Embryo Case
Summary Sheet
(Not to exceed 3 pages total)

Working title of the case: Clinical Workflow Re-engineering

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Source of case data: _____ Library research __X__ Interviews __X___ Consulting

_____ Personal experience _____Combination (check all that apply)

Expected level: __X__ Graduate _X__ Advanced Undergraduate _____ Undergraduate

Industry setting: Healthcare/Allergy and Immunology Clinics

Main character, job title: Charlie Dawson, Executive Vice President

Relevant theory to be applied:

Workflow management
Business process reengineering
Modeling and simulation

Envisioned case issues (for the Teaching Note):

This case is about workflow modeling and simulation in an allergy clinic situation. The students are expected to analysis the challenges presented in the case and to propose a solution by using modeling and simulation approaches. The case study focuses on analytical skill development. The decision making/solution cannot be inferred from the case materials. It must be created with modeling and simulation software tools. The case study will not be completed in a single class setting.

This case can be used at the following levels of classes:

1. General decision sciences/information systems, undergraduate class. The case could be used as a demo of business process re-engineering and workflow management, and agent-based modeling and simulation. Students are asked to identify and prioritize the challenges, and to propose conceptual solutions without actual implementation. The instructor would use the developed models to illustrate the

ability and flexibility of modeling and simulation in exploring solutions for a real-world problem.

2. Upper level undergraduate class in Decision Sciences/Operations Management or Modeling and Simulation class. Students are asked to analyze the challenges and propose solutions that include developing flowcharts, creating conceptual models, developing simulations, carrying out various scenario analysis, and making recommendations.
3. Graduate level Decision Sciences/Operations Management or Modeling and Simulation class. Students are asked to analyze the challenges and propose solutions by using various modeling and simulation approaches, including Discrete Event Modeling and Agent-based Modeling and Simulation. The proposed solution should be accompanied by complete documentation that includes user guide, feasibility study, capability analysis, typical scenarios and optimal scenario, future extensions, and implementation recommendations.

Questions/issues I'd like help with:

Teaching strategies

Learning objectives

Synopsis of the case as you currently envision it: (Attach no more than one page)

General Health and Medical Center (GHMC) was in a tough financial situation due to competitions, regulatory pressures, and years of inefficient operations. Charlie Dawson, the Executive VP of Revenuer at GHMC had to find ways to make the organization financially sustainable. After a comprehensive review of the operations of the major departments, Charlie concluded a major change initiative was needed at the Allergy and Immunology Department. However, even professionals in allergy and immunology are allergic to change. Many employees in the department had been there for a long time and they were used to the routines. Although they recognized the inefficiency in the current operation, they were reluctant to face the risks and uncertainties that inevitably came with significant changes.

Challenges came from multiple areas: insufficient staff, less than fully utilized provider capacity, scheduling difficulties, long waiting time for follow-up appointments, lack of privacy at checking in, lack of privacy in waiting room, and so on. The most glaring issue was the convoluted workflow that required multiple patient movements among the exam room, test room, and waiting room. When those patients were in gowns, those movements increased the risk of injury and concerns of privacy. Furthermore, patients in mixed age and gender were sharing the same skin test waiting room.

The workflow model that was currently in use had the patient go through check-in and then the exam room if one was available. Once the exam was complete, the patient, if necessary,

picked up their belongings and moved to the skin test room if it was available. If it was not available, the patient moved to the skin test waiting room. Once the skin test room became available the patient moved into it. An initial test was performed, and the patient moved back to the skin test waiting room to wait for 15 minutes to determine if there was an indication of an allergic reaction. After this was complete, the patient then moved back to the skin test room to have a reading done and another test administered. Once this second test was complete the patient moved back to the skin test waiting room for another 15-minute wait to determine if there was an indication of allergic reaction. Once this was complete, the patient moved back to the exam room for a final read on the test and preparation to see the physician for final consultation. After that, the patient was sent to check out.

Charlie knew that the problems at the Allergy and Immunology Department were serious and radical changes were needed. He faced two questions: 1) What process redesign were needed to improve the operation efficiency and patient satisfaction? 2) How could he get the employees at the department motivated and supportive of the change initiative?

The following exhibits depict the current clinic layout and patient flow.

