



ISMP Survey Information Technology Review HIMSS Recommendations

This document includes advice and council to HIMSS members regarding how to answer questions from the ISMP hospital survey that are specifically IT related. Numbered questions and FAQs listed in this document are copied verbatim from the ISMP Survey for reference purposes.

The intent of these recommendations is to provide guidance for consistent survey completion.

The review and recommendations were completed by an industry panel of Information Technology and Pharmacy representatives.

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Recommendations for HIMSS members:

General Recommendations

- Note that partial implementation can be either partial functionality across entire enterprise, or full functionality in limited areas.
- Suggest answering the questions without regard to subjective qualifiers such as “easily” and “clearly”.
- Questions that require no further clarification will be noted as “self-explanatory”
- Questions which should be answered “A” not implemented, or “E” fully implemented, with little potential for partial implementation will be noted as “binary”

Section I Patient Information

- 1(1) Prescribers and nurses can easily and electronically access inpatient laboratory values while working in their respective inpatient locations.
 - HIMSS – Answer the question as if “can easily and” is removed. Consider the potential that not all lab work may be completed by in-house lab facilities, so not all lab values may be available electronically.
- 1(2) Pharmacists can easily and electronically access inpatient laboratory values while working in their respective inpatient locations.

- HIMSS – Answer the question as if “can easily and” is removed. Consider the potential that not all lab work may be completed by in-house lab facilities, so not all lab values may be available electronically.
- 2(1) Prescribers and nurses can easily and electronically access outpatient laboratory values while working in their respective outpatient locations.
- HIMSS – Answer the question as if “can easily and” is removed. Consider the potential that not all lab work may be completed by in-house lab facilities, so not all lab values may be available electronically.
- 2(2) Pharmacists can easily and electronically access outpatient laboratory values while working in their respective outpatient locations.
- HIMSS – Answer the question as if “can easily and” is removed. Consider the potential that not all lab work may be completed by in-house lab facilities, so not all lab values may be available electronically.
- 3(1) Prescribers and nurses can easily and electronically access both inpatient and outpatient laboratory values while working in their respective inpatient and outpatient locations.
- HIMSS – Answer the question as if “can easily and” is removed. Consider the potential that not all lab work may be completed by in-house lab facilities, so not all lab values may be available electronically.
- 3(2) Pharmacists can easily and electronically access both inpatient and outpatient laboratory values while working in their respective inpatient and outpatient locations.
- HIMSS – Answer the question as if “can easily and” is removed. Consider the potential that not all lab work may be completed by in-house lab facilities, so not all lab values may be available electronically.
- 6 Orders cannot be entered into the pharmacy computer system until the patient’s allergies have been properly entered and coded (patient allergies is a required field).
- HIMSS – Binary question / Self explanatory
- 7 The pharmacy computer system automatically screens and detects drugs to which patients may be allergic (including cross allergies) and provides a clear warning to staff during order entry.
- HIMSS – Self explanatory
- 8a **In hospitals WITHOUT computerized prescriber order entry (CPOE) systems:** Distinctive and visible prompts that list patient allergies are included on all pages of hardcopy order forms as a visible reminder to those prescribing drugs. (Prescribers initially list the allergies on order forms and patient care unit staff consistently transfer the information to subsequent order forms when replenishing charts with blank copies of order forms.)
- HIMSS – Binary question / Self explanatory
- OR
- 8b **In hospitals WITH computerized prescriber order entry (CPOE) systems:** Prescribers are provided with an electronic alert if a drug is entered to which a patient is allergic.
- HIMSS – Binary question / Self explanatory
- 9 Allergies are listed and clearly visible on all pages (or screens) of medication administration records (MARs), including those for new admissions, as a reminder during drug administration.
- HIMSS – If a hospital has both CPOE and non-CPOE processes implemented in different areas, need to consider the implementation phase of both processes.

- 11 MACHINE-READABLE CODING (e.g., bar coding) that utilizes at least two identifiers of the patient (e.g., name and birth date, name and medical record number) is used to verify patient identity during drug administration.
 - HIMSS – Self explanatory
- 12 Basic information (e.g., patient name, hospital unit location, birth date, physician) is clear and easily visible on orders transmitted to the pharmacy via addressograph imprints, stickers on hard copy or facsimile, or is sent electronically.
 - HIMSS – Double check the print quality of this information. Consider that the process may be in place to include this information on orders, but may not always be clearly visible.
- 13 Information about the patient’s comorbid and/or chronic conditions (e.g., hypertension, diabetes, renal or liver impairment, pregnancy, lactation) is obtained, communicated to pharmacists, and available in the pharmacy computer system for reference.
 - HIMSS – Self explanatory

FAQ 13. What does "and available in the pharmacy computer for reference" mean?
 A patient's comorbid and/or chronic conditions should be contained in the pharmacy computer system for pharmacists to have easy access to review this information as orders are processed. If the information is available in a separate system that must be accessed, then the answer to this item should not exceed response C

