T-CPR
Quality Improvement
TOOLKIT

A compilation of best practices in a free, self-directed toolkit aimed at making quality-improvement tools accessible to every community.

T-CPR Quality Improvement Toolkit

Telecommunicators (TCs) are indispensable members of the emergency medical services system and play a pivotal role in the cardiac arrest chain of survival. High-performing emergency call centers that provide rapid assessment and promptly initiate telecommunicator cardiopulmonary resuscitation (T-CPR) instructions have a significant impact on cardiac arrest survival rates in the communities they serve.

Key Insights

- TCs are as effective in saving lives as someone performing conventional cardiopulmonary resuscitation (CPR).
- T-CPR is more common than bystander CPR without TC instruction.
- In many regions, survivors are twice as likely to have received T-CPR than CPR without TC instruction.

The Resuscitation Academy, the American Heart Association (AHA), and Laerdal Medical (together known as **the Alliance**) recognize TCs as the initial and most impactful link in improving rates of survival after cardiac arrest. To support TCs, the Alliance has developed several resources, including the following:

- T-CPR Course: An online cognitive course designed to ensure that learners have the necessary knowledge to recognize cardiac arrest and guide a caller to take action; you can find a link to the online course in Appendix 6
- T-CPR Quality Improvement Toolkit: A compilation of 4 years of best practices in a free, self-directed toolkit aimed at making quality-improvement tools accessible to every community; the toolkit provides a structured framework and resources to deliver simulation training and conduct case reviews

These resources are intended to support your organization's efforts to establish and maintain a high-performing T-CPR training and quality improvement program. Our goal is to equip all emergency call center communities with these tools and best practices to enhance cardiac arrest survival outcomes across the United States.

Thank you for your commitment to improving survival.

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Purpose

The delivery of CPR instructions over the phone poses unique challenges, including accurately diagnosing the patient's condition, overcoming barriers such as patient repositioning, and ensuring effective communication of CPR techniques.

This T-CPR Quality Improvement Toolkit provides resources for addressing these challenges head-on. It provides an overview of the structured framework and resources that your organization needs to deliver simulation training and conduct case reviews.

These tools are designed for self-directed use by your organization's staff as part of your quality improvement program. They enhance TCs' skills and confidence, enabling rapid critical interventions in out-of-hospital cardiac arrest (OHCA) events.

Baseline Knowledge

This toolkit is designed with the premise that TCs already possess a foundational understanding of initiating and coaching T-CPR. The simulations and key performance indicators (KPIs) adhere to the AHA's 2020 Guidelines.

To standardize the learning base, the T-CPR Essentials Course serves as the foundational curriculum for this toolkit. This online course provides the essential knowledge and practices that informed the development of the resources in this toolkit.

Performance Goals

The performance goals (PGs) used in this toolkit are recognized as industry standards and best practices within the emergency call center profession. The Time and Performance Goal Assessment Tool created to evaluate simulations and case reviews serves as a scorecard that uses these known targets to assess the knowledge and skills of a TC. This can help you identify areas for improvement.

The T-CPR Assessment Tool is in Appendix 5. Information on how to conduct simulations and case reviews by using this tool as a scorecard is shown here.

1. **Time**: There are 5 KPIs and PGs.
    - KPI: Time from start of call to address acquisition; PG: less than 30 seconds
    - KPI: Time from start of call to recognition of OHCA; PG: less than 90 seconds
    - KPI: Time from start of call to first TC-directed chest compressions; PG: less than 150 seconds
    - KPI: Time from address acquisition to recognition of OHCA; PG: less than 60 seconds (calculated)
    - KPI: Time from address acquisition to first confirmed TC-directed chest compressions; PG: less than 120 seconds (calculated)

Time PGs are achieved if the KPI is completed within the PG-allowed time.`

2. **Recognition of Cardiac Arrest**: There are 2 Yes (Y) or No (N) objective measurement questions.
    - Did the TC appropriately recognize cardiac arrest when recognition was possible? (Y/N)
    - Were all preventable delays mitigated during recognition of cardiac arrest? (Y/N)

Answers of “Yes” to both questions represent goal achievement for recognition of cardiac arrest.

3. **Quality**: A series of 7 Yes, No, or Not Applicable (NA) standards to assess whether the TC guided the rescuer to perform the highest-quality CPR possible.
    - The TC asked the caller to put the phone on speaker mode before moving the patient. (Y/N/NA)
    - Complete T-CPR instructions on how to perform CPR (hand placement, compression depth, chest recoil) were properly relayed. (Y/N)
    - The TC ensured that CPR compressions occurred at the proper rate (100-120 /min). (Y/N)
    - No unnecessary questions or preventable interruptions to CPR were allowed. (Y/N)
    - The TC employed appropriate caller management techniques. (Y/N)
    - *If applicable*: The TC delivered appropriate T-CPR ventilation instructions. (Y/N/NA)
    - *If applicable*: The TC relayed patient movement techniques when the caller was having difficulty moving the patient. (Y/N/NA)

- *If applicable*: The TC had the caller perform CPR on an alternative surface (eg, bed, chair, etc.) when the caller was unable to move the patient in a timely manner.

Answers of "Yes" or "Not Applicable" where appropriate to all 7 quality questions represent the goal achievement of delivering high-quality T-CPR. This is the key factor when evaluating KPI PGs.

Simulations

Simulated emergency calls allow TCs to practice and demonstrate the application of their knowledge and skills. Evaluation and debriefing of simulations provide opportunities to strive for and achieve benchmarks for continuous improvement and continued education, highlighting the delivery of high-quality T-CPR, problem-solving, and critical thinking skills.

This toolkit includes 4 Simulation Scenarios. Each scenario gives context for an emergent situation, describes the caller's emotional state to enhance the roleplay activity, and provides scripted answers to known algorithm questions to ensure a consistent experience for all learners.

By using the T-CPR Assessment Tool, you ensure that a standardized data set is recorded with each simulation event. Baseline and ongoing data can be collected and used for trending over time.

Recommendation: A TC should complete a simulated training scenario once each quarter.

Simulation Setup

Simulations should mimic real life whenever possible. Use your organization's current tools, such as electronic emergency medical dispatch software, in training mode. The simulation facilitator (the caller) should be on the phone and not be in the same room as the TC.

Preparing for the Simulation

- Print the needed materials.
  - Chosen Simulation Scenario
  - T-CPR Assessment Tool
  - T-CPR Debriefing Guide
- Read the scenario, and familiarize yourself with the questions and the caller's responses.
- Secure a stopwatch-type device. Smartphones with a stopwatch and lap feature work well.
- Access an online compression rate finder to validate compression rate coaching. There are many free options on the internet.

Recommendation: If you cannot use standard electronic emergency medical dispatch software, then landlines, mobile phones, or video-conferencing applications are good alternatives.

Note: If you use a video-conferencing application, the cameras should be turned off.

Running the Simulation

The simulation begins when the simulation facilitator's (caller's) ring is answered. The TC should answer the call with their standard greeting (e.g., "What's the address of your emergency?") and use their emergency medical dispatch protocols. The entire simulation will last about 5 minutes, from the start of the call until the facilitator announces that first responders have arrived.

Note: The address of the emergency that you provide should work in your system.

Using the Chosen Scenario's Script

- You are roleplaying the caller in the scenario.
- Each scenario is scripted to answer questions that are used in standard protocols.
- Use the scripted answers to the questions.
- The TC's questions and interventions are in the "TC intervention," column and your answers, as the caller, are in the "Caller response" column.
- The "Expected" column indicates whether each TC intervention is correct, incorrect, or neutral.

For example: When the TC asks, "What is happening?" You reply, "I told you! She collapsed in the bathroom."

Example from Appendix 1:

Table 1B. Call Circumstances: Adult CPR at Home

Expected	TC intervention	Caller response
Initial assessment		
C	TC answers with standard greeting	"My mom needs an ambulance. She collapsed in the bathroom."
C	Verifies address	Provide address in jurisdiction.
N	Asks if caller is with the patient	"Yes."
N	Asks what is happening	"I told you! She collapsed in the bathroom."

