cooperation with the local health authorities. A total of 27 health facilities were evaluated against the World Health Organization's (WHO) standard of Primary Health Care. Results: Of 134 health facilities with an average staff number of 42, serving a population of 1.2 million, 125 were functioning. Thirteen of the 27 healthcare facilities evaluated offered vaccinations and 13 offered antenatal care. Growth monitoring of children was performed in 24, of which 13 had a feeding center, and 14 had laboratories. The survey revealed severe insufficiencies in expertise, logistics, and administrative procedures.

Conclusions: The survey was to be a useful tool in the evaluation and improvement of health care in Northern Iraq. Local health authorities used the survey as a guide for their further investments into health care, and for the development of procedures to improve the sustainability of health care, logistics, and administration. The same method may be used through internationally deployed forces to provide support for rebuilding health care after population displacement. Keywords: health care; hospital evaluation; population displacement; rebuilding; survey

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### Landmines

Chair: Berndt Michael Schneider

# Injuries and Deaths from Landmines and Unexploded Ordnance in Chechnya—1994–2005

O Bilukha; M. Anderson; M. Brennan; L. Klein Centers for Disease Control (CDC), Atlanta, Georgia USA

Introduction: For more than a decade of armed conflict and civil unrest, the civilian population of Chechnya has been among those most affected by landmines and unexploded ordnance worldwide.

Methods: An analysis of surveillance data on civilian casualties from landmines and unexploded ordnance in Chechnya was conducted. The analysis included 3,021 civilian non-combatants injured by landmines and unexploded ordnance in Chechnya during 1994–2005.

Results: The largest number of injuries occurred in 2000 (716, injury rate 6.6 per 10,000 per year) and 2001 (640, injury rate 5.9/10,000/year). One quarter of all victims were <18 years, and 19% were females. The case-fatality rate was 23%. Approximately 40% of victims were injured by landmines, 30% by unexploded ordnance, and 7% by booby traps. A large proportion of both children and adults were injured while travelling or performing activities of economic necessity. Of children, 29% were injured while tampering with explosives or playing in a contaminated area. Children were more likely to be injured by unexploded ordnance and to sustain upper body injury and upper limb amputations when compared to adults.

Conclusions: The civilian population of Chechnya experienced rates of injury from landmines and unexploded ordnance that were 10 times higher than injury rates reported from other highly affected countries, such as Afghanistan, Angola, and Cambodia. Prevention programs that focus on mine risk education, survivor assistance, and advocacy must continue and be fully supported. To prevent further civilian injuries and deaths, urgent efforts to identify, mark, and clear areas mined and/or contaminated with unexploded ordnance are needed.

Keywords: civil populations; Chechnya; injury; landmines; unexploded ordnance

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# Poster Presentations—Theme 6: Humanitarian Crises

## (102) Organization of Work in the Department of Anesthesia and Intensive Care Units during Wartime Bombing

A.P.P. Pavlovic; T.S. Trpkovic; D.T. Tabakovic; S.M. Matejic; O.M. Marinkovic

Medical Faculty Pristina-Kosovo, Mitrovica, Belgrade, Serbia

The bombings of Serbia and Montenegro from March to June 1999 provided professional and living experience for doctors and medical staff from the Surgical Clinic in Pristina, Kosovo. At the onset of the bombings, there was confusion, lack of experience in war situations, uncertainty, and concern for family members. Going to a shelter during the bombings was not possible for the patients and the medical staff of the Intensive Care Unit. Working under such circumstances was made even more difficult for the staff and patients due to power outages, water and food shortages, and the disruption of the central gas networks. To prevent patient injury from broke glass due to bomb detonation, beds and ventilators were moved away from windows. The windows also were covered by scotch tape. Thoracostomy tubes and the central gas supply lines had to be extended in order to move the patients away from the windows. Although there were sufficient supplies of medications and disposable equipment during the war, and that humanitarian help was provided, some of the received medications were outdated and unusable. Transfusion also was a problem.

Working during a period of bombing requires effective organization and poses a number of technical and professional problems.

Keywords: bombing; department of anesthesia; hospitals; intensive care unit; operations; Serbia

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#### (103) Medical Response from the UK to the Kashmir Earthquake

K. Challen

University Hospital of South Manchester, Manchester, UK

Introduction: Scattered responses to humanitarian crises can waste resources and impose additional logistical problems. It has been estimated that small-scale donations to Bosnia in the early 1990s cost (US)\$34 million for disposal. The World Health Organization (WHO) warned of similar problems in the early stages of the Kashmiri earthquake response. The aim of this study was to establish the