eLS-OIIS

Improve health literacy and health equity for chronically ill people, as part of the development of the regional digital health platform OIIS

Xavier Debussche, CHU Réunion, France

- CHU, University hospital of St Denis, Reunion, France
- NCD research unit of CIC-EC 1410 INSERM
- ICARE Unit (Austral Cooperative Unit for the Research in Education)
- Clinical departments of Nephrology, Diabetology and Cardiology of CHU Reunion
- Regional Union of Pharmacists
- Dialysis centres
- REUCARE Network (NGO, Health management, renal, cardiovascular disease and diabetes)

- **Partners**
    - GCS Tesis e-santé, Health Cooperation Group in charge of the development of the OIIS platform,
    - Regional Health Agency
    - WHO collaborative Centre for Health Literacy

- **Funding**
    - APITHEM research grant for Health equity via Digital tools, GIRCI SOHO (Interregional Group for Clinical and Innovation Research, Bordeaux), French MoH
    - 60 k€ for the 1st phases

CONTEXT

- French health system considered as one of the most efficient

- Paradoxically social and territorial health inequalities are the most marked among Western European countries.

- Inequalities are linked to isolation (rural areas, access to health care provision) and/or to people's situation (precariousness, language barrier, level of education, profession, etc.).

- Reunion Island is particularly sensitive on these points with greater social and health inequalities than in metropolitan France

Reunion

Table 4 – Top 10 countries for diabetes prevalence in 2010 and 2030.

| | 2010 | | 2030 | |
	Country	Prevalence (%)	Country	Prevalence (%)
1	Nauru	30.9	Nauru	33.4
2	United Arab Emirates	18.7	United Arab Emirates	21.4
3	Saudi Arabia	16.8	Mauritius	19.8
4	Mauritius	16.2	Saudi Arabia	18.9
5	Bahrain	15.4	Reunion	18.1
6	Reunion	15.3	Bahrain	17.3
7	Kuwait	14.6	Kuwait	16.9
8	Oman	13.4	Tonga	15.7
9	Tonga	13.4	Oman	14.9
10	Malaysia	11.6	Malaysia	13.8

Only includes countries where surveys with blood glucose testing were undertaken for that country.

International Diabetes Federation Diabetes Atlas, 7th edition, 2015
Favier et al, Diab Res Clin Pract, 2005, 67, 234-242

Reunionese context

- *Multicultural population*, with meshes and integrations, which helps "absorb" modern changes
- *Rapid social changes*
- *Vulnerable* population: socio-economic, language barriers, education, unequal health supply
- *Young population* 40% < 20 yrs
- Health structures that have evolved very quickly, with *subsistence of plural health practices*
- *ICT coverage* as good as anywhere else, for everyone

Debussche X et al. Diabetes Metab 2006; Balcou-Debussche M, Debussche X. Diabetes Metab 2008; Balcou-Debussche M., Debussche X. Qualitative Health Research, 2009

What do we know from now: first assessments

HL needs and assets of people struggling with long standing diabetes in Reunion:

- Difficulties in accessing and handling *health information*
- Great *diversity in navigating health services*, depending on location (access to specialists, remote areas,…)
- *Primarily functional relationship for treatment and disease follow-up*, leaving the health professional the directions and initiatives.
- In contrast, *active relation to food practices and exercise*
- *Social support for health and relation to professionals* and health care services are important determinants for managing health

Balcou-Debussche M. Debussche X. Qualitative Health Research, 2009; Debussche X et al Diabetes Metab, 2012; Debussche X et al. Cardiovascular diabetology 2012; Debussche X, Balcou-Debussche M. Santé Publique, 2018

OIIS : Indian Ocean Health Innovation

- The OIIS digital health platform was created to **address the challenge of chronic diseases** prevalent in the Indian Ocean: diabetes, chronic kidney disease (CKD) and cardiovascular diseases.

- It aims to offer health actors and population various **digital tools**: a device to help coordinate care pathways and a **web porta**l "masante.re".

- *Strengthening health services to improve health equity* requires systematic approaches that take into account:
    - the people most in need of health care,
    - services and information when designing interventions to improve health literacy and equity of access.
- These interventions must be *based on knowledge of people's needs, existing systems, services and resources*, and the principles of equity, sustainability and responsiveness.

8

Aims

To establish the basis for the design of intervention(s) to improve health literacy and digital health literacy and health equity, in the context of La Réunion where the OIIS digital platform project is currently developing

- To **assess the HL and digital HL needs** of chronically ill populations in difficulty for geographical, social or psycho-social, economic, educational or cultural reasons

- To assess the potential **contribution of existing tools**, via the OIIS digital platform.

- To provide the essential elements for the **co-design of interventions considering digital tools and platform(s)** aimed at improving access and equity in health in the context of chronic diseases

Population and settings

People with chronic diseases (n=600): diabetes, cardiovascular diseases, kidney diseases:

- *Outpatient hospital setting*:
  - Nephrology: End stage renal disease, post-transplant
  - Diabetology: consultation file, therapeutic education courses
  - Cardiology: Heart failure, consultation file, therapeutic education courses
- *Dialysis centres*: patients with ESRD
- *RéuCARE health management network*: patients with diabetes, renal disease, or at high cardiovascular risk in primary care
- *Local pharmacies:*
  - patients attending for the delivery of an anti-diabetic, lipid-lowering or cardiovascular drug
  - Patients screened with diabetes during screening campaign

Assessment study

- **Digital health literacy questionnaire (eHLQ)**
  - 7 scales, 35 items, culturally adapted to French and Reunion
  - Digital health literacy is understood as the individual's ability to successfully search, access, understand and evaluate desired health information and services from electronic sources, and then use this information to solve a health problem
- **Health Literacy Questionnaire (HLQ**): 6 out of the 9 scales (29 items)
- Diversity of **socio-demographic and health and care profiles** related to HL
- **Qualitative interviews**: e-HL profile of health and disease management, use of digital, factors and obstacles to the appropriation of digital for health; association between health pathways (GP consultations, specialists, hospitalizations, follow-up, treatment and adherence, health practices) and e-HL profiles.

Co-design of recommendations for the evolution and adaptation of digital tools in Reunion Island for patients with chronic diseases.

- Workshops and consultations with the various stakeholders
    - Patients and associations
    - Civil society representatives and Municipalities
    - Health professionals
    - Digital professionals
    - Government agency
- Objective
    - on the basis of the results of the quantitative and qualitative surveys, and in particular the description of the diversified profiles of e-literacy and associated care pathways,
    - identify the gaps and deficiencies of the services currently in place with a view to establishing recommendations for their evolution and adaptation, in order to increase the inclusiveness of these digital services

The project will engage **communities, patient associations, healthcare professionals**, and **government agencies** in planning innovative actions to

1) enhance the quality, relevance, and pragmatic nature of health information and individual medical files available using the regional digital portal

2) Be aware of those who have no access or cannot get access to Internet

3) Discuss the implementation and scaling-up if necessary of organizations to respond to health literacy needs at stake.