



Centre hospitalier universitaire vaudois
Service de Néphrologie
et Hypertension

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Hypertension management in the Swiss primary care: protocol for the randomized controlled study Team-Based Care for Improving Hypertension (TBC-Hypertension study)

Prof. HES-SO Dr Valérie Santschi, PharmDipl, Ph.D

La Source, School of Nursing Sciences, University of Applied Sciences Western Switzerland, Lausanne, Switzerland
Head of research, Service of Nephrology /Hypertension, Lausanne University Hospital, Lausanne, Switzerland

3rd Swiss Symposium on Health Services Research 2014
4 November 2014
Bern



ASSM Académie Suisse
des Sciences Médicales

Presentation plan

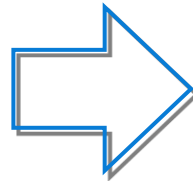
TBC-Hypertension study

- From the context to the TBC-Hypertension study
 - Hypertension care
 - Impact of nonphysician healthcare professionals in hypertension care
- Study presentation
 - A Team-Based Care for Improving Hypertension (TBC-Hypertension): A Randomized Controlled Study
 - Methodological challenges and responses
- Conclusions & perspectives

Context

Hypertension care

- HTA control suboptimal
 - 50% of treated patients with hypertension remain uncontrolled
(Danon-Hersch Eur J Cardiovasc Prev Rehabil. 2009)
- Ageing population
- Limitation to access to primary care MD
Heavy workload of primary care MD



- Recommendation of team-based care models to improve HTA control
(2012 US Preventive Services Task Force)
- Greater involvement of non physicians healthcare professionals - pharmacist and nurse
 - provider of health services
 - member of healthcare team
(2012 US Preventive Services Task Force)

Context

TBC with pharmacist/nurse in ambulatory care

Pharmacist

- Provides medication management in patient-to-MD interface
 - Therapy reviews of medications
 - Resolution of DRP
 - Patient counselling for each prescription
- Supports patients in drug intake
- Reinforces MD messages

Nurse

- Provides care for patients and/or family
 - Education i.e on lifestyle
 - Prevention i.e. assessment of risk factors status (BP measurement)
- Assists patients to interpret health information
- Is in patient/family-to-MD and other healthcare professionals interface

Pharmacist and nurse

- have skills and knowledge complementary to those of MD
- are a valuable asset in a team-based care of hypertension

Context

Impact of nonphysicians healthcare professionals on HTA care

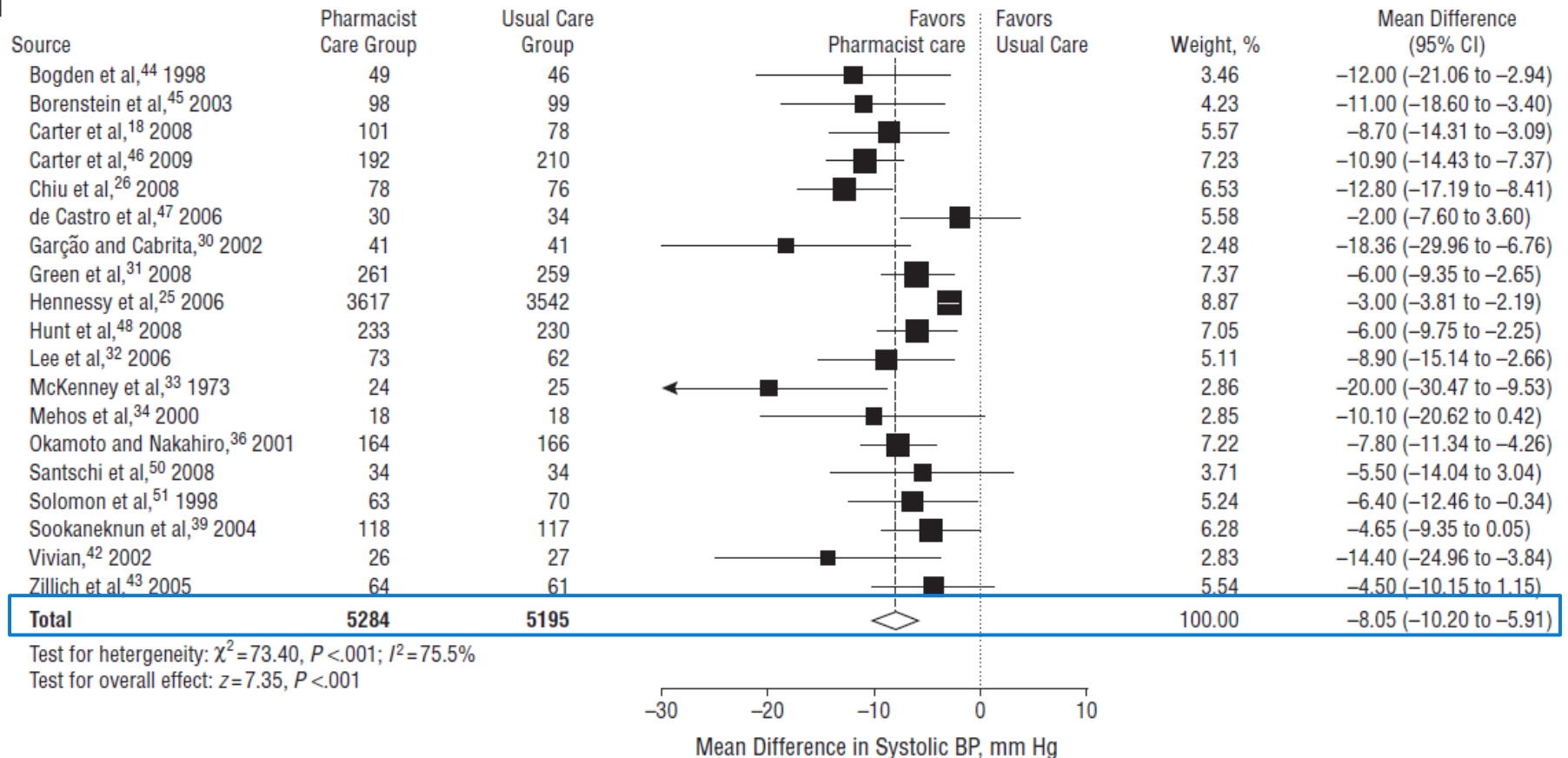
Results of recent systematic reviews with meta-analyses of randomized controlled trials evaluating the effect of pharmacist care and nurse-led care on hypertension care

