Part 2 of 3

Preparation of Case Materials For Part II Examination of the American Board of Orthopaedic Surgery

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Introduction

Preparation of your case materials for the ABOS Part II exam is often a daunting task. The instructions provided by the ABOS are brief. The following is taken from the 2009 Rules and Procedures:

Exam Materials/Preparation: Once the candidate has received the list of the 12 cases selected by the Board, he or she must gather all of the following to bring to the examination:

a) Three copies of the list of 12 selected cases
b) Three copies of the case list summary sheet
c) Three copies of the complication list
d) Three copies of the applicant’s complete case list that was submitted to the Board in January.
e) Images (including x-rays) for the 10 cases selected by the candidate - The pertinent pre-operative, intra-or immediate post-operative, and most recent follow-up x-rays for each case selected by the candidate for presentation. Before the examination begins, x-rays should be arranged in order of presentation and clearly marked in terms of date pre- and post-operative. Pertinent images in CT and MRI panels must also be marked. The candidate must bring hard copies of all image studies even if his/her institution uses a digital image system.
f) Three copies of notes for the 10 cases selected by the applicant - this includes admission and discharge notes, operative notes, office notes, and any other patient chart material that will aid in case presentation. All records must be unaltered copies of the original materials.
g) Video prints or photographic prints for arthroscopy cases selected - that show the initial lesion(s) and the lesion(s) after treatment. (Do not bring videotapes.)
h) For selected cases with complications, images (including x-rays) pertinent to the complication and its treatment and three copies of any consultation report(s).

The following guide has been prepared specifically to guide the candidate in preparation of case materials for the ABOS Part II exam. The author of this guide recalls preparing for Part II and looking online and finding almost no helpful information regarding the process.

The reader should note:

- The author is a practicing Orthopaedic Trauma Surgeon and is board-certified.
- This information is based on the author’s own experience and in helping friends and colleagues with their board preparation.
- Points of particular interest to traumatologists are indicated in BOLD and GREEN.
- Specific examples from the author’s experience are indicated in italics.

- The reader should review the Rules and Procedures for 2009 which are available at ABOS website: (https://www.abos.org/documents/2009RPPart2.doc)
**Preparation of Case Materials**

One of the most time-consuming parts of preparing for Part II of the boards is the preparation of your case materials and x-rays. However, the time that you spend in this endeavor is very worthwhile. A well-organized, detailed presentation of your cases immediately informs your examiner that you are well-prepared, detailed, and organized. Conversely, if you show up for your exam with a disorganized jumble of papers, your examiner may suspect that this also reflects your attitude when providing patient care or performing surgery.

Also, remember that you only have 35 minutes with each set of examiners. While this may seem like a long time to you now, in reality it goes by in a flash and if you have spent most of that time sorting through a disorganized stack of papers, your examiners and consequently, you will be very unhappy.

In general, there are two methods of preparing your case materials for presentation. The first method is to prepare a large folder (Giant Folder Method) which contains all of your materials including your case lists, complications, and all of the documentation for each of you 10 selected cases. The second method is to prepare individual charts for each patient (Individual Chart Method). Candidates have used both techniques in the past successfully, so the method that you choose is one of preference.

**Giant Folder Method**

As described above, in this method, the candidate creates three identical large folders which contain all of the case materials. This technique is more common than the Individual Chart Method. The Giant Folder Method requires the following materials:

1. Three large binders

   **Size:** Depending on the complexity and size of your documentation and supplementary material, choose a folder that is of the appropriate thickness. *When I first started this process, I thought I could get by with 1 inch folders. By the time I had accumulated all my materials, I needed 3 ½ inch folders.*

   **Type:** Good quality 3-ring binders can be found at most office-supply stores. Your folders need to survive the trip to Chicago. If your folder is particularly thick, it is also helpful to get D-ring binders (see below). The D-ring makes it easier to turn a large quantity of pages together without ripping them or tearing them.
**Design:** Choose a binder that has a space to put an information sheet on the front so you can label your folder with your Candidate Number and date.

