

Surgical Count Improvement – Part 2 – A Redux

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ABSTRACT

A correct surgical count is a key component in any surgery, whether the count is the initial, final or anywhere in-between. Prevention of Retained Surgical Items (RSI) is a priority in any surgical procedure. RSI's can threaten the wellbeing of the patient and staff involved. RSI's can also lead to more surgical time and risk for the patient, increased costs, non-reimbursement for this "Never Event". At the 2024 AORN Expo we presented a poster that introduced our first steps in reducing counting errors by using a counting simulation standardization lab. This saw a 57% improvement in the first 4 months but then the numbers started to rise again. Our counting simulation standardization lab decreased our numbers temporarily but it was discovered that a true reduction would involve more than a standardized process. After the initial decrease and leveling off, a spike happened followed by a decrease and leveling off again. The numbers were still high and not within our wanted goals of 5 or less a month. The Surgical Unit Council (made up of frontline staff) along with leadership refocused efforts and encouraged new ideas to address the counting discrepancies. In September of 2024, It was decided that more than a "Back to Basics" attitude was needed and it was time to empower the staff to the importance of what is an acceptable count and what is not. Between September 2024 to December 2024 ideas were discussed and implemented, keeping ideas that worked and not using ones that did not. Between February 2025 and March 2026 (this will change depending on data) a significant reduction was seen and 1 below our set goal.

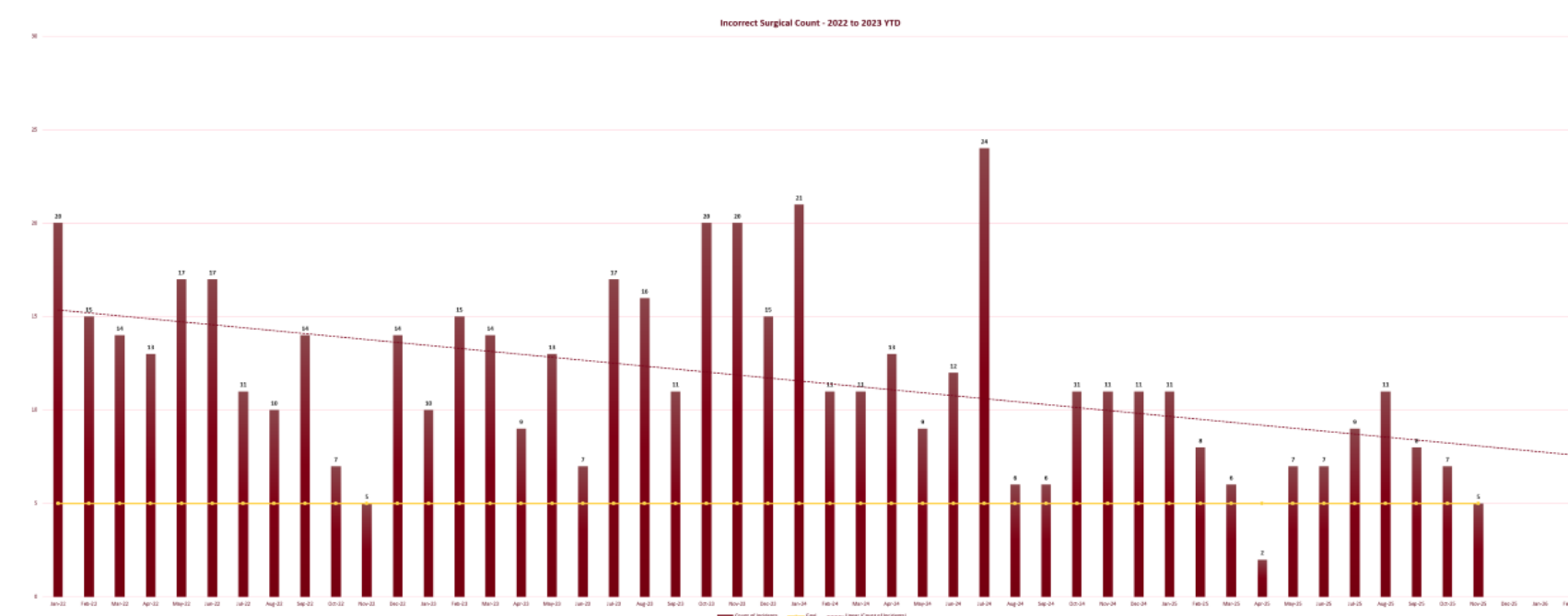
BACKGROUND

- Since 2022 we have been tracking incorrect counts in our surgical unit. With a monthly average of 12.3 incorrect counts from 2022-2024.
- In 2024 we have had 5 RSI's. In 2025 we have had 2 (Data may change)
- In 2025 the education department introduced additional training. The staff driven Unit Council implemented new strategies for improvement and daily, weekly and monthly reporting to all staff of incorrect counts and what was implemented For a reduction
- In 2025 our incorrect counts have dropped to 7.6 incorrect counts a month (We do approximately 800 procedures a month). This results in a 0.95% per month
- The Ultimate goal of any organization should be 0%