Comparison of pharmacist care – alone or via TBC – compared usual care group

19 RCTs involving 10 479 participants

Figure 2. Forest plots of the mean difference in systolic (A) and diastolic (B) blood pressure (BP) with the pharmacist care group compared with the usual care group. CI indicates confidence interval.

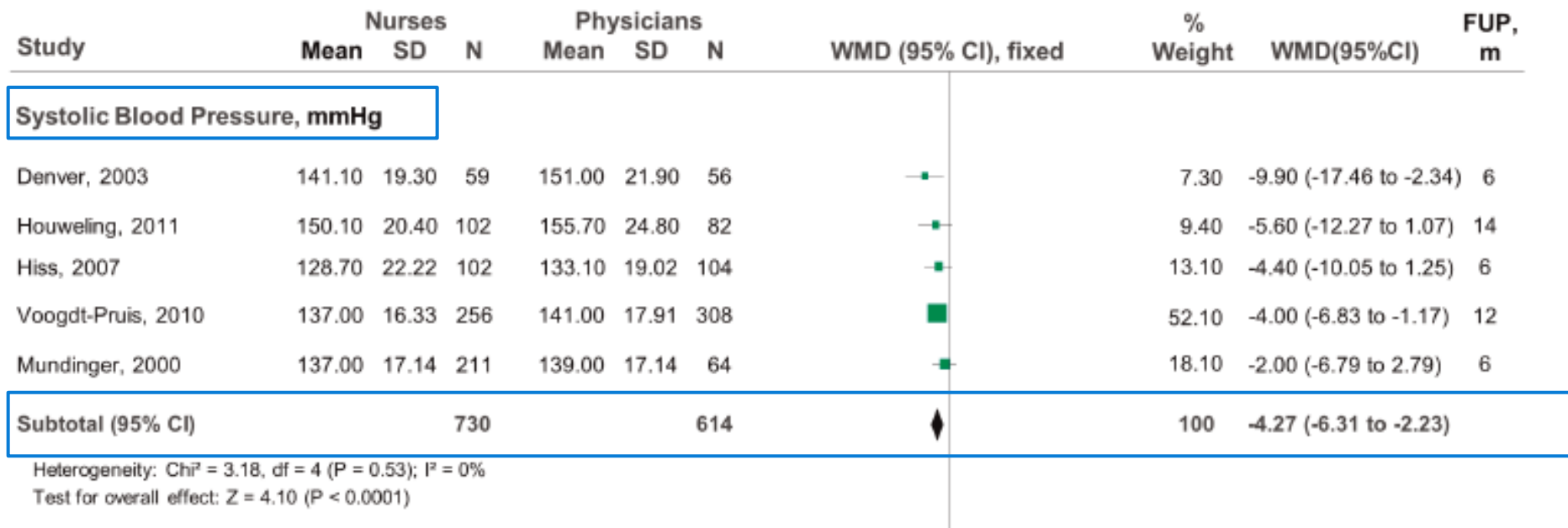
A



Comparison of BP control between nurse-led and physician-led care

11 RCTs involving 30 427 participants

Figure 2. Comparison of blood pressure control between nurse-led care and physician-led care. Studies are listed in order of decreasing weighted effect size. Abbreviations: mmHg= millimetres of mercury; SD=standard deviation; N=total number of patients in the analysis; WMD = weighted mean differences; CI = confidence interval; df = degrees of freedom; I² = heterogeneity between trials; FUP = Follow-up; m = months. doi:10.1371/journal.pone.0089181.g002



