

*Internationale Gesellschaft zur Erforschung von Hirntraumata
International Neurotrauma Organization*

IGEH Annual Report 2004

Vienna, Austria

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THE PRESIDENT'S ADDRESS

Johannes Orsini-Rosenberg

For those who understand the IGEH and the nature and purpose of its work, it will come as no surprise to learn that we put our hearts into everything we do. The year just past was no exception. The scientific output and other operations of the Institute continue to improve and to show the benefits of the greater productivity and efficiencies, which Walter, Martin and the team of the Institute have achieved, in recent years.

This year we have finished our four years Austrian project granted from the Austrian National Bank Jubilaem Fund. Here we achieved to establish the IGEH as new research institute in Austria being active in the field of Traumatic Brain Injuries. Our efforts in Balkan area came to the second year with significantly increased number of recorded TBI patients. We participated in number of conferences and professional meetings to disseminate our results and to create a positive momentum for our further research.

Consequently the IGEH and all its team are especially grateful to the many donors who give so generously to the IGEH, some every year, others only occasionally but all thereby ensuring that our very valuable work will continue for the benefit of the present and succeeding generations. Without you, the IGEH would not exist at all and its major contributions to the health and welfare of all Austrians and Europeans could not continue to be made.

Nevertheless, in this highly competitive scientific environment the IGEH can never afford to rest on its laurels and a very substantial number of project grant and fellowship applications are in preparation for 2005. We plan to focus on deriving new evidence from over 2.000 patient records collected over the years and share the results with professional community in Austria and abroad.

CHAIRMAN of SCIENTIFIC MEDICAL BOARD's ADDRESS

Univ.prof. Dr.Med. Walter Mauritz, Ph.D.

Dear colleagues and friends,

From my point of view, 2004 has been a very difficult year. We have seen some success, most notably with the 2001-2004 Austrian "Alfred von Auersperg" Project. This project included data from more than 500 patients from six Austrian hospitals. The "Jubiläumsfonds" of the "Österreichische Nationalbank", which was the main sponsor of the project, has accepted final reports, and also accepted the financial statements. I am quite happy to have this responsibility off my shoulders! Also the Balkan project "RESEACH-TREAT-TBI" is on a good course, and the Rijeka meeting of the project members was quite successful. We had some well-received presentations at various meetings which are listed in this report. We had some papers published, and a number of interesting weekly or bi-weekly seminars on topics ranging from "epidemiology of traumatic brain injury" to "GRID-technology" were held. Detailed evaluation of the data from the Austrian project has started, but with less speed than I had hoped for.

This was due to the fact that we lost a key member of the INRO team: Mag. Ingrid Wilbacher, RN-ICU, after obtaining her Master's degree in Social and Economical Studies from Vienna University, has left us for the "Hauptverband der Österreichischen

Sozialversicherungsträger”, where she has become a member of the “evidence-based-medicine” team. Ingrid has been the most important researcher of the Austrian project; she visited all the hospitals, entered most of the data, and provided interim analysis. Ingrid will be impossible to replace, as researchers with university training and first-hand experience with brain trauma patients as an ICU nurse are quite rare, unfortunately.

In addition to that, other researchers left to pursue their careers elsewhere: Dr Annalisa Rosso, our Italian team member and expert on epidemiology, has taken a fellowship with the “United Nations” in Cairo, Egypt, and Dr. Alexandra Brazinova, from Slovakia, went to University of California in San Francisco, USA, to do two years of training in epidemiology and statistics. Both Annalisa and Alexandra have expressed their interest in working with INRO again. At present, we are evaluating some people who might be interested to work with INRO, but it will take time until the team will be back to its old strength. But cheer up, the worst is yet to come! We spent a lot of effort to obtain a grant from the (US) “National Institute of Health” (NIH); but we failed, for reasons which had (most probably) nothing to do with the quality of the project proposal. We also tried to get a follow-up grant from the “Jubiläumsfonds”, which would have looked at the influence of the quality of care upon the outcome of intensive care patients, but this application was also turned down, with the notable argument that there are already enough studies on this topic. I have failed to find a single one, by the way.

