Setting up an effective falls prevention assessment and intervention programme: Experiences in the Region Languedoc-Roussillon

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Hot topic in geriatric medicine

Living Lab Falls-MACVIA-LR: The falls prevention initiative of the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) in Languedoc-Roussillon

What is a Living lab?

- A real-life test and experimentation environment where users and producers cocreate innovation, Public-Private-People Partnerships (PPPP) fostering user-driven open innovation.
- Allows research results to be deployed in real life for all users.

According to the European Network of Living Labs (ENoLL)

http://www.openlivinglabs.eu
President of EUGMS | French and European partners | Director of Retirement and occupational health insurance Agency, of National Solidarity Fund for Autonomy

Directors of LR Unions of private physicians, pharmacists, nurses

Mayors of cities

Health Insurance

LR Health Agency

MTP and Nîmes University hospitals

Medicine, Pharmacy, and Sciences of physical activities Faculties Schools for physiotherapists and occupational therapist

President of Montpellier University

President of the LR Council

Director of the MacVia-LR program
a. Languedoc-Roussillon: a region in South of France that comprises 4 departments (Gard, Hérault, Lozère, Pyrénées orientales)

b. Main cities involved in the in MacVia-LR partnership

c. Montpellier and the different cities around Montpellier involved in the MACVIA-LR partnership

Fig. 2. The Languedoc-Roussillon Region.

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The LR MACVIA Falls Living Lab

1. LR Balance and Falls Prevention Centre

Opened in 2012: 500 patients per year (200 in « half a day hospital »)
Keeping balance to prevent falls and remain independent. Together, we can...
1. For whom?

- History of fall in the past year
- Fear of falling; dizziness
- Rising from a chair is difficult
- One-foot balance < 5 sec
- Difficulty to perform dual tasks

Links +++ with emergency, neurology, ENT, rhumatology, orthopedics departments (private, public)

⇒ GP ⇒ Balance and Falls Prevention Centre
In one morning:
Examination by Geriatrician + specialist in medical rehabilitation, podiatrist, occupational therapist (home visit), physiotherapist - specialist in sports and physical activity for older people neurologist, ENT, social worker
Possible : blood sample collection, X-Ray, CT scan, MRI,…
⇒ Multifactorial program

How takes place the evaluation?
A letter, with the minutes of the assessment and proposals, is delivered just after the assessment for GP and other caregivers and an appointment to assess the effects of the program
recently [19–21]. Based on this comprehensive examination, a management plan for falls and fracture prevention is given to the patient and mailed to the referent physician. This plan includes tailored physical exercises to improve balance, muscle strength, flexibility, and motor coordination. Documents are also given to the patient (ProFouND tools, in particular) [22] (http://www.
LR MACVIA Falls Living Lab

1. LR Balance and Falls Prevention Centre

2. Teaching programs in link with
   - Medicine and Sciences and Physical Activities and Sports Faculties
   - Schools for physiotherapists, occupational therapists, and nurses
   - 4 University degrees
1. Geriatrics and NH coordination for GPs

Diplôme Universitaire de
MÉDECINE GÉRIATRIQUE
GÉRONTOLOGIE ET COORDINATION
d’EHPAD

ANNÉE UNIVERSITAIRE 2014 - 2015

DIRECTEUR DE L’ENSEIGNEMENT :
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35 GPs/ year; 9 days (78h)

2. University degree for paramedical staff
Nurses, assistant nurses, and other allied health professionals

Diplôme Universitaire
AMELIORATION DES PRATIQUES
SOIGNANTES ET DES DEMARCHES
QUALITE EN GERIATRIE

ANNÉE UNIVERSITAIRE 2014 - 2015

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20/year; 12 days (84h)

One day dedicated to falls prevention
3. University degree: Prevention of dependency and falls in older persons for
- Physiotherapists
- Occupational therapists
- Specialists in Sports Sciences and Physical Activities for older people

Master’s 2 degree
For Specialists in Sports Sciences and Physical Activities for older people

