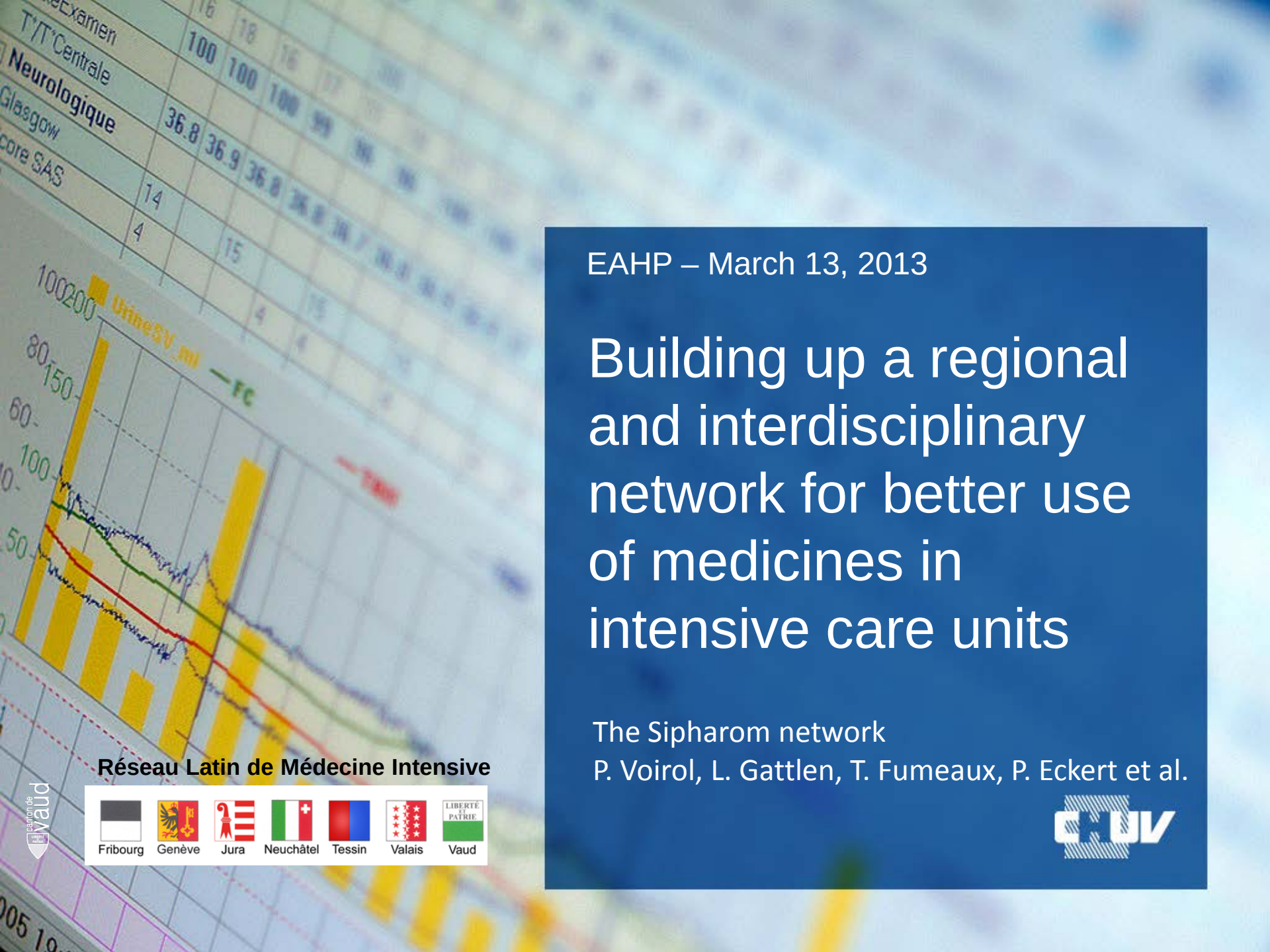


EAHP – March 13, 2013

Building up a regional and interdisciplinary network for better use of medicines in intensive care units

The Sipharom network
P. Voirol, L. Gattlen, T. Fumeaux, P. Eckert et al.