Exhibit 1 Current Patient Flowchart at LA Clinic

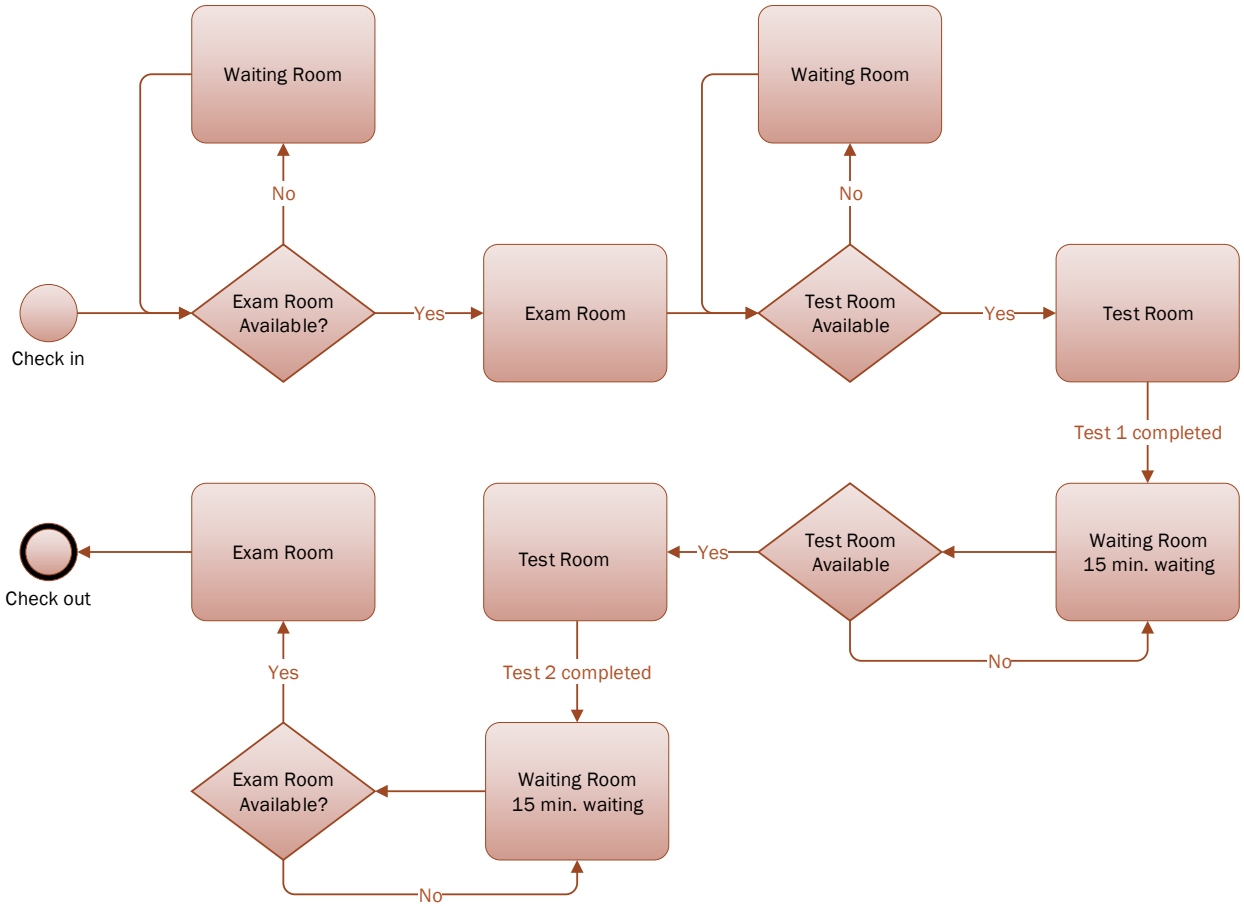

Exhibit 2 Current Layout at LA Clinic

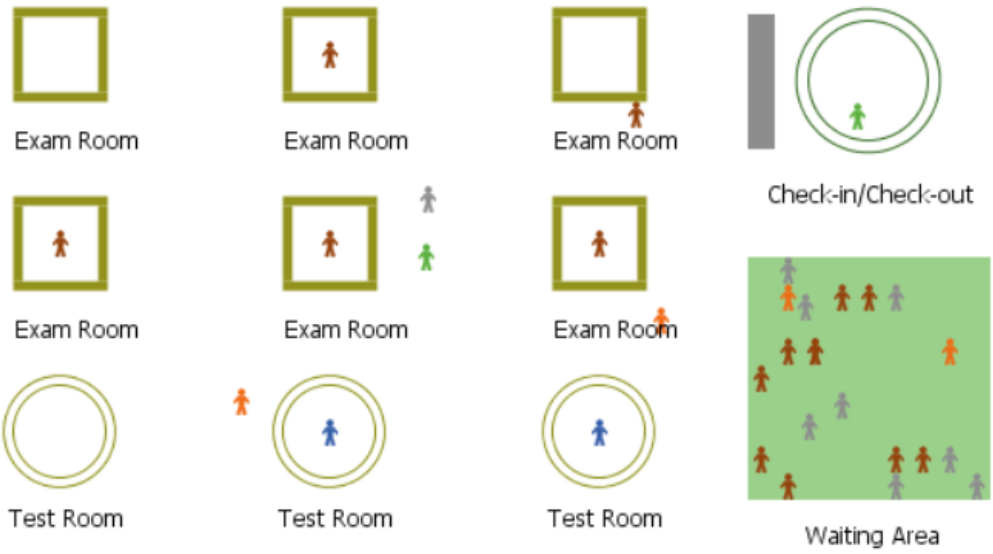

Exhibit 3 Current Workflow at LA Clinic