So, 2004 was not the best of years for INRO. For this year, we plan to finish the detailed evaluation of the data from the Austrian project, and to submit a series of papers to the Austrian journal “Wiener Klinische Wochenschrift”. We developed some new algorithms which should make easier the detailed evaluation of the data from the Balkan project which is in its last year. Together with the “Arbeitsgemeinschaft für Standardisierung und Dokumentation in der Intensivmedizin” (ASDI) we are evaluating data on traumatic brain injury from their database which includes over 100.000 ICU patients. We also work on new project proposals to be submitted to NIH (again), EU, and other agencies. Hopefully, we will have more luck this year.

I would like to thank the INRO team members for their hard work, and I would also like to express my gratitude to our sponsors who keep INRO financially afloat in these difficult times. Thank you very much!

With my best regards.

Prof. Dr. Walter Mauritz

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1. IGEH / INRO

A. Members

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Prof. Petr Wendsche, M.D., CSc, spinal and trauma
surgeon, Trauma Hospital, Brno, Czech Republic

Prof. Daniel West, Jr., Professor of Health
Management, University of Scranton, USA

Prof. David Yates, Prof. of Emergency Medicine,
Department of Emergency Medicine, Salford, UK

D. Researchers

Doz. Dr.Med. Martin Rusnak, PhD, Executive Director

Dr.Med. Alexandra Brazinova, PhD, Scholar

Miss. Katharina Erb, Medical Student

Dipl. Ing. Ivan Janciak, IT Manager

Dr.Med. Johannes Leitgeb, Scholar

Dr. Lucia Lenartova, Research Fellow

Prof. Dr. Med. Walter Mauritz, PhD, Scholar

Dr.Med. Annalise Rosso, Research Fellow

Mag. Ingrid Wilbacher, Research Fellow

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F. Views

From my perspective it was great to discover through IGEH an evidence based approach to improving head injury care within Europe; with which we at TARN/EuroTARN can collaborate. I think this greatly enhances our future chances of improving patient care and reducing morbidity after head injury.

*Fiona Lecky, Univ. of Manchester, Hope Hospital,
EuroTARN Research Director*

As far as our experiences in 2004 are concerned, this project has met the expectations regarding the benefit of the treatment of severe head injured patients according to the Guidelines for the management of severe head injury. We believe that this project, when completed, will determine the main problems facing the management of severe brain injury and will offer possible variety of solutions in overcoming the encountered problems.

*Dr Bruno Splavski PhD, Head of
Neurosurgery, Hospital Osijek, Osijek, Croatia*

I believe IGEH will play a significant role and provide leadership in the future development of TBI care. Using evidence-based medicine with clinical guidelines improves patient care and treatment outcomes. We need to isolate the necessary components of TBI patient care to build continuum of care models that produce the best results. Enhancements in treating the whole person (cura personalis) necessitates that we train functional interdisciplinary teams to navigate changes in the delivery of total TBI patient care.

prof. Daniel J. West, University of Scranton, PA, USA

Cooperation between CEEN Economic Project & Policy Consulting and IGEH was established in 1991 and has subsequently developed into a robust partnership based on the solid foundations of trust and complementarity. IGEH, provider of highly professional expertise in its field, in partnership with CEEN, a well-established project management and consultation provider, combine to create unique synergies for the implementation of EuropeAid and Worldbank projects within Central and Eastern European Countries as well as the New Independent States. Our cooperation has been a source of joy, inspiration and mutual benefit; our future cooperation is thereby ensured and it is with anticipation and excitement that we look forward to upcoming joint endeavors.

*Derek Barker
Managing director of CEEN Economic Project & Policy
Consulting*

2. FORTSCHRITTSBERICHT IGEH AKTIVITÄTEN IN ÖSTERREICH IM JAHR 2004

Folgende Aktivitäten wurden durch die Internationale Gesellschaft zur Erforschung von Hirntraumata auf den Gebieten Forschung, Entwicklung und Bildung unternommen:

A. *Forschungsprojekt „Behandlungsstandards bei schwerem SHT (in Andenken an Alfred von Auersperg)“ Jubiläumsfonds-Projekt Nr. 8987*

Wie geplant wird das Projekt bis Ende Oktober 2004 abgeschlossen sein. In Summe hat das Projekt einige wesentliche wissenschaftliche Erkenntnisse gebracht, aber auch die Voraussetzungen für weitere Untersuchungen ermöglicht. Hier sind besonders zu erwähnen: Entwicklung, Test und Implementierung der Datenbank für SHT, die in den beteiligten Zentren weiter verwendet werden wird, aber auch für andere Projekte (z.B. das von der EU finanzierte "Balkan"-Projekt) verwendet werden kann. Die Datenbank ist in der Zwischenzeit nicht nur in Deutsch, sondern auch in Englisch und Italienisch verfügbar, und wird für Kooperationen und Studien in Zentren in Bosnien, Kroatien, Mazedonien, Slowakei, Tschechien, Russland und Italien verwendet. Hier ist über viele Jahre mit Ergebnissen von vergleichenden Studien, aber auch multizentrischen Untersuchungen zur Behandlung der Patienten (z.B. Arzneimittelprüfungen, etc.), zu rechnen.

