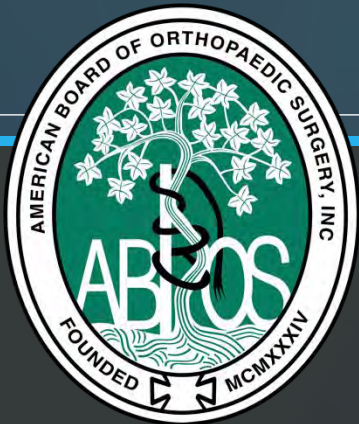


# *The American Board of Orthopaedic Surgery Knowledge, Skills, and Behavior Program*

ABOS KSB



American Board of  
Orthopaedic Surgery

*Establishing Education & Performance  
Standards for Orthopaedic Surgeons*



# Overview

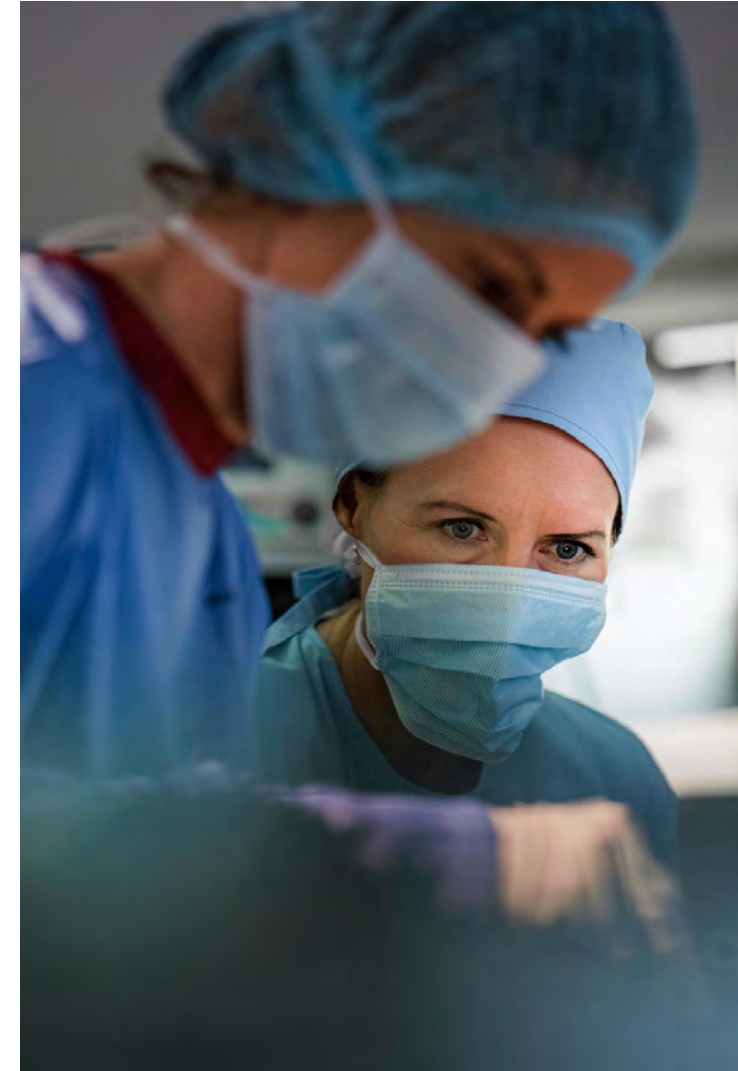
- Background
- About the ABOS KSB Program
  - Orthopaedic Knowledge
  - Surgical Skills
  - Professional Behavior
- Residents
- Program Directors
- Getting Started
- FAQs
- Questions
- Contact the ABOS

# *Background*

# Background

## *Competency-Based Education*

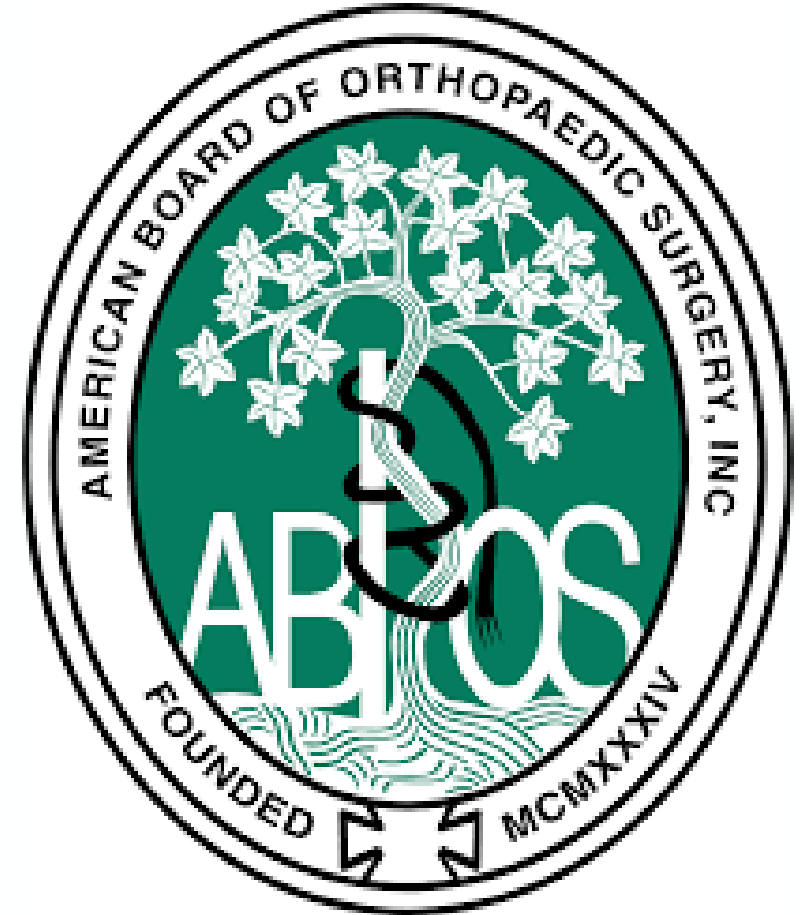
- Graduate Medical Education is transitioning from time-based programs for the acquisition of knowledge and skills to promoting more competency-based curricula.
- Validated tools to measure competency are critical to this transition.
- Formative and summative assessments are vital in creating successful hybrid time and competency-based residency programs.



# Background

## ABOS

- The ABOS has been establishing education and performance standards for orthopaedic surgeons since 1934 — dedicated to protecting the public and our patients with relevant and innovative programs.





