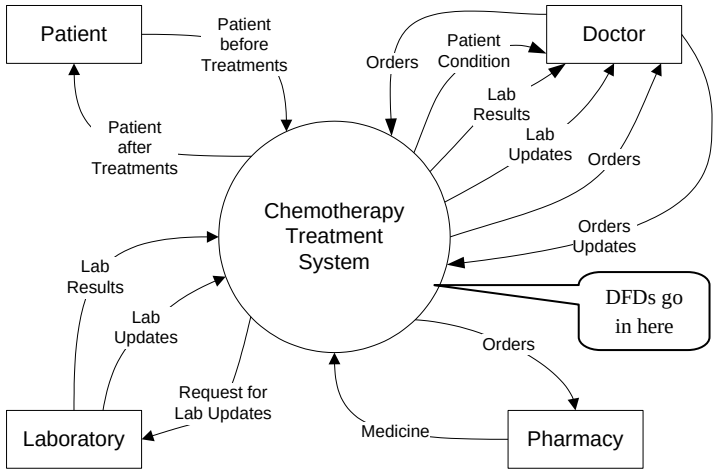
Froedtert & Medical College of Wisconsin Clinical Cancer Center

Day Hospital Room Utilization Modeling and Simulation

4. Data Flow Diagram

Data flow diagrams (DFDs) include the major data and material flows and transformation processes that occur within the system being modeled. In essence, DFDs fit inside of the *Chemotherapy Treatment System* identified in the model's context diagram, shown below. The DFD for this deliverable provides a physical model which shows the implementation-dependent data and material stores required in the chemotherapy treatment system.

