

# UMR 1290 RESHAPE

## *RESEARCH ON HEALTHCARE PROFESSIONALS AND PERFORMANCE*

*ANTOINE DUCLOS – ANNE MARIE SCHOTT*

*Journée Recherche HCL, 24/09/2021*



Université Claude Bernard Lyon 1

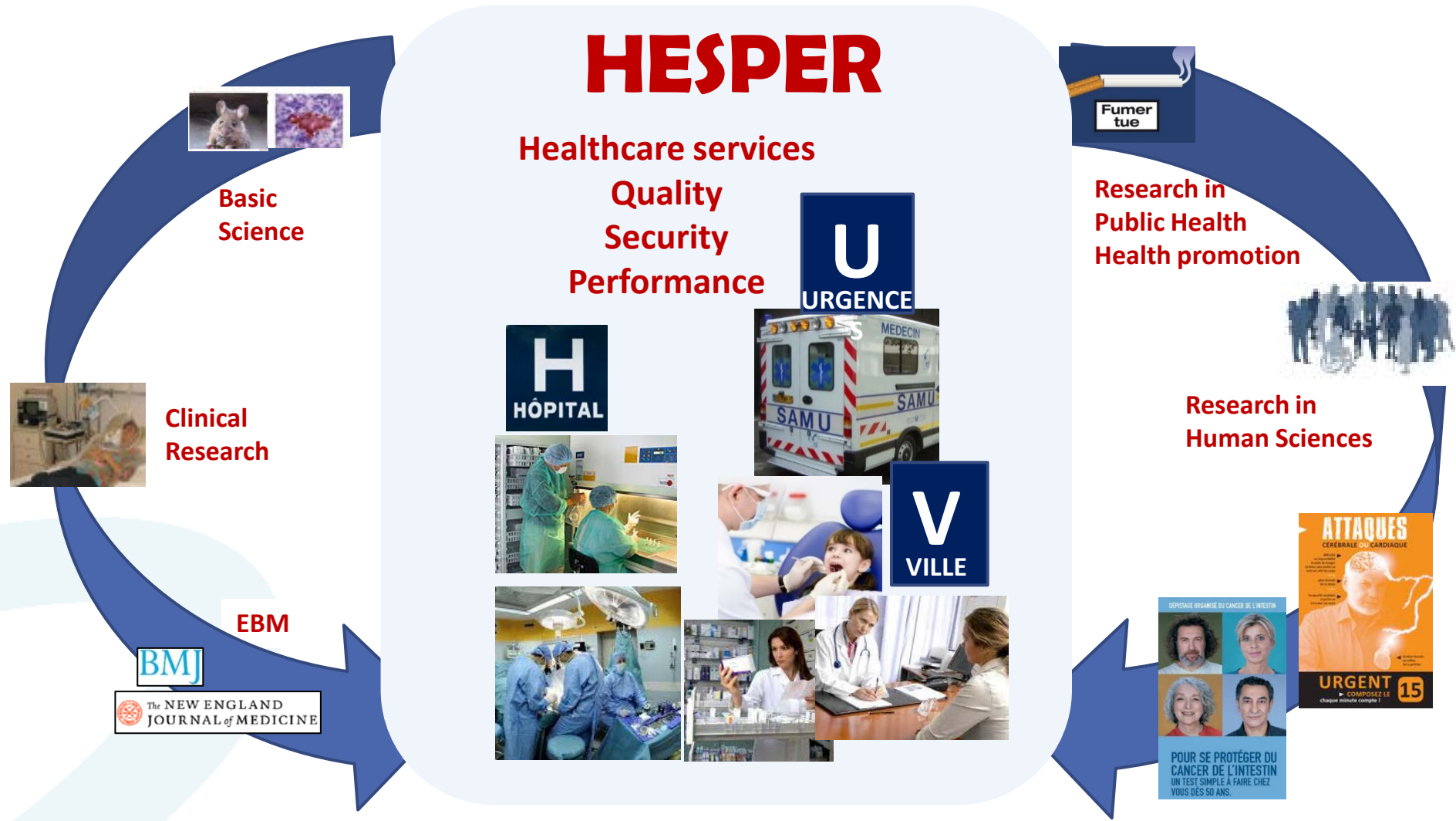


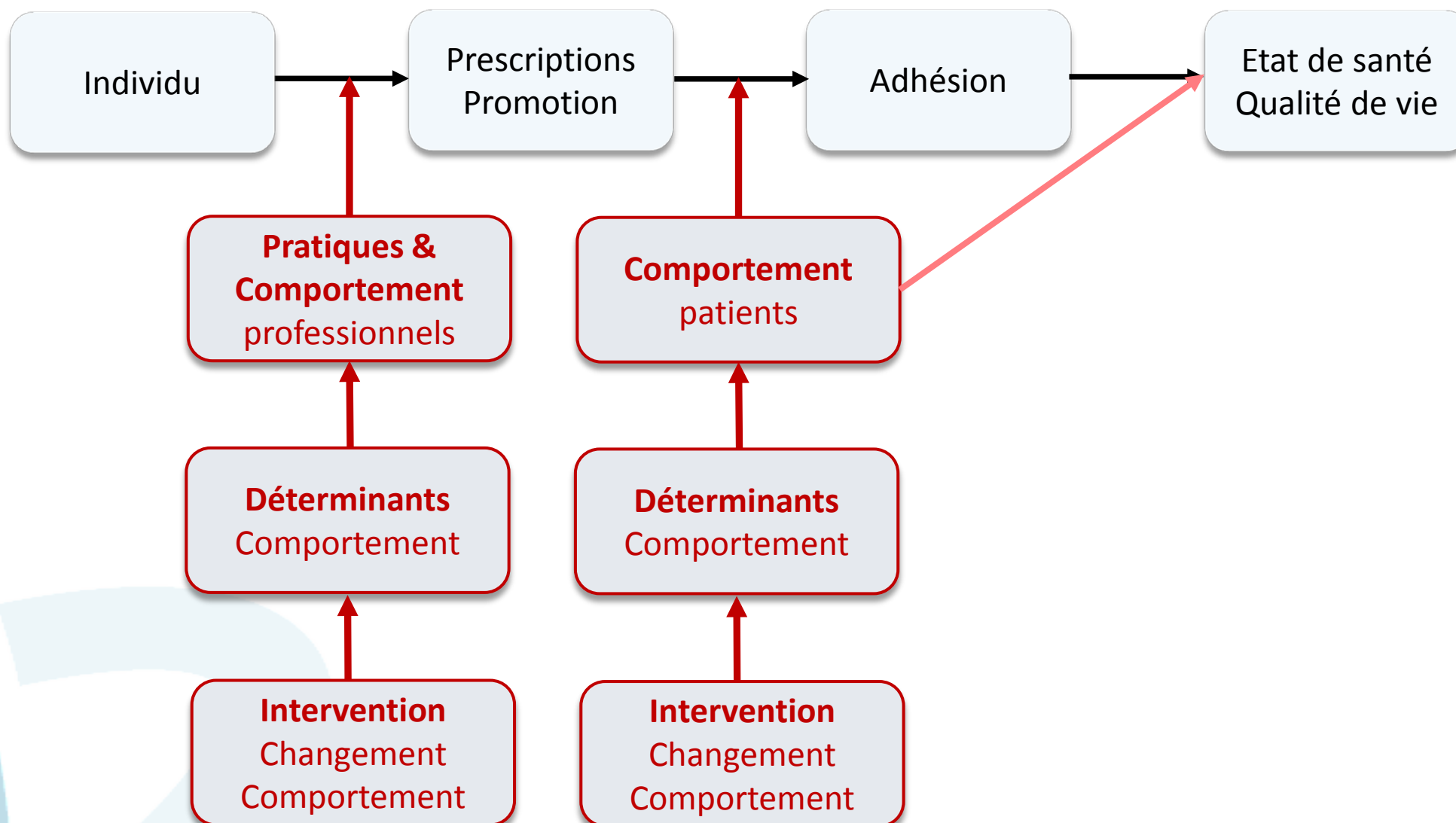
**Inserm**



RESHAPE

# RESEARCH DOMAINS







HESPER  
Health Services and Performance Research



Lyon 1

La recherche

## ÉQUIPE HESPER : TRAVAUX SUR L'AVC

au service de la performance en santé

### 1. Reconnaître l'AVC

Comprendre les représentations des usagers

QUALI AVC

Evaluer l'efficacité des campagnes d'informations

REACT

Développer des outils pédagogiques plus performants

### 2. Prendre en charge l'AIT pour éviter l'AVC

Améliorer l'efficacité de la prise en charge des AIT

PLATEFORME AIT

### 3. Prendre en charge l'AVC aigue

Suivi d'une Cohorte de 700 patients victimes d'AVC

AVC 69-2007

Suivi d'une Cohorte de 1000 patients victimes d'AVC en 2015-2016

STROKE 69-2015

Impact d'un programme de formation des professionnels des urgences

AVC II-TRIAL

### 4. Reprendre une vie active après un AVC

Plateforme d'informations, de ressources et d'échanges  
Patients-aidants-professionnels

PARCOURS AVC

Accompagner les AVC mineurs vers retour professionnel

AV COGNITION

Evaluer un dispositif de coordination de parcours par un « navigateur »