Abbreviations: C, correct; N, neutral [not required, but not an error to do it].

Note: The full chart includes I, Incorrect, which is not used in this excerpt.

Advanced recommendation: Create your own modifications to the simulations. Use the scripts provided as a foundation and modify any or all of the details. For example, change the patient's age, name, or sex; the location; or the emergent situation to create a new experience. After completing the modifications, review the scripted caller responses to ensure that they match your new case setup.

Using the Chosen Scenario—Acting

For each scenario, behave calmly initially while ensuring that the TC can hear your anxious breathing. As the scenario continues, escalate your emotions. Then, become very discouraged at 1 minute.

You can choose your level of emotional escalation based on the TC's level of experience, confidence, and performance.

Ending the Simulation

The simulation ends when you, the simulation facilitator (caller), announce that the first responders have arrived at the patient's side. This should happen about 5 minutes after the start of the call.

Case Reviews

Live reviews of actual 911 calls (case reviews) are one of the best ways to identify and understand organizational trends and cultures—both the known and the unknown. Case reviews create a unique opportunity for the organization to review PGs of the TC as well as collective goals of the organization. Case reviews also highlight areas where additional focused training would be beneficial. Evaluating 100% of identified cardiac arrest calls will give the organization a solid insight into the trends of how calls are being managed.

Recommendation: Per guidance from APCO/NENA ANS (Association of Public-Safety Communications Officials/National Emergency Number Association American National Standards) 1.107.1.2015, 100% of TC-identified cardiac arrest calls should be reviewed. Review 100% of "emergency medical services–confirmed" cardiac arrest calls if you have access to that data.

The Assessment Tool

Use the assessment tool (Appendix 5) as a scorecard to evaluate the achievement of PGs for both the simulations and the case reviews. The assessment tool/scorecard used for both exercises is the same. It has 2 sections: (1) time goals and (2) quality measurement evaluations.

Time Goals

Time is critical in the response to cardiac events. Using a phone with a stopwatch and a lap setting makes assessing response to cardiac events easier. Record lap times (some tools call these split times) for each critical event. These can be entered into the scorecard after the simulation.

Simulation: Start the stopwatch when the TC answers the phone and begin your roleplay.

Case review: Start the stopwatch as soon as the phone is answered, and begin listening for KPIs.

Stop the timer when the simulation is complete (or when the case review call has ended). On the scorecard, record the lap times that you captured, as in the example below.

Example from Appendix 5:

Time

Key performance indicator	Performance goal	Time
Start of call to address acquisition	<30 s	Record lap 1 here.
Start of call to recognition of OHCA	<90 s (1 min 30 s)	Record lap 2 here.
Start of call to first confirmed TC-directed chest compressions	<150 s (2 min 30 s)	Record lap 3 here.

Quality Measurements

The scorecard has quality measurements for cardiac arrest recognition and for the delivery of T-CPR. The TC's performance can be easily recorded as you move through the simulation/case review. Verification of the TC's actions is a portion of the assessment of performance goals and should be included in your debriefing.

Document the TC's performance by marking Y (yes), N (no), or NA (not applicable) for each of the quality measurements, as in this example:

The TC asked the caller to put the phone on speaker mode before moving the patient.	X/N/NA
Complete T-CPR instructions on how to perform CPR (hand placement, compression depth, chest recoil) were properly relayed.	X/N
The TC ensured that CPR compressions occurred at the proper rate (100-120/min).	X/N

Additional Documentation During the Scenario

As the scenario progresses, use the white space provided on the assessment tool to document the following:

- Rate of compressions (assessed by using a metronome or a beats-per-minute counter)
- Preventable delays to CPR that occurred after recognition of cardiac arrest
- Unnecessary questions/distractions during CPR
- Exemplary time management techniques that led to higher efficiency
- Exemplary caller management techniques that led to higher bystander compliance and rapport
- Preventable delays to recognition that occurred after address verification
    - Examples of preventable delays include but are not limited to
        - » TC over verifying the patient's consciousness or breathing
        - » Caller being uncertain about the patient's consciousness
        - » Caller being uncertain about the patient's breathing
        - » Caller's emotional state preventing or slowing protocol progression
        - » Caller leaving the phone
        - » TC pursuing another condition

Debriefing

Debriefing is a key component of learning. It is often the time when learners make important connections. Debriefing should be a safe space, where errors are used as tools for learning.

Immediately after the simulation, the facilitator should hold a debrief with the learner about the simulation.

For case reviews, the debriefing should occur as soon after the event as possible and after the scoring assessment.

The scorecard should be reviewed for timed PGs and quality measurements. The debriefing guides provide additional questions to enrich discussions about the simulation and reviews. (Each appendix includes a full debriefing guide for one of the simulations.)

Use the TC's scorecard that you completed during the simulation to review the performance goals.

Time

Key performance indicator	Performance goal	Time
Start of call to address acquisition	<30 s	28
Start of call to recognition of OHCA	<90 s (1 min 30 s)	93
Start of call to first confirmed TC-directed chest compressions	<150 s (2 min 30 s)	140
Address acquisition to recognition of OHCA (calculation)	<60 s	65
Address acquisition to first confirmed TC-directed chest compressions (calculation)	<120 s (2 min 0 s)	112

Recognition of Cardiac Arrest

Did the TC appropriately recognize cardiac arrest when recognition was possible?	Y/X
Were all preventable delays mitigated during recognition of cardiac arrest?	X/N

Quality

The TC asked the caller to put the phone on speaker mode before moving the patient.	X/N/NA
Complete T-CPR instructions on how to perform CPR (hand placement, compression depth, chest recoil) were properly relayed.	X/N
The TC ensured that CPR compressions occurred at the proper rate (100-120/min).	X/N
No unnecessary questions or preventable interruptions to CPR were allowed.	X/N
The TC employed appropriate caller management techniques.	X/N
If applicable: The TC delivered appropriate T-CPR ventilation instructions.	X/N/NA
If applicable: The TC relayed patient movement techniques when the caller had difficulty moving the patient.	X/N/NA
If applicable: The TC had the caller perform CPR on an alternative surface (eg, a bed or chair) when the caller was unable to move the patient in a timely manner.	Y/N/X

1. Did the TC meet the goals?

- Discuss identified exemplary behaviors.
- Discuss goals that were not met and how to improve.

2. Employ the topics for enhanced debriefing discussion.

- Each debriefing guide includes a list of suggested open-ended questions to promote discussion and learning.
- Not all debriefing questions need to be answered. The questions can serve as discussion starters to encourage thoughtful review of the experience.

3. Compare the simulation to previous simulations.

- Tracking data over time provides a valuable tool. The scorecards can be kept or the data can be logged into your learning management tool for long-term analysis.

Closing: Let's Work Together

We all have the same goal—to ensure better patient outcomes and improved rates of survival after cardiac arrest. To achieve this goal, we all must work together.

This toolkit represents our commitment to you to continue the work to help save lives by providing tools and best practices for all emergency call centers for use in the ongoing quality improvement program.

The structured frameworks, simulation training, and continuous learning resources outlined in this guidebook are provided to champion your organization's high-quality T-CPR training efforts.

We would also like to pose a challenge. We understand the constraints of resources and time, but as you master these tools or adapt a scenario that proves more effective for your region, we urge you to share with your peers and neighbors. Your successes and modifications are valuable contributions to our collective mission.

Thank you for your unwavering commitment to improve cardiac arrest survival outcomes, not only in your community but to each other and across the United States.

The Alliance

APPENDIX 1:

Simulation 1 and Debriefing Guide

Simulation 1: Adult Collapsed at Home

Scenario Details

A 50-year-old woman has collapsed at home in the bathroom. She is unconscious and not breathing at the time of the call. The caller is initially calm but becomes increasingly distraught as the call continues, until emergency medical services arrives to assist.

