QUALITY IMPROVEMENT: Optimization and Standardization of the Family Medicine Inpatient Sign-Out for Safer Patient Care

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Aim of project

To review current literature on effective sign out, and to take the opportunity to have our Family Medicine Residents and Attendings reflect upon the current Inpatient Family Medicine Sign Out and Hand Off Report. Our goal is to use the literature, and the feedback from our department to improve the integrity of Sign-Out, which will ultimately result in optimal medical care for the patients that we serve at UNM Hospital.

Background of project

In 2003, the Accreditation Council for Graduate Medical Education (ACGME) set limits for resident duty hours.¹

With the advent of the 80 hour workweek, much attention has been focused on the benefits of shorter work hours regarding resident fatigue and reduced medical errors. Along with this changes, there has been more reliance on multiple teams of residents who assume the care of inpatients at different times. In this new paradigm, a safe and effective sign out process is needed to ensure a seamless transition of the care from one resident to another.²

The safety of the handoff process has been called into question by a number of different sources and studies, which suggest that handoffs are often characterized by communication failures and environmental barriers.³

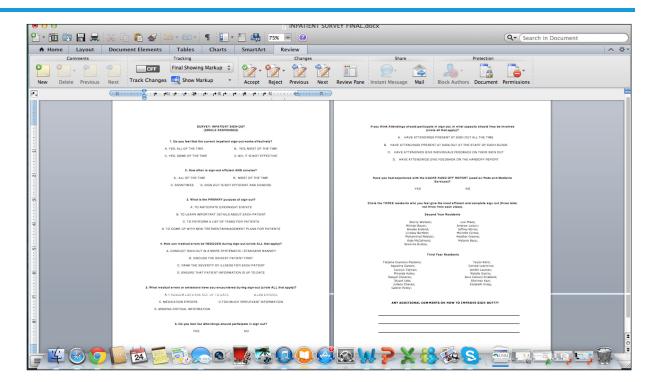
- Accreditation Council for Graduate Medical Education: Resident Duty Hours and the Working Environment. http://acgme.org/acWebsite/dutyHours/dh Lang703.pdf.
- 2 Kemp CD, Bath JM, Berger J, et al. The top 10 list for a safe and effective sign-out. Arch Surg. 2008;143(10):1008-1010.
- 3 Arora V., et al: Communication Failures in patient signout and suggestions for improvement: a critical incident analysis. QualSaf Health Care 14:401-407, Dec. 2005.

The handoff is also the subject of a Joint Commission on Accreditation of Healthcare Organizations National Safety Goal, which has a written requirement, which requires hospitals to implement a standardized approach to handoff communication and to provide an opportunity for staff to ask and respond to questions about patient's care.⁴

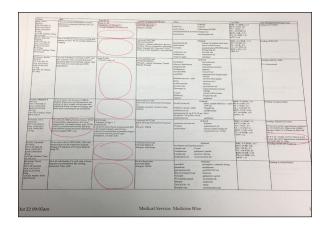
Because medical trainees receive little to no formal training or education in communication or education in communication during handoffs, there is an inherent opportunity to influence the practice of future physicians.⁵ (5)

Planned interventions tested

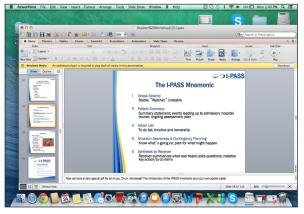
- 1. Literature Review
- Meeting to Discuss New Handoff Report, with Dr. Jacobs (Pediatrics Attending), to obtain information on transitioning to CACHE System for Hand Off Report from the PowerchartAdHoc Handoff Report.
- 3. **Resident Survey (example shown on next page)**, completed by Melanie Baca, MD, R2
- Hospital Attending Feedback Session, completed by Linda Smoker, MD Inpatient Attending
- 5. Implement IPASS method for sign out
- 4 Solet DJ. et al: Lost in translation: Challenges and opportunities in physician-to-physician communication during patient handoffs. Acad Med 80:1094-1099, Dec. 2005.
- 5 Horwitz LI, et al: Transfer of patient care between house staff on internal medicine wards: a national survey. Arch Intern Med 166:1173-1177, Jun 12, 2006.



Hand Off Report – *BEFORE* (previous with PowerchartAdHoc System)



Implement Mnemonic for standardization



Hand Off Report – *AFTER* (updated with Cache System)

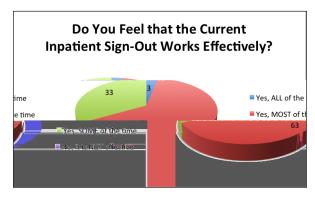
- Has BRIEF presentation
- Has BRIEF problem list and only pertinent PMHx
- Ranks Severity of Illness for each patient
- Provides Team Provider Contact Information and other hospital personnel for easier navigation
- Contains pertinent lab data only
- Specific section for anticipated overnight events
- Code status/allergies/IV access, are easy to find