NAVISTROKE

Evaluation médico-économique

ARRPAC

Prévention du risque vasculaire

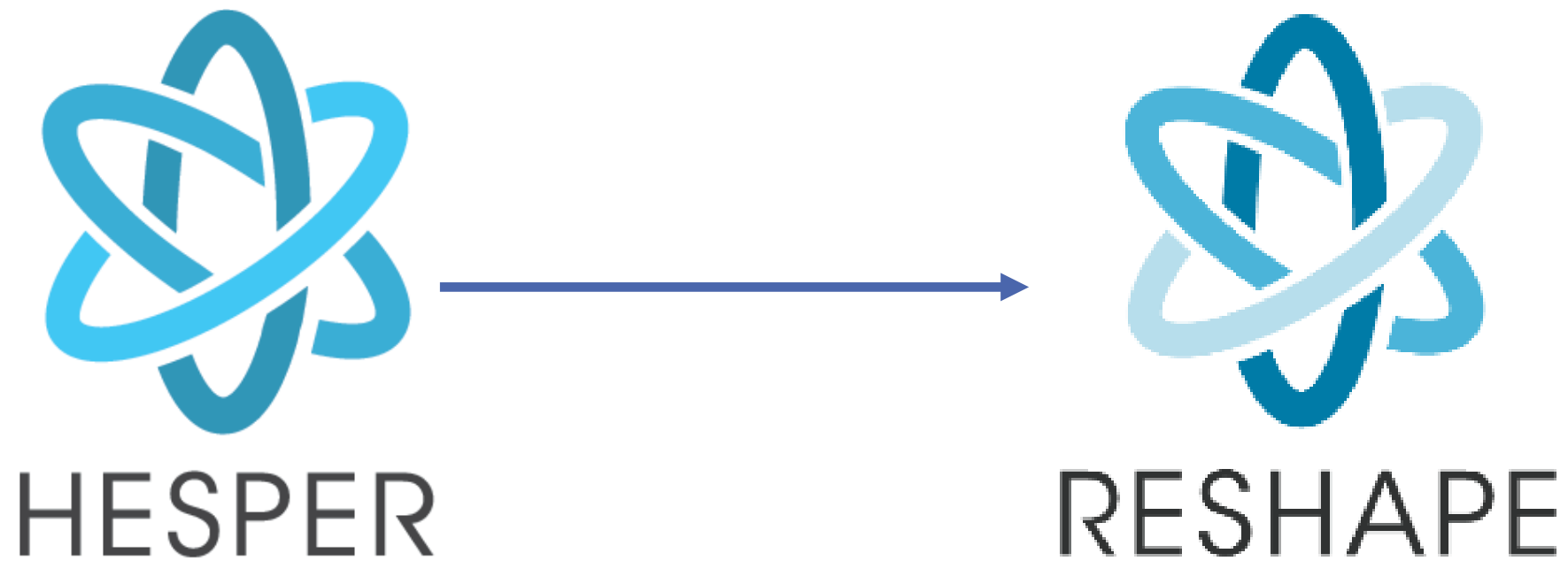
PRICE

Connaitre les besoins des patients et de leurs aidants

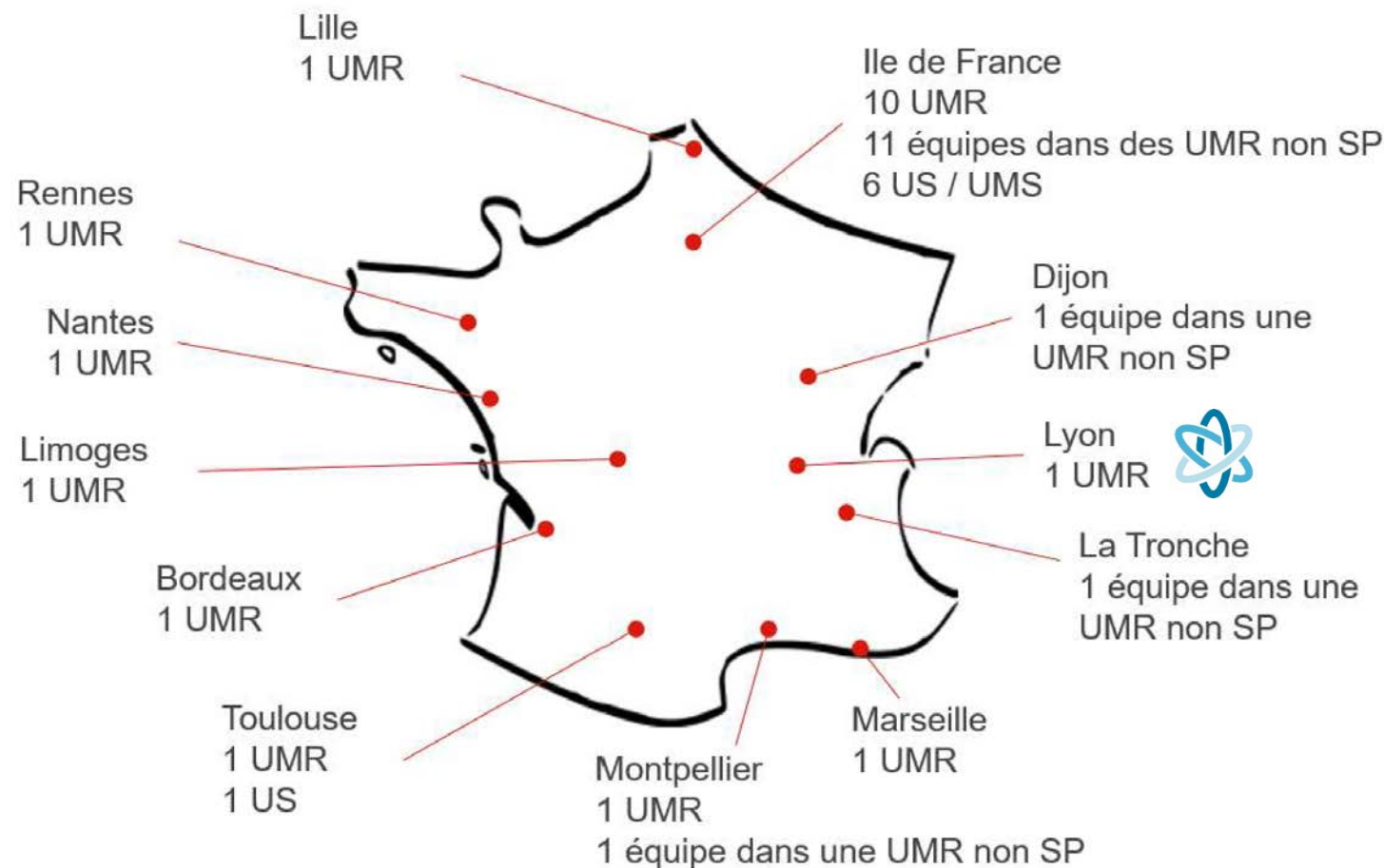
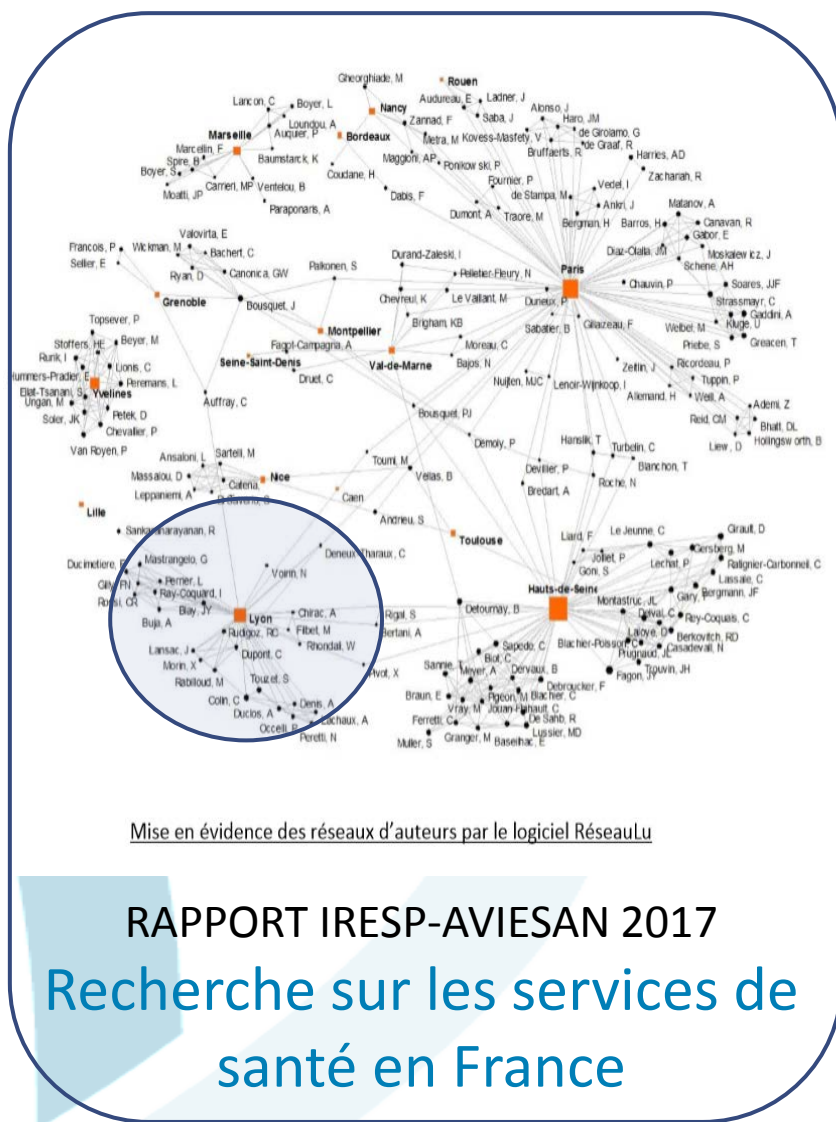
TYBRA



RESHAPE



# INSERM PUBLIC HEALTH UNITS





# HEALTH SERVICES AND SYSTEMS RESEARCH

*“Health services and systems research