PARCOURS DE MASTER 2
« GESTION DE LA SANTE PAR L’ACTIVITE PHYSIQUE POUR LES PERSONNES AGEES »
• Strong links between skilled GPs, nurses, physiotherapists, occupational therapists, and the Balance and Falls Prevention Center in both directions
  – BFPC : internship site
  – BFPC makes referrals to NHs and skilled professionals for people assessed for falls
  – The professionals and GPs advise people and GPs and make referrals to BFPC

⇒ Regional Balance and Falls Prevention network with common knowledge and documents
Components of the LR MACVIA Falls Living Lab

1. LR Balance and Falls Prevention Centre
2. University degrees – Balance and Falls Prevention Network
3. Links with the community, cities involved in the MacVia-falls program
Role of cities in falls prevention +++

- Conferences organised by cities
  - local newspaper, phone calls, mails, make arrangement for a meeting room (town hall,…)
  - make arrangement for a room to organise training in groups

- The Balance and Falls Prevention Centre and the Science and Physical Activities and Sports Faculty make available students enrolled in Master 2 degree to manage falls prevention training groups for free

Win-Win collaboration between cities, the University Hospital, and the University
Conferences for lay public (meetings, TVs, radio)

“Prévenir, c’est agir.”

Café des seniors

Jeudi 21 février
Accidents domestiques, chutes : comment les prévenir ?
(avec le Centre de Prévention et de Traitement des Maladies du Vieillissement – CHU Montpellier)

Convention de partenariat tripartite
entre le CCAS de Lattes, le CHU de Montpellier et l’université Montpellier
relative à la prévention des chutes
Role of LR Health Agency in the falls Preventing program in NH

• Accreditation of NH by LR Health Agency every 4 years
• Up to now, accreditation of NH if strategies effective in reducing falls are implemented in NH:
  – Systematic Vitamin D supplementation in all residents
  – Systematic visit by an occupational therapist, physiotherapist, specialist in Sports and physical activity
    • Improvements in safety (bathroom, bedroom, common areas), educational sessions for the staff
    • Implementation of training programs to enhance balance, muscle strength, simulate trips and bumps and improve use of assistive devices
  – Comprehensive geriatric assessment to:
    • Reduce drugs as much as possible (psychoactive medication use +++)
    • Screen and care chronic diseases (vision problems, carotid sinus hypersensitivity…)
  – Podiatry and ankle exercises in people with disabling foot pain

⇒ These measures are financed for two years by the LR Health Agency if falls and their complications (hospitalization, fractures, death) are recorded (to assess the benefits of the program)
Components of the LR MACVIA Falls Living Lab

1. LR Balance and Falls Prevention Centre
2. University degrees – Balance and Falls Prevention Network
3. Links with the community, cities involved in the MacVia-falls program – LR Health Agency - NH
4. Links with private and public research teams involved in movement and falls prevention
Research and development

• Patients assessed in the Balance and Falls Prevention Centre or who participate in the training programs are proposed to enter into studies
  – Molecules that increase muscle strength in older fallers (anti-myostatin antibodies)
  – Tools to screen early fallers and frail older people…
  – Collaboration with teams that work on alarm and home safety systems (sensors to diagnose falls, etc…).
Improved cerebral oxygenation response and executive performance as a function of cardiorespiratory fitness in older women: a fNIRS study

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Aging & Mental Health

Effects of a six-month walking intervention on depression in inactive post-menopausal women: a randomized controlled trial


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PHYSICAL FUNCTION DECLINE AND DEGRADATION OF POSTURAL SWAY DYNAMICS IN ASYMPTOMATIC SEDENTARY POSTMENOPAUSAL WOMEN


Recurrence Quantification Analysis of Human Postural Fluctuations in Older Fallers and Non-fallers

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(Rceived 9 October 2012; accepted 12 March 2013)

Usefulness of bone density measurement in fallers


Activité physique et prévention des chutes chez les personnes âgées

Expertise collective

Rapport
Next steps

• To disseminate the experience throughout LR and create:
  – Proximity medical consultations « balance and falls prevention » on the same model as the memory consultations with
  – Balance and falls prevention day hospitals in every hospital in LR
Conclusion

- Interest to create Falls Prevention Living Lab in LR
- To pull together locally and at a region level all relevant competences in order to prevent falls in older people
- To share experiences between people coming from different horizons (Care, teaching, research and development)
Thank you for your attention!

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