Project: Build the AS-IS model of the medical care of a hospital located in Curitiba, Brazil. This private hospital provides services (appointments, exams, surgeries) to the population. Brazilian government pays every provided service by the hospital.

General description:

1) Patient goes first to a medical care unit called UBS∗ (Healthcare Basic Unit). Each region in Curitiba has at least an UBS. The objective of an UBS is to provide the first care to the population. In UBS, a non-specialist physician initially treats the patient. The physician may recommend the patient an appointment with a specialist or request some exams. In both cases, UBS is responsible to schedule appointments and exams. Thus, at the end of the first appointment, UBS provides where and when the patient must go (to an appointment with a specialist or to do exams). Our interest here relies on appointments and exams scheduled in a specific hospital;

∗ UBS is a unit managed by the government of Parana State (Curitiba is the capital of Parana). So, its process is out of the scope of the present project.

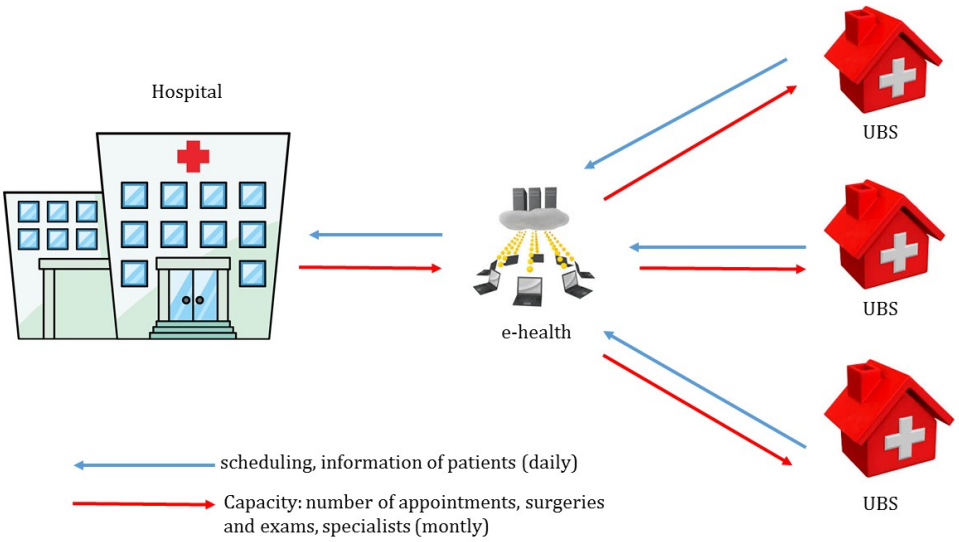
2) The hospital inform monthly to all UBS the amount of appointments and exams available. Thus, each UBS schedules an appointment or exams according to such availability;

3) There is an information system (called e-health) that manages the scheduling of patients. The e-health supports the healthcare public system of Paraná State. Private hospitals cannot modify or make any changes in e-health. The only thing that they can do (using e-health) is to inform the availability of appointments and exams (as described in 2);

4) In a daily basis, the hospital received (from e-health) the scheduling of patients. Thus, the first task that employers have to do is to download the file that contains a list of patients for that day (appointments and exams). This list includes private information of each patient, the time of appointment or exams, and the specialist for that appointment;

5) When the patient arrives in some of these clinics, the first reception has to check his/her scheduled time (according to information from e-health) and register some information about him/her. Then the patient is referred to a second reception where he/she has to provide an attendance record issued by the first reception. In such record is informed which specialist the patient should go or which exams are requested. The second

reception is responsible to organize the service queue of both appointments and exams;



6) In the case of an appointment, the specialist calls each patient according to the queue organized by the second reception. The medical examination is executed and the specialist creates a medical report. The specialist may request some exams, recommend an appointment with another specialist, or both, or may recommend some medications and ask the patient to return, or may recommend some surgery;

7) In the case of exams, the patient is first prepared. Then the exam is performed. A medical examination report must be created;

8) Depending of the specialist recommendation, after appointment or exams the patient has to go to the first reception in order to schedule new appointment or exams or surgery or return. The first reception has to provide information about date, time, addresses of appointments and exams. This step is called 'checkout';

9) It is possible that a specialist recommend for a specific patient a maximal priority over other patients concerning exams, appointments (with other specialist) or surgery. In this case, the patient is referred to other sector called ROTA. In this sector an auditor (a specialist working for Brazilian Government) will confirm the urgency of each case;

10)The hospital will charge the Brazilian government the services provide to all patients. Thus, is necessary that the all reports store the whole set of relevant information.

What the operations managers of the hospital want:

i) To build a pervasive healthcare process model for the hospital;

ii) To represent the exception alternatives in the healthcare process (cancellations and re–scheduling of appointments and exams);

iii) To reduce the total time of patients in clinic. A certain level of automation has been suggested to reach this objective. For example, the managers want to give permissions to the specialists to schedule another appointment or exams. Currently this activity is under responsibility of first reception;

iv) The current process does not consider the emergency cases. It is necessary to create a process to treat this situation;

v) To restrain the permissions of the specialists. The aim is each specialist can only schedule exams related to your specialty;

vi) To propose performance indicators to monitor the quality of healthcare process.