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Making a case for concise narrative radiology reports

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While prose-style radiology reports are still considered most accurate and complete, and still most commonly used by radiologists,¹ template-based reports have been attracting considerable attention as of late.^{2,3}

I can't help but wonder why.

My own opinion is that not only do template-based reports thwart more creative thought, but their growing popularity is also leading to increasingly verbose, repetitive and cluttered reports that can trigger chuckles of amusement, at best; and unleash fear of lawsuits and other serious consequences, at worst.

Indeed, I've come across some reports so blatantly superfluous that they are actually funny: "Normal abdomen radiographically with no visualized acute diagnostic abnormalities evident within the abdomen on this examination at the present time radiographically. Opinion: Abdomen within the range of normal."

I've seen other reports that breach basic logic through needless repetition: "Pneumonia is bilateral, seen in both lungs"

Obviously redundant and illogical elements like these impair the quality and accuracy of our reports and may, indeed, increase the risks of adversely affecting patient care.

I think that one can trace the cause of this problem, at least in part, to the world we live in, which is filled with efforts to make ideas appear better than they actually are; look no further than marketing and advertising messages, which often consist of not much more than long-winded, somewhat dishonest and manipulative rhetoric. I think also that many radiologists believe the longer their reports, the better and more impressive they—and

their reports—will look to others. While long reports can and probably do impress some medical students and naive doctors, in my experience, they make a poor impression on most readers.

Robert Allen, MD, the eminent pediatric cardiac surgeon at Le Bonheur Children's Hospital, once said to me, "Please don't put all that needless stuff in your post-op radiology reports. Mention only significant findings." Similarly, David Carroll, MD, the University of Tennessee Professor of Radiology and past president of the American College of Radiology, always insisted on brief reports.

(Let me emphasize that I don't have anything against long radiology reports per se; complex studies and interventional studies certainly, and often, require longer reports. My concerns focus mainly on reports documenting less complicated, normal studies, or follow-up studies without change.)

Drs. Allen and Carroll were right to insist on brevity. No less an authority than William Strunk, Jr., co-author with E.B. White of *The Elements of Writing*, wrote in the introduction to that classic primer, "Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason a drawing should have no unnecessary lines and a machine no unnecessary parts."

Strunk and White were on target, and many of us radiologists would do well to apply Occam's Razor (also known as the Principle of Parsimony), which says the shortest and least complicated way is the truest, to the writing of our reports. If Sir William of Occam were practicing medicine today, I'm sure he would take many patients off all medications and

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start with a clean slate; if he were playing basketball, he would shoot straight for the hoop, rather than bank off the glass.

Tips for writing more concise reports

Thus, it is in this spirit of saving paper, toner and time—yours and that of your readers—that I offer the following pearls of advice for shortening your traditional narrative reports without losing their all-important meaning to your referring physicians and their patients.

- **Use the “Opinion” or “Impression” section judiciously.** If your report is complete and succinct, you don’t always need these sections, particularly if you include a summary opinion at the end of the report body. I have seen reports where four sentences in the Opinion section repeated, almost verbatim, the same four sentences used in the body. I give an Opinion only when I think I need it to emphasize the most relevant points of my report. I also prefer to use “Opinion” instead of “Impression,” as the latter reminds me too much of blurry 19th century French paintings. Seriously, I’ve heard referring doctors say they usually read only the Impression, and I think that perhaps providing them with such a shortcut to avoid reading the report, which has its own value, may not be a good idea.
- **Don’t say, “Comparison: None” when there is no comparison to make.** Jean-Paul Sartre, sitting at a Paris café and revising his draft of *Being and Nothingness*, said to the waitress, “I’d like a cup of coffee with no cream.” The waitress replied, “I’m sorry, but we’re out of cream. How about with no milk?” You wouldn’t say “I am not leaving the room now” if, indeed, you are not departing. Save the ink and space for more useful words.
- **Conversely, report comparisons with previous studies with one word and one date.** To wit: CHEST: PA and LATERAL, 7-4-14, *since* 7-3-14. Without a template that includes headings such as “Comparison” or “Reference Study” as a separate line, the thought flows more smoothly. Incidentally, reviews of previous reports are typically quite repetitive. I’ve noticed that it is almost becoming more the rule, rather than the exception, to report “No pneumothorax or pleural effusion” on daily chest radiographs. I once asked a resident why he added this to his reports, and he confidently replied, “Because that was reported on the previous fourteen chest studies.”
- **Avoiding repeating headings.** If a template heading says, “CHEST: PA and LATERAL,” don’t then take up space—and your reader’s time—with, “PA and LATERAL views of the chest were submitted for review.”
- **Don’t use Findings as a heading.** I do not use the template word “Findings.” Does anyone not know this is a radiology report?
- **Mention only one or two pertinent negatives in addressing a specific problem.** A radiologist recently told me it is best to list four nonpertinent negatives to make a report appear more complete. I asked, “Then would eight be better?” While “overcalling” is very common,⁵ gratuitous negatives create clutter. For

example, on post-op chest films, an under-aerated medial lung is expected and not pathological, and I’ll often write, “No evidence of post-op complications.” With experience, moreover, the acceptable range of normal widens. Minimal imaging abnormalities are often technical imperfections that can change on a repeat study a few minutes later. Findings don’t have to be perfectly normal to be within two standard deviations of the mean; ie, non-pathologic or normal variants that are not necessary to discuss. One shouldn’t create lengthy reports simply to teach house staff and generalists; they are not without knowledge and we should not set an example for them to clutter medical records.

- **Mention only significant changes in support tubes and lines.**

It is perfectly acceptable simply to comment that “all tubes and lines are in good (bad, stable) position” rather than describing their physical relationship to specific vertebrae.

Shorter reports never killed anyone’s career or bottom line

I have been told that shortening longer reports into more concise forms lessens their value. Why? Is it because the use of wordy reports has become so pervasive that doctors have become accustomed to their lengthy, needlessly embellished style and accept it as normal and proper? It would be just as logical to say the value of a report doubles if you double the number of words.

I have never seen evidence of radiologists’ not getting paid or being sued for concise reporting. Indeed, I have spoken with the billing officers at the major Memphis hospitals and have been told they do not get claims denials because of concise reports.

That said, let me just note that my libertarian leanings obligate me to assert that everyone should be free to report findings his or her own way. “Let a thousand different flowers bloom,” as the saying goes, and the best ways will gravitate to the top. I hope some of you will consider my ideas and even implement some of them.

Still, I can’t help but wonder what my colleagues would think if I started making my reports twice as long as they usually are. How would I explain myself? I can only imagine that I would plant tongue firmly in cheek, smile with a twinkle in my eye, and say, “It just looks so impressive.”

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