is a multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately, our health and well-being.” [Lohr, Health Serv Res 2002]*

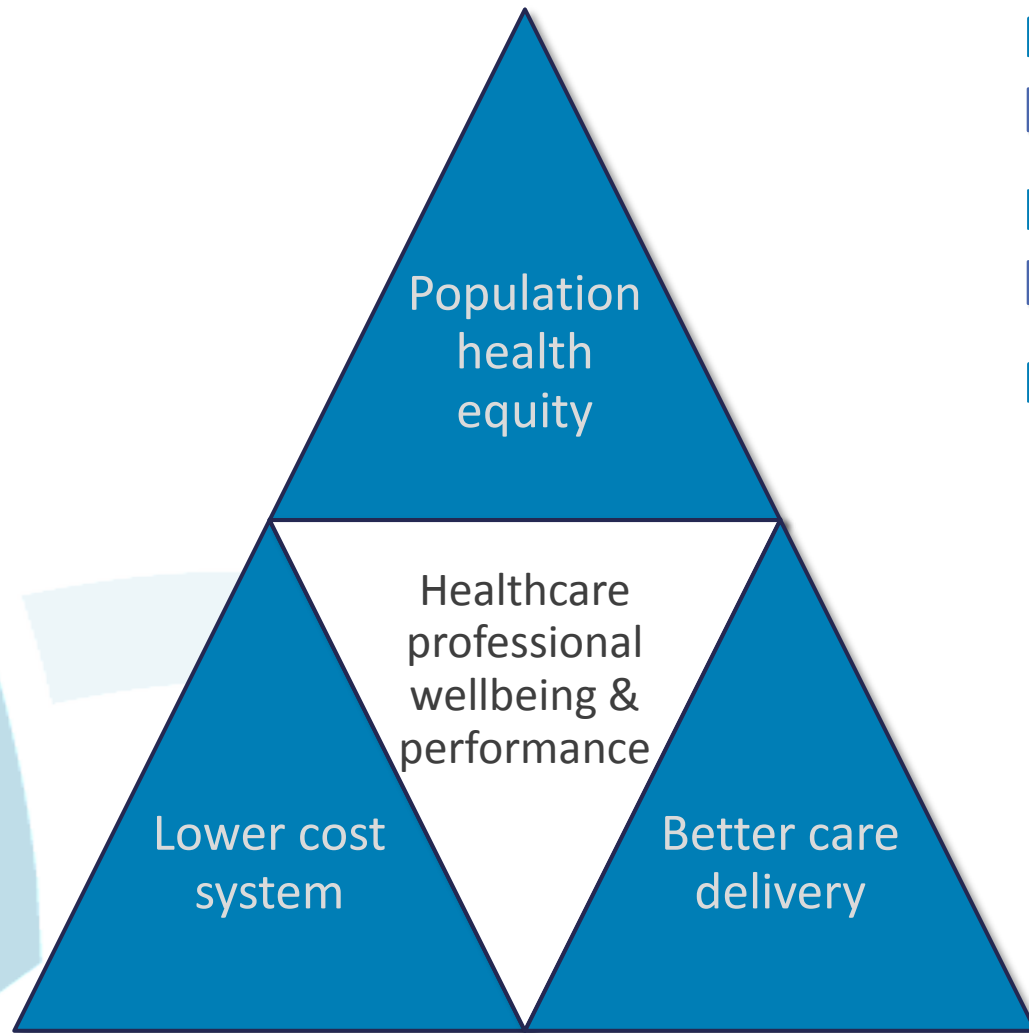
*“The main pursued goals are to identify the most effective ways to organize, manage, finance, and deliver high quality care; reduce medical errors; and improve patient safety” [Agency for Healthcare Research and Quality, 2002]*

