



International Hypothermia Registry





International Hypothermia Registry

1. Need for a registry
2. Aim
3. Method
4. Expectations





1. NEED FOR A REGISTRY

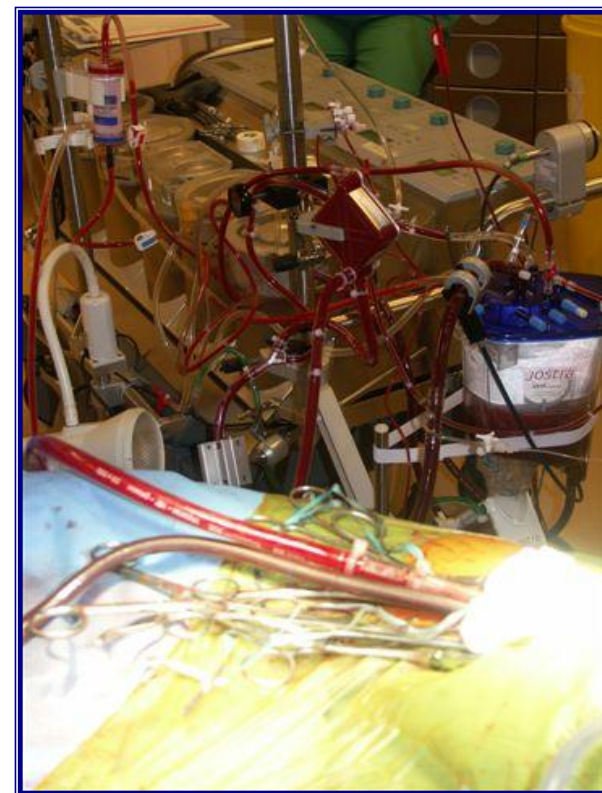
- « Survival after accidental deep hypothermia and prolonged cardiac arrest is **rare**...however, long term survival rates without sequelae of **47%** is higher than previously reported » ***NEJM Walpoth et al 1997***
- No consensus national/international guidelines for hypothermia treatment
- Insufficient medical literature, no case reports on negative outcomes





2. AIMS

- Create a database on accidental hypothermia to:
 - ⌘ Study pre-hospital treatments and their impact on outcome
 - ⌘ Increase our knowledge on impact and complications of rewarming techniques.
 - ⌘ Prevent and decrease severity of post-rewarming complications (i.e. lung and brain oedema)





3. Method

- Internet-based English survey, protected anonymous data
- Eligibility: all interested hospitals/rescue centres
- Includes:
 - victims with core body $T^{\circ} < 32^{\circ}\text{C}$, preference for $T^{\circ} < 28^{\circ}\text{C}$ with cardiac arrest.
 - accidental hypothermia of any origin (exposure/avalanche/immersion/suicide attempt...)
- Registry components:
 - Anonymous patient data
 - Accident data
 - Prehospital treatment
 - Hospital treatment, rewarming method, clinical and laboratory data
 - Post-rewarming complications
 - Outcome
- Data access and publication possible for your own cases
- Global data analysis by the International Working Group on Accidental Hypothermia (IWAH)
- Quality control reports on a yearly basis



Access Rights definition

Access levels:

i) Case editor:

May enter cases in a given centre, may only access or modify his/her own cases (entered under the same login/password).

Viewing or modification of other cases in the centre or registry is not possible.

ii) Centre reviewer:

May only see cases entered by one given centre, no data modification possible no case entry possible.

Suitable for data studying.

iii) Centre supervisor:



May enter cases , may access or modify data of all the cases entered his/her centre.

Has access to names and birthdates, in order to facilitate hospital file retrieval and differed case entry.

iv) Registry supervisor:

May enter cases, may access or modify data of all the cases in the registry.





International Hypothermia Registry
IHR
IHR Prehospitalisation

Philippe Baumann connected since 09:10 until 10:11
IHR local data manager / center of Geneva
Patient : [PATIENT 17 Patient 17 \(M\)](#) N° : 80000342
Stored consent

Accident Features **Medical Features**

Accident Features

Accident Date Accident Time Hours Minutes

Type of accident -- Water Alpine Urban/Rural

Water

Context of accident (water) -- Immersion Submersion

Temperature (water) known -- Unknown Known Température (water) [C°]

Time in water (water) -- Unknown Known Time in water Days Hours Minutes

Rescue

Rescue on site by Companions/Self -- First on site Second on site

Rescue on site by Paramedics -- First on site Second on site

Rescue on site by Physician -- First on site Second on site Name Organization City


Medicated rescue arrival date Hours Minutes

Interval between accident and rescue 16 (days) 16 (hours) 3 (minutes)