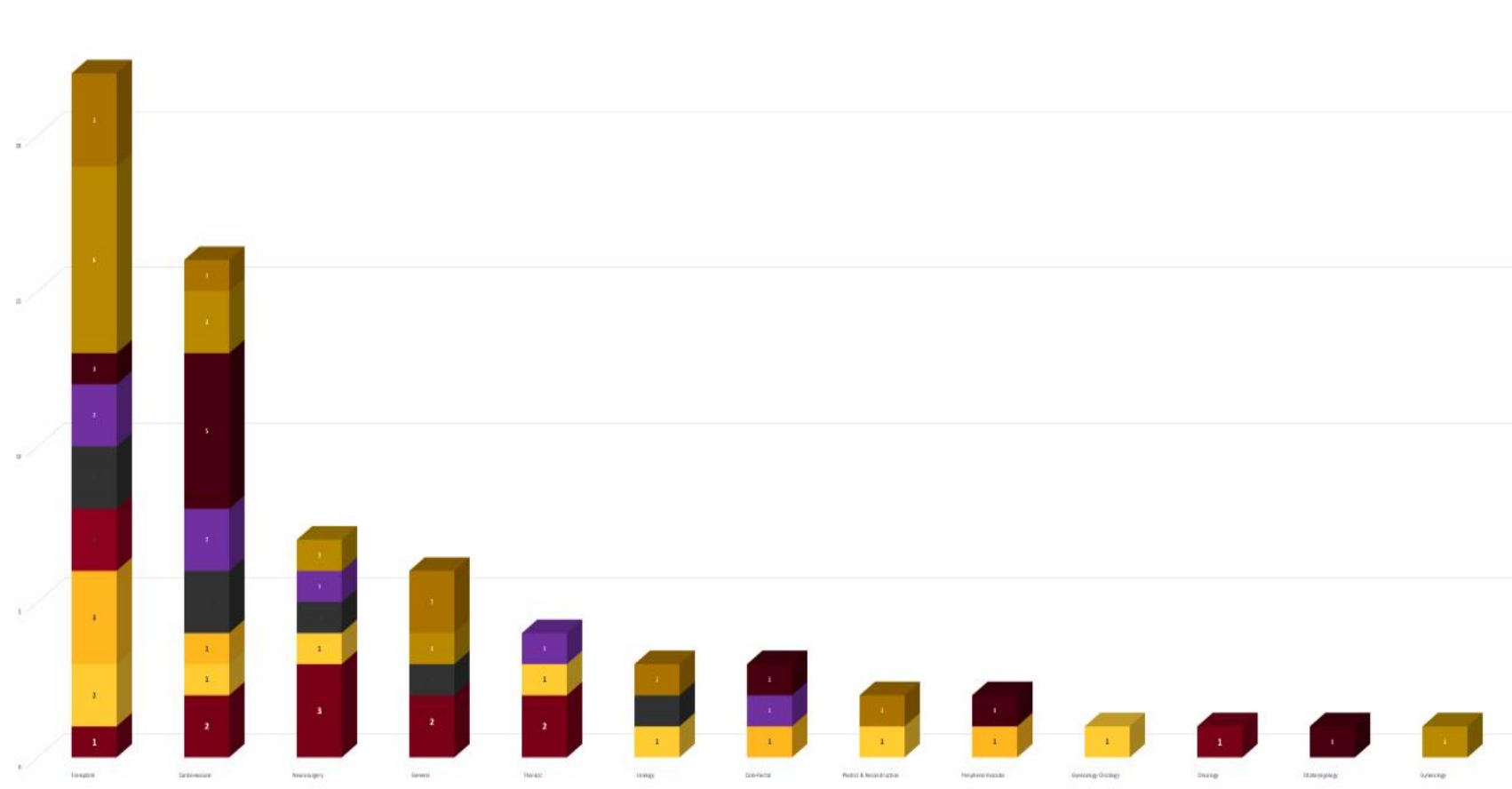
DATA ANALYSIS

Since our 2025 poster presentation "Surgical Count Improvement: Use of Simulation for Standardization" which saw a count error improvement temporarily followed by spikes, followed up with reminders and implementation of new ideas. This process of "ups and downs" has continued with gradual decreases in the monthly counting error average by 30% (as of Nov 2025) from the initial Standardization Simulation lab training to the present. In our surgery department we average 800 procedures a month. The majority of our counting errors occurred in our more complex surgeries: Transplant Surgery – liver, kidney and pancreas, followed by Cardiovascular surgery which also includes heart and lung transplants. These specific procedures can be lengthy and involve hundreds of instruments, sponges and needles (the most common causes of our errors).