- 14 The computer system used for medication order entry is directly INTERFACED with the laboratory system to automatically alert practitioners to the need for potential drug therapy changes.
 - HIMSS – Self explanatory
- 15 Medication orders cannot be entered into the pharmacy computer system until the patient’s weight has been entered (weight is a required field).
 - HIMSS – Self explanatory
- N4 Archived allergy information from a prior admission is readily available for pharmacists to review (e.g., pop-up screens during entry of the first set of orders) when a patient is readmitted, but the information does not automatically populate the allergy field before practitioner verification.
 - HIMSS – Self explanatory

FAQ N4. How do I answer this item if allergy information is transferred from prior admissions but practitioner verification is only needed for certain medications?
 Your answer should not exceed a C for this item. The intent of this item is that if your system allows allergy information from a patient's prior admission to automatically populate a new patient profile, the information must first be verified before medication orders are processed. ISMP has received error reports when allergies from prior admissions populate the pharmacy computer system without further verification, and pharmacists dispense medications assuming that current allergies have been entered

- N5 Allergies are prominently visible on each patient-specific screen for all electronically displayed medication systems and records (e.g., CPOE screens, pharmacy computer screens accessed during order entry, automated dispensing cabinet screens, electronic MARs).
 - HIMSS – If a hospital has both CPOE and non-CPOE processes, need to consider the implementation phase of both processes.

Section II Drug Information ITEMS

- 18(1) Pharmacists and pharmacy technicians have easy access (e.g., on each computer terminal) to user-friendly, up-to-date, computerized drug information systems (e.g., MicroMedex, Facts and Comparisons), which include information on herbal and alternative medicines, in the pharmacies.
- HIMSS – Verify that your system includes alternative therapies. Consider if this information is actually used in this manner, not just that the information is available for use.

- 18(2) Prescribers and other non-pharmacy practitioners have easy access (e.g., on each computer terminal, palm devices) to user-friendly, up-to-date, computerized drug information systems (e.g., MicroMedex, Facts and Comparisons), which include information on herbal and alternative medicines, in all patient care areas.
- HIMSS – Verify that your system includes alternative therapies. Consider if this information is actually used in this manner, not just that the information is available for use.

- 24 The pharmacy computer system performs dose range checks and warns practitioners about overdoses and underdoses for all high-alert drugs and for most other medications.
- HIMSS – Self explanatory

FAQ 24 and 25. Are there examples that you can provide for answering these items?

Examples of medication orders to perform testing on your computer system can be found at the end of this document. These examples don't represent an exhaustive check of computer systems but can be used to identify categories (e.g., allergy checks, drug-drug interactions, maximum doses) of routine medication testing.

- 25 Pharmacy staff routinely tests the computer system to assure that MAXIMUM DOSE alerts are present for high-alert drugs and builds alerts for those that are not present.
- HIMSS – Self explanatory

- 27 Drug information updates for medication order entry systems (e.g., pharmacy system, CPOE system) are received from a database vendor and loaded at least quarterly.
Scoring guideline: Do not choose level D or E if updates are received or loaded less frequently than quarterly.
- HIMSS – Binary question / Self explanatory

- 28 Except in emergent lifesaving situations, all inpatient drug orders are entered into a computer and screened electronically against the patient's current clinical profile for contraindications, interactions, and appropriateness of doses before drugs are administered.
- HIMSS – Binary question / Self explanatory

FAQ 28. Does this mean that anyone can screen medication orders in a computer system?

The intent of this item is that all new patient medication orders are entered and screened against the patient's total medication profile in an electronic system by a pharmacist before the medication is dispensed and administered unless it is an emergent lifesaving situation (e.g., cardiac arrest). In a hospital without 24-hour pharmacy service this process should be performed by a licensed healthcare professional when a pharmacist is not available

- 29 The information technology system maintains (for at least five years) ongoing patient profiles with basic demographic information (including allergies) and drug therapy records for each episode of care, which are readily accessible to pharmacists when a patient is readmitted. *Scoring guideline: Do not choose level D or E if information is purged more frequently than every five years.*
- HIMSS – Binary question / Self explanatory

- 30 Inpatient and outpatient pharmacy computer systems are linked so that comprehensive patient and drug information is available to practitioners wherever (inpatient or outpatient) the patient receives care in the hospital system. *Scoring guideline: Choose NOT APPLICABLE if your hospital pharmacy does not prepare any outpatient prescriptions and your hospital does not have an outpatient pharmacy.*
- HIMSS – Binary question / Self explanatory
- N6 The pharmacy computer system (and prescriber order entry system if in use) requires practitioners to enter an explanation upon overriding a serious alert (e.g., exceeding a MAXIMUM DOSE for a high-alert drug, a serious drug interaction, an allergy).
- HIMSS – Binary question / Self explanatory

Section III Communication of Drug Orders and Other Drug Information

- 38 Prescribers enter medication orders into a computer system that is directly INTERFACED with the pharmacy computer system. *Scoring guideline: Do not choose D or E if prescribers enter orders into a computer system that is not directly INTERFACED with the pharmacy computer system*
- HIMSS – Binary question Note that INTERFACED could be defined as the electronic interface between two distinct systems, or and INTEGRATED solution (single vendor) which includes both order entry and pharmacy computer system.

