Javier, a 20-year-old whose head and right arm protruded from the rubble. It took rescuers two hours to extricate him. Following extrication, he was stabilized for the transportation. (Luckily, Javier is alive.) At 15:00 hours, all of the private E.M.S. personnel were "invited" to leave the scene.

The 386 injured and astonished victims were treated in various hospitals, 86 died. This only is a photograph and just as every reader may have felt, emergency specialists too were overcome by dispair—first because of the cowardly act, and second in the fact that inadequate training deepened the sense of failure.

030.
Bellows-on-Sternum Resuscitation (BSR)

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Objective: During the performance of advanced cardiac life support (ACLS), cardiopulmonary resuscitation (CPR) must be performed until a perfusing rhythm can be restored. For two persons, CPR using a bag-valve-mask and simultaneous ACLS is difficult to perform.

Hypothesis: Bellows-on-Sternum Resuscitation (BSR) will provide better conditions.[1] Is the performance of BSR feasible during ACLS?

Material: The Cardiovent (Kendall, prototype) is a bellows with a rubber block at its lower end. With compressed bellows, external chest compressions can be performed in a way similar to that accomplished when using the Cardiopump™ (but without decompression). Expansion and compression of the bellows allows ventilation without removing it from the sternum.[1]

Once a patient is endotracheally intubated, one person can perform both ventilation and cardiac massage. During mask ventilation, the second person has to hold the mask only and has one hand free.

Method: The authors performed two-person CPR (5:1 ventilation/compression ratio) with ventilation by mask on a Laerdal Recording ResusciAnne. We alternated ventilation by BSR and conventional ventilation with a self-refilling bag (Weinmann Combibag).

Results:	BSR	Conventional
Cycles/min	11–12	11–13
Frequency of chest compressions/min	75–100	70–100
Compression depth correct (38—51mm)	98%	98%
Pressure release correct (0—1 mm)	90%	98%
Time for ventilation (sec)	1.4–2.2	1.0–2.0
Ventilation correct (0.8—1.21)	81%	92%

Conclusions: After 1 hour of training, we were able to perform BSR with a quality similar to that achieved during standard CPR. Correct pressure release and the visual control of hand position were the main problems. Studies on a Mega-Code Trainer could test the hypothesis that overall performance of two-rescuer ACLS is better when associated with BSR.

References

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047.
Patient Identification and Information Systems: Application Issues in Europe

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One of the most crucial elements in emergency care is patient assessment: early access to reliable information and identification can have a major impact on effectiveness of the care provided. The advances in information technology have resulted in patient identification and information systems that can be applied to emergency and disaster care. The systems can be divided into "low-tech" and "high-tech" versions. Examples of low-technology options include the European Emergency Passport, Medic Alert, microfilm-based versions (German Emergency Card, Sabeco Emergency Card, Medicard), and magnetic strips. The high-tech versions, most of which are in different stages of testing, are microchip-based cards ("smart cards") that require software programs, a PC and a reader that can be portable and adjusted for use in f.i. an ambulance. The high-tech options have significant potential in (routine) Emergency Care, in particular when used in combination with other Health Care Telematic Networks. Directorate XIII of the European Union has supported, since 1987, the development of these cards through its AIM program (Advanced Informatics in Medicine). Examples of smart cards in Europe include: DefiCard, Diabcard, CSAM/Vitale, MPC, Sabeco Smartcard. In the presentation, we will introduce and briefly discuss the "SIRRCUS" criteria as a simple tool that can be used to evaluate the increasing number of options that will be offered and/or become available in the near future: 1) speed; 2) integration; 3) relevance; 4) reliability; 5) cost; 6) user friendliness; and 7) security.

052.
Simple Device for Difficult Intubations

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Objective: To evaluate the efficacy of a new endotracheal tube introducer for difficult intubation.

Background: In difficult intubations, a narrow stylet is easier to pass into the trachea than an endotracheal tube (ETT). Rather than passing an ETT over the stylet, we devised an inexpensive, disposable stylet that expands to allow the passage of an ETT through it. As the ETT passes down the device, it is guided into