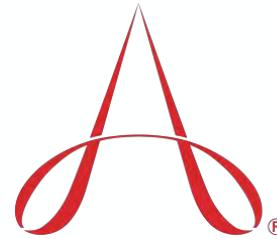
# Background

## *Developing the ABOS KSB Program*

- Developed in collaboration with the American Orthopaedic Association (AOA), the Accreditation Council for Graduate Medical Education (ACGME), the American Academy of Orthopaedic Surgeons (AAOS), and Orthopaedic Residency Programs across the country.



AMERICAN  
**ORTHOPAEDIC**  
ASSOCIATION



Accreditation Council for  
Graduate Medical Education



AMERICAN ACADEMY OF  
ORTHOPAEDIC SURGEONS



# *About the ABOS KSB Program*



# *About the ABOS KSB Program*

*Knowledge / Surgical Skills / Professional Behavior*

- Key Benefits of the ABOS KSB Program:
  - Measures competency
  - Provides real-time assessment
  - Strengthens resident responsibility





# *Orthopaedic Knowledge*

# Orthopaedic Knowledge

## Measuring Competency

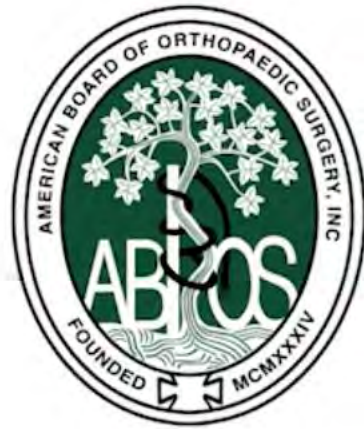
- Orthopaedic Knowledge acquisition is measured yearly
  - Annual Knowledge Assessment score (OITE results correlated with ABOS Part I standards)



# Orthopaedic Knowledge

## Measuring Competency

- The ABOS and the AAOS are working together to align the AAOS OITE and ABOS Part I Examination Blueprint.

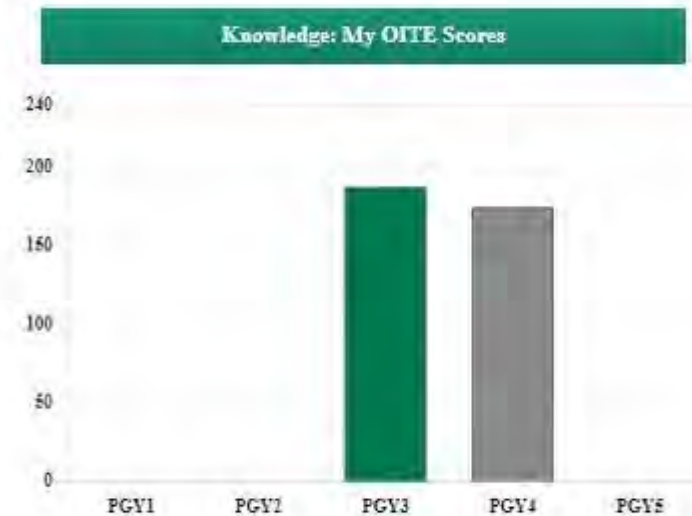


# Orthopaedic Knowledge

## Measuring Competency

- Residents participating in the program will have access to their own ABOS Resident Dashboard that tracks their progress and displays their scaled Orthopaedic In-Training Examination (OITE) scores.

### My Progress



A green column indicates a score at or above the score corresponding to the minimum passing performance level on the ABOS Part I Certifying Examination. Click [here](#) for more information.

A background image showing several surgeons in an operating room, wearing blue scrubs, masks, and hairnets, focused on a surgical procedure. The image is overlaid with a semi-transparent dark purple filter.

# *Surgical Skills*



# *Surgical Skills*

## *Real-Time Assessment*

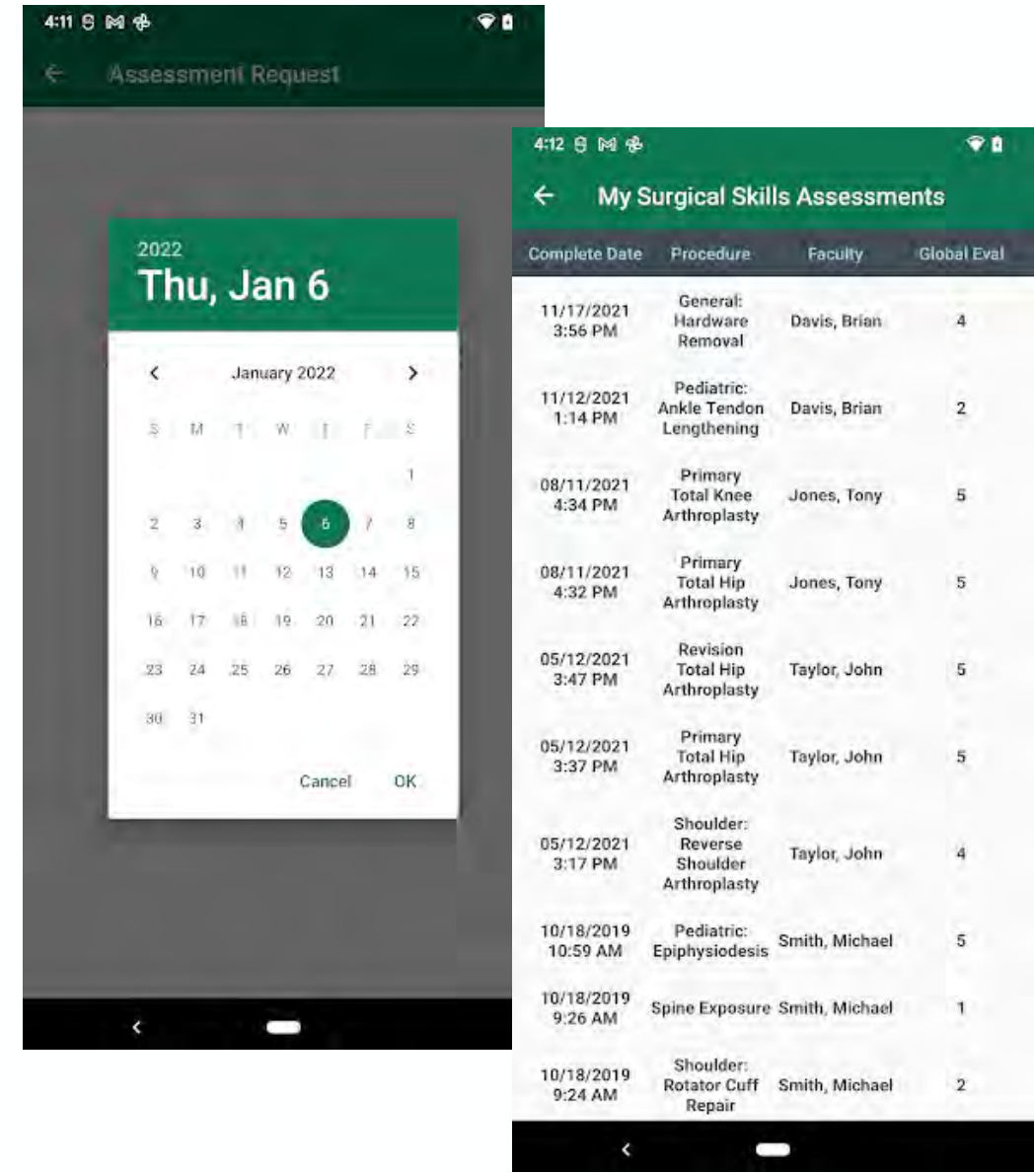
- **Assesses residents' surgical skills through the surgical skills assessment tool**, a web-based, real-time, workplace-based assessment that allows residents to easily request evaluations.
- Ensures a **real-time snapshot of residents' performance in the operating room**.



