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Abstract from the Literature

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Willy C, Sterk J, Schwarz W, Gerngross H. Computer assisted training program for simulation of triage, resuscitation, and evacuation of casualties. Mil Med 1998; 163(4): 234-8

Screen-based simulation is an emerging modality with much promise and application to ADF health personnel. This article from the April edition of Military Medicine represents one of the first reports of Simulation usage in Military Health training.

Although still in the German language it represents a CD-Rom, 20Mb, 16-bit program requiring an IBM compatible 386 processor or better, certainly within the grasp of most home and workplace hardware.

The program is structured in five phases.
These are:

1. Introduction (45min)
2. Principles of Triage (45min)
3. Principles of Adequate Resuscitation (45min)
4. Casualty simulation exercise involving 5 patients and varying injuries including gunshot injuries, burns and orthopaedic problems. All injuries are from conventional warfare.
5. Test phase, which is automatically assessed, often involving a larger scenario.

Parameters that can be altered include airway management (guedels-IPPV), Fluid Management (type and rate), emergency procedures (eg.ICC,) dressings and analgesic regimes. Physiological changes occur in real-time, further patient medical record data can be retrieved and warnings of patient deterioration are given as screen-based messages.

Some obvious flaws include the absence of blood pressure recordings and the restriction to conventional warfare injuries. Both these issues will be dealt with in later software upgrades.

The authors also make some contentious statements such as:

> 'One way to ensure that combat-eligible physicians gain experience with sufficient numbers of severe trauma cases is to use a computer-aided instruction program'

No training modality does this though screen based simulation packages such as these will enhance the theoretical knowledge of participants. Only high fidelity battlespace simulation, (not yet a reality) might allow sufficient practice of combat casualty care to ensure competence via simulation modalities.

Another disputable concept is that the whole range of 'traumatologic/accident clinical pictures' is covered by the day to day spectrum of treatment in surgical, anaesthesia and intensive care departments at a military hospital. True enough if you never leave that department and treat everything that arrives. However clinical training is predicated on random personal experience. This means individual experience and treatment of, specific patterns of injury and uncommon crisis may vary markedly between clinicians. This problem is improved but not overcome by prolonged training periods.

Overall this is an informative and interesting article clearly articulating the program's functions, strengths and limitations. An English version is eagerly awaited.