Entwicklung, Test von Implementierung der internet-basierten Kommunikation zwischen den Zentren und dem zentralen Server der IGEH: Die Daten der beteiligten Zentren können – sicher verschlüsselt – via internet auf den zentralen Server eingelesen werden; dieses System erlaubt es, jederzeit den aktuellen Stand der Patienten in den beteiligten Zentren abzufragen und die Qualität der eingegebenen Daten zu überprüfen, so dass fehlende Daten rasch abgefragt und ergänzt werden können.

Entwicklung eines Scores, mit dem sich CT-Bilder vergleichen lassen: Bisher gab es keinen Score, der es ermöglicht hätte, CT-Bilder hinsichtlich Schwere und Art der Verletzung einfach zu vergleichen. Mit dem im Rahmen des Projekts entwickelten Score sollte es möglich sein, z.B. den klinischen Verlauf und die Veränderung des CT-Befunds in einfacher Weise zu korrelieren.

Etablierung einer Arbeitsgruppe: In der IGEH hat sich ein Team von Public-Health-Experten (Doz. Dr. Rusnak und StudentInnen), Soziologen (Frau Mag. Wilbacher), Unfallchirurgen und Anaesthesisten etabliert, das auch weiterhin in diesem Bereich forschend tätig sein wird. Kooperationen mit dem Institut für Medizinische Computerwissenschaft wurden über den IT-Manager des Teams (Mag. Janciak) hergestellt.

B. Anbahnung neuer Projektentwicklung

Das Bundesministerium für Bildung, Wissenschaft und Kultur gewährt Unterstützung zur Entwicklung eines Projektantrags für das EU 6th Framework Program: "Provision of Instant Scientific Evidence for Professionals Treating Patients with Neurotrauma ISE-NEURO". Das Projekt war in Kooperation mit der Universität Wien, Institut für Softwarewissenschaft, entwickelt. Allerdings wurde es im Endeffekt nicht gefördert.

C. *Einfluss der Pflegequalität auf das Ergebnis der Intensiv-Behandlung*

In diesem Projekt soll der Einfluss der Pflege auf den Outcome der Patienten objektiv gemessen werden. Bei den bisherigen Untersuchungen der IGEH über Patienten mit schwerem Schädel-Hirn-Trauma ist der Eindruck entstanden, dass die Pflege auf der Intensivstation einen wesentlichen Beitrag zum guten Outcome der Patienten leisten kann. Ziele sind: a) Definition von Faktoren, die Pflegequalität (Prozess, Struktur- und Ergebnisqualität) objektiv messbar machen, und b) Korrelation dieser Faktoren mit dem Behandlungsergebnis von Intensivpatienten verschiedener Stationen.

Untersucht werden sollen quantitative Daten aus österreichischen operativen Intensivstationen, wobei die Qualität der Pflege (Kriterien: Personal, verbrauchte Ressourcen pro Jahr, Arbeitsbelastung und Pflegestruktur) mit Patientendaten korreliert werden soll. Zur Datenanalyse werden multivariate statistische Methoden herangezogen.

Damit soll überprüft werden, ob, wie und in welcher Weise der Outcome der Patienten über Veränderungen im Bereich der Pflegequalität beeinflusst wird.

Der Untersuchungszeitraum wird drei Jahre betragen, in denen laufend Kontakt zu den teilnehmenden Zentren gehalten wird. In Anlehnung an den erwähnten von uns in unseren anderen Projekten vermuteten Zusammenhang zwischen Pflegemanagement und Qualität des Outcomes der Patienten sollen Faktoren gefunden werden, die diese Beobachtung beweisbar und messbar machen.

