

Appendix D: Guidance for Consideration of AED Units in Remote Areas

Guidance for Consideration of Automated External Defibrillator (AED) Units in Remote Areas

The "Chain of Survival" is a concept that outlines the critical steps that need to be taken to increase the chances of survival in cases of cardiac arrest. It emphasizes the importance of timely intervention at each stage.

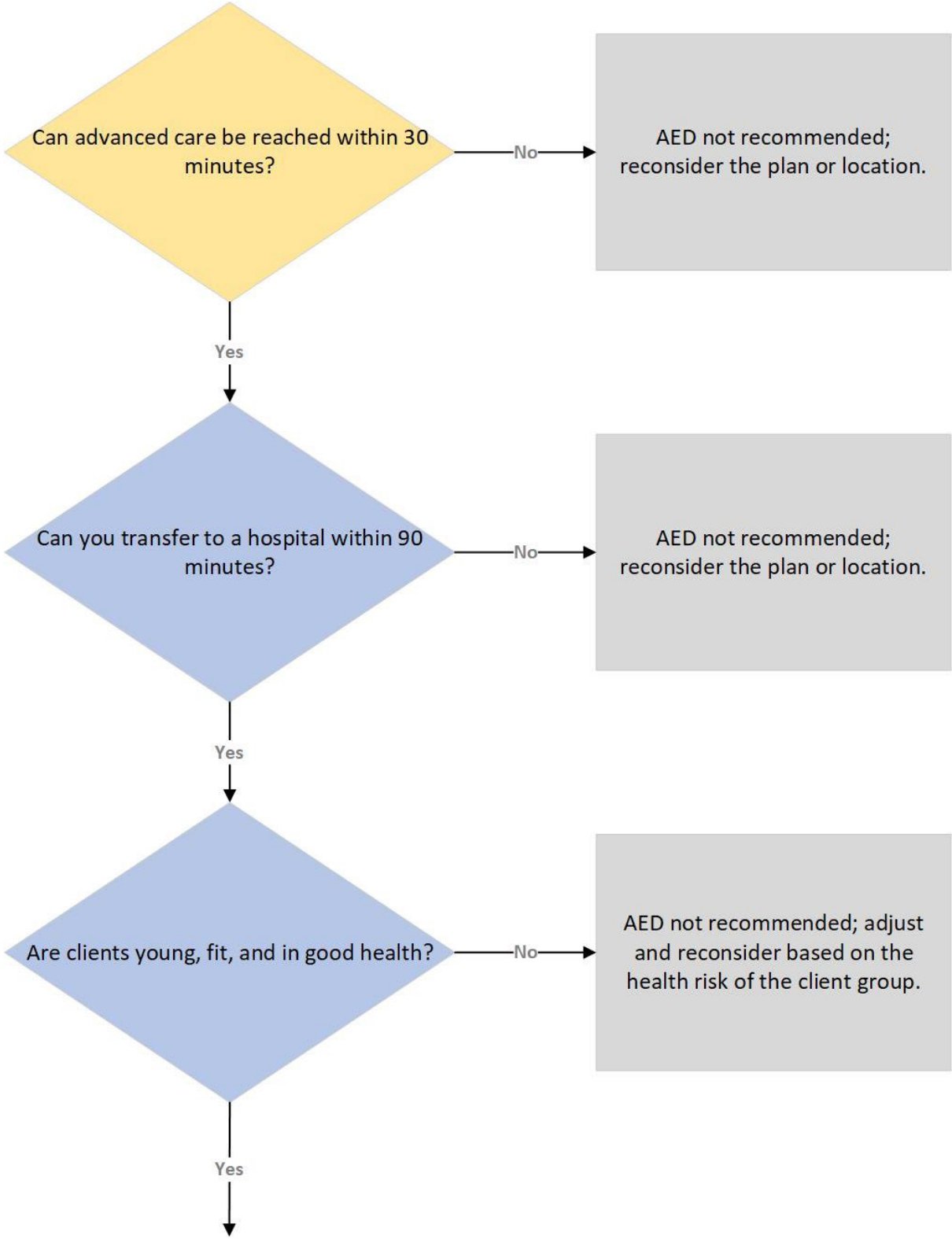
The typical components of the Chain of Survival include:

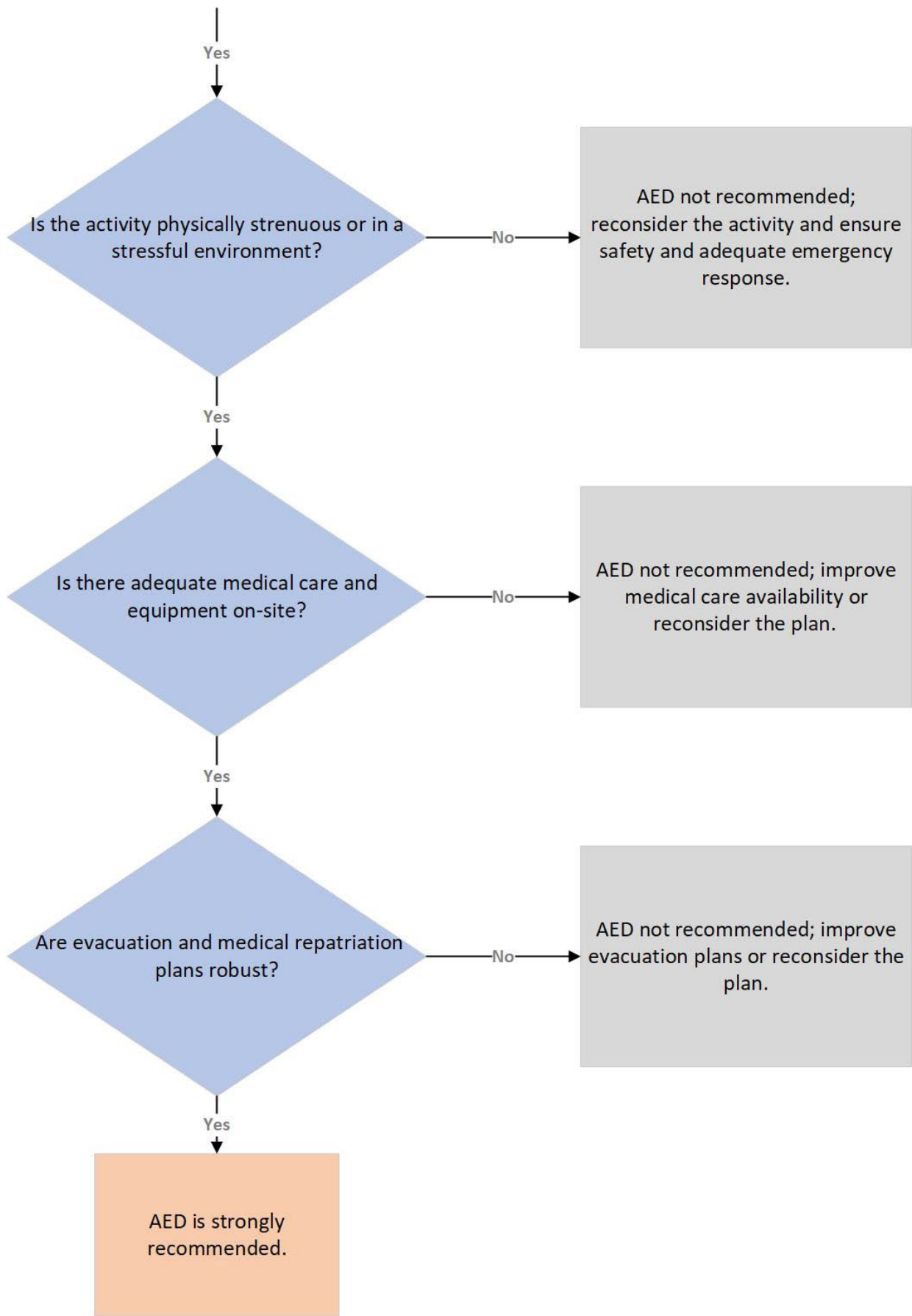
1. **Early Recognition and Activation of Emergency Services:** Quickly recognizing the signs of a cardiac emergency and calling for help (such as dialing 911) is crucial.
2. **Early CPR:** Initiating cardiopulmonary resuscitation (CPR) as soon as possible can help maintain blood flow to vital organs until professional help arrives. High-quality chest compressions are vital during this stage.
3. **Early Defibrillation:** Using an automated external defibrillator (AED) as soon as it is available can restore a normal heart rhythm in cases of ventricular fibrillation. The chances of survival decrease significantly with each passing minute without defibrillation.
4. **Advanced Care:** Once emergency medical services arrive, advanced medical interventions can be provided, including advanced airway management, medications, and more intensive monitoring.
5. **Post-Cardiac Arrest Care:** After initial resuscitation, appropriate care in a hospital setting is essential to address the underlying cause of the cardiac arrest and to manage any complications.

Each link in the Chain of Survival is critical, and improving any one of them can significantly enhance the likelihood of survival and positive outcomes after a cardiac arrest.

- **Consideration of AED units in Remote Areas:** Evaluate the necessity of having an Automated External Defibrillator (AED) as part of your emergency procedures. AEDs are crucial for responding to cardiac emergencies and can be life-saving in remote locations where medical help is delayed.
- **Advanced Care and Transport:** Successful resuscitation requires pre-hospital advanced care and hospital transport, which might not be available in remote areas. **Ventricular Fibrillation Timing:** The heart can stay in Ventricular Fibrillation for 10-12 minutes, longer with effective CPR. Quick defibrillation is crucial but not guaranteed without follow-up care.

Use the following flowchart to determine if an AED is required:





Summary

If all steps are satisfied (proximity to care, client health, activity type, emergency plan, and evacuation), carry an AED.

If any critical steps are not satisfied, reconsider the location, activity, or client group to ensure safety and adequacy of emergency.

Defibrillation is simply one link of the chain: Even if the casualty is successfully resuscitated by the lay rescuer, they will still require pre-hospital Advanced Care as well as transport to definitive care in a hospital which cannot be guaranteed in a remote environment. The heart may remain in Ventricular Fibrillation for 10-12 minutes from collapse, a few minutes more if preceded by effective CPR. With an AED close to hand, we may be able to defibrillate well within this timeframe, however, successful recovery is still dependent on Advanced Life Support within 30 minutes and transfer to definitive care within 90 minutes. While timely defibrillation can increase the chance of survival for some casualties, a defibrillator cannot guarantee successful resuscitation—a defibrillator cannot shock all heart rhythms and not all causes of Cardiac Arrest can be resolved by defibrillation.