*A key difference with traditional clinical research is that health services and systems research investigates care delivery and prevention actions in real world settings using both observational and experimental approaches based on mixed quantitative/qualitative methods.*



RESHAPE

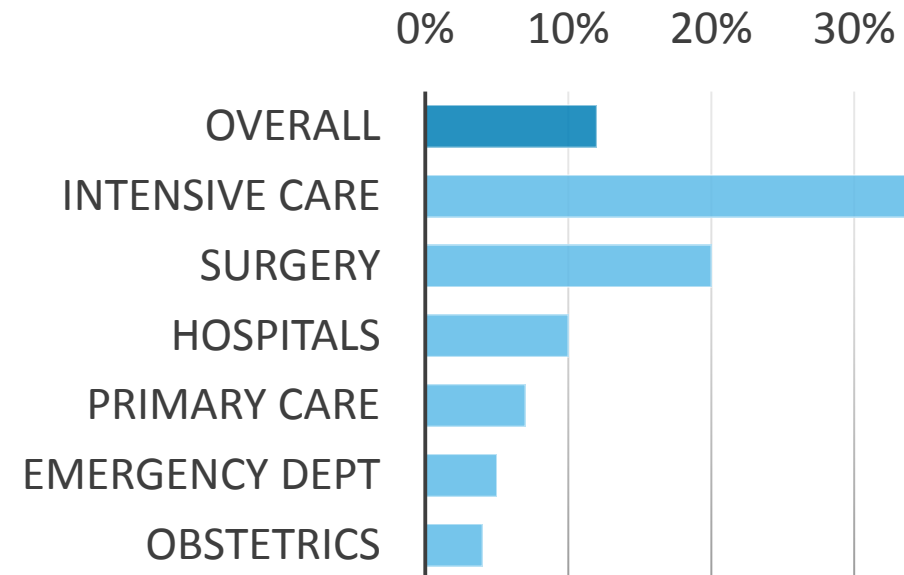
# HEALTHCARE SYSTEMS QUADRUPLE AIM



Medical Error is the 3<sup>rd</sup> leading cause of death  
[Makary, BMJ 2016]

Half of adverse events are preventable  
[Panagioti, BMJ 2019]

