end of March, 2001, and will present the results during the 12th WADEM. Key words: camp; health information; health services; information; refugees; team E-mail: kuniio@attglobal.net

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Quebec's Integrated Trauma System *Pierre Lapointe* Quebec, CANADA

This poster summarizes the interactions between the 14 components of the chain of services in this trauma system model. Each link has received from the Quebec Automobile Insurance Board, a conceptual or an operational input in order to reach the preset goals for each specific service. In this presentation, the authors will inform the readers on the outcomes resulting from the implementation of this integrated approach, and especially on the support systems that permit the evaluation and improvement of the end product—quality.

Key words: chain; evaluation; goals; integration; quality; services

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Measurement of Carbon Monoxide in Expired Breath: An Experimental Study

F. Lapostolle;¹ H. Gourlain;² M.N. Pizagalli;¹

F. Buneaux;² J. Catineau;¹ P. Letoumelin;¹ F. Adnet;¹

M. Galliot;² M. Fleury;¹ C. Lapandry¹

- 1. SAMU 93, Bobigny, FRANCE
- 2. Laboratoire de Toxicologie, Hôpital Fernand Widal, Paris, FRANCE

Introduction: Carbon monoxide (CO) detectors currently are used as an alert method by emergency rescue teams. Some of these detectors also can measure expired breath CO concentrations. This method of measurement has been studied only for low concentration of CO in smokers.

Objective: To validate the measurements performed with CO detectors by comparing the results with the gold standard method (infrared spectrophotometry).

Methods: This was an experimental study using the FIM CO-detector. CO gas was obtained from Cosma. Infrared spectrophotometric measures were performed with IR Beryl 100 Cosma. A bag was filled with a gas mixture of air and CO concentration from 100 to 500 ppm. Manual pressure was performed to reproduce expired breath. The CO concentration was measured with the CO-detector, and two samples of gas were obtained: (1) at the beginning; and (2) the end of the simulated expired breath. These samples had to be diluted (with air) to allow spectrophotometric measures. The dilution method as tested with a reference CO gas (80 ppm). A total of 21 measurements were performed.

Results: Dilution method was validated with a SD of 2.7%. *Conclusion*: Despite a difference with the reference in measurements for high CO concentrations, the linearity of these results is satisfactory for clinical practice. A CO detector is a efficient and reliable method to measure CO in expired breath

Key words: air; exhaled; assessment; carbon monoxide; detectors

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Practical Experience Inquiry on Emergency Endotracheal Intubation in Emergency Departments in France

P. Lebrin;¹ F. Staikowsky;² H. Lambert;³ V. Lafaix;⁴ P. Miroux;⁵ F. Compagnon;⁶ I, Dandine;² et le Groupe National de Recueil des Intubations aux Urgences

Emergency Departments: 1. Bry sur Marne; 2. Caen; 3. Nancy; 4. Marseille; 5. Amiens; 6. Coulommiers, FRANCE

Introduction: In France, Emergency Medicine is not a recognized speciality. Endotracheal intubation usually is learned during a specific training ("Capacité de Médecine d'Urgence") with an apprenticeship on a mannequin or on human beings during anaesthesia. However, this training also is necessary for the emergency care of critically ill or injured patients. The objective of this study was to evaluate endotracheal intubation knowledge and practice of physicians working in emergency departments in France.

Methods: A questionnaire was sent to emergency practitioners in France. The collected data included a physician's knowledge of intubation procedures, their use of medicaments for intubations, and the options available for difficult airway management.

Results: 816 questionnaires received from general practitioners (48%), emergency physicians (28%), or anaesthesiologists (12%) were analysed. Among them: 64% received the training "Capacité de Médecine d'Urgence"; 50% work in an out-of-the-hospital emergency medical system ("SMUR"), and 15% work in an intensive care unit. Seventeen percent work in a hospital emergency department for <2 years, and 20% for more than 10 years. In emergency rooms, 88% of questioned physicians already had intubated patients, but 40% had not practised this act during the last month; 25% of emergency practitioners have made less 5 intubations during the last year, and 29% performed >15 intubations during the same period in emergency rooms. Predictors of difficult airway management (anatomic hurdles, anatomic techniques, Cormack, Mallampati score) never are used by 31% of emergency practitioners, while 51% of questioned physicians have been confronted at least once with an impossible intubation. In cases of impossible intubation, ventilation with bag-valve-mask is the method most often employed while waiting for assistance (63%). In their practical experience, a small number of physicians have used fibroscope (16.4%), intubating laryngeal mask airway (14.3%), kit for cricothyroidotomy (13.7%), and catheters for percutaneous transtracheal ventilation (10.9%). Rapid sequence intubation is used in more than 50% of intubations by 23% of emergency physicians. Among anaesthesic drugs, midazolam is the most frequently used (95%), then fentanyl