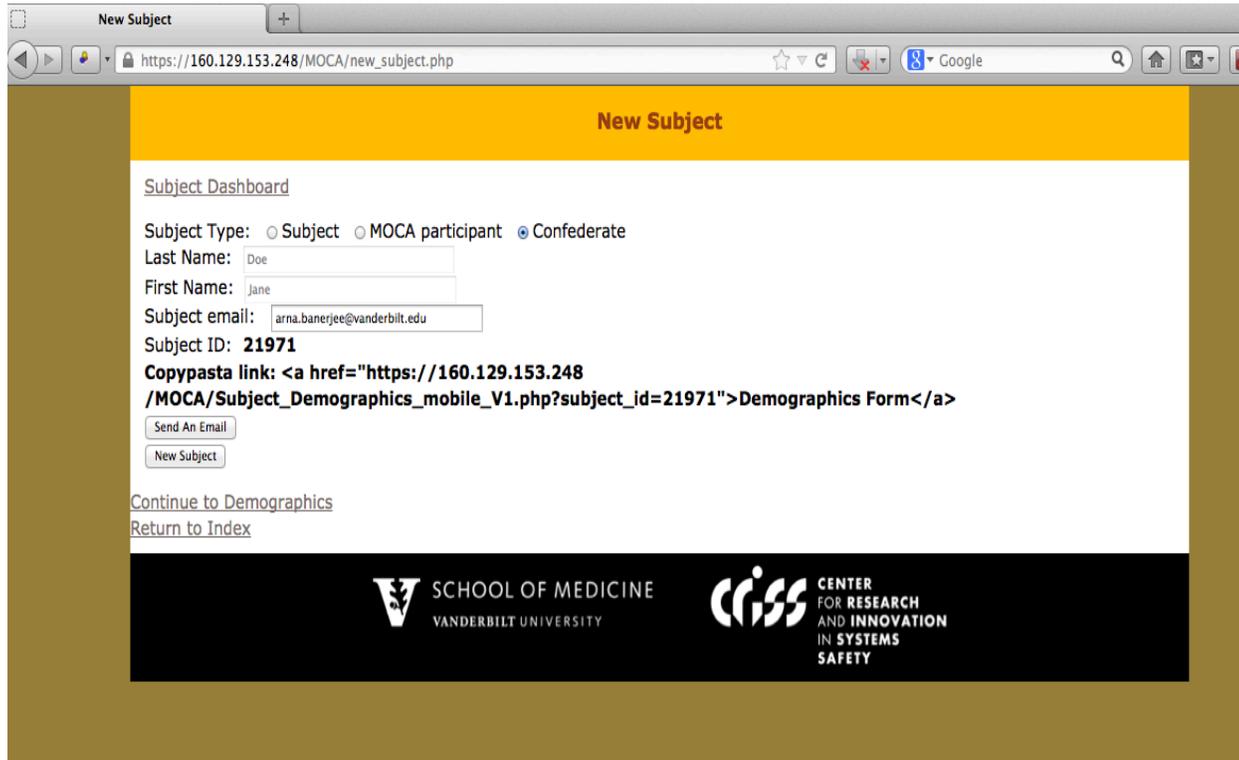
**Confederate** - A non-MOCA course participant in either the hot seat (HS) or the first-responder (FR) position. This may be either for purposes of creating a prototypical (good or bad) scenario performance as a pilot for training video raters or as a way to conduct a scenario for a study subject (typically in the HS but could be as a FR) when a second study subject is not available (e.g., if the site is doing an "extra" scenario to be able to study a single study subject in two scenarios).

- e. Click **Get ID**
- f. The database will display the Subject ID;  
*Log the ID in the Encounter Form and the HTML for a direct link to the form.* There is also a button for directly sending the link as e-mail to the subject.

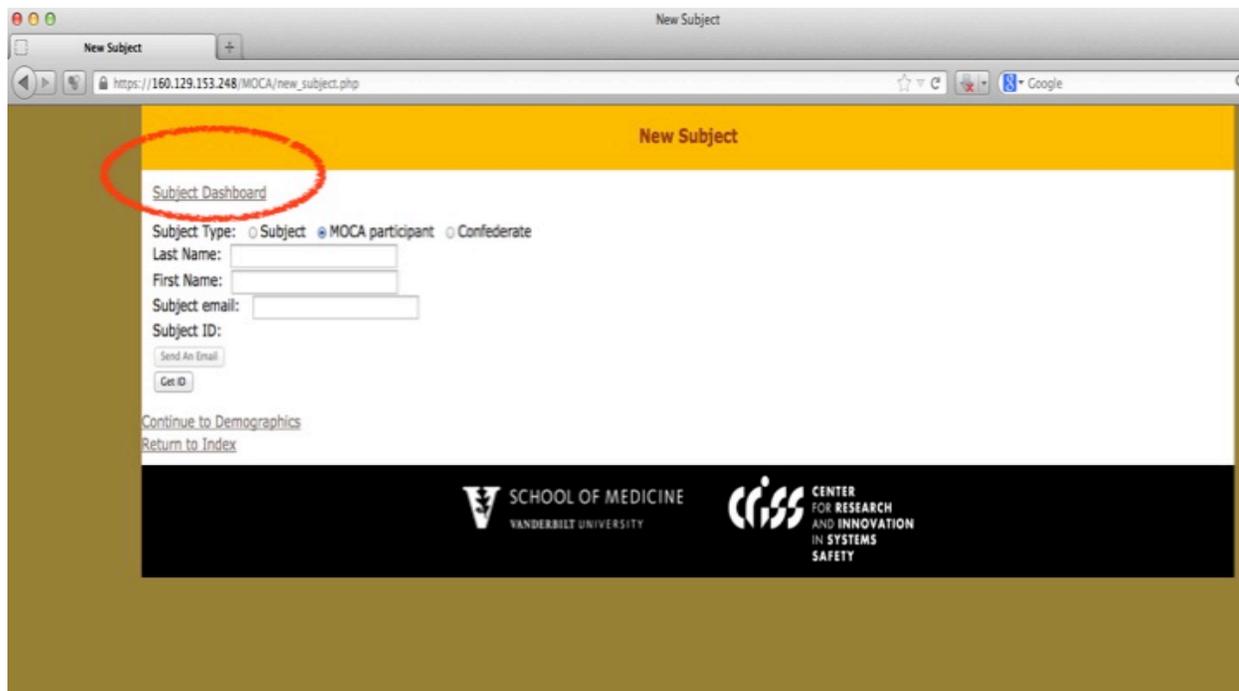
As an example below – I entered subject name, email address, designated myself as a confederate (I am not enrolled in the MOCA course but have allowed my video to be used. Then I click Get ID –

The screenshot shows a web browser window titled "New Subject" with the URL [https://160.129.153.248/MOCA/new\\_subject.php](https://160.129.153.248/MOCA/new_subject.php). The page has a yellow header with the text "New Subject". Below the header is a "Subject Dashboard" section. It contains a "Subject Type" field with three radio buttons: "Subject", "MOCA participant", and "Confederate" (which is selected). Below this are input fields for "Last Name" (containing "Doe"), "First Name" (containing "Jane"), and "Subject email" (containing "arna.banerjee@vanderbilt.edu"). There is also a "Subject ID" field which is currently empty. Below the "Subject ID" field are two buttons: "Send An Email" and "Get ID". At the bottom of the form area, there are two links: "Continue to Demographics" and "Return to Index". The footer of the page features the logos for the "SCHOOL OF MEDICINE VANDERBILT UNIVERSITY" and the "CENTER FOR RESEARCH AND INNOVATION IN SYSTEMS SAFETY".

The database displays the subject ID - 21971 and the html link to the demographics form – below. Note this information on the Encounter Form.



g. **Subject Dashboard.** There is a link to the subject dashboard at the top of the form.



The Subject Dashboard can be accessed either by encounter ID or by Subject name. (This is site – specific) From here you can change subject assignments, as well as subject type for a specific Encounter ID or for a specific Subject.

