Process medical payment

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| Primary Actor | Hospital Cashier |
| Stakeholders and Interests | * Hospital Cashier: Wants accurate, fast entry, and no payment errors, as cash drawer shortages are deducted from his/her salary * Doctor: Wants patients get their medicine quickly, and be healthy as soon as possible * Patient: Wants purchase and fast service with minimal effort. Wants easily visible display of medicine and prices in receipt. * Hospital: Wants to accurately record transactions and satisfy patient requirements. Wants to ensure that Payment Authorization Service payment receivables are recorded. Wants some fault tolerance to allow medicine sales capture even if server components (e.g., remote credit validation) are unavailable. Wants automatic and fast update of accounting and inventory. * Payment Authorization Service: Wants to receive digital authorization requests in the correct format and protocol. Wants to accurately account for their payables to the hospital. |
| Preconditions | Hospital cashier is identified and authenticated. Doctor has already made a prescription for patient in hospital medical system. |
| Success Guarantee | Medical sale is saved. Accounting and Inventory are updated. Commissions recorded. Receipt is generated. Payment  authorization approvals are recorded. |
| Main Success Scenario | 1. Patient arrives at hospital front desk and checks out by his patient identify number to purchase.  2. Hospital cashier starts a new sale.  3. Hospital cashier enters patients ID.  4. System displays medicine name and their description, price, and running total. Price calculated from a set of price rules.  5. System presents total with calculated taxes.  5. System prints a list for medicine name and quantity to pharmacist.  6. Pharmacist picks up medicines by following the medicine list to front desk.  7. Hospital cashier scans each medicine.  8. Hospital cashier tells Patient the total, and asks for payment.  9. Patient pays and System handles payment.  10. System logs completed sale and sends sale to Inventory system (to update inventory).  11. System presents receipt.  12. Patient leaves with medicine and receipt. |
| Extensions | **3a**. Invalid Patient ID(not found in the system):   1. System signals error and reject entry. 2. Hospital cashier responds to the error:   1. Hospital cashier check with the doctor.  2. Hospital cashier enters the patient ID again.  **8a**. Paying by cash:   1. Cashier enters the cash amount tendered. 2. System presents the balance due, and releases the cash drawer. 3. Cashier deposits cash tendered and returns balance in cash to Customer. 4. System records the cash amount.   **8b**. Paying by credit:   1. Patient enters their credit account information. 2. System displays their payment for verification. 3. Cashier confirms. 4. System sends payment authorization request to an external Payment Authorization Service System, and requests payment approval.   4a. System detects failure to collaborate with external system:  1. System signals error to Cashier.  2. Cashier asks Customer for alternate payment.   1. System receives payment approval, signals approval to Cashier, and releases cash drawer (to insert signed credit payment receipt).   5a. System receives payment denial:  1. System signals denial to Cashier.  2. Cashier asks Customer for alternate payment.  **8c**. Paying by debit…  **11a**. Printer out of paper   1. If System can detect the fault, will signal the problem. 2. Cashier replaces paper. 3. Cashier requests another receipt. |
| Special Requirements | * Touch screen UI on a large flat panel monitor. Text must be visible from 1 meter. * Credit authorization response within 30 seconds 90% of the time. * Somehow, we want robust recovery when access to remote services such the inventory * system is failing. * Language internationalization on the text displayed. |
| Technology and Data Variations List | 7a. Medicine scanned by bar code laser scanner (if bar code is present) or keyboard.  8a. Credit account information entered by card reader or keyboard.  8b. Credit payment signature captured on paper receipt. But within two years, we predict many customers will want digital signature capture. |
| Frequency of Occurrence | Could be nearly continuous |