

Never Events in Emergency Medicine – NEEMS-1 Study

Dear Participant,

We are conducting a survey on the topic of risk management in prehospital emergency care.

Emergency medical services (EMS) are a high-risk environment, and the issues of patient and staff safety are becoming increasingly important. In recent years, the term "Never Events" has been introduced into the Anglo-American healthcare systems. This term refers to events that must never occur during the acute medical treatment of patients. Corresponding lists have been developed and implemented, for example, by the National Quality Forum in the U.S. and the U.K.'s National Patient Safety Agency (NHS). The aim of our study is to develop a comparable list of "Never Events" for the prehospital setting. We are inviting experts from four areas: medical directors of EMS, emergency medicine researchers, EMS education professionals, and members of prehospital professional societies.

Please assess each of the following items in terms of whether it describes a never event relevant to patient and staff safety in prehospital emergency care.

The answer options range from 1 = strongly disagree to 5 = strongly agree.

Thank you very much for your participation.

Best regards,

Hartwig Marung, Matthias Lenz and Stefan Poloczek

Consent to Participate

I declare that by participating in this study, I consent to the publication of my responses. I understand that the study will be conducted in full compliance with applicable data protection regulations and that it will not be possible to identify me personally at any time. I am aware that I may withdraw from participation at any time without providing any reason.

Demographic Information

Professional Area(s):

- ☐ Medical Director of EMS
- ☐ Emergency Medicine Research
- ☐ EMS Professional
- ☐ Mass Casualty Incident Qualification
- ☐ Committee Work
- ☐ EMS Training and Education

Gender: ☐ Female ☐ Male **Age:** _____ years

Experience in EMS: ____ years

Events in Prehospital Emergency Medical Care

A. Death or serious harm due to inadequate airway management
(e.g., unrecognized oesophageal intubation, tube dislocation, prolonged intubation attempts without interim ventilation)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

B. Death or serious harm due to medication errors
(e.g., wrong medication / drug mix-up, incorrect dosage, errors in timing, infusion rate, preparation or mode of administration; expired or otherwise ineffective drugs)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

C. Death or serious harm due to unrecognized hypoglycemia

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

D. Death or serious harm to a small child due to inappropriate treatment
(e.g., conversion errors, incorrect sizing of medical equipment)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

E. Death or serious harm to a patient in NACA categories I–III

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

F. Death or serious harm to a patient in triage categories Green or Yellow during a mass casualty incident

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

G. Pressure ulcers following EMS involvement
(e.g., due to lack of cuff pressure monitoring; lack of padding during prolonged secondary transfers)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

H. Declaration of death despite the presence of vital signs

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

Events in EMS Organization

I. Death or serious harm after a patient refused transport without being properly informed / lacking decision-making capacity

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

J. Death or serious harm after EMS personnel decided not to transport the patient

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

K. Death or serious harm due to delayed treatment caused by missing EMS resources
(e.g., due to failure to dispatch, incorrect system status, faulty pager, wrong destination)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

L. Death or serious harm due to failure to dispatch appropriate emergency resources
(e.g., helicopter, divers, high-angle rescue)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

M. Failure to initiate telephone-assisted CPR despite recognition of cardiac arrest, trained personnel, and sufficient situational resources

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Surgical Events

N. Death or serious harm due to invasive procedures
(e.g., ventricular perforation during chest tube insertion, uncontrolled bleeding after cricothyrotomy)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Device/Product-Related Events

O. Death or serious harm due to inappropriate use of medical devices
(e.g., ventilators, defibrillators, syringe pumps, oxygen tanks – due to faulty equipment, poor hygiene practices)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Environment-Related Events

P. Death or serious harm due to burns of any origin during EMS operations
(e.g., fire in ambulance due to technical defect or high O₂ flow during NIV)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Q. Death or serious harm due to restraints or forced measures during EMS care

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Events Related to Lack of Patient or Staff Protection

R. Death or serious harm due to improper immobilization
(e.g., missing or incorrectly applied cervical collar despite indication; unnecessary cervical collar placement)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

S. Death or serious harm to patient or EMS staff due to improperly secured equipment inside the vehicle

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

T. Death or serious harm to patient or EMS staff during transport using emergency lights and sirens

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

U. Death or serious harm in connection with a patient fleeing from care

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

V. Death or serious harm to an EMS worker due to missing or improperly used personal protective equipment
(e.g., helmet, duty jacket, boots, safety vest)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
1	2	3	4	5

Criminal Events

W. Any medical treatment performed or ordered by a person who falsely claims to be a qualified medical professional
(e.g., physician, paramedic, EMT)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

X. Death or serious harm to a patient or EMS staff due to physical assault during an EMS operation

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Y. Sexual assault of a patient during EMS care
(e.g., attempted or completed rape; also includes non-indicated diagnostic procedures)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Z. Severe breaches of data protection or confidentiality
(e.g., sharing of photos or videos from an incident with media outlets)

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

AA. Death or serious harm due to transportation of a patient to an inappropriate treatment facility

<i>strongly disagree</i>	<i>somewhat disagree</i>	<i>undecided</i>	<i>somewhat agree</i>	<i>strongly agree</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

Room for comments and suggestions of additional Events for the next Delphi round(s):