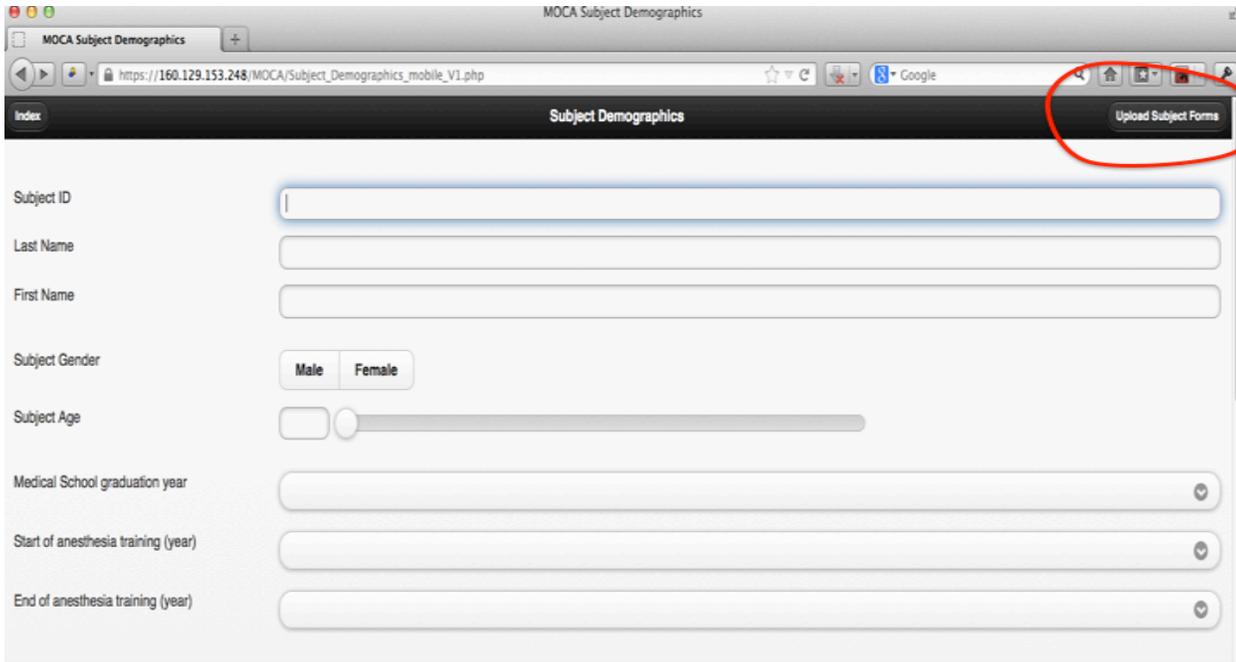
Encounter	Start	Hotseat	Hotseat Type	Responder	Responder Type
52293		banerjaa, arna	Confederate	Porterfield, Eric S.	Confederate
52713		Subject, Joe D.	Confederate	Porterfield, Eric S.	Confederate
52077		banerjaa, arna	Confederate	banerjaa, arna	Participant
52112		banerjaa, arna	Confederate	banerjaa, arna	Confederate
52119		banerjaa, arna	Confederate	banerjaa, arna	Confederate
52126		banerjaa, arna	Confederate	banerjaa, arna	Participant
52191		banerjaa, arna	Participant	banerjaa, arna	Participant
52242		banerjaa, arna	Confederate	banerjaa, arna	Confederate
52351		banerjaa, arna	Participant	banerjaa, arna	Participant

**III. Subject Demographics**

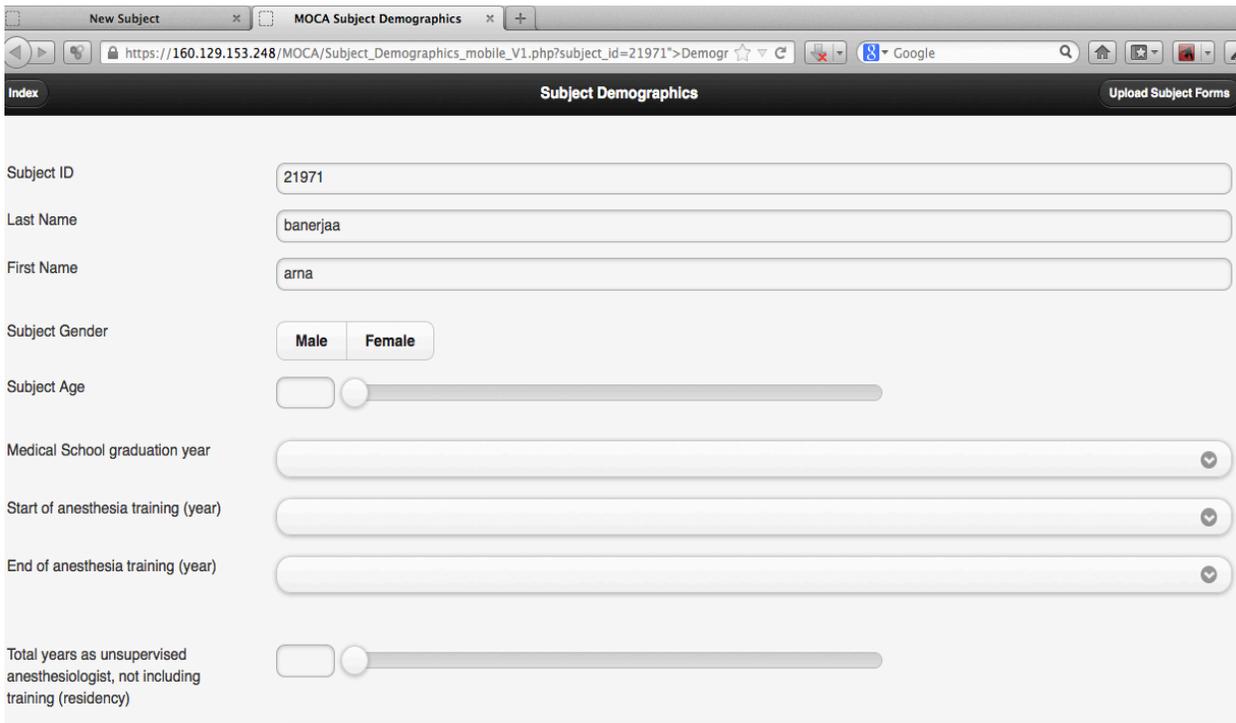
To be filled out by the participant during or before the course.

NOTE: The participants will not have access to the database; just to the online demographic form.

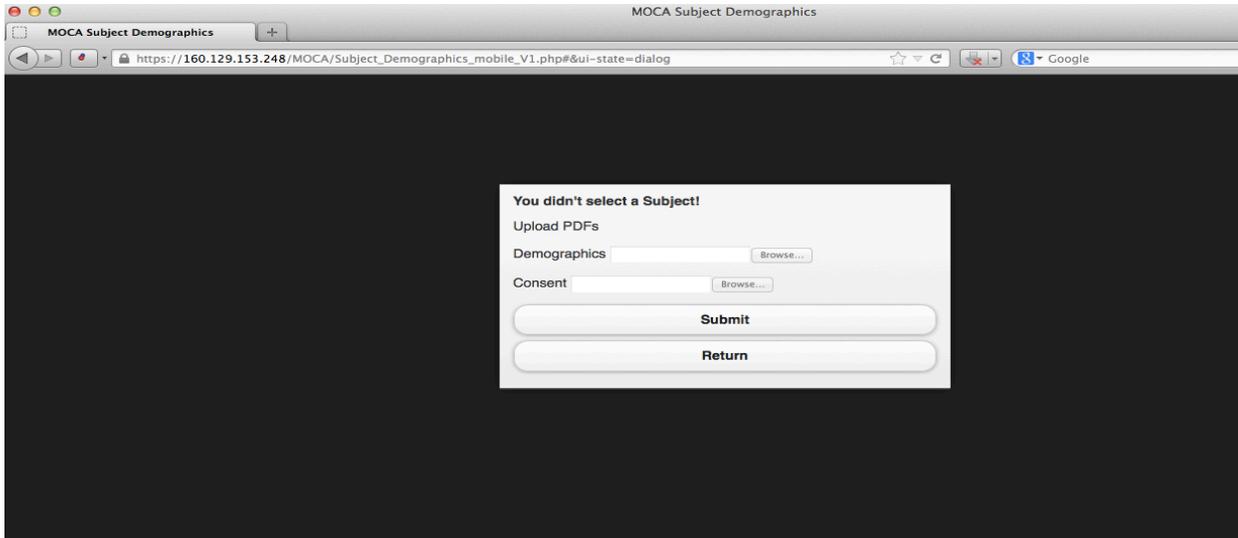
The site may also [upload a pdf of the paper version](#) of the document (button top right). You may use the html link to access this page for the participant directly or enter the subject ID obtained.



In my example I have used the Subject ID 21971 as shown below.



To upload paper forms.