Réseau Latin de Médecine Intensive

Fribourg Genève Jura Neuchâtel Tessin Valais Vaud

Background

Clinical pharmacy in intensive care units (ICUs) showed beneficial effects on safety and economics.

The set up of a regional network including pharmacists, physicians and nurses of all ICUs seemed useful for the following reasons:

- Issues regarding medication use in ICU are similar in all hospitals.

- Patients are often transferred from a tertiary care hospital to a secondary one or vice versa.

- Health care givers move from a hospital to another one during their career

In 2007, an interdisciplinary group, **Sipharom**, was set up in order to create a network in the French and Italian speaking parts of Switzerland.

Projet Purpose

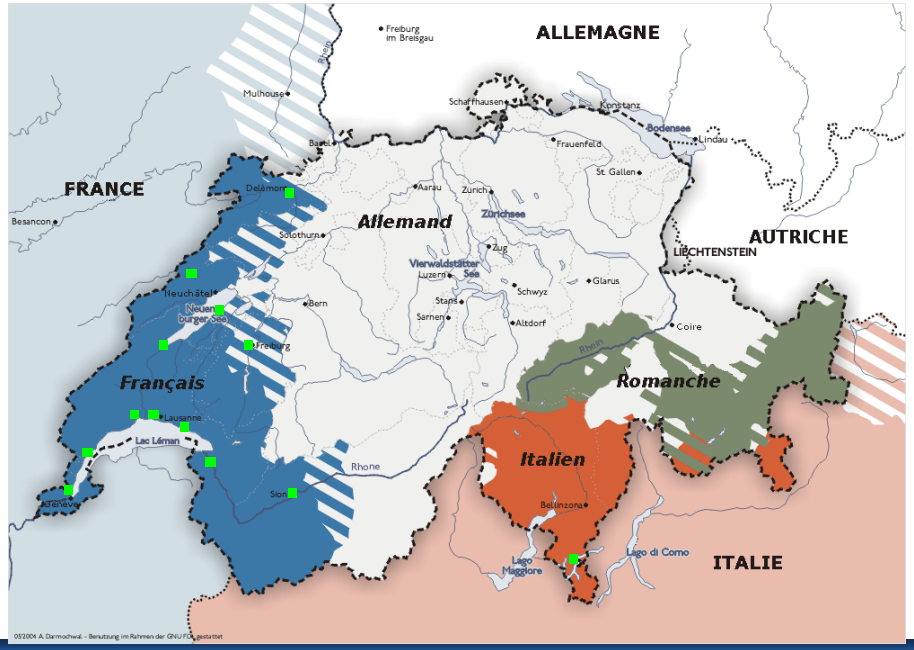
The goals of the project are:

- exchange of data on drug administration in ICUs
- sharing of knowledge and skills
- establishing standards for the administration of drugs

Materials and Methods

Sipharom involves now 13 hospitals. Each is supposed to be represented by an ICU physician, an ICU nurse and a clinical pharmacist.

The group meets twice a year. Then, each member has to implement the decisions in his/her hospital.



Evolution

2007	Creation of Sipharom (5 centres)
2007-2012	Integration of new sites
2010	Integration of Sipharom as a unit of a medical network of all ICUs of the French- and Italian-speaking parts of Switzerland (RLMI)
2012	Most of the 13 sites members of Sipharom are represented by a physician, a nurse and a pharmacist.

Results

Four main axes have been developed :

1. Harmonisation of the dilution and preparation of intravenous drugs
2. Harmonisation of the labelling of syringes
3. Exchange of critical data
4. Drafting of joint guidelines

1. Harmonisation of the dilution and preparation of intravenous drugs

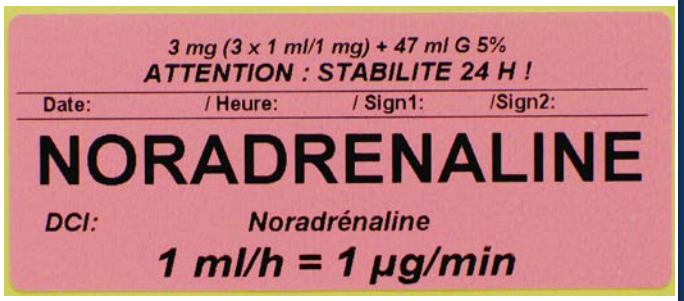
52 standard dilutions have been defined.
Negotiations with industries in order to obtain ready-to-use preparations at the defined dilutions.