A Team-Based Care for Improving Hypertension (TBC-Hypertension): A Randomized Controlled Study

Principal investigators	<p>Prof. HES-SO Dr Valérie Santschi, PharmDipl, PhD La Source, School of Nursing Sciences, University of Applied Sciences Western Switzerland Service of Nephrology/Hypertension, CHUV, Lausanne</p> <p>Prof. Dr med. Michel Burnier, MD Service of Nephrology/Hypertension, CHUV, Lausanne</p>
Co-investigators	<p>PD Dr med. Grégoire Wuerzner, MD, Service of Nephrology/Hypertension, CHUV, Lausanne PD Dr med. Arnaud Chiolero, MD, PhD, IUMSP, CHUV, Lausanne Prof. Dr med. Bernard Burnand, MD, MPH, IUMSP, CHUV, Lausanne Prof. Dr Lyne Cloutier, RN, PhD, UQTR, Canada Prof. Dr med. Gilles Paradis, MD, MSc, McGill University, Canada</p>
Collaborators	<p>Sylvie Tremblay, RN, Service of Nephrology/Hypertension, CHUV, Lausanne Prof. HES-SO Christine Cohen, RN, MSc La Source, School of Nursing Sciences, University of Applied Sciences Western Switzerland</p>
Beginning of the study End of the study	<p>01-08-2014 01-06-2017</p>
Fundings/Support	<ul style="list-style-type: none"> • Swiss Society of Hypertension AstraZeneca Grant-in-Aid • Seed-Money from the Swiss Academy of Medical Sciences (SAMW)-Health Services Research promotion program (Bangerter foundation) • Bourse Promotion Académique des Femmes, FBM, UNIL (obtained but declined)

TBC-Hypertension study

Research question

- Does a **nurse-pharmacist-physician team-based care model** of hypertension
 - improve **BP control** among treated uncontrolled hypertensive outpatients, compared with usual care group (care not involving nurse and pharmacist intervention)?