**IV. New Encounter**

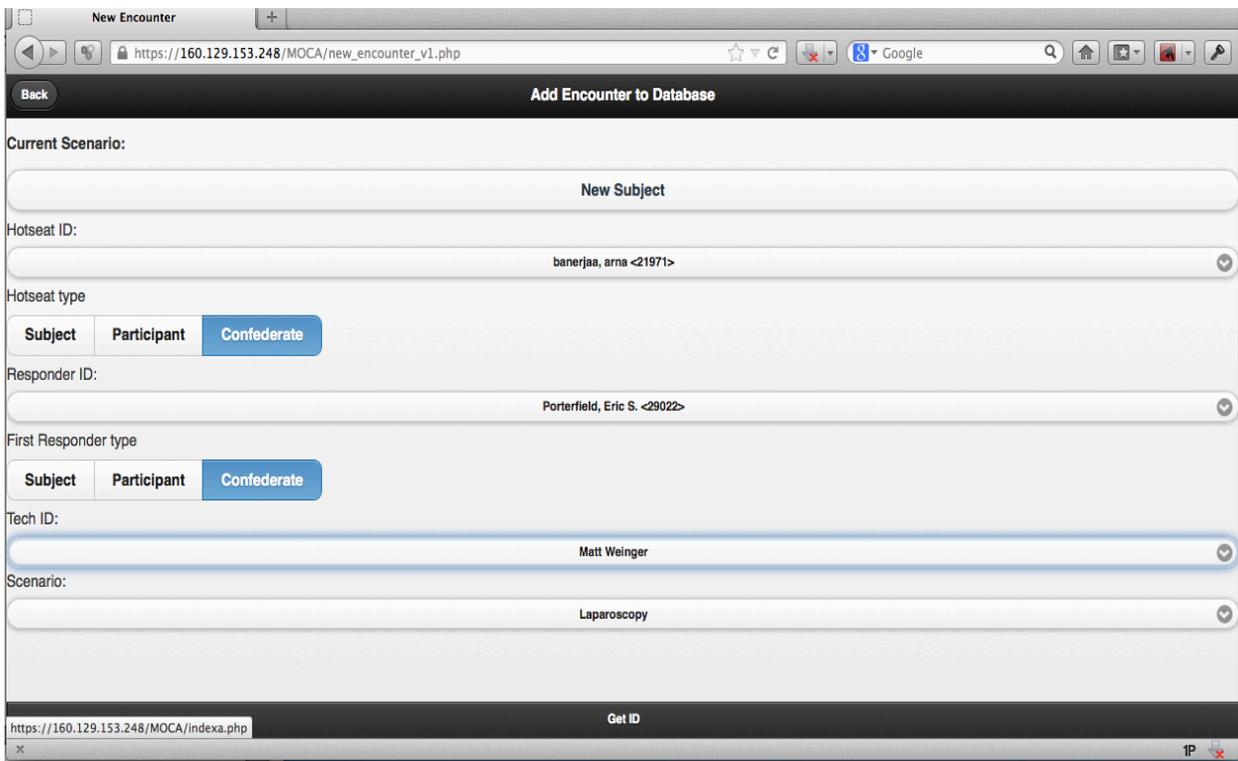
**Create your Encounter ID**

This ID is to be created for every study scenario.

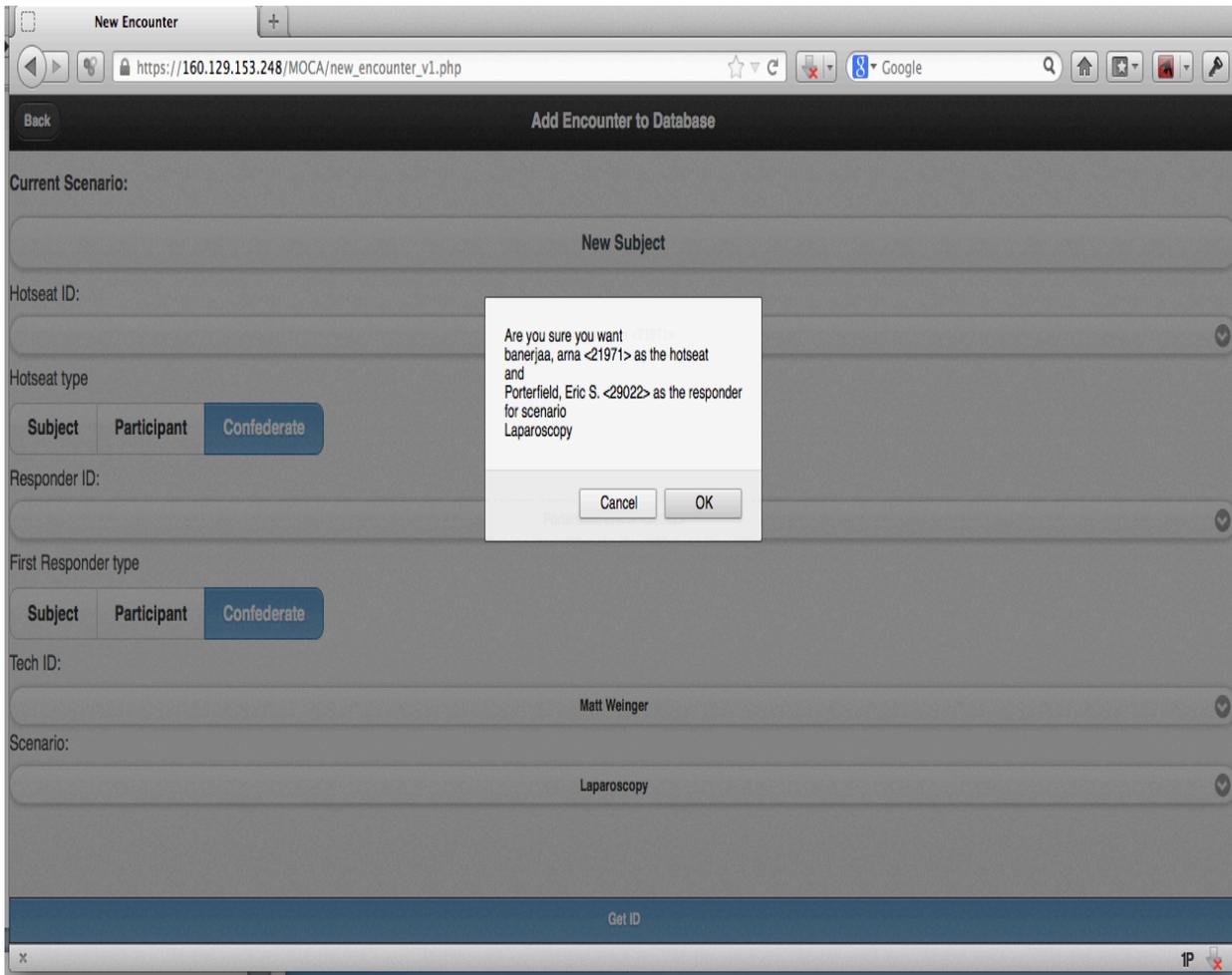
In case you have not obtained your subject ID's there is a link here to obtain it called **New Subject** Information needed to obtain Encounter ID.

- a. Hotseat ID – select subject type
- b. Responder ID – select subject type
- c. Choose Tech ID
- d. Choose Scenario Name
- e. Click Get ID

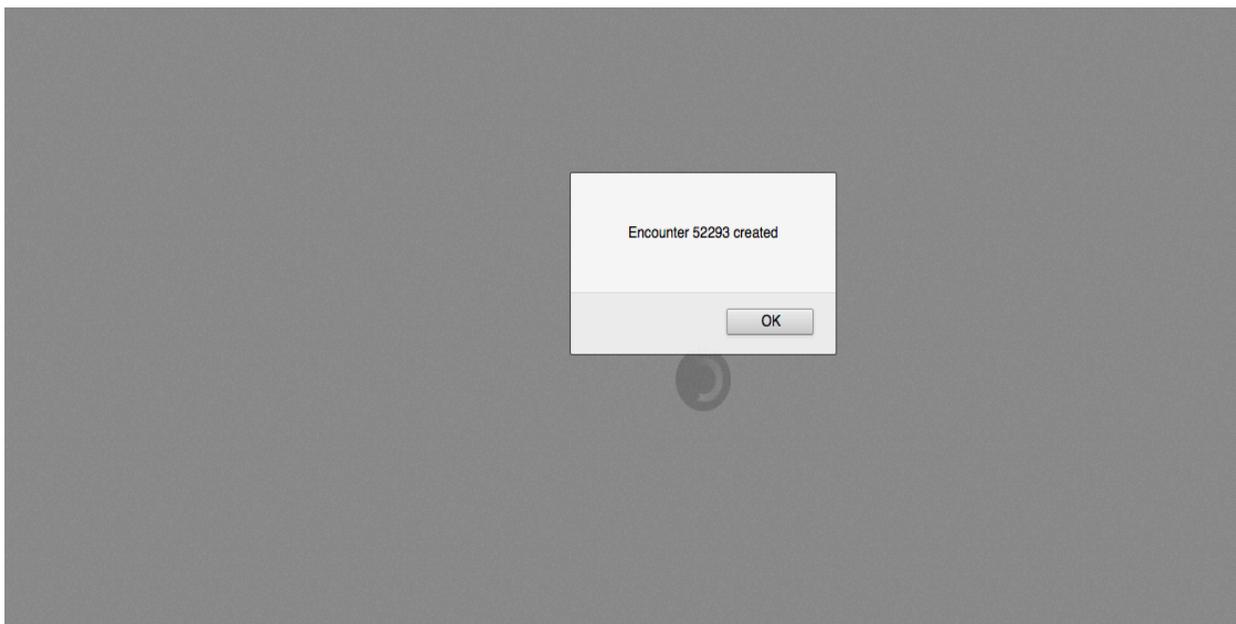
Using my example – I have chosen Arna B as Hotseat, Eric P as First responder, Tech as Matt W and Scenario as Laparoscopy. After entering the information as shown below click Get ID