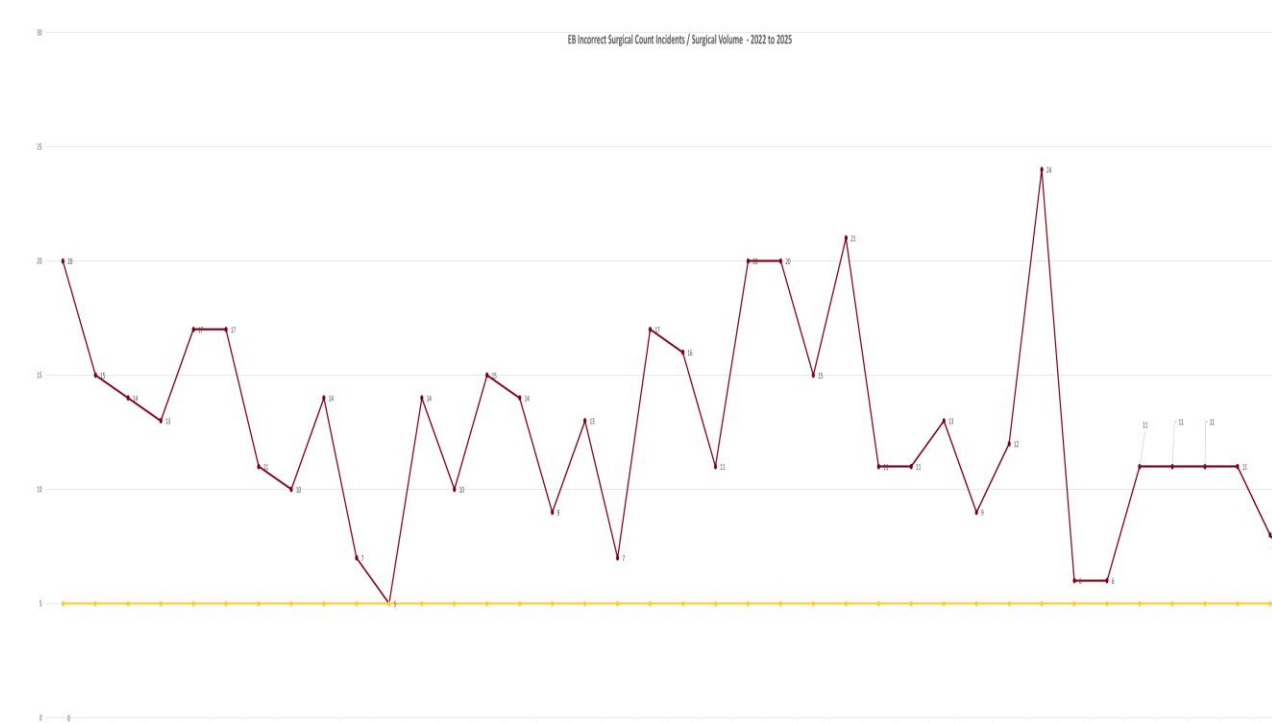
Incorrect Count by Month - 2022 thru 2025



Incorrect Count by Service - 2025



Incorrect Count by Year Starting in 2022



A collaboration among the University of Minnesota, University of Minnesota Physicians and Fairview Health Services

METHODS

The Surgical Unit Council involvement existed throughout this process of error reduction. After the spike in errors in June of 2024 the council's involvement became more pronounced by suggesting to leadership that we take a more frontline approach which included: A back-to-basics approach, data sharing with staff, physician engagement, role playing at report, staff empowerment with leadership backing, special focus on high use cases (cardiovascular and transplant), permanent relief counts, slowing down, distraction reduction, surgical tech recount check while circulator attends to patient care, readbacks with closed-loop communication and the use of colored markers to identify the staff performing the counts. Monthly, weekly and daily reinforcement of counting expectations to staff is required to avoid spikes. Overall, a decrease in errors is being seen, especially in the last year.

KEY CHANGES

The data from the 2025 poster only told a small part of the story, discussing the results of the Count simulation lab over a 4-month period. This poster demonstrates shows the data from 2022 to the present. Highlighting the data from 2024 to now, which is when the Surgical Unit Council, Education and Leadership began to put serious focus on improving counting errors.

Unit council Suggestions put into practice: Data sharing, physician engagement, role playing at report, Staff, empowerment with leadership backing, special focus on high use cases (cardiac, transplant), slowing down, Distraction reduction, ST recount check while circulator attends to pt., readbacks with closed-loop communication, Relief counts: colored markers marker to signify who was in the room (primary circulator, break relief, lunch dinner relief, permanent relief).

OUTCOMES

After an education or new process for error reduction happened the errors went down initially, but would eventually rise again. The Unit Council followed up, monthly and weekly at reports to remind staff to continue being diligent and use best practices This reinforcement has led to less counting errors decreasing by 30%

REFERENCES

Duggan, E. G., Fernandez, J., Saulan, M. M., Mayers, D. L., Nikolaj, M., Strah, T. M., Swift, L. M., & Temple, L. (2018). 1,300 Days and Counting: A Risk Model Approach to Preventing Retained Foreign Objects (RFOs). *Joint Commission journal on quality and patient safety*, 44(5), 260–269. <https://doi.org/10.1016/j.jcjq.2017.11.006>