# Surgical Skills

## Real-Time Assessment

- Residents can use their smartphone or **computer to request an attending surgeon's** evaluation of their performance up to 48 hours from the date of procedure.
- Faculty Members immediately receive a text or email to complete the evaluation.
- After the evaluation, residents can review areas of strength and improvement for each procedure.



# Surgical Skills and Professional Behavior: Assessment Request

Residents  
have 48  
hours from  
procedure  
date to  
request  
assessment.

[Assessment Request](#) [My Skills Assessments](#) [My Behavior Evaluators](#) [My Profile](#) [Log Out](#)

John Doe

ABOS Assessment Request

Select the subspecialty of the procedure to be assessed:

Select the procedure to be assessed:

Select the attending to assess you:

Select the date of procedure:  

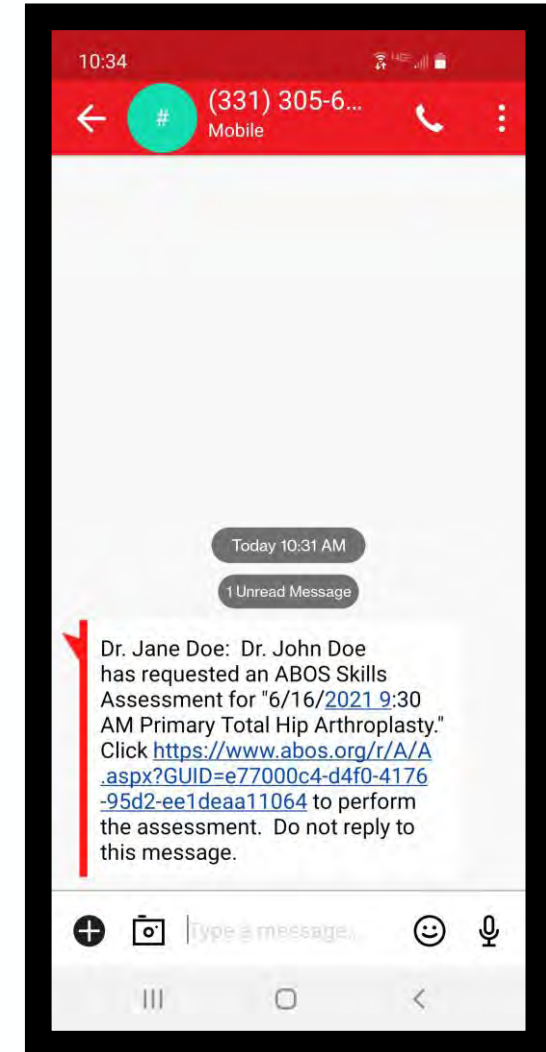
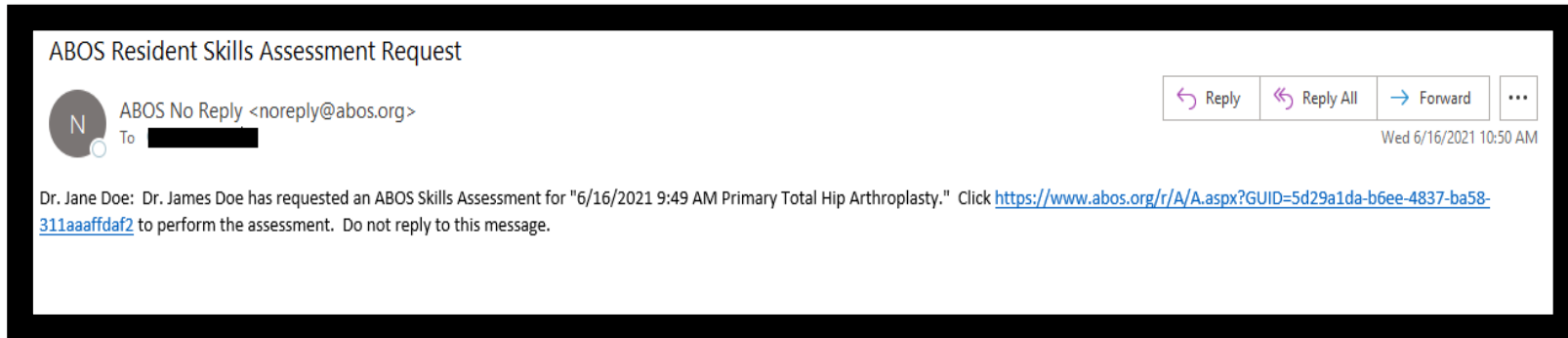
|               |     |     |     |     |     |     |
|---------------|-----|-----|-----|-----|-----|-----|
| < June 2021 > |     |     |     |     |     |     |
| Sun           | Mon | Tue | Wed | Thu | Fri | Sat |
| 30            | 31  | 1   | 2   | 3   | 4   | 5   |
| 6             | 7   | 8   | 9   | 10  | 11  | 12  |
| 13            | 14  | 15  | 16  | 17  | 18  | 19  |
| 20            | 21  | 22  | 23  | 24  | 25  | 26  |
| 27            | 28  | 29  | 30  | 1   | 2   | 3   |
| 4             | 5   | 6   | 7   | 8   | 9   | 10  |

Select the time of procedure:  
10:41 AM

# *KSB app is available*



# Email/Text Assessment Requests Look Like



# *Surgical Skills Assessments*

- ABOS has developed two lists of orthopaedic surgical procedures.





