The Role of Micro-Surveys to Support Agile Software Development

FedCASIC

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Agenda

- Background
  - VA Pharmacy
  - Agile / HCD
- Methods
  - Micro Surveys /Data Calls
- Results
- Conclusion
- Questions

VA Mail Order Pharmacy

- A system of seven highly automated pharmacies; rated "among the best" in customer satisfaction by J.D. Power U.S. Pharmacy Study.

- Processed **119.7 million outpatient prescriptions** in fiscal year 2016.

- Provided approximately 80% of all VA outpatient prescriptions to Veteran patients.

- Processed **470,000 prescriptions daily; each** work day over 330,000 Veterans receive a package of prescriptions in the mail.

VA Emergency Pharmacies

- VA maintains a fleet of Mobile Pharmacy vehicles to assist Veterans, VA staff, as well as civilians during major emergencies.

- These self-contained vehicles can be up and running within a few hours to function as an outpatient pharmacy capable of delivering life-saving pharmaceuticals to Veterans.

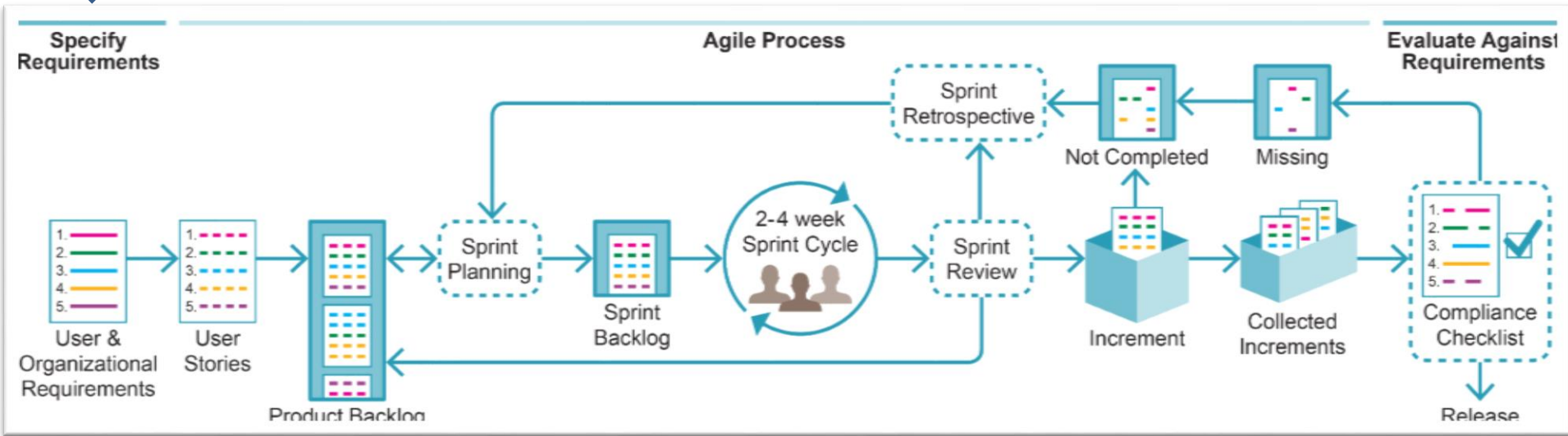# Current VA Pharmacy system

Test patient data

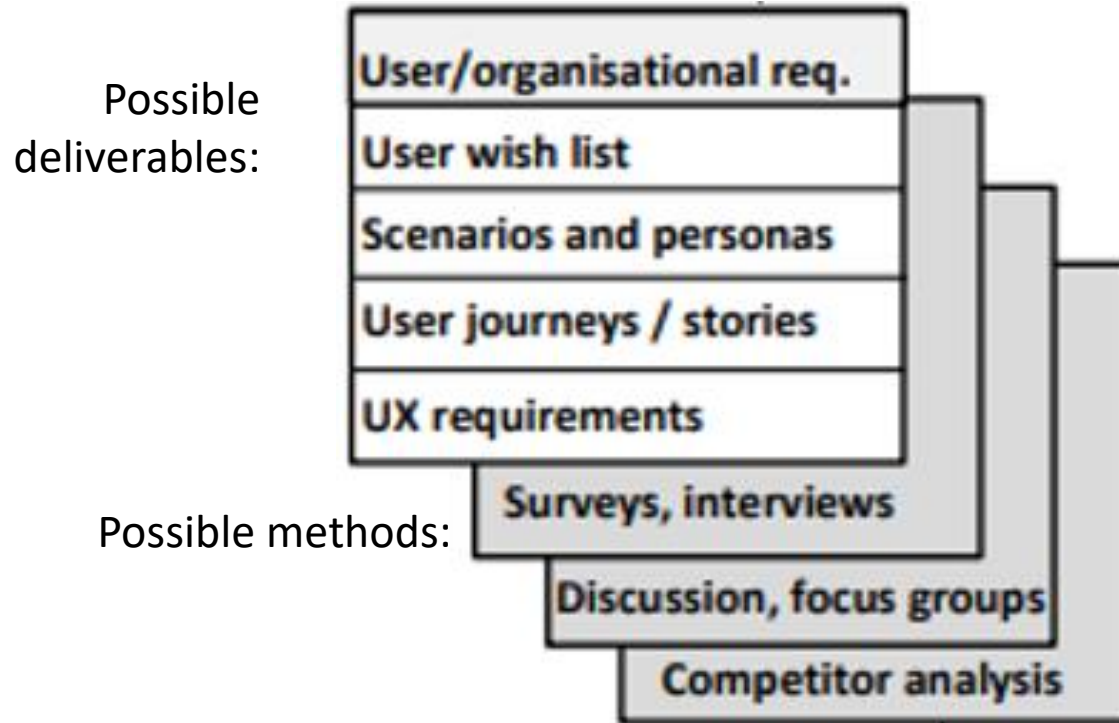# Integrating Human Centered Design into Agile Processes

*Human Centered Design

Future VA Pharmacy system - Advanced Medication Platform (AMPL)

Questions:

- How to best organize allergy/ADR information?
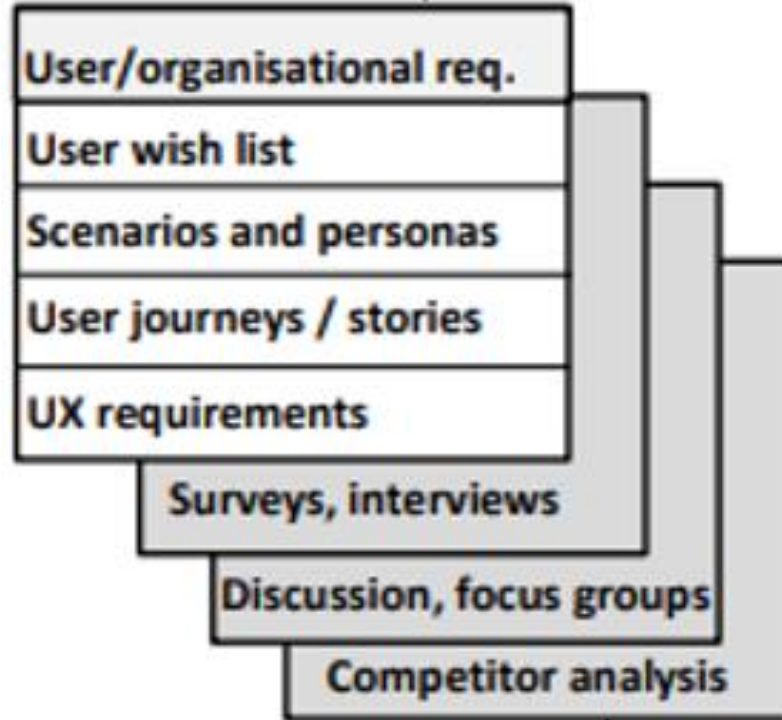- How to best organize vital signs information?

