

Introduction:

Orthopaedic surgery is the least diverse medical specialty in the United States. Structural barriers, including limited early exposure and a scarcity of role models, drive this disparity. Distance Traveled (DT) is a nonprofit addressing these gaps through hands-on workshops for high school students underrepresented in medicine (URiM). Pilot NYC workshops significantly increased student curiosity about orthopaedics, orthopaedic knowledge, and medical school interest. "DT in a Box" aims to expand this program to a national scale with the goal of ultimately increasing surgeon diversity.

Methods:

DT provides half-day workshops combining didactic presentations with interactive surgical modules taught by volunteers. To facilitate national scaling, a 15-page operating guide and "DT in a Box" kit were developed to standardize replication. Sessions for 20–30 students include a 30-minute introductory video followed by 30-minute rotations through banana suturing, intramedullary nailing, plating, and external fixation on sawbones. Host sites receive non-industry supplies via the kit and coordinate with local industry for power tools and surgical trays. Impact is measured via IRB-approved pre- and post-workshop electronic surveys assessing student demographics, field knowledge, and career interests using a 10-point Likert scale.

Results:

Since 2023, 15 NYC workshops have reached 319 students; 90% were URiM, 67% female, and 65% Hispanic. The September 2025 Verona, NY pilot (n=15) was 80% female and 66.7% Black, confirming the model maintains its demographic focus while expanding geographically. Pilot post-surveys showed every participant increased their orthopaedic knowledge and interest following the workshop, with over half considering pursuing a career in orthopaedics.

Conclusions:

"DT in a Box" is a sustainable, accessible framework for expanding early orthopaedic exposure. By engaging URiM students early, the program directly addresses diversity gaps and associated clinical disparities. Future analysis of upcoming workshops will further evaluate national impact.

Schedule Overview:

Time	Topic
8:30-9:45am	Volunteers arrive, room set-up
9:45-10:00am	Student check-in
10:00am	<i>Program starts</i>
10:00-10:30am	DT Presentation
10:30-12:15pm	Hands on stations (20-30 min per station) <ul style="list-style-type: none"> - ORIF - IMN - Ex-fix - Suturing
12:15-12:45pm	Lunch and Q&A
12:45-1:00pm	Wrap-up: Surveys, exchange mentor info
1:00pm	<i>Program ends</i>
1:00-2:00pm	Clean up

Figure 1. Sample workshop day schedule (from standard operating guide)

All Demographics (N = 319)		
Age		
	13 y/o	3
	14 y/o	29
	15 y/o	90
	16 y/o	120
	17 y/o	71
	18 y/o	4
	19 y/o	1
Sex		
	Female	232
	Male	87
Gender		
	Woman	226
	Man	86
	Non-binary	4
	Transgender Man	1
	Other	2
Pronouns		
	She/Her/Hers	226
	He/Him/His	84
	They/Them/Theirs	7
	Ze/Hir/Hirs	1
	Another pronoun set	1
Race		
	White	18
	Black or African American	135
	Asian	27
	Native Hawaiian or Pacific Islander	3
	American Indian or Alaska Native	5
	Other	79
	Mixed	29
	Prefer not to say	23
Ethnicity		
	Hispanic, Latino, or Spanish Origin	138
	NOT Hispanic, Latino, or Spanish Origin	160
	Prefer not to say	19

Figure 2. Demographics from aggregate survey data, DT 2023-2026