British Universities Life Saving Clubs' Association

Guidelines for Setting a Simulated Emergency Response Competition (SERC)

Table of Contents

1. Introduction

These competition guidelines are aimed to help with the setting and review of a proposed Simulated Emergency Response Competition (SERC) for a BULSCA event. They are not intended as rules, and should not be prohibitive to the creativity or complexity of an achievable SERC. The competition rules pertaining to the SERC can be found in the latest edition of the BULSCA Competition Manual on the BULSCA website: www.bulsca.co.uk.

It is expected that the rules within the BULSCA Competition Manual will change over time. Additionally, decisions may be made at BULSCA meetings that influence the potential contents of a SERC which are not recorded elsewhere. While it is desirable that Setters are aware of such meeting decisions (which are fully minuted), it is the responsibility of the BULSCA Judges Panel to ensure such decisions are appropriately reflected in the SERCs of any particular BULSCA season. Nonetheless, Setters have an obligation to abide by any decisions made during BULSCA meetings once they are informed of them, regardless of their own personal opinions as to the appropriateness of those decisions.

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2. The SERC

2.1. Aim of the SERC

The setter should at all times bear in mind the following aim of a SERC:

- To encourage lifesavers to develop, maintain and demonstrate essential physical and mental skills required to save lives under pressure.

2.2. The Role of the Setter

When setting a SERC it is the setter's undertaking, on behalf and at the expense of the management committee, to:

- Plan a scenario for competition;
- Either provide or arrange for the availability of any props or equipment;
- Provide a brief for both judges and casualties;
- Provide a brief for competitors; and
- Devise a mark scheme for the event.

2.3. The Role of the BULSCA Judges Panel

When reviewing a SERC it is the responsibility of the Judges Panel, on behalf of the BULSCA committee, to ensure:

- The general incident is realistic, sensible and tests the competitors' lifesaving skills and knowledge, not their imagination;
- The incident does not involve any situation where previous knowledge of the incident area is an advantage;
- The areas are safe and do not need further risk assessment;
- The casualties are appropriate for the scenario and for a lifesaving situation;
- The weightings are appropriate;

- The score sheets for judges are well written, clear and self-explanatory;
- The casualty briefs are detailed and accurate i.e. the actions of the casualty reflect how a casualty with the specified condition would act; and
- The schematic of the incident is present and the location is appropriate for the incident.

In practice, the BULSCA Judges Panel will raise queries with an incident to ensure it of a suitable standard. In assessing this, they will ask targeted questions on various parts of the incident to ensure it has all been thought through properly and that it is likely to reward the best performing teams on the day. The setter should not take the presence of a lot of questions as criticism, the ultimate goal is that both parties reach consensus - this will not necessarily be the opinion of the BULSCA Judges Panel – but in reaching this consensus the Setter will need to have successfully argued their point of view. Having achieved this, the Setter will be in a good position to justify the incident to any complaining competitors on the day.

2.4. Conceiving a SERC

The competition manual (2013-2014) states the following rules regarding scenarios acceptable for use in BULSCA competition:

5.3.9   Situation scenarios:

5.3.9.1   *Simulated emergency scenarios, secret until the start of the competition, shall be designed using one or more of the following approaches:*

- *An amalgam of single or multiple-person situations which are related;*
- *A group of people involved in a number of situations which relate to a common theme, such as a pool party or an upturned crowded boat.*

5.3.9.2   *Simulated emergencies shall be staged as realistically and safely as possible, and not test the competitors' imagination.*

5.3.9.2.1   *For example, a situation in which an actor complains of burned hands should be staged with simulated evidence of a fire, or electrical wire, or chemicals.*

5.3.9.3   *Real fire, live wires, or hazardous chemicals shall **not** be used.*

5.3.9.4   *The simulated emergency shall not require the competitors to know how to use an automatic-external defibrillator or administer oxygen. If this equipment is available, there shall be an actor who has sufficient knowledge to use the equipment effectively.*

5.3.9.5   *If the simulated emergency includes a casualty (or casualties) with a suspected spinal cord injury, the expected treatment is that of a **lifesaver** as described in "The Lifesaving Manual for Instructors".*

5.3.9.5.1   *The response of a professional lifeguard is **not** expected.*

2.5. Criteria for a SERC plan

The setter should feel free to devise any scenario for competition so long as it is within the bounds of the rules, promotes the aim of the SERC and falls within the following criteria:

- It should be reasonable to expect competitors to be useful in the simulated situation;
- It must be possible for competitors to envisage what is happening in the SERC without unreasonable use of imagination;

- The SERC should allow competitors to demonstrate a range of skills;
- An effective SERC must give scope for teams/competitors to realistically perform in a discernibly differing manner;
- It must be possible to accurately recreate the scenario for each team in the draw;
- The SERC should take into account the number of casualties available;
- It must be possible for the judges available to accurately score the SERC i.e. are there just too many casualties for them to keep track of / will they actually be able to view what is going on? And also
- The SERC should attempt to be fair to all competitors.

