



Internationale Gesellschaft zur Erforschung von Hirntraumata
International Neurotrauma Research Organization

Annual Report 2012

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Internationale Gesellschaft zur Erforschung von Hirntraumata
International Neurotrauma Research Organization
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Project office

Day-to-day management:

The office of INRO is run by **Sasha Brazinova**. Dr. Alexandra Brazinova is a medical doctor with further education in Public Health and PhD from Social Medicine. Dr. Brazinova is the President of INRO's Board of Directors. She does administrative management, develops project proposals, coordinates project implementation, writes project reports. Dr. Brazinova is the project coordinator for the Prehospital project that is implemented by INRO in 2008-2012. In her scientific work she focuses on health care quality research and descriptive epidemiology, writes and co-authors scientific publications. She also teaches at the Faculty of Health Care and Social Work of Trnava University, Slovak Republic as a part time lecturer.

Prof. **Walter Mauritz**, the Vicepresident of INRO's Board of Directors, is the chairman of the Department of Anaesthesiology at Lorenz Boehler Trauma Hospital in Vienna, which is also a teaching facility. Furthermore, Dr. Mauritz is a visiting professor at Trnava University. Prof. Mauritz is the project leader for the Prehospital project that is implemented by INRO in 2008-2012. Prof. Mauritz is scientific and clinical advisor of INRO and he oversees the development and implementation of scientific work.

Dr. Marek Majdan is a biostatistician working closely with INRO on data analysis and publication development. Dr. Majdan teaches at and is a vicedean of the Faculty of Health Care and Social Work of Trnava University, Slovak Republic.

In November 2011 at the annual INRO Board meeting was Martin Rusnak on his own request released from the position of INRO's President of Board of Directors due to on-site commitment in a European Commission Public Health project in Bosnia-Herzegovina in 2012-2013. Sasha Brazinova was appointed the President of Board of Directors and Walter Mauritz remained at the position of the Vicepresident. Martin Rusnak became a member of the Supervisory Board.

Close academic affiliations of prof. Rusnak, prof. Mauritz, Dr. Brazinova and Dr. Majdan bring students and young scholars interested in brain trauma research into INRO's activities.

ACTIVE research fellows at IGEH are:

Dr. **Johannes Leitgeb** is a trauma surgeon at the University Clinic for Emergency medicine, General Hospital Vienna (AKH). He has been involved in project activities focused mainly on evaluation of clinical brain trauma management data. Currently he is working on his PhD thesis on TBI management and writes and co-authors scientific publications on INRO's research outcomes.

Mag. **Dagmara Mastelova** and Mag. **Veronika Rehorcikova** are doctoral students at Trnava University. They, together with **Mag. Lenka Krajcovicova** (assistant teacher at Trnava University) assist with Prehospital project implementation.

DI **Ivan Janciak** is an IT specialist, working at the University of Vienna. He developed and maintains the ITCP and the Prehospital project databases for INRO.

FORMER (passive) research fellows at INRO are:

Dr. **Lucia Daubnerova** works as a consultant in public health in the Slovak Republic and abroad and as an INRO team member she participates in the development of scientific publications. She defended her PhD thesis on trauma management at Trnava University in 2010.

Dr. **Ingrid Wilbacher**, who used to work at INRO in 2002 – 2005, works for Austrian Social Insurance Company and finished her PhD thesis in public health at Trnava University in 2009.

ACTIVITIES in 2012

Projects implemented

Prehospital Austrian project

'Prehospital Project' (Project for optimizing early care for patients with severe brain trauma) (Projekt zur Optimierung der Erstversorgung von Patienten mit Schädel-Hirn-Trauma) was finalized in 2012.

The project is funded by the grant of the Austrian Ministry of Health (BMGFJ) and Worker's insurance fund (AUVA).

The contracts of INRO with both AUVA and BMGFJ to implement this project were signed in October 2008. The project ran from 2009 till the end of 2012.

The **summary of the project** is the following:

The project has started in the end of 2008. By the end of March 2010 we have collected data on 448 patients with moderate and severe brain trauma. We have entered and cleaned the data and retrieved missing information in the period April – September 2010. Long term outcome of patients 6 months after the trauma was collected through phone interviews and entered till October 2010. Data were analysed in October 2010 and presented at conference with the representatives of all participating hospitals in November 2010 in Vienna.

After the discussion of the presented data and existing TBI management guidelines at the November 2010 conference, *Prehospital and Early Hospital TBI Treatment Guideline* for Austria was prepared. All participating centres started using the guideline as of the 1. January 2011. In the period April 2011 – April 2012 the second round of data was collected. In this period the data on 330 patients were collected. The patient data were analysed again (fall 2012) to see the difference in patient outcomes. The final report and preliminary data analysis was presented to the Austrian Ministry of Health in November 2012. Main finding is the in the second data collection phase, after the implementation of the developed guideline, mortality of patients decreased and proportion of patients with long term good outcomes increased. The detailed data analysis will be carried out in 2013.