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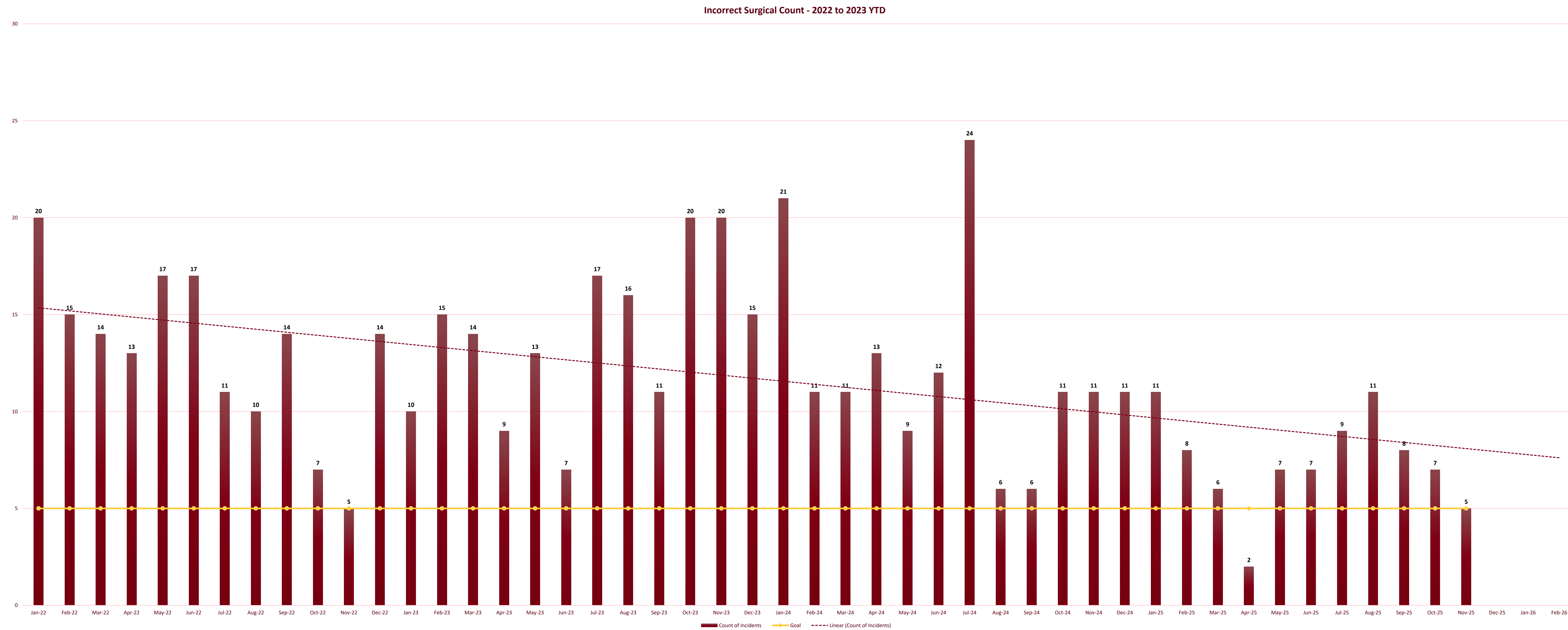
Fencl, J. (2016, July). Guideline Implementation: Prevention of retained surgical items. *AORN Journal*, 104(1), 37-45. <http://dx.doi.org/10.1016/j.aorn.2016.05.005>

Prabhakar, H., Cooper, J., Sabel, A., Weckbach, S., Mehler, P., Stahel, P. (2012). Introducing standardized "readbacks" to improve patient safety in surgery: a prospective survey in 92 providers at a public safety-net hospital. 12, 1-8. Retrieved from <http://www.biomedcentral.com/1471-2482/12/8>