Expected simulation time: 5 minutes

Expected debriefing time: 10 minutes

Scenario-Specific Learning Objectives

Adult CPR simulation: The TC should efficiently recognize the OHCA and provide accurate, age-appropriate T-CPR coaching while using proper caller management and support.

Table 1A. Call Circumstances: Adult CPR at Home

Category	Details
Patient's age group	Adult, 50 years old
Patient's sex	Female
Information about consciousness	Caller does not report patient's state of consciousness before being asked
Need for a clarifying question about consciousness	No
Reason for delay in consciousness assessment	NA
Information about breathing	Caller does not report patient's breathing status before being asked
Need for a clarifying question about breathing	No
Reason for delay in breathing assessment	NA
Caller's description of agonal breathing	NA
Caller/rescuer involvement	Single caller/rescuer
CPR in progress before T-CPR instructions	No
Reasons for delay in or barriers to T-CPR	NA
Conditions requiring ventilation	NA
Conditions requiring special CPR considerations	NA

Table 1B. Simulation 1: Telecommunicator Interventions With Responses From Caller

Expected	TC intervention	Caller response
Initial assessment		
C	TC answers with standard greeting	"My mom needs an ambulance. She collapsed in the bathroom."
C	Verifies address	Provide address in jurisdiction.
N	Asks if caller is with the patient	"Yes."
N	Asks what is happening	"I told you! She collapsed in the bathroom."
N	Asks about age	"She is 50."
C	Asks about consciousness	"No—she's not awake!"
I	Asks clarifying question—consciousness	"I already told you! She's not awake!"
C	Asks about breathing status	"No." Start crying loudly.
I	Asks clarifying question—breathing	"No! She's not breathing!"
C	Recognizes cardiac arrest	
N	Asks if there is an AED available	"No! I don't know. I don't have anyone here."
N	Asks if caller is currently with the patient	"Yes."
Cardiac arrest		
C	Advises caller to set phone on speaker mode	ok
C	Advises caller to get the patient flat on the floor, faceup	*First time*: "OK, oh goodness!" If asked, answer that the patient is on her side. *Second time:* "OK, she's on her back now."
N	Suggests techniques for moving the patient	
I	Offers alternative solution(s) for moving the patient	
C	Gets caller next to the patient	"OK."
C	Advises correct hand placement	"OK."
N	Advises about straight arms	"OK." Cry.
C	Advises compression depth	"OK."
C	Advises compression rate of 100 to 120/min	
C	Asks caller to count out loud	*First time:* "1, 2, 3, 4,..." Count at the correct rate, then stop counting after a while. *Second time:* Resume counting at the correct rate when reminded.
C	Provides periodic brief encouragement to continue CPR, for example, "Good job," "Keep going," "Great rate," "Remember [inserts compression depth and recoil reminders per your protocols]."	Listen for encouragement and coaching.
I	Corrects incorrect compression rate	

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Expected	TC intervention	Caller response
Ventilation and AED		
I	Advises to open airway	
I	Advises to give breaths	
I	Advises/maintains proper compression-to-ventilation rate	
N	Advises to get AED	
I	Advises to continue compressions during AED setup	
I	Advises to follow AED instructions	
I	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	"No. I'm by myself."
N	Asks to speak with someone else	
N	Redirects caller's attention	
N	Asks for and uses caller's name	Say your name.
N	Explains reasons for questions	
N	Speaks clearly and slowly	

Abbreviations: C, correct; I, incorrect; N, neutral [not required, but not an error].

Debriefing Guide: Simulation 1, Adult Collapsed at Home

Key Points to Address in the Debriefing

Select the most important topics, including both potential performance issues and things the learner did particularly well, and guide the learner to reflect on these topics through a facilitated discussion.

For additional support, refer to the list of expected TC interventions in Table 1C.

- **Did the TC meet the PGs?**
  - Review the timed interventions.
    - » Time from start of call to address acquisition
    - » Time from start of call to recognition of OHCA
    - » Time from start of call to first TC-directed chest compressions
    - » Time from address acquisition to recognition of OHCA
    - » Time from address acquisition to first confirmed TC-directed chest compressions
  - If they did not meet the PGs, review the reasons why (see the following points).
- **Did the TC complete the initial assessment appropriately?**
  - Did the TC complete the initial assessment in the correct order?
  - Did the TC avoid over-verification (by avoiding asking clarifying questions that were not needed in this scenario by answering questions clearly initially)?
- **Did the TC coach the caller to initiate CPR?**
- **Did the TC coach the caller to perform quality CPR?**
- **Did the TC use appropriate communication techniques to manage the caller and maintain call control?**
  - Did the TC remind the caller about appropriate CPR techniques (repeating instructions about compression depth, rate, and so on) after compressions started?
  - Did the TC provide encouragement and reassurance when the caller expressed signs of discouragement?

Table 1C. Simulation 1: Expected Interventions and Rationales

Expected	TC intervention	Rationale
Initial assessment		
C	TC answers with standard greeting	
C	Verifies address	Per your agency policies
N	Asks if caller is with the patient	If it is not clear whether the caller is with the patient, this needs to be clarified. In this case, nothing indicated that the caller was not with the patient, so it was not required.
N	Asks what is happening	There are occasions when asking a caller exactly what is happening can help efficiently identify the patient's condition, reducing the need for additional questions.
N	Asks about age	This question is only critical as it relates to CPR instructions when it is unclear if a patient is younger than 8 years but older than 12 months.
C	Asks about consciousness	Consciousness is a key indicator of a person's overall neurological status, providing immediate insight into the severity of an emergency. A lack of consciousness may indicate a life-threatening condition like cardiac arrest
I	Asks clarifying question—consciousness	Asking a clarifying question was inappropriate because the caller had previously advised that the patient was unconscious. It is important to avoid oververification because it causes delays in the identification of cardiac arrest.
C	Asks about breathing status	The TC should have asked about the patient's breathing status.
I	Asks clarifying question—breathing	Asking a clarifying question was inappropriate because the caller had already reported that the patient was not breathing. It is important to avoid oververification because it causes delays in the identification of cardiac arrest.
C	Recognizes cardiac arrest	TCs can save lives by rapidly recognizing cardiac arrest. Cardiac arrest should have been recognized in less than 60 seconds from address verification.
N	Asks if there is an AED available	Asking if there is an AED available when cardiac arrest is recognized is required according to some protocols.
N	Asks if caller is currently with the patient	Directing the caller to get next to the patient after the recognition of cardiac arrest is required according to some protocols.
Cardiac arrest		
C	Advises caller to put their phone on speaker mode	Once cardiac arrest was confirmed, the TC should have directed the caller to put the phone on speaker mode before moving the patient.

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Expected	TC intervention	Rationale
C	Advises caller to get the patient flat on the floor, faceup	The patient should have been flat on her back on a hard surface to ensure the most effective compressions.
N	Suggests techniques for moving the patient	The patient was already on the floor. The TC only needed to confirm that the patient was on her back.
I	Offers alternative solution(s) to move the patient	In this scenario, the patient was already on the floor.
C	Gets caller next to the patient	The caller needed to be in a position that allowed them to deliver CPR.
C	Advises correct hand placement	The TC should have followed your agency's protocols or guidelines.
N	Advises about straight arms	The TC should have followed your agency's protocols/guidelines.
C	Advises compression depth	Because the patient was an adult, the TC should have told the caller to push down as hard as they could (at least 2 inches). This step should have been repeated as part of reminding the caller of appropriate CPR technique.
C	Advises full chest recoil	AHA guidelines recommend full recoil after each compression.
C	Advises compression rate of 100 to 120/min	The first TC-directed chest compressions should have been delivered in less than 120 seconds from address verification. Establishing the correct rate by counting with the caller is important. AHA guidelines recommend a compression rate of 100 to 120/min. This step should have been repeated to remind the caller of appropriate CPR technique.
C	Asks caller to count out loud	Asking the caller to count out loud helps the TC monitor the compression rate. This step should have been repeated to remind the caller of appropriate CPR technique.
C	Provides periodic brief encouragement to continue CPR	Performing quality CPR is physically challenging. Therefore, it is important to provide encouragement to help the caller continue with compressions until help arrives. In this scenario, the caller also expressed doubt that their efforts would work, so repeated encouragement and reassurance was needed.
I	Corrects incorrect compression rate	This caller followed the correct compression rate but just needed to be reminded about the appropriate rate to make sure it was maintained.
I	Distracts caller with unnecessary questions or talking during CPR	This should never occur. Questions can cause the caller to stop compressions to respond; therefore, it is important to limit questions to the most needed information.