2.6. Difficulty and complexity

BULSCA competitions, by virtue of their team-orientated structure, regularity and resources of competing clubs, do allow a high level of difficulty and complexity.

All reasonable effort should be taken to remove "chance" from the SERC, i.e. there should not be an item within the SERC which cannot be discovered by a reasonable process of questioning / deduction etc., upon which the success in the SERC hinges. Furthermore, a SERC which contains a distinct chain of steps, which need to be followed in order to 'solve' a SERC shall be rejected by the BULSCA Judges Panel.

Setters, with assistance from the Judges Panel, should ensure that teams are not unfairly rewarded by virtue of competing in a previous competition.

While there is no requirement for the whole SERC to be solvable in the allotted time period, it should be clear to competitors how each part of the SERC could be dealt with, and given enough time how the whole SERC could be solved. Note, such a solution may involve non-interference with a casualty, however, this "treatment" should be as easy to justify for the Setter as any other.

2.7. Deaths in a SERC

There has been a number of SERCs in the past where it has been possible for competitors to die. While it is important to provide teams with the opportunity to demonstrate their awareness of dangers in any particular SERC, killing competitors is not a preferable course of action. Where deaths are a requirement of a SERC, maximum effort should be made so that a "death" is not judged on an arbitrary measure that was not entirely obvious to competitors.

2.8. Environment

Setters should try to take into account the features of the incident area which might have an effect on the competition. Here is a list, which is by no mean exhaustive:

- **Lighting:** Dependent on the time/date of the competition the sun may set. Obviously, this is quite unavoidable and if lighting becomes sufficiently poor to change the dynamics of the SERC, artificial light should be used to keep the area well illuminated. However if the competition area is supposed to be dark, the light level should be carefully controlled to ensure impartiality.
- **Sound**: Some environments will be affected by noise outside of the control of the managing committee. Where this is unavoidable in the chosen incident area, Setters

should account for it in the design of the incident (for example, by setting up a SERC where competitors will need to rely on non-verbal communications).

- **Third Parties:** If the SERC is to be staged in a public area, appropriate steps should be taken in advance to ensure onlookers are aware of the activity taking place and discourage any communication, verbal or otherwise, to the competitors. In practice, this responsibility will fall mainly to the SERC manager / managing committee. However, a SERC setter should be aware of potential risks and provide appropriate forewarning if there is a potential risk from third parties.

3. Props, Equipment & Visual Aids

A SERC should attempt to appear as realistic as possible. To this end, all casualty injuries should be created as faithfully as possible. When appropriate, both fake blood and vomit should be used in the desired quantities. Setters need to be prepared to provide spare clothing for bodies whose part may involve contact with undesirable materials such as fake blood if they have not agreed an alternative arrangement with the management committee.

The setter should consider the following:

- By combination of competitor brief (section 4) and an initial view of the incident area it should be obviously apparent to competitors;
- The general location / premise of the incident (factory, road accident, party);
- The bounds of the incident (this might not be the case in a scenario that either develops or where there is further information for teams); and
- Which elements / people are part of the incident and which are not.

4. Incident Briefing Pack

The SERC brief should contain:

- an overview of the scenario;
- a map of the event area;
- detailed individual casualty briefs;
- the competitor brief; and
- marking sheets for judges to use, weighting factors omitted.

Ideally the Setter should look to present the documentation in such a way as to assist the managing committee to print and distribute appropriate copies of each sheet of paper on the day.

ONLY the recorders will receive a copy of the entire mark scheme, with weightings.

4.1. The Incident Overview

The overview should tell the SERC participants:

- the location of the scenario;
- what has happened to create this situation;
- what is going to happen during the SERC;
- information regarding props and equipment; and
- any general information not particular to an individual casualty.

4.2. The SERC Schematic

The map should supplement the overview, depicting:

- the location of each of the casualties at the start of the incident;
- the location of any important aids, props or equipment;
- where competitors will enter the competition area; and
- any areas out of bounds to competitors.

For the aquatic-based SERC: the entries, exits and positions of support available to competitors, should also be included.

On the day of competition you will have to assign actors to the roles of casualties; it is imperative to the success of a SERC that all its participants are comprehensively briefed.

