



# [INSTITUTE OF HEALTH RESEARCH]

**INSTITUTE OF HEALTH RESEARCH. Current Research, Projected Research, Completed Research, PhD, Department Head and Research Team**

**July 2011**



## Table of contents

<b>CURRENT RESEARCH.....</b>	<b>5</b>
AGING, CHRONIC DISEASE, PALLIATIVE CARE .....	5
COMMUNICATION, INTERACTION, THERAPEUTIC EDUCATION.....	7
DEVELOPMENT, VALIDATION, EVALUATION OF A CLINICAL OR TECHNICAL APPROACH .....	9
<i>Research in collaboration with other institutions.....</i>	<i>11</i>
AGING, CHRONIC DISEASE, PALLIATIVE CARE .....	11
DEVELOPMENT, VALIDATION, EVALUATION OF A CLINICAL OR TECHNICAL APPROACH .....	11
TRAINING, PRACTICES AND PROFESSIONAL REPRESENTATIONS.....	13
<b>PROJECTED RESEARCH .....</b>	<b>15</b>
DEVELOPMENT, VALIDATION, EVALUATION OF A CLINICAL OR TECHNICAL APPROACH .....	15
TRAINING, PRACTICES AND PROFESSIONAL REPRESENTATIONS.....	17
SOCIO-SANITARY CONTEXT .....	18
<b>COMPLETED RESEARCH.....</b>	<b>21</b>
AGING, CHRONIC DISEASE, PALLIATIVE CARE .....	21
COMMUNICATION, INTERACTION, THERAPEUTIC EDUCATION.....	25
DEVELOPMENT, VALIDATION, EVALUATION OF A CLINICAL OR TECHNICAL APPROACH .....	28
TRAINING, PRACTICES AND PROFESSIONAL REPRESENTATIONS.....	33
SOCIO-SANITARY CONTEXT .....	35
<i>Completed research in collaboration with other institutions.....</i>	<i>37</i>
DEVELOPMENT, VALIDATION, EVALUATION OF A CLINICAL OR TECHNICAL APPROACH .....	37
TRAINING, PRACTICES AND PROFESSIONAL REPRESENTATIONS.....	39
SOCIO-SANITARY CONTEXT .....	40
<b>CURRENT PHD RESEARCH.....</b>	<b>41</b>
<b>DEPARTMENT HEAD AND RESEARCH TEAM .....</b>	<b>46</b>

## Abbreviations for research Foundations

CTI : The innovation promotion agency

DORE: Do Research, the Swiss National Science Foundation's (SNSF) funding instrument for *practical research at universities of applied sciences*

HES-SO: University of Applied Studies Western Switzerland

OPET: Federal Office for Professional Education and Technology

SNSF: Swiss National Science Foundation

FOPH: Federal Office of Public Health

# Current Research

## Aging, chronic disease, palliative care

### **Growing old together under the gaze of professionals: theatricalised intimacy?**

Annick Anchisi

*Funding: SNSF*

### **Work organisation in the provision of help and care at home to persons aged 80 and over : the example of three home care centers**

Annick Anchisi

*In collaboration with Nicolas Kühne (EESP HES-SO)*

*Funding: SNSF*

### **Living out one's days in a nursing home: dying in a "place for living"**

Annick Anchisi

*In collaboration with Rose Anna Foley (HECVSanté), Clothilde Palazzo Crettol (HES-SO Valais, santé-social)*

In Switzerland, 42.3% of deceased persons in 2009 were 85 years old or more. More than half of these deaths occurred in nursing homes. Yet end of life in these institutions remains poorly documented. Studies on nursing homes highlight the paradoxical model of "places for living", which tends to make the issue of death secondary, although episodes of death are very common in such institutions. Facing this paradox, we postulate that trajectories of dying in nursing homes are challenging the definition of such institutions as "places for living".

Our project aims to better understand how professional practices are organized within "places for living", particularly when it relates to elderly persons who aren't always considered capable of judgment. The aim here is to understand how the end of life trajectory in nursing homes is articulated with "life projects" trajectories of other residents. The analysis of dying persons' trajectories in nursing homes will be carried out through a study of institutional practices (as formalized in nursing homes) and ordinary practices (on the field), as well as through professionals' representations.

The investigation is based on the use of classic methods in anthropology and sociology (literature review, interviews, and observations) and will focus on two axes. In the institutional axis, we will focus on the institutional philosophy towards end of life and the degree of practices' formalization and standardization. In the professional axis, we will look at the actual work of professionals around the dying person, from the moment end of life is identified until death. In this axis too, the focus will be on professional norms and values, and in particular on "good death" representations.

Trajectories and delimited sequences will be analysed on the basis of a specific tool developed to systematically record the various professional actions deployed around the dying resident. The analysis will uncover the degree of specialization and routinisation in professional practices, management of each end of life's singularity, the place of the dying persons and their loved ones in work practices' implementation, as well as areas of professional uncertainty and tension. Fieldwork will be deployed on 9 nursing homes spread over 3 French speaking cantons. The comparative dimension is an important part of our research plan.

*Funding: SNSF*

### **Four seasons in a nursing home. Analysis of the adjustment process during the first year of life in a nursing home**

Murielle Pott

*In collaboration with Jérôme Debons (HECVSanté)*

This research is based on a socio-ethnographic approach. It aims to observe the adjustment process of elderly people entering a nursing home. We have followed ten residents during their first year of life in the institution. We have analysed the institutional life, and described social relations between residents, professionals and families. We have also identified how the institution promotes the integration of residents and the kind of professional activities implemented (activities, support and care, etc).

The fieldwork takes place in a medium size nursing home (60 beds) situated in a village of the French part of Switzerland for a two-year period. The main method is ethnographic observation. We have completed our observations by interviewing residents, professionals and families. This research is supported with funds provided through the Swiss National Science Foundation.

*Funding: SNSF DORE*

### **Discharge planning and readiness for hospital discharge, anxiety and avoidable utilization of health care of hospitalized elderly in medical unit**

Cédric Mabire

*In collaboration with Céline Goulet (UNIL), Christophe Büla (CUTR Sylvana), Diane Morin (UNIL)*

The transition from hospital to home of an elderly person is an important moment for continuity of care. Many adverse events occur after hospital discharge, and several factors will contribute to increase this risk in the future: growth number of elderly, increasing the complexity of their management and their direction after discharge, and the economic pressure on the length of hospital stays.

Nursing discharge planning is an important component to ensure an optimal transition of the elderly and his caregivers during the post-hospitalization period. A better understanding and mastery of the discharge planning process would certainly improve the patient's perception of being prepared to his departure, and thus to reduce anxiety and avoidable use of health care.

This predictive study conducted among 236 people aged 75 and older hospitalized in a medical ward will test the hypothesis that better (comprehensive) discharge planning is associated, in elderly, with an improvement of readiness for hospital discharge, a reduction in anxiety at the time of release, as well as less use of health care after discharge. The sample will be recruited in four medical services of funded hospitals in the canton of Vaud.

*Funding: Fondation Leenards*

## Communication, interaction, therapeutic education

### **Communicative activity: effects and functions analysis in medical radiation technologists**

José Jorge

*In collaboration with Livia Scheller (CNAM, Paris)*

The objective of this research is to study the role of the communicative dimension of the work of the medical radiation technologists at the time of the assumption of responsibility of the patients in the services of medical radiology. Medical radiation technologist's communicative activity is a constitutive component by the central role that these professionals play according to the quasi permanent presence they ensure near the patients. On the basis of the report that the generalized implementation of digital technologies, practices of standardization and certification (protection against radiation, quality assurance, patients rights, administrative procedures) operates a major change of the medical radiation technologists work content, the analysis of the linguistic processes to work proves to be necessary for the understanding of the current characteristics of the real work of the medical radiation technologists.

This project will consist initially of the implementation of a methodology of analysis of this real work, which will comprise the observation and the audio-video recording of tasks carried out in three services (nuclear medicine, radiotherapy and radiology), and of the talks in simple and crossed self-confrontation with the concerned actors. The results obtained will be fed back to the practitioners-partners, and will be also used to document the training programs of the medical radiation technologists as well to feed the current reflection concerning the professionalization of this trade.

*Funding: SNSF DORE*

## **Discharge from rehabilitation centers: how are decisions taken? Analysis of the interaction between patients and health professionals**

Veronika Schoeb

*In collaboration with Béatrice Despland (HECVSanté), Claudia Zanini (Institute of Communication and Health, Università della Svizzera Italiana)*

**Introduction:** The discharge decision at the end of stay in a rehabilitation center results from the collaboration between an interdisciplinary team and the patient in a particular context. It has been shown that team work, communication and leadership are essential for these interdisciplinary meetings to function well.

**Objective:** The study will shed light on the strategies used by health professionals and patients during interdisciplinary meetings in the process of decision-making in regards to discharge planning. It draws particular attention to the influence of context.

**Method:** Four rehabilitation centers covering the three language regions in Switzerland will participate in the study. For each center, ten patients and their health professionals (physicians, nurses, occupational therapists, physiotherapists, speech and language pathologists and social workers) will be invited to participate. The weekly medical visits and interdisciplinary meetings in presence of patients will be filmed, and interviews with health professionals will be conducted. The focus will be at the end of rehabilitation stay when discharge is planned. Ethnomethodology (conversation analysis) and thematic analysis are the selected methods to analyze the data.

**Expected results:** The study will allow us to describe how discharge from a rehabilitation center is planned and negotiated in light of the institutional, personal and social context of individuals. The results may help to refute, confirm or adjust the recommendations on professional practice at national and international levels.

**Conclusion:** This study may provide key knowledge on decision-making in discharge planning.

*Funding requested: DORE*

## Development, validation, evaluation of a clinical or technical approach

### A pilot study on the exposure of the population by medical radiology and how it can be automatically checked

Régis Le Coultre

*In collaboration with Verdun Francis R., Physician PD MER, Chef du Groupe d'imagerie médicale –GIM Institut Universitaire de radio physique appliquée (IRA), Lausanne/ Institut Universitaire de radiophysique appliquée (IRA), Lausanne / Coendoz Stéphane, Directeur administratif, Département de radiologie médicale (DRM) / Centre Hospitalier Universitaire Vaudois (CHUV), Lausanne / Aroua-Abbas, Physicien PD, Directeur de recherches / Health & Education (AHEAD), Prilly*

Medical imaging is an essential element in the care of all patients. Its use, however, is not harmless as the majority of examinations generates an element of ionized radiation, which is a health risk for those exposed to it. Almost a quarter of the total exposure of the Swiss population to radiation is a result of medical examinations, and it is this factor which creates a public health problem. Today, the knowledge of the exposure of the Swiss population is a result of many inquiries, what is to know the type and frequency of radiological examinations; which in turn gives the means by which a suitable dose can be calculated. With this knowledge, a good system of radioprotection is possible which may be a great benefit to the patient if it is regularly followed.