FAQ **38. We have CPOE and all of our prescribers enter orders directly into the system. Do I answer E for this item?**
 Self-assessment scores should not exceed level C (i.e., can not score D or E) if prescribers enter orders into a computer system that is **not** directly interfaced or integrated with the pharmacy computer system, even if the vast majority of physicians or other prescribers enter orders via computerized prescriber order entry.

- 39a **In hospitals WITH computerized prescriber order entry (CPOE) systems:** The system warns prescribers about unsafe orders (e.g., allergies, MAXIMUM DOSES, interactions) during input and guides the use of formulary drugs and established protocols/clinical pathways.
- HIMSS – Consider the implementation status of all three components referenced in the question: warnings during input, formulary guidance, and protocol/pathway guidance.

OR

- 39b **In hospitals WITHOUT computerized prescriber order entry (CPOE) systems:** Preprinted order forms are used to guide prescribing of routine medications for preoperative and postoperative patients, for inpatient critical care admissions, and for oncology patients.
- HIMSS – Consider the implementation status for each specific patient population. Answer fully implemented only if implemented across all noted patient populations.

- 46 Computer-generated or electronic MARs that share a common database with the pharmacy system are used to guide and document medication administration.
- HIMSS – Binary question / Self explanatory

- N15 Prescribers have easy access to an electronic or computer-generated medication profile for each patient (which lists all current and recently discontinued medications), and they review this profile on a daily basis to verify the accuracy of order interpretation and as a reference when planning the patient's discharge medications.

- HIMSS – Double check profile review is in place. Consider that the process may be in place to review profiles daily, but may not always be completed by prescribers.

Section IV Drug Labeling, Packaging and Nomenclature

- 54 Computer MNEMONICS are arranged to prevent look-alike drug names from appearing on the same computer screen; or look-alike drug names are clearly distinguished in a way that differentiates them (e.g., use of TALL-MAN LETTERS) if they appear sequentially on the same computer screen.
- HIMSS – Binary question / Self explanatory
- 56 Alerts are built into the computer software to remind practitioners about problematic drug names (including drugs with multiple suffixes such as XL, SR, ER, CD, LA), packaging, or labeling.
- HIMSS – Binary question / Self explanatory
- 59 Pharmacy computer systems produce clear and distinctive labels free of ERROR-PRONE ABBREVIATIONS and nonessential information (e.g., computer MNEMONICS and other pharmacy codes).
- HIMSS – Consider implementation of both abbreviations and nonessential information when answering question. Note that some of this information may be provided from a system other than the pharmacy computer system.

Section VI Medication Device Acquisition, Use and Monitoring

- N23 General infusion pumps with SMART PUMP TECHNOLOGY are in use with full functionality employed to intercept and prevent wrong dose/wrong infusion rate errors due to misprogramming the pump, miscalculation, or an inaccurately prescribed dose or infusion rate.
- HIMSS – Answers C or D should only be used if full functionality is implemented. If full functionality is not implemented, only answers A or B are appropriate.

Section VIII Staff Competency and Education

- N26 The hospital information technology department includes personnel with specialty training in clinical informatics (not just general computing support for hardware and software) who are knowledgeable about applications in medication systems, and who are readily available for assistance in the development, application, and troubleshooting of these systems.
- HIMSS – Binary Question / Self explanatory

Section X Quality Process and Risk Management

- 175 In addition to practitioner reporting systems, computer markers or triggers for selected drug orders (such as antidotes) and laboratory tests (such as aPTT greater than 100) are used to enhance detection of potential adverse drug events (both medication errors and adverse drug reactions).
- HIMSS – Note that the question addresses implementation for both drug/drug and drug/lab interaction. Consider both alert types in answering for partial implementations.
- 185 MACHINE-READABLE CODING (e.g., bar coding) is used to verify drug selection prior to dispensing drugs (includes robotic dispensing).
- HIMSS – Binary question / Self explanatory

- 186a **In hospitals WITH automated compounders:** MACHINE-READABLE CODING (e.g., bar coding) is used to verify all base solutions and additives attached to automated IV admixture compounders.
- HIMSS – Binary question / Self explanatory
- OR
- 186b **In hospitals WITHOUT automated compounders OR WITHOUT MACHINEREADABLE CODING for automated compounders:** At least a pharmacist and one other person verify and document all base solutions and additives used in compounding all TPNs and/or cardioplegic solutions.
- HIMSS – Binary question / Self explanatory
- 187 MACHINE-READABLE CODING (e.g., bar coding) is used at the point of care to verify drug selection prior to administering medications.
- HIMSS – Binary question / Self explanatory
- 188a **In hospitals WITHOUT computerized prescriber order entry (CPOE) systems:** Drugs are filled using the order copy and the computer-generated drug label together and a pharmacist compares the label with the original order copy before drugs are dispensed.
- HIMSS – Binary question / Self explanatory
- OR
- 188b **In hospitals WITH computerized prescriber order entry (CPOE) systems:** A pharmacist reviews the order in the computer before generating a label from which the drug order is filled.
- HIMSS – Binary question / Self explanatory