4.3. The Casualty Briefs

Each casualty should have an individual brief to supplement the overview which the judges and casualties will read together to get a detailed picture of the roles played. All participants of the SERC should be apprised of the brief so as to allow a more believable and crucially comprehensible dynamic. The briefs may contain a variety of the following pieces of information:

- The name of the casualty;
- The casualty's relation to other people in the scenario;
- What has happened to them;
- Details of any and all injuries;
- The effect of probable treatments;
- Details of any developments that may occur to the casualties status;
- Reactions to probable occurrences;
- What the casualties are able to do to help competitors (can they walk/climb out, assist in a lift, go for a phone, etc.);
- If the casualty has any relevant skills (first aider, radio operator, etc.);
- Items the casualty possesses;
- Information the casualty will volunteer without provocation; and
- Information the casualty has but will only release in the right circumstances (usually when asked).

On the day of competition it is usually best to have the Setter available to go through the scenario with all the participants. It is their job to try integrating all the elements together so that when competitors come through the casualties are well versed and can present a realistic and believable scenario.

4.4. The Competitor / Team Brief

If the construction of a SERC requires competitors to provide equipment, notably a first aid kit or footwear, then they must be notified in advance of the competition (as per the BULSCA Competition Manual).

All other information pertaining to competitors will be conveyed on the day of the competition either en masse at the captains' briefing or individually immediately before the commencement of each SERC. If a briefing is to be delivered immediately prior to a SERC, the time required for that briefing should be submitted to the BULSCA Judges Panel for review.

The competitor brief may tell the competitors useful information, at the discretion of the Setter, including:

- the location of the scenario;
- what has happened to create this situation;
- any general information;
- a map of the incident area; and
- the location of a communications device, first aid kits, etc.

4.5. Captain's Briefing

The captains' brief, on the day, should contain information on each of the following:

- Any relevant safety advice (e.g. mandatory footwear);
- The manner in which the SERC area is cordoned off (it may be enough to say that the boundaries are obvious where they exist);
- How uninvolved officials / spectators will appear to the competitors; and
- The nature of communications devices (e.g. Phones simulated, otherwise live).

5. The Mark Scheme

It is the role of the Setter to provide a mark scheme for the SERC which fairly reflects its composition, and to provide judges with guidelines on what parts of the competition they will assess.

5.1. How does the mark scheme work?

Within a mark scheme, each judge should be provided with a mark sheet. Each mark sheet is individual to the judge and comprises assessment areas, each of which the judge will score out of 10. The assessment areas are then weighted by multiplication factors (weighting factors) known only to the setter and scorers. These adjusted scores are then summed to determine a total score for that SERC. Teams are then ranked based upon their scores.

5.2. Building a mark scheme

The marking sheets shall be prepared with one (1) judge marking the entire scenario and **not** focussing on particular groups of actors, including specific marks for:

- effective control of the scenario;
- effective communications;
- effective prioritisation of the casualties; and
- effective captaincy

while the remaining judges mark **only** the treatment or rescue of particular groups of actors.

The mark scheme used must allow judges to use their skill in assigning marks, and provides for a competitor offering an appropriate but unanticipated rescue/response.

5.3. Apportioning the marks

Marks should be apportioned to casualties based primarily on the following factors (in roughly order of priority):

- The importance of the treatment;
- The skill required to perform a rescue/ provide primary care;
- Complexities, to include secondary injuries, potential dangers, additional information, hindrances etc.; and
- The time required to deal with a casualty effectively.

In general it is easiest to begin by deciding which casualties should be worth the most marks down to those worth the least and if any casualties are comparable.

The **"importance of the treatment"** refers to the potential consequences of a casualty not receiving / receiving inappropriate treatment. For example, an unconscious swimmer will die without treatment, whereas a cut hand would be expected to survive. However, it is important to not confuse this distinction between prioritisation. The treatment of a CPR casualty is not less important than the treatment of a choking casualty; however it will generally be considered a lower priority by a team who are aiming to optimize the number of casualties they save (see prioritisation section later). It is important that points are not built into the casualty score for identifying the need to prioritise the treatment of this casualty – as that is captured in the marksheet for the overall judge.

It is useful to allow a consideration of the time required to deal with a casualty effectively when apportioning marks. While some Setters have commented they find this approach discomforting, it is recommended because it prevents competitors being able to "game" the incident. Without such a consideration, over a series of competitions teams could resort to treating casualties tactically rather than appropriately. The SERC marksheets should be designed to align the awarding of the most marks with the most appropriate reaction to the SERC, as a whole.