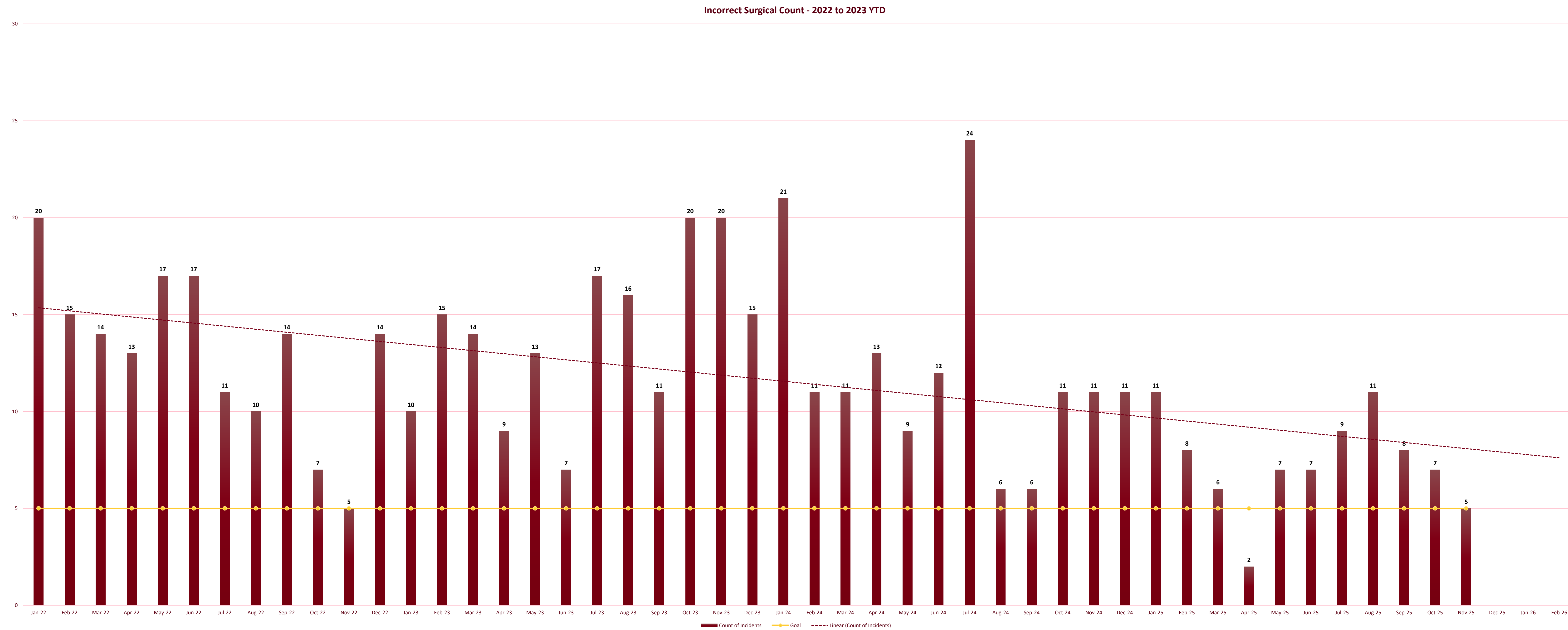


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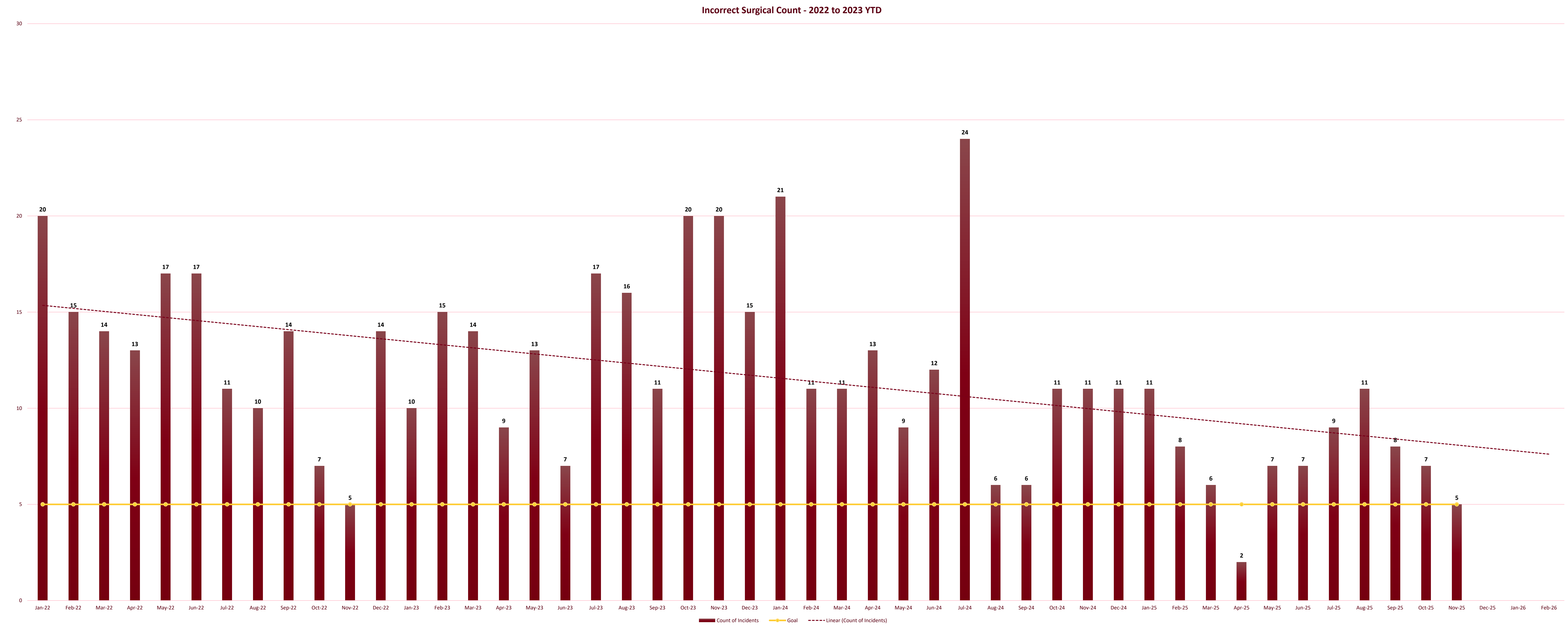
Incorrect Count by Month - 2022 thru 2025