You will be asked to confirm your choice.



If the information is correct click OK and the system will give you the encounter ID – in this case 52293



Once you click OK you will return to the previous screen and the encounter ID as well as current scenario data will show. Write this information down on the encounter form.

**Back** **Add Encounter to Database**

**Current Scenario:** 52293

**New Subject**

Hotseat ID: banerjaa, arna <21971>

Hotseat type  
 **Subject**  **Participant**  **Confederate**

Responder ID: Porterfield, Eric S. <29022>

First Responder type  
 **Subject**  **Participant**  **Confederate**

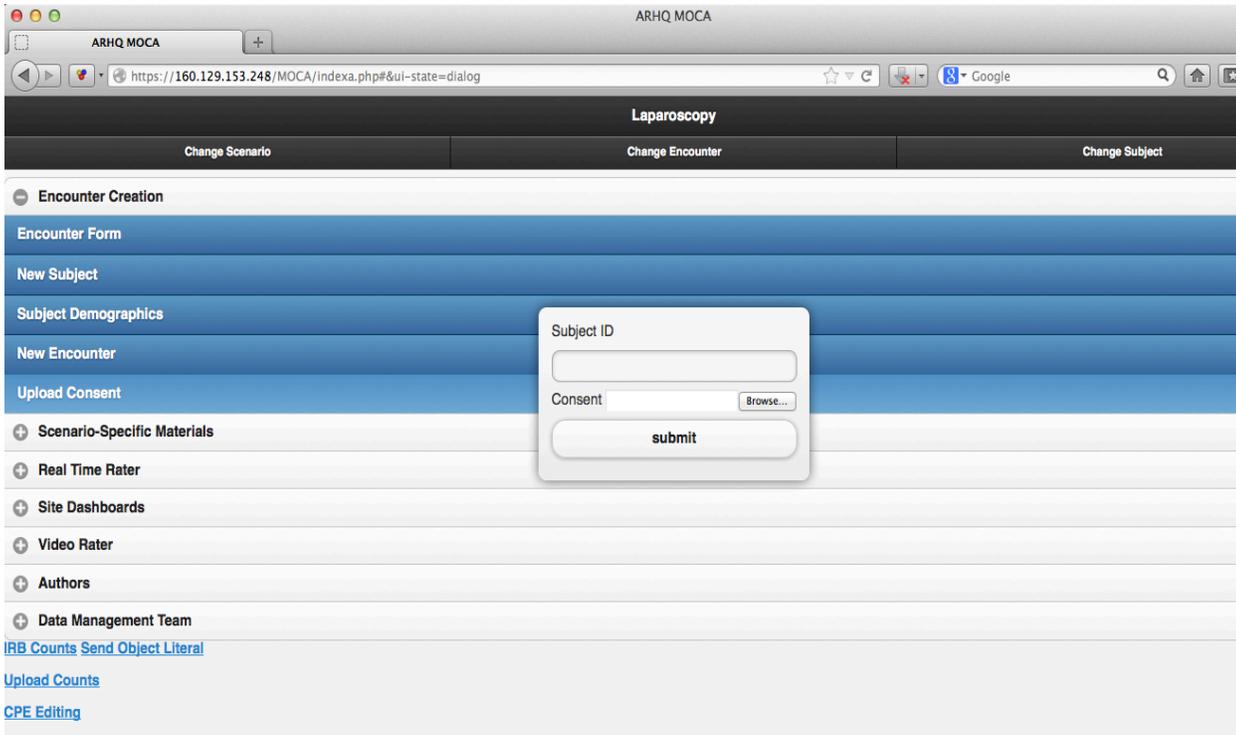
Tech ID: Arna Banerjee

Scenario: Laparoscopy

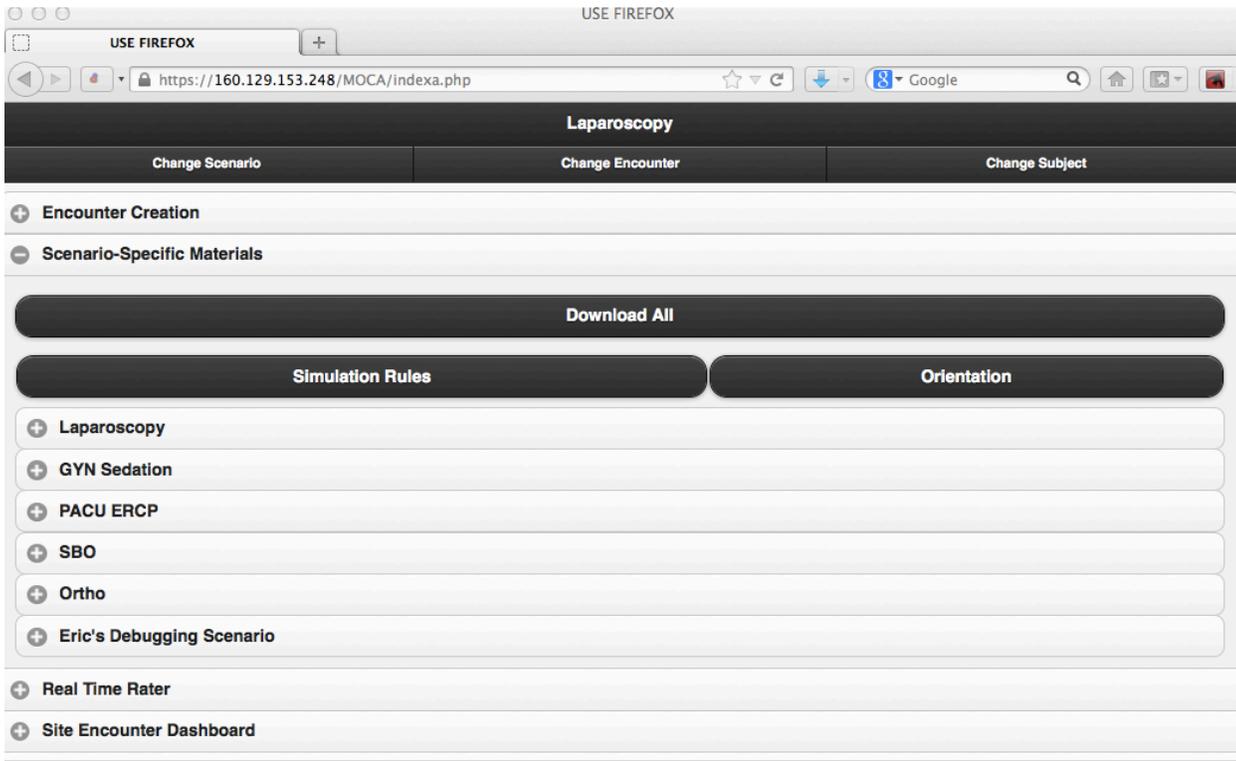
**Get ID**

**V. Upload Consent**

If you have not already done so please upload the consent form



**B. SCENARIO SPECIFIC MATERIAL**



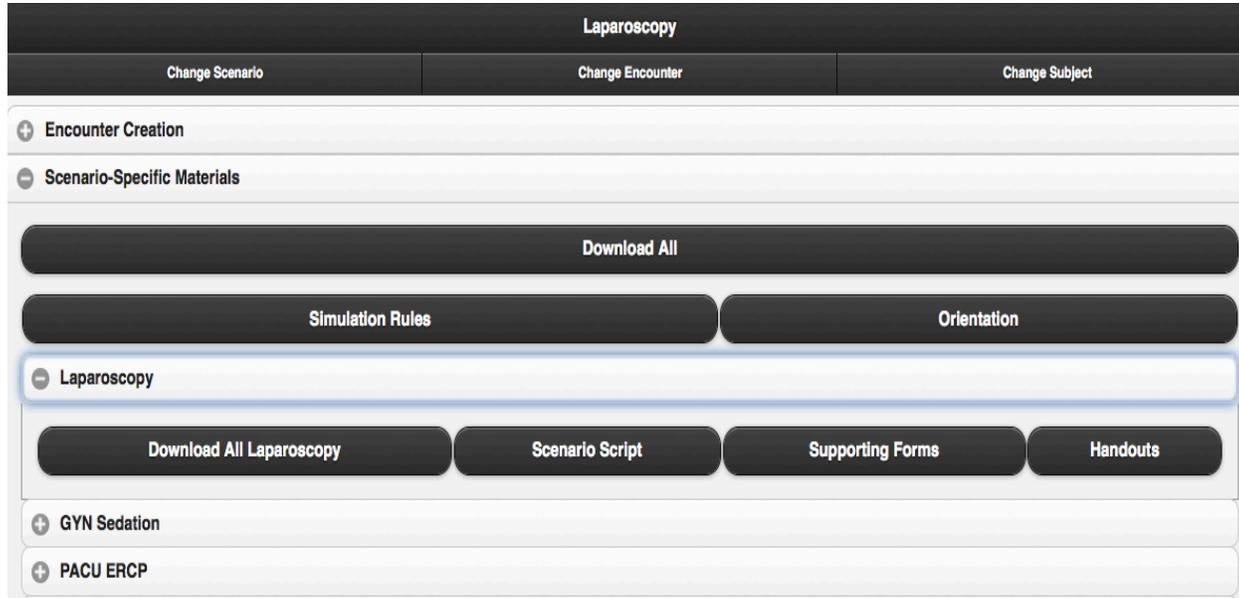
**Documents pertaining to all scenarios:**

Option to download all scenarios as well as scenario related files at once – this will download all documents in a zip file at once.

Download buttons for:

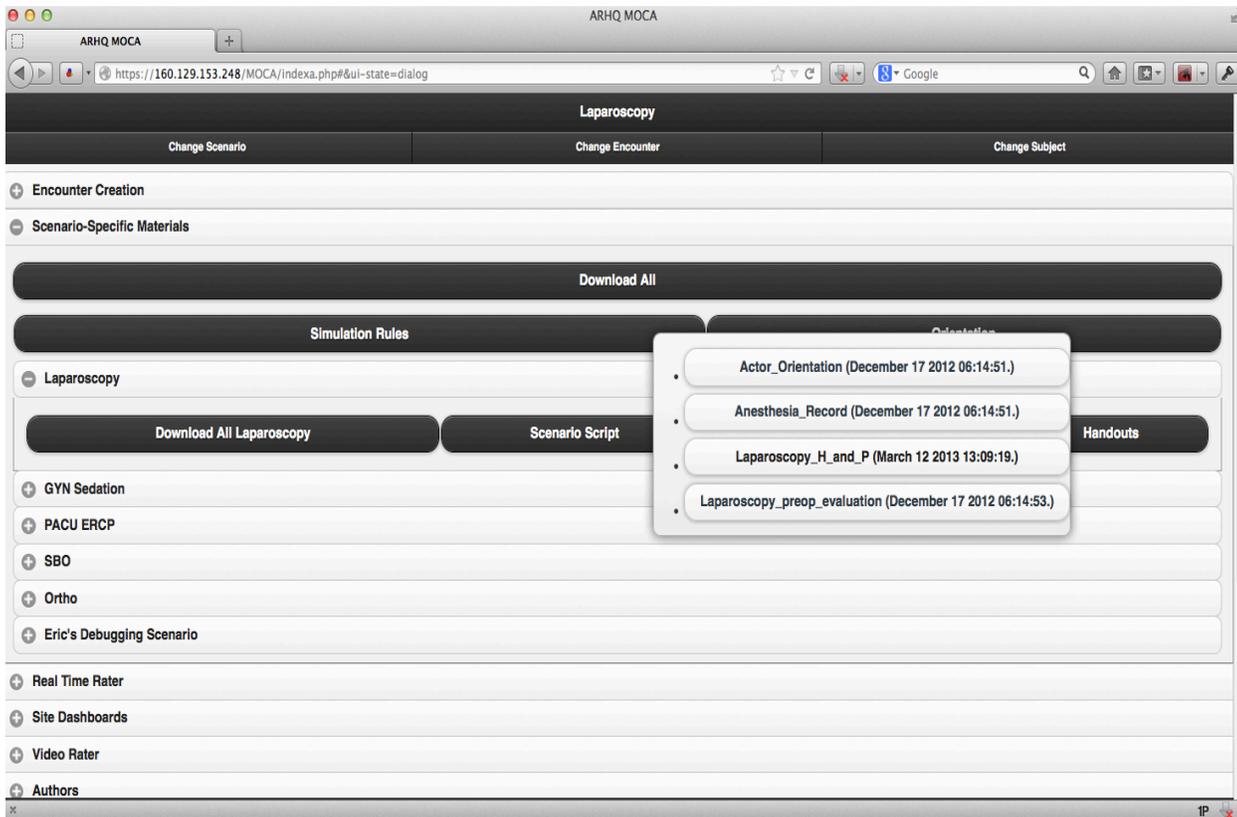
- a. Simulation rules – this is the current rules for simulation document
- b. Orientation – this is the PowerPoint slide presentation of recommended orientation topics. These orientation topics need to be covered prior to starting the first study scenario.