Potentially wasting 1% of the total French GDP

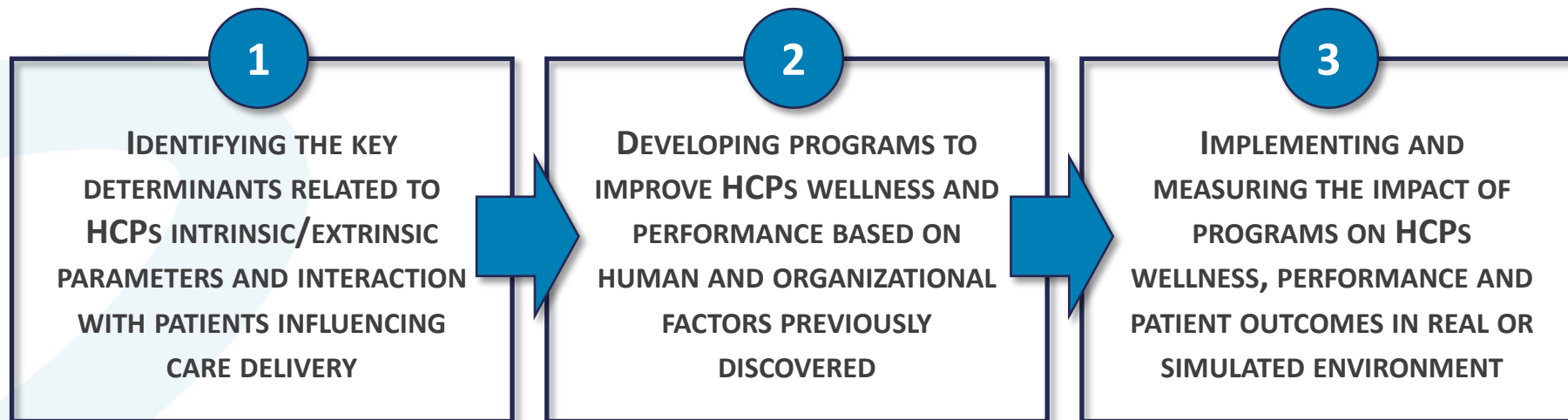


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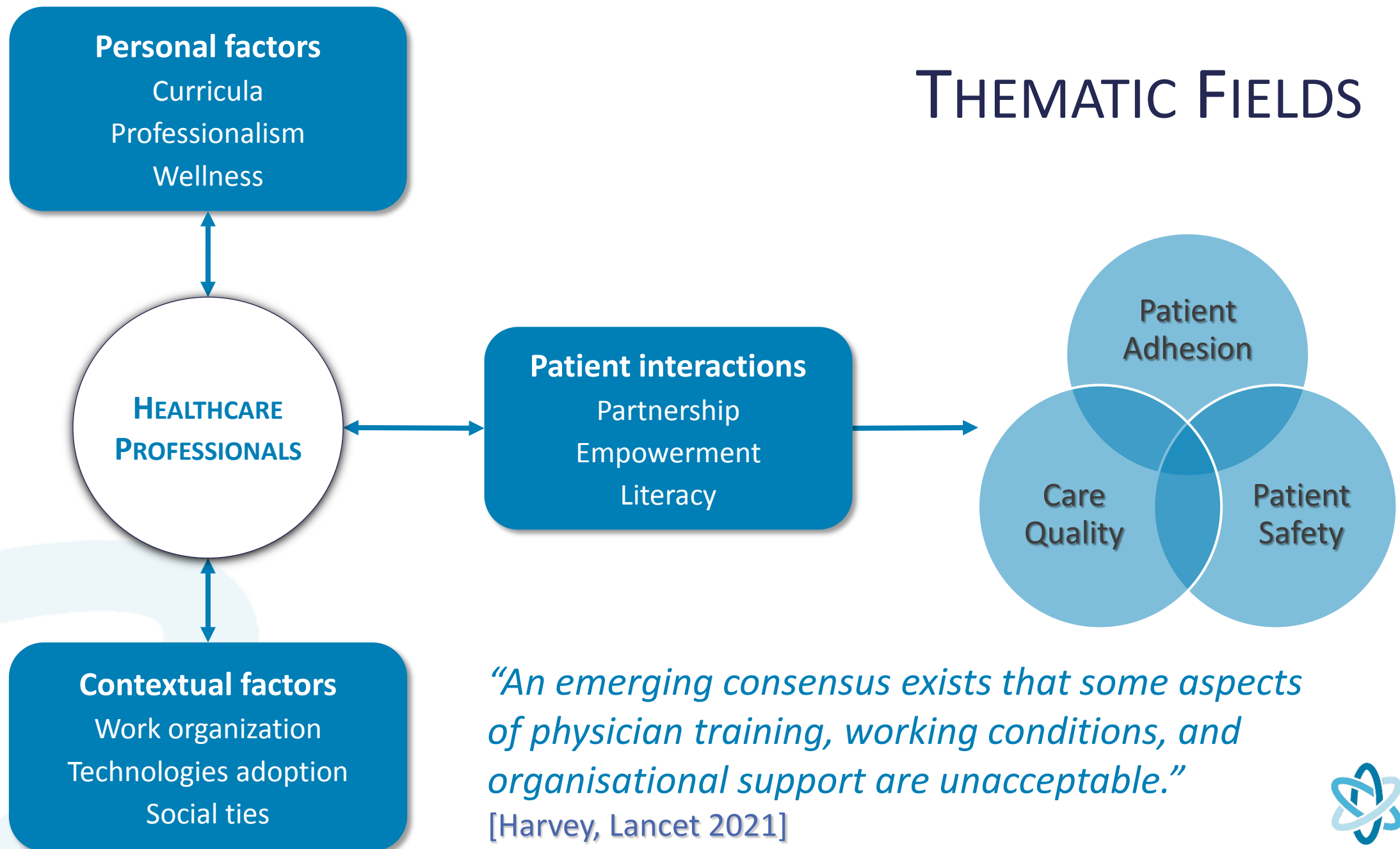


# MISSION STATEMENT

**To improve care delivery and patient outcomes  
through the consideration of healthcare professionals  
(HCPs) as a core resource**



# THEMATIC FIELDS



*“An emerging consensus exists that some aspects of physician training, working conditions, and organisational support are unacceptable.”*  
[Harvey, Lancet 2021]

# RESHAPE TEAM

**70**  
**Multidisciplinary**  
**Members**

Emergency  
Intensive care  
Surgery  
Anesthesia  
Obstetrics

Public Health  
Epidemiology  
Data and Statistics  
Qualitative methods  
Simulated teaching  
Neuropsychology  
Physiology