The goal of this study is the utilization of the terminology Tarmed (the medical bills) in particular, to enable us to create a picture of the frequency of radiological examinations in general. This pilot scheme will be carried out in the canton of Vaud. This method will eventually be used for a national inquiry on the exposure of the population to medical radiology. The project is an innovative one because it investigates into data already included in the Tarmed nomenclature though, as, yet, not used for radioprotection.

*Funding: SNSF DORE*

### Mental representation of pain in patients with acute and chronic low back pain

Emmanuelle Opsommer

*In collaboration with Roger Hilfiker (HES-SO Valais)*

Pain is a subjective experience and the need of pain evaluation is commonly accepted in clinical practice. The patient's self-report has been considered as the most valid measure of his/her experience of pain. Ordinal scales (the visual analogue scale, the numerical rating scale, the verbal rating scale) are commonly used as self-report rating scales since they provide valuable information. These scales are also easy to administer and score. However, these scales present some limitations (Turk et al. 2006) and more details can be obtained when the pain perception is expressed on an interval scale. One instrument, the Situational Pain Scale (SPS), validated by the Rasch' methodology provides a measure of the mental representation of pain in imaginary painful situations. It measures the effect of psychological factors on pain perception and has been validated in a population of healthy subjects and chronic pain patients. In this project, it will be used in patients with low back pain in order to

study and compare the mental representation of pain at an acute and chronic stage. A chronification of acute pain would modify this representation. In addition, the possible predictive value of this instrument could guide caregivers in their management of patients at different stages.

*Funding: SNSF DORE*

### **Impact of a telenursing service on satisfaction and health outcomes of children with inflammatory rheumatologic diseases and their family: a crossover trial**

Anne-Sylvie Ramelet

*In collaboration with Elodie Feltin (HECVSanté), Nicole Rimaz-Keller (HECVSanté), Michaël Hofer (CHUV), Joaquim Rapin (CHUV), Béatrice Fonjallaz (Ligue genevoise contre le rhumatisme), Ghislaine Aubel (CHUV)*

Children with inflammatory rheumatologic diseases suffer from chronic conditions and decreased functional ability, requiring regular medical care. The chronicity of their disease and its impact on family functioning requires holistic and continuity of care. In the canton of Vaud, the resources allocated to the care of these children are limited and does not allow for appropriate patient care and family follow-up ensuring continuity of care. Follow-up of children and their family can be ensured by regular telephone consultation made by experienced nurses. Telenursing (TN) is a cost-effective service adopted by many health-care providers to increase their efficiency in meeting patients' needs and satisfaction, but its effectiveness has not been tested in paediatric patients with inflammatory rheumatologic diseases. This experimental study aims to test the effectiveness of the TN on patient's satisfaction with care.

*Funding: SNSF DORE*

# **Research in collaboration with other institutions**

## **Aging, chronic disease, palliative care**

### **Health systems and long-term care for older people in Europe – Modelling the INTERfaces and LINKS between prevention, rehabilitation, quality of services and informal care**

Pierre Gobet and Elisabeth Hirsch (EESP, HES-SO)  
*In collaboration with Annick Anchisi (HECVSanté)*

The objective of this 3-year project is to construct and validate a general model to describe and analyse long-term care (LTC) systems for older people from a European perspective. The particular aspects of the different emerging national models that currently address long-term care needs in Europe will be used to show how the links to health care services, the quality of LTC services, the incentives for prevention and rehabilitation, and the support for informal carers can be governed and financed to enhance structures, processes and outcomes of LTC systems. Based on the assumption that LTC systems in Europe have only started to develop at the boundaries of health and social care, the project will focus on the elaboration of concepts, indicators and models for policies and practice at the interfaces and links between health systems and LTC. Good practice determinants will be identified and validated across countries. A European 'state of the art' model for describing and analysing long-term care provision will this be constructed as an analytical toolbox that takes into account pathways of reform policies at any stage of a national LTC system's development. The project outcome will guide policy analyses and design, permit comparison and will substantially broaden the scientific base that supports the Member States to better organise their health and LCT systems. It will also integrate the professional and the non professional domain with inputs of a wide range of stakeholders by means of National Expert Panels and European-level Sounding Board Conferences. The project will be carried out by a consortium of 16 partners from universities, national and international research institutes with international and interdisciplinary expertise also in cross-national research. The consortium represents 14 Member States covering different welfare regimes and geographical domains to allow for the regional and developmental, path-dependent differences.

*Funding: European Community*

## **Development, validation, evaluation of a clinical or technical approach**

### **Dynamic Post-Mortem Angiography**

S. Grabherr (CHUV, Lausanne)  
*In collaboration with A. Dominguez (HECVSanté); F. Doenz, R.Meuli and P. Mangin (CHUV); Dirrhofer, B. Steger (Fumedica AG); B. Sollberger and E. Gygax (University Hospital Bern).*

Learning Objectives:

1. To understand the role of radiographers in forensic imaging regarding CT (computed tomography) angiography.
2. To know the different responsibilities of forensic radiographers such as:
  - \* sample collection for toxicological analyses (post-mortem liquid puncture).

- \* sample collection for additional analysis such as histology or bacteriology (post-mortem biopsy)
- \* the performance of post-mortem angiography including the use of a perfusion machine
- \* general statement of conclusion:

The radiographer represents a profession that is necessary to guarantee good quality of radiological examinations and allows a rapid investigation, which is important to implement biopsies and angiography in the daily routine of forensic medicine. This collaboration is well accepted in the forensic team. The interdisciplinary exchange of forensic pathologists, radiologist and radiographers leads to fruitful discussions and successful collaborations between those specialists. Regarding the increase of radiological exams in forensic departments, this new radiographer allows to save much time in the daily routine.

Impact of the presentation: The involvement of a radiographer in forensic sciences leads to a new subspecialty of this profession. The presentation will display the first experiences and future possibilities of this new opportunity. It will also introduce the radiographer and his skills to the medico-legal public.

*Funding: CTI*

### **PPAO-3D: Computerized three dimensional pre-operative planning for total hip arthroplasty**

Alexander Knob (HEIG-Vd)

*In collaboration with Sandrine Ding, P. Monnin and A. Dominguez (HECVSanté), E. Pétremand (HEIG-Vd), D. Petter, G. Jeanmonod, B. Christen (Symbios)*

The purpose of the project PPAO-3D is twofold: first to increase usability (i.e. intuitive, concise, quick to use) of the HIP plan® software for preoperative planning, developed by Symbios while simultaneously increasing reliability and reproducibility of results of the CT that provides upstream baseline data for planning. Secondly, this project aims to optimize the dosimetry of the CT examination to make it more easily acceptable by the medical environment (surgeons, patients, insurers). The optimization of radiologic examinations will be done by investigations on technical parameters (acquisition parameters), anatomical parameters (patient positioning) and image processing. All these elements will lead to the further development of a summary document intended to practice. Thus the results of this project will enable the widespread use of preoperative computerized planning to increase the success rate of hip operations, which will result in increased patient comfort after surgery and increased the lifetime of the implant.

*Funding: OPET*

## Training, practices and professional representations

### **The health problems and the health support of the student at the University of Applied Art, Music Section, in French-speaking Switzerland: a mixed method design**

Kristin Stjerna (HEDS Geneva)

*In collaboration with Elisabeth Bürge and Karin Jeanbart (HEDS Geneva), Veronika Schoeb Mezzanotte(HECVSanté), Angelika Güsewell (HEM)*

#### Introduction

Profession musicians can be compared to athletes due to their high performance, as well as their musculo-skeletal problems. Health professionals have not yet been sufficiently interested in this population up to this point. Music students are characterized by their attitude and implication, as well as the strong identification with their work. Even though, health problems of music students are known, the prevalence cannot be determined exactly. The objective of this study is to understand the health problems of music students at the conservatory (prevalence, attitudes, management) and identify their health and body representations.

#### Methods

A mixed method design includes a quantitative approach followed by a qualitative investigation. All students at the five sites of the conservatory in French-speaking Switzerland are asked to participate. In phase 1, a questionnaire collects quantitative data regarding habits and attitudes during musical practice, musculo-skeletal problems and chosen treatment as well as general health questions. A small sample (phase 2) will then participate in a semi-directed interview in order to explore the meaning of the health problems of this population.

#### Conclusions

The study will provide information about the presence (or absence), the nature and intensity of musculo-skeletal problems during musical practice. The results of the interview will help understand the representation music students have of their body and health. The results provide insights into musical students' needs and could help establish preventive programs and specific interventions.

*Funding: SNSF DORE*

## **Development of an e-learning tool on research methodologies in the bibliographic databases CINAHL and Medline**

Blanche Kiszio (HEdS – La Source)

*In collaboration with Sandrine Ding (HECVSanté), Nathalie Favre (HEdS-LaSource), Rémi Arnoud (HEdS-LaSource)*

The transition from hospital to home of an elderly person is an important moment for continuity of care. Many adverse events occur after hospital discharge, and several factors will contribute to increase this risk in the future: growth number of elderly, increasing the complexity of their management and their direction after discharge, and the economic pressure on the length of hospital stays. Nursing discharge planning is an important component to ensure an optimal transition of the elderly and his caregivers during the post-hospitalization period.

A better understanding and mastership of the discharge planning process would certainly improve the patient's perception of being prepared to his departure, and thus to reduce anxiety and avoidable use of health care.

This predictive study conducted among 236 people aged 75 and older hospitalized in a medical ward will test the hypothesis that better (comprehensive) discharge planning is associated, in elderly, with an improvement of readiness for hospital discharge, a reduction in anxiety at the time of release, as well as less use of health care after discharge. The sample will be recruited in four medical services of funded hospitals in the canton of Vaud.

# Projected Research

## Development, validation, evaluation of a clinical or technical approach

### **Dosimetric aspects of CT and PET/CT examinations repeated in children suffering from lymphoma: towards an optimisation of the practice**

Régis Le Coultre

*In collaboration with Leonor Alamo Meystre (CHUV), Ariane Boubaker (CHUV), Francis R. Verdun (IRA)*

At the beginning of the year 2000, it was shown clearly that the technical parameters of CT protocols were generally not optimised, introducing variations of irradiation for a given examination going from a factor 2 to 10. Unfortunately it was not until the tabloid press seized upon this problem by publishing figures of the number of people who died from cancers related to CT examinations that strategies were developed to improve the situation at international level (USA Today, Jan 23,2001 " Radiologists agree CT scans harm kids"). Concerning the Swiss pediatric population, this problem was fortunately much less critical than in some other countries, because of strict indications instructions about the use about CT examinations and regular information given to radiologists specialised in pediatrics at radiology conferences on the optimization of the protocols (step supported by the FNS). Nevertheless, this made it possible to highlight the importance of continuous optimisation of technical parameters from the acquisition of the CT in active collaboration between radiology technicians (TRM), radiologists and medical physicians.