**When the scenario name is clicked material related to that specific scenario becomes available**



**Tabs under each Scenario Name are**

- *Download all (Scenario name) – this will down all files related to that scenario as a zip file at once*
- *Scenario Script*
- *Supporting Forms – This tab contains all supporting documents e.g Anesthesia record, H&P etc.*
- *Handouts – Papers and handouts for the participants and debriefing guides*



I. **Laparoscopy**

- a. Download all Laparoscopy related files
- b. Scenario Script
- c. Supporting Forms
  - 1. Actor Orientation
  - 2. Anesthesia Record
  - 3. Laparoscopy H and P
  - 4. Laparoscopy Pre Op Evaluation
  - 5. Scenario Standardization form
- d. Handouts
  - 1. Azevedo JLMC, Azevedo OC, Miyahira SA, et al. Injuries caused by Veress needle insertion for creation of pneumoperitoneum: a systematic literature review. *Surgical endoscopy*. 2009;23(7):1428-1432.
  - 2. Opitz I, Gantert W, Giger U, Kocher T, Krähenbühl L. Bleeding remains a major complication during laparoscopic surgery: analysis of the SALTS database. *Langenbeck's Archives of Surgery*. 2005;390(2):128-133.

II. **GYN Sedation**

- a. Download all GYN Sedation related files
- b. Scenario Script
- c. Supporting Forms

1. Actor Orientation
  2. Sedation Record
  3. Scenario Standardization form
- d. Handouts
1. Neal JM, Bernards CM, Butterworth JFI, et al. ASRA Practice Advisory on Local Anesthetic Systemic Toxicity. *Regional Anesthesia and Pain Medicine*. 2010;35(2):152-161  
110.1097/AAP.