Primary care  
Psychiatry  
Geriatrics  
Pharmacy

Oncology  
Internal Med  
Cardiology  
Neurology

## Host Institutions



## Partnerships



# HEALTHCARE CONTEXTS

Technical care and acute diseases

Specialized care and complex diseases

Primary care and chronic diseases



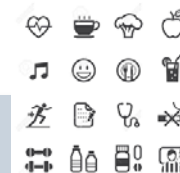
# METHODOLOGICAL APPROACHES



Big data  
IT infrastructure



Mixed methods  
Living lab



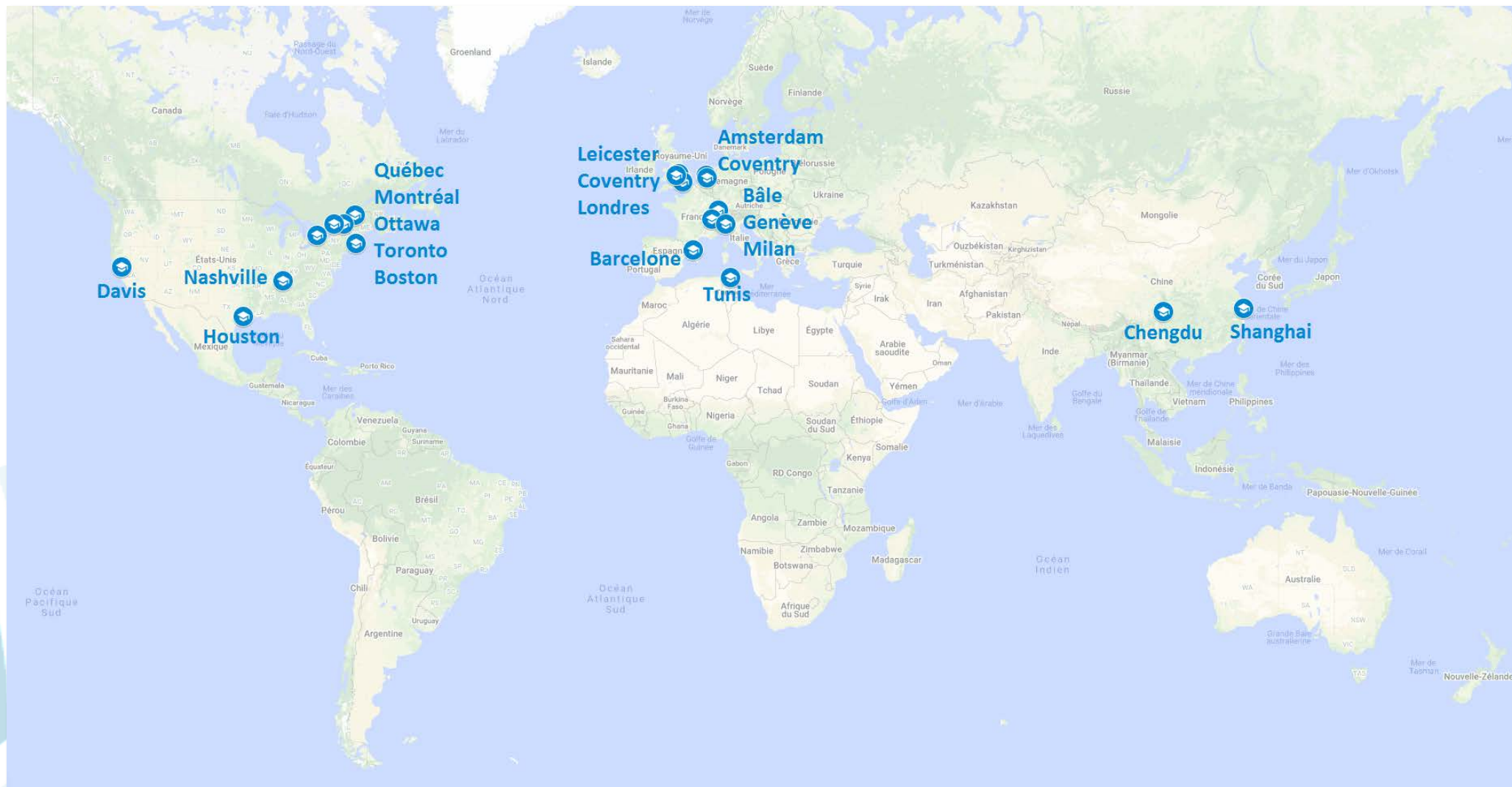
Simulated environment



RESHAPE



# INTERNATIONAL NETWORK



# HOW TO IMPROVE THE STROKE CARE PATHWAY ?

✓ **Strong interprofessional collaborations**

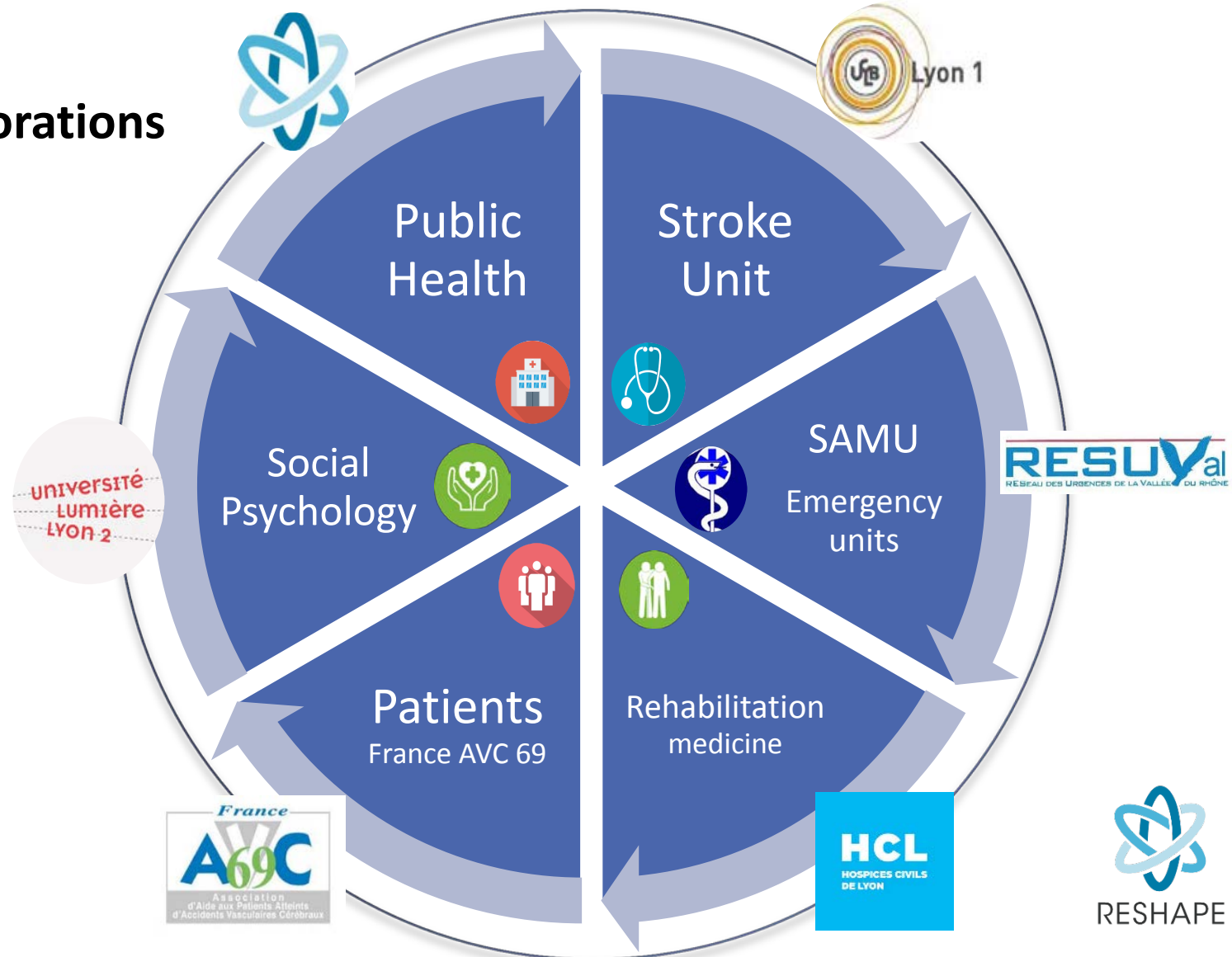
✓ **Patients included**

✓ **Methodological approach**

- Implementation sciences
- Mixed methods

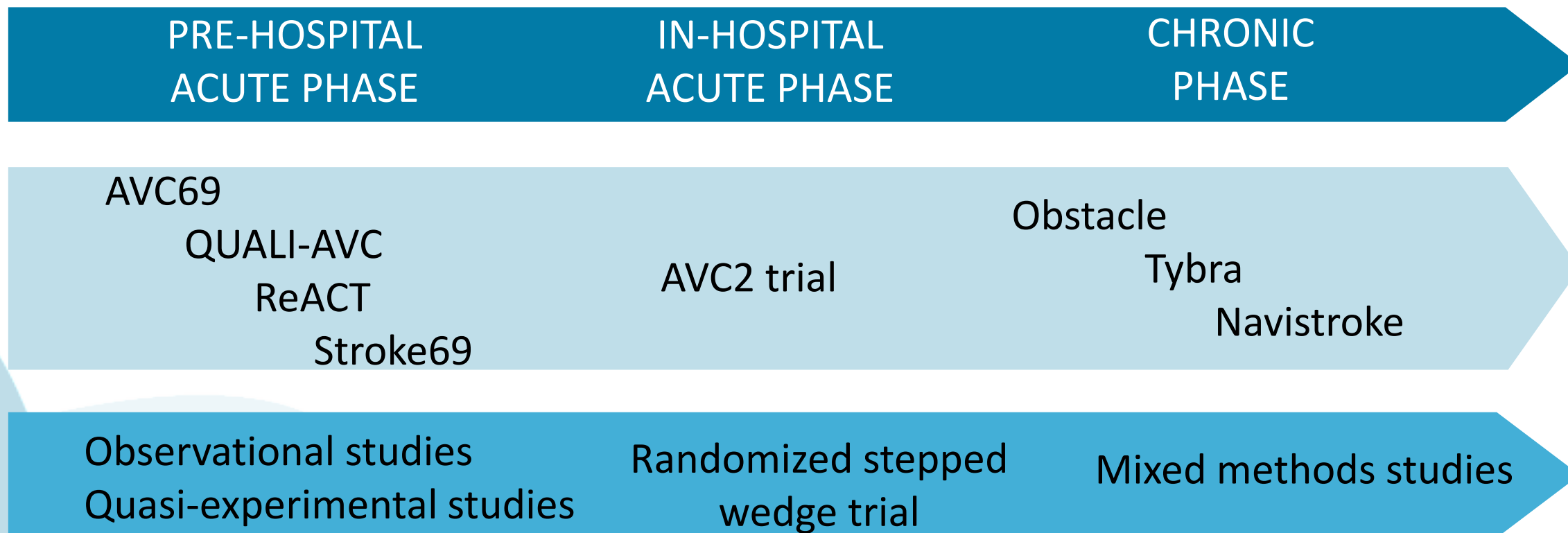
✓ **Social psychology**

- Theoretical frameworks
- Behavior change methods





# RESHAPE STROKE RESEARCH PROGRAM



## Research

### Effect of monitoring surgical outcomes using control charts to reduce major adverse events in patients: cluster randomised trial