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Expected	TC intervention	Rationale
Ventilation and AED		
NA	Advises to open airway	For adults, appropriate T-CPR instructions do not include directions for breaths. The exception to this is when the cardiac arrest is secondary to respiratory arrest, but that was not the case in this scenario.
NA	Advises to give breaths	
NA	Advises/ maintains proper compression-to-ventilation rate	
N	Advises to get AED	In this scenario, the cardiac arrest occurred at home and the caller was alone. Therefore, providing instructions about getting and using an AED was not required.
NA	Advises to continue compressions during AED setup	
NA	Advises follow AED instructions	
NA	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	In this scenario, there was no one to help, but it was still important to investigate this option. Had there been somebody else present, they could have helped with moving the patient.
I	Asks to speak with someone else	This strategy can help overcome language barriers or if the caller is so emotional that they do not follow instructions. This was not the case in this scenario and, therefore, was not required.
N	Redirects caller's attention	This strategy can be used to manage highly emotional callers.
N	Confirms compliance	This strategy should be used to ensure that a distracted caller is following instructions.
N	Asks for and uses caller's name	This strategy can be used to manage highly emotional callers.
N	Explains reasons for questions	This strategy can be used to manage highly emotional callers.
N	Speaks clearly and slowly	This strategy can help overcome language barriers. This was not an issue in this scenario and, therefore, was not required.
N	Uses repetitive persistence	This strategy can be used to manage distracted and emotional callers. It was not required in this scenario.
N	Provides reassurance	This strategy can be used to manage a noncompliant caller, provide information, and build rapport. It was not required in this scenario.

Abbreviations: C, correct; I, incorrect; N, neutral (not required, but not an error).

APPENDIX 2:

Simulation 2 and Debriefing Guide

Simulation 2: Adult CPR in a Bed

Scenario Details

A 57-year-old man is unconscious and not breathing. The caller, who is the patient's partner, is hysterical and frustrated with the TC's questions but is nonetheless compliant. The patient is in bed, and the caller is unable to move him.

Expected simulation time: 5 minutes

Expected debriefing time: 10 minutes

Scenario-Specific Learning Objectives

Adult CPR simulation involving moving the patient: The TC should efficiently recognize the OHCA. They should provide specific techniques to assist the caller with moving the patient to the floor. When the caller is still unsuccessful, the TC should offer an alternative method of movement so that compressions can be started promptly. It is crucial for the TC to be able to identify an incorrect compression rate and adjust it accordingly once a caller begins to count out loud.

Table 2A. Call Circumstances: Adult CPR in a Bed

Category	Details
Patient's age group	Adult, 57 years old
Patient's sex	Male
Information about consciousness	Caller does not report patient's state of consciousness before being asked
Need for a clarifying question about consciousness	No
Reason for delay in consciousness assessment	NA
Information about breathing	Caller does not report patient's breathing status before being asked
Need for a clarifying question about breathing	No
Reason for delay in breathing assessment	NA
Caller's description of agonal breathing	NA
Caller/rescuer involvement	Single caller/rescuer
CPR in progress before T-CPR instructions	No
Reasons for delay in or barriers to T-CPR	Caller has difficulty moving the patient and ultimately cannot move them
Conditions requiring ventilation	NA
Conditions requiring special CPR considerations	NA

Table 2B. Simulation 2: Telecommunicator Interventions With Responses From Caller

Expected	TC intervention	Caller response
Initial assessment		
C	TC answers with standard greeting	"My partner's pacemaker is firing."
C	Verifies address	Provide address in jurisdiction.
N	Asks if caller is with the patient	"Yes! He's right here next to me."
N	Asks what is happening	"I just told you! Send the ambulance! Where's the ambulance?"
N	Asks about age	"He's 57."
C	Asks about consciousness	"No!" Scream.
I	Asks clarifying question—consciousness	"No! I just told you so."
C	Asks about breathing status	"No, he's not!"
I	Asks clarifying question—breathing	"No! He's not breathing. How far away are they!"
C	Recognizes cardiac arrest	
N	Asks if there is an AED available	"No! I don't have an AED!" Scream again.
N	Asks if caller is currently with the patient	"Yes."
Cardiac arrest		
C	Advises caller to set phone on speaker mode	"OK."
C	Advises caller to gets the patient flat on floor, faceup	"He's on the bed…I can't move him. Where's the ambulance?"
C	Suggests techniques for moving the patient	First time: "OK." Leave the phone for 20 seconds, and make background noise. "I can't move him!" Second time: "Oh!" Scream, and make some noise.
C	Offers alternative solution(s) to move patient	"OK."
C	Gets caller next to patient	"OK."
C	Advises correct hand placement	
N	Advises about straight arms	
C	Advises compression depth	
C	Advises full recoil	
C	Advises compression rate of 100 to 120/min	

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Expected	TC intervention	Caller response
C	Asks caller to count out loud	*First time*: "1, 2, 3, 4,..." Count at the correct rate initially. Then, slow down. *Second time:* "1...2...3...4,..." Count at the correct rate if TC is counting with you, but slow down if TC stops counting. *Third time:* "1, 2, 3, 4,..." Count at the rate the TC instructs you to.
C	Provides periodic brief encouragement to continue CPR, for example, "Good job," "Keep going," "Great rate," "Remember [inserts compression depth and recoil reminders per your protocols along with monitoring the 30:2 transition]."	Listen for encouragement and coaching.
C	Corrects incorrect compression rate	
I	Distracts caller with unnecessary questions or talking during CPR	"What? Just get someone here!"
Ventilation and AED		
I	Advises to open airway	
I	Advises to give breaths	
I	Advises/maintains proper compression-to-ventilation rate	
N	Advises to get AED	
I	Advises to continue compressions during AED setup	
I	Advises to follow AED instructions	
I	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	"No. I'm alone. How far away is the ambulance?"
N	Asks to speak with someone else	
N	Redirects caller's attention	
N	Confirms compliance	
N	Asks about/uses caller's name	Say your name.
N	Explains reasons for questions	
N	Speaks clearly and slowly	
N	Uses repetitive persistence	
N	Provides reassurance	

Abbreviations: C, correct; I, incorrect; N, neutral (not required, but not an error).

Debriefing Guide: Simulation 2, Adult CPR in Bed

Key Points to Address in the Debriefing

Select the most important topics, including both potential performance issues and things the learner did particularly well, and guide the learner to reflect on these topics through a facilitated discussion.

For additional support, refer to the list of expected interventions in Table 2C.

- **Did the TC meet the PGs?**
  - Review the timed interventions.
    - » Time from answering call to verifying the address
    - » Time from address acquisition to asking about consciousness
    - » Time from address acquisition to asking about breathing
    - » Time from address acquisition to identifying cardiac arrest
    - » Time from address acquisition to first compression
  - If they did not meet the PGs, review the reasons why (see the following points).
- **Did the TC complete the initial assessment appropriately?**
  - Did the TC complete the initial assessment in the correct order?
  - Did the TC avoid over-verification (by avoiding clarifying questions that were not needed in this scenario by answering initial questions clearly)?
- **Did the TC coach the caller to initiate CPR?**
  - In this scenario, the patient was in bed. Did the TC suggest techniques for moving the patient?
  - Did the TC move on to alternative solutions when the attempts at moving the patient did not work?
- **Did the TC coach the caller to perform quality CPR?**
  - Did the TC identify that the caller was not following the correct rate and adjust the rate?
- **Did the TC use appropriate communication techniques to manage the caller and maintain call control?**
  - Did the TC remind the caller about appropriate CPR techniques (repeating instructions about compression depth, rate, and so on)?