HUG
International Hypothermia
Registry
IHR
IHR Hospitalisation



IHR

Save

Save and Close

Cancel

Philippe Baumann connected since 09:10 until 10:14 Quit

IHR local data manager / center of Geneva

Patient: **PATIENT 17 Patient 17 (M)** N°: 80000342 Change

Stored consent: Patient consent given

Pre-rewarming management of the patient
Data on rewarming
Intensive Care after Rewarming
Comments

Arrival time at rewarming hospital

Arrival time at rewarming hospital Date: Hours: Minutes:

Neurologic evaluation

Arrival hospital Glasgow -- Possible Impossible Glasgow score : O: 2 V: 3 M: 3 --Tot: 8

Global Glasgow Score

Eye opening -- None To pain To speech Spontaneous

Verbal response -- None Incomprehensible Inappropriate Confused Oriented

Motor response -- None Extension Flexor response Withdrawal from pain Localizes pain Obeys commands

Left pupil		Right pupil	
Reactive to light	<input checked="" type="radio"/> -- <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	Reactive to light	<input checked="" type="radio"/> -- <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Size	<input checked="" type="radio"/> -- <input type="radio"/> Normal <input type="radio"/> Mydriasis <input type="radio"/> Miosis <input type="radio"/> Unknown	Size	<input checked="" type="radio"/> -- <input type="radio"/> Normal <input type="radio"/> Mydriasis <input type="radio"/> Miosis <input type="radio"/> Unknown

Core T° determined at hospital admission

Core T° -- Unknown Known

Shivering present -- Yes No

ECG

ECG recordings

Circulation

Defibrillation -- Yes No Unknown

Cardiovascular arrest -- Yes No Unknown

Systolic blood pressure [mmHg] Diastolic blood pressure [mmHg] Heart rate [/min]

Major concomitant trauma	Major concomitant disease	Major concomitant intoxication
<input checked="" type="radio"/> -- <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	<input checked="" type="radio"/> -- <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	<input checked="" type="radio"/> -- <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown

Drug administration

Drug administration -- Yes No Unknown

Drug	Dose	Unit	How many times	Drug response	Other drug
General anaesthetics: narcotics or sedatives	123	mg	4	Yes	

Fluid replacement


Fluid replacement -- Yes No Unknown

Fluid replacement volume [ml] Warmed -- Yes No Unknown Temperature [C°]


Airway rewarming

Airway rewarming -- Yes No Unknown





International Hypothermia Registry
IHR
IHR Outcome



Philippe Baumann connected since 09:10 until 10:14

IHR local data manager / center of Geneva

Patient : **PATIENT 17 Patient 17 (M)** N° : 80000342

Stored consent **Patient consent given**

Outcome at 1 year

Comments

Outcome assesment date

Outcome assessment date

Consent status

Patient's consent given -- Yes No Patient consent given

Time spent in hospital/rehabilitation after ICU

Time spent in hospital/rehabilitation after ICU -- Yes No Unknown

Alive after 1 year

Alive after 1 year -- Yes No Unknown

Neurologic evaluation

Outcome Glasgow -- Unknown Known Glasgow score : O: 0 V: 0 M: 0 --Tot: 0

Long term complications

Neurological : CNS long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Neurological : PNS long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Cardiac long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Pulmonary long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Digestive long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Renal long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Metabolic long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Musculoskeletal long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable
Other long term complications	<input checked="" type="radio"/> -- <input type="radio"/> Had none <input type="radio"/> Improvement <input type="radio"/> Stable <input type="radio"/> Deterioration <input type="radio"/> Unavailable



REGISTRATION FORM

International Hypothermia Registry (IHR)
<https://www.hypothermia-registry.org>

First name: _____ Surname: _____
Title: _____
Position in the institution: _____
Institution _____
Address: _____
Town: _____ Postcode: _____
Country: _____
Tel. _____ Fax: _____
(including country code)
e-mail: _____
Institution web-site: _____ Date: _____

Interest / involvement in accidental hypothermia treatment.