The use of the PET/CT with F-18-FDG in the pediatric population, in particular for the diagnosis and management of lymphomas, is becoming more and more common. The latter introduces a level of additional complexity compared to CT examinations, because of combined use of x-rays (CT) and of radioactive tracers (PET). The number of examinations using PET imagery, in patients less than twenty years old, has increased very little during the 5 last years (+15%) reaching nearly 300 examinations in our country in 2008, whereas the full number of PET has increased from 10' 000 in 2005 to close to 15' 000 in 2008. However, there currently does not exist any consensus concerning the acquisition protocols to adopt, on the level of the technical parameters or the level of the medical justification. Total doses delivered during an examination by a combined PET/CT can be relatively important, between 7 and 12 mSv (J Nucl Med 2009; 50:1483 - 1491), it is important to optimise each dose delivered taking into account the cumulative effects of the radiation and long life expectancy of these children in order to avoid the appearance of radio-induced cancers.

One of the innovating characteristics of this project is that it approaches the problem from a global and multi-disciplinary manner (radiology technicians, radiologist, nuclear medicine doctor, physician and oncologist). The optimisation will not only concern the technical aspects or the problems of medical justification, but a more in-depth questioning of current practices. The optimisation required is that of a global management of a particular problem,

with the aim of allowing everyone involved provide optimal services which will be of clear benefit to the patient.

*Funding: SNSF DORE*

## **Moderate alcohol consumption during pregnancy and development of the children up to 3-4 years of age**

Yvonne Meyer

*In collaboration with Sakari Lemola (University of Basel), Patrick Hohlfeld (CHUV)*

This study aims to follow up a cohort of children aged 3-4 years. A former study showed, in a collective of 1258 women followed for pregnancy and childbirth in the university hospital of Lausanne, significant effects of moderate alcohol consumption (2-4 drinks/wk) and binge drinking ( $\geq 3$  glasses per occasion, 1-2 times or more per month) on average weight of the new-born babies ( $p = 0.017$ ), intrauterine growth retardation (IUGR) ( $p = 0.048$ ), neonatal asphyxia ( $p = 0.014$ ). Our new research question is: Does moderate alcohol consumption during the pregnancy have an influence on the behavioral and emotional development in the children of 3-4 years?

The adopted method aims to assess consumptions'habits and to evaluate children's development and mental health of the mother and the father on the basis of 4 tests filled by both parents - Strength and Difficulties Questionnaire, Children's Sleep Habits Questionnaire, Life Orientation Test-Revised and Edinburgh Postnatal Depression Scale - Given the high rate of pregnant women in Switzerland who consume alcohol, it seems worthwhile to investigate further the development in pre-school age.

*Funding: University of Basel*

## **Preventing the development of shoulder pain and functional rehabilitation of upper limb after stroke**

Emmanuelle Opsommer

*In collaboration with Sylvie Ferchichi-Barbey*

The adult stroke patient suffers from activity limitations, participation restrictions and sensations of pain mainly in the controlateral shoulder to brain injury. A key element of prevention or correction of pain is the maintenance or restoration of specific segments of the movement (Sahrman 2001). This project aims at comparing enhanced therapies tailored to individual needs of the post-stroke patient to prevent the development of controlateral upper extremity pain and to restore function and sensory motor upper limb with routine treatments in a specialized unit for stroke care.

*Funding: HES-SO*

## **Adaptation of a pain evaluation tool for critically ill patients with neurological impairments and altered consciousness**

Anne-Sylvie Ramelet

*In collaboration with Elodie Feltin (HECVSanté), Marie-Josée Roulin (HUG, Geneva), Céline Gélinas (McGill University, Canada)*

Adequate pain relief in neurologically-impaired patient depends mainly on the accuracy of the assessment of pain, it does remain challenging because these patients are often unable to self-report their pain and their cognitive dysfunction often leads to confused, stereotyped, and uncoordinated behavior. The aim of this two-phase study is to modify an existing pain instrument originally designed for non-verbal ICU patients and test its performance characteristics and clinical utility in patients with neurological impairment. The first phase aims to generate from the literature and focus groups the physiological and clinical factors impacting on pain behaviour in patients with neurological impairment, and modify the existing pain assessment tool accordingly. The second phase aims to test the modified instrument for feasibility and clinical utility.

*Funding requested: SNSF DORE*

## **Training, practices and professional representations**

### **Medical imaging and technological innovation: the technical mediation in the heart of the professional practice of medical radiology technologists**

Séverine Rey

*In collaboration with José Jorge (HECVSanté)*

The medical radiology technologists form a specific occupational group in the field of care and health. Their training and professional practice place them in an interdisciplinary context emblematic of the modern scientific medicine practices: the medical radiology, divided between diagnostic and interventional radiology, radiation oncology and nuclear medicine. The title given to the profession (in French at least), with the term "technologists" reveals their paradoxical position: it is indeed simplistic in that it fails to recognize their real work, particularly their relations with patients. To understand the reality of their work, the research will focus on the technology and the medical imaging, and will analyze the professional practice and identity by documenting the values conveyed by the technology or attributed to it. The objective of this research is to uncover the mediation between, firstly, the social meaning directly prescribed by the medical imaging and continuous technological innovation and, secondly, the social meaning indirectly served by professional practice of the medical radiology technologists. Particular attention will be given to the definition of humanity and its consequences in terms of thinkable and practicable in the field of health care practices.

*Funding requested: HES-SO*

## Socio-sanitary context

### **Historical and sociological perspectives on the construction of organ donation as a public problem in Switzerland**

Raphael Hammer

*In collaboration with Vincent Barras and Manual Pascual*

The purpose of this research project is to study organ donation as a public problem in the Swiss context, using both sociological and historical approaches. Two main empirical fields are planned. The first one aims to reconstitute historically how the concept of organ donation has developed on one side, and how organ donation has been recognized as a social problem and as a category of public action on the other side. In other words, we will examine how transplantation as a medical issue has progressively become a focus of social and political concern. Analysis will be based on a corpus of various historical sources. The second empirical field aims to describe and understand how patients associations contribute to construct organ donation as a public problem. In particular, we will examine their engagement in the public sphere as well as in providing psychosocial support to transplant patients. Focus will be on associations' political and symbolic work, which can be defined as actions and strategies aiming to influence social perception frames of organ donation and to shape patients' personal experience. Semi-directive interviews with members of transplant patients associations and with non-engaged transplant patients will be carried out.

*Funding requested: HES-SO.*

### **Breastfeeding duration: facilitators and barriers in the Geneva setting**

Lucia Floris

*In collaboration with Philippe Chastonay (UNIGE)*

Although breastfeeding is a biological phenomenon, it remains controversial. Both health professionals and international health organizations active in the field of prevention promote it as the best way to feed infants and an excellent means of prevention against infectious and chronic diseases. Some epidemiological studies suggest breastfeeding has protective effects for the health of the mother and child. However, others view the promotion of breastfeeding as a social construction, which aims to confine women at home and to order them to perform their "natural" role. The epidemiology of the phenomenon shows disparities from one country to another. Indeed, the duration of breastfeeding is often more limited in time compared to that recommended by the World Health Organization.

Taking into account the divergent opinions on breastfeeding and the limited data available, this research aims to identify and understand the environmental and sociocultural factors influencing women during the first six months of the baby's life. The research design will comprise two phases: first, an exploratory study with focus groups; and the second will aim

to confirm the data obtained in the qualitative study using a questionnaire administered to a sample of women who have given birth in Geneva.

*Funding requested: HES-SO.*

## **Perinatal losses and support to reconstruction through the search for meaning**

Yvonne Meyer

Perinatal losses are quite common. In addition to the tragic loss and upset, the parents are confronted with the complexity of perinatal mourning. Although mourning is not a disease, mourning in the reproduction period is more likely to lead to complications, from 13 to 34% according to studies. Beyond the hospitalization the offer of support is scattered. The maternal/newborn healthcare professionals have little awareness with the experience of bereaved families in the months after the pregnancy.

**Objective :** The aim of the project is to explore the use of the Model of Meaning Reconstruction in Response to Bereavement in context of perinatal loss. The activities of reconstruction are those which contribute « to give meaning », « to find benefit » and « to reorganize identity » (Gillies & Neimeyer, 2006). This contemporary theory makes more explicit the psychological adaptability of the people to reconstruct themselves. The search for meaning does not awake only sadness and sorrow in the bereaved; it decreases their distress and takes part in their growth. Yet, some works on perinatal mourning have showed pieces only of reconstruction's activities, not all the 3 activities of the model.

**Method :** The study is based on mixed methods. The exploration of the process of reconstruction is planned using 40 narrative interviews with mothers and fathers within 6 months to 2 years after the loss. Interviews will be focused on the 3 domains of interest. Bereaved parents will be recruited in French-speaking Switzerland through the independent professionals of the sector and through associations of assistance to perinatal mourning. Six months after the interview, an evaluation of the reconstruction will be carried out by the CiOQ, a questionnaire designed to test the positive and negative changes following a traumatism. The result of the test will be crossed with the analysis of interview.

**Expected benefit :** This study with bereaved parents will improve the knowledge related to the process of reconstruction in the very particular perinatal mourning, reinforce the coherence of the therapeutic counseling, and help to find better coordination between the early and later therapists. The object of this research is important for the bereaved parents, the maternal/newborn healthcare professionals, as well as for the public health policy.

*Funding requested: SNSF*

## **Birth complications in home-settings or in free standing centres: Midwives' and women's perspective on decision making**

Yvonne Meyer

*In collaboration with Claudia König (ZHAW), Jessica Pehlke-Milde (ZHAW)*

**Background :** The safety of home births and births in free standing centres is controversial, cleaving most doctors and midwives in contrasting positions on the issue of risk. The literature review shows that neither the decision-making of the midwife in out-hospital deliveries nor the role of the woman as decision-maker has yet been explored.

**Objective:** The purpose of this study is to document the decision process and the partnership of midwives to women in relation with management of impromptu situations in planned out hospital births.

**Method:** The approach is qualitative, with interviews among independent midwives and women focused on following main aspects: the components of explicit and implicit knowledge, cognitive phenomena, social and emotional factors of influence. Data analysis will be performed on the basis of the grounded theory.

**Results:** This research will fill a previously not explicit knowledge on decision-making and partnership in complication occurring during out hospital births. This research is of interest for patients, for midwives and for public health.

