FIGURE 4

ADAPTIVE TRIAL DESIGN

PLANNING

- Start early and ensure sufficient time for protocol development.
- Collaborate or consult with experts in adaptive trials.
- Engage stakeholders (e.g., patients, family members/caregivers, healthcare professionals, and hospital managers).
- Define research questions and outcomes that are relevant to stakeholders.
- Determine most appropriate adaptation strategies based on research questions and existing uncertainties. Choose from: sample size recalculation; dropping ineffective study arm(s); stopping the trial early, etc.
- Define adaptation details, including decision rules, number and timing of interim analyses.
- Consult with statisticians to ensure robustness and correctness of planned analyses.
- Check the ACE* to ensure all aspects are considered when planning the trial.
- Meet with stakeholders to review adaptation aspects and discuss worst-case scenarios.
- Obtain ethical approval from appropriate research ethics board(s).
- Make the study protocol publicly available. Details on statistical decision rules should not be published until trial is complete to avoid operation bias.

EXECUTION

- Begin trial, recruitment, and data collection.
- Communicate potential adaptations with patients when obtaining consent or during consent process.
- Conduct interim analysis when data is available (as defined in trial protocol).
- Make adaptations according to guidelines for changes.
- Continue data collection or stop the trial.
- Repeat the process (interim analysis and adaptations) when necessary.

ANALYSIS & DISSEMINATION

- Final data analysis.
- Disseminate results using transparent reporting (e.g., report results that guided trial adaptations, and describe reasons for ending or stopping trial early).
- Describe details of pre-planned adaptations and deviations (if any) with justifications.
- Check the ACE* to ensure that all aspects are considered when reporting the trial results.