D. *Forschungsprojekt betreffend die Reduzierung der Sterblichkeit und Langzeit-Behinderung von Schädelhirn Trauma-Opfern durch die Erforschung von Behandlungsmethoden in Bosnien- Herzegovina, Mazedonien und Kroatien.*

Projektbeginn dieser Arbeit war Jänner 2003. Im zweiten Jahr des Projektes wurden ca. 400 Fälle von Patienten aufgezeichnet. Bei einem Treffen in Rijeka entschieden die Teilnehmer über eine Analysestruktur der gesammelten Daten und über die Strategieoptionen betreffend einer Implementierung der Richtlinien in allen teilnehmenden Staaten.

E. Strategischer, wissenschaftlicher Workshop: Wissenschaftlicher fakten-basierter Ansatz zum Management von Patienten mit schweren Schädel-Hirn-Traumata

Begutachtungsphase, betreffende Entscheidungen daher noch ausständig.

Ein eintägiger Workshop wurde in den Räumlichkeiten der IGEH abgehalten und von sieben Traumata-Spezialisten von drei NIS-Staaten (Georgien, Armenien, Russland) besucht. Den Teilnehmern des Treffens wurde die Methodologie der fakten-basierten Medizin und ihrer Anwendung zur Vermeidung von Komplikationen bei einer sekundären Gehirnverletzung nähergebracht. Die Anwesenden erhielten eine Einführung in und diskutierten über Richtlinien und Behandlungsberichte betreffend eines vor-stationärem und stationärem Management von schweren Schädel-Hirn-Traumata-Patienten. Weiters besuchten die Traumata-Spezialisten die führende Traumata-Behandlungstätte Wiens, das Lorenz Böhler Unfallkrankenhaus. Ebenfalls besucht wurde die 7. Konferenz „Injury Prevention and Safety Promotion“ in Wien.

F. Pflege, Entwicklung und Promotion des ISS Hospital Surveys in der erweiterten EU (ISS DATA)

Das Ziel dieses, vom EU “Public Health Program” geförderten Projektes, ist die Promotion und Weiterverbreitung des ISS (Injury Surveillance System) in den alten und speziell auch in den neuen EU-Mitgliedsstaaten. Das Projekt versucht weiters eine exakte und einwandfreie Datensammlung zu garantieren und ist eine Fortsetzung und Weiterentwicklung des IPP Status (Injury Prevention Program 1999-2003). Es wird ausserdem eine Erweiterung der ISS-Erhebung zu allen Verletzungen, inkludierend vorsätzlicher Verletzungen, angestrebt. Letztendlich wird eine Weiterverbreitung und Ausweitung der ISS-Erhebung in so vielen alten und neuen Mitgliedsländern wie möglich anvisiert. Die Rolle der IGEH dabei ist ein Erfahrungsaustausch mit internationalen Netzwerken und Internet-Datenbanken auf dem Gebiet. Die geplante Projektdauer sind 2 Jahre.

G. ITCP Datenbank Aktualisierung

Die Datenbank wurde einer Zusammenführung und technischen Verbesserung unterzogen und in neuer Version (1.3.1) in allen teilnehmenden Zentren, die mit der IGEH an dem Projekt zusammenarbeiten, installiert.

H. Weitere Aktivitäten

Vier neue Projektkonzepte wurden entwickelt und bei österreichischen und internationalen Förderorganisationen beantragt. Einige davon sind noch in der

3. SUMMARY of ACTIVITIES

IGEH team in its **fifth year of existence** focused on enhancing activities within Austria with a goal to improve the understanding of national situation in care for TBI patients. During series of seminars the IGEH team has discussed overall situation, analyzed collected evidence and started to prepare a series of papers for Austrian audience. The team worked hard to secure more funding from national as well as international sources, too. Number of project proposals was developed in close cooperation with cooperating organizations in Austria, USA, Netherlands, Croatia, and Italy. This will hopefully result in more activities next year, securing thus the position of IGEH in the world of TBI research and development. ITCP was continued in number of centers and number of collected patients was significantly increased. Activities were centered on increasing quality of data and in increasing the compliance with TBI guidelines. Interim analysis of collected data was performed for data from Austria and Balkan.

New projects were executed. IGEH was asked to join **EU project on injuries prevention**. A grant from the **INTAS** was received to host a workshop for colleagues from Russia, Georgia and Armenia. IGEH joined the **EUROTARN** network on trauma quality of care. Couple of proposals for new projects were developed, among them a project submitted to National Institutes of Health for a Fogarty project in Croatia. New project for a cooperation in TBI research with Russia was developed and submitted for funding to EU. Clinical trial based on the guidelines and the ITCP database was outlined for **EBEWE** company. A project on researching effects of trauma systems in Austria was proposed for funding to Austrian National Bank. Finally a project on researching the collected data was submitted to private donor.

