

BACKGROUND

- Ability to suture simple lacerations is expected of many residents, but medical school graduates often feel unprepared to perform this skill.¹
- Various curricula facilitate acquisition of procedural skills such as suturing during medical school,²⁻⁴ but most are offered only as electives for interested students.⁵
- To address this deficiency, residency programs are implementing intern boot camps focusing on basic procedural skills.⁶⁻⁹

Primary objectives of FOSS

1. Provide resources to learn basic suturing skills
2. Build confidence to reduce anxiety when asked to suture during clerkships



First Year

- Receive suture kit & online video resources
- **Fall**
 - Skill #1 Proper instrument starting position
 - Skill #2 simple interrupted suture
 - Skill #3 Instrument tie
- **Spring**
 - Evaluation of Skills #1-3
 - Skill #4 Two handed knot tying

Second Year

- **Fall**
 - Evaluation of Skills #1-4
 - Skill #5 simple continuous suture
 - Skill #6 deep dermal (buried) suture
- **Spring**
 - Review & evaluation of previous skills
 - Skill #7 Running subcuticular suture

Third Year

- Check-off of all skills before start of rotations
- Refresher course early in Surgery clerkship

LIMITATIONS & FUTURE WORK

- This curriculum requires widespread institutional support to allocate resources such as those below:
 - Faculty leaders
 - Classroom space
 - Suture material
- Future work focuses on impact of the course on clerkship experience as shown in the survey below.

Fundamentals of Suturing Skills – Follow-up Survey

Please read and complete each item:

	Not at all	Somewhat	Moderately	Very	Completely					
1. How confident are you right now that you could identify the appropriate instruments and equipment needed to suture a patient's wound?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
2. How comfortable are you suturing a patient's wound right now?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
3. To what extent did the UAMS Fundamentals of Suturing Skills (FOSS) curriculum prepare you to suture wounds during your third-year clerkships?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
4. Rate your comfort level in completing each task below:										
	Not at all 1	2	Somewhat 3	4	Moderately 5	6	7	Very 8	9	Completely 10
a. Proper instrument position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Placing a simple interrupted suture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Performing an instrument tie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Performing two-handed knot tying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Placing a deep dermal suture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Placing a horizontal mattress suture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Placing a vertical mattress suture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Completing a running subcuticular suture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Did you successfully tie knots during your clerkships without needing significant directions/guidance?						No	Yes			
						<input type="checkbox"/>	<input type="checkbox"/>			
							↓			
							If yes, how many? _____			
6. Did you successfully suture actual patient wounds during your clerkships without needing significant directions/guidance?						No	Yes			
						<input type="checkbox"/>	<input type="checkbox"/>			
							↓			
							If yes, how many? _____			
7. If you could make any changes to improve the FOSS curriculum, what would you suggest?										
8. What was the most useful part of the FOSS course for you (e.g., online videos, in-person instruction, at home practice material, etc)?										

OUTCOMES

- M1 students completed course evaluation surveys before (n=167) and after (n=148) the first FOSS session.
- Prior to FOSS
 - About one-third (37%) had no suturing exposure or direct suturing experience.
 - Of 63% with "exposure", < 5% had any direct suturing experience
- Improvement in students' ratings of comfort ($p < 0.0001$)
 - Proper instrument position
 - Performing simple interrupted sutures
 - Performing instrument ties
- Majority found course resources **very helpful**: materials/self-study guides (91%); clinical faculty (99%); session time (99%)
- 83% rated the gross lab sessions as excellent.

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