Brand Name	Generic name	DECISION OF SIPHAROM
ACTRAPID	Insuline	0,5 ml = 50 UI + Dextrose 5 % or NaCl 0,9% ad 50 ml. 1 ml/h = 1 UI/h.
ADALAT	Nifedipine	5 mg (1 x 50 ml/5 mg), PURE
ADRENALINE	Epinephrine	15 mg (1,5 x 10 ml/10 mg) + 35 ml Dextrose 5% 1 ml/h = 5 µg/min
ADRENALINE	Epinephrine	3 mg (3 x 1 ml/1 mg) + 47 ml NaCl 0.9% 1 ml/h = 1 mcg/min
AGGRASTAT	Tirofiban	12.5 mg (1 Flex de 250 ml), PURE 1 ml/h = 50 µg/h
CATAPRESAN	Clonidine	2amp.=300mcg=2ml + 22ml NaCl 0.9% 1ml=12.5 mcg (300mcg/24h=1ml/h)

2. Harmonisation of the labelling of syringes

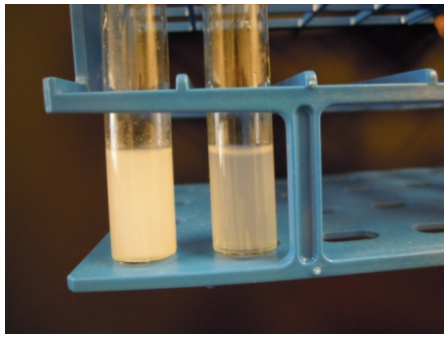
Definition of the minimal list of elements that labels have to include (based on the available international guidelines and norms - ISO 26825).

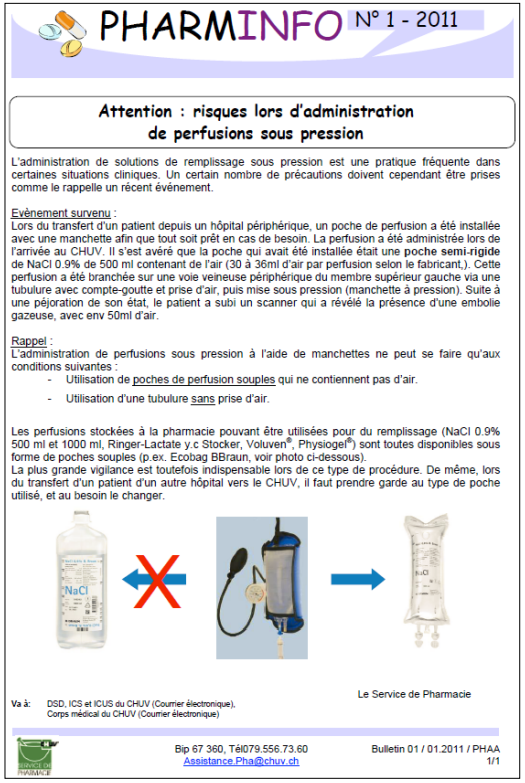
1. Preparation / Dilution
2. Highly relevant information (e.g. limited stability / To be protected from light)
3. Date / Time of preparation / signature(s)
4. Brand name
5. Generic name
6. Dose-speed of perfusion



3. Exchange of critical data

Messages of alerts, problems of stability or of physico-chemical compatibilities





PHARMINFO N° 1 - 2011

Attention : risques lors d'administration de perfusions sous pression

L'administration de solutions de remplissage sous pression est une pratique fréquente dans certaines situations cliniques. Un certain nombre de précautions doivent cependant être prises comme le rappelle un récent événement.

