**Supplemental File 3. Behaviorally Anchored Rating Scales**

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| **PHASE 1: PREPARATION**  ***Provide a score that best indicates the provider’s procedural skills across Phase 1 of TVP placement. Phase 1 includes all components of preparation: donning sterile personal protective equipment, preparing transvenous pacer equipment, setting generator to appropriate settings*** | |
| **1** | Subject is significantly unsure of necessary tasks in this phase or doesn't know how to use the equipment (some even overtly state this). The majority of steps were omitted or wrong enough to require prompting. >1 critical task is **omitted/prompted** |
| **2** | <=1 critical mistake **omitted/prompted** OR more than 1/2 of the steps of this phase are mistakes/omissions or required prompting |
| **3** | Subject is inefficient with time and not fully comfortable the equipment. Multiple mistakes were made, but they are not critical and don't preclude completion of the phase. The total number of mistakes/omissions/prompts is <1/2 of the steps of this phase |
| **4** | No critical errors, only 1 or 2 steps needed prompting for minor errors/omissions. |
| **5** | Subject smoothly and efficiently performs the steps of this phase without mistakes, omissions, or need for prompts |

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| **PHASE 2: INITIAL TVP ATTEMPT AND TROUBLESHOOTING FAILED CAPTURE**  ***Provide a score that best indicates the provider’s procedural skills across Phase 2 of TVP placement. Phase 2 includes initiating effort to pace (advance wire, inflate balloon, confirm settings/approach correct, withdraw wire appropriately and re-engage)*** | |
| **1** | Subject is significantly unsure of necessary tasks in this phase or doesn't know how to use the equipment (some even overtly state this). The majority of steps were omitted or wrong enough to require prompting. >1 critical task is **omitted/prompted** |
| **2** | <=1 critical mistake **omitted/prompted** OR more than 1/2 of the steps of this phase are mistakes/omissions or required prompting |
| **3** | Subject is inefficient with time and not fully comfortable the equipment. Multiple mistakes were made, but they are not critical and don't preclude completion of the phase. The total number of mistakes/omissions/prompts is <1/2 of the steps of this phase |
| **4** | No critical errors, only 1 or 2 steps needed prompting for minor errors/omissions. |
| **5** | Subject smoothly and efficiently performs the steps of this phase without mistakes, omissions, or need for prompts |

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| **PHASE 3: IDENTIFY AND CONFIRM CAPTURE**  ***Provide a score that best indicates the provider’s procedural skills across Phase 3 of TVP placement. Phase 3 includes identifying electrical and physiologic capture, deflating balloon, securing wire, and adjusting settings appropriately.*** | |
| **1** | Subject is significantly unsure of necessary tasks in this phase or doesn't know how to use the equipment (some even overtly state this). The majority of steps were omitted or wrong enough to require prompting. >1 critical task is **omitted/prompted** |
| **2** | <=1 critical mistake **omitted/prompted** OR more than 1/2 of the steps of this phase are mistakes/omissions or required prompting |
| **3** | Subject is inefficient with time and not fully comfortable the equipment. Multiple mistakes were made, but they are not critical and don't preclude completion of the phase. The total number of mistakes/omissions/prompts is <1/2 of the steps of this phase |
| **4** | No critical errors, only 1 or 2 steps needed prompting for minor errors/omissions. |
| **5** | Subject smoothly and efficiently performs the steps of this phase without mistakes, omissions, or need for prompts |

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| **PHASE 4: POST-PROCEDURE EVENTS**  ***Provide a score that best indicates the provider’s procedural skills across Phase 1 of TVP placement. Phase 4 includes identifying electrical and physiologic capture, deflating balloon, securing wire, and adjusting settings appropriately.*** | |
| **1** | Subject is significantly unsure of necessary tasks in this phase or doesn't know how to use the equipment (some even overtly state this). The majority of steps were omitted or wrong enough to require prompting. >1 critical task is **omitted/prompted** |
| **2** | <=1 critical mistake **omitted/prompted** OR more than 1/2 of the steps of this phase are mistakes/omissions or required prompting |
| **3** | Subject is inefficient with time and not fully comfortable the equipment. Multiple mistakes were made, but they are not critical and don't preclude completion of the phase. The total number of mistakes/omissions/prompts is <1/2 of the steps of this phase |
| **4** | No critical errors, only 1 or 2 steps needed prompting for minor errors/omissions. |
| **5** | Subject smoothly and efficiently performs the steps of this phase without mistakes, omissions, or need for prompts |

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| **OVERALL BARS SCORE**  ***Provide an overall score that best indicates the provider’s procedural skills across all phases of TVP placement.*** | |
| **1** | The subject's overall performance in this case was very concerning and/or demonstrated significant safety threat(s) |
| **2** |  |
| **3** | This subject's performance was "average." There are inefficiencies and errors, but they were able to complete the procedure |
| **4** |  |
| **5** | The subject's performance was excellent. There were no errors, safety threats, or prompts |