Human Centered Design Methods and Deliverables

Possible deliverables:

User/organisational req.
User wish list
Scenarios and personas
User journeys / stories
UX requirements

Possible methods:

Surveys, interviews

Discussion, focus groups

Competitor analysis

Human Centered Design Methods and Deliverables

Constraint: **Must take less than 10 minutes of Pharmacy staff time**

Possible
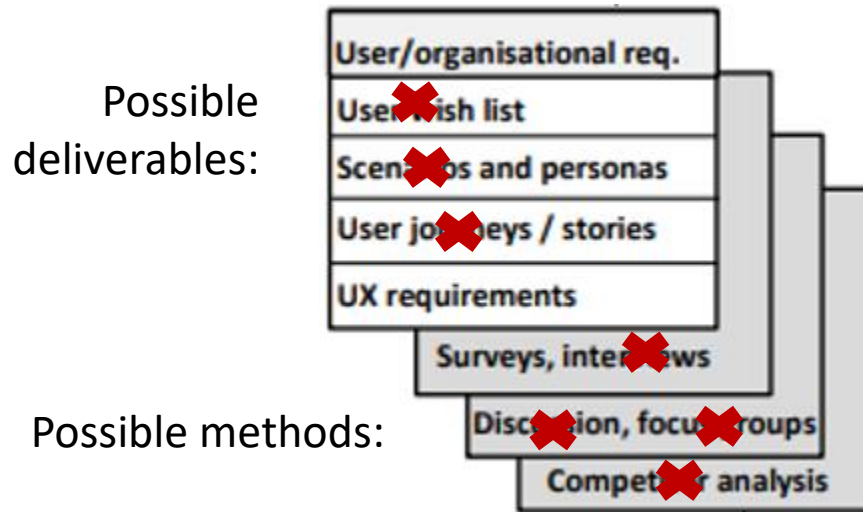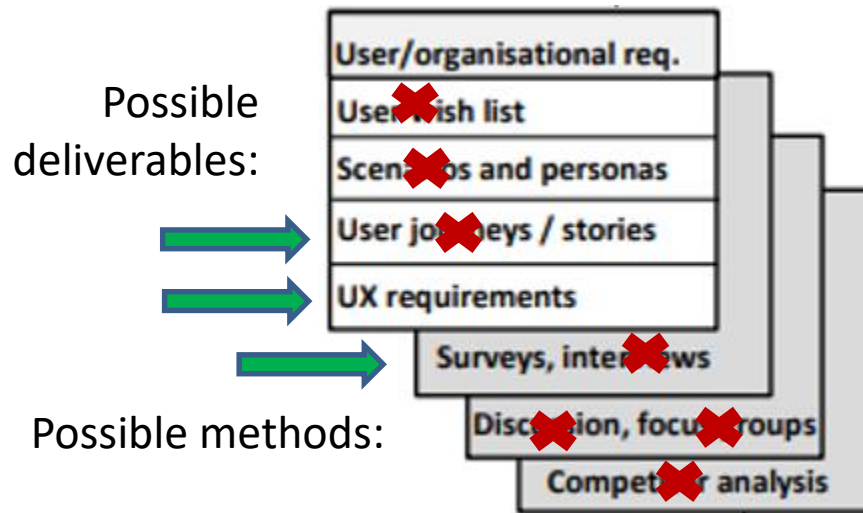deliverables:

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Possible deliverables:

Possible methods:

Method: 10 min Micro-Surveys

Micro-Surveys / VA Data Calls

1. Allergies/ADRs **5 pages / 5 questions**

- **3 demographic questions**
- **2 topic related questions (w/comments)**
  - **rate and rank**

2. Vitals **5 pages / 7 questions**

- **3 demographic questions**
- **4 topic related questions (w/comments)**
  - **rate and rank**
  - **rate only**

3. Vitals – metric/Imperial **6 pages / 11 questions**

- **4 demographic questions**
- **7 topic related questions (w/comments)**
  - **multiple choice**
  - **text response**