TBC-Hypertension study

Objectives

Among treated uncontrolled hypertensive outpatients,

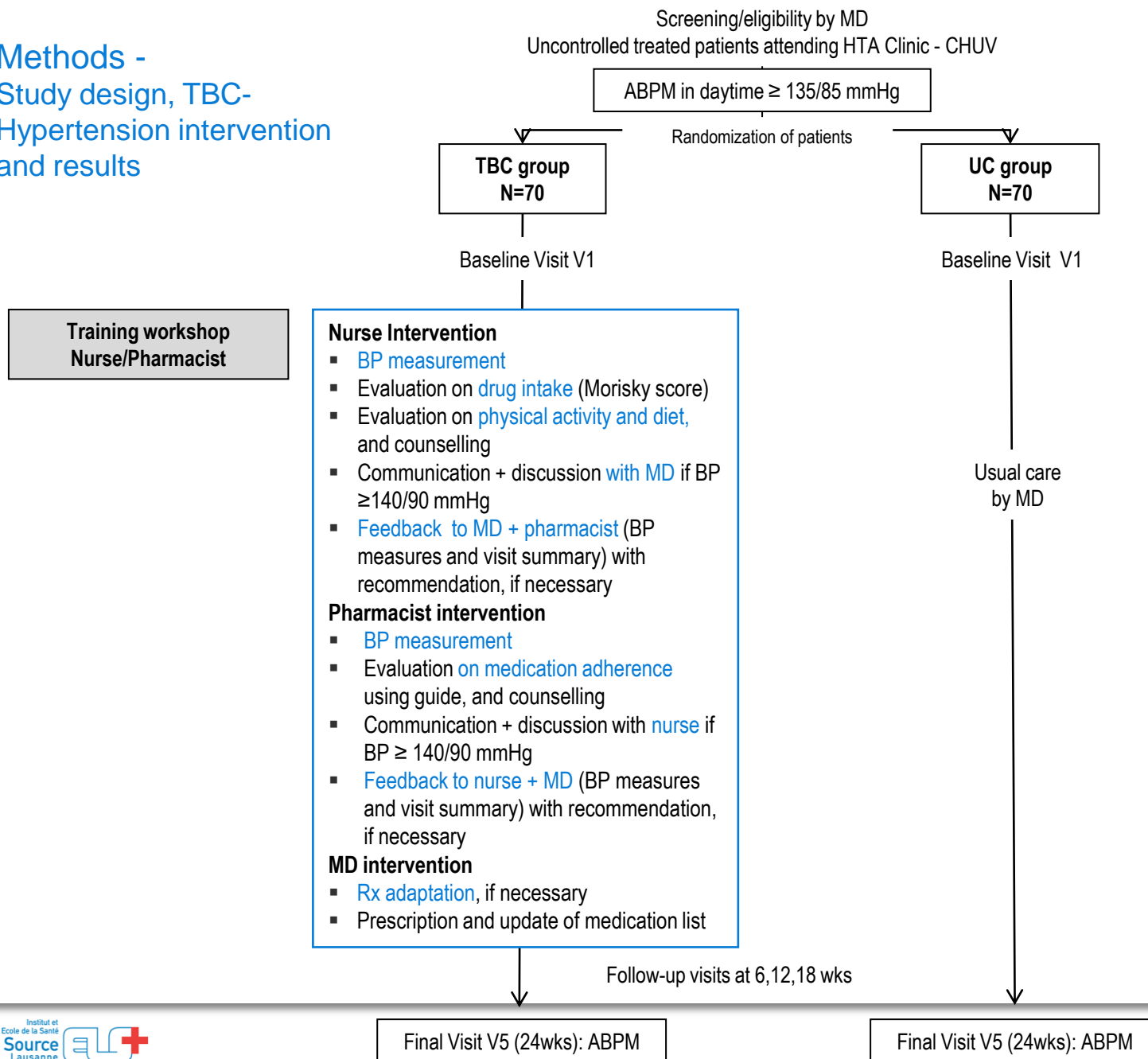
Primary objective

- determine the **difference in BP** (measured by daytime ABPM) at 6-month between TBC patients and UC patients

Secondary objectives

- evaluate **patients and healthcare professionals** (nurse/pharmacist/MD) **satisfaction** with TBC intervention
- determine the **persistence** of effect on BP at 12 months (i.e., 6 months after TBC intervention stopped)

Methods - Study design, TBC- Hypertension intervention and results



TBC-Hypertension study

Preparation

Preparation

Tools study

- Tools for TBC group
 - CRF MD-nurse / CRF pharmacist follow-up
 - Visit summary – nurse (BP measurement drug intake, physical activity, and diet) with recommendation, if necessary
 - Visit summary – pharmacist (BP measurement, PA, evaluation on medication adherence) with recommendation, if necessary
 - Interview guide on medication adherence
 - «Livret de bord» for patient
 - «Aide-mémoire» for nurse / pharmacist follow-up
- Tools for UC group
 - CRF UC follow-up
- CER of the canton of Vaud
 - formation and consent form

Preparation and animation

Training workshop

- Development training workshop for nurse and pharmacist
 - Standardized BP measurement
 - Standardized hypertension care
 - Antihypertensive medication management (assessment of medication adherence)
 - Recommendations on physical activity and diet
 - Study requirements and TBC-intervention
- Animation of 2-hour workshop (May 2014)
 - multidisciplinary team (MD of the HTA Clinic, researchers of la Source and IUMSP and nurse of la Source)

TBC-Hypertension study

Methodological challenges and responses

Methodological challenges

- **Poor culture** of interprofessional teamwork in Switzerland
 - implementation of interprofessional teamwork takes **time, respect and knowledge of each healthcare professionals**

Responses

- **Interprofessional team** to develop research protocol TBC-Hypertension
- **Interprofessional education**
 - FBM-Unil/La Source (02–04. 2015) for students in medicine and nursing
 - course «Hypertension and medication adherence in clinical practice: which challenges for healthcare professionals?»
 - Journées interprofessionnelles FBM Unil/HES-SO for students in medicine and filières en soins (i.e. nursing, physiothérapeutes, sages femmes, TRM)

TBC-Hypertension study

Methodological challenges and responses

Methodological challenges

- Organisational context in which healthcare professional works in Switzerland
 - Community pharmacist
 - Transmission of clinical data

Responses

- Nurse coordinator with «rôle pivot»
- Development and implementation
 - easy tools for communication patient/healthcare professional and between different healthcare professionals
 - electronic platform for transmission of clinical data

TBC-Hypertension study

Conclusions & perspectives

- Improving the management of hypertension
 - is a major clinical challenge regarding the ageing population
 - need a new approach to organize and manage hypertension in the Swiss primary care by further integration of pharmacist and nurse
- Pharmacist and nurse in collaboration with MD can help the management of hypertension in ambulatory care
- We need to do now is implement and evaluate it in Switzerland

Thank you for your attention

Prof. HES-SO Dr Valérie Santschi, PharmDipl, PhD

v.santschi@ecolelasource.ch

valerie.santschi@chuv.ch