*Funding requested: SNSF DORE*

# Completed Research

## Aging, chronic disease, palliative care

### **Palliative home care for persons in a symptomatic stage: crossed view points of the actors involved**

Murielle Pott

*In collaboration with Rose Anna Foley (HECVSanté), Laurence Seferdjeli (Oncology Dpt Valais)*

Living with serious illness with a fatal prognosis in the short term within the family at home is a little studied area in terms of the comparison between domestic and caregivers' reasoning. Our study takes place in a region, which has known an important but unequal development of palliative services, a long-term commitment of practitioners in taking care of people in a palliative phase, a major development of geriatric oncology, as well as an important reform of the hospital institution. Based on the narrative of the person in a symptomatic palliative phase at home and that of members of the household and of significant professionals according to the patient, we analyze how the domestic perspectives articulate to those of caregivers with the common aim to address the changes in the severely ill's body and approaching death.

*Funding: SNSF DORE, end 2009*

### **Oral chemotherapy by persons aged 70 and over: Crossed representations and practices between patients, general practitioners and specialist**

Annick Anchisi

*In collaboration with Rose Anna Foley (HECVSanté), Clothilde Palazzo Crettol (HES-SO)*

Since the year 2000, more and more oral medications have been developed to treat various types of cancer, this at all stages of life, whatever the prognosis. All principal types of cancer are concerned and treatments have been standardised. Just as intravenous chemotherapy, this new galenic form has significant toxicities, which can even be lethal. Self-administration of this type of medicines can generate mistakes. Medical studies have mainly documented patients' relation to oral chemotherapy through non-compliance. While, in this point of view, the elderly are considered an at-risk population, their views on the subject have so far been poorly explored.

This study aims to analyse the object "relation to oral chemotherapy" through doctors' and elderly patients' discourses, this in a sociological perspective. The crossed perspectives between medical specialists, general practitioners and patients will inform on the relationship between age, drugs and cancer, more specifically between oral chemotherapy tablets – a socio-cultural mediator- and social relations at work between users: prescribers, inspectors and consumers.

*Funding: SNSF DORE*

## **Implementation of home support for people in age AVS\* in the context of the 2nd revision of the LaMal: the example of the county Valais.**

Annick Anchisi

*In collaboration with C. Bigoni and B. Despland (HECVSanté), V. Hugentobler (INAG)*

Analysis of home care facilities in three stages: - a quantitative analysis of professional carers' records (N680) - an analysis of 30 cases selected in terms of complexity criteria used by professionals - a selection of four situations (home observations and interviews with next of kin and professionals). Results: Incapacity to achieve activities of daily living (ADLs) requiring basic care, is not argued by caregivers with an aim of insurance coverage. The issue of qualifying simple or complex basic care through this angle is important in the current context of insurance coverage, claiming to assign this type of care to low-skilled professionals. This distinction of situations has an impact on the entire system of home support, may it concern the political aspects, the care facilities, the work organisation, as well as the type of professionals hired in order to respond to these situations. By analysing these situations, dementia and its effects require complex care, which only the most skilled professionals can account for. As pillars of the device and placed under house arrest, the relatives are bound to constrained isolation. Thus, the ADLs - a social construction giving the right to insurance coverage and mapping out the professional fields - especially reveal the flaws in the system and reduce the perception of the situations' complexity.

*Funding: SNSF DORE; end 2008*

## **Acceptance of oncological treatments by persons aged 70 years and over: resources and obstacles.**

Annick Anchisi

*In collaboration with M. Pott (HECVSanté), V. Hugentobler, INAG, V. Luyet (HES-SO Valais)*

This study is based on the interview of 21 subjects, aged 70 years and over, attending an oncology centre. At the end of their treatment, we have explored the processes of patient's choice, including goals, resources and constraints. The main variables influencing the acceptance of chemotherapy are full awareness of one's clinical condition, irrespective of whether a cure is possible or not, self perceived state of health, and lastly life expectancy. Age itself initially does not appear to be a limiting factor. Every effort should be made to tailor communication to individual needs, not least because of a link between learned and perceived treatment adverse effects. We found that symptoms, especially fatigue, hamper routine activities, leading to social withdrawal. Gradually the manifestations of the disease itself and of its treatment, combined with age, reveal both personal vulnerability and the role of support networks.

*Funding: SNSF DORE; end 2005*

## **Family and caregivers' perspectives in the placement of a demented person in a home for the elderly.**

Annick Anchisi

*In collaboration with V. Hugentobler (INAG), V. Luyet (HES-SO Valais)*

In this study, we interviewed 23 family caregivers. On a daily basis and on the long-term, they helped their demented elderly parent and were active in the decision of placement in a home for the elderly. Dementia as such is rarely mentioned by family members although it led to the help they offer to their parent. The normative dimension of family solidarity proscribes the use of professional services. The few times they occur, the networks' potentialisation cannot be verified. Alternative options to the placement are dependent of families. When they are exhausted, the placement is considered as definitive and the decision described as consensual. The placement is not discussed with the parent. Caregivers of the home for the elderly expect from family members the anamnesis and a narrative of their parent's life, whereas the family members feel they have nothing to pass on. The myth of parental abandonment once placed in an institution is one of the strongest concerns of the family carers. They wish to take a place in the institution but only identify a normative and reduced role, which comes down to visit the parent. Professionals design collaboration with family caregivers mainly in case of trouble. They do not integrate them into the decisions. If the hope of a return to social life for the parent can be verified inside the home for the elderly, the family caregivers are generally on the outskirts of institutional life.

*Funding: SNSF DORE; end 2004*

## **Residents with dementia in a home for the elderly: daily challenges for caregivers.**

Annick Anchisi

*In collaboration with V. Hugentobler, INAG, V. Luyet (HES-SO Valais)*

This research has highlighted the characteristics of care to the elderly with dementia within institutions. Interviews were held with 19 nurse's aides and 19 nurses. According to the nurse's aides, the representations of old age and dementia are confused and bring back common sense. The nurses refer to a professional ideal resulting in a non-differentiation of individuals cared for. Regarding time, the nurse's aides and nurses favour efficiency. Caregivers primarily consider their actions with a perspective of task and control first being of use to the institutional system based on the hospital model. Facing the uncontrolled behaviour of residents with dementia, physical danger is clearly identified in the nurse's aids' discourses, while unpredictable care situations is central to the nurse. Although interactions are described as essential by the nurse's aids and nurses, they are not considered as therapeutic. The speech primarily has a functional role. The care offer is mainly confined to the physiological response to needs for both professional groups. The nurse's aids and nurses are satisfied with their work. Satisfaction is viewed from the angle of utility and professional ideal. In summary, the specificity of taking care of elderly with dementia in an institution first depends on the context and only secondarily on the training followed.

*Funding: SNSF DORE; end 2002*

## **Palliative Care Networks: What Autonomy for Elderly Patients?**

Muriel Pott

Palliative care promotes a philosophy centred on quality of life and respect of the autonomy of the patient and next of kin, invited to express their needs and desires. The explosion of healthcare costs led to a reorganisation of health systems and, in particular, we are witnessing the creation of networks of care. In the county Valais, a pilot network of palliative care has been launched. It intended to put "the right patient at the right place at the right time" and its motto was "being able to choose the place for one's end of life." Faced with this double bind, and together with our network partners, we wondered what were palliative patients' expectations towards the professional network of palliative care.

We conducted 15 semi-structured interviews and questionnaires with 15 elderly patients. Analysis of the interviews showed that the difficulties are related to their status of being "ill" and their representations of the illness, which is seen as a fundamental constraint and a fatality. The doctor has knowledge about the disease, whereas few patients feel the need to question him about the special treatment undertaken. They are satisfied with global and brief information and trust the professionals. On the other hand, interviewees speak in detail of their sufferings and losses. They have plans, but only half of them with the means to achieve them.

The nurses' benefits seem to be limited to support for action: they don't represent a source of information or assistance in decision-making. Palliative philosophy involves a strategy of actors, which is very difficult to implement for very ill patients aged over 70 years, who have difficulty in mobilizing the formal network.

*Funding: SNSF DORE; end 2002*

## **Care of demented elderly in institutions: Analysis of the influence of representations of caregivers regarding their practices of touch.**

Corinne Schaub

*In collaboration with Marie-Christine Follonier and Catherine Borel (HECVSanté)*

**Background:** The use of touch and simple massage are first-line non-pharmacological interventions used in the comprehensive care for the elderly with dementia (EWD). Nevertheless, these acts are not carried out by all caregivers in the same manner. This study seeks to understand the impact of their EWD's representations on their practice of touch with this population. It will also highlight their ways of coping with any difficulties encountered. **Method:** It is based on a qualitative analysis of 31 semi-structured interviews (17 nurses and 14 aides) conducted with caregivers working primarily with elderly patients with dementia.

**Results:** The results indicate that touch, although well integrated in all activities of personal care, is not considered as a care intervention in itself. It is subject to multiple influences. Indeed, on the one hand, the representations those caregivers have of the elderly patient with dementia overlap with those of their roles and skills and change the type of touch and their intentions when they touch.

On the other hand, the emotions generated by the "dirty" work and the aggressiveness of the elderly patient with dementia sometimes make it difficult to touch them. Conclusion: The perspective of caregivers is essentially self-referenced and touch does not appear as an indicator of institutional norms.

*Funding: SNSF DORE; end 2009*

## **Communication, interaction, therapeutic education**

### **Analysis of patient-physiotherapist interaction in an orthopaedic outpatient setting – Research in progress**

Veronika Schoeb

*In collaboration with Liliane Staffoni (HECVSanté), Alison Pilnick and Ruth Parry (University of Nottingham, UK)*

*Partner organization: Private practice in Lausanne and Rolle, Switzerland, University Hospital of Lausanne, Orthopaedic Department*

**Introduction:** Research in health care communication has gained importance in recent years. Professional practice guidelines prescribe health care professionals in general and physiotherapists in particular to include patients into the decision-making process and to establish collaboration in order to elaborate therapeutic goals and treatment plans. However, not much is known more about the way the interaction between patients and professionals takes place. The interactive nature of physiotherapy (using verbal and non-verbal communication) has not yet been fully described. The aim of this research is to shed light on patient-physiotherapist interaction during initial encounters in musculo-skeletal physiotherapy, and in particular on the goal-setting process and how decisions are made concerning the choice of treatment modalities.

**Methods:** Three different physiotherapy practice settings participate in the study: an outpatient clinic based in a public hospital, a private practice in the outskirts of a city and a private practice in a small village. 60 consenting outpatients seeking physiotherapy for their musculo-skeletal problem and their therapists will be videotaped during five consecutive sessions. Conversation analysis (CA) is chosen as a method to help describe actual interaction.

**Conclusion:** A better comprehension of the interaction between physiotherapists and patients could help reconsider, confirm or refute some of the policies advocated in physiotherapy regarding patient participation in physiotherapy. A deeper understanding of how patients and physiotherapists communicate in an outpatient physiotherapy practice could also help professionals' awareness of their communication skills.

