

## BACKGROUND

- ✓ An increase of **oral cancer therapies** raises new organizational challenges:
  - ➔ As Hospital visits become less frequent, primary healthcare professionals become highly sought after.
  - ➔ Patients receive less support and symptom monitoring.
  - ➔ A need to ensure adherence of patients to treatment.
  - ➔ A change in the way cancer patients are treated, moving toward a chronic-disease model, increased need for better coordination between all treatment stakeholders.
- ✓ Significant interest in **Cancer Care Coordination Program (CCCP)**, especially those combining Nurse Coordinators (NC) and the use of health technologies.
- ✓ This type of intervention involves a number of interacting components which can make it difficult to model, therefore it is necessary that a project phase of CCCP be devoted to the **design of the intervention**.

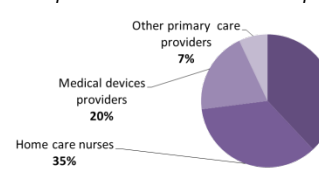
## OBJECTIVES

Design and model an organizational intervention based on **Tele health and NC** using **mixed methods** to:

- ✓ Analyze care coordination needs from the perspectives of patients, hospital and primary care providers.
- ✓ Identify NC activities and skills needed.
- ✓ Choose the most appropriate technological tool and select key features.

Part of the **CAPRI research project** (Cancer, Parcours de Soins, Région Ile de France) at Gustave Roussy (Villejuif, France) includes design, implementation and evaluation of CCCP.

## DEVELOPING CCCP INTERVENTION – METHODS AND RESULTS

Studies	Objectives	Methods	Principal Findings
<b>Use of internet-based technologies by patients(1)</b>	<ul style="list-style-type: none"> <li>• Understand the current level of patients' use of internet technologies (IT)</li> <li>• Assess their intention to use IT for their health</li> </ul>	<ul style="list-style-type: none"> <li>• Patient survey</li> <li>• Outpatient department</li> <li>• Questionnaire : 3 parts</li> <li>✓ Use of IT through computers, mobile phones and tablets</li> <li>✓ Willingness to use IT for their health</li> <li>✓ Perceived ease of use of IT</li> </ul>	<p><i>n= 1371 questionnaires</i> (participation level = 85%)</p> <p><b>Access an use :</b></p> <ul style="list-style-type: none"> <li>✓ 93% of patients had access to the Internet from home, 71% used a mobile phone everyday, while most patients reported never using tablets.</li> </ul> <p><b>Willingness to use IT for their health, perceived usefulness of IT applications :</b></p> <ul style="list-style-type: none"> <li>- Having an access to electronic records, filling out a self-test regarding their health status, communicating via email with their physician, scheduling appointments, and getting information about their disease</li> <li>⊕ Chat with peer patients, communicate via video</li> </ul> <p><b>Perceived ease of use</b></p> <ul style="list-style-type: none"> <li>✓ Patients were <b>not reluctant</b> to use IT tools, 84% confirmed they were able to use computer, tablet and/or smartphone.</li> </ul>
<b>Care coordination needs</b>	Understand care operational processes, coordination needs and define how telehealth and NC could prevent difficulties and facilitate coordination	<p>Semi-structured interviews</p> <ul style="list-style-type: none"> <li>✓ Patients</li> <li>✓ Hospital Practitioners</li> <li>✓ Primary Healthcare providers</li> </ul>	<p><i>43 interviews conducted</i></p> <p>The qualitative analysis enabled to refine the features the CCCP could offer: collecting and monitoring side effects, having a warning system, sharing data, scheduling appointments, and receiving access to information.</p> <p>The analysis highlighted the importance of collecting data on a flexible basis for the patient and the need for NC to develop <b>decision support tools</b> to have appropriate responses for each situation of care.</p>
<b>Home care coordination activities and skills(2)</b>	Analysis of home care coordination practices to identify the necessary skills and tasks of a NC	Analysis of phone calls requests received via telephone platform of COC (Coordinating Outpatient Care) department	<p><i>n=543 phone calls received via telephone platform of COC</i></p>  <ul style="list-style-type: none"> <li>Transmitting information about healthcare professionals</li> <li>Evaluating and managing alerts about side effects and cases of emergencies</li> <li>Explanation concerning care protocol</li> </ul> <p>➔ Majority of needs for patients and professionals related to <b>managerial and organizational issues</b></p>

## CCCP INTERVENTION DESIGN

### Key findings from mixed studies

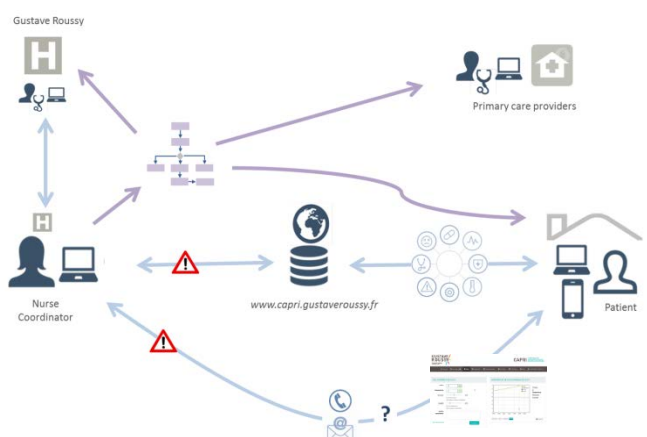
#### Patient's needs and expectations

- Being informed and supported.
- Being accompanied along the care pathway.
- Having an representative identified at the hospital.
- Taking in consideration specific aspects of their personal background.

#### Main expectations on web application

- Facilitating contact, sharing data, accessing information.
- Managing follow-up.

NC should have a role as a **Case Manager** to maintain the link with the patient and all healthcare providers, ensure the clinical monitoring and continuity of care in order to prevent critical situations.



## REFERENCES

1. Girault A, Ferrua M, Lalloué B, Sicotte C, Fourcade A, Yatim F, et al. Internet-based technologies to improve cancer care coordination: Current use and attitudes among cancer patients. *Eur J Cancer*. 2015 Mar;51(4):551–7.
2. Yatim F, Cristofalo P, Ferrua M, Girault A, Lacaze M, Di Palma M, et al. Analysis of nurse navigators' activities for hospital discharge coordination: a mixed method study for the case of cancer patients. *Support Care Cancer*. Springer; 2017 Mar
3. Gervès-Pinquié C, Daumas-Yatim F, Lalloué B, Girault A, Ferrua M, Fourcade A, et al. Impacts of a navigation program based on health information technology for patients receiving oral anticancer therapy: the CAPRI randomized controlled trial. *BMC Health Serv Res*. 2017;17(1):133.

## CONCLUSION AND PERSPECTIVES

These preliminary studies has allowed an **overview of coordination needs** and modeling intervention components, as well as assisting **involving Health Care Professionals** in the program which should facilitate the adoption of the intervention. This step has enabled to test the **feasibility** of the CCCP intervention before its implementation.

- ✓ Moving forward, the next steps are to measure the impact of CCCP, evaluated by:
  - **Randomized trial(3)** : 1,000 patients beginning oral cancer treatments (150 patients are currently enrolled since November 2016)
  - **Process evaluation** : Describe the use of the web portal, assess user's satisfaction and needs and analyze NC activities