Safety Enhanced Design Brief
How to Present Drug-Drug Interaction and Other Alerts

Alerts are broadly used for automated drug-drug, drug-allergy interaction checks and for clinical decision support.

However, alerts are often poorly designed. Users often complain about

- Too many alerts
- Difficulty understanding alerts
- Many steps for responding to alerts
- Difficulty seeking more information or providing feedback about alerts

If alerts are too frequent or are not designed in a meaningful way providers will ignore them.

System Design: Creating a system that utilizes meaningful alerts

1. Reserve interruptive ("modal") alerts only for highest patient risks
2. Classify alerts by their severities (e.g., "Advisory", "Warning", "Danger")
3. Support configuration of who receives alerts (e.g. MD, PharmD, RN)
4. Provide functionalities for the client organization to continually track and adjust alerting policies (e.g. who receives alerts, on what alerts)
5. Provide alerts for at least: drug-drug interactions, drug-allergy interactions, therapeutic duplications, contraindications, dosing error checking, adjuvant therapeutic and monitoring warnings, and formulary status

Screen and Interaction Design: How alerts should look and act

6. Place actionable alerts where users can easily see them:
   a. Near where the potential error was made, or
   b. Near relevant controls (e.g. Order, Cancel)
7. Use consistent formatting to:
   a. Maximize visibility, highlight key information, and
   b. Differentiate types of alerts by color (e.g. red vs. yellow), signal words (e.g. Warning vs. Danger) and/or shape (e.g. inverted triangle vs. rectangle)
8. Provide a list of action options and pre-select recommended or expected provider responses (e.g. cancel order, revise order)

Signal Word

Provide clear visual cues and type of alerts

Nature of hazard

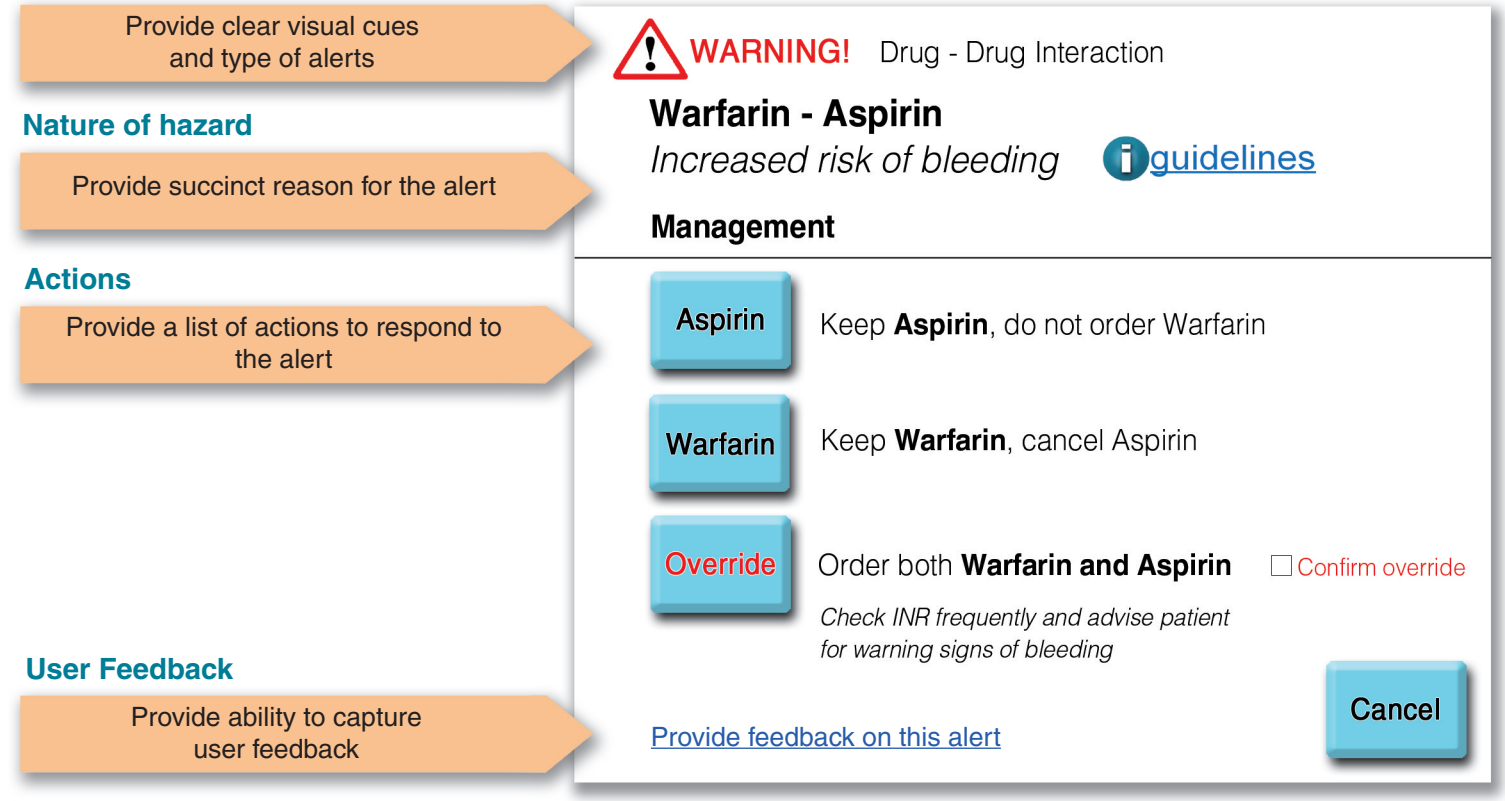
Provide succinct reason for the alert

Actions

Provide a list of actions to respond to the alert

User Feedback

Provide ability to capture user feedback



Learn more at https://sbmi.uth.edu/nccd/SED/Briefs/sedb-MU01.htm

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