*Funding: SNSF DORE*

## **Impact of Goal Attainment Scaling on quality of life, functional results and patient satisfaction in an orthopedic outpatient setting**

Veronika Schoeb

*In collaboration with Claude Pichonnaz (HECVSanté)*

**Introduction:** In today's world, more and more pressure is put on physical therapists to prove the efficiency of their therapeutic intervention. Involving the patient in the therapeutic goal setting appears to provide some important elements. One of the instruments proposed and widely accepted is the Goal Attainment Scaling (GAS). The goal of this study is to compare two therapeutic approaches and determine whether goal setting in physical therapy in collaboration with the patient has an influence on patient satisfaction and the functional outcome. The comparison is made between two groups of outpatients, one group following a traditional approach (physical therapists set the goals for their patients), and another group following a patient-centered approach (the GAS is used to establish the patients' goals with the physical therapist).

**Methods:** In this prospective double cohort study 119 patients, with a diagnosis of low back pain (n= 50; age: .43.5 +/- 12.2; BMI: 24.4 +/- 5.8) or a knee problem with a ligamentous injury (n=69; age: 30.9 +/- 11.2; BMI: 23.8 +/- 2.8) are included in the study. In phase 1, the patients were treated by either the participating physical therapists (Group A) or a control group (physical therapists in Group C). Quality of life questionnaires (EQ-5D), functional scales (Quebec Low Back Scale for low back pain patients, Lysholm-Tegner for the patients with knee problems), patient satisfaction, and the Patient Specific Functional Scale (PSFS) are collected before and after the treatment as well as at 3 and 6 months follow-up. In phase 2, and after a 10-hour educational session, the participating therapists (Group B) treat their patients using the GAS procedure including the goal setting in collaboration with the patients. The same questionnaires are then collected. T-test, Wilcoxon and Mann-Whitney U are used to compare the results between the groups ( $\alpha=0.05$ ; SPSS 15.0).

**Results:** The function in all groups have significantly improved before and after treatment ( $p=0.000$ ), as well as at 3 and 6 months for the knee patients ( $p=0.002$ ). No differences were detected between group A, B and C. Even though, the patients with low back pain show less improvement they are still satisfied with their physical therapy treatment.

**Conclusion:** The GAS procedure does not seem to change fundamentally the interaction between patients and physical therapists. Either the patient-centered approach is not always appropriate in the orthopedic context, or the measures taken were not sufficiently sensitive. Patients with low back pain or knee problems do not seem to benefit from the proposed Goal Attainment Scaling. It has to be further investigated what aspects do influence the treatment results in orthopedic physical therapy.

*Funding: SNSF DORE; end 2008*

## **Moderate alcohol use during pregnancy and neonatal health**

Yvonne Meyer

*In collaboration with Sakari Lemola (University of Basel), Jean-Bernard Daeppen (CHUV), Olivier Dériaz (Rehabilitation Clinic, SuvaCare, Sion), Stefan Gerber (CHUV)*

**Objective:** We studied the relationship of prenatal drinking and alcohol/cigarette double consumption with IUGR, preterm birth, and neonatal asphyxia.

**Method:** 1258 women were screened for drinking and smoking during prenatal visit at a Swiss antenatal clinic; information on neonatal health was obtained at birth.

**Results:** 31.4% of the women showed alcohol consumption alone, 8.5% smoking alone, and 8.1% alcohol/cigarette double consumption. 0.9% showed heavy drinking ( $\geq 5$  glasses/week), 7.9% were drinking moderately (2–4 glasses/week), and 4.7% showed binge drinking (defined as  $\geq 3$  glasses/occasion). IUGR was related to moderate drinking ( $p=.048$ ) and alcohol/cigarette double consumption ( $p=.034$ ) after 16 weeks of pregnancy; neonatal asphyxia was associated with binge drinking ( $p=.014$ ). The associations remained when controlling maternal age, origin, professional status, parity and child gender.

**Conclusion:** Moderate drinking and alcohol/cigarette double consumption after 16 weeks of pregnancy may put the child at risk for IUGR. Prenatal binge drinking is associated with asphyxia.

*Funding: SNSF DORE; end 2009*

## **Smoking cessation counselling for mothers during postpartum**

Yvonne Meyer

*In collaboration with C. Desaulles and V. Schoeb (HECVSanté), J. Cornuz (University of Lausanne).*

**Background:** The majority of women who quit smoking during pregnancy will resume smoking during postpartum. The aim of this study is to evaluate short smoking cessation intervention in postpartum.

**Method:** Prospective and controlled study in two hospitals with similar environment in French part of Switzerland. Shortly after birth, 1316 mothers were asked about their tobacco status. The participants were 168 spontaneous quitters as well as active smokers. In intervention site, midwives and nurses were trained to provide counselling based on the transtheoretical model, whereas in control site, mothers received usual care. Follow up was made by questionnaires at 3 and 6 months postpartum.

**Results:** Individual counseling has increased new smoking cessation after childbirth, but without significant difference (11% vs 4%, Fisher exact one-sided 0.111). Smoking cessation became significant in association with partner quitting at the same time (Fisher exact  $<0.001$ ), late weaning ( $P=0,011$ ), favourable socioeconomic status ( $P=0.015$ ), whereas

smoking cessation had no relation with educational level, return to paid employment, duration of smoking habits, rate of nicotine dependence, changes in mood due to stress, minor depressive symptoms or lack of family support. Otherwise, intervention had not the expected effect on the relapse prevention.

Conclusion: The intervention was successful for women who had not sufficient resources for smoking cessation during pregnancy, but had them after the child was born. Future work is needed to fully assess the stop-tobacco prevention during the postpartum period, particularly for relapses, for example by involving the partner or by dedicating more intensive interventions provided by staff.

*Funding: SNSF DORE; end 2003*

## **Development, validation, evaluation of a clinical or technical approach**

### **Development and validation of the simplest possible kinematic functional shoulder test**

Claude Pichonnaz

*In collaboration with Jean-Philippe Bassin (HECVSanté), Alain Farron and Brigitte Jolles-Haeberli (CHUV), Kamiar Aminian (EPFL, Lausanne)*

There are more than twenty standardized shoulder functional questionnaires, but none of them is recognized as a gold standard. Computerized movement analysis could be an alternative to questionnaires, as previous studies have shown that functional shoulder tests based on ambulatory kinematics (accelerometers and gyroscopes) are applicable, reliable and responsive after shoulder surgery. Although ambulatory kinematic tests are much easier to perform than conventional laboratory computerized movement analysis (e.g. with infrared or magnetic devices), time needed is still too long to consider use in current clinical practice. Wireless technology now allows a reduction in setup time. In addition, reducing the number of performed movements to only the ones which are relevant would also be a contribution to transfer of kinematic functional tests in current clinical practice. This would be the goal of this study. We planned an implementation in three phases: 1) reducing test procedure to a few essential movements 2) clinical validation of test 3) development of an user-friendly interface for instant interpretation of results.

*Funding requested: SNSF DORE*

## **Mammography quality assessment: evolution from 1999-2007**

Nicole Richli-Meystre

*In collaboration with J-L Bulliard (IUMSP)*

High-quality mammograms are essential in early breast cancer detection. Technical as well as clinical aspects of a mammography are important in considering the image quality and the accuracy of a diagnosis of breast cancer. The mammograms which are performed within a cantonal breast cancer screening program have quality standards fixed by a federal law. In Switzerland, however, only a few cantons have such a screening program.

By comparing the evolution of the mammography image quality in a canton having a screening program with a canton where there is no screening program, the aim of our study is to contribute at the reflection about the necessity to extend the minimal quality standards to all mammograms, which are performed in Switzerland.

Material and methods: Some 1700 mammograms performed in two different cantons of Switzerland, one with a screening program and the other without, are randomly selected. The mammograms are then assessed and classified in four categories: perfect, good, moderately good and inadequate, the so called PGMI classification system.

*Funding: SNSF DORE*

## **Outcome of manual lymphatic drainage following total knee arthroplasty surgery**

Claude Pichonnaz

*In collaboration with Jean-Philippe Bassin (HECVSanté), Brigitte Jolles-Haeberli (CHUV), Kamiar Aminian (EPFL), Enrico Staderini (DAL)*

There is scientific evidence that rehabilitation has a positive influence on patients' recovery after total knee arthroplasty (TKA). According to the literature, conventional rehabilitation aims to improve knee range of motion, lower limb strength, gait, activities and pain. Although swelling is a systematic consequence of TKA surgery, less focus is put on swelling reduction. Patients develop swelling due to periarticular edema, hematoma and joint effusion. Inflammation, pain, stiffness, alteration of gait pattern, quadriceps contraction inhibition and slowing of rehabilitation are reported as consequences of swelling. Accordingly, it is likely that a therapy that would promote resorption of swelling would decrease the negative impact of swelling on patients' recovery. Manual lymph drainage (MLD) could possibly accelerate oedema resorption after TKA surgery. Several authors advise MLD after TKA, and physiotherapists currently apply MLD to reduce postsurgical swelling. Its positive effect on chronic lymphedema resorption is largely accepted. Results on pain and range of motion seem interesting from an empirical point of view but, to our knowledge, no scientifically driven studies have confirmed these positive effects after orthopaedic surgery.

This study aims to evaluate the effect of MLD on swelling, and parameters possibly influenced by swelling (pain, knee range of motion, knee objective and subjective function and gait pattern). This study is a randomized controlled clinical trial. Patients will be blinded from goals of the treatments and evaluators will be blinded from the treatment delivered to the patient. The effects of MLD (5 treatments of 30 minutes from the second to the eighth postsurgical day) will be compared to those of a placebo (relaxation sessions). MLD or placebo will be added to the conventional rehabilitation program of our Orthopaedic Department. Assessments will be conducted one day before surgery, two days, 8 days and 3

months after surgery. Evolution and differences between groups will be statistically assessed at each step. This project aims to improve knowledge on the efficiency of rehabilitation treatments following TKA. It will contribute to effective evaluation of the effects of a widely applied treatment. The results will help physiotherapists and medical doctors to take clinical decisions based on documented evidence. This will make a contribution to better quality of care and better allocation of resources to rehabilitation.

*Funding: SNSF DORE*

### **Effects of Manual Therapy Followed by Specific Active Exercises on the Improvement of Functional Disability of Chronic Low Back Pain Patients**

Pierre Balthazard

*In collaboration with Philippe Demeulenaere (HECVSanté), P. de Goumoens (CHUV, Lausanne), Olivier Dériaz (Clinique romande de Réadaptation)*

**Introduction:** This study investigates the effects of manual therapy followed by specific active exercises on the improvement of functional disability of chronic low back pain patients. The literature recommends active exercises for chronic low back pain. However, the physical activity tends to be limited by pain and, in some cases, by a fear-avoidance process, conducting to a general physical deconditioning. Moreover, the literature recognizes acute analgesic effect of manual therapy. We postulated that this analgesic effect may facilitate the compliance to perform subsequent active exercises and, consequently, improves the treatments efficacy of these patients.