2. **Tabbed Dividers with labels**
   Tabbed dividers provide the examiner with a good method to organize case materials into subsections. You will need 10 dividers (one for each case) and then several sub-dividers within each case to organize the various sections (see below).

3. **A reliable 3 hole punch**

4. **Three copies of all of your case materials**

Your folder may be organized into the following sections:

**Summary**

Place the list of your 12 selected cases, the Operative Summary List, and the Pie chart here.

**Case Lists**

Place your notarized cases lists into this section. One section from each hospital.

**Complications**

Place your list of complications here.

**Case 1.....Case 10**

Each tab here is for each individual selected case.
**Individual Chart Method**

In this method, the candidate creates an individual chart for each case. When the particular case is being discussed, the candidate provides one copy of the chart to each examiner. Each chart is self-contained and has all of the relevant materials for the given patient. *My comments about this technique are few as I did not choose this, but as I mentioned many of my colleagues have used this technique successfully. I prefer and recommend the Giant Folder Method.*

This method requires the following materials:

1. **Individual Chart Folders**
   
   Many different designs of these folders are available, but each should have a method of being able to subdivide the case materials into the various sections. For example, the folder shown below has 8 individual subdivisions with fasteners for the individual pages.

   ![Individual Chart Folder](image1)

2. **Additional folders**
   
   Additional folders of some type will be needed to hold your case lists, complications, and summary information.

3. **Method of transportation**
   
   As you will have 10-12 individual folders in this case, you will need to find a way to keep them organized as you transport them to Chicago and then into the actual exam room. *One of my colleagues used a sort of portable office crate with wheels (see below) and a retractable handle which allowed him to keep the charts well-organized rather than having them in giant disorganized stack.*

   ![Portable Office Crate](image2)
Organizing Each Case

Regardless of which method you use, each case should be organized into subsections such as the following:

- History and Physical
- Pre-operative Notes
- Consent
- Operative Report
- Inpatient Notes
- Outpatient Notes
- Associated Surgery
- Consults

Please note that these are the specific subheadings that I used. The actual sections that you choose and how you label them and divide them will vary from surgeon to surgeon.

History and Physical
This section is pretty self-explanatory. In general, this should be your first encounter with the patient and should be detailed, neat, and thorough. As a traumatologist, your first encounter with the patient may be in the operating room or in the ICU a few days after admission and so the situation may be slightly different. In these cases, it is still best to dictate your own history and physical indicating your own interaction with the patient. This is preferable to using an H&P performed by a resident, general surgeon, or another physician that may or may not reflect your understanding of the patient.

For example, in my Case #7, the patient sustained bilateral pilon fractures, one open and one closed on November 6. One of my partners took care of her on the night that she was admitted and it was not until November 10 that I was consulted to manage the patient. Although she had an initial H&P dictated on November 6, before I operated on the patient on November 10, I dictated an H&P indicating her history up to that point including the initial management by my partner, my own examination, and my own discussion with the patient.

For those of you who work with residents or physician assistants, during your collection period, it would be best for you to dictate your own H&P. An important part of the H&P should be your discussion of indications for surgery and a discussion of risks and benefits. While residents or physician assistants can do this effectively, if you dictate this and document it yourselves, it provides the examiners with insight into your safe and competent surgical practices.

In addition, your dictated history and physical (particularly for traumatologists) provides you with an excellent location to provide a detailed discussion of the indications, risks and benefits of surgery. This is very, very important and is often scrutinized by the examiners. Although it is best to avoid performing surgery with controversial indications during your board collection period, sometimes, as
a traumatologist, you may not have the luxury of saying no and you may be faced with difficult decisions. A good discussion of your indications for a controversial case can be helpful for you and informative to the examiner.

For example, for my Case#2, I operated on a patient with a posterior hip dislocation and a minimally-displaced Pipkin II femoral head fracture that remained minimally displaced after closed reduction of the hip. I agonized about this decision for a while and I reviewed the literature on this and made a decision to operate on the patient and I indicated the rationale for surgery in my dictated H&P.