Table 2C. Simulation 2: Expected Interventions and Rationales

Expected	TC intervention	Rationale
Initial assessment		
C	TC answers with standard greeting	
C	Verifies address	The address needs to be verified so that help can be sent to the right place.
N	Asks if caller is with the patient	If it is not clear whether the caller is with the patient, this needs to be clarified. In this case, nothing indicated that the caller was not with the patient, so it was not a required question.
N	Asks what is happening	There are occasions when asking a caller exactly what is happening can help efficiently identify the patient's condition, reducing the need for additional questions.
N	Asks about age	This question is only critical as it relates to CPR instructions when it is unclear if a patient is younger than 8 years but older than 12 months.
C	Asks about consciousness	It is important to screen for cardiac arrest on every medical call.
I	Asks clarifying question—consciousness	Asking a clarifying question about consciousness was not appropriate in this case because the caller had already reported that the patient was unconscious. It is important to avoid over-verification because it causes delays in the identification of cardiac arrest.
C	Asks about breathing status	The patient was reported as unconscious, so the TC should next have asked about the patient's breathing status.
I	Asks clarifying question—breathing	Asking a clarifying question about breathing was not appropriate in this case because the caller had already reported that the patient was not breathing. It is important to avoid over-verification because it causes delays in the identification of cardiac arrest.
C	Recognizes cardiac arrest	TCs can save lives by rapidly recognizing cardiac arrest. Cardiac arrest should have been recognized in less than 60 seconds from address verification.
N	Asks if there is an AED available	Asking whether there is an AED available when cardiac arrest is recognized is required according to some protocols.
N	Asks if caller is currently with the patient	Directing the caller to get next to the patient after the recognition of cardiac arrest is required according to some protocols.
Cardiac arrest		
C	Advises caller to set phone on speaker mode	Once cardiac arrest was confirmed, the TC should have directed the caller to put the phone on speaker mode before moving the patient.
C	Advises caller to get the patient flat on the floor, faceup	The patient should have been faceup on a flat, hard surface to ensure the most effective compressions.

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Expected	TC intervention	Rationale
C	Suggests techniques for moving the patient	The caller had difficulty moving the patient, so the TC should have coached the caller with specific suggestions to move the patient.
C	Offers alternative solution(s) to move the patient	If the caller cannot move the patient despite suggestions from the TC, it is important to move on to alternative solutions as quickly as possible so that compressions can be started. Partially effective CPR is still better than no CPR.
C	Gets caller next to the patient	The TC needed to get the caller in position to deliver CPR.
C	Advises correct hand placement	The TC should have followed your agency's protocols or guidelines.
C	Advises about straight arms	The TC should have followed your agency's protocols or guidelines.
C	Advises compression depth	Because the patient was an adult, the TC should have told the caller to push down as hard as they could (at least 2 inches). This step should have been repeated as part of reminding the caller of appropriate CPR technique.
C	Advises full chest recoil	AHA guidelines recommend full recoil after each compression.
C	Advises compression rate of 100 to 120/min	The first TC-directed chest compressions should have been delivered in less than 120 seconds from address verification. Establishing the correct rate by counting with the caller is important. AHA guidelines recommend a rate of 100 to 120/min. This step should have been repeated to remind the caller of appropriate CPR technique.
C	Asks caller to count out loud	Asking the caller to count out loud helps the TC monitor the compression rate. This step should have been repeated to remind the caller of appropriate CPR technique.
C	Provides brief periodic encouragement to continue CPR	Performing quality CPR is physically challenging. Therefore, it is important to provide encouragement to help the caller continue with compressions until help arrives.
C	Corrects incorrect compression rate	In this scenario, the caller slowed down their compression rate when the TC stopped counting with the caller. The TC should have identified this and corrected the caller's rate.
I	Distracts caller with unnecessary questions or talking during CPR	This should never occur. Questions can cause the caller to pause compressions to answer; therefore, it is important to limit questions to the most needed information.

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Expected	TC intervention	Rationale
Ventilation and AED		
NA	Advises to open airway	For adults, appropriate T-CPR instructions do not include directions for breaths. The exception to this is when the cardiac arrest is secondary to respiratory arrest, but that was not the case in this scenario.
NA	Advises to give breaths	
NA	Advises/ maintains proper compression-to-ventilation rate	
N	Advises to get AED	In this scenario, the cardiac arrest occurred at home and the caller was alone. Therefore, instructions about getting and using an AED were not required.
NA	Advises to continue compressions during AED setup	
NA	Advises to follow AED instructions	
NA	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	In this scenario, there was no one to help, but it was important to investigate this option. Had there been somebody else present, they could have helped with moving the patient.
N	Asks to speak with someone else	This strategy can help overcome language barriers or if the caller is so emotional that they do not follow any instructions. This was not the case in this scenario and, therefore, was not required.
N	Redirects caller's attention	This strategy can be used to manage highly emotional callers.
N	Confirms compliance	This step may be needed in some situations, particularly if the caller is highly emotional. It was not a required step in this scenario.
N	Asks about/uses caller's name	This strategy can be used to manage highly emotional callers.
N	Explains reasons for questions	This strategy can be used to manage highly emotional callers.
N	Speaks clearly and slowly	This strategy can help overcome language barriers. This was not an issue in this scenario and, therefore, was not required.
N	Uses repetitive persistence	This strategy can be used to manage distracted and emotional callers. It was not required in this scenario.
N	Provides reassurance	This strategy can be used to manage a noncompliant caller, provide information, and build rapport. It was not required in this scenario.

Abbreviations: C, correct; I, incorrect; N, neutral (not required, but not an error).

APPENDIX 3:

Simulation 3 and Debriefing Guide

Simulation 3: Child CPR

Scenario Details

An in-home child daycare provider is working alone. When they witness a 2-year-old girl with a known heart defect collapse, they immediately phone for help. At the time of the call, the child is unconscious and not breathing. The caller's demeanor is panicked but cooperative.

Expected simulation time: 5 minutes

Expected debriefing time: 10 minutes

Scenario-Specific Learning Objectives

Child CPR: The TC should provide accurate, age-appropriate T-CPR even though the caller advises that they are trained. The TC should adequately manage the transition between compressions and ventilations while supporting and encouraging the caller.

Table 3A. Call Circumstances: Child CPR

Category	Details
Patient's age group	Child, 2 years old
Patient's sex	Female
Information about consciousness	Patient is unconscious
Need for a clarifying question about consciousness	No
Reason for delay in consciousness assessment	NA
Information about breathing	Patient is not breathing
Need for a clarifying question about breathing	No
Reason for delay in breathing assessment	NA
Caller's description of agonal breathing	NA
Caller/rescuer involvement	Single caller/rescuer
CPR in progress before T-CPR instructions	No
Reasons for delay in or barriers to T-CPR	NA
Conditions requiring ventilation	Child patient
Conditions requiring special CPR considerations	NA

Table 3B. Simulation 3: Telecommunicator Interventions With Responses From Caller

Expected	TC intervention	Caller response
Initial assessment		
C	TC answers with standard greeting	"Help! A little girl I watch just collapsed!"
C	Verifies address	Provide address in jurisdiction.
N	Asks if the caller is with the patient	yes
N	Asks what's happening	"A little girl I care for who has a heart defect just collapsed!"
N	Asks about age	2
C	Asks about consciousness	"No! She's not conscious."
I	Asks clarifying question—consciousness	"I told you she collapsed! She won't wake up!"
C	Asks about breathing status	"No, she's not breathing; she's turning blue!"
I	Asks clarifying question—breathing	"I told you! She's turning blue!" If a breathing tool/assessment is being used, wait 8 seconds and say, "now," then 12 seconds and say, "now."
C	Recognizes cardiac arrest	"OK. I think I know what to do."
N	Asks if there an AED available	"No! I don't have one of those."
N	Asks if caller is currently with the patient	"Yes, I'm still with her."
Cardiac arrest		
C	Advises caller to set phone on speaker mode	"OK."
C	Advises caller to get the patient flat on the floor, faceup	"She already is…should I put both hands on her chest?"
I	Suggests techniques for moving the patient	"She's already on her back on the floor."
I	Offers alternative solution(s) to move the patient	
C	Advises correct hand placement	"OK."
N	Advises about straight arms	"OK."
C	Advises compression depth	"OK."
C	Advises full recoil	"OK."
C	Advises compression rate of 100 to 120/min	Count at the instructed rate. Stop counting out loud after 30 compressions, and wait for the TC to prompt you to provide breaths.
C	Asks caller to count out loud	"OK." Count out loud. Stop counting after 30 compressions if the TC does not prompt you to provide breaths.