**Population:** 42 patients, aged 20 to 65 years old (28 males, 14 females), suffering from chronic low back pain without complications and co-morbidities, were randomly distributed into two groups, i.e. a manual therapy (MT) and a control (C) group. **Interventions:** Each patient followed nine physiotherapy sessions over a period of 4 to 8 weeks: the MT group received MT + specific exercise therapy (SET); the C group, sham ultrasound + SET. **Outcomes:** "Pain intensity-VAS", "Oswestry Disability Index-ODI" and "Fear-Avoidance Beliefs Questionnaire-FABQ" were evaluated before treatment, after the 9<sup>th</sup> session, at 3 and 6-months after the end of treatment. Statistically, the results were treated by a one factor ANOVA with repeated measurements. A significant difference response between treatments was assessed with the treatment x time interaction.

**Results:** Thirty-eight out of 42 subjects completed the study. The improvement of the ODI score was significantly better for the MT group ( $p=0.01$ ). The progression of the VAS and the FABQ scores was not significantly different between groups,  $p=0.44$  and  $p=0.25$  respectively.

**Discussion:** Manual therapy followed by specific active exercises improves the recovery of functional disability. The mechanisms, by which manual therapy affects active exercises and functional disability, appear to be not or only partly associated with pain or fear-avoidance.

*Funding: SNSF DORE; end 2009*

## **AUDoRaP: Ubiquitous access to radiological patient record**

Sandrine Ding

*In collaboration with Alexandre Dominguez (HECVSanté)*

The issues related to the health and legal framework, now allowing patients to access their medical records, are the basic contexts of the creation of the project AUDoRaP. Specifically, we are interested in medical radiology, which occupies an important place in the health system. Indeed, few patients are properly cared for without the support of medical imaging. However, data related to radiology are not always easy to access, which complicates the work of medical teams and contributes to increase health care costs.

Under the project AUDORAP we developed a prototype for the patient and the physician allowing immediate access to the radiological file, in Switzerland and from abroad. The information shared through this file is administrative data about the patient and the associated medical reports. But two key elements have also been integrated into the application: the DICOM images and the dosimetry. Particular attention was paid to securing data.

*Funding: Fonds stratégique HES-SO; end 2008*

## **Lower Leg Edema Evaluation After Total Knee Arthroplasty Using Bioimpedance**

Claude Pichonnaz

*In collaboration with J.-P. Bassin and D. Currat (HECVSanté), B. Jolles-Haeberli (CHUV), E. Martin, E. Staderini (HEIG-VD)*

Introduction: Scar, dressing and metallic implants prevent the use of classical measurement tools to evaluate postsurgical oedema in orthopaedics for the selection of the optimal rehabilitation process. Consequently, the research on oedema and its prevention and treatment remained scarce in this field up to now. According to research conducted in the field of lymphology, bioimpedance could overcome the mentioned difficulties but have not been validated in the specific context of orthopaedics. The aims of our study are to assess the applicability and clinimetric properties of bioimpedance for measurement of lower limb oedema after total knee arthroplasty.

Methods: Two evaluators measured twice and alternately the postoperative oedema of 24 patients after total knee arthroplasty using bioimpedance. Oedema volume was also evaluated by girth measurements. Measurements were taken one day before surgery (D-1), two days after (D+2) and eight days after surgery (D+8). We calculated the operated/healthy ratio for both methods. We evaluated intra- and interobserver reproducibility of bioimpedance, responsiveness of both methods and correlation between methods.

Results: Mean operated/healthy volume ratio was 1.04 (SD  $\pm$  0.06) before surgery, 1.18 (SD  $\pm$  0.09) two day after surgery and 1.17 (SD  $\pm$  0.10) eight days after surgery. Mean

healthy/operated bioimpedance ratio was 1.04 (SD  $\pm$  0.07) before surgery, 1.51 (SD  $\pm$ 0.22) two day after surgery and 1.65 (SD  $\pm$  0.21) eight days after surgery. Intraclass coefficients of correlations were respectively higher than 0.97 and 0.95 at each stage for intra- and interobserver reproducibility. Mean difference between evaluators were all smaller than 0.46  $\Omega$ , with limits of agreement ranging from -3.59 à 2.95  $\Omega$ . Effect-sizes measured between D-1 and D+2 were respectively 4.49 and 2.23 for bioimpedance and volume. Correlations between methods were 0.71 at D-1, 0.61 at D+2 and 0.33 at D8.

Conclusion: Bioimpedance had excellent intra- and interobserver reproducibility, and better responsiveness than volume measurement. The decrease of correlation between methods over time could be related either to a change in liquid composition, or to muscular atrophy which affects volume but not bioimpedance, which is specific to interstitial fluid. The exact relationship between bioimpedance and limb volume has still to be investigated. However, bioimpedance is a reliable, responsive and easily applicable measurement tool, which facilitates oedema evaluation and follow-up after total knee arthroplasty.

*Funding: SNSF DORE; end 2008*

## **Assessing an interview technique aimed at improving the admission and prognosis of acute psychotic patients**

Alexia Stantzos

*In collaboration with Gilles Bangerter (HES La Source), Bertrand Graz (CHUV)*

For patients with acute psychosis, not only drugs but also relationships are important from the very first day of care. A specific technique, called "Crisis Dialogue", was elaborated by a multi-disciplinary team in Switzerland in order to fill a perceived gap in clinician abilities at the beginning of a psychotic crisis: To know how to speak with a person in psychotic crisis, beyond anamnesis and basic instructions and reassurance.

The Crisis Dialogue was inspired by phenomenology and the French specialist in emergency psychiatry Henri Grivois. It takes 3 minutes of the consultation time and is meant as a complement to usual care in emergency psychiatry. Crisis Dialogue was taught in 3 psychiatric wards. Physicians, nurses and psychologists were instructed to first use pre-written sentences displayed on a memo card --- and observe how this would foster their work with patients. They could then apply with increasing flexibility the learned underlying theory.

Teaching Crisis Dialogue was tested through the focus-groups method. Clinicians found it easy to learn and an aid for the establishment of a good therapeutic alliance, while helping the patient giving a non-delirious meaning to what happened and being more apt to detect first signs of a potential relapse. A prospective measurement of clinical and economic effects remains to be done and could be conducted in various institutional and cultural settings.

*Funding: SNSF DORE, end 2010*

## Training, practices and professional representations

### **Gender and horizontal segregation in the health professions: sharing the daily practice**

Séverine Rey

*In collaboration with Christine Pirinoli and Nicole Richli Meystre (HECVSanté)*

By focusing its attention on the observation of the labor division between male and female colleagues, this project aims to answer to the problem of equal opportunities within the health professions. To uncover the mechanisms of sexual segregation in the practice of health professionals, we chose two professions (medical radiology technicians and nurses). We observe, through the techniques and gestures, how gender relations are reflected in the sharing of work tasks. In this context, we wish to highlight how trades work-sharing between colleagues in mixed teams of each profession and, secondly, to observe any differential use of technologies and tools, while questioning how these practices are justified.

*Funding: OPET*

### **Status of the physiotherapy profession**

Geneviève de Rham

*In collaboration with Marcelo Valli (HECVSanté), Pascal Wagner-Egger (HECVSanté)*

This research relates to a profession which is not often studied. The starting point for this research was a study undertaken in 1982 (ambulatory care - PNR8, including a section on physiotherapy). It is based on a standardized self-administered questionnaire, sent to all physiotherapists who practice in Canton of Vaud (950).

The results indicate that 47% of the physiotherapists are wage-earners, 50% practice on a purely independent basis and 3% exert in both categories. Average age is 42. Two thirds of the physiotherapists are women, in both wage-earner category as well as in independents practitioners category. Compared to 1982, the proportion of women remained stable (2/3), even if total staff grew from 402 to 950 persons during this period. Women work less hours per week, particularly in independent sector.

Main concerns of physiotherapists are (in decreasing order): technical evolution of the profession, relations with the health insurance companies, financial constraints, relations with doctors, competition and education. This study brings useful information to adjust the bachelor curriculum in physiotherapy.

*Funding: HES-SO; end 2008*

### **Health literacy of population and patients- is this a topic in the training of health professionals in Switzerland?**

Philippe Lehmann

In the context of developing a strategy and measures to promote the health literacy of the Swiss population, the Federal Office of Public Health points to the role that health professionals can play and especially their training in Schools of Health Sciences. This exploratory research project identifies teachers in the fields of nursing, midwifery and physiotherapy in four Schools of Health Sciences in the French and German speaking parts of Switzerland who explicitly focus on the topics of Health Literacy, Health Competence, Patient Education, Patient or Family Centeredness, Health Promotion and Community Health. Interviews with 20 teachers reveal their theoretical background, practical experience, teaching methods and outcomes, as well as a judgment on the importance of these aspects in the pre-graduate or postgraduate curricula of health professionals.

The research analysis shows that Health Literacy and Competence of patients and/or population is effectually a matter of teaching. There is neither a common concept nor a unique theoretical background in this field, and teachers with interest in the field don't communicate in local or national networks. Beyond the great diversity of reference models, one can observe a strong commitment for person/patient centered approaches. There are fewer differences between linguistic areas or the three professions than between public health vs. clinical, individual vs. community, psycho-social vs. nursing sciences roots of the theoretical backgrounds of the teachers. The conclusion of this research is a plea to intensify the dialogue between public health strategies and the field of training of health professionals.

*Funding: FOPH; end 2009*

## **Socio-historical approach of physiotherapy and its education in the state of Vaud**

Christine Pirinoli

*In collaboration with Véronique Hasler (HECVSanté)*

This study will trace the history of physiotherapy and its school in the state of Vaud. It will examine the process of the institutionalization of the profession and of the education through their decisive milestones, the program of study, the distribution of tasks and the definition of roles. Simultaneously the interests, the stakes and the interactions between the social actors involved will be identified. This research will also interrogate in a diachronic way several themes currently debated within the profession - like autonomy in practice, the diversification of education and areas of intervention, effectiveness of techniques. It will finally focus on images and social uses of the body that are underlying these themes.

*Funding: Fonds stratégique HES-SO; end 2010*

## **Interdisciplinary Colloquia in Re-adaptation: the Stakes and Limits**

Muriel Pott

*In collaboration with A. Anchisi (HECVSanté)*

Twice a week, the observed clinic calls a meeting of all professionals with the aim to define an interdisciplinary goal to achieve for each patient. This reunion is described by participants as essential, but not satisfactory.