For example, consider two casualties, a choking and CPR, in an isolated area of the incident. Both receive a high proportion of marks for the importance of the treatment and the skills to perform primary care, in this incident the Overall Judge has identified the choking as the higher priority. Two teams enter the incident, and dispatch one member to the isolated area where it chooses which casualty to treat. The first chooses the choking, receives nearly all the marks for treatment, gets high prioritisation marks, and within 30 seconds rejoins the rest of the team, scoring marks on other casualties. The second chooses the CPR, and remains with that casualty for the remainder of the incident. Clearly both teams have made mistakes, but in the absence of the reward for staying with the CPR, teams will be incentivised to leave time-consuming casualties until everything else has been dealt with.

There are often proxies for rewarding points for the time-consumptiveness of the particular types of casualties. Commonly used are:

- Points for "continuous, effective compressions applied to CPR for a period of at least X seconds, until the end of the incident";
- Points for effective bandaging of broken limbs; and
- Points for treating for shock and aftercare.

However, such devices are at the discretion of the Setter and BULSCA Judges Panel, and will depend on the circumstances being considered.

The apportionment of marks to the overall judge, and to any communication device should also be carefully considered. A general rule of thumb is that these will each have an apportionment of marks at least as large as the highest-scoring casualty, although this will obviously be dependent on the SERC as a whole and could conceivably not hold in a wide range of scenarios.

5.4. Prioritisation

A common desire with Setters is to include, for certain casualties, a speed to treatment or identification of priority score on individual casualty's marksheets. However, BULSCA rules specify that all such marks should be recorded by the Overall Judge. The exact priorities of an incident will generally be decided by the Overall Judge on the day, however these should be reasonably discernible to ensure the incident is fair, and therefore, the Setter should have considered carefully what they believe the priorities in an incident to be.

Prioritisation will vary by SERC, but should generally consider things like:

- Urgency of treatments required (choking outranks CPR);
- Likelihood of recovery (choking outranks CPR);
- Casualty history (recently unconscious outranks other unconscious);
- Incident management (in the absence of other options, sending a team member for a phone instead of completing treatments may be appropriate);
- Reprioritisation (for example evolving casualties or hidden casualties); and
- Features of the incident (for example dangers).

Most prioritisation will generally happen in the opening 20 seconds of the SERC. However, there may be other opportunities for prioritisation in the SERC and these should be appropriately rewarded in the mark scheme.

5.5. Assessment Areas and Weighting Factors

An assessment area pinpoints an element (or elements) of the SERC where a judge will evaluate competitor performance and assign a score out of 10.

Weighting factors are an invaluable tool used to balance the mark scheme and highlight the important areas of assessment. Increasing the weighting of a particular assessment area causes a greater spread in the marks attained from that area, hence increasing the importance to a competitors overall score. Setters should be wary of using unnecessarily high weightings, as they may cause minor differences in treatment to produce relatively large differences in the marks attained. It is recommended that setters confine weighting factors to 0.5, 1.0, 1.5, 2.0, 2.5 and 3.0. Where the setter feels more marks should be awarded for a section they should attempt to divide the assessment area into more parts. This has the added effect of giving the judge more scope to use their judgment in evaluating performance.

5.6. Evolving Scenarios / Conditional Events

A SERC may be designed so as to cause either the situation or the state of casualties to evolve as it progresses. The changes may or may not be dependent on the input of competitors. Here are a few illustrative scenarios:

- A panicking casualty in imminent danger in the water who will fall unconscious after a given period of time without intervention;
- A wall that collapses during the SERC;
- A scenario where the competitors can turn the power to the building back on but might electrocute casualties and/or competitors.

Setters must be wary of the impact on the casualties in the incident from such changes and the possible marking issues. If a casualty may develop during the SERC it should be contained

specifically within their brief, or in the case of a changing situation what their reaction to it might be.

Where prevention of injury/worsening to a casualty is possible the mark scheme should ensure that:

- Competitors can never gain more marks by early negligence and later action than by prevention.
- When competitors fail to intervene or indeed cause injury to a casualty and further action is required it is possible to distinguish between teams who did nothing and those who demonstrated skill.

5.7. Prescriptive / Specialist Marks

In general prescriptive marking is not to be used in the setting of a BULSCA SERC. However in certain scenarios it can be appropriate to assign a particular score for small elements of the incident, particularly if it is not being scored by a judge or when small pieces of information are required when summoning emergency assistance.

5.8. Assigning Casualties to Judges

Do not overload your judges. Ideally the Setter should inform the management committee of the number of judges required. In an ideal situation, one judge will only be required to mark one casualty (with one judge marking the overall management of the scenario). However, it is very unlikely that that number of judges are available, and as a result it is expected that the Setter will either: downscale the SERC, or assign multiple casualties to judges. When assigning multiple casualties to judges, thought must be given to the proximity those casualties and the complexity of the treatment/response required by those casualties.