Please choose one or more:

- Pre-hospital care (e.g. rescue team)
- In-hospital care (e.g. rewarming / ICU)
- Post-hospital rehabilitation / outcome
- Induced / therapeutic hypothermia
- Fundamental research on hypothermia
- Other (please detail): _____

How many cases of accidental hypothermia do you treat yearly? :

Please indicate:

- | | |
|---|--|
| Type of etiology: | Type of rewarming: |
| <input type="checkbox"/> Alpine | <input type="checkbox"/> Non-invasive |
| <input type="checkbox"/> Sea | <input type="checkbox"/> CPB |
| <input type="checkbox"/> Urban | <input type="checkbox"/> ECMO |
| <input type="checkbox"/> Other (please detail): _____ | <input type="checkbox"/> Other (please details): _____ |

Comment: _____



4. Expectations

- International awareness on hypothermia, its treatment and outcome
- Wide international participation for at least 10 years
- Multicentre quality control
- Creation of international consensus guidelines for:
 - ❧ prehospital management
 - ❧ rewarming
 - ❧ post rewarming management

International Hypothermia Registry (IHR)

<https://www.hypothermia-registry.org>



Improving
hypothermia
prevention,
rescue,
treatment,
outcome



Supported by:



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Thank you for your interest and participation



The IHR is working
Please register
Enter your patients
regardless of outcome

<https://www.hypothermia-registry.org>





3rd International Symposium on Accidental Hypothermia

Tromsø Sept. 1st and 2nd 2011
Pre Tour to Spitsbergen

Can we agree on national guidelines?

Dear Colleagues

The Organizing Committee cordially invites you to participate in the 3rd International Symposium on Accidental Hypothermia in Tromsø, Norway - "The Port to The Arctic".

This Symposium is organized every second year by leading European universities involved in research and treatment of victims of accidental hypothermia.

The goal of this 3rd International Symposium is to further explore current controversies in the "chain of survival" and care for the hypothermia victim and hopefully reach consensus on some of these topics.

This meeting place is also aimed at coordinating ongoing research and share clinical experience as well as preventive and educational efforts.

High North Research Centre for Climate and the Environment (The "Fram Centre"), Tromsø

Organizers

Institute of Clinical Medicine, University of Tromsø, and University Hospital of North Norway (Clinics of Anaesthesia and Intensive Care, Cardio-Thoracic Surgery, Emergency Medicine)

Organizing committee

Torkjel Tveita, Mads Gilbert, Arne Skagseth, Lars Bjertnæs, Truls Myrmed, Kristian Bartnes, Kristine Wærhaug, Torvind Næsheim

International Advisory Board

Hermann Brugger, Giuseppe Faggian, Beat Walpoth, Gary C Sieck, Fidel Elsensohn

Poster submission deadline, June 30th



PRELIMINARY PROGRAMME

Thursday Sept 1st 2011

Welcoming Opening Ceremony

Mayor of Tromsø
Rector/UIT
Sami Cultural welcome

"The Survivors" of accidental hypothermia: a tale of the extreme: "Varg" experience

The big picture: Challenges in the sub-arctic North

Occupational hazards
Fisheries (Case presentation)
Offshore (Risk assessment) me
Mass Tourism (Case: Maxim Gorliy)
Outdoor activities (mountain, sea)

Prevention better than cure: but what strategies?

Systematic mandatory training: national safety training for fishermen - does it work?
Systematic voluntary training: can we change behaviour?
Protective gears: industry vs science?
Insurance, legislations, punishments: any effects?

Lunch with poster presentations

Prehospital strategies in remote areas: when to keep going - when to surrender?

ILCOR 2010 guidelines - what have changed?
How to organize "The hypothermia chain of survival"?
The Northern-Norwegian experience
The Swedish experience
The Finnish experience
The Danish Experience: Mass accidental hypothermia anno 2011

National prehospital protocols needed: a case for quality assurance

Four tales of immersion hypothermia: what went wrong?
Do we need national/international prehospital guidelines?
Pro/Con

How can we handle major accidental hypothermia with larger numbers of unconscious victims?

The Norwegian model: Field trip

Prevention: Visit to Regional Safety Training Center (Havarivernsenteret)
Rescue: Visit to UNN- Air ambulance base
Cure: Visit to University Hospital (AMK/Emergency/OR/ICU)

Welcome party

Friday Sept 2nd 2011

Brief sum-up of day one: how to reduce numbers and optimize victims' pre-hospital condition

New knowledge

Laboratory research in hypothermia: What's new?
Circulatory aspects
Metabolic aspects
Cooling/rewarming aspects
Micro aspects
Clinical evidence: what's new?
What did we learn from 10 years of therapeutic hypothermia after cardiac arrest?

Lunch with poster presentations

In-hospital treatment strategies
Guidelines 2010 (AHA/ERC/ILCOR): What's new?
Resuscitation protocols: drugs and fluids - or not?
Rewarming protocols: any conclusions?
Post-rewarming periods: key challenges
Long term results: the price to survive?

International Hypothermia Registry

What can we learn through shared experience?

Round table discussion: The way forward

Closing remarks



www.hypothermia.no

Thank you for your interest and participation



<https://www.hypothermia-registry.org>