Improving Written Sign-Outs Through Education and Structured Audit: The UPDATED Approach

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The Challenge

The Accreditation Council for Graduate Medical Education Common Program Requirements mandate that all residency programs need to monitor and ensure resident competency in patient handoffs.[1] Changes in resident duty hours have increased the volume and complexity of handoffs and have increased the use of "bridge" or "float" residents who may not have prior knowledge of the patients. Ensuring proper creation and maintenance of the written sign-out is critical in this environment. Existing curricula to teach sign-out communication to residents have focused almost exclusively on verbal handoffs.[2] Tools to facilitate teaching, monitoring, and evaluation of written sign-outs are especially lacking. This becomes even more important given the focus on educational milestones related to written communication, such as providing "legible, accurate, complete, and timely written communication that is congruent with medical standards."[3]

What Is Known

Studies suggest that written sign-outs are often plagued by medication errors, including omissions and erroneous information. Often, these errors result from failure to keep the sign-out updated.[4] Although the growing adoption of electronic health records can streamline documentation through linking data to sign-out applications, cut and paste problems and information overload may still occur.[5]

Rip Out action items

Program Directors must:

1. Acknowledge the growing volume and complexity of patient handoffs in the era of resident duty hour changes
2. Recognize that poor sign-outs can lead to medical errors
3. Implement an interactive, workshop-based curriculum for teaching and evaluating written sign-outs by residents and medical students

Ensuring proper creation and maintenance of the written sign-out is critical in today's environment.

Structured templates for documenting handoff information are recommended by professional organizations.[6] A recent, appreciative-inquiry study[7] in a large internal medicine training program found that handoffs varied widely in the absence of an educational curriculum and that a consistent methodology for sign-out organization is key.

One promising technique for teaching written sign-outs is the use of practice audits, which can promote reflection on past performance and facilitate transfer of knowledge into actual clinical practice.[8]

The UPDATED Approach

The UPDATED educational approach to teaching written sign-outs emphasizes the importance of the following attributes of sign-outs:

Updated administrative data

Prioritized problem list

Diagnoses in the one-liner

Anticipated problems clear

prevent **T**oo much information

Error-prone medications highlighted, and

Directions that are clear

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Is Signout UPDATED? *Date_____ Evaluation of_____*

Self-Assessed OR Evaluation by_____

When reviewing one daily signout, circle appropriate score for each domain and total at the bottom.

U	**Updated administrative data?** - *0 = ANYTHING missing/blank* - *1 = ALL administrative data present, including patient name, room number, code status, allergies, PCP, family contact information, and treatment team*	0	1	
P	**Problem list prioritized and accurate?** - *0 = Not prioritized AND not updated* - *1 = Updated with daily information but not appropriately prioritized* - *2 = Prioritized AND updated*	0	1	2
D	**Diagnosis listed in one-line summary?** - *0 = No one-liner present or repeated description of symptoms in one-liner despite new data "patient with shortness of breath" when pneumonia diagnosed* - *1 = Diagnosis in one-liner accurate and updated*	0	1	
A	**Anticipated problems?** - *0 = No "if/then" statement with specific instructions on what to do* - *1 = Detailed "if/then" statement*	0	1	
T	**Too much information?** - *0 = Superfluous data categories such as HPI, Social history, Family history, difficult to pick out important information* - *1 = No superfluous data categories, easy to identify problems, if/then and to-do*	0	1	
E	**Error-prone medications clear and correct?** - *0 = Antibiotics listed without start date or dose OR drips or meds mentioned in problem list but not on med list, antibiotics, anticoagulants, narcotics, insulin not highlighted* - *1 = All medications listed clearly AND all antibiotics with start date*	0	1	
D	**Directions clear and concise?** - *0 = Unclear if tasks to complete (no "NTD" written) OR overly vague task ("check ABG" or "chock UOP")* - *1 = Task listed/timed but without rationale or detailed instructions ("check CBC q8h")* - *2 = "NTD" written OR Task listed with detailed instructions for completion such as "Check CBC q8h and transfuse 2u for Hgb <7.0"*	0	1	2
	Column Totals			
	Sum the Column Totals for the OVERALL SCORE			

KEY	*If your Overall Score was in this range, your performance was...(circle one)*		
		0-3	Poor
		4-6	Fair
		7-9	Good

Areas for improvement:

FIGURE **Is Sign-Out UPDATED?**

The UPDATED mnemonic has been transformed into an audit tool, with specific examples of appropriate and inappropriate language, and incorporates a points system to create an overall sign-out score (FIGURE). The audit tool is intended to facilitate peer- or self-assessment of written sign-outs during a facilitated workshop session. This follows a brief slide presentation that introduces the UPDATED concept with examples of poor and excellent written sign-outs.

How You Can Start TODAY

1. Dedicate an intern or resident teaching conference to written sign-out education, in addition to orientations to the wards.
2. Contact the authors of this Rip Out for the sample slide sets that can be adapted for use at your institution and with your electronic health record system.

What You Can Do LONG TERM

1. For Program Director and Faculty: Sustain a consistent emphasis on high-quality and standardized written sign-out skills. Prioritize multiple conferences, check-ins, and on-service reminders by teaching attendings on the topic of sign-outs throughout the academic year.
2. For Residents: Assist residents in appreciating that more than half of a patient's time in the hospital occurs when the primary service is not in-house, and the precision of the written sign-out is critical to safe care. Emphasize that peer- and self-assessment and maintenance of high-quality sign-outs is a professional obligation.

Resources

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