Number of ITCP (IGEH database) collected TBI patients records has exceeded **one thousand** during the last month of the year. All together the IGEH has a data set of over 2.400 records in three different databases. Although **the team** is composed from professionals of different backgrounds, the cooperation of medical doctors, public health, sociologist and IT experts proved to be mutually beneficial. Several members started postgraduate doctoral education (PhD) in the field of public health or traumatology. Close collaboration is maintained with Universities in Manchester (UK), Ancona (I), Brno (CZ), Trnava (SK), Osijek and Zagreb (HR), and Scranton (USA).

Underlining the need to utilize the effect of intensive data collection in previous years much effort was focused on **publication of results**. The first step was done this year by extensive participation on national (Austrian) and international conferences and meetings. This has served as a test bed for the quality of our work and also to establish the IGEH as solid research institute in Europe and worldwide.

4. PROJECTS and RESEARCH ACTIVITIES

A. *Balkan TBI: Bosnia-Herzegovina, Macedonia and Croatia, European Union, 5th FP -Copernicus 2002- 2005*

During the second year of the project activities carried out were oriented to implement the objectives of the Project. The second year of the project was launched after a workshop that took place in Bratislava in November 2003, where evidence based guidelines on the management of severe TBI were introduced to participating centers. The guidelines contained scientific indications for the management of severe TBI, including recommendations on Trauma Systems' structure, initial management of TBI victims, resuscitation of blood pressure and oxygenation, indications for Intracranial and Cerebral Perfusion Pressures management, the use of hyperventilation, and indications on the use of medicaments such as mannitol, barbiturates, steroids and antiseizure prophylaxis. Each participating center started implementing the guidelines under the supervision of the project contact person. Continuous contact between the centers and the coordinator was kept in order to help the centers in adopting the new standards, and consultations were provided when needed.

In June 2004 a meeting of all participating institutions was organized in Rijeka, where difficulties experienced with guidelines implementation were discussed. Each center exposed local problems which limited the possibility of following the recommendations. Possible solutions to overcome those problems were discussed with the coordinator.

Retrospective data collection using ITCP database was continued by centers, covering the years 2002 and 2003. Furthermore, prospective collection of new cases admitted in 2004 was started. The collection of data regarding the long term outcome of registered cases was started; every center autonomously decided the method used to obtain data.

All entered material was sent to the central server, based in the coordinating organization. Regular maintenance of data (back-ups, copying, antivirus protection, reporting) was provided by IGEH staff. Regular reports were sent to the centers informing them on the current status of data collection. Data quality assurance of all recorded material was performed in June 2004 by IGEH staff. All information entered into the database before June 2004 was reviewed, and all erroneous and missing data were identified. The most frequent missing and errors were presented to all participants of the meeting in Rijeka. Furthermore, every representative received a detailed list of incomplete data from its center. Problems met in data collection and possible solutions were discussed with the coordinator.

Interim analysis were performed on collected data, focusing on the description of TBI epidemics in the centers. As the first step basic data cleaning was performed. The second step was to convert all measurements to common SI units. Data were analyzed

using built in Excel functions as well as XLSTAT statistical package.

Participating centers were asked to make suggestions on the hypothesis to be tested to facilitate an introduction to the next phase of the project, which will be the data analysis. The goals of the analysis were defined, and research hypothesis to better understand the factors improving the outcome of TBI were formulated during the meeting in Rijeka.

B. Austrian TBI (In memory of Alfred von Auersperg) 2001 – 2004

The project activities were officially finished in October 2004 by final report submitted to Austrian National Bank. In general the project has reached planned scientific goals as well as opened number of issues for further research. Following major areas were addressed:

Development, verification and implementation of specific TBI database ITCP. It was used by the centers of the study but also in other projects of IGEH. The database interface is in different languages, such as English and German, additional language mutations are feasible, too. The data collected provide enough material to continue several years of studies.

Development, verification and implementation of communication system among centers and the central server based on internet. Data from individual centers were coded and sent to the central database without individual personal data. The system allowed for monitoring of patients and to evaluate quality of care provided. Newly developed CT scoring system facilitates evaluation of extent and kind of injury. The scores are ready to be used in clinical settings and will make further research easier.