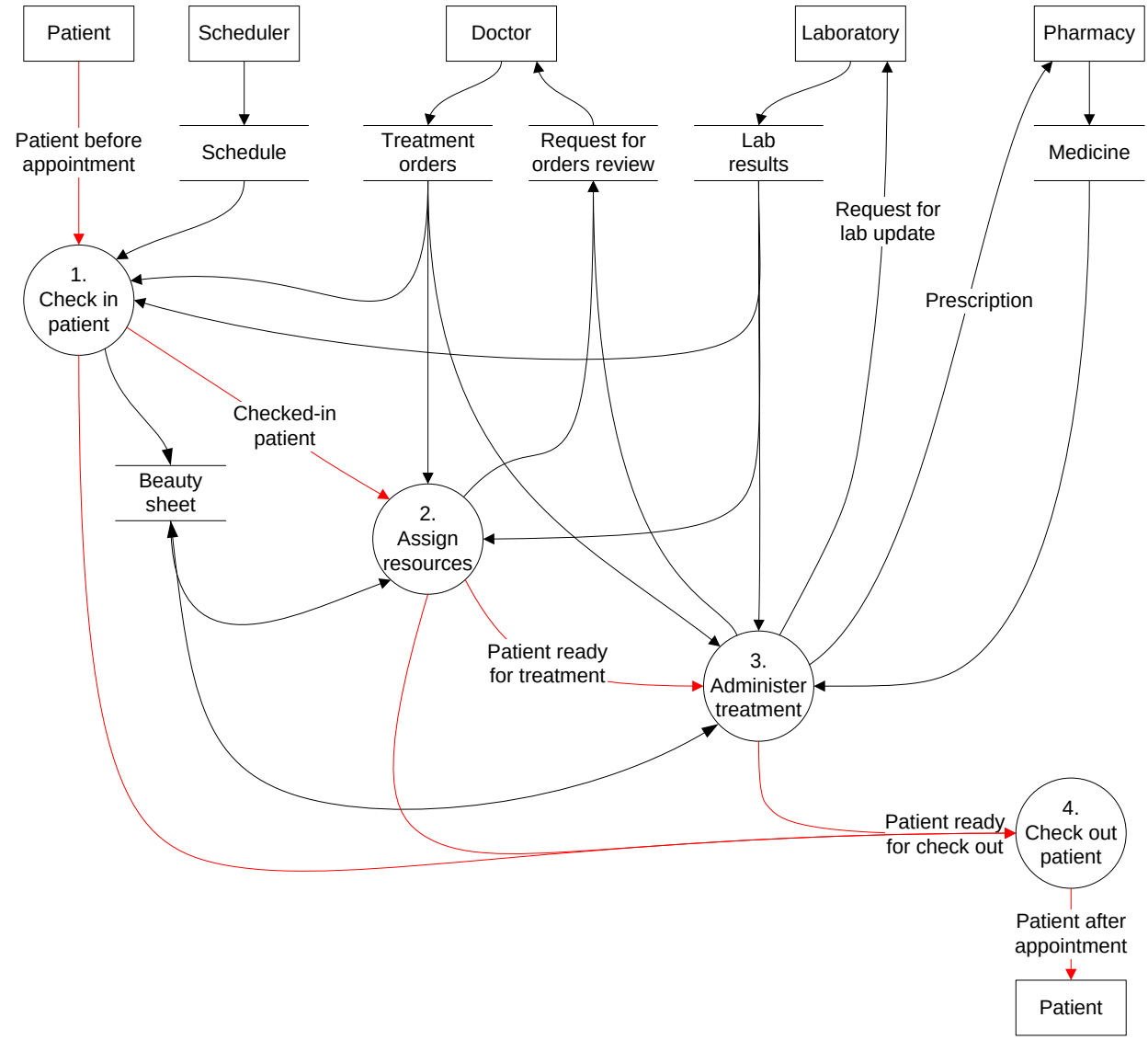


(Note: The term "data flow diagram" stems from the original use of this modeling tool in software systems. For this system, the tool is being used to model primarily material flow. The original terminology is used to maintain continuity with generally-used system modeling nomenclature.)

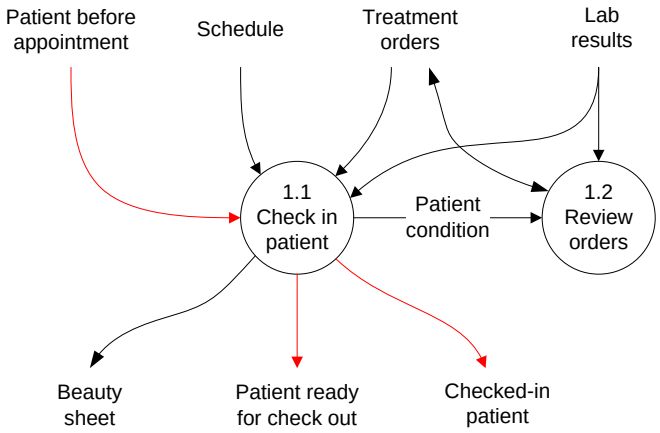
The following comments apply to the data flow diagrams on the following pages:

- The DFDs provided in this deliverable represent a physical model which shows the implementation-dependent material stores required for batch processing of castings.
- The DFDs are constructed in two levels: Level 0 and Level 1. The Level 0 DFD contains the high level processes of the *Chemotherapy Treatment System* shown in the context diagram. The three Level 1 DFDs given here provide detail for the *Check in patient*, *Assign resources*, and *Administer treatment* processes included in the Level 0 diagram. (The *Check out patient* process does not require a Level 1 DFD)
- To simplify the diagram, flows into and out of storage elements are not labeled – the flows have the same name as the stores.
- To further simplify the diagram, a number of the flows attached to the Beauty Sheet store are bi-directional. The Beauty Sheet is the working daily schedule that the staff works from and continually updates throughout the day as patients enter and leave the system.

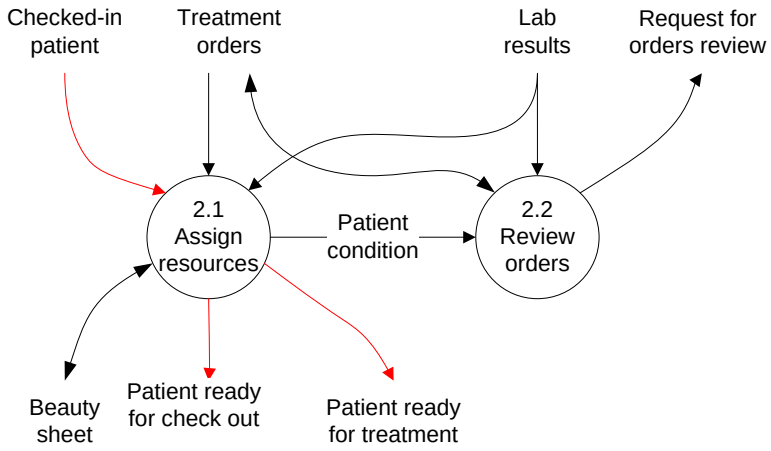
Level 0: Chemotherapy Treatment System



1. Check in patient



2. Assign resources



3. Administer treatment