

Context

Union Healthcare is a healthcare provider which operates a wide variety of healthcare facilities across the United States including pharmacists, blood testing labs, gyms, and hospitals. Union health is currently facing a challenge whereby some of its doctors/providers are over-prescribing certain drugs to its members. This is putting patient health at risk and is leading to regulatory penalties. Currently Union health finds it's difficult to identify these cases and take appropriate action to ensure that the provider does not over-prescribe the drug again. Additionally, medical guidelines are constantly evolving with new research, and the rules governing over-prescriptions can change. Union Healthcare's current systems are not flexible and changing business logic can take months and incur a huge IT cost.

High level business process

1. Physician prescribed a patient a series of drugs on site e.g., write a paper prescription.
2. Patient goes into a Union Healthcare Pharmacy to get their prescription
3. Pharmacist enters prescription information into a system of record, recording the details of the patient, physician and the prescription line items
4. Prescriptions considered high risk (as per medical guidelines) are flagged for attention
5. A Case Handler is assigned a Case to work on where they conduct outreach with the Physician who over-prescribed the drug
6. Case handler is advising Physician by email and works with them to ensure it does not happen again.
7. The Case is eventually closed by the Case Handler if they are satisfied.
8. There are several types of case handlers based on drug type.
9. Patient care is improved, risks are reduced and regulatory costs are reduced

User groups

Pharmacist – responsible for recording details of prescriptions in the system

Case handler-Liquid - Responsible for looking at new cases and performing initial outreach with the physician if drug type is Liquid.

Case handler-Solid - Responsible for looking at new cases and performing initial outreach with the physician if drug type is solid.

Case handler-Inhaler/Injection - Responsible for looking at new cases and performing initial outreach with the physician if drug type is Inhaler/Injection.

Admin – responsible for creating and editing business logic/over-prescription rules.

Challenge

Using the above information and the embedded documents design, build and test a flexible and scalable Salesforce.com solution which will allow Union Healthcare to identify over-prescription occurrences', and manage an outreach workflow with their Providers to ensure improved patient health and reduce regulatory penalties. You may choose to utilize any Salesforce product that you have access to for this challenge and utilize all and any of the declarative and programmatic capabilities to meet the requirement. Remember Union Health needs a flexible solution that can adapt to change with minimal IT input.

High Level Requirements

- Require the ability to record details about prescription products including the drug name, type, and an image of what the drug looks like (see attached excel for product details).
- Dosage measurement should be changed based on drug type.
- Available drug types - Liquid, Solid and Inhaler/Injection. Dosage for each drug type is ml, number, and frequency. Hint: Use picklists for dosage and drug type.
- Require the ability to capture basic member and physician information
- Require the ability to enter a prescription onto the system
- Each prescription may have multiple product line items and will include information such as the physician, drug, dosage, quantity, start date and end date -
- Only active drugs can be selected when creating a prescription.
- When creating a prescription, the user should be mandated to enter the physician, drug name, dosage, start date and end date. These fields should be validated before entering.
- System should not allow to enter duplicate physicians and drug.

Hint: Use id, first name, last name for physicians, Use drug id for drugs

- Pharmacist Reps will be the user group who can create new prescriptions
- Pharmacist Reps should not be able to delete prescriptions
- Any prescriptions created which violate the rules in the attached rules Excel file, should be marked with a risk status of high and a red flag should appear on the prescription record
- When a rule has been violated and a physician has over-prescribed a drug, a complaint record of some type should be automatically created by the system
- These created cases should be assigned to correct queues (Check user groups mentioned above) based on drug type.
- System administrator/all case handlers should be able to change the status of case via path.
- Any new complaints should be routed to the Case Handler group of users automatically
- All Case Handlers should only have read access to prescriptions.
- The Case status should be represented with a visual chevron bar image
- The application should be design and built to ensure Case handlers and other actors can work in the most productive manner, viewing multiple records at once without having to open multiple browser windows
- Pharmacist users should not be able to edit prescriptions created by other pharmacist users, but should have read access to all prescriptions
- Admin user should be able to add new rules for other drugs not mentioned in requirements without complex effort.

- All Case handlers only should be able to view the following reports:
 - Total number of prescriptions created
 - Top 5 prescribed drugs
 - Total number of cases created split by drug
 - Top offending physician
 - Cases closed YTD vs. target
 - Average case handling time
 - Number of cases assigned to each rep
- All Case handlers should be able to get a **visual** snapshot of all the above-mentioned reports from their desktop and mobile devices.
- All Case handlers should not be able to export data from Salesforce Reports.
- All users of the application should not have access to apps and objects which are not required for them to perform their job role.
- Any changes made on important data base object fields by end users should be tracked for audit purposes
- Users should have the ability to attach documents to database records.
- Any other features and functionality you believe will be useful to pharmacists, case handlers, QI and or case managers which is not listed above which is deemed a good idea will be awarded bonus points.

Key things I will be looking for:

- Maximum usage of out of the box features and declarative configuration
- User friendly design
- Logical data model
- Business logic around rules is easily maintainable and flexible.
- Visual indicators where possible such as status chevron bars
- Mobility

Attached documents



Challenge data
sheet.xlsx

Tip

- Think Case Management/Service
- Are there Any AppExchange free products you can use to meet any of the requirements

Documentation

- ER Diagram
- Use case diagram.
- Business process
- List down out of the box features you used for this assignment and describe why you select them.
- If you have any other suggestions to improve this business scenario, list down them with the business requirement.