**Supplemental Digital Content 1. Survey Questions**

1. What is your current position?

🞏Fellow in training

🞏Attending Physician (<5 years in practice)

🞏Attending Physician (6-10 years in practice)

🞏Attending Physician (>10 years in practice)

1. Select all the items that describe the residency and/or fellowship training that you have completed?

🞏 Internal Medicine

🞏 Emergency Medicine

🞏 Anesthesiology

🞏 Surgery

🞏 Emergency Ultrasound

🞏 Critical Care Medicine

🞏 Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Have you received structured training (course completion, dedicated rotation during residency/fellowship, certificate program, OR > 5 dedicated lectures) in bedside ultrasound?

🞏Yes 🞏No

1. Select all the descriptions most similar to your current employment.

🞏Academic Setting

🞏Community Setting

🞏Urban Setting

🞏Suburban Setting

🞏Rural Setting

🞏 West Region (CA, WA, OR, NV, UT, CO, ID, MT, WY, AK, HI)

🞏 Southwest Region (AZ, NM, OK, TX)

🞏 Midwest Region (IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI)

🞏 Southeast Region (SC, VA, WV, NC, MS, AR, TN, FL, GA, AL, KY, LA)

🞏 Northeast Region (ME, VT, NH, MA, RI, CT, DE, MD, PA, NY, NJ)

1. Exclude femoral catheters, how many central lines you have personally placed or directly supervised during your medical career? 🞏<50 🞏51 - 100 🞏101 - 400 🞏 >400
2. When you perform/supervise any central line INSERTION, how often is this done using ultrasound guidance?

🞏Never 🞏Rarely 🞏 Some of the time 🞏Most of the time 🞏Almost always

1. Excluding femoral catheters, emergency conditions (cardiac arrest or severe shock) and intraoperative line placement, what is your routine method to confirm catheter position AFTER you perform/supervise a central line insertion?

🞏 No additional confirmation step 🞏 Chest radiography alone

🞏 Ultrasound alone 🞏 Ultrasound AND chest radiography

1. Excluding femoral catheters, emergency conditions (cardiac arrest or severe shock) and intraoperative line placement, how often do you use bedside ultrasound as the sole method to confirm catheter position (without chest radiography) AFTER you perform/supervise a central line insertion?

🞏Never 🞏 Rarely 🞏 Some of the time 🞏Most of the time 🞏Almost always

1. Excluding emergency conditions (cardiac arrest or severe shock) and intraoperative line placement, what is your routine method to exclude a procedure-related pneumothorax AFTER a central line has been placed?

🞏 No additional confirmation step 🞏 Chest radiography alone

🞏 Ultrasound alone 🞏 Ultrasound AND chest radiography together

1. What factors, if any, prevent you from using ultrasound alone to evaluate for catheter position and for a central line-related pneumothorax (select all that apply)?

🞏 No barriers, I currently use ultrasound and NOT chest radiography for confirmation.

🞏 I wasn't aware/ didn't appreciate that this was an option

🞏 My hospital has a policy or protocol requiring radiography after central line placement

🞏 I do not feel adequately comfortable with my ultrasound skills to make this call

🞏 Ultrasound is not as sensitive as chest radiography in evaluation of position or pneumothorax

🞏 Political forces in my hospital would oppose this, as I would be in the minority of performing the ultrasound protocol

🞏 It is more convenient to get a chest radiograph

🞏 Medicolegal concerns

🞏 Inertia: I don't think of it/ it is just hard to change behavior & break habits

🞏 I lack sufficient ultrasound confidence to make this call

🞏 Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_