The client is a leading healthcare solutions provider.

**BUSINESS NEED**

Client envisaged a complete medication order management system with an automated conflict checking system.

Patients who visit a health care center may:
- Be under medication
- Have allergies to specific formulations or food
- Have a specific health condition

It is important for the healthcare provider to consider these factors in prescribing medications for the current health condition. Often it is a difficult and time consuming process to verify these conflicts using manual methods.

**STANDARDS USED**

- NDC – National Drug Code

**BUSINESS BENEFITS**

- A patient safe medication order management system.
- A quick and efficient conflict checking system.
- Integrated with their pharmacy system – Orders can be placed from pharmacy also.
- Conflict generated in clinical module can be viewed in pharmacy also – Pharmacist can verify the conflicts from their logged in applications itself.

We have integrated Medi-Span drug database API to provide medication decision support functionality. The API is integrated such that it is automatically invoked for checking conflicts whenever a new medication order is placed or when an allergy is added for the patient.

When a new order is placed the following conflict checks are done:
- Minimum and Maximum dose
  - When a new order is placed
  - During medication administration
- Drug to Drug Interactions between:
  - The medication items in the new orders
  - The new medication items and existing medications items
- Drug to Food Interactions:
  - Foods that should be avoided during the course of medication.
- Duplicate Therapy
  - Checks if the same medication or medication with same formulation is already being administered to the patient.

When a new allergy is added for the patient the following conflict:
- Drug Allergy Screening:
  - Against the specific medication in existing medication orders
  - Against specific formulation in existing medication orders

The results are displayed during the time of placing the order itself and physician or nurse is prompted to select an action on whether to proceed with the order or to discontinue it. In the case of Drug to Drug and Drug to Food interaction severity levels are also displayed. The system also allows the orders to be hold until the conflict results are addressed with a suitable action.

This implementation has been integrated with client’s order management system as well as their pharmacy system there by producing consistent conflict checking results whichever system client uses to place the medication order.

ABOUT ALTEN CALSOFT LABS

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