

## Newsletter January 2013

**THANK YOU FOR YOUR  
CONTINUOUS SUPPORT!**  
Please stay in touch.

### Dear all,

first of all, I would like to wish you a happy, healthy and prosperous 2013!  
May the diseases, injuries, misfortunes and other unpleasant events stay away from us!

The second half of 2012 was quite busy for INRO as we completed the 'Prehospital project' and right now is a perfect moment to take a deep breath, reflect upon what we have achieved and think what to do next.... Please join me:

### Activities implemented in 2012

#### Project Prehospital and early hospital care for patients with Brain Trauma in Austria:

The second round of data collection was completed in the end of March 2012, data were retrieved from hospitals and entered into INRO's database. In summer 2012 surviving patients were contacted by telephone for 6 months after injury outcome. In the fall the database was finalized, data cleaned and missing information retrieved where possible. In the second round of 'Prehospital project' data collection data on 330 patients were obtained. Preliminary analysis of the data was developed in October and presented together with final project report to Austrian Ministry of Health (the grant giver, together with AUVA) in November 2012.

Scientific articles developed and submitted (for a complete list see further – **Publications**)

#### Conferences attended:

March: IBIA (International Brain Injury Association) Congress – Edinburgh, Scotland, GB

April: EMN (Europeana Multidisciplinaria Neurotraumatologica) – Cluj, Romania

April: Central European Congress of Emergency Medicine – Senec, Slovakia

October: Public Health and Humanities – Trnava, Slovakia

### INRO People

Currently, the team of INRO consists of:

Alexandra Brazinova, MD, MPH, PhD – President of Board of Directors

Prof. Walter Mauritz, MD, PhD – Vicepresident of Board of Directors

Research fellows:

Marek Majdan, DrPH, PhD

Johannes Leitgeb, MD

Dagmara Mastelova, MS

Veronika Rehorcikova, MS

Lenka Krajcovicova, DrPH

Zuzana Sklenarova, DrPH

Lucia Daubnerova, DrPH

Mag. Ingrid Wilbacher, PhD

Ivan Janciak, MS, PhD

### INRO Supervisory Board

Johannes Orsini-Rosenberg

Annie Laurie Auersperg Isham

Ralph Isham

Goert Auersperg-Trautson

Vinzenz Auersperg

Martin Rusnak

Marie-Therese Rutherford

Isabelle Harnoncourt

Peter Quinn

Andrew Maas

### Project Prehospital and early hospital care for patients with Brain Trauma in Austria (Optimierung der Erstversorgung von Patienten mit SHT) – project course and preliminary results

The project was implemented in the period end of 2008 – beginning of 2013; 17 (later on 15) Austrian hospital treating patients after traumatic brain injury collected detailed information on patient's status and treatment. INRO is carrying out the task to analyze factors influencing patient's outcomes with the ultimate goal of improving care provided to brain injury victims.

In the first and second round of data collection data on almost 800 patients were collected.

Within the first round of data collection in 2009 and 2010 we have collected data on 448 patients and analyzed impact of factors of health status, injury and treatment on overall patient outcomes. Based on the analysis, we have developed Prehospital and Early In-Hospital Guideline and its recommendations were subsequently implemented in 15 Austrian participating hospitals. Afterwards second round of data collection took place in 2011 and 2012, in total data on 329 patients were collected. In the second half of 2012 data collection was completed, data checked, cleaned and missing information was retrieved where possible. Detailed analysis of the full data set is planned for the first half of 2013. In the fall of 2012 we have performed preliminary analysis of the data and the main findings of new guideline compliance are the following:

- Prehospital as well as in-hospital management was better (more patients received maximal treatment, more capnography and ventilation used, more trombelastography used, etc.)
- Mortality was 16.7% lower in the second phase compared to the 1<sup>st</sup> phase
- Mortality was 20% lower than expected

### Publications published in 2012

Majdan M, Mauritz W, Wilbacher I, Janciak I, Brazinova A, Rusnak M, Leitgeb J.

Traumatic brain injuries caused by traffic accidents in five European countries: outcome and public health consequences.

Eur J Public Health. 2012 Jun 10

Leitgeb J, Mauritz W, Brazinova A, Matula C, Majdan M, Wilbacher I, Rusnak M.

Outcome of patients with severe brain trauma who were treated either by neurosurgeons or by trauma surgeons.

J Trauma Acute Care Surg. 2012 May;72(5)

Leitgeb J, Mauritz W, Brazinova A, Janciak I, Majdan M, Wilbacher I, Rusnak M.

Outcome after severe brain trauma due to acute subdural hematoma.

J Neurosurg. 2012 Aug;117(2):324-33.

Leitgeb J, Mauritz W, Brazinova A, Majdan M, Wilbacher I. Outcome after severe brain trauma associated with epidural hematoma. Arch Orthop Trauma Surg. 2012 Nov 16.

### Publications submitted in 2012

Majdan M, Mauritz W, Wilbacher I, Brazinova A, Rusnak M, Leitgeb J.

Barbiturates use and its effects in patients with severe traumatic brain injury in five European countries.

J Neurotrauma. 2013 Jan;30(1):23-9.

### Activities planned for 2013

#### Data analysis and interpretation

We would like to dedicate this year to an in-depth analysis of data on Austrian TBI study results – the data on almost 800 patients from 'Prehospital project' will be analyzed and compared to data on 400 Austrian patients collected in 2002-2005 within a previous INRO project.

The scientific questions that we use for the data analysis are the following:

- Description of the Methodology and Results of 'Prehospital project'
- Impact of various health status and treatment factors on patient's outcomes: transport, prehospital emergency care, prehospital and early in-hospital infusions, body mass index, severity of injury, time intervals between injury-EMS arrival-hospital admission-first CT scan-operation (if indicated), comorbidities, guideline compliance, etc.

We plan to develop and publish several scientific articles as a result of this analysis, in acknowledged international journals.

For this analysis, that will require focused work of INRO collaborators and invited assistance and expertise, **we have applied for grant from AUVA.**

Furthermore, the Austrian Ministry of Health, satisfied with the course and results of 'Prehospital project', is planning to engage INRO in a **national conference and series of regional seminars for presentation of project outcomes** and their dissemination throughout Austria.

#### Conferences:

April: Central European Congress of Emergency Medicine – Senec, Slovakia

October: Public Health and Humanities – Trnava, Slovakia

#### Projects

##### FP7 proposal

INRO participates in preparation of the proposal Collaborative European NeuroTrauma Effectiveness Research in TBI (Center-TBI) within a consortium lead by Prof. Andrew Maas, to be submitted to European Commission within 7<sup>th</sup> Framework Programme in February 2013. The project will examine effectiveness of traumatic brain injury treatment across Europe. INRO assisted in site selection in the process of proposal development and will participate in one work package of the project.

#### Thank you for your attention.

**On behalf of the whole INRO team allow me to wish you a good year.**

Sasha

Alexandra Brazinova, MD, MPH, PhD – President of Board of Directors