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Centre for Science and Policy, Intergovernmental Panel on Climate Change Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.

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PhD in Medical Sciences  
2016-2017

INVITATION to the Public defence of

**Gerlant van BERLAER**

To obtain the academic degree of '**DOCTOR IN MEDICAL SCIENCES**'

**Disaster and humanitarian emergency response:  
the importance of field medical data registration.**

**Tuesday 27 June 2017**

Auditorium **Vanden Driessche**, 18:00  
Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

How to reach the campus Jette:  
<http://www.vub.ac.be/english/infoabout/campuses>

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## Summary of the dissertation

Good intentions alone are no longer enough to ensure victims of disasters receive the best quality care. Improving quality and effectiveness of Emergency Medical Teams in their relief efforts needs an evidence-based approach, depending on the availability of scientific data. This is complex in disaster medicine, as medical teams on-site prioritise providing acute care to patients over documenting their work, and randomised trials are impossible in crisis situations.

We describe the complaints, diagnoses and treatments of 9214 disaster patients presenting to Field Hospitals during five humanitarian relief operations in the aftermath of different types of disasters: an earthquake, an explosion, a typhoon, a civil war, and a refugee crisis. We analysed patterns in pathology, compared with "baseline" data when available, and identified factors influencing the changing case-mix of patients over time. The burden of injuries and wounds, more present after sudden onset disasters like earthquakes or storms, will fade swiftly within two weeks. The largest group presenting are patients with infectious diseases, mostly of respiratory, digestive, eye or skin origin; emerging quickly due to bad living conditions in temporary shelters and camps, and affecting children more. Disasters with slow development (wars, refugee crises) destabilise more patients with chronic diseases (diabetes, hypertension, and asthma) missing their routine treatment. Mental health problems might be under detected due to low awareness and cultural differences. Pregnant and labouring women, new-borns, and patients missing appropriate or affordable treatment locally will also request attention.

Emergency Medical Teams need to adapt to these findings to appropriately allocate staff and equipment in order to meet the changing needs of all types of patients presenting. To facilitate documenting in future interventions and enhance scientific knowledge, a uniform and universal template was developed based on our results and a literature review. This patient record considers all stakeholders: patients, field workers, authorities and researchers.

## Curriculum Vitae

Dr. Gerlant van Berlaer is a paediatrician and emergency physician, experienced in paediatric critical care, who obtained the degree of Master in Science in Disaster Medicine.

He is Chief of Clinic at the Emergency Department of the Universitair Ziekenhuis Brussel, Belgium, clinical tutor at the Faculty of Medicine and Pharmacy (VUB), unit-coordinator of Complex Humanitarian Emergencies in the European Master in Disaster Medicine (EMDM), and staff member in the Belgian First Aid and Support Team (B-FAST). He is course director for Advanced Pediatric Life Support (APLS), instructor for Prehospital Pediatric Life Support (PHPLS), and invited professor at the University Associations of Brussels, Ghent, Leuven and Antwerp.

He volunteered in humanitarian emergencies in Indonesia after the 2004 tsunami, in Gaza during the 2009 war, in Haiti after the 2010 earthquake, in Switzerland after the bus crash with paediatric casualties in 2012, and in the refugee camp of asylum-seekers in Brussels in 2015.

He is member of the Research Group in Emergency and Disaster Medicine (ReGEDiM, VUB) and started researching the pathology of disaster victims and disaster patient records since 2011.

Furthermore he has been foster father for five of his brothers and sisters, before raising his two own sons; he is elected City Council member in his home town Grimbergen in Belgium; volunteer for Special Olympics (Healthy Hearing programme, globally coordinated by his wife Melina Willems); and founded PICARO (Paediatric International Catastrophe Aid and Relief Organisation) to build the first two earthquake-proof schools in Haiti. The thread in his work and life is the care for vulnerable patients and populations, especially children.