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Expected	TC intervention	Caller response
C	Provides periodic brief encouragement to continue CPR; for example, “Good job,” “Keep going,” “Great rate,” “Remember [inserts compression depth and recoil reminders per your protocols along with monitoring the 30:2 transition.”	
I	Corrects incorrect compression rate	
I	Distracts caller with unnecessary questions or talking during CPR	If asked about medications, tell them that you have a list then ask if you should go get it. Leave the phone for 30 seconds if they indicate that you should.
Ventilation and AED		
C	Advises to open airway	“OK.”
C	Advises to give breaths	Comply with instructions.
C	Advises/maintains proper compression-to-ventilation rate	If TC goes past 40 compressions, ask if you should give breaths.
N	Advises to get AED	
I	Advises to continue compressions during AED setup	
I	Advises to follow AED instructions	
I	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	“No, it’s just me here with 3 kids.”
N	Asks to speak with someone else	
N	Redirects caller’s attention	
N	Confirms compliance	“Yes, I’m doing it.”
N	Asks for and uses caller’s name	Say your name.
N	Speaks clearly and slowly	
N	Uses repetitive persistence	
N	Provides reassurance	
N	Provides reassurance	

Abbreviations: C, correct; I, incorrect; N, neutral [not required, but not an error].

Debriefing Guide: Simulation 3, Child CPR

Key Points to Address in the Debriefing

Select the most important topics, including both potential performance issues and things the learner did particularly well, and guide the learner to reflect on these topics through a facilitated discussion.

For additional support, refer to the list of expected interventions in Table 3C.

- **Did the TC meet the PGs?**
  - Review the timed interventions.
    - » Time from answering call to verifying the address
    - » Time from address acquisition to asking about consciousness
    - » Time from address acquisition to asking about breathing
    - » Time from address acquisition to identifying cardiac arrest
    - » Time from address acquisition to first compression
  - If they did not meet the PGs, review the reasons why (see the following points).
- **Did the TC complete the initial assessment appropriately?**
  - Did the TC complete the initial assessment in the correct order?
  - Did the TC avoid over-verification (by avoiding clarifying questions that were not needed in this scenario by answering initial questions clearly)?
- **Did the TC properly coach the caller to initiate CPR?**
  - If not, what did the caller say that caused you to hesitate?
- **Did the TC successfully keep track of the 30:2 transition between compressions and ventilations?**
  - f not, what techniques could you use to help keep track of this transition?
    - » Count in sets of 10
    - » Use counter on your protocol metronome, if provided
- Did the TC use appropriate communication techniques to manage the caller and maintain call control?
  - Did the TC remind the caller about appropriate CPR techniques (repeating instructions about compression depth, rate, and so on) after compressions started?
  - Did the TC provide encouragement and reassurance to help the caller stay focused?

Table 3C. Simulation 3: Expected Interventions and Rationales

Expected	TC intervention	Rationale
Initial assessment		
C	TC answers with standard greeting	
C	Verifies address	Per your agency policies
N	Asks if caller is with the patient	If it is not clear whether the caller is with the patient, this needs to be clarified. In this case, nothing initially indicated that the caller was not with the patient, so it was not required.
N	Asks what is happening	When patient symptoms are not provided, there are occasions when asking a caller precisely what is happening can reduce the need for additional questioning. In this scenario, if they were asked, the caller volunteered significant patient symptoms, which aids in rapid recognition.
C	Asks about age	This question is only critical as it relates to CPR instructions when it is unclear if a patient is under 8 years old but older than 12 months. In this scenario, the patient's age was critical to determine the proper instructions to provide.
C	Asks about consciousness	Is there a situation(s) when it may not be necessary to ask about consciousness? When and why would that situation be?
I	Clarifying question—consciousness	Asking a clarifying question was inappropriate because the caller previously advised that the patient was unconscious. It' is important to avoid over-verification because it causes delays in the identification of cardiac arrest.
C	Asks about breathing status	The TC should have next asked if the patient was breathing normally.
I	Clarifying question—breathing	Asking a clarifying question was inappropriate because the caller had already reported that the patient was not breathing. It' is important to avoid over-verification because it causes delays in the identification of cardiac arrest.
C	Recognizes cardiac arrest	TCs can save lives by rapidly recognizing cardiac arrest. Cardiac arrest should have been recognized in less than 60 seconds from address verification.
N	Asks if there is an AED available	Asking if there is an AED available when cardiac arrest is recognized is required according to some protocols.
N	Asks if caller is currently with patient	Directing the caller to get next to the patient after the recognition of cardiac arrest is required according to some protocols. In this scenario, it helped identify that the caller was not in the room with the patient.
Cardiac arrest		
C	Advises caller to set phone on speaker mode	Once cardiac arrest was confirmed, the TC should have directed the caller to put the phone on speaker mode before moving the patient.

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Expected	TC intervention	Rationale
C	Advises caller to get the patient flat on floor, faceup	The patient should have been flat on her back on a hard surface for the most effective compressions.
I	Suggests techniques for moving the patient	The patient was already on the floor, so the TC only needed to confirm that the patient was on her back.
I	Offers alternative solution(s) to move patient	In this scenario, the patient was already on the floor.
C	Gets caller next to the patient	The caller needed to be in position to deliver CPR.
C	Advises correct hand placement	The TC should follow your agency's protocols/guidelines. Some protocols require providing ventilation instructions before hand placement instruction for child CPR.
N	Advises about straight arms	The TC should follow your agency's protocols/guidelines.
C	Advises compression depth	The TC should follow your agency's protocols/guidelines for child CPR. Reinforce the age range for children (1-8 years), and discuss the differences among adult, child, and infant CPR as they relate to compression depth and hand placement.
C	Advises full recoil	AHA guidelines recommend full recoil after each compression.
C	Advises compression rate of 100 to 120/min	The first TC-directed chest compressions should have been delivered in less than 120 seconds from address verification. This step may have been more challenging if your agency's protocols/guidelines require ventilation to be provided first. Establishing the correct rate by counting with the caller is important. AHA guidelines recommend a rate of 100 to 120/min. This step should have been repeated to remind the caller of appropriate CPR technique.
C	Asks caller to count out loud	Asking the caller to count out loud helps the TC monitor the compression rate and the number of compressions completed to track transitions.
C	Provides periodic brief encouragement to continue CPR	Performing quality CPR is physically challenging. Therefore, along with monitoring compliance and proper transitions, it is important to help the caller stay focused on delivering high-quality compressions until help arrives.
I	Corrects incorrect compression rate	This caller maintained an effective compression rate. They just needed to be reminded to provide breaths after 30 compressions.
I	Distracts caller with unnecessary questions or talking during CPR	This should never occur. Questions can cause the caller to stop compressions to respond; therefore, it is important to limit questions to the most needed information.

