RMH delivers high quality patient care with a collaborative and interdisciplinary BPM system built on Bizagi

CUSTOMER SNAPSHOT

CUSTOMER
Riyadh Military Hospital (RMH)

INDUSTRY
Healthcare

LOCATION
Saudi Arabia

OBJECTIVES
• To enhance efficiency of healthcare delivery within a patient-centered approach
• To implement a collaborative and interdisciplinary BPM system
• To automate core processes covering the complete patient life cycle

RESULTS
• 70+ automated processes in record time
• Robust BPM system used by 400+ users and serving 2,000+ outpatients per day
• Cycle-time reductions in: patient waiting times, medical procedures and treatments, medication prescription and dispensing
• Improved resource allocation and high-quality patient care

Overview & Challenges

The Riyadh Military Hospital (RMH) is a Tertiary Healthcare Facility belonging to the Medical Services Department (MSD) of the Ministry of Defense and Aviation (MODA) in Saudi Arabia. Al-Wazarat Health Center (WHC) is a Primary Healthcare Facility related to RMH. The Center is specialized as a Family and Community Medicine Department, with a large practitioner service including several clinics, the ordinary healthcare facility and auxiliary, and other medical facilities such as a Pharmacy Department, Radiology Department, treatment rooms, specimen rooms, resuscitation and ECG rooms, and a nebulizing room.

Like any healthcare organization, WHC involves complex clinical and administrative tasks and processes to manage its daily operation which covers different specialty services. The clinical workflow varies from appointment registration, clinical procedures and investigation (e.g. laboratory/radiology), and may include a referral to the outpatient clinic or the emergency room. The various tasks and processes also involve healthcare providers, physicians, pharmacists, nurses, clerks and administrative personnel.

WHC developed a collaborative, integrated and process-oriented BPM system (eMedServe) built on Bizagi BPM Suite, which captures and automates all of WHC clinical and administrative processes and activities. The aim was to enhance efficiency of healthcare delivery within a patient-centered interdisciplinary approach. Bizagi was able to provide the appropriate BPM system offering a robust, high-level and multifunctional application that would allow WHC to achieve faster results.
Bizagi Solution

Tasks in the workflow were performed manually; however, the cooperation between different areas as well as between healthcare providers is crucial to accomplish the required process, since the work of each user (regarding a patient) is dependent upon accurate entries by other users. Much of the value derived from the delivery system results from the effective communication of information from one party to another and the ability for multiple parties to engage in interactive communication of information.

The (dynamic) planning of the patient flow is a very complex and error-prone task, since activities may be closely related to each other due to clinical, organizational or logistic reasons, and they cannot be executed sequentially nor completely independently of each other. For a particular patient, medical interventions may have to be performed in a certain order or with a minimum or maximum time span between them.

A process-oriented and collaborative BPM system built on Bizagi BPM Suite was implemented in record time, enhancing the efficiency of healthcare delivery by improving interactions within the different actors involved (e.g. physician to patient; physician to physician; physician to pharmacist). It encourages many forms of inter-partnerships to support patient care.

The new BPM system also allows clinicians to update, manage and change a particular treatment protocol as new drugs are discovered or emitted. It also shows new methods of application or treatments, including information concerning a course of a particular disease and its patterns. Other information such as a pre-planned treatment process and organization policies and procedures are at the user’s finger tips.

Results

The BPM initiative was led by the Medical Informatics Research and Development Center (MedICen) at RMH. In its first approach, the MedICen personnel automated over 70 (mostly dynamic) processes for the WHC.

These processes can be classified in 4 main services:

- **Walk-In process:** Attention of patients that walk in to the hospital without any prior appointment.
- **Short-booked:** general service provided for patients that have booked an appointment.
- **Speciality booked:** speciality service provided for patients that have booked an appointment.
- **Emergency:** patients that come to the hospital because of an emergency.

The project covers the complete life cycle of the patient, from registration and triage management, to diagnosis and treatment and is used by approximately 400 users serving approximately 2,000 outpatients per day. Once the system was rolled-out, the BPM team at MedICen initiated the definition and automation of processes at the much larger RMH, where there will be several thousands of users serving around 8,000 patients per day.

The BPM system is responsible for keeping track of the practical tasks and enables the user to perform a certain task in a specific time, in the appropriate order. The system ensures the completion of the required task, and provides the flexibility to change the order of tasks when required without having to reprogram the system. WHC experienced cycle-time reductions in: patient waiting times, medical procedures and treatments, medication prescription and dispensing. Now, the WHC management team can provide better human resource utilization and more accurate healthcare activity planning which results in high-quality patient care services.