

# KAMEDO Report No. 79

## Train Accident in Germany, 1998

Lennart Iselius; Per-Åke Nilsson; Louis Riddez (ed)

KAMEDO = Swedish Disaster Medicine Study Organization

These reports can be ordered from:

National Board of Health and Welfare  
Customer Service Webstore or  
National Board of Health and Welfare  
Customer Service  
SE-120 88 Stockholm  
Fax: +46 8 779 96 67  
E-mail: socialstyrelsen@strd.se

The Swedish Disaster Medicine study organization, KAMEDO, was described in *PDM* 1999;14(1):18–26, and three reports, Numbers 69–71, were published. In *PDM* 2000;15(3):113–118, two more reports (72–73) were published, in *PDM* 2001;16(1):50–52, Report No. 74 was published, and in *PDM* 2005;20(4):258–264, Report No. 75–76 were published. Report No. 77–80; and 82–84 are published in this issue.

### Information on purchase and ordering Prices

Catalogue prices inclusive of VAT. Postage always additional. Price changes are possible and items may be temporarily or permanently out of stock.

### Reduced VAT on publications

Effective 01 January 2002, the VAT on our publications was reduced to 6%. The reduction applies to books, brochures, and booklets/print-outs of Web publications. The VAT on CDs, video films, and diskettes is unaltered.

### Discount terms

We can give quantity discounts on orders for several copies of the same title:

10–24 copies: 10%  
25–99 copies: 20%  
100+ copies: 25%

NOTE: We cannot give student discounts (25%) on orders via our Webstore. To be sure of a discount, order via e-mail (socialstyrelsen@strd.se) or fax (+46 8 779 96 67). Always state where you are studying.

### Abstract

A train traveling at 200 kilometers per hour carrying 300 passengers crashed into a bridge. At least 85 doctors and 1,889 persons were involved in the emergency response. A total of 101 persons were killed, 108 were injured, and 87 were transported to a hospital (27 by helicopter; 60 by land ambulance). Eighty percent of the severely injured were transported to a hospital within two hours of the crash. Coordination of the activities of the hoards of responders was an issue, as was the lack of a formal organization to provide psychosocial support. Preparedness plans should include management of the dead and for the provision of psychosocial support.

Iselius L, Nilsson P, Riddez L: KAMEDO Report No. 79: Train accident in Germany, 1998. *Prehosp Disast Med* 2006;21(2):119–120.

### Summary

The worst train accident in Germany since World War II occurred on 03 June 1998. A high-speed express train, the Inter City Express 884, carrying 300 passengers, crashed into a bridge abutment at 200 kph near the German city of Eschede. The accident claimed the lives of 101 people and injured 108.

Of the injured, 87 (80.6%) were transported to the hospital. In 27 cases (31.0%), transport was by helicopter and 60 cases (69.0%) were transported by ambulance. Eighty-five doctors were involved in the rescue effort and the injured were distributed amongst 23 hospitals. During the first 24 hours, 1,889 people were involved in the emergency response effort. There were 354 vehicles and 39 helicopters at the scene. The massive emergency response meant that all of the injured could be provided skilled aid.

The crash occurred on a weekday in an easily accessible area, which allowed swift implementation of emergency services. The primary problems that arose were organizing command of the large number of aid workers who responded, inadequate coordination of medical response, and the lack of a formal organization to provide psychosocial assistance.

### Conclusions

1. High-speed express trains have evolved into a very common mode of travel in Europe. As the trains are driven at very high speeds, the standards imposed on materials for both rail lines and trains are stringent. When such

If a publication is ordered is on back order, the customer is notified, and the order will be processed.

Contact Customer Services immediately if you wish to change your order or return a publication. Attach a copy of the invoice with returns. You are entitled to return a publication within two weeks

Updated 04 June 2002.

**Keywords:** coordination; disaster; emergency services; Germany; helicopter transport; organization; prehospital transport; preparedness plan; relief worker; train

**Web publication:** 23 March 2006

- a train is involved in an accident, the energy released is high and the damage outcome is much higher than for lower-speed crashes. Consequently, the disaster response organizations in these regions should adapt their resources to cope with these scenarios.
2. The accident in Eschede was caused by a purely material defect that was difficult to prove. The human factor had little significance in this event, in contrast to many other major incidents.
  3. Modern computer technology can facilitate rapid notification of all agencies when a major incident occurs. However, the lack of this technology can be compensated by meticulously prepared disaster declaration plans, in which command center operators know precisely how to act in the event of a major incident.
  4. Medical transports via helicopter are valuable in long distances and inaccessible terrain. Most medical transports, however, are accomplished just as quickly by land ambulance. Land vehicles can accommodate several injured persons.
  5. On-scene medical aid was performed by a large number of medical teams consisting only of doctors. Many were accustomed to such situations, which is a prerequisite for efficient performance. On the other hand, in Sweden, there are specially-trained nurses who can perform essentially all medical interventions done on the scene.
  6. When there are too many doctors working at the scene or at the rendezvous point, there always is a risk that too much will be done before the injured are transported to the hospital. In Eschede, 80% of the most severely injured had been transported to a hospital within two hours of the accident. For many of the injured, this entailed a substantially longer time at the scene than the 10 minutes prescribed in Swedish trauma medicine training. Conditions may be unique in real disaster situations, but it always is important to get the injured to the hospital quickly.
  7. Transport of the injured to the hospital often is difficult to coordinate when there are many medical transports. Better coordination among the medical teams in Eschede probably would have resulted in better distribution of the most severely injured among the hospitals. A central command doctor at the scene of the disaster or the management of medical transports via a command center are other solutions to this problem. The English alternative described in the report from Paddington Station, where the ambulance service managed the distribution of the injured to different hospitals, also is a possibility.
  8. Patients were received and admitted at the various hospitals without significant problems. When the incident was declared a disaster, the hospitals were quickly able to call-in enough personnel and arrange enough beds, even at the smaller hospitals that do not usually care for this category of patients.
  9. Volunteer efforts often are difficult to manage during major incidents because no one knows how many volunteers are there or what skills they may have. As a rule, volunteers rarely are needed for the rescue effort or at hospitals. The German volunteer organization, Technisches Hilfswerk, works well, however. The emergency services organizations are familiar with Technisches Hilfswerk, and the latter has limited its contributions to assisting with the logistical problems that arise during a time-consuming aid effort.
  10. Disaster preparedness plans should include procedures for taking care of the dead in a dignified and respectful fashion. For instance, bodies should be identified as rapidly as possible, an adequate number of caskets should be available, and transports should be carried out in a correct manner.
  11. One of the most important lessons that the German disaster organization learned from the train accident was that psychosocial care for victims and their families must be reviewed thoroughly. There was no joint press spokesperson dedicated to those issues.