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Expected	TC intervention	Rationale
Ventilation and AED		
C	Advises to open airway	Follow agency protocols. Ensure that the learner understands each instruction and how to address potential challenges.
C	Advises to give breaths	
C	Advises/ maintains proper compression-to-ventilation rate	
N	Advises to get AED	In this scenario, the cardiac arrest occured in a home setting and the caller was the only adult on scene. Therefore, instructions about getting and using an AED were not appropriate in this case.
NA	Advises to continue compressions during AED setup	
NA	Advises to follow AED instructions	
NA	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	In this scenario, there was no one to help, but it was still important to investigate this option. Had there been somebody else present, they could have helped with managing the other children or switching out with the caller.
N	Asks to speak with someone else	This strategy can help overcome language barriers or if the caller is so emotional that they do not follow instructions. There were no other adults on scene in this scenario and, therefore, it was not required.
N	Redirects caller's attention	This strategy can be used to manage highly emotional callers.
N	Confirms compliance	This may be needed, particularly if the caller is highly emotional. It was not a required step in this scenario.
N	Asks for and uses caller's name	This strategy can be used to manage highly emotional callers.
N	Explains reasons for questions	This strategy can be used to manage highly emotional callers.
N	Speaks clearly and slowly	This strategy can help overcome language barriers. This was not an issue in this scenario and, therefore, was not required.
N	Uses repetitive persistence	This strategy can be used to manage distracted and emotional callers and children. It was not required in this scenario.
N	Provides reassurance	This strategy can be used to manage a noncompliant caller, provide information, and build rapport. It was not required in this scenario.

Abbreviations: C, correct; I, incorrect; N, neutral (not required, but not an error); NA, not applicable.

APPENDIX 4:

Simulation 4 and Debriefing Guide

Simulation 4: Infant CPR

Scenario Details

A hysterical parent calls to report finding their 6-month-old son unconscious and not breathing in his crib. As soon as the call is answered, the caller reports that the baby is not breathing. The caller is not with the baby and initially refuses to go back into the room where the baby is.

Expected simulation time: 5 minutes

Expected debriefing time: 10 minutes

Scenario-Specific Learning Objectives

Infant CPR simulation: The TC should efficiently manage the hysterical caller by utilizing proper caller management skills to quickly recognize the OHCA and provide accurate, age-appropriate T-CPR coaching. The TC should also be able to successfully manage the 30:2 transition between compressions and ventilations while continuing to provide encouragement and support.

Table 4A. Call Circumstances: Infant CPR

Category	Details
Patient's age group	Infant, 6 months old
Patient's sex	Male
Information about consciousness	Caller reports, before being asked, that the patient is either unconscious or dead
Need for a clarifying question about consciousness	No
Reason for delay in consciousness assessment	NA
Information about breathing	Caller reports, before being asked, that the patient is not breathing
Need for a clarifying question about breathing	NA
Reason for delay in breathing assessment	NA
Caller's description of agonal breathing	NA
Caller/rescuer involvement	Single caller/rescuer
CPR in progress before T-CPR instructions	No
Reasons for delay in or barriers to T-CPR	Caller's emotional state
Conditions requiring ventilation	Infant patient
Conditions requiring special CPR considerations	NA

Table 4B. Simulation 4: Telecommunicator Interventions With Responses From Caller

Expected	TC intervention	Caller response
Initial assessment		
C	TC answers with standard greeting	"My baby's not breathing!"
C	Verifies address	
N	Asks if caller is currently with the patient	"He's in the nursery. I don't want to go in there!"
N	Asks what is happening	"I don't know! I went in there and found him like this."
C	Asks about age	"He's 6 months old. Just get them here!"
N	Asks about consciousness	"I told you he's not breathing!"
I	Asks clarifying question—consciousness	"No! Just get them here!"
I	Asks about breathing status	"NO!"
I	Asks clarifying question—breathing	"No, you're not listening to me! I need help!"
C	Recognizes cardiac arrest	"What do I need to do?"
N	Asks if there is an AED available	"No!"
N	Asks if caller is currently with the patient	"No! Just get someone here!"
Cardiac arrest		
C	Gets caller next to patient	"I don't want to go in there! I don't want to go in there!" Cry, and take 20 to 30 seconds to move into the nursery.
C	Advises caller to set phone on speaker mode	"OK."
C	Advises caller to get the patient flat on floor, faceup	"He's in his crib." When the TC coaches you to move the infant onto a table or hard surface, say, "OK, he's on the table now."
N	Suggests techniques for moving the patient	"i'm doing it"
I	Offers alternative solution(s) to move patient	"Just get here"
C	Advises correct hand placement	"I need help! Please!"
N	Advises about straight arms	
C	Advises compression depth	"OK."
C	Advises full recoil	
C	Advises compression rate of 100 to 120/minute	

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Expected	TC intervention	Caller response
C	Asks caller to count out loud	First time: "1, 2, 3, 4, 5,..." Count at the correct rate. Continue counting until the TC prompts you to stop and provide breaths. Second time: Do not start counting until the TC prompts you, and then continue at the correct rate.
C	Provides brief periodic encouragement to continue CPR; for example, "Good job," "Keep going," "Great rate," "Remember [inserts compression depth and recoil reminders per your protocols, along with monitoring the 30:2 transition]."	Listen for coaching and encouragement.
I	Corrects incorrect compression rate	
I	Distracts caller with unnecessary questions or talking during CPR	If asked an unnecessary question, repeat "I don't know!"
Ventilation and AED		
C	Advises to open airway	"OK."
C	Advises to give breaths	"How hard do I blow?"
C	Advises/maintains proper compression-to-ventilation rate	If the TC goes past 40 compressions, ask if you should give breaths.
N	Advises to get AED	
I	Advises to continue compressions during AED setup	
I	Advises to follow AED instructions	
I	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	"No!"
N	Asks to speak with someone else	"No one is here!"
N	Redirects caller's attention	
C	Confirms compliance	"I'm doing it...OK, I've done it."
C	Asks for and uses caller's name	Give your name.
N	Explains reasons for questions	
C	Speaks clearly and slowly	
C	Uses repetitive persistence	
C	Provides reassurance	

Abbreviations: C, correct; I, incorrect; N, neutral (not required, but not an error).

Debriefing Guide: Simulation 4, Infant CPR

Key Points to Address in the Debriefing

Select the most important topics, including both potential performance issues and things the learner did particularly well, and guide the learner to reflect on these topics through a facilitated discussion.

For additional support, refer to the list of expected interventions in Table4C.

- **Did the TC meet the PGs?**
  - Review the timed interventions.
    - » Time from answering call to verifying the address
    - » Time from address acquisition to asking about consciousness
    - » Time from address acquisition to asking about breathing
    - » Time from address acquisition to identifying cardiac arrest
    - » Time from address acquisition to first compression
  - If they did not meet the PGs, review the reasons why (see the following points).
- **Did the TC complete the initial assessment appropriately?**
  - Did the TC complete the initial assessment in the correct order?
  - Did the TC avoid over-verification (by avoiding clarifying questions that were not needed in this scenario by answering questions clearly initially)?
  - Was it necessary to confirm if the patient was conscious (why or why not)?
- **Did the TC successfully keep track of the 30:2 transition between compressions and ventilations?**
  - If not, what techniques can you use to help keep track of this transition?
    - » Count in sets of 10.
    - » Use the counter on your protocol metronome, if provided.
- **Did the TC use appropriate communication techniques to manage the caller and maintain call control?**
  - Did the TC use proper caller management techniques to encourage the caller to go back into the nursery to assist the infant in a timely manner?
  - Did the TC provide encouragement and reassurance to help the caller stay focused and compliant until help arrived?