Within the IGEH a team of Public Health Experts (Doz. Dr. Rusnak and his students), Sociologists (Mag. Wilbacher), Trauma Surgeons and Anesthesiologists was established. The team will continue the research in this field.

C. ITCP Database

The database underwent comprehensive evaluation and it is being used in all the centers of IGEH collaboration. By the end of the year the database comprised over 1.000 cases of severe TBI patients, monitored up to one year, making it one of the biggest data file suitable for further research. The team aims to elucidate factors influencing health outcome, such as TBI distribution within a geographic area, systematic aspects of quality of care, physiological, clinical, biochemical, CT findings, intensive management, nursing care, etc. The database opens up opportunities for more external PhD fellows to study those aspects.

D. Strategic Scientific Workshop: Scientific Evidence Based Approach to the Management of Patients with Severe Traumatic Brain Injury

The project was sponsored from INTAS (an independent International Association formed by the European Community, European Union's Member States and like minded countries acting to promote the valuable scientific potential of the NIS partner countries and to support east-west scientific co-operation). The grant was used to support a Strategic Scientific Workshop as well as to facilitate participation of trauma specialists from NIS at the international conference, both in the area of traumatic brain injuries management. One day scientific workshop labeled as above was held at IGEH and was attended by 7 trauma specialists from 3 NIS countries (Georgia, Armenia, and Russia). The participants of the meeting got acquainted with methodology of Evidence Based Medicine and its application to the prevention of complications stemming from secondary brain injuries. They were introduced into and discussed guidelines and treatment protocols on prehospital and hospital management of TBI patients. The concept of outcome research for quality assurance in TBI care was introduced and demonstrated on practical examples. Different trauma systems in Europe were presented and consequences discussed. The situation in TBI in Europe and NIS countries was reviewed with respect to epidemiology and treatment modalities. Surgical and intensive care approaches to TBI management were presented and discussed. Participants visited the leading trauma care facility in Vienna. They participated at the 7th Conference on Injury Prevention and Safety Promotion.

E. Maintenance, Development and Promotion of the ISS Hospital Survey in the current and enlarged EU (ISS DATA)

The project funded by EU Public Health Program aims to outreach the ISS (Injury Surveillance System) to all current and new member countries. It plans to ensure proper data-collection for the ISS (formerly EHLASS) - as a continuation and further development of the IPP status (Injury Prevention Program 1999-2003). It is also expected to extend the ISS survey to all injuries, including intentional injuries. And finally to expand the ISS survey to as many old and new Member States as possible. The role of IGEH is to share experiences with international networks and Internet databases. The project is planned for 2 years.

5. PUBLICATIONS

The team focused on collecting peers reflections through number of conferences and meetings in Austria and abroad. That concept proved its value prior to publishing results in peer reviewed, recognized journals. The result is a number of abstracts, some of them published in full format within conference proceedings:

Rusnak, M., Janciak, I., Brazinova, A., Mauritz, W., Project Research Team (Dr. Miroslav Vukic, Dr. Bruno Splavski, Dr. Dean Giroto, Dr. Kemal Dizdarevic, Dr. Maria Soljakova): *Epidemic and Clinical Characteristics of TBI situation in three Balkan countries: case study of Croatia, Macedonia and Bosnia*. Proceedings of the 7th World Conference on Injury Prevention and Safety Promotion, Wien, June 06th – 09th, 2004.

Leitgeb J., Lenartova L., Dado P., Mauritz W., Rusnak M., Vécsei V.: *Trauma systems in Middle Europe*. 6th European Trauma Congress, Prague, 16-19 May, 2004

Martin Rusnak, Walter Mauritz, Ivan Janciak, Ingrid Wilbacher, Alexandra Brazinova, and Traumatic Brain Injury Study: *Epidemic of Severe TBI in Selected Regions of Austria and Balkan*. Proceedings of the third International Conference on Healthcare Systems, Charleston, West Virginia, USA, October 14-17, 2004

Doc. MUDr. Martin Rusnák, CSc a prof. Dr. Med. Walter Mauritz: *Kvalita zdravotníckej starostlivosti a znalostná medicína. Klinická epidemiológia ťažkých úrazov mozgu. Červenkové dni preventívnej medicíny*, Banská Bystrica, Slovak Republic, June 2004