The project objective is to improve health outcomes of TBI victims by standardizing the treatment, with a special focus on the crucial early phase of the treatment, thus the objective was achieved.

The funding for the Prehospital project is over Eur 170 000 from the Austrian Ministry of Health and about Eur 100 000 from AUVA. Project is planned for 5 years.

Project progress: In 2012 we have implemented the following steps of the project:

Since April 2011 till the end of March 2012 the hospitals collected the data on status and treatment of patients with moderate and severe brain trauma (originally a period May-November 2011 was planned, but the data collection period was prolonged into 2012).

During the data collection the INRO office provided support to the treatment centres through telephone, email and personal visits. Due to the personnel issues, LKA Salzburg was not able to carry out data collection in this second phase. Majority of the centres collected fewer patients than in the first phase, in total data on 330 patients were collected. All surviving patients were approached by phone by an epidemiologist collaborating with INRO to assess the outcome of the patient 6 months after the injury.

Participating hospitals:

1. LKH Amstetten
2. LKH Feldkirch
3. Univ.klinik Graz
4. LK Waldviertel Horn
5. Univ.klinik Innsbruck
6. LKH Klagenfurt
7. AKH Linz
8. LK Wiener Neustadt
9. LK St.Pölten
10. KH Schwarzach/Pongau
11. UKH Graz
12. UKH Linz
13. UKH Salzburg
14. UKH Wien XII (Meidling)
15. UKH Wien XX (Lorenz Boehler Unfall Krankenhaus)

By the end of August 2012 data were collected and cleaned, in case of missing information the hospitals were approached to provide these, where possible.

In September – October the data were preliminary analyzed, main differences in patient outcomes between the two data collection phases (2009-2010 and 2011-2012) were summarized. In November final project report was submitted to the Austrian Ministry of Health and AUVA.

Project proposal submitted

INRO is a partner organization within Framework Programme 7 (granting structure of European Commission) project CENTER-TBI (Collaborative European Neurotrauma Effectiveness Research in Traumatic Brain Injury). The European consortium is developing project proposal that will be submitted in February 2013. The consortium is being led by prof. Andrew Maas and INRO's role will be coordination of a work package on blood coagulation.

Publications developed and submitted

In 2012 the following INRO publication have been accepted and published

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):1263-70.

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. doi: 10.3171/**2012**.4.JNS111448. Epub **2012** May 25

Educational activities and Conferences

Textbook – in 2011 INRO team (Sasha Brazinova, Walter Mauritz, Martin Rusnak, Marek Majdan and Zuzana Sklenarova) has put together a draft of a textbook titled Traumatic Brain Injury and Public Health that was submitted for publication for students at Trnava University, Slovak Republic in 2012.

March 2012: the Ninth World Congress on Brain Injury, International Brain Injury Association, Edinburgh, Scotland. INRO team actively participated.

April 2012: Central European Congress of Emergency and Disaster Medicine, Senec, Slovak Republic. INRO team actively participated.

April 2012: 17th Annual EMN Congress (Europeana Multidisciplinaria Neurotraumatologica). INRO team actively participated

July 2012, August 2012, November 2012: consortium meeting for the project proposal for European Commission's Framework Programme 7 call on Traumatic Brain Injury

October 2012: Trnava University V. Public Health Symposium: Global Issues Facing Humanity within Health and Social Well Being. INRO team actively participated.

PLAN FOR 2013

Conference participation

April 2013: Central European Congress of Emergency and Disaster Medicine, Senec, Slovak Republic. Sasha Brazinova will actively participate

May 2013: Severe Brain Trauma Symposium , Austrian Ministry of Health. Walter Mauritz will present outcomes of Prehospital project.

October 2013: INRO team will participate at Trnava University Public Health Symposium

Projects to be implemented

In 2013 we are carrying out detailed analysis of Prehospital project data, as well as comparison of the outcomes of this project with the ITCP database (database from earlier project).

INRO will participate in CENTER-TBI (Collaborative European Neurotrauma Effectiveness Research in Traumatic Brain Injury), European wide project, that was successfully awarded grant (in April 2013). The project will start in the fall 2013 and last for 7 years. The consortium is being led by prof. Andrew Maas and INRO's role will be coordination of a work package on blood coagulation.

INRO cooperates with Statistik Austria and based on their data will publish a study on all TBI mortality for Austria for 2009-2011, with detailed analysis of injury characteristics and individual factors (gender, age, mechanism and location of injury, etc). These data will be compared with situation in neighboring countries (Slovakia, Hungary).

THANK YOU FOR YOUR ATTENTION AND FOR THE CONTINUOUS SUPPORT!