# *Surgical Skills Assessments*

- ABOS has developed two lists of orthopaedic surgical procedures.
    - Tier 1 Procedures (Core Competency)
- Considered critical to an orthopaedic **surgeon's education.**
- Residents are expected to attain competence in that group of procedures.





# *Surgical Skills Assessments*

- ABOS has developed two lists of orthopaedic surgical procedures.
  - Tier 2 Procedures (Subspecialty Exposure)

Those procedures that an orthopaedic surgeon should be exposed to during their residency education.



# *Surgical Skills Assessments*

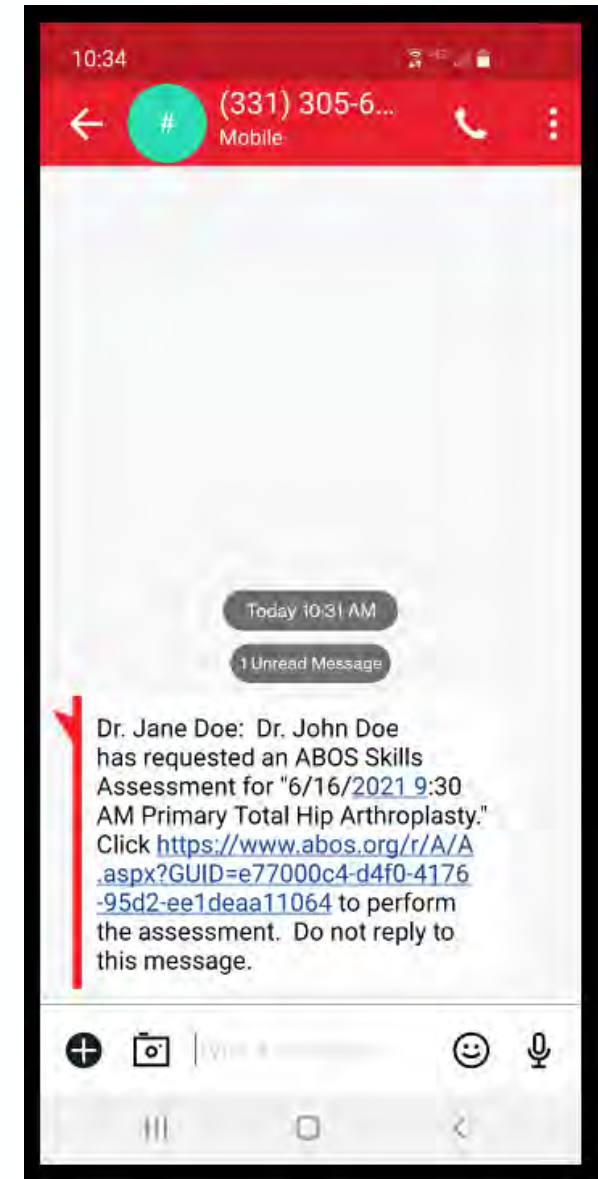
- ABOS has developed two lists of orthopaedic surgical procedures.
  - Tier 1 and Tier 2 procedures fit nicely into the ACGME Milestones 2.0 Program.



# *Surgical Skills Assessments*

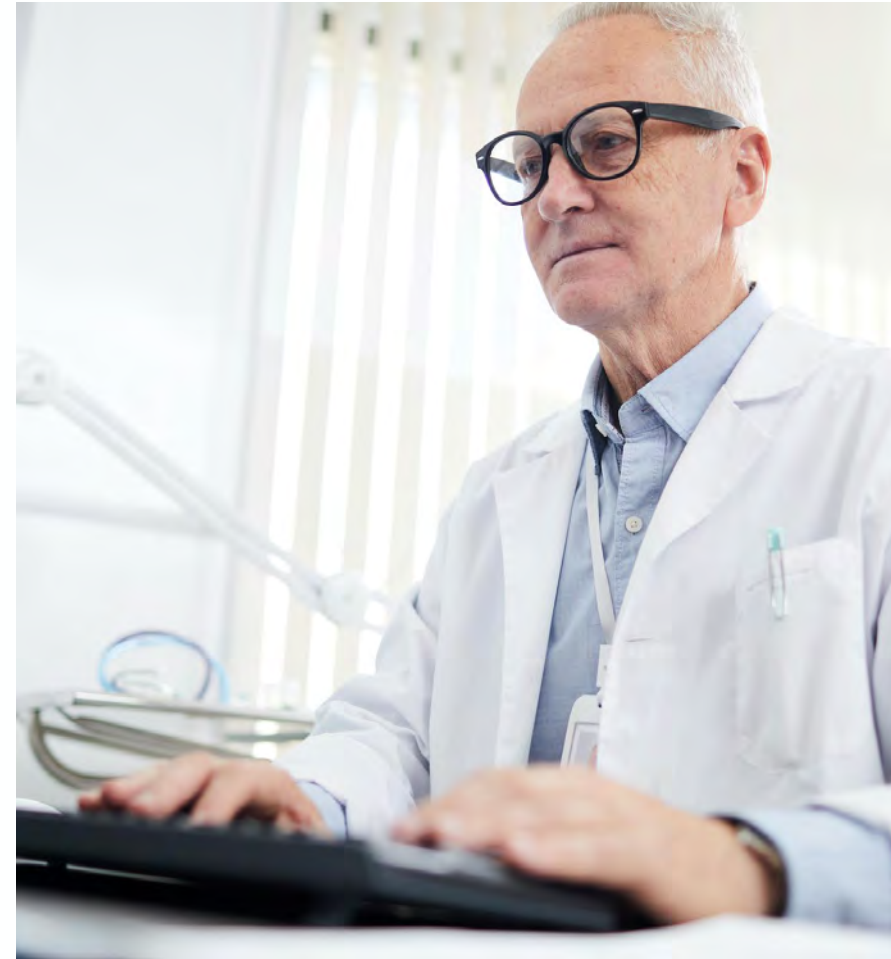
- Residents are expected to request a minimum of two Surgical Skills Assessments per week, if possible, based on the list of Tier 1 Core Orthopaedic Procedures and Tier 2 Subspecialty Orthopaedic Procedures.