Evénement survenu :
Lors du transfert d'un patient depuis un hôpital périphérique, un poche de perfusion a été installée avec une manchette afin que tout soit prêt en cas de besoin. La perfusion a été administrée lors de l'arrivée au CHUV. Il s'est avéré que la poche qui avait été installée était une **poche semi-rigide** de NaCl 0.9% de 500 ml contenant de l'air (30 à 36ml d'air par perfusion selon le fabricant,). Cette perfusion a été branchée sur une voie veineuse périphérique du membre supérieur gauche via une tubulure avec compte-goutte et prise d'air, puis mise sous pression (manchette à pression). Suite à une péjoration de son état, le patient a subi un scanner qui a révélé la présence d'une embolie gazeuse, avec env 50ml d'air.

Rappel :
L'administration de perfusions sous pression à l'aide de manchettes ne peut se faire qu'aux conditions suivantes :

- Utilisation de poches de perfusion souples qui ne contiennent pas d'air.
- Utilisation d'une tubulure sans prise d'air.

Les perfusions stockées à la pharmacie pouvant être utilisées pour du remplissage (NaCl 0.9% 500 ml et 1000 ml, Ringer-Lactate y.c Stocker, Voluven®, Physiogel®) sont toutes disponibles sous forme de poches souples (p.ex. Ecobag BBraun, voir photo ci-dessous).
La plus grande vigilance est toutefois indispensable lors de ce type de procédure. De même, lors du transfert d'un patient d'un autre hôpital vers le CHUV, il faut prendre garde au type de poche utilisé, et au besoin le changer.

Le Service de Pharmacie

Va à: DSD, ICS et ICUS du CHUV (Courrier électronique), Corps médical du CHUV (Courrier électronique)

Bip 67 360, Tél079.556.73.60
Assistance.Pha@chuv.ch

Bulletin 01 / 01.2011 / PHAA
1/1

4. Drafting of joint guidelines on drug use within the network

Subject in progress :

Nitroprussiate and Sodium thiosulfate

Benefits of standardisation

Nurses:
Univocal documents
Simplicity in drug preparation and administration

Physicians:
Reflection on practices and of the way of prescribing

Pharmacists :
Simplification in the elaboration of reference documents (concentration, stability)
Simplification in the realisation of compatibility analysis

Expected impact of the network

Impact on safety

Decrease of risk during transfer of patients.
Less habits to change when a care-giver (physician or nurse) move to another hospital.
Standardisation of medication use.

Financial impact

Weight of the network when negotiating with industries.

Discussion and conclusions

Establishing a network is an effective way of increasing the exchange of expertise.

It can lead to the simplification and harmonisation of practices

- help reducing risks and medication errors
- limit problems related to the movement of patients and caregivers.

Pharmacists have to be the driving force of such interdisciplinary projects focusing on drug use.

Members of the network

Sion	Pierre Turini Muriel Joris-Frasseren Emmanuel Benoît
Jura	Alain Kocher Norbert Croce Juliane Fringeli
Geneva (HUG)	Didier Tassaux Claude Guegueniat-Dupessey Thérèse Siegrist
Lausanne (CHUV)	Philippe Eggimann Laurent Gattlen, Isabelle Maillard Pierre Voirol
Nyon (GHOL)	Thierry Fumeaux Catherine Sermet Corinne Chalet
Vevey (Riviera)	Damien Tagan (medicine) Gérald Seemater/Christine Lebrun (surgery) Sophie Wallef (medicine) Sandrine Gabens (surgery) Anne-Laure Blanc

Chablais	Natalie Schai
Morges	Anne Bezançon, Florence Prudhomme Corinne Chalet
Fribourg (HFR)	Vincent Ribordy Marianne Maus
Yverdon	François Lapres Renaud Pichon
Payerne	David Chabanel Jean-Paul Charlaine Renaud Pichon
Neuchâtel – La Chaux-de-Fonds (HNE)	Denise Njemba-Freiburghaus Marjorie Lambotte Rima Ducommun
Cardio Centro Lugano	Paola Rusca







Thank You for your attention !