Micro-Surveys / VA Data Calls

1. Allergies/ADRs   **5 pages / 5 questions**

ESTIMATED COMPLETION RATE	ESTIMATED TIME TO COMPLETE
79 % Completed	7 Minutes

2. Vitals   **5 pages / 7 questions**

ESTIMATED COMPLETION RATE	ESTIMATED TIME TO COMPLETE
77 % Completed	7 Minutes

3. Vitals – metric/Imperial   **6 pages / 11 questions**

ESTIMATED COMPLETION RATE	ESTIMATED TIME TO COMPLETE
80 % Completed	5 Minutes
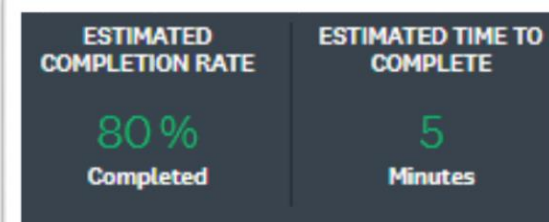
Rate example question

*4. The data elements listed below represent existing pharmacy related information that could originate from one or from multiple sources, (i.e. local, remote and DoD, or other non VA locations). For your convenience, a definition has been included for each data element.

- Please rate the importance of each of the data elements in the context of viewing a patient's allergy/ADR history in the patient profile.

- Rate each item using a scale of 1-5 where 1 is the most important and 5 is the least important information.

	1- Very important	2- Fairly important	3- Important	4- Slightly important	5- Not important
CAUSATIVE AGENT / REACTANT (The substance to which the patient had a reaction such as Penicillin or Ragweed)	○	○	○	○	○
CHART MARKED (The person who indicated that this causative agent has been included in the patient chart)	○	○	○	○	○
COMMENTS (Comments entered about the patient's reaction)	○	○	○	○	○
COMMENTS DATE (The date/time the comments were entered)	○	○	○	○	○
FACILITY/SOURCE (The name of the facility or source of the allergy/ADR information such as STN 655)	○	○	○	○	○
ID BAND MARKED (The person who indicated that patient's ID Band has been marked for this reactant)	○	○	○	○	○
INGREDIENTS (List of drug ingredients to which the patient had reactions for this causative agent)	○	○	○	○	○
MECHANISM (Indicates the nature of the reaction such as allergy, pharmacologic and unknown)	○	○	○	○	○
OBSERVED/HISTORICAL (Indicates					

Rank example question

5. Below are the data elements you listed as very important in the last section. Please rank these in the order that you would like to see them displayed/listed (when reviewing a patient's allergy ADR information in the patient profile).