### III. **PACU ERCP**

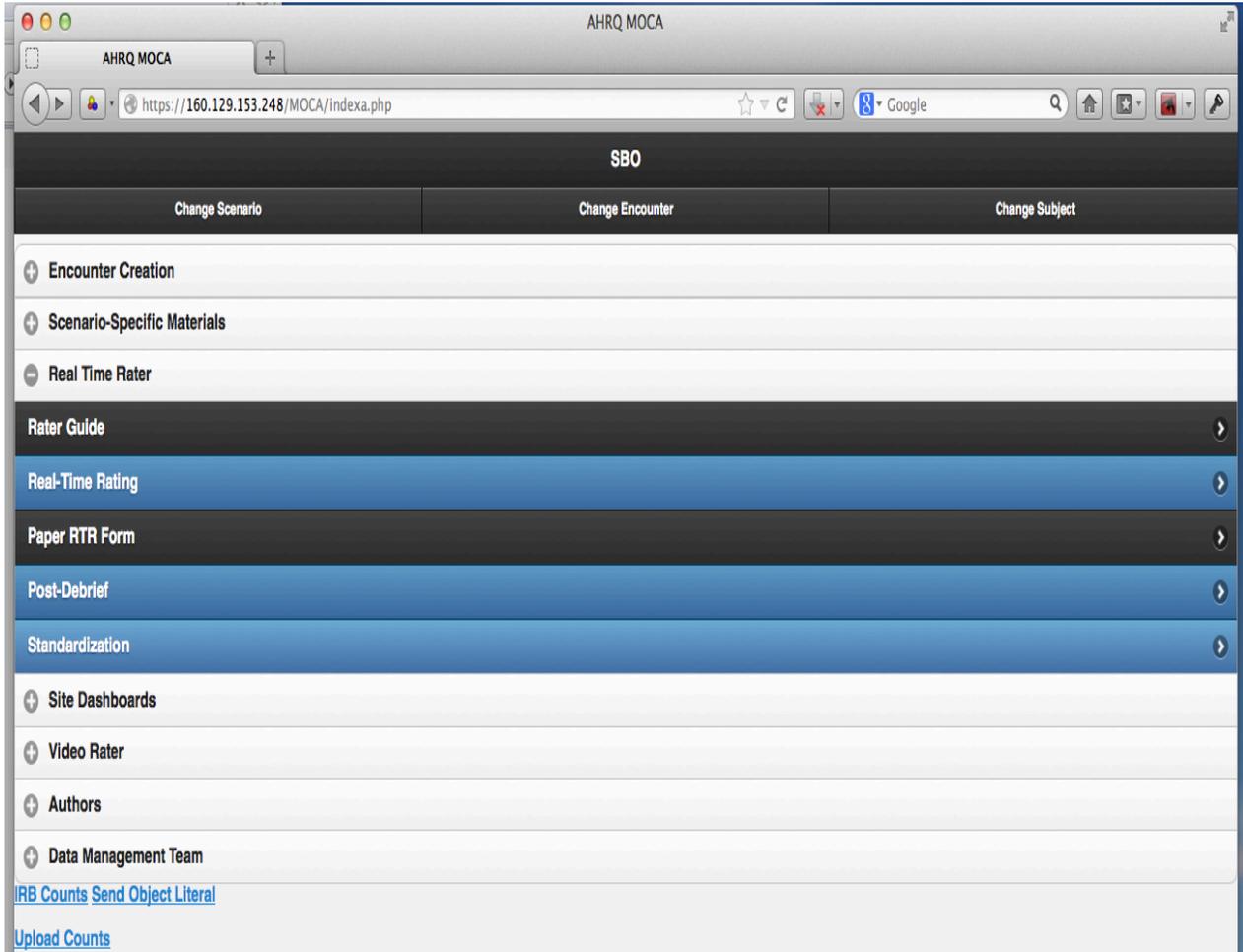
- a. Download all Laparoscopy related files
- b. Scenario Script
- c. Supporting Forms
  1. Anesthesia record
  2. CXR-PA
  3. ECG – Sinus tachycardia
  4. PACU-Lab values
  5. Post op record
  6. Pre scenario checklist
  7. Prop list
  8. Real time rater med tech checklist
  9. Role – PACU RN
  10. Role – Gastroenterologist
  11. Role – Nurses Aid
  12. Role – Patient
  13. Scenario Standardization form
- d. Handouts
  1. MH debrief

### IV. **SBO**

- a. Download all SBO related files
- b. Scenario Script
- c. Supporting Forms
  1. Anesthesia Record
  2. Cardiogenic Shock ECG
  3. Intra op ECG
  4. Preop ECG
  5. Pre op Echo Report

- 6. Pre op Eval Anes
- 7. Scenario Standardization form
- d. Handouts (none yet)