To understand this lack of satisfaction, we analysed 4 meetings in terms of exchanged information and decisions taken. We also analysed traces of these decisions in the professionals' records. We first found that managing time devoted to each patient did not correspond to identified criteria of complexity. Regarding information, we found a large collection of data without any prioritisation. As for the development of interdisciplinary goals, the 4 meetings proceed differently and did not demonstrate a collective decision-making competency. However, analysis of records shows that reunions can influence the activity of different disciplines, although it is mainly routine activities benefiting from interdisciplinary meetings.

We were unable to identify innovative responses to complex problems. This first approach of an interdisciplinary tool could be continued with action research aiming to involve professionals in a reflection on their practices and changes they could bring to it.

*Funding: SNSF DORE; end 2004*

## Socio-sanitary context

### **Social Inequalities and Health in Switzerland – Health and Social Policies of Swiss cantons**

Philippe Lehmann

In the context of developing a national strategy and measures to reduce the social inequalities in health in Switzerland, the Federal Office of Public Health asked the investigator to examine the actual policies in this field adopted and implemented by some of the Swiss cantons.

This exploratory research project recognizes that the social inequalities in health are an established reality in Switzerland with many facets, but that they are taken little into account in a general way. On the contrary, the health policies of the Swiss cantons reacted for a long time to certain particular aspects of social inequalities and set up specific measures in this respect. Moreover, the federal health policy also introduced some actions to diminish the inequalities, for example the reduction of the premiums of sickness insurance. The subsidies are allocated to low income persons or families by the cantons, which have each one a particular way to proceed. The goal of the research is to scrutinize how these various solutions are articulated between them (or not) and on which points the cantons put the main effort. The differences between the cantonal policies can help to find tracks useful to a future national policy.

The field research covers the five cantons of Vaud, Freiburg, Bern, Basle and St Gall, which represents a third of the population of Switzerland. The research method includes interviews

of Health Ministers, key persons in health administration and representatives of NGOs as well as written documents. The analysis will give a cross-sectional view of the different policies and set out a few recommendations on what a national policy could be in this field.

*Funding: FOPH; end 2009*

## **Social security coverage of health care delivered by family members**

Beatrice Despland

*In collaboration with Claudia Von Ballmoos (HECVSanté)*

*Funding: HES-SO; end 2009*

## ***Completed research in collaboration with other institutions***

### **Development, validation, evaluation of a clinical or technical approach**

#### **Effects of a “Vertical Ambulatory Traction Device” on trunk muscles recruitment of non-specific low back pain patients**

E. Staderini (HEIG-Vd)

*In collaboration with P. Balthazard (HECVSanté), D. Goldman (Cabinet de physiothérapie de Montelieu)*

Introduction : This project intend to quantitatively validate the clinical effects of a “Vertical Ambulatory Traction Device” (Vertetrac) on a healthy population and on a population suffering of non-specific low back pain, with or without irradiation in the lower extremity. Nowadays, the literature recognizes biomechanical and neurophysiological effects from a standardized traction: a separation of the intervertebral motion segment and a modulation of nociceptive input in either the ascending or descending pathways. Although these effects seem to diminish patient’s signs and symptoms, particularly on those with radicular pain and neurological deficit, this passive modality hasn’t yet been recommended by European guidelines for the treatment of acute and chronic non-specific low back pain. Meanwhile, over the last decade, therapists have used a different kind of lumbar traction with good subjective clinical results: the “Vertetrac”. This device, which sits on the iliac crest and allows the subject to remain active and functional in the standing position, brings new perspective on the interpretation of the effects of mechanical traction. In addition to the ones mentioned before, we can expect new strategies to develop to keep the body erect. It brings new proprioceptive inputs to the nervous system, affecting the strategies already in place. For the low back pain patient, this could result in another different sequence of recruitment of the deep and the superficial muscles.

Methods: Intervention and outcomes: Measurements on 8 healthy subjects, with and without the apparatus on, will be done for: 1) muscle electrical and mechanical activation timing and intensity with EMG electrodes and UWB sensor plate; 2) body positioning and movement with an inclinometer/accelerometer device. Similar measurements will be repeated on 8 non-specific low back pain subjects.

*Funding: HES-SO, end 2009*

#### **Medicoordination: A practical approach to the interoperability in the Swiss health system**

Michael Schumacher (HEVs)

*In collaboration with Sandrine Ding (HECVSanté)*

Interest for medical information technologies infrastructures and interoperability between

health professionals is growing. The electronic exchange of information is of benefit (reduced cost, faster transmission, etc.) but misuses of such sensitive data must be avoided. Many countries or communities are establishing e-health strategies for better interoperability. However it remains a complex problem. Indeed the number of developed standards and legal bases such as data protection, for instance, do not make it trivial. In this context, the MediCoordination project aims to analyse and validate the interoperability between health professionals on a regional scale and to implement two scenarios with prototypes. In parallel with the Swiss eHealth strategy that is currently being elaborated by the Swiss confederation, particularly medium-sized hospitals and external partners are targeted in MediCoordination to implement concrete added-value scenarios of information exchange between hospitals and external medical actors. These scenarios have been created in collaboration with two hospitals, two private practices and a medical software provider. The first scenario is the release notice transmission from the hospital to private practices; the second is the admission of a patient in the hospital.

*Funding: HES-SO, end 2009*

### **A new method for treatment outcome evaluation in shoulder pathology using kinematic sensors**

Brigitte Jolles-Haeberli (CHUV, Lausanne)

*In collaboration with Claude Pichonnaz and Jean-Philippe Bassin (HECVSanté), Alain Farron (CHUV), Kamiar Aminian (EPFL, Lausanne)*

Background: Nowadays, physicians have tools to assess the efficacy of shoulder treatments. Among these tools, they have a lot of questionnaires, that each patient has to fill out, and which contain different items as for example questions on shoulder pain, range of motion or effects of the disease on their daily lives. These subjective data are very important but they lack an objective part in the assessment of the treatment outcome. As for the doctors, they can assess the range of motion or the muscular power for example. However, they cannot make a direct relationship between these data and the limitations patients have or the improvements patients will have with treatment in the activities of daily living. Therefore, physicians currently lack a convenient and simple method to reliably assess the activity and the quality of life of their patients before and after shoulder treatment.

Aim: This project will provide a new tool for objective outcome evaluation and functional assessment of patients with shoulder pain and pathology, a tool that can be used easily by any physician at the hospital or in his/her office and moreover by the patient at home. It will allow measurement of changes in the biomechanics of the shoulder by noting the effects of these changes on clinical findings and day-living patient pain and activity. Technically, the system will be non-invasive, unobtrusive, and it will allow long term monitoring of the patient's activities. Selection of the useful parameters will be made and visualization tools will be used to help the physician to quickly and easily interpret the results also producing a valid, reliable and responsive outcome measure.

Significance: The contribution of the proposed method would be of great use to appreciate the improvement in functional performances after shoulder pain treatment, to control the efficiency of a rehabilitation program in order to adjust and reorient functional rehabilitation as well as a better understanding the needs of different physical activities of daily living.

*Funding: SNSF PNR53, end 2010*

## Training, practices and professional representations

### **Women's contribution to co-constructed hand-held maternity records: Mapping content to theory in patient-centred care.**

T. Humphrey (University of Aberdeen)

*In collaboration with J. Tucker (University of Aberdeen), C. De Labrusse (HECVSanté), H. Whitford, A. Shetty*

Background: UK policy recognises patient-centred care as one aspect of high quality health care. The Scottish Women Hand Held Record (SWHMR) was launched in 2007 and aims to support communication and patient-centredness in maternity care. This innovative tool invites women to directly write in their own record including their preferences for care and birth.

Aims and Objectives:

- To explore the extent and the content of women's contribution to the SWHMR. The research questions included:
- To what extent do women contribute to their case-notes?
- What are the socio-demographic and clinical characteristics of women who do and do not contribute to their case-notes?
- What do women write/not write about in their case-notes?

Methods: The project took place in Aberdeen Maternity Hospital. A series of 300 women who gave birth  $\geq$  24 weeks gestation were eligible.

Data extraction: Women's anonymised socio-demographic and clinical characteristics were extracted from hospital records. Women's written responses to open items were also directly transcribed into excel spreadsheet.

Quantitative analysis: SPSS (version 16) was used to undertake descriptive statistics, comparing the socio-demographic, clinical characteristics and birth outcomes of the women.

Qualitative analysis: was done using a framework approach to map the data to the key domains to patients-centred care.

Results:

1. We were able to retrieve 250 (83%) case-notes for review.
2. Most women contributed their personal details (88%) and health and life style issues (76%) to their record, but markedly fewer contributed about their birth preferences/management in labour (25%) or postnatal care (12%).
3. Compared to teenagers and older women, those aged 20 to 35 years ( $p < 0.05$ ) were significantly more likely to contribute personal details to case-notes.
4. Women having their first child were also significantly more likely to write about their birth preferences/management ( $p < 0.05$ ), as were women who received community based midwife-led care, compared to those who had hospital based shared care.

*Funding: NHS Research & Development Endowment Grant 2008 (Project No 08/31); end 2007*

## **When gender relation prevails on professional relation. Ethnological analysis of physical therapy**

Hélène Martin (EESP, Vaud)

*In collaboration with Pascal Damidot (HECVSanté), Céline Perrin (EESP, Vaud)*

*Funding: SNSF DORE*

## **Socio-sanitary context**

### **Women's course of action when requesting termination of pregnancy (TOP) and healthcare professionals' and social workers' point of views within the framework of the new provisions of the law (art. 119-120 PC, 02.07.2002) concerning TOP in French-speaking Switzerland.**

Eliane Perin (HEDS Geneva)

*In collaboration with Murielle Pott (HECVSanté)*

This study intends to answer questions linked to the context of the new penal code provisions on termination of pregnancy (TOP) (art.119-120 CP, 02.06.2002). Despite a common legislative framework, the TOP remains a controversial practice in society in general as well as among health and social work professionals. This reluctance and resistance can be expressed during the implementation of the law, as it is interpreted by each County or region, by each hospital or doctor, whereas it is meant to be the same for everyone. These subtle variations are to be grasped in this study at three levels: county interpretations, implementation by healthcare and social professionals, trajectories of women seeking a TOP.

*Funding: SNSF DORE; end 2009*

# Current PhD Research

## How to elicit and record women's views and preferences for care around birth: Case study approach of Aberdeen (Scotland) vs. Lausanne (Switzerland).

Claire De Labrusse

Background: This project will explore women's experiences, opportunities and views about expressing their preferences for care during labour and birth in two tertiary units (Aberdeen (Scotland) and Lausanne (Switzerland)). A previous pilot study in Aberdeen (case note review of 250 cases using the Scottish Women Hand Held Record) showed only 26% of women contributed to the section related to their birth plan and that their birth-plan preferences varied. Furthermore, some women preferred to be passive and, "*go with medical advice*", but others preferred to be "*in control*" with a more active role in decision-making<sup>1-3</sup>. Preliminary observations in Lausanne indicate that women at >25 weeks gestation are offered a birth-plan consultation with a midwife counsellor, and ~40% of women attend.