If there are more than 10 data elements listed, please only rank the 10 most important ones. If you have fewer than 10 data elements listed, please ignore the extra columns.
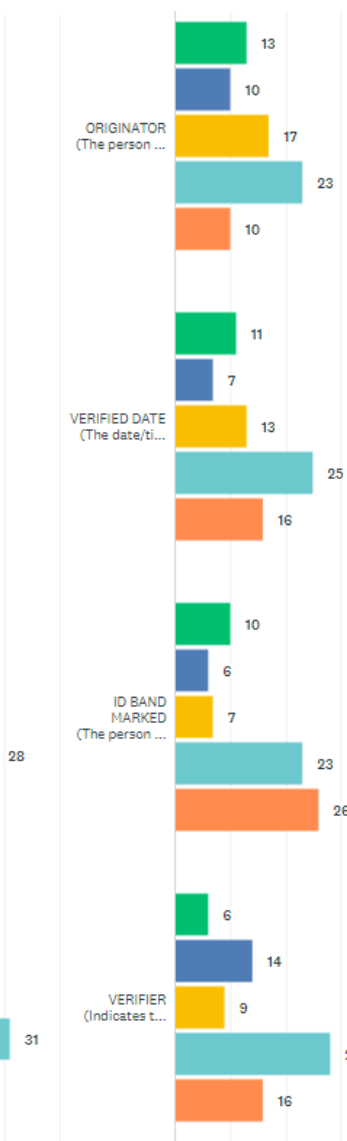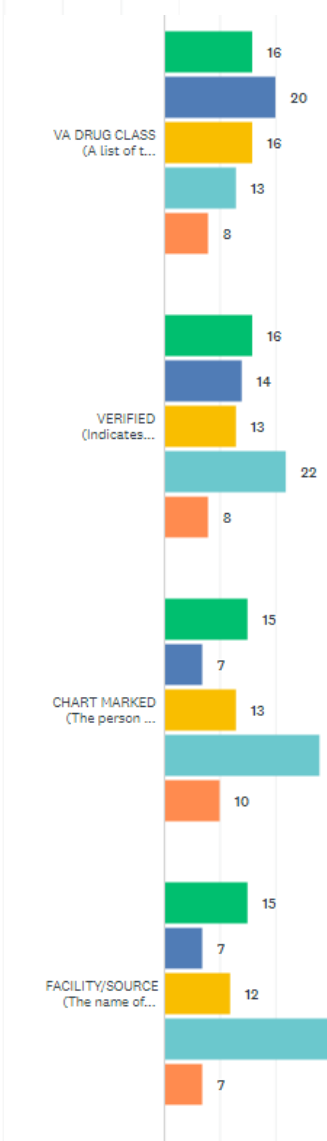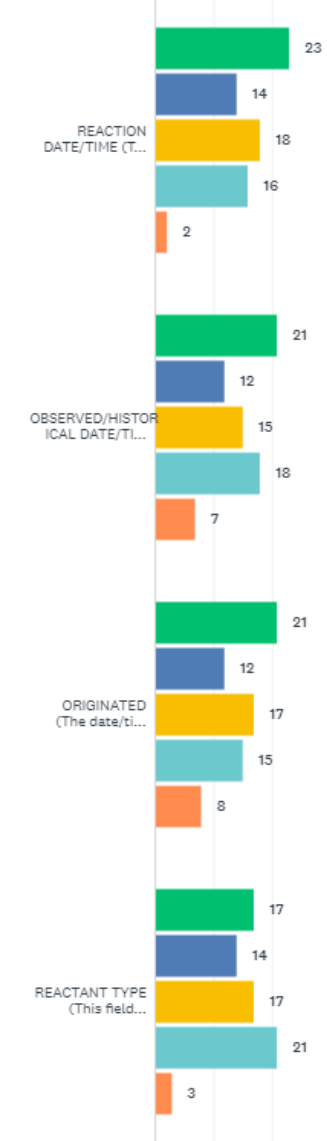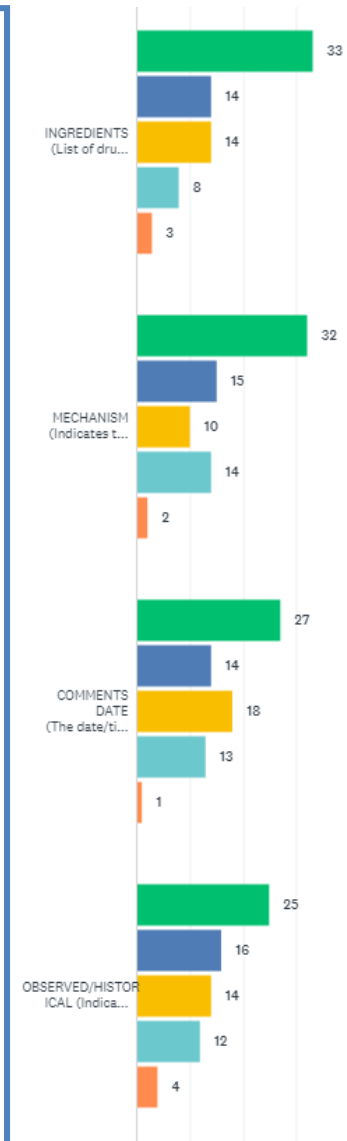
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
↪ CAUSATIVE AGENT / REACTANT (The substance to which the patient had a reaction such as Penicillin or Ragweed)	○	○	○	○	○	○	○	○	○	○
↪ CHART MARKED (The person who indicated that this causative agent has been included in the patient chart)	○	○	○	○	○	○	○	○	○	○
↪ COMMENTS (Comments entered about the patient's reaction)	○	○	○	○	○	○	○	○	○	○
↪ COMMENTS DATE (The date/time the comments were entered)	○	○	○	○	○	○	○	○	○	○
↪ FACILITY/SOURCE (The name of the facility or source of the allergy/ADR information such as STN 655)	○	○	○	○	○	○	○	○	○	○
↪ ID BAND MARKED (The person who indicated that patient's ID Band has been marked for this reactant)	○	○	○	○	○	○	○	○	○	○