C. **REAL TIME RATER AND SITE MATERIALS**



Tabs included are

*Rater Guide*

*Real Time Rating*

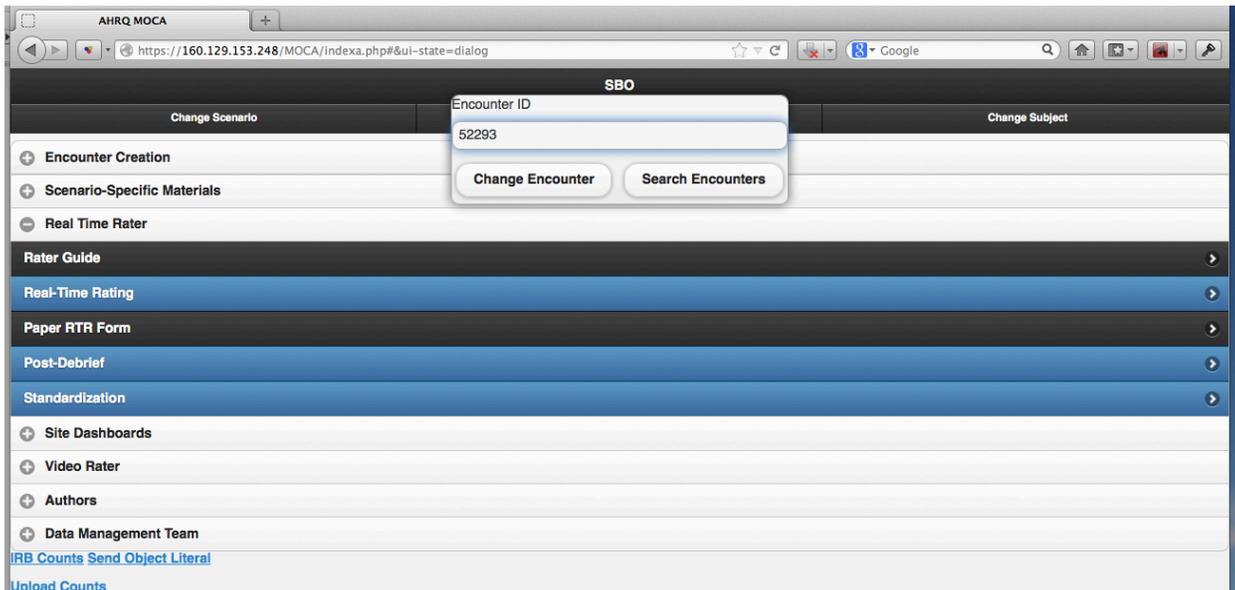
*Paper RTR Form*

*Post Debrief*

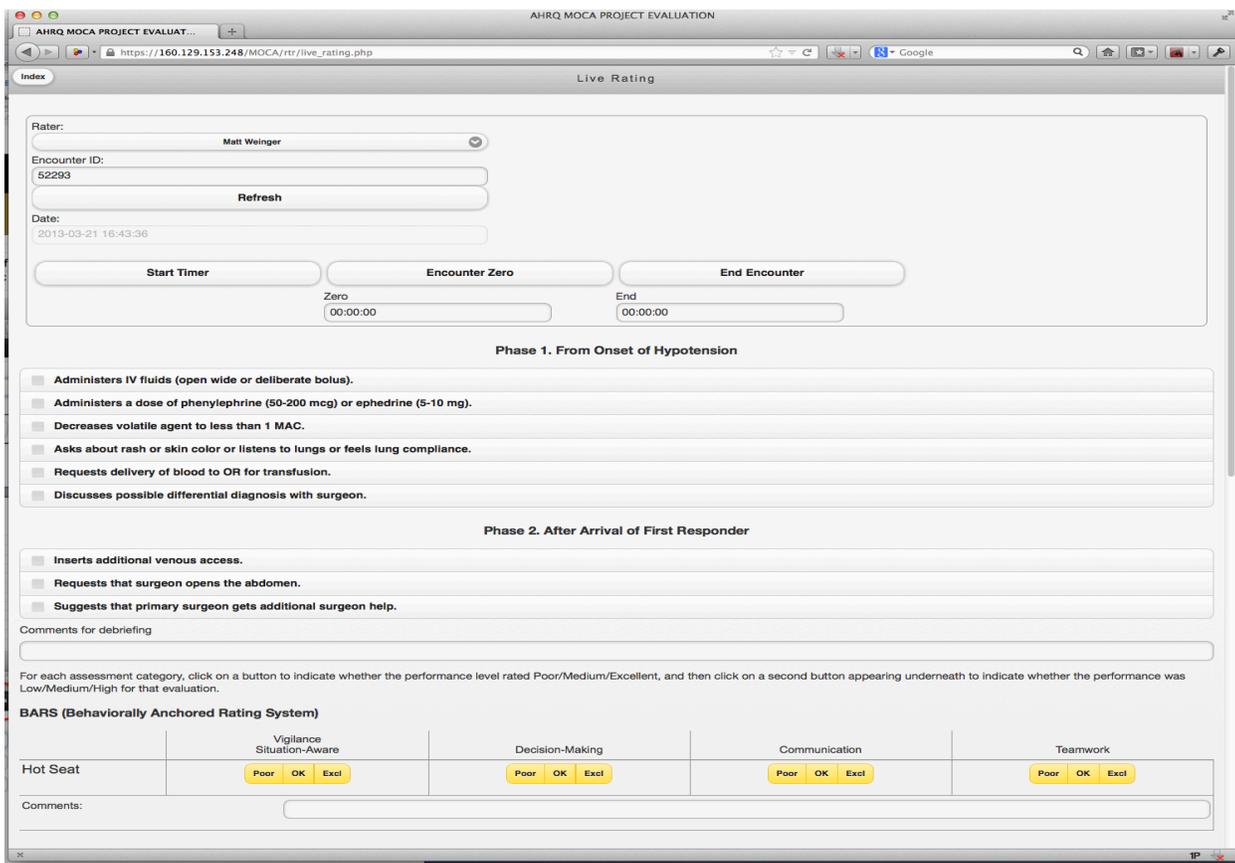
*Standardization*

- a. **Rater Guide for the AHRQ MOCA grant project** – this is available for download and contains an outline of “how to rate for this project”
- b. **Real Time Rating** – This form is scenario specific and contains the real time rating items as well the BARS items. Once ready to rate a candidate access the real time rating tab. Choose the encounter ID. In the example below I

have chosen ID 52293 that I created. You can also change the encounter number or Search for a particular encounter if necessary.

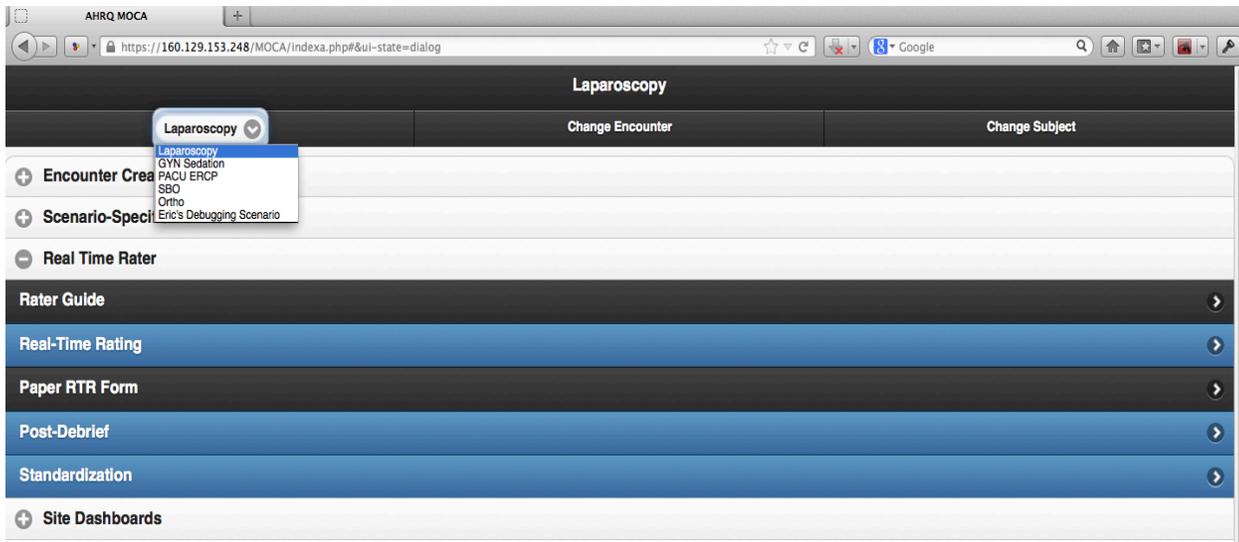


Access The Real Time Rating form online. This has components of both technical and BARS items for that particular scenario. If necessary you can enter an encounter ID into the box and hit refresh to access. Make sure that the *Rater Name* is selected correctly.



**c. Paper RTR form**

Ability to Download Paper versions of the forms. These forms are scenario specific. If necessary please change scenario type prior to accessing the form. In the example below laparoscopy has been chosen.



Encounter Zero (mm:ss): \_\_\_\_\_:\_\_\_\_\_

**Phase 1: From Onset of Hypotension**

- Administers IV fluids (open wide or deliberate bolus).
- Administers a dose of phenylephrine (50-200 mcg) or ephedrine (5-10 mg).
- Decreases volatile agent to less than 1 MAC.
- Asks about rash or skin color or listens to lungs or feels lung compliance.
- Requests delivery of blood to OR for transfusion.
- Discusses possible differential diagnosis with surgeon.

**Phase 2. After Arrival of First Responder**

- Inserts additional venous access.
- Requests that surgeon opens the abdomen.
- Suggests that primary surgeon gets additional surgeon to help.

Comments for debriefing: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Encounter ID: \_\_\_\_\_ Rater: \_\_\_\_\_

**BARS (Behaviorally Anchored Rating System)**

	Vigilance Situation-Aware	Decision-Making	Communication	Teamwork
Hot Seat	Poor - OK - Excl 1 2 3 - 4 5 6 -7 8 9	Poor - OK - Excl 1 2 3 - 4 5 6 -7 8 9	Poor - OK - Excl 1 2 3 - 4 5 6 -7 8 9	Poor - OK - Excl 1 2 3 - 4 5 6 -7 8 9

Comments: \_\_\_\_\_

**Holistic Ratings**

	Medical/Technical Performance	Behavioral/Non- Tech Performance	Did the person perform at the level of a consultant anesthesiologist?
	Poor - OK - Excl	Poor - OK - Excl	

**d. Post Debrief**

After submitting the real time rating access the post debrief note.

If anything was uncovered in during debrief that you think would be useful in explaining the Hot seat and/or First Responder actions or behaviors, please include in the form and submit

The screenshot shows a web browser window titled "RTR Post Debrief" with the URL "https://160.129.153.248/MOCA/RTR\_Post\_Debrief.php". The form contains the following elements:

- Index** (top left)
- RTR Post Debrief** (top center)
- Encounter ID** field with the value "52293".
- Lookup** and **Lookup Tutorial** buttons.
- Video Disposition** section with buttons for **Study Encounter**, **Evaluate Standardization**, and **Discard**.
- A text input field with the prompt: "What did you learn, if anything, from debriefing about what the HS and FR were thinking?"
- A yellow **Submit Form** button at the bottom.

**e. Standardization**

Finally fill out the scenario standardization form below.

The screenshot shows the same "RTR Post Debrief" form, but with the "Standardization" section expanded. The "Encounter ID" remains "52293". The "Study Encounter" button is selected. The "Standardization" section includes:

- A question: "Did anything happen in the running of the scenario that was not as planned or deviated from optimal for this standardized scenario?" with a **Yes** radio button selected.
- A section titled "Type(s) of Deviation (check all that apply)" with the following options:
  - Deviation from scenario script - vital signs or timing
  - Deviation from scenario script - wrong or missing event or critical cue
  - Deviation from scenario script - confederate interactions
  - Equipment or other technology problem
  - Participant action/inaction messed us up (if checked, also complete #2 below)
- A text input field for "Description of Deviation(s):".
- A yellow **Submit Form** button at the bottom.

