How much to do at the accident scene?

Spend time on essentials, save lives

The argument over how much care to give trauma victims at the scene of an accident reflects the development of the ambulance service. Originally the ambulance service simply provided a means of transport to hospital. As such the best policy was to scoop the victim up and run as fast as possible to the hospital, where treatment was started—"scoop and run." Extended training of ambulance personnel meant that more could be done at the scene. Training, however, was based around learning skills rather than patient assessment, so the skills may have been used without assessment as to whether the timing was correct. The concept of stabilise before transport was developed, forgetting that it may not be possible to stabilise the critically injured patient without surgery. The pendulum swung to overtreating at the scene. Accusations of wasting time appeared and the phrase "stay and play" was adopted. Where are we now in the swing of this pendulum?

Preventable deaths in prehospital care are rarely due to unavailability of advanced techniques but more often to failure to treat basic ABC (airway, breathing, and circulation) problems.[1] Although fluid administration may be delayed in many circumstances—for example, thoracic trauma[2]—American evidence suggested that giving intravenous fluids at the site and thus causing delay in arrival in the operating theatre increased mortality in penetrating trauma.[3] The pendulum swung again and recommendations were made of a "platinum 10 minutes" on scene for all major trauma—the paramedics' share of the "golden hour."[4]

This debate over scoop and run or stay and play serves only to perpetuate the swinging of the pendulum. There is likely to be no single answer for the care of the critically injured. Each patient needs individual assessment of his or her needs. Paramedics have been restricted by protocols, which are often inflexible, because their training has not been broad enough to allow more flexible guidelines. Doctors have also tended to overestimate the skills of paramedics.[5]

The Audit Commission has asked what training staff will need to deliver the new ambulance service.[6] There is no doubt that paramedic training needs to concentrate more on patient assessment and less on skills usage. Continuing education also needs improvement as 61% of British ambulance services fail to provide this.[7] Changes are needed if the paramedic is to be an independent practitioner rather than a protocol based provider. Graduate courses are now evolving which will provide the underpinning knowledge for the new breed of paramedic.[8] Changes in the structure of the service are also needed. In hospital medicine we are gradually moving to a consultant led service, but prehospital care is still largely provided by one grade of paramedic. In most ambulance services promotion means loss of patient contact. Some services are developing clinical supervisors with increased training and experience, who can be sent to more serious incidents, just as senior staff in hospital are summoned to life threatening trauma.

Better integration of care between ambulance services and accident and emergency departments could also lead to better training and increased understanding.[9] Ambulance services are introducing medical directors,[10] and some have online medical assistance from doctor to paramedic via the radio. The involvement of doctors at accident scenes, however, continues to be mostly on a voluntary basis through the BASICS (British Association for Immediate Care) schemes.

With increased assessment skills, paramedics can make informed decisions about what is appropriate at the scene. The crucial decision is what is the definitive care for each patient—securing the airway or relieving a tension pneumothorax (easily undertaken at scene); draining a haemothorax (hazardous and not done by paramedics but possible at the scene); or controlling internal haemorrhage (needing an operating theatre). If a paramedic is not trained in certain skills a decision is then needed over whether it is better to bring skilled people to the patients or take the patients to them. Any critical injury that will kill a patient before arrival at hospital (such as airway obstruction) needs immediate treatment at the scene. But some conditions can have definitive care only in hospital (such as an exsanguinating abdominal injury), so time to arrival in the operating theatre should be minimised.

Two ambulance personnel have to undertake ABC priorities serially (and treatment en route is by only one person), whereas a hospital trauma team will run these in parallel and complete resuscitation more quickly. If the distance to hospital is short resuscitation may be completed earlier by rapid transfer to the awaiting multidisciplinary hospital trauma team. We should now spend time wisely at the scene only on critical interventions and save the time to definitive care. Let us hope that both scoop and run and stay and play are laid to rest. With more highly trained staff we should aim to "spend and save" for trauma and all prehospital care.

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