Text Request Example



# *Surgical Skills Assessments*

- Faculty Members use the OP-Score to perform surgical skills assessments.
  - The O- score is the Ottawa Surgical Competency Operating Room Evaluation
  - The P-score is a summative score similar to the Zwisch scale



# *Surgical Skills Assessments*

## 5 Point Ottawa Surgical Competency Operating Room Evaluation (O-Score)

1. **“I had to do”**—i.e., Requires complete hands-on guidance, did not do, or was not given the opportunity to do
2. **“I had to talk them through”**—i.e., Able to perform tasks but requires constant direction
3. **“I had to prompt them from time to time”**—i.e., Demonstrates some independence, but requires intermittent direction
4. **“I needed to be in the room just in case”**—i.e., Independence but unaware of risks and still requires supervision for safe practice
5. **“I did not need to be there”**—i.e., Complete independence, understands risks and performs safely, practice ready





# *Surgical Skills Assessments*

## Formative Evaluation Using O-Score for 8 Steps of Surgical Procedure

### 1. Pre-procedure plan:

Gathers/assesses required information to reach diagnosis and determine correct procedure required

### 2. Case preparation:

Patient correctly prepared and positioned, describes approach and lists required instruments, prepared to deal with probable complications

### 3. Knowledge of specific procedural steps:

Can sequence steps of procedure, articulates potential risks, and means to avoid/overcome them



# *Surgical Skills Assessments*

Formative Evaluation Using O-Score for 8 Steps of Surgical Procedure

## 4. Technical performance:

Efficiently performs steps, avoiding pitfalls and respecting soft tissues

## 5. Visuospatial skills:

3D spatial orientation and able to position instruments/hardware where intended

## 6. Post-procedure plan:

Appropriate complete post procedure plan



# *Surgical Skills Assessments*

Formative Evaluation Using O-Score for 8 Steps of Surgical Procedure

## 7. Efficiency and flow:

Obvious planned course of procedure with economy of movement and flow

## 8. Communication:

Professional and effective communication/utilization of staff

## 9. Global Evaluation:

Resident is able to safely perform this procedure independently

# *Surgical Skills Assessments*

The 5 Point Summative P-Tool (Procedure Assessment Tool) offers feedback to residents, including targeted areas for improvement.

1. Novice: Attending surgeon provides maximum assistance
2. Advanced Beginner: Attending surgeon provides significant assistance and direction
3. High Intermediate: Attending provides modest assistance and direction
4. Supervision Only Competent: Functions as expected of a program graduate
5. Advanced Expertise-Proficient: Performance matches that of an advanced surgeon



# Surgical Skills Assessment

**Dr. Jane Doe** ABOS Skills Assessment (OP-Score) of **Dr. James Doe** for 6/16/2021 9:49 AM Primary Total Hip Arthroplasty

4 (of 11) Knowledge of Specific Procedural Steps: Understands steps of procedure, potential risks, and means to avoid/overcome them

- ☐ 1: I had to do.
- ☐ 2: I had to talk them through.
- ☐ 3: I had to prompt them from time to time.
- ☐ 4: I needed to be in the room just in case.
- ☐ 5: I did not need to be there.

Previous

## Definitions

- 1: I had to do - i.e., requires complete hands-on guidance, did not do, or was not given the opportunity to do.
- 2: I had to talk them through - i.e., able to perform tasks, but requires constant direction.
- 3: I had to prompt them from time to time - i.e., demonstrates some independence, but requires intermittent direction.
- 4: I needed to be in the room just in case - i.e., independence, but still requires supervision for safe practice.
- 5: I did not need to be there - i.e., complete independence, understands risks and performs safely, practice ready.

# *Surgical Skills and Professional Behavior*

**Dr. Jane Doe** ABOS Skills Assessment (OP-Score) of **Dr. James Doe** for 6/16/2021 9:49 AM Primary Total Hip Arthroplasty

11 (of 11) [Feedback to Resident](#) (600 character limit)

Previous

Submit

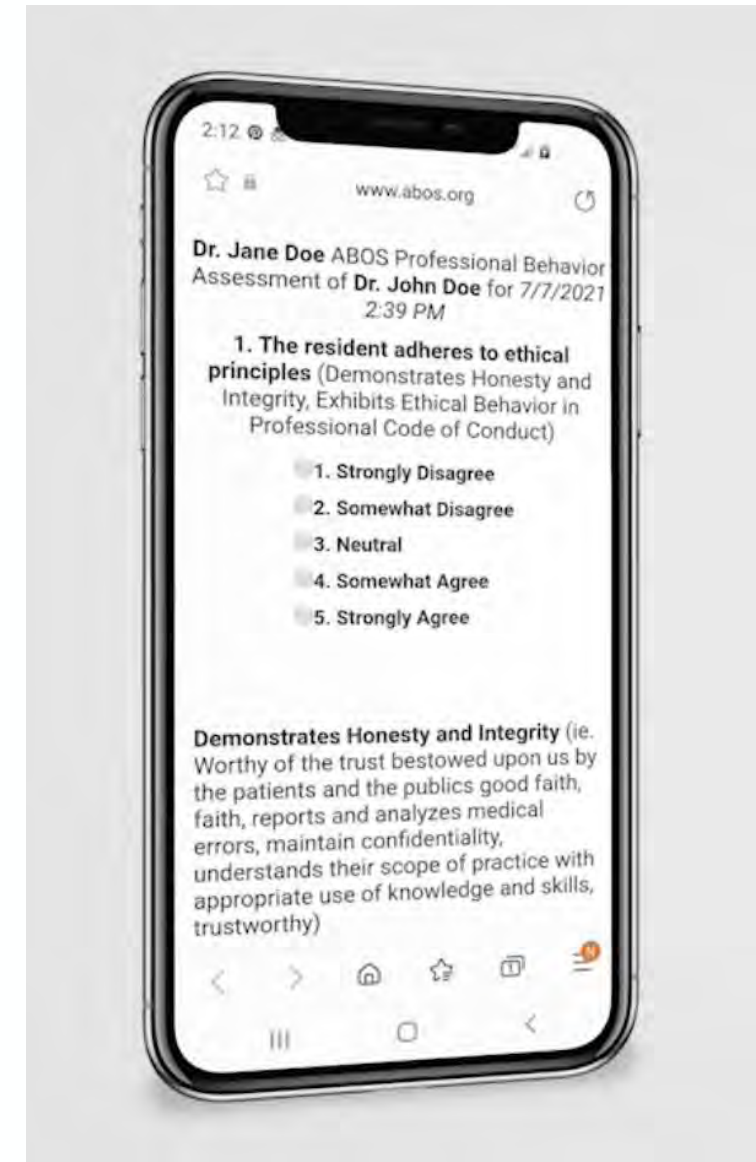
# *Professional Behavior*



# Professional Behavior

The ABOS has developed a Professional Behavior tool that allows program directors and faculty members the opportunity to evaluate the professional behavior of orthopaedic residents in five domains:

1. Ethical behavior
2. Communication
3. Interaction
4. Reliability
5. Self-assessment.



# *Professional Behavior Assessments*

- There are two types of ABOS Professional Behavior Assessments, both required to fulfill the Behavior Skills portion of the ABOS KSB Program.
  - End of every rotation from each Faculty Member with whom the orthopaedic resident worked.
    - The Professional Behavior Evaluation consists of a 5-question survey with one additional, open-ended question that provides faculty the opportunity to provide additional comments by typing or dictating.
  - 360-Evaluation once a year.
    - Multiple healthcare professionals in multiple environments the opportunity to evaluate resident performance. Individuals who have had adequate exposure to the resident are chosen, including fellow residents.



# Professional Behavior Assessment

Dr. Jane Doe ABOS Professional Behavior Assessment of Dr. James Doe for 6/16/2021 10:14 AM

**2. The resident effectively communicates with patients and with people who are important to those patients** (Shows Compassion/Empathy, Demonstrates Communication and Listening skills, Shows Respect for Patient needs)

- ☐ 1. Strongly Disagree
- ☐ 2. Somewhat Disagree
- ☐ 3. Neutral
- ☐ 4. Somewhat Agree
- ☒ 5. Strongly Agree

Previous

Next

**Shows Compassion/Empathy** (ie. Collaborates with patient, enhances the relationship)

**Demonstrates Communication and Listening skills** (ie. Attentive, shows patience, respect patient autonomy and empower them to make informed decisions, manages communication challenges with patients and families)

**Shows Respect for Patient needs** (ie. Respects patients' viewpoints and considers his/her opinions when determining healthcare decisions, regards the patient as a unique individual, treats the patient in the context of his/her family and social environment, takes time to educate the patient and their family)

# *Residents*



# *Residents*

- The ABOS KSB Program gives residents the opportunity to take greater responsibility for their own educational progress toward becoming eligible for ABOS Board Certification.

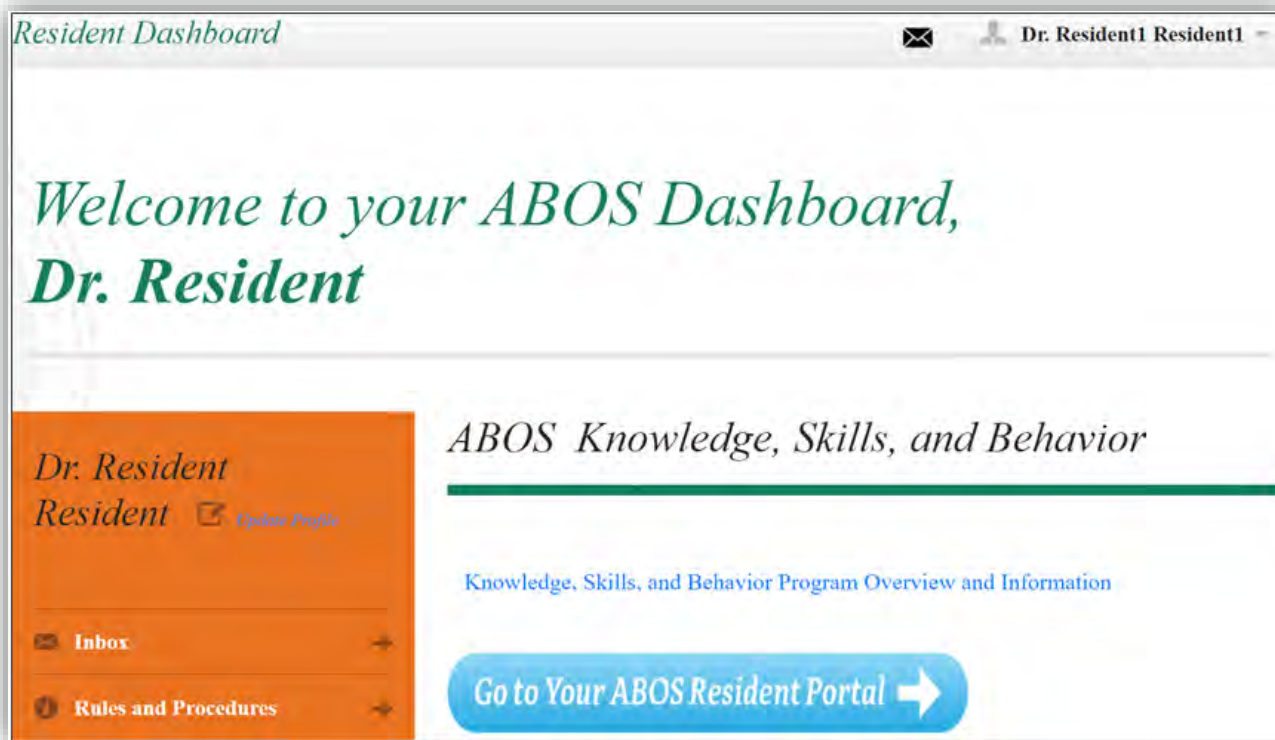


# *Residents*

- Allows orthopaedic residents to identify areas of strength and weakness, and to tailor their learning experience accordingly.
- Allows residents to track their progress and performance in competency measures across each year of their residency on the ABOS KSB Resident Dashboard.

