

Security of Mass Transportation Policy for Implementation of Innovation

by

Dr Johanna Ludvigsen

Institute of Transport Economics, Oslo, Norway

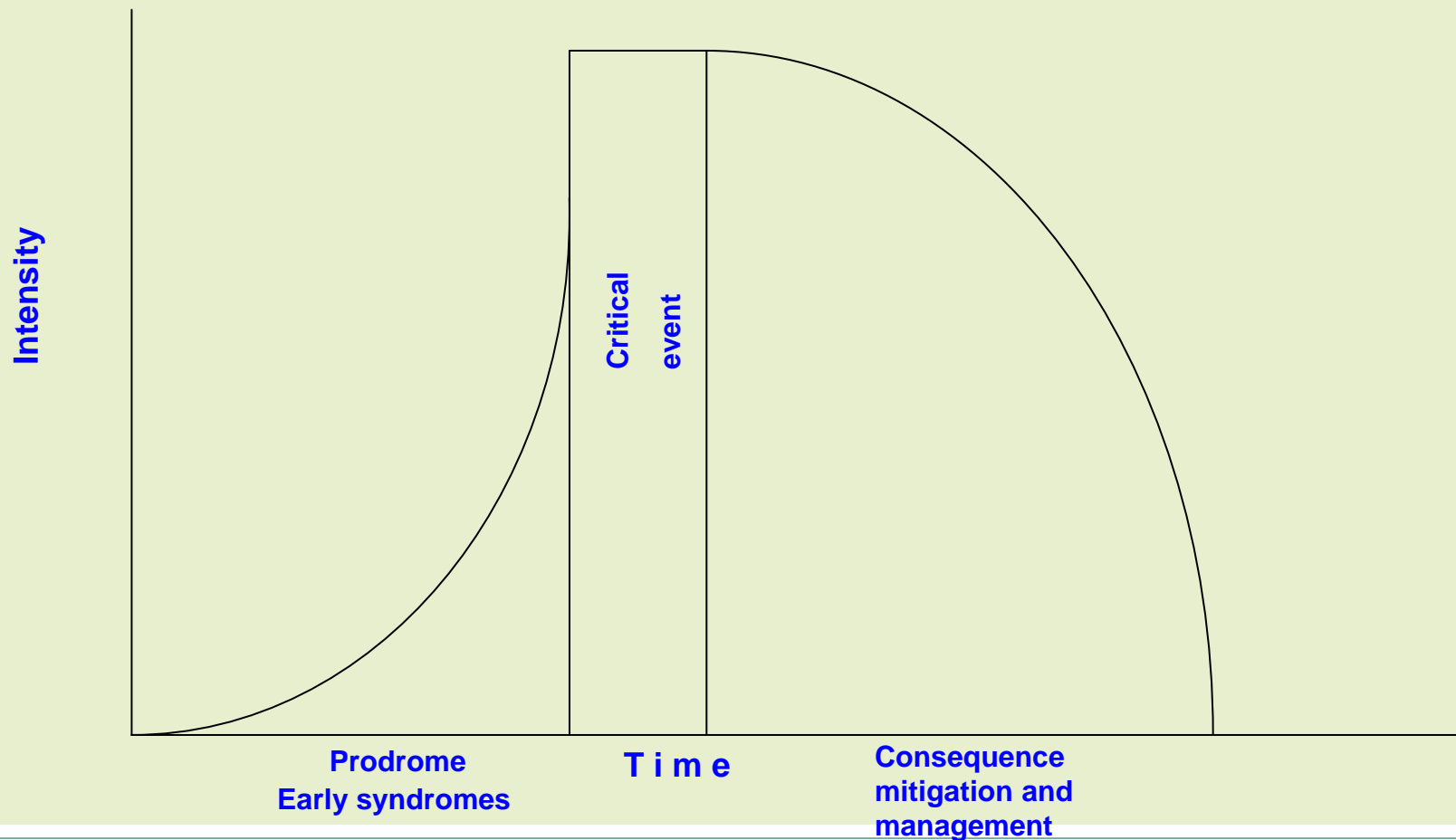
Main conclusions from research:

Assess preparedness for mass transport security at different:

- Levels in government and public institutions
- All temporal disaster phases according to “All-hazards approach”:
 1. Prodrome (early symptoms)
 1. Critical event
 2. Consequence mitigation and management

Disaster stages

Disaster temporal phases



Assess disaster's early symptoms, quality of preparedness and containment at different levels of

- Ministries (e.g. Internal Affairs, Defence, etc)
- Regional administrative bodies
- Municipalities
- City governments
- Counties/boroughs

Assess disaster symptoms and preparedness quality at

- Infrastructure planning, construction and development organisations
- Infrastructure administrators (track, tunnels, stations, bridges, terminals)
- ICT equipment and service providers (hardware and software)
- Maintenance and repair service providers

Assess preparedness quality for post-event management at

- Police
- Fire fighting brigades
- Paramilitary and/or military rescue units
- Hospitals, ambulance, medical rescue teams, medical aid and/or disaster-fighting civil dept's
- Mass transit operators (bus, underground, light train...)
- NGOs (Red Cross, etc)

Use inputs from previous assessments to

- 1) Identify gaps *at* different preparedness levels and *between* the different administrative and executive responsibilities
- 2) Assess needs for corrective measures/actions
- 3) Specify areas for improvements / upgrades / education and training

Use inputs from previous assessments (continued)

- 4) Implement changes required
- 5) Deploy new/upgraded equipment and/or systems
- 6) Check functionality of upgraded systems *at / between* the different administrative and executive levels
- 7) Periodically review preparedness quality and adjust its scope in line with disaster intelligence

Development of disaster response and containment capabilities requires:

Design of “*stage-specific*”, “*cross-functional*”, “*inter-stage and*” “All-hazards approach” disaster fighting scenarios

Rehearsals of interactions between

- 1) agents with different functionalities,
- 2) several mono-organisational teams and inter-organisational co-actions
- 3) aggravation of physical and natural environment
- 4) different technologies, disaster-detection and disaster-fighting types of

Examples of modelling and rehearsal scenarios

1. Decision-making under stress and/or life threatening situations
2. Management ineffectiveness under chaos, conflict, and confusion
3. Crowd dynamics and consequence reduction under lack of and/or limited access to relevant information
4. Evacuation under severe constraints and/or time pressure
5. Leadership of multi-functional teams during each disaster phase

Examples of policy research themes

1. Preparedness quality and resource effectiveness
2. Evacuation of large urban areas
3. Emergency evacuation of key staff and personnel
4. Public-private partnerships in post-event order restoration
(resource mobilisation, moral hazards, division of technical and financial responsibilities, etc)

Research for innovation and policy development

Summary:

- 1) Assess preparedness at different administrative and executive levels
- 2) Apply corrective measures
- 3) Model and rehearse disaster detection, combat and management scenarios
- 4) Apply empirically verified knowledge to development of relevant policy strategies