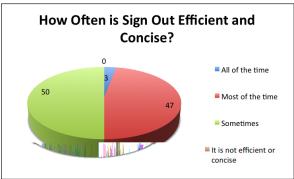
| Team 8 pager; 951 | Presentation/Active problems | PMH | Medical student: Tommy c951 | OVTI | Team To Do | OCO 16 D6 | Other/Dispo |
|--|--|---|---|---|--|---|---------------------------------------|
| Smith | 66 yo man with pmh of CVA in 2011, | HTN, CVA 2011, | Atoniastatin, dopidogrei, aspart. | Allergy/Code Heparin ottinkda/ | contis nece ne | -if worsening CP | |
| 7360 SDU-11 *UNSTABLE | pancreatitis, HTN [ECHO on 8/7/13 showed EF 50-55] and prostate cancer s/p prostatectomy presenting today with chest pain. | coronary vasospasms, HLD, GERD, pancreatris, neck/back pain | leuprolide, methocarbamol, pantoprazole, trazodone, lisinopril, aspirin, metoprolol, heparin git, integrelin | full code | nevascularization | despite 3 nitro → starf nitro drip | |
| Colles3716 SD 127-1 WATCHER | Ns yo M will COPD, newly diagnosed lung mass, p/w severe pain in lower chest, 30B, found to have large mass in lung and adrenal. | Copd, lung mass, htn, hid, OA, bph | Metronidazole, cipro, azibromycin, Isinopril, Morphina, Bibuterol, venapamil, docusatolsenna, finasteride, gašapentie, omeprazole, pravastatir, Tylenol, cyclobenzaprine, naproxen; duonebs. | Contact: Michael (son) 626-252-8400 | -IR bx Friday | -if sio infection, pan cx, cxr, start vancidefepim or merigenim 2/2 reported-pen-all | PT recs snt, pt requesting home |
| Ponder 3009 Sdu Z STABLE | o) yd m pinh polythysigia rheumatic, riewly discoverecklung mass plw Gitbleed, now wi DIC. | Polythyalgia meumatic, fung mass; htn | Zésyn, oxycodone, foic acid, dexamethaçone, parteprazole. | acaşınka direleni | -hemerond recs- -bode marrow bx tomogrow. | for coags/CBC- tonight of INR elevated, give FFF' or pt rdo → give pit for BM bx tomorrow | |
| Russ (324 5D 108/5 STABLE | 69 yoM with CKD, disstolic ht (et- >55), OSA, kidney transplant, CAD, DMII presenting with ADHF | Herpes zöşler, ckd, chf, pulmyhtn, osal, dmil, CAD | Amfodipirle, fürdşemide, Pisulin, celiceşt; metoproloi, tacrolimus, tamsulosin | Heppin/priodat one- verapamiliful | -durese, strict I/O- -renal appt | etd | |
| Romero 8812, 5A 152-1, STABLE | 76 m.pmh htmp/w-cholecystilis. | htn | metoproloi | Scds/full/pon | -surger y-recs -GLnote -trendfLFTs | | |
| Intern B Jane | Presentation/Active problems | PMH | Meds | DVT/Allergy/Co de | Team To Do | OCD To Do | OtheriDispo |
| Frank,5896 5D (04-5 STABLE | 66'yd myenh copd, cad transferred fforr osh, wi copd exacerbation. | Copd, cad, hid, seizure dio- | Duonebs, azithromycin, augmentin prednisone, budes florm, asa; simvastętin, orreorazole, cherytoin, tramadol | Loveroxhkaful | -stress test torromow | -NPC for stress, test tomorrow | |
| Mptinez 2586 5A-131-5 STABLE | 50 yd m w(BPH, prostate ća, p/w UTI and fiernaturia: | bph:prostate ca:advanced urothelial carand, hid | BICALUTAMISE, FINASTERIO, OXYBUTYNIN, SIMVASYATIN TAMSULOSIN, cipro | NKa;full code:SCD9 | -placement | NTO | dictorfacility tomorrow |
| 5A 4014, 265 50 2441, 461 50 2441, 461 50 2041, 461 50 2042, 211 50CU 2372 50CU 2372 780CC 4594, 264 780 404 7 | Nat mad 250-7902 cst 2250-2285 | r épo A whole | Di. Vulhi 3647, 243-0462 FF APT4 4051 Si Cappart 001, 229-1421 5551 Pr Entire 5532 U Enter Pathy 3229-1154 Bs Vania Cute 5333 Pr SCD 58-2756 Pr PCC 10st 211, 4546 Bs | E 2003 2044 4837, 4031, 2093 30 2071 varend 5000 d Caust 5739 pil. 978, 4000 d Sid 2156, 2166 dy CT 5300 T Sab 4000 | 3A SGN, 5637 GMID A 1932, 7953 GMID A 1932, 7953 GMID B 1930 GMID T 2607, 2994, 2005 GF 600 3207 A 1932, 2914, 291 | BIA BANKA 251-005 | |

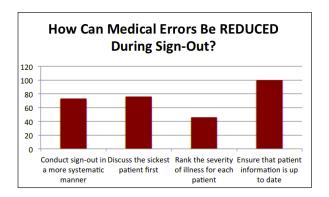
Prediction of Results and/or Intended Results

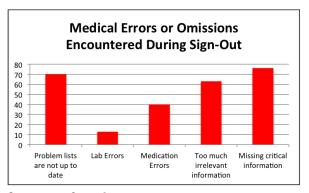
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Results of Resident Survey









Summary of results

N/A

Discussion

- The majority of our residents agreed that medical errors could be reduced by ensuring that patient information on the handoff report is up to date, and by conducting sign-out in a more systematic manner.
- Utilizing the IPASS system for sign-out, will allow patient information to be updated more efficiently.
- Initiating an educational curriculum for sign-out is critical for establishing a standardized process for sign-out.
- Further monitoring and evaluation of the sign-out changes implemented are likely to result in improved individual handoff skills, as well as improved patient outcomes on the Family Medicine Inpatient Service.

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Future Steps

- **Appreciative-Inquiry Approach**, with Focus Group of exemplar residents (3 residents selected as giving the most efficient sign-out)
- Pilot implementation of the CACHE Hand Off Report March 17th
- Complete **Post-Implementation Survey** of Senior Residents for 6 months. Come up with additional strategies as issues are identified.
- Train incoming Interns/upcoming Senior Residents on New System June 2014
- Incorporate **Attending Physicians** into sign-out Process