Incorrect Count by Month - 2022 thru 2025

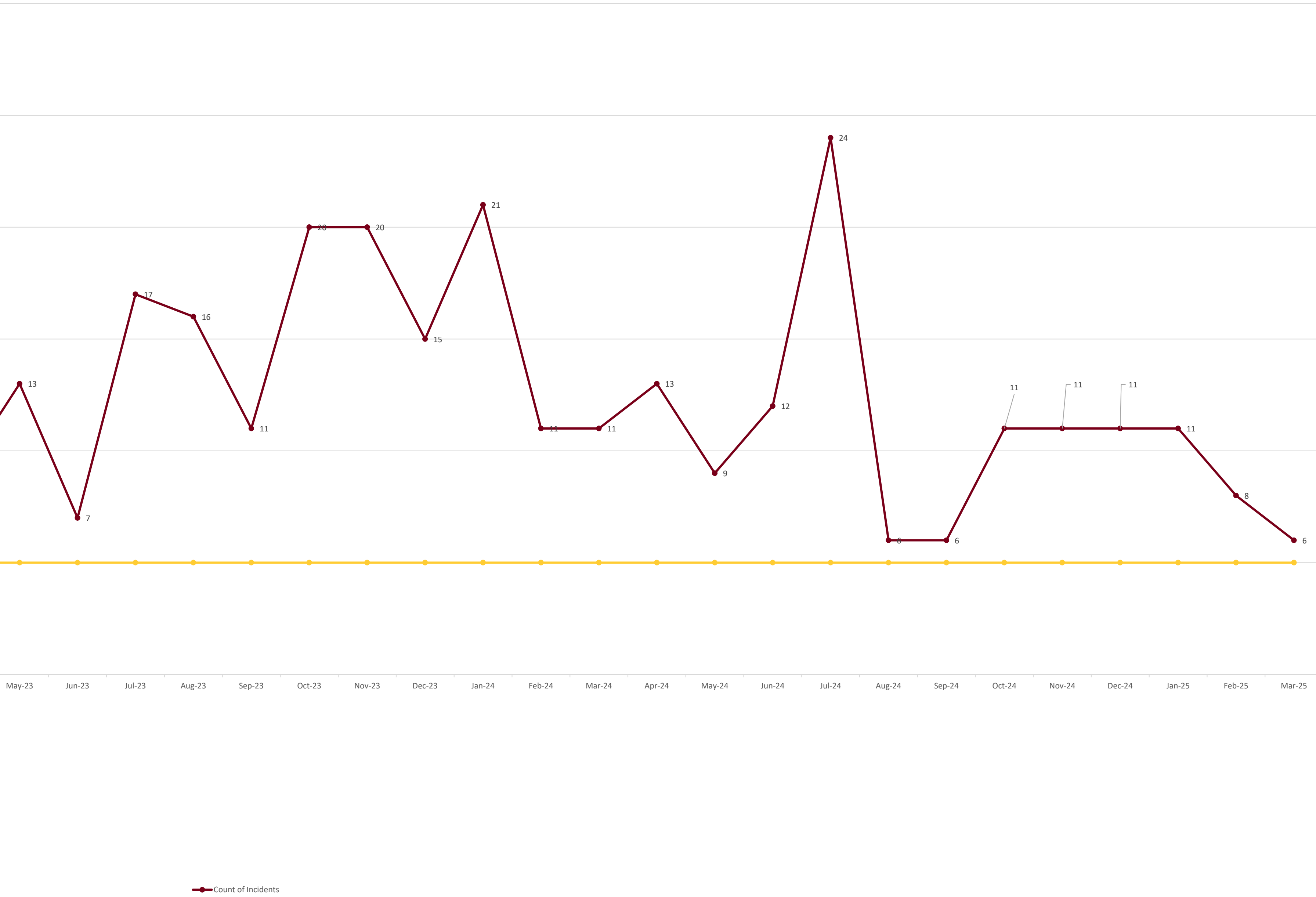


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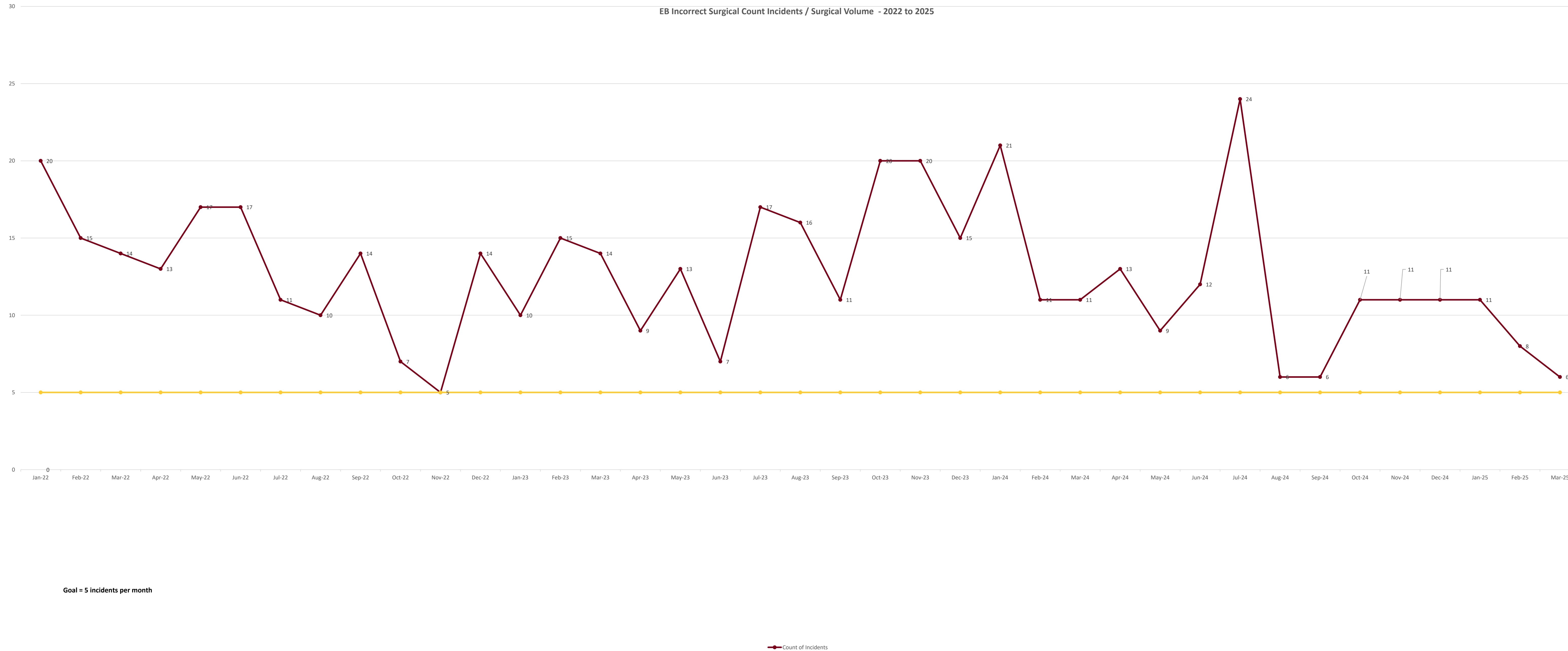