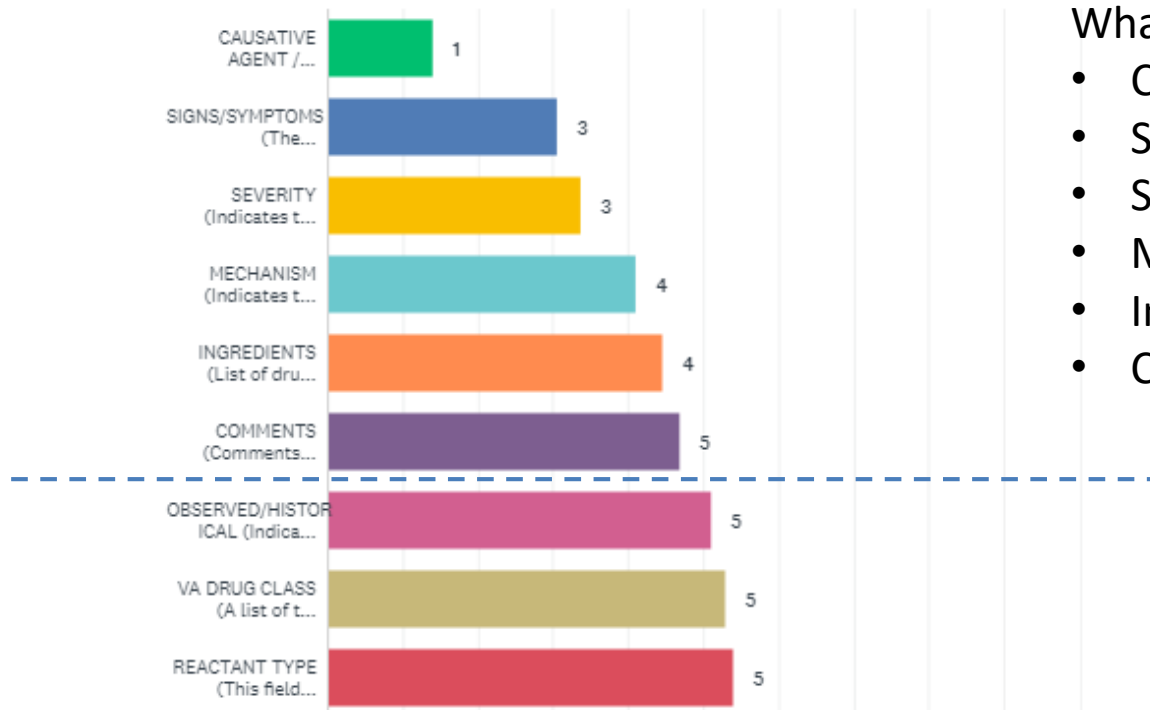# Results

Rating results

Most important allergy data

The data elements listed below represent existing pharmacy related information that could originate from one or from multiple sources, (i.e. local, remote and DoD, or other non VA locations). For your convenience, a definition has been included for each data element. Please rate the importance of each of the data elements in the context of viewing a patient's allergy/ADR history in the patient profile. Rate each item using a scale of 1-5 where 1 is the most important and 5 is the least important information.