**D. SITE ENCOUNTER DASHBOARD (THIS IS SITE SPECIFIC FOR THE PI AND IS TO BE USED AS A PORTAL FOR SITE DOCUMENTS)**



- a. Once a document gets uploaded in one place it will change color in every other place that it is supposed to show. So you only have to submit or upload a document once.
- b. The Dashboard will show to the site personnel documents that have already been uploaded, what is yet to be uploaded and serve as an inbox for them
- c. List of Variables that will appear on the Dashboard:

ID Created Time	
Encounter ID	
Scenario Name	
Encounter Disposition	(Study/Pilot/Discard)
Video	(Upload/Review)
Hotseat Consent	(Upload / Download)
Hotseat Demographics	(Review / Enter)
Responder Consent	(Upload / Download)
Responder Demographics	(Review / Enter)
Real-Time Rating	(Enter / Review)
RTR Standardization Form	
Post Debrief Notes	
Comments for the site	

The subject dashboard is also accessible from here

ID Created	Encounter	Scenario Name	Encounter Disposition	Video	Hotseat Consent	Hotseat Demographics	Responder Consent	Responder Demographics	Real-Time Rating	RTR Standardization Form	Comments for the site
2012-09-13 18:29:28	52638	PACU ERCP	Pilot	Upload	Download	Review	Download	Review	Review	Enter	No data
2012-09-18 08:48:17	52591	GYN Sedation	Pilot	Review	Download	Review	Download	Review	Enter	Enter	Comments
2012-09-18 11:27:35	52119	PACU ERCP	Pilot	Review	Download	Review	Download	Review	Enter	Enter	Comments
2012-09-28 16:03:47	52351	Laparoscopy	Pilot	Upload	Upload	Enter	Upload	Enter	Review	Enter	Comments

The Encounter type can be designated – Pilot / Study / Discard

ID Created	Encounter	Scenario Name	Encounter Disposition	Video	Hotseat Consent	Hotseat Demographics	Responder Consent	Responder Demographics	Real-Time Rating	RTR Standardization Form	Comments for the site
2012-09-13 18:29:28	52638	PACU ERCP	Pilot	Upload	Download	Review	Download	Review	Review	Enter	No data
2012-09-18 08:48:17	52591	GYN Sedation	Pilot	Review	Download	Review	Download	Review	Enter	Enter	Comments
2012-09-18 11:27:35	52119	PACU ERCP	Pilot	Review	Download	Review	Download	Review	Enter	Enter	Comments
2012-09-28 16:03:47	52351	Laparoscopy	Pilot	Upload	Upload	Enter	Upload	Enter	Review	Enter	Comments

***The videos can be uploaded from this site.***

Click the upload button in the dashboard for the encounter

Upload MOCA Video

Encounter ID: 52004

Video Disposition: Study Encounter, Evaluate Standardization, Discard

Encounter Start: 2012-10-18 06:38:00

A video with sound: Choose File (No file chosen)

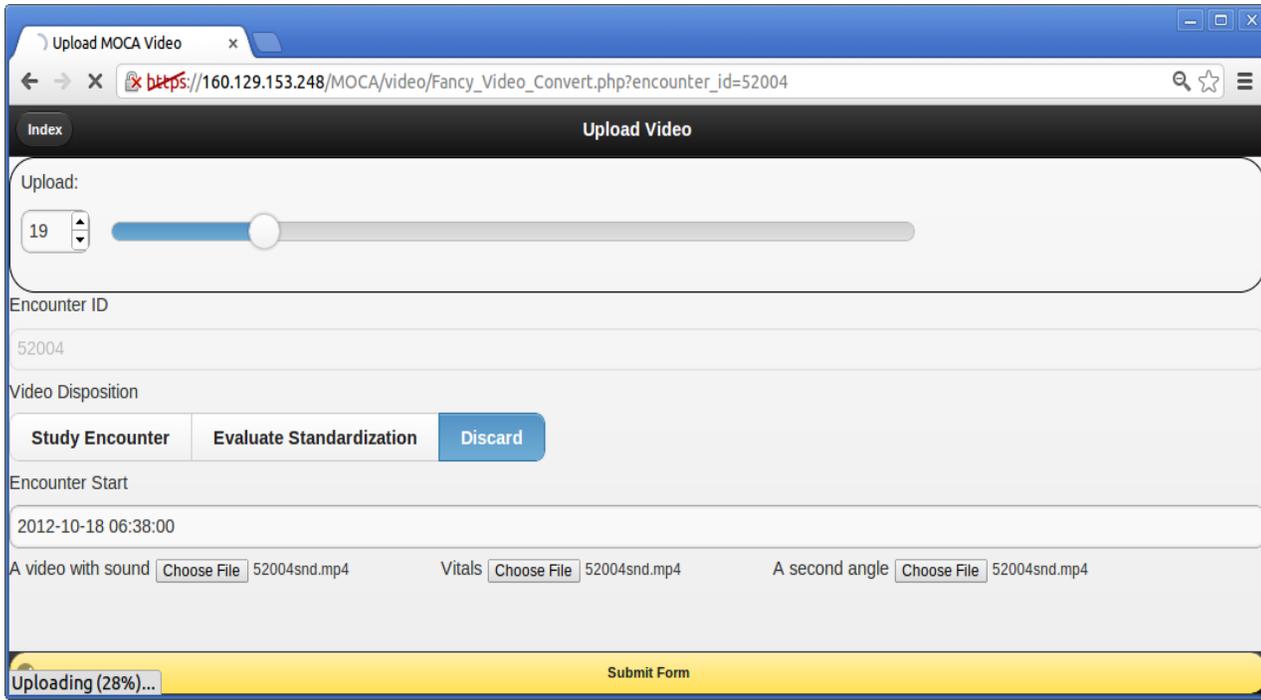
Vitals: Choose File (No file chosen)

A second angle: Choose File (No file chosen)

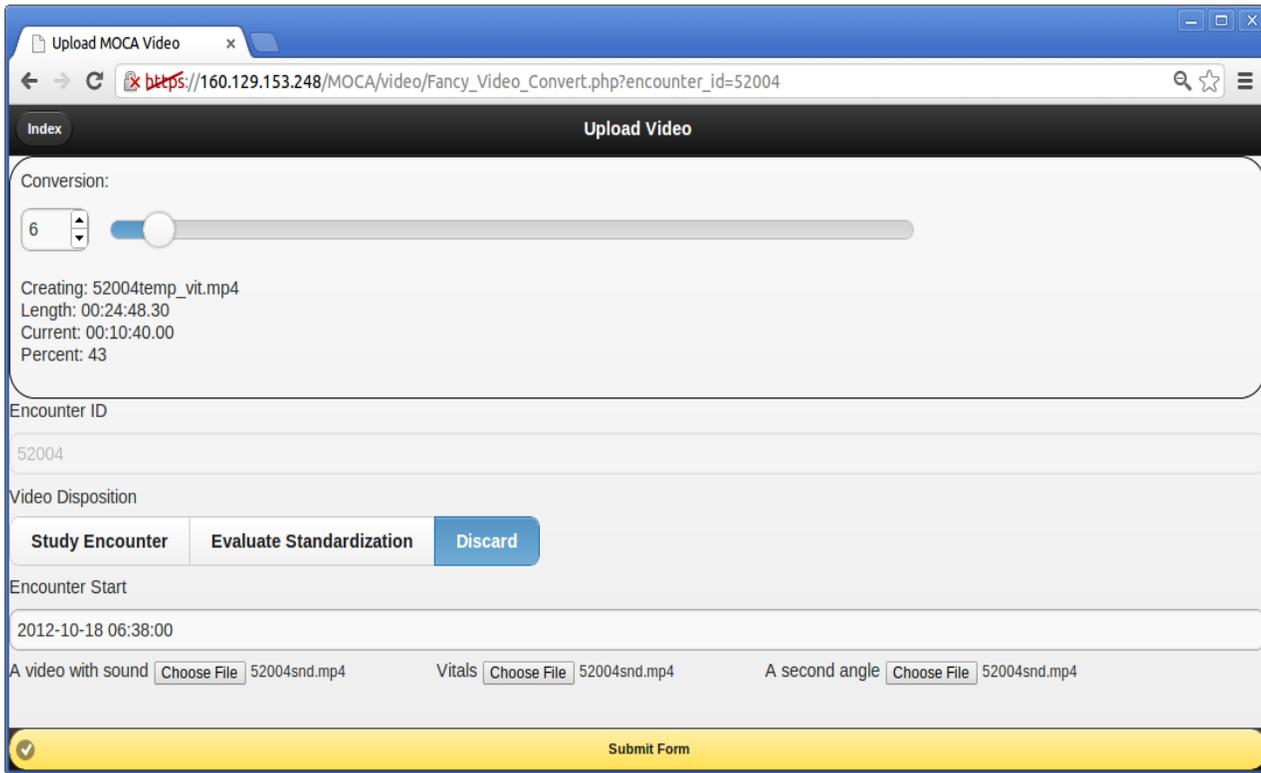
Submit Form

Select all three of your video files and Submit Form (it treats a single video file differently)

It will show you an upload progress bar. Do not close the window or navigate away.



When the upload is finished, it will show the progress of the conversion. You can now close the browser or navigate away. You can come back later to check the progress if you want.



When the conversion is complete, it will have a small link to the uploaded video.

Upload MOCA Video

https://160.129.153.248/MOCA/video/Fancy\_Video\_Convert.php?encounter\_id=52004

Index Upload Video

Conversion:

100

Video ready  
[Review](#)

Encounter ID

52004

Video Disposition

Study Encounter Evaluate Standardization Discard

Encounter Start

2012-10-18 06:38:00

A video with sound Choose File 52004snd.mp4 Vitals Choose File 52004snd.mp4 A second angle Choose File 52004snd.mp4

Submit Form