BMJ 2020 ; 371 doi: <https://doi.org/10.1136/bmj.m3840> (Published 04 November 2020)

Cite this as: BMJ 2020;371:m3840



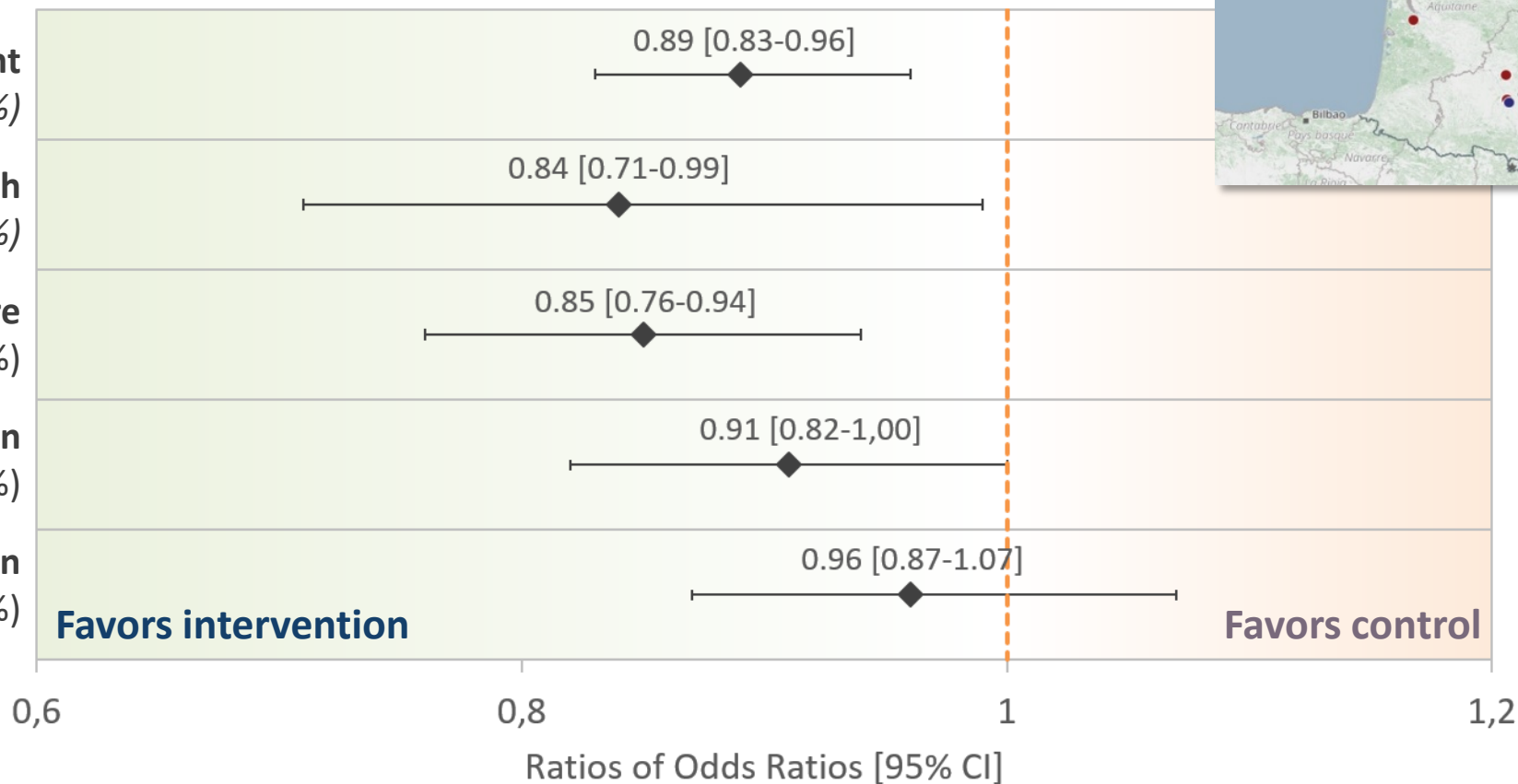
**Major adverse event**  
N=17,575 (11.3%)

**Death**  
N=2,425 (1.6%)

**Intensive care**  
N=8,873 (5.7%)

**Reoperation**  
N=7,068 (4.5%)

**Severe complication**  
N=6,619 (4.2%)





**TOP**SURGEONS

<https://topsurgeons.univ-lyon1.fr>



European  
Research  
Council

## ***UNDERSTANDING THE INFLUENCE OF HUMAN AND ORGANIZATIONAL FACTORS ON SURGEON PERFORMANCE TO ENHANCE PATIENT OUTCOMES***



