



Paediatric Consultant Documentation in the Intensive Care Unit- Use of Copy & Paste in the Electronic Medical Record

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Background

- Medical records provide a timely record of a patient's hospital course, as well as what the medical team is thinking, including plans and contingencies.
- When records were done on pen and paper, it could be hard to read, and lab and X-ray results could not be added to the record.
- With a modern Electronic Medical Record (EMR), most of these issues are addressed, but a new issue has arisen- copying notes from other doctors, or from other days and pasting them into daily notes
- Using copy and paste can be a time saver, but also can lead to confusion as copied material may not accurately reflect patient status.

Objectives

- Primary Objective:
 - Evaluate the use of copy & paste by pediatric subspecialty consultants, both medical and surgical, in our sickest patients
- Secondary Objectives:
 - Determine the portions of the medical record most frequently copied, and assess if those items were edited by the responsible physician

Methods

- The medical record, Epic, will be opened to the PICU page
- If there are any consult notes for a patient, each consult note will be opened, and the "Hide copied text" and "Hover for attribution information" buttons will be checked. This will make any information that had been copied to be highlighted, and will tell who originally typed it and when it was originally typed, and who copied it and when it was copied.
- Each of the 4 main areas of the note will be looked at to see if portions were copied (History or Subjective; Exam or Objective; Assessment or Impression; Recommendation or Plan), and if so, whether it was edited on that day.
- The information that will be recorded on a standardized data collection form (MS Excel) includes the consulting service; which attending physician signed the note; the total number of hospital days; the number of days each consulting service wrote a consult note; whether it was an initial consult or a follow-up note; whether a house officer or mid-level provider (Physician's Assistant or Nurse Practitioner) wrote the note; and whether the copied information was written by the same attending physician that originally wrote it.
- No patient identifiers were collected
- Protocol was approved by WVU IRB.
- Data were analyzed using Chi Square with Yates correction

Example of Copy & Paste & Edit

Exam:
VS: Blood pressure (I) 79/38, pulse 98, temperature 36.2 °C (97.2 °F), resp. rate 28, height 0.7 m (2' 3.56"), weight 9.88 kg (21 lb 12.5 oz), head circumference 43 cm (16.93"), SpO2 (I) 75 % on vent via trach FiO2 21%, PEEP 7.

General: Female infant in no acute distress.

Head: Normocephalic and atraumatic, pupils equal and round, moist mucous membranes.

Neck: Trach in place

Lungs: Coarse breath sounds bilaterally with no wheezing or crackles appreciated. Unlabored respirations.

Cardiac: RRR but unable to appreciate murmur secondary to coarse breath sounds, well perfused.

Abdomen: Soft, non-distended, non-tender, G tube in place.

Extremities: Warm, well perfused, no injuries or edema.

Skin: No rashes. Clabbing noted. Cheeks with ruddy appearance, somewhat worse than baseline.

Plans:
1. Continue current Sildenafil dose of 1 mg/kg dose PO Q8hr (goal dose) to help lower pulmonary vascular resistance in hopes to further help decrease shunting through the AVMs and the development of venous collaterals AP collaterals.
2. Attempt trial of FiO2 25% today to have sats around 80% to attempt to prevent further collateralization secondary to hypoxia.
3. Wean Lasix to 1 mg/kg q8 hours today given hyponatremia, increased BUN. Hold Diuril given worsening labs this afternoon. Otherwise, continue current cardiac medications. Repeat BMP tomorrow. Will hold on starting ACE inhibitor given recent labs.
4. Work on disposition and discharge planning for home ventilator/home nursing - home ventilator company to complete family training and family is aware of

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10. Milk protein allergy, on Alimentum
11. Subglottic stenosis and granulation below vocal cords- trach dependence; s/p bronchoscopic dilation on 4/13/18.
12. S/P GJ tube placement on 4/13/18.

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Results

A total of 277 consultant notes were reviewed, 99 by surgical consultants and 178 by medical consultants. There were 14 surgeons representing 7 specialties, and 25 medical consultants from 10 specialties.

	TOTAL	SURGEON	%	MEDICINE	%	p
n	277	99		178		
Copied History	102	22	22.2%	80	44.9%	0.00028
No edit History	12	4	18.2%	8	10.0%	0.366
Copied Exam	147	43	45.3%	104	57.1%	0.079
No edit Exam	31	13	30.2%	18	17.3%	0.12
Copied Assess	167	57	57.6%	110	61.0%	0.84
No edit Assess	55	6	10.5%	49	44.5%	0.00002
Copied Plans	137	40	40.4%	97	54.5%	0.033
No edit Plans	9	3	7.5%	6	6.2%	0.92

Results

- Surgical consultants were much more likely to write the medical history and not resort to copy and paste than the pediatric non-surgical consultants, 77.8% vs 55.1%, p = 0.00028.
- While surgical and non-surgical consultants copied the assessment from previous notes more than 50% of consults, surgeons were much more likely to edit the assessments, performing this 89.5% of consults vs only 55.5% for the pediatric non-surgical consultants, p < 0.00002.
- Copy & Paste was much less likely to be used on initial consults than on follow-up consults, 26.7% vs 77.6%, p < 0.00001.
- The use of house officers or advanced practice clinicians (Nurse Practitioner or Physician's Assistant) to write the note for the consultant did not effect the frequency at which the examination was copied from a previous note, 62.7% if consultant wrote the note, and 69.8% if a proxy wrote it (p = 0.35).

Discussion

- Copy & Paste is frequently used in hospitals with modern Electronic Health Records. In one study of the prevalence of copied information in an Intensive Care Unit, 80% of notes had evidence of significant copying from previous days' notes, and 50-60 % of all information in a note was copied (Thornton DJ, et al. Prevalence of copied information by attendings and residents in critical care progress notes. Crit Care Med 2013; 41(2): 382-388).
- That the practice of Copy & Paste may lead to medical errors was demonstrated in a study of orthopedic patients, where documentation did not accurately indicate patient status in 4 of 7 cases of serious complication, and of 54 patients that required a return to the Operating room, this was only noted in 30 of the 54 cases (Winn W. The role of copy and paste functions in orthopedic trauma progress notes. J Clin Orthop Trauma 2017; 8:76-81).

Conclusion

- The Copy & Paste function in EHRs in our PICU occurs at an alarmingly high rate, and the copied notes are not always edited.
- Initial consulting notes are much more likely to reflect original thoughts than are subsequent or follow-up notes
- Surgeons do a better job at communicating their thoughts than do medical subspecialists.

Future Direction

- Develop guidelines for the rational use of Copy & Paste in our EHR to improve communication and better outcomes for our patients.