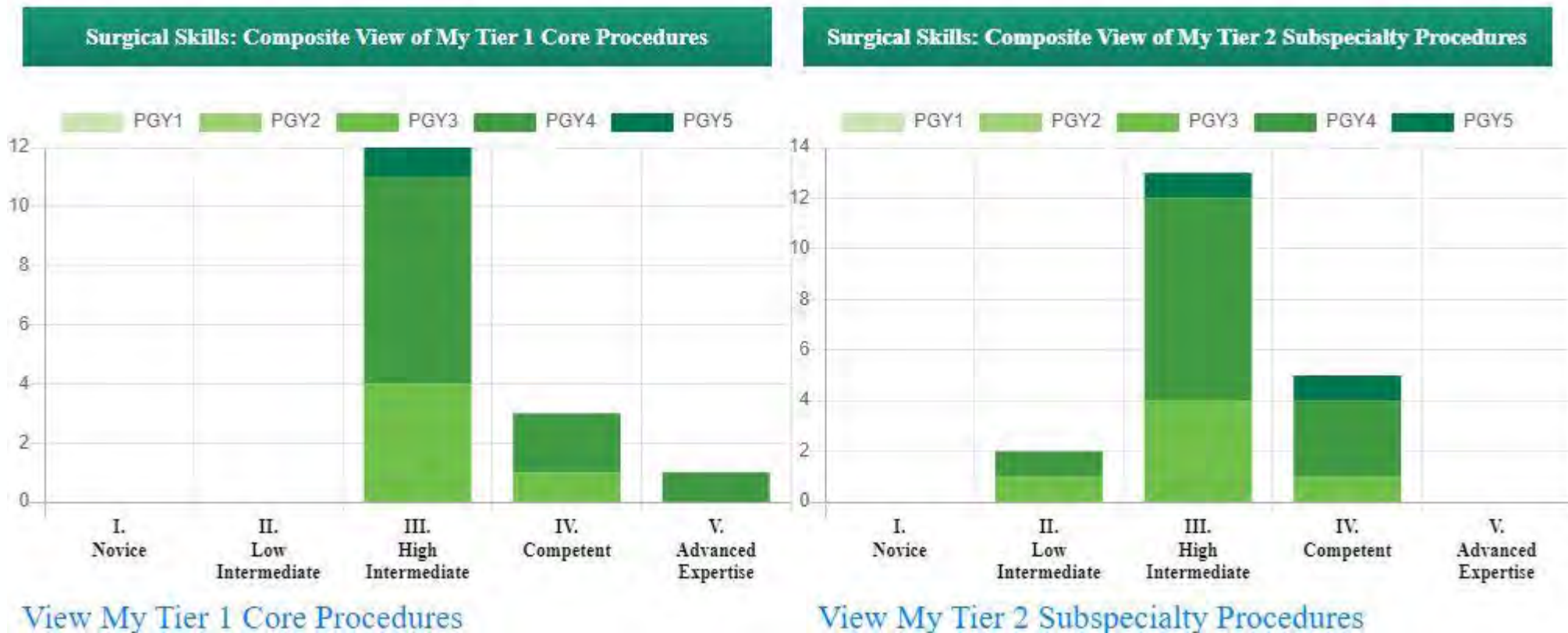


# Resident Dashboard

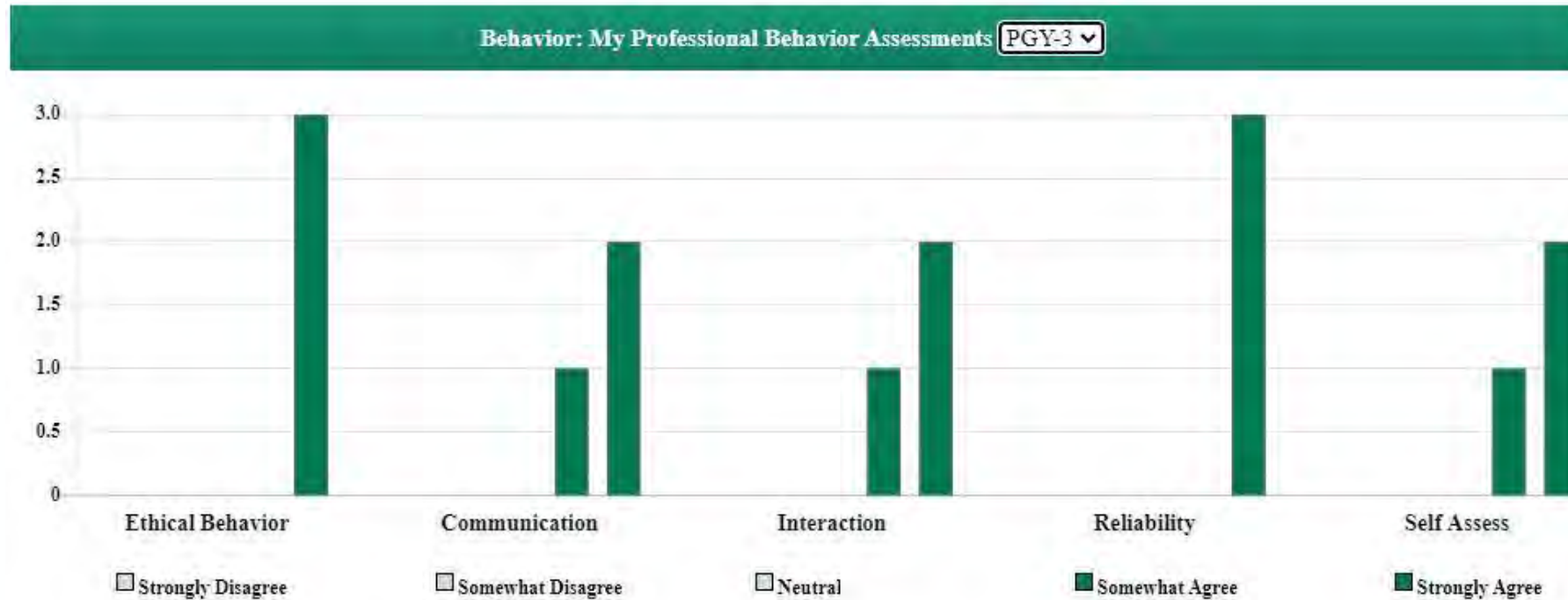


- Longitudinal Progress
  - Multi-Purpose
    - Rules and Procedures
    - Link to Resident Assessment Request Portal
    - Surgical Skills Assessment Ratings
    - Professional Behavior Assessment Ratings
    - OITE Performance
    - Orthopaedic Education Requirements

# Surgical Skills Assessments



# Professional Behavior Assessments



Note: Residents only see **previous year's** Professional Behavior ratings.