Wilbacher I., Brazinova A., Janciak I., Leitgeb J., Lenartova L., Mauritz W., Rosso A., Rusnak M.: *Brain Injury – a short Epidemiology of TBI and presentation of a new European database*. Proceedings of the 11th International Mondsee Medical Meeting, Unterach, Austria, September 9–12, 2004

Rusnak M., Brazinova A., Janciak I., Leitgeb J., Lenartova L., Mauritz W., Rosso A., Wilbacher I.: *Perspectives on Guidelines and Standards. Do They Make a Difference in Outcomes?* Proceedings of the 11th International Mondsee Medical Meeting, Unterach, Austria, September 9–12, 2004

A. Rosso: *TBI mortality studies: a problem of classification*. Working Paper, WP-04-01, IGEH, October 2004

6. APPLICATIONS for NEW PROJECTS

As in previous years the team developed couple of applications. Given the complexity of proposals we have limited our efforts to those, where major outreach and impact could have been expected.

A. Evidence Based Quality Improvement in TBI Care in Croatia

Research project submitted by the University of Scranton, Pennsylvania and IGEH to the Dpt. of Health and Human Services for funding. The project utilizes a collaborative, multinational team approach to improve the quality of TBI care in Croatia. The primary objective is to promote low cost improvements in facility based TBI care based on scientific evidence and research. Specific long-term research-training objectives include: a) strengthening research capacities of scientists, health professionals; b) building interdisciplinary research teams; c) implementing CQI methods in TBI treatment using research to measure effects; d) developing educational materials, curricula and research experiences to support the implementation of evidence based TBI guidelines; providing training in health care ethics, law, economics, finance and policy; e) developing a TBI database; f) expanding scholarly research, teaching and service in TBI care; g) expanding collaboration and cooperation between developing and developed countries, scientists and health professionals; and h) instituting short term, long term and academic training programs.

The project was not approved. New application will be submitted next year.

B. Austrian National Bank – Jubiläum Projekt: „Einfluss der Pflegequalität auf das Ergebnis der Intensiv-Behandlung“

The aims of the project are to define factors which would allow for objective measurement of quality of nursing management in intensive care for trauma patients. That would facilitate possibilities to increase the quality providing well defined benchmarking among the units. The project was not approved.

C. Strengthening the Role of Neurotrophic Treatment in Standardized Care for Traumatic Brain Injury

Primary goal of the study was to demonstrate effects of treatment with Cerebrolysin® versus treatment with a placebo and to quantify them in early and late outcome after severe TBI. To ensure correct results a randomized, double-blind and placebo controlled trial was recommended under conditions of controlled variation of

treatment based on TBI Guidelines. The projected venue was Russia: Moscow and Chelyabinsk.

The project application was not successful.

D. Assessment of Trauma Epidemics and its Burden on Societies in Russia and NIS

The project was submitted for funding to the EU FP6 INCO call for proposals specific program: Integrating and Strengthening the European Research Area. The project comprises epidemiological and demographical investigations into the long-term trends of trauma in Russia & NIS (Russian Federation, Georgia, Armenia) and its socio-economic consequences; these are of particular pertinence in transition economies - research indicates that there will be a significant upward trend in incidence rates in developing countries; cases of serious trauma are very likely to increase, and the socio-economic costs are very significant and need to be planned for and ameliorated. ATEB will collate baseline statistics; install tailor-made software at the 7 participant centers; train staff at centers; collect and analyze data over the project duration of 34 months; arrange networking events; and disseminate outcomes. The results of the ATEB project will include an elaboration of National Strategy for preventative government programs. Dissemination of the project results will be made through wide publicity of the final workshop. The participation of media and the policy makers will be ensured to promote the take up of the conclusions and recommendations. To strengthen the proposals, possibilities for improving the cost effectiveness and efficiency in the treatment of the trauma patients will be presented in a clear and convincing case in dissemination material.

The proposal was not selected for funding.

7. PRIORITIES for the YEAR 2005

Next year activities will be oriented to:

- A. Continue the Balkan project and other projects as grants will be allocated;
- B. Publish series of papers in European journal(s), participate at international conferences and meetings;
- C. Develop new version of ITCP database;
- D. Apply for new Austrian grant;
- E. Renew the application for a grant from NIH;
- F. Apply for new INTAS grant for a cooperation with New Independent States (Russia and Georgia);
- G. Strengthen IGEH team cooperation with other European and US teams.