CAUSATIVE AGENT /…: 72, 1

SIGNS/SYMPTOMS (The…: 67, 6

SEVERITY (Indicates t…: 55, 12, 4, 2

COMMENTS (Comments…: 50, 18, 3, 2

INGREDIENTS (List of dru…: 33, 14, 14, 8, 3

MECHANISM (Indicates t…: 32, 15, 10, 14, 2

COMMENTS DATE (The date/ti…: 27, 14, 18, 13, 1

OBSERVED/HISTORICAL (Indica…: 25, 16, 14, 12, 4

REACTION DATE/TIME (T…: 23, 14, 18, 16, 2

OBSERVED/HISTORICAL DATE/TI…: 21, 12, 15, 18, 7

ORIGINATED (The date/ti…: 21, 12, 17, 15, 8

REACTANT TYPE (This field…: 17, 14, 17, 21, 3

VA DRUG CLASS (A list of t…: 16, 20, 16, 13, 8

VERIFIED (Indicates…: 16, 14, 13, 22, 8

CHART MARKED (The person…: 15, 7, 13, 28, 10

FACILITY/SOURCE (The name of…: 15, 7, 12, 31, 7

ORIGINATOR (The person…: 13, 10, 17, 23, 10

VERIFIED DATE (The date/ti…: 11, 7, 13, 25, 16

ID BAND MARKED (The person…: 10, 6, 7, 23, 26

VERIFIER (Indicates t…: 6, 14, 9, 28, 16
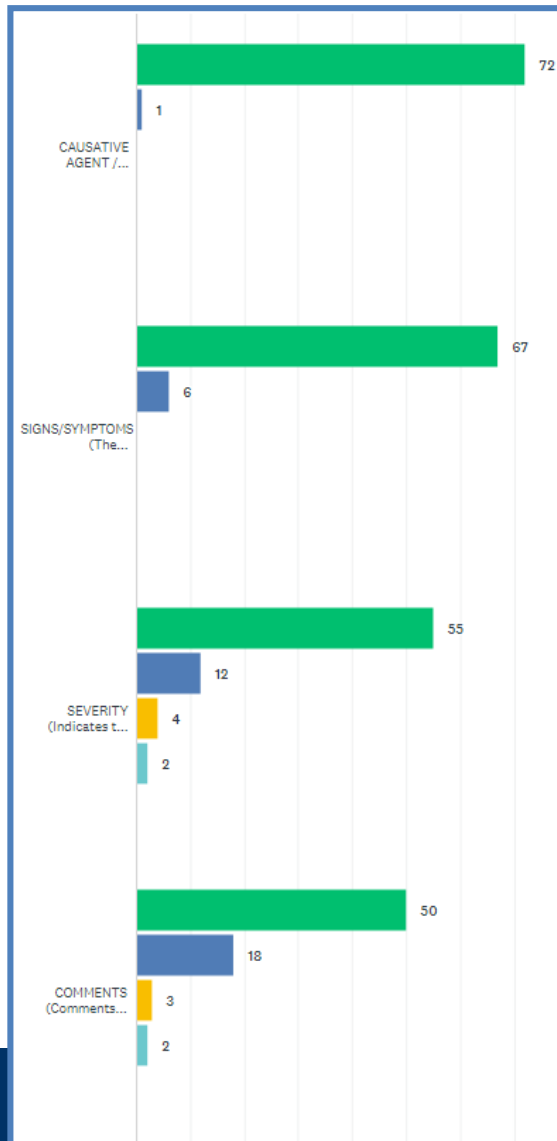
Ranking results

Below are the data elements you listed as very important in the last section. Please rank these in the order that you would like to see them displayed/listed (when reviewing a patient's allergy ADR information in the patient profile).If there are more than 10 data elements listed, please only rank the 10 most important ones. If you have fewer than 10 data elements listed, please ignore the extra columns.

Answered: 72   Skipped: 4

What order?
- Causative agent
- Signs/Symptoms
- Severity
- Mechanism
- Ingredients
- Comments

Resulting Design – List view

Pharmacy Staff Ranking:
- Causative agent
- Signs/Symptoms
- Severity
- Mechanism
- Ingredients *
- Comments *

Design:
- Standard term
- Causative agent
- Signs/symptoms
- Observed/historical (Severity)
- Mechanism
- Reactant type
- Origination date/time
- Facility

Results Summary

- Good participation rates (55-80 responses)
- Quick feedback from Pharmacy staff
- Insights in comments
- May need to bridge the gap (feedback => design)

Conclusion

- Data calls (Micro-surveys) with as few as 3 demographic and 2 topic questions can obtain valuable feedback from users

- Ideally, topics have a narrow focus

- Rate and rank questions were especially useful, but take users longer to complete than multiple choice or text comments

Questions

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Contact us:

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