# *Program Directors*

# Program Directors

- In the platform, program directors can also view the status of Surgical Skills and Professional Behavior Assessments across the Residency Program.
- Program directors are notified in real-time, via email, of any resident with a low score in any of the five domains of the Professional Behavior evaluations in the ABOS KSB Program. Program directors can then determine how they would like to address any deficiencies.

|         |         |                         |            |
|---------|---------|-------------------------|------------|
| Faculty | Reports | 360 Behavior Evaluators | My Profile |
|---------|---------|-------------------------|------------|

## Reports

[Surgical Skills Report](#)

[Assessment Activity by Resident](#)

[Assessment Activity by Faculty](#)

[Program Participation Report](#)

[Professional Behavior Report \(Redacted\)](#)

[Professional Behavior Report \(Not Redacted\)](#)





# *Program Directors*

## *ABOS KSB Program Maps To Milestones 2.0*

- The ABOS KSB Program can help in completion of the ACGME Milestones 2.0 Program.
- Currently, the Surgical Skills assessment results from ABOS KSB can provide data for completing some of the Patient Care Milestones:
  - Operative Management
  - Professional Behavior
  - Practice-Based Learning and Improvement
  - Professionalism
  - Interpersonal and Communication Skills





# *ABOS KSB Milestones Report*

## **Milestones**

| <b>Milestone</b>   | <b>Level</b> |
|--|--------------|
| Patient Care 1: Operative Management of Fractures and Dislocations                               | 4            |
| Patient Care 2: Operative Management of Soft Tissue Pathology                                    | 3.5          |
| Patient Care 3: Operative Management of Degenerative, Infectious, and Neoplastic Conditions      | 3            |
| Patient Care 4: Operative Management of Arthroscopically Treated Conditions                      | 2.5          |
| Patient Care 5: Operative Management of Pediatric Conditions                                     | 3.5          |
| Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth | 5            |
| Professionalism 1: Professional Behavior and Ethical Principles                                  | 5            |
| Professionalism 2: Accountability/Conscientiousness  | 5            |
| Professionalism 3: Well-Being  | 5            |
| Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication             | 5            |
| Interpersonal and Communication Skills 2: Interprofessional and Team Communication               | 5            |
| Interpersonal and Communication Skills 3: Communication within Health Care Systems               | 5            |

# ABOS KSB Milestones Report

## Patient Care 1: Operative Management of Fractures and Dislocations

| Procedure                             | # of Assessments | Level |
|---------------------------------------|------------------|-------|
| General: Fasciotomy                   | 2                | 4     |
| General: Hardware Removal             | 5                | 5     |
| General: Unilateral External Fixation | 2                | 4     |
| Lower: Femoral Neck Fx                | 5                | 5     |
| Lower: Femoral Shaft Fx               | 2                | 3     |
| Lower: Intertrochanteric Fx           | 6                | 4     |
| Lower: Tibial Shaft Fx                | 2                | 4     |
| Lower: Uni/Bi-malleo (Syndesmo.) Fx   | 3                | 4     |
| Pediatric: Supracondylar Humerus Fx   | 3                | 4     |
| Upper: Carpal Fx and/or Dislocation   | 1                | 3     |
| Upper: Distal Humerus Fx              | 2                | 4     |
| Upper: Distal Radius Fx               | 5                | 4     |
| Upper: Humeral Shaft Fx               | 1                | 3     |
| Upper: Proximal Radius/Ulna Fx        | 3                | 4     |
| Upper: Metacarp/Phalan Fx/Disloc      | 5                | 4     |

# ABOS KSB Milestones Report

## Patient Care 1: Operative Management of Fractures and Dislocations

### Lower: Femoral Neck Fx

| Faculty | Date       | Rating | Feedback   |
|---------|------------|--------|--|
|         | 11/06/2021 | 5      | Great job not only on the case but teaching it to the intern as well.  |
|         | 06/29/2021 | 4      |  |
|         | 06/24/2021 | 3      | Very nice job on the approach and room set up. You know the steps of the approach and handled them well. You will gain the independence needed to perform the more complex aspects (choosing final reaming/broach size, stem height, management of calcar bone loss) with additional repetitions of this procedure. Very good case management for this first week of PGY4 year. I appreciated you talking through your steps - it shows what you know and are anticipating in the case. Good work! Fully expect you will gain independence of such a case this year. |
|         | 06/20/2021 | 3      | Dr. did a nice job with the technical execution of this operation. I would encourage him to more consciously direct the procedure at this level. For example, ask for the bed height to be raised, realize that drilling two of the holes but not all three is a wasted step, etc.   |
|         | 05/31/2021 | 4      | Great job with wire navigation and screw placement for femoral neck fracture   |

# Getting Started

ABOS has created an easy system for incorporating the ABOS KSB program in your institution.

- Collect the preferred email address and cell phone information for all orthopaedic residents and faculty members in your program.
- **Note faculty members' contact preference for receiving assessment requests and residents' contact preference for receiving assessment results.**
- Log in to the program directors and program coordinators management tool. The password and link will be provided to you by ABOS.
- Set up your program in the system.
- Residents will receive follow-up instructions on participating in the program.



# *Helpful Notes*

- New residents or faculty can be added to the system at any time.
- Your faculty are not assigned login information as they will not be logging into the system.







# *Frequently Asked Questions*



# FAQs

## How much does the program cost?

- The cost of the program (assessment tool development, electronic registration and data analysis and feedback) is borne by the ABOS. There is no cost to programs or residents other than time spent in registration and assessment.



# FAQs

## Is participation mandatory?

- At this time, participation is voluntary.
- Widespread participation is encouraged to provide useful documentation for residents and residency programs regarding progress towards competency.



# FAQs

## Will the ABOS KSB Program increase my workload?

- The ABOS KSB Program is specifically designed to decrease current administrative burdens on program directors and coordinators.
- Transfers ownership of individual resident education to the learner.
- Provides data useful in completion of ACGME milestones.



# FAQs

## Who makes the decision on the duration of a resident's program?

- Consistent with ACGME guidelines, the program chair and program director retain full discretion on the content, evaluation, and length of an individual resident's education.



# *Resident Perspective*



**Dr. Michal Klek**

Orthopaedic Surgery Resident

Penn State Health, Milton S. Hershey Medical Center

*Questions?*



# KSB Resources

Home → ABOS Knowledge, Skills, and Behavior Program → ABOS KSB-Residents


**ABOS Knowledge, Skills, and Behavior Program**

- ABOS KSB-Program Directors and Program Coordinators
- ABOS KSB-Residents
- ABOS KSB-Faculty

## Residents


### Instructional Resources and Templates

**An Introduction to ABOS (video)**




**Introduction**

**Introduction to ABOS KSB**



**Introduction to ABOS KSB Tutorial (video)**



### Instructional Resources



# *How to Contact the ABOS*

Please do not hesitate to contact the ABOS with questions or input.

*Mona Saniei*  
*ABOS KSB Program Specialist*  
[ksb@abos.org](mailto:ksb@abos.org)  
[www.abos.org/abosksb](http://www.abos.org/abosksb)

