

## Sloppy and Paste

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### The Case

A 78-year-old man with hypertension and diabetes presented to an emergency department (ED) with new onset chest pain. The ED physician reviewed the patient's electronic medical record (EMR) and noted a history of "PE" listed under the Past Medical History section. This raised his suspicion for the possibility of a pulmonary embolus (PE). After initial testing excluded a cardiac etiology, a computed tomography (CT) scan of the chest was ordered to rule out a PE. When the physician approached the patient to explain why he was ordering the diagnostic test, the patient denied ever having a PE or being treated with blood thinners.

Puzzled by the conflicting reports, the ED physician returned to the EMR and noted that this mistaken history of PE dated back several years. It even appeared in the "problem list" section of his EMR. Investigating further back, the ED physician discovered that the letters "PE" were first noted nearly a decade earlier where it was clearly intended to reflect a "physical examination" rather than a "pulmonary embolus." A physician likely copied and mistakenly pasted "PE" under "past medical history," after which this history of pulmonary embolism was carried forward time and time again. The patient, who was ultimately discharged from the ED, never suffered any harm from the documentation error. The EMR was updated to reflect, "This patient never had a pulmonary embolism."

### The Commentary

Copying of notes in the medical record is a practice that dates back at least 100 years.<sup>(1)</sup> In our era of electronic medical record (EMR) adoption, the practice is highly prevalent, with 90% of physicians reporting copy-and-paste use.<sup>(2)</sup> In fact, copy-and-pasted information from prior notes accounts for more than half of the information in EMR progress notes.<sup>(3)</sup> The widespread use and misuse of copy-and-paste raises significant concern about the accuracy of EMR documentation.<sup>(4)</sup> The case presented highlights the cascade effects that can result when inaccurate information enters the EMR, effects that can haunt patients for years without their knowledge.

Before condemning its use entirely, it is important to acknowledge that copy-and-paste functionality can be a legitimate timesaving tool when used appropriately. For instance, copy-and-pasting of past medical history (PMH) verified to be unchanged may be accompanied by the notation "PMH reviewed with patient today (current date) and is accurate and up to date." Utilized this way, copy-and-paste is not inherently evil or harmful to patients. On the other hand, "sloppy-and-paste," the practice of copying a note without editing and updating it, is a major contributor to EMR note inaccuracies. Sloppiness creates opportunities for error and patient harm.

High-risk copy-and-paste errors, which are defined as mistakes with high potential risk for patient harm, fraud, or tort claim, have been reported in 10% of patient EMRs.(4) Medication reconciliation discrepancies are particularly noteworthy, since such errors are noted in almost 40% of EMR patient medication lists.(5) There are also reports of incredible copy-and-paste persistence and absurdity. These include a consultant's note that was copied forward by multiple authors for 7 years, and dietary and follow-up instructions provided to a deceased patient.(6) While these kinds of documentation errors undoubtedly occurred in the pen and paper era, they are rampant with EMRs.(2,6)

Consider the accompanying PE vignette. With pen and paper, providers were forced to physically write "PE" into a note and one cannot help but wonder if copying by hand forced them to consider the accuracy of the copied text. Furthermore, physically signing a note was tantamount to declaring "*I, the author, am responsible for the accuracy of all the information contained in this note.*" Electronic signature via mouse click doesn't convey this same sense of personal ownership. Rather, it seems to connote, "*My electronic signature affirms that the copy-and-pasted portions in this note have been accurately copy-and-pasted from earlier notes.*" Thus, the responsibility for the accuracy of copy-and-pasted text does not reside with the current author, but instead, with unnamed previous authors.

Many editorialists have bemoaned the widespread use of copy-and-paste and the resultant information errors and disjointed patient narratives.(7-9) Beyond encouraging people to do better, specific remedial suggestions are limited but worth reviewing.

## **Potential Copy-and-Paste Remedies**

### *Harassment of sinners*

This is likely an ineffective strategy. Copy-and-paste may be the Achilles heel of EMRs but, as has been pointed out, "no amount of hectoring will change that."(9) Others (10) have suggested that we "go beyond reflex criticism of copy-and-paste methods to search for creative approaches." While it is hard to disagree, neither of these viewpoints offers specific solutions.

### *Technology*

It is tempting to advocate for disabling the copy-and-paste function entirely. However, copy-and-paste is extremely popular (2), and the efficiency tradeoffs would make such an intervention unpopular and difficult to adopt. Moreover, easy computer workarounds are available for determined users of copy-and-paste functionality.(9) A more creative technology solution might involve highlighting copy-and-pasted text by color-coding or italicizing it. Such highlighting would not reduce inappropriate copy-and-paste but would prompt readers to heighten their skepticism regarding the text's accuracy. As an alternative to long and

unreadable copy-and-pasted progress notes, brief clinical notes in a Facebook-like system have been suggested.(11) In such a system, new entries and updates would be forwarded, via digital pager or smart phone, to all involved practitioners in real time. Recipients could then acknowledge receipt or make comments or suggestions via the same pathway.

### *Education and mentoring*

There is a dearth of effective strategies to teach and foster high-quality and safe EMR use.(12) Moreover, the goals of clinical documentation are evolving. Documentation not only summarizes and communicates clinical care, it also serves as a record of care for purposes of professional billing, quality measurement, and litigation. Trainees may feel that longer, copy-and-pasted notes better address these purposes but there is no evidence that this "more is better" approach is indeed better.

Potential educational strategies include greater auditing and feedback on trainees' documentation practices, including copy-and-paste use. Feedback is a proven strategy for improving the quality of trainee progress notes, but such interventions are time- and labor-intensive.(13-16) Documentation improvement initiatives are certain to grow and having more outsiders review clinical records will increase scrutiny of copy-and-paste misuse.

### *Acceptance*

The history of the written medical record is characterized by continuous change.(1) The EMR is a new medium, and database trumps narrative in new media.(17) Current trainees are comfortable importing large chunks of data into their notes even though the resultant notes lack traditional storytelling narratives. As the last of the pen-and-paper practitioners die out, concise, linear narratives may die with them. If so, long, non-linear copy-and-pasted notes will become the accepted norm.

In reflecting back to our case presentation, it does end on an upbeat note with the emergency physician correcting the "PE" error in the EMR. We're still left wondering whether subsequent providers will notice this correction and compose their notes accordingly. Or will future providers copy-and-paste from the most recent admission note and the mistaken cycle begin anew? After all, PE was confirmed numerous times in the EMR and debunked only once. The popular vote may carry the day and exhume the diagnosis of PE. Perhaps the only way for the patient to ensure his own safety is to don a medic-alert bracelet with the disclaimer, "I HAVE NOT NOW NOR HAVE I EVER HAD A PULMONARY EMBOLISM."

### **Take-Home Points**

- Copy-and-paste practices are common in EMRs, and while they offer important efficiencies, they also require careful attention to appropriate use.
- Unedited copy-and-paste ("sloppy-and-paste") results in inaccuracies that can be perpetuated through the EMR and lead to potential patient harm.
- Increased focus on auditing and feedback of provider notes may improve clinical documentation practices.

**Robert Hirschtick, MD** Associate Professor in Medicine, Division of General Internal Medicine and Geriatrics Northwestern University Feinberg School of Medicine

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