Table 4C. Simulation 4: Expected Interventions and Rationales

Expected	TC intervention	Rationale
Initial assessment		
C	TC answers with standard greeting	
C	Verifies address	Per your agency policies
N	Asks if caller is currently with the patient	If it is not clear whether the caller is with the patient, this needs to be clarified. In this case, nothing initially indicated that the caller was not with the patient, so it was not required.
N	Asks what is happening	When patient symptoms are not provided, asking what is happening can help determine precisely what is happening and reduce the need for additional questioning. In this scenario, the frantic caller volunteered that the infant was not breathing, so this question was not necessary.
C	Asks about age	This question is only critical as it relates to CPR instructions when it is unclear if a patient is younger than 8 years old but older than 12 months. In this scenario, knowing the patient's age was critical for determining the proper instruction to provide.
C	Asks about consciousness	Is there a situation(s) when it may not be necessary to ask about consciousness? When and why would this be?
I	Clarifying question—consciousness	Asking a clarifying question was inappropriate because the caller previously advised that the patient was unconscious. It is important to avoid over-verification because it causes delays in the identification of cardiac arrest.
I	Asks about breathing status	The caller already volunteered that the patient was not breathing.
I	Clarifying question—breathing	Asking a clarifying question was inappropriate because the caller had already reported that the patient was not breathing. It is crucial to avoid over-verification because it causes delays in the identification of cardiac arrest.
C	Recognizes cardiac arrest	TCs can save lives by rapidly recognizing cardiac arrest. Cardiac arrest should have been recognized in less than 60 seconds from address verification.
N	Asks if there is an AED available	Asking if there is an AED available when cardiac arrest is recognized is required according to some protocols.
N	Asks if caller is currently with the patient	Directing the caller to get next to the patient after the recognition of cardiac arrest is required according to some protocols. In this scenario, it helped identify that the caller was not in the room with the patient.
Cardiac arrest		
C	Advises the caller to get next to the patient	The caller needs to be in position to deliver CPR.

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Expected	TC intervention	Rationale
C	Advises caller to set phone on speaker mode	Once cardiac arrest was confirmed, the TC should have directed the caller to put the phone on speaker mode before moving the patient.
C	Advises the caller to get the patient flat on the floor, faceup	The patient needs to be flat on their back on a hard surface prior to starting ventilations or compressions
C	Suggests techniques for moving the patient	The patient was in a crib. The TC should have provided a specific technique for moving the infant if the caller was hesitant or unable to accomplish the task.
I	Offers alternative solution(s) to move patient	In this scenario, the caller complied once a specific instruction was provided.
C	Advises correct hand placement	The TC should follow your agency's protocols/guidelines. Some protocols require providing ventilation instructions before hand placement instruction for child CPR.
N	Advises about straight arms	The TC should follow your agency's protocols/guidelines.
C	Advises compression depth	The TC should follow your agency's protocols/guidelines for child CPR. Reinforce the age range for children (1-8 years) and discuss the differences among adult, child, and infant CPR as they relate to compression depth and hand placement.
C	Advises full chest recoil	AHA guidelines recommend full recoil after each compression.
C	Advises compression rate of 100 to 120/min	The first TC-directed chest compressions should have been delivered in less than 120 seconds from address verification. This step may have been more challenging if your agency's protocols/guidelines require that ventilation be provided first. Establishing the correct rate by counting with the caller is important. AHA guidelines recommend a rate of 100 to 120/min. This step should have been repeated to remind the caller of appropriate CPR technique.
C	Asks caller to count out loud	Asking the caller to count out loud will help the TC monitor the compression rate and the number of compressions completed to track transitions.
C	Provides brief periodic encouragement to continue CPR	Performing quality CPR is physically challenging. Therefore, along with monitoring compliance and proper transitions, it is important to help the caller stay focused on delivering high-quality compressions until help arrives.
I	Corrects incorrect compression rate	This caller maintained an effective compression rate. They just needed to be reminded to provide breaths after 30 compressions.
I	Distracts caller with unnecessary questions or talking during CPR	This should never occur. Questions can cause the caller to stop compressions to respond; therefore, it is important to limit questions to the most needed information.

(continued on next page)

Expected	TC intervention	Rationale
Ventilation and AED		
C	Advises to open airway	Follow agency protocols. Ensure that the learner understands each instruction and how to address potential challenges.
C	Advises to give breaths	
C	Advises/maintains proper compression-to-ventilation rate	
N	Advises to get AED	In this scenario, the cardiac arrest occured in a home setting and the caller was the only adult on scene. Therefore, instructions about getting and using an AED were not appropriate.
NA	Advises to continue compressions during AED setup	
NA	Advises to follow AED instructions	
NA	Advises to resume CPR after shock	
Problem-solving and communication		
N	Asks if there is anybody to help	In this scenario, there was no one to help, but it was important to investigate this option. Had there been somebody else present, they could switched out providing compressions and breaths with the caller.
N	Asks to speak with someone else	This strategy can help overcome language barriers or if the caller is so emotional that they do not follow instructions. There were no other adults on scene in this scenario and, therefore, it was not required.
N	Redirects caller's attention	This strategy can be used to manage highly emotional callers.
N	Confirms compliance	This may be needed, particularly if the caller is highly emotional. It was not a required step in this scenario.
N	Asks about and uses the caller's name	This strategy can be used to manage highly emotional callers.
N	Explains reasons for questions	This strategy can be used to manage highly emotional callers.
C	Speaks clearly and slowly	This strategy can help overcome language barriers and highly emotional callers. Because this caller was emotional, this strategy may have been beneficial to ensure that the caller understood the instructions provided.
N	Uses repetitive persistence	This strategy can be used to manage distracted and emotional callers and children. This technique may have been helpful in this scenario when attempting to get the caller back into the nursery.
N	Provides reassurance	This strategy can be used to manage a noncompliant caller, provide information, and build rapport. This technique may have been helpful in this scenario to gain rapport with the caller and get them to render aid.

Abbreviations: C, correct; I, incorrect; N, neutral (not required, but not an error); NA, not applicable.

APPENDIX 5:

Assessment Tool

Can be used both for simulations and for case reviews

Time and Performance Goal Assessment Tool

Performance Tracker

TC initials: _____ Reviewer initials: _____

Reviewer: As you assess the TC, record the time for each time goal and circle the appropriate response (Y, yes; N, No; or NA, not applicable) for the recognition of cardiac arrest goals and the quality goals.

Time

Key performance indicator	Performance goal	Time
Start of call to address acquisition	<30 s	
Start of call to recognition of OHCA	<90 s (1 min 30 s)	
Start of call to first confirmed TC-directed chest compressions	<150 s (2 min 30 s)	
Address acquisition to recognition of OHCA (calculation)	<60 s	
Address acquisition to first confirmed TC-directed chest compressions (calculation)	<120 s (2 min 0 s)	

Recognition of Cardiac Arrest

Did the TC appropriately recognize cardiac arrest when recognition was possible?	Y/N
Were all preventable delays mitigated during recognition of cardiac arrest?	Y/N

Quality

The TC asked the caller to put the phone on speaker mode before moving the patient.	Y/N/NA
Complete T-CPR instructions on how to perform CPR (hand placement, compression depth, chest recoil) were properly relayed.	Y/N
The TC ensured that CPR compressions occurred at the proper rate (100-120/min).	Y/N
No unnecessary questions or preventable interruptions to CPR were allowed.	Y/N
The TC employed appropriate caller management techniques.	Y/N
If applicable: The TC delivered appropriate T-CPR ventilation instructions.	Y/N/NA
If applicable: The TC relayed patient movement techniques when the caller had difficulty moving the patient.	Y/N/NA
If applicable: The TC had the caller perform CPR on an alternative surface (eg, a bed or chair) when the caller was unable to move the patient in a timely manner.	Y/N/NA

If used for case review:

Review date: _____ Employee name: _____

T-CPR quality improvement review performed by_____

Incident date: _____ Incident time: _____ Incident number: _____

APPENDIX 6:

Additional Educational Materials

The T-CPR Course

This online cognitive program was developed to ensure that learners have the standard knowledge needed to recognize cardiac arrest and coach a caller into action. The online course is 4 hours (qualifies for 4 hours of continuing education) and covers these important topics:

- Understanding the first 600 seconds
- Identifying cardiac arrest
- Coaching high-quality T-CPR
- Caller management
- Special circumstances in resuscitation

Scan QR code for link to the T-CPR Course.

The Resuscitation Academy Cardiac Arrest System Assessment Tool

How does your community measure up?

"Measure and improve" is a Resuscitation Academy mantra. We believe that emergency medical services systems can significantly improve survival from OHCA. Before starting any resuscitation performance improvement initiative, measure your system's current capabilities by using the Resuscitation Academy's 5-step assessment.

Scan QR code for link to the Resuscitation Academy's Cardiac Arrest System Assessment (CASA)

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