Incorrect Count by Year Starting in 2022

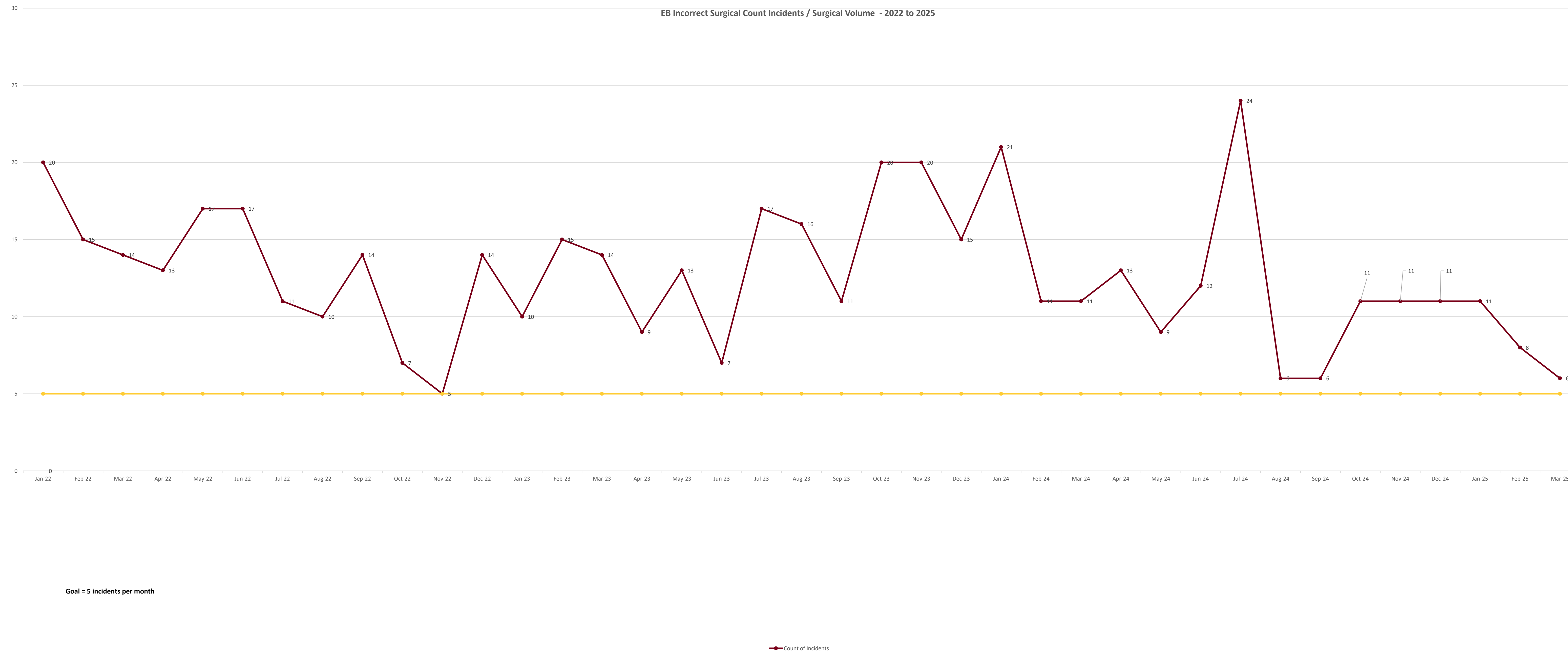
EB Incorrect Surgical Count Incidents / Surgical Volume - 2022 to 2025



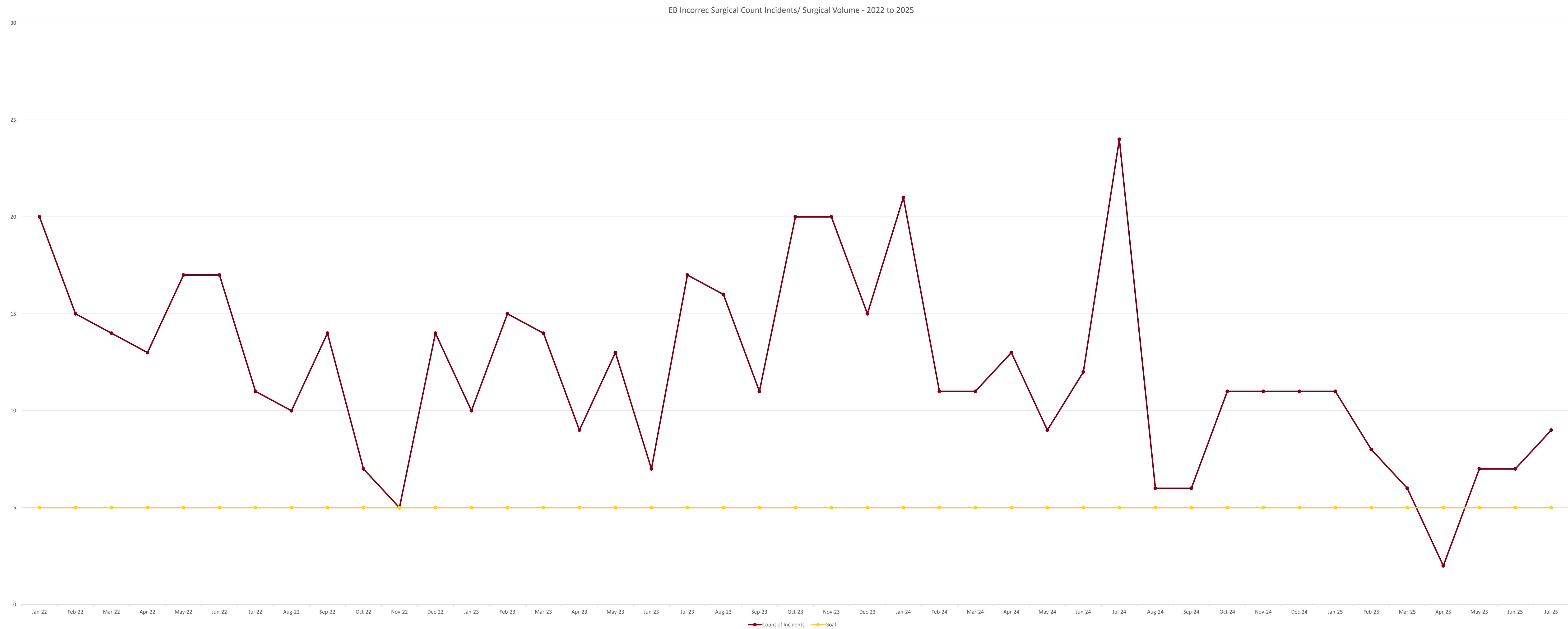
Incorrect Count by Year Starting in 2022



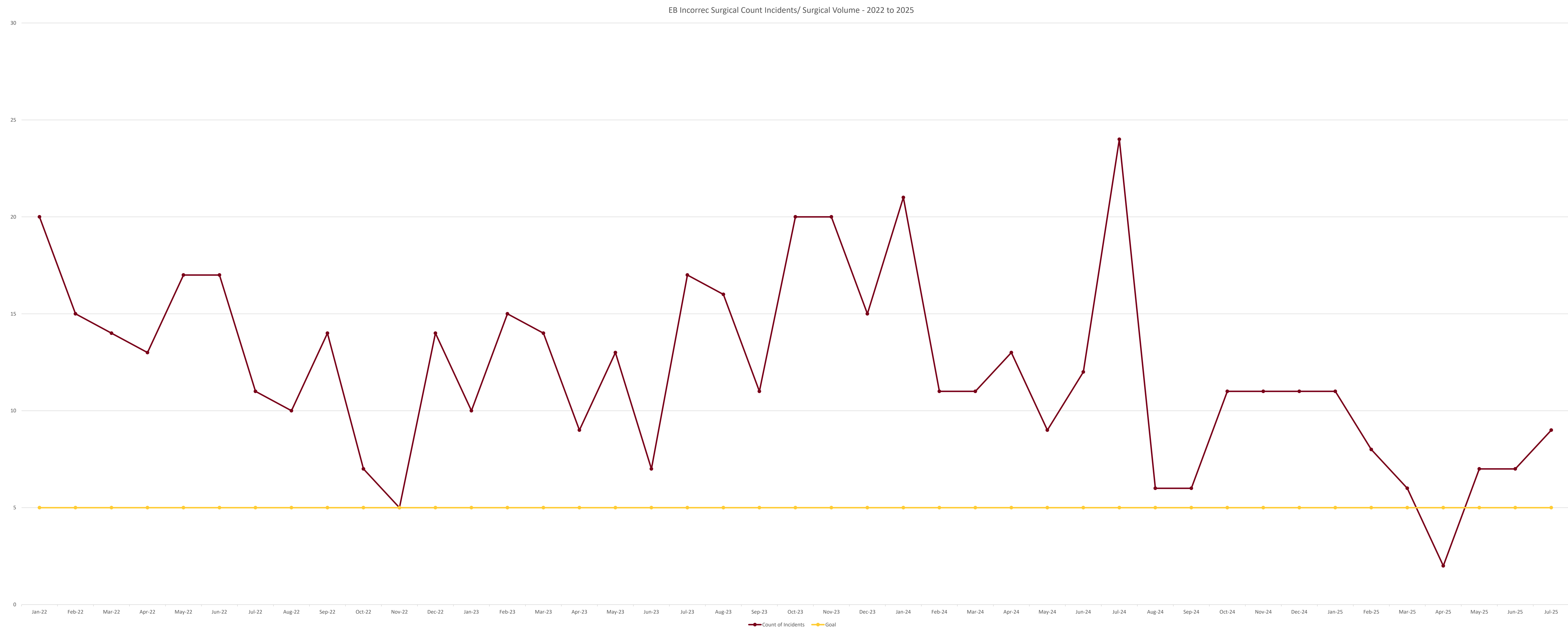
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