The aim: to explore the systems in place in Scotland and Switzerland to elicit women's preferences for labour and birth and evaluate "what works"?

### Objectives:

1. To describe and compare the context policies, systems in place to elicit women's preferences.
2. To describe and compare the extent to which women's preferences are sought, expressed and recorded in Scottish vs. Swiss maternity records.
3. To explore women's views about opportunities and methods in place to seek their preferences for labour and birth
4. To critically appraise the extent to which the two systems and maternity records in place capture women's antenatal preferences about birth (as expressed in interviews)
5. To test if women who do express antenatal preferences about birth are associated with obstetric risk? Or particular maternal socio-demographic or theoretical psychological traits arising from qualitative data (eg. measures of perceived health competence and health locus of control)

Methods: A comparative mixed method study in two tertiary units: Aberdeen and Lausanne.

For Objective 1: A retrospective medical record review in Lausanne (as completed in Aberdeen) of socio-demographic, clinical characteristics, attendance at a birth-plan consultation and recorded birth preferences. A statistical descriptive review of the data collected in Aberdeen will inform us about the sample size needed and the variables that

For Objective 2: Qualitative interviews with 10 women in both settings to elicit their views on expressing and recording their preferences for birth and shared decision-making.

For Objective 3: Synthesis and critical appraisal of findings arising from phase 1 and 2

For Objective 4: Using data from phase 1 and 2-develop and pilot a theory-based questionnaire survey of women in both settings to assess their perceived level of being able to express preferences, and their ideal level of expressing preferences (this would be to

measure their “dissatisfaction” between actual vs. ideal? + locus of control and/or perceived health competence)

In order to pursue this research with a reflective angle, a flexible framework will be drawn so that every step will be informing the next one.

A health service perspective will be sought in order to achieve better user services utilization that require further attention in the development of future initiatives.

## **Palliative medicines as mediators of the relation to death and analysers of in-hospital palliative practice**

Rose-Anna Foley

*Phd Thesis directed by Prof. Ilario Rossi, Institute for Social Science (ISS), University of Lausanne (UNIL)*

In a context of strong questioning towards medicalised death, palliative care provides a more human support based on the multiple aspects (physical, psychological, social and spiritual) of the dying patient's suffering. This new form of global care, first developed in the hospitals' margins, is trying to integrate them while only partially achieving to establish as a fully fledged medical specialty. To what extent this low recognition is related to differences between curative and palliative models? Medical progress, fighting against diseases and working under pressure are opposed values to those advocated by the palliative care movement, namely acceptance of incurability and adaptation of caregivers to the patients' individual needs. In hospital, palliative care professionals wish to formalise the entry into the palliative “phase” so that it may be better anticipated and coordinated, but also more explicit to the patient. This represents a real challenge in terms of interprofessional collaboration on the one hand, and requires “enhanced” accompanying of the patient around the announcement of end of life on the other.

At the heart of the care to dying patients, medicines such as morphine and its derivatives (previously used exclusively for acute pain), or sedatives used in palliative sedation (conceived as a last resort treatment in cases of intractable symptoms), allow professionals in this field to be recognised as specialists of pain associated with end of life. But, if this new clinical knowledge plays an important integrative role, palliative drugs are subject to great reluctance from patients, their relatives and caregivers of other hospital services.

This thesis aims to examine non-adherence of patients towards medicines available in the context of palliative care. If they are subject to strong social representations, these treatments can have significant side effects such as dependency, altered state of consciousness or life shortening. While these effects are often considered as acceptable by palliative caregivers since there is little time left to live, priorities and concerns of patients (and their relatives) often seem to confront to those of caregivers. Moreover, the multiple misuses of palliative medicines either to shorten end of life, to alter it or make it unconscious, question the difficulty to assume the role, advocated by palliative care, of a conscious and autonomous patient responsible for his own death.

Even if pain is now widely considered as to be eradicated in hospitals, the prescription of morphine or the induction of an artificial sleep when the dying patient's pain is unbearable

are often linked to the professional's fear of interfering in the patient's death. In the Swiss context where assisted suicide is tolerated in some hospitals, the limit between relieving from suffering and putting an end to an irrevocably condemned life seems increasingly tenuous, causing complex situations for caregivers to bear. Based on an ethnographic study conducted in an in-hospital palliative care service, this thesis discusses the "lethal potion" as an alternative to palliative medicines and evokes the embarrassment incurability and end of life treatments generate in hospitals.

## **Articulation between professionalism and educational practices of medical radiologic technologists from the point of view of a situated actions anthropology**

José A. Pires Jorge

*Director of thesis : Françoise Clerc, Educational Sciences, Université Lumière – Lyon 2*

The object of this thesis lies within the context of the current transformation of educational and professional practices of health professions but with a particular focus on the profession of Medical Radiologic Technologists. The problem of the articulation between the educational practices and the "*professionalism*" of the Medical Radiologic Technologists is built on a diachronic level starting from three dimensions: genesis of medical radiology as an emblematic interdisciplinary field of modern scientific medicine; the development of medical radiology as a production sector of medical services within the modern hospital; evolution of the educational devices of Medical Radiologic Technologists compared to the changes of the professional practices. Synchronically, the concept of "*professionalism*" describes the product of the professionalization processes with their share of implicitness complexity and opacity. It is objectified in its symbolic dimension in reference to the works in anthropology of technology which define the technique as "*effective traditional act*" (Mauss). In addition, its functional dimension relating to competences and the professional gestures as cognitive structures and operations is made understandable by a clinical approach of the activity in the work situation related to ergonomic psychology.

## **Relational care around maternity : the experience of independent midwives as a confronting mirror to Evidence Based Practice**

Patricia Perrenoud

Patricia Perrenoud is preparing her PhD thesis in Health Anthropology. She's currently working on a comparison about conceptions and practices in the fields of Evidence Based Research and independent midwifery. Evidence Based Research is examined through a systematic and critical review of randomized controlled trials designed to assess interventions implying social skills (e.g. counseling, depression prevention, motivational interviewing) and occurring during pregnancy or the first year post partum. Midwives' conceptions and practices are being described through a field research and a grounded

theory approach. Three main topics are being thoroughly observed and analyzed in order to illustrate reflexivity in research and practice fields. These topics are: equity and acknowledgement of population's personal, social and cultural diversity, acknowledgement and insight about context of care and finally conceptions and practices of helping behaviors. This twofold research's aims are to describe similarities and differences between two activity fields, to unveil shared issues and to discuss complementary roles of Evidence Based Research and field reflexivity.

## **Analysis of patient-physiotherapist interaction in an orthopaedic outpatient setting in German-speaking Switzerland – PhD thesis (Department of Sociology, University of Nottingham)**

Veronika Schoeb

*Partner organization: District Hospital in Solothurn, Switzerland, Private practice in Grenchen, Switzerland*

**Introduction:** Research in health care communication has gained importance in recent years. Professional practice guidelines prescribe health care professionals in general and physiotherapists in particular to include patients into the decision-making process and to establish collaboration in order to elaborate therapeutic goals and treatment plans. However, not much is known more about the way the interaction between patients and professionals takes place. The interactive nature of physiotherapy (using verbal and non-verbal communication) has not yet been fully described. The aim of this research is to shed light on patient-physiotherapist interaction during initial encounters in musculo-skeletal physiotherapy, and in particular on the goal-setting process and how decisions are made concerning the choice of treatment modalities.

**Methods:** Two different physiotherapy practice settings participate in the study: an outpatient clinic based in a public hospital and a private practice in a town. 28 consenting outpatients seeking physiotherapy for their musculo-skeletal problem and their therapists will be videotaped during three consecutive sessions. Conversation analysis (CA) is chosen as a method to help describe actual interaction.

**Conclusion:** A better comprehension of the interaction between physiotherapists and patients could help reconsider, confirm or refute some of the policies advocated in physiotherapy regarding patient participation in physiotherapy. A deeper understanding of how patients and physiotherapists communicate in an outpatient physiotherapy practice could lead to sensitising professionals on their communication skills.



## Department Head and Research Team

### Christine Pirinoli

HES Professor  
Head of the Institute of Health Research (URS)  
Haute Ecole Cantonale Vaudoise de la Santé (HECVSanté)  
University of Applied Sciences Western Switzerland (HES-SO)  
Avenue Beaumont 21 – 1011 Lausanne, Switzerland  
Tel : + 41 21 316 81 00  
cpirinol@hecvsante.ch

Secretariat : Véronique Dussault ([vdussaul@hecvsante.ch](mailto:vdussaul@hecvsante.ch))  
Tel : + 41 21 316 81 01

### Research Team:

ANCHISI Annick, HES Professor  
BALTHAZARD Pierre, HES Professor  
BASSIN Jean-Philippe, HES Professor  
BATTISTINI Mélanie, Research assistant  
BIGONI Catherine, HES Professor  
BOREL Catherine, HES Professor  
BORER Carolina, Research assistant  
CURRAT Damien, HES Professor  
DALLERA Corine, Assistante de  
recherche  
DE LABRUSSE Claire, HES Professor  
DE RHAM Geneviève, HES Professor  
DEBONS Jérôme, Research assistant  
DESPLAND Béatrice, HES Professor  
DING Sandrine, HES Professor  
DOMINGUEZ Alexandre, HES Professor  
DUBOIS Julie, Research assistant  
FELTIN Elodie, Research assistant  
FOLEY Rose-Anna, Teacher  
GASPOZ Frédéric, Research assistant  
GREPPIN Christophe, Research assistant  
GUENIAT Christophe, Research assistant  
HAMMER Raphaël, HES Professor  
HASLER Véronique, Teacher  
JORGE José, HES Professor  
LE COULTRE Régis, HES Professor  
LEHMANN Philippe, HES Professor  
MABIRE Cédric, HES Professor

MARCHAND Pauline, Research assistant  
MEYER Yvonne, HES Professor  
OPSOMMER Emmanuelle, HES Professor  
PERRENOUD Patricia, HES Professor  
PICHONNAZ Claude, HES Professor  
POTT Murielle, HES Professor  
RAMELET Anne Sylvie, HES Professor  
REY Séverine, HES Professor  
REYMOND Laurie, Research assistant  
RICHLI MEYSTRE Nicole, HES Professor  
SCHAUB Corinne, HES Professor  
SCHOEB MEZZANOTTE Veronika, HES  
Professor  
STAFFONI-DONADINI Liliana, HES  
Professor  
STANTZOS Alexia, HES Professor  
VON BALLMOOS Claudia, HES Professor

