The Art of HANDOFFS: A Mnemonic for Teaching the Safe Transfer of Critical Patient Information
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Problem

• Mandatory work-hour restrictions

• Increasing number of hospitalists

• Patient care is frequently transferred among multiple physicians.

• Each handoff brings with it a risk for errors, near-misses, and challenges to high-quality care.
Handoffs

• Pitfalls in handoffs:
  – providing too much information
  – omitting salient points
  – communication breakdown between physicians.

• Solution:
  – Standardized dataset for ensuring complete and relevant handoffs.
The HANDOFFS mnemonic

Hospital location: wing, room number
Allergies/adverse reactions/medications
Name (age, gender)/number (medical record)
DNAR?/Diet/DVT prophylaxis
Ongoing medical/surgical problems
Facts about this hospitalization
Follow-up on...
Scenarios

DNAR = do not attempt resuscitation; DVT = deep-vein thrombosis.
Mr X, a 43-year-old man admitted because of upper gastrointestinal (GI) bleeding. History includes alcohol abuse and withdrawal seizures. Takes no medications and has no known drug allergies. Hemodynamically stable and does not have abdominal pain. At the time that his care was transferred for the first time that day from the short-call team to the long-call team, the primary physician was notified that the patient's esophagogastrroduodenoscopy (EGD) examination revealed a gastric ulcer. When the patient was handed off for the second time that day, from the long-call team to the night-float team, the relevant information was given, using the mnemonic
HANDSOFF

Hospital location

Patient located on:
3e hospital, room 13

Consider including any special room, bed, ward features, e.g. telemetry or isolation.
Mr X reported: No known drug allergies

Medications
• Pantoprazole drip
• Lorazepam, per institutional alcohol withdrawal protocol
• Thiamine 100 mg/day for 3 days
• Multivitamin, with folate, 1 daily

Specify medication dosages, if this information may be helpful to the covering physician.

Doses of pain medications can be invaluable to the covering physician called in response to a complaint of ongoing pain.

Update medication and allergy list every day with every admission.
HANDOFF

Name (age, gender)/number

Mr X  43-year-old man
Medical record number

Note if there are duplicate names of patients on the same ward.

DNAR/Diet/DVT prophylaxis

DNAR (do not attempt resuscitation)
Full code

Address code status for every hospitalization, update daily and documented both in chart and in the handoff sheet.
Diet

*Clear liquid diet after procedure*

Information about diet can be critically important, e.g. if a patient is NPO eating after midnight in preparation for a procedure, or if a patient cannot safely take anything, including pills, by mouth.

DVT prophylaxis

*Serial compression device and compression stockings*

Document if the patient cannot receive pharmacologic deep-vein thrombosis (DVT) prophylaxis (e.g., he has a documented history of heparin-induced thrombocytopenia or is actively bleeding.)
HANDOFF

Ongoing medical/surgical problems

Mr X's medical/surgical problems are:
  • Upper GI bleed
  • Alcohol abuse
  • Upper GI bleed
  • Alcohol abuse
  • History of withdrawal seizures

Note medical/surgical problem list at admission and update daily. Include problems that are active and may affect current care; e.g. history of withdrawal seizures helps to focus the differential diagnosis of seizures or tachycardia. Do not include history of diseases that do not affect current care; e.g. degenerative arthritis of the hands is unlikely to affect this patient's care, slows down the handoff, and may obscure more important problems.
Facts about this hospitalization

1. Hemodynamically stable: blood pressure, 110/70 mm Hg
2. Serial hematocrit posttransfusion of 2 units of blood; hematocrit stable at 30% at 2 time points
3. Two 16-gauge intravenous (IV) lines in place, access required
4. Status post-EGD performed this afternoon revealed gastric ulcer; status postsclerotherapy, no varices noted.
**Important vital sign information.** E.g., patient admitted for a COPD exacerbation, baseline oxygen saturation values are helpful for decision-making.

**Significant laboratory data.** Covering physicians asked to follow up on a laboratory test must know the baseline value to be able to make treatment decisions efficiently.

**Access.** Patients may lose IV access. Covering physicians should know if the patient does not need central access immediately. Document if the patient has a central line in place if complications occur, such as an IV line infection, DVT, or pneumothorax.

**Procedures and results.** Covering physicians who know the results of procedures can consider possible complications of procedures when they are called to deal with patient issues and can use the procedure results in medical decision-making. E.g., if called about shortness of breath in a patient who has had a negative pulmonary computed tomography angiogram and venous duplex evaluation of the legs that afternoon, the differential diagnosis will be narrowed.

**List the consultants involved; be specific.** Enable the covering physicians to call the appropriate consultant. E.g. for issues related to a patient's laminectomy, call a neurosurgeon not a hospitalist.

**Blood or blood product availability.** Covering physicians need to know if unstable patients have blood products in-house (in the event that they need to receive blood or may need a procedure or surgery).
Follow-up

Overnight, Mr X's patient-care needs include:
Please check hematocrit at 18:00 hours and every 6 hours thereafter.

Identify specific information that the covering physicians need to review and what to do with the results.
Indicate what should be done with the information obtained, in the form of an "If...then..." statement.
Include relevant laboratory data trends if not noted above in the facts about this hospitalization. Indicate when test results should be available, and verify that the tests have been ordered before you leave.

If you anticipate that a patient may need a procedure based on new test results, discuss your handoff plans with the patient and obtain his or her consent in advance if necessary
CONCLUSION

- Potential for errors increases significantly when critical patient information is not communicated among the many covering physicians.
- Physicians need to learn the art of handoffs early in their career and continue to refine this skill to ensure high-quality patient care.
- Use the HANDOFFS mnemonic as a standardized guide to facilitate the safe transfer of patient information.
- Include salient points on the handoff sheet, but omit information that is not pertinent to the decision-making process for the specific patient.
1. All these statements about patient handoffs are true, except:
   A. Handoffs have increased since mandatory workhour restrictions were put in place
   B. The addition of hospitalists to the hospital team have reduced the number of handoffs
   C. Handoff sheets should include information about all consultants involved in the patient's care
   D. Medication and allergy information on handoff sheets should be updated daily

2. Which information in the history should not be included in the handoff sheet of a patient with a history of alcohol abuse who is admitted to the hospital for upper GI bleeding?
   A. Withdrawal seizures
   B. Degenerative arthritis of the hands
   C. Heparin-induced thrombocytopenia
   D. Arrhythmias
3. The "A" in the HANDOFFS mnemonic refers to all the following information, except:
   A. Accident/injury
   B. Allergies
   C. Adverse drug reactions
   D. Medication dosages

4. Which of the following options is not part of the "D" in the HANDOFFS mnemonic?
   A. Do not attempt resuscitation
   B. Nothing by mouth
   C. DVT prophylaxis contraindicated
   D. Drug/alcohol status
Self Assessment

5. Which of the following should not generally be included on the handoff sheet of a patient admitted for dyspnea?

A. Results of pulmonary computed tomography angiography  
B. Results of venous duplex examination  
C. Oxygen saturation level at admission  
D. Total cholesterol level at admission

References

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