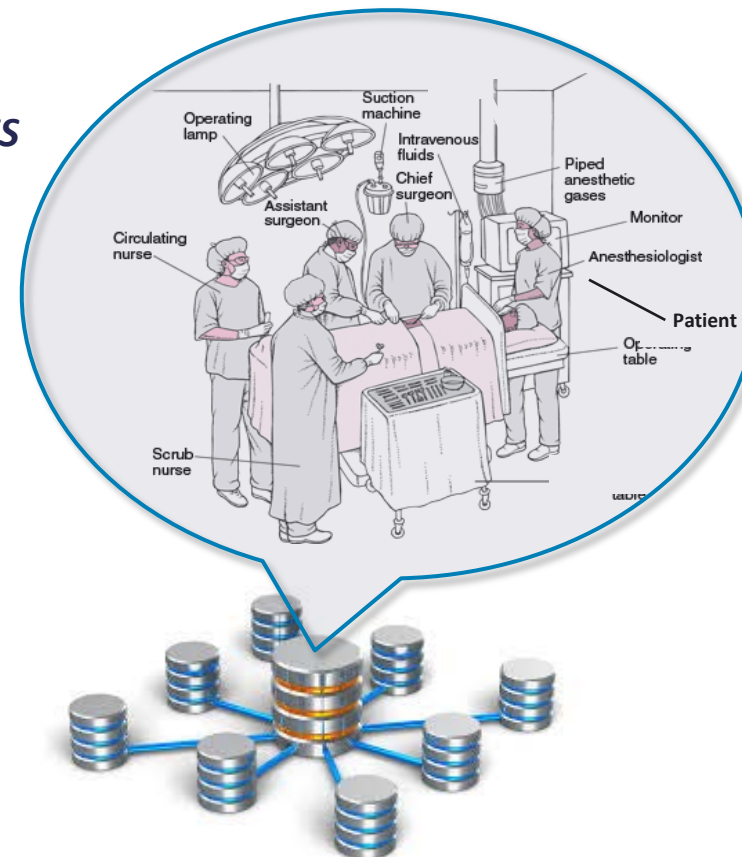
**SURGEON**

### **Connected sensors**

*Physiological parameters, daily activity*

### **Self-administered questionnaires**

*Characteristics, habits, wellness*



### **Hospitals data warehouse**

*Patient, surgical procedure and outcomes*

*Operating room team and organisation*

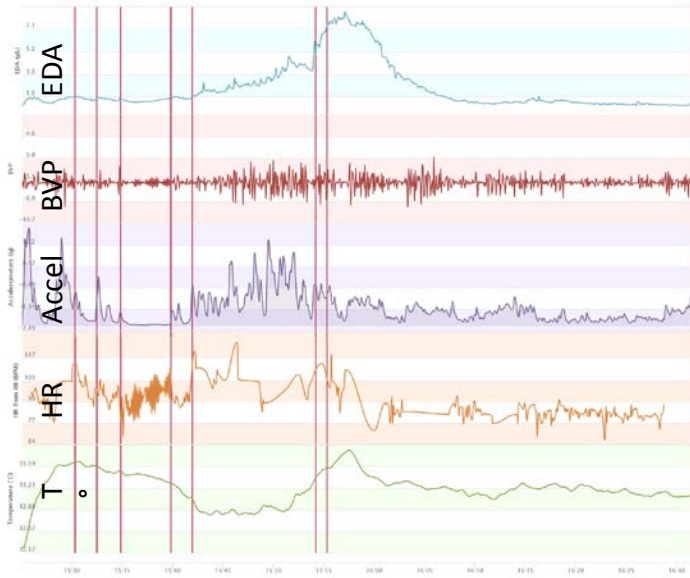
*Surgeon's agenda and workload*

# SLEEP DEPRIVATION AND PERFORMANCE

To evaluate the effect of sleep deprivation on healthcare professionals' performance and well-being

To implement and evaluate human performance optimization interventions

In simulated and real environment.



PHYSIOLOGICAL RECORDING

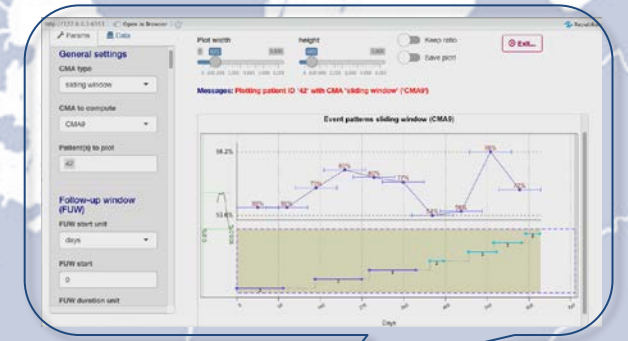
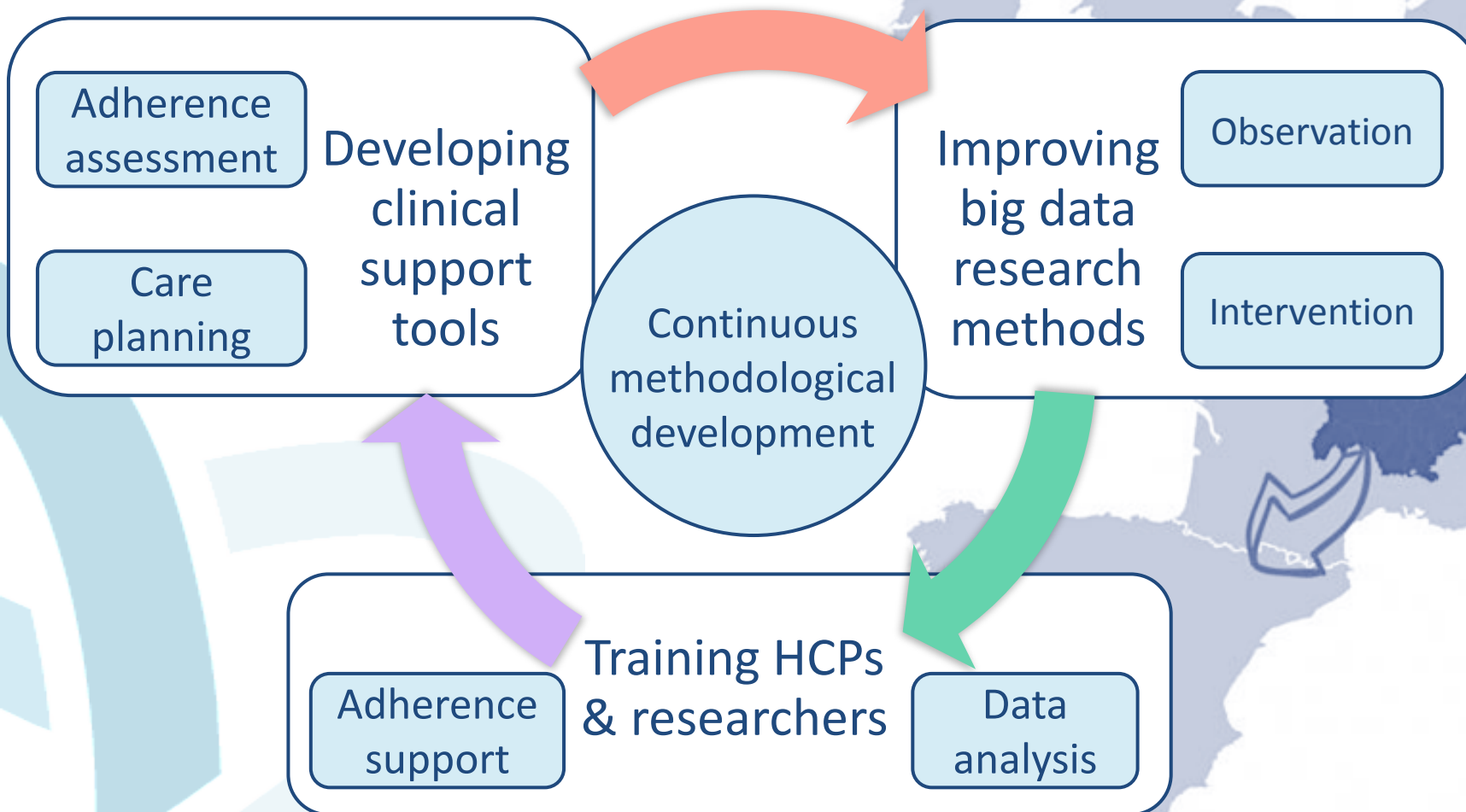


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# AdhereR



# IMPULSE PROJECT

 **EPI-PHARE**  
177 Tweets 

 **EPI-PHARE** @EPIPHARE · 14 sept.  
 **@EPIPHARE** publie les résultats de l'appel à candidatures Équipe d'avenir en pharmaco-épidémiologie

 financement de la jeune équipe IMPULSE portée par le Dr Marie Viprey au sein de l'unité REHSAPE U1290 sous la tutelle [@Inserm](#) et [@UnivLyon1](#)



Appel à candidatures Équipe d'avenir - Résultats - EPI-PHARE  
Résultats de l'Appel à candidatures pour le financement d'une Équipe d'avenir en pharmaco-épidémiologie - EPI-PHARE  
[epi-phare.fr](#)