Pre-operative Notes
This section is for any documentation, other than the H&P, that you performed prior to surgery. This mostly applies in the case of elective surgery. For example, consider the case of an isolated humeral shaft fracture. Initially you may have chosen to treat the patient in a fracture brace and follow her for a period of time. Suppose she then developed a painful nonunion and you chose surgery. Your documentation of the fracture brace management up to the time of the decision for surgery could be placed in the pre-operative note section.

In many trauma patients, you do not really have an extensive pre-operative documentation that is distinct from your H&P. Therefore, you may choose to omit this section entirely for certain cases.

This section again provides you with an excellent opportunity to provide a detailed discussion of the indications, risks, and benefits of surgery.

Consent
The ABOS 2009 Part II Exam Rules and Procedures (https://www.abos.org/documents/2009RPPart2.doc) lists the following as a requirement:

Three copies of notes for the 10 cases selected by the applicant - this includes admission and discharge notes, operative notes, office notes, and any other patient chart material that will aid in case presentation. All records must be unaltered copies of the original materials.

Note that this fails to mention anything about the consent. DEFINITELTY INCLUDE THE CONSENT. The examiners often look for this specifically.

At least three of my colleagues did not bring consents as part of their board materials, and while they did not fail, the examiners certainly gave them a hard time about this.

Also, as indicated above, try to obtain your own consents during your board collection period. Always include death as a potential risk for any case.
Operative Report
This section should include a copy of the operative report and supplementary material. It may be helpful to place intra-operative photos, fluoroscopy images, etc. into this section immediately after the operative report.

For trauma cases, inclusion of pictures of wounds or fluoroscopy images in this section is invaluable as it allows the examiners to see exactly what you saw and the steps you took in the operating room.

Again, it is best to dictate your own operative reports during your board collection period. Also, when you sign your dictations look carefully for any errors, even grammatical errors, and correct them.

Inpatient Notes
Note that the instructions do not specifically ask for inpatient notes. You may include this section at your discretion. As a general guideline, daily progress notes that did not really change the patient’s management are probably not helpful. However, notes that indicated a change in outcome, decision-making, or a significant event may be useful to the examiner.

For example, in my Case #1, a patient with a comminuted both column acetabular fracture was noted to have a loss of reduction in follow-up films on hospital day #6. After discussion with the patient, I took him back to the operating room. I included this documentation in the inpatient notes section.

You should include the discharge summary in this section as well.

Outpatient Notes
These notes should include all of your documentation of outpatient follow-up with the patient up to your most recent visit.

As a traumatologist, many of your patients may be transferred from great distances and follow-up with local surgeons once they return home. In addition, many of your patients may be lost to follow-up for a variety of reasons. It may take some effort, but it is helpful to get follow-up of some type on all of your patients.

Another method that can be used is a telephone note. If you are able to call the patient and speak with them on the phone, you can get an idea of the patient’s outcome and document a note of the telephone conversation in your outpatient notes.

Although the examiners appear to be understanding about patients that are lost to follow-up, the one situation where follow-up is probably essential is in a patient with a complication.

In my Case #4, the patient was a 4 year old female that sustained a displaced supracondylar humerus fracture. Post-operatively she developed an ulnar nerve palsy. At 4 months follow-up, she still had a palsy
and looked like she was developing an unlar claw hand. She then promptly disappeared and did not return for any of her follow-up visits. The phone number for the family was disconnected. I finally was able to find an address and drove to the patient’s house. It turned out that the family had lost their insurance and she had completely recovered from her ulnar nerve palsy so they did not thing it was necessary to return for any appointments. They allowed me to take some pictures and I was able to keep this case. Without this follow-up, I probably would have not selected it for discussion as it was lost follow-up on a complication.

The outpatient notes section is also an excellent place to document clinical photos or outcome scores of your patient at their most recent follow-up visit.

Associated Surgery
This section can be used to include other surgery that you may have performed on the patient that was distinct from the case that was chosen by the examiners.

For example, in my Case #7, the patient with bilateral pilon fractures, the examiners chose the open pilon case as the one to be discussed. However, I included the operative report and images from the contralateral closed pilon case in the Associated Surgery section.

Consults
The 2009 Rules and Procedures state, “For selected cases with complications, images (including x-rays) pertinent to the complication and its treatment and three copies of any consultation report(s).”

Again, if consultation was pertinent to your case, even if you did not have a complication, it may be advisable to include this.

Radiographs

The 2009 Rules and Procedures indicate:

Images (including x-rays) for the 10 cases selected by the candidate - The pertinent pre-operative, intra-or immediate post-operative, and most recent follow-up x-rays for each case selected by the candidate for presentation. Before the examination begins, x-rays should be arranged in order of presentation and clearly marked in terms of date pre- and post-operative. Pertinent images in CT and MRI panels must also be marked. The candidate must bring hard copies of all image studies even if his/her institution uses a digital image system.

Many practices and hospitals have moved to digital radiology or a PACS system and it is difficult to print films. In 2008, candidates were allowed to print images on paper or photo paper and bring them in that format.

In my opinion, if it is easy for you to print actual films, I believe you are better off bringing those as you can put them up on the lightbox while you are discussing the patient. As technology improves, printing
the digital images on photo paper may approach the same quality, but I would still recommend printing them out as large as possible so you can hang them on the lightbox with the light turned off.

As a traumatologist, you may have patients transferred to you from outside institutions with plain films. In many instances it is a good practice to repeat x-rays at your institution, but if not make sure you obtain and hang on to any outside films during your board collection period.

Here a few helpful tips about the x-rays:

1. Labeling
   Label each x-ray with the case #, patient’s identifier, and description. For example, your label might look like this:

   ![X-Ray Label Example]

2. Know which end is up
   This may seem like a minor point, but when you pull an x-ray or CT sheet out of a folder you should be able to immediately look at it and know which end is up so you can put it up quickly on the viewbox. One method is to always put your labels in the same spot (e.g. the top right corner) so you know which side is up. Alternatively you can use a small colorful dot in one corner as a visual reminder of which side is up (see below).
3. Label specific findings
   Label specific findings on CTs, MRIs etc. For example, if you have a few CT cuts of a posterior wall acetabular fracture that demonstrate marginal impaction point these out with a separate sticker.

4. Placing x-rays in your folder
   It may be helpful to print copies of your x-rays on photo paper and place them directly into your folder. This also serves as a back-up if you bring separate hard copies in case your x-rays are damaged or lost in transit.

5. Intra-operative Fluoroscopy Images
   These images are invaluable for the traumatologist. If your C-arm has the capacity to save intra-operative images, you can demonstrate various points during the case. Also, your final intra-operative fluoroscopy shot may be a better image than the post-operative x-ray shot in the splint.

   For example, my case #7 was ORIF of an intra-articular tibial pilon fracture. I obtained a perfect lateral of the ankle using fluoroscopy and printed this image and included it in the folder.
This image was superior to the oblique obtained in the recovery room with the patient’s plaster splint in place.

Candidate 133’s Part II Giant Folder

I have included some excerpts from my own folder for the boards. As I mentioned above, I used the Giant Folder Technique. I ended up using 3 ½ inch thick D-ring folders.
I have included my summary information below:

I used clear plastic dividers for each of the major sections (Summary, Case Lists, Complications) and the 10 Cases.
Within each section, I used these smaller colorful tabs for the different sections of each case.

I labeled each case with a clear divider with the patient’s age and diagnosis.
Case 10 was a patient with a bicondylar tibial plateau fracture. I included the injury films in printed format immediately after the H&P (although I also brought the actual hard copy x-rays to hang on the light box).

Here is an example of the fluoroscopy shots that I included with Case 10. I placed these images right after the operative report.
Finally, here is a photograph documenting the patient’s range of motion at final follow-up.

I have included a short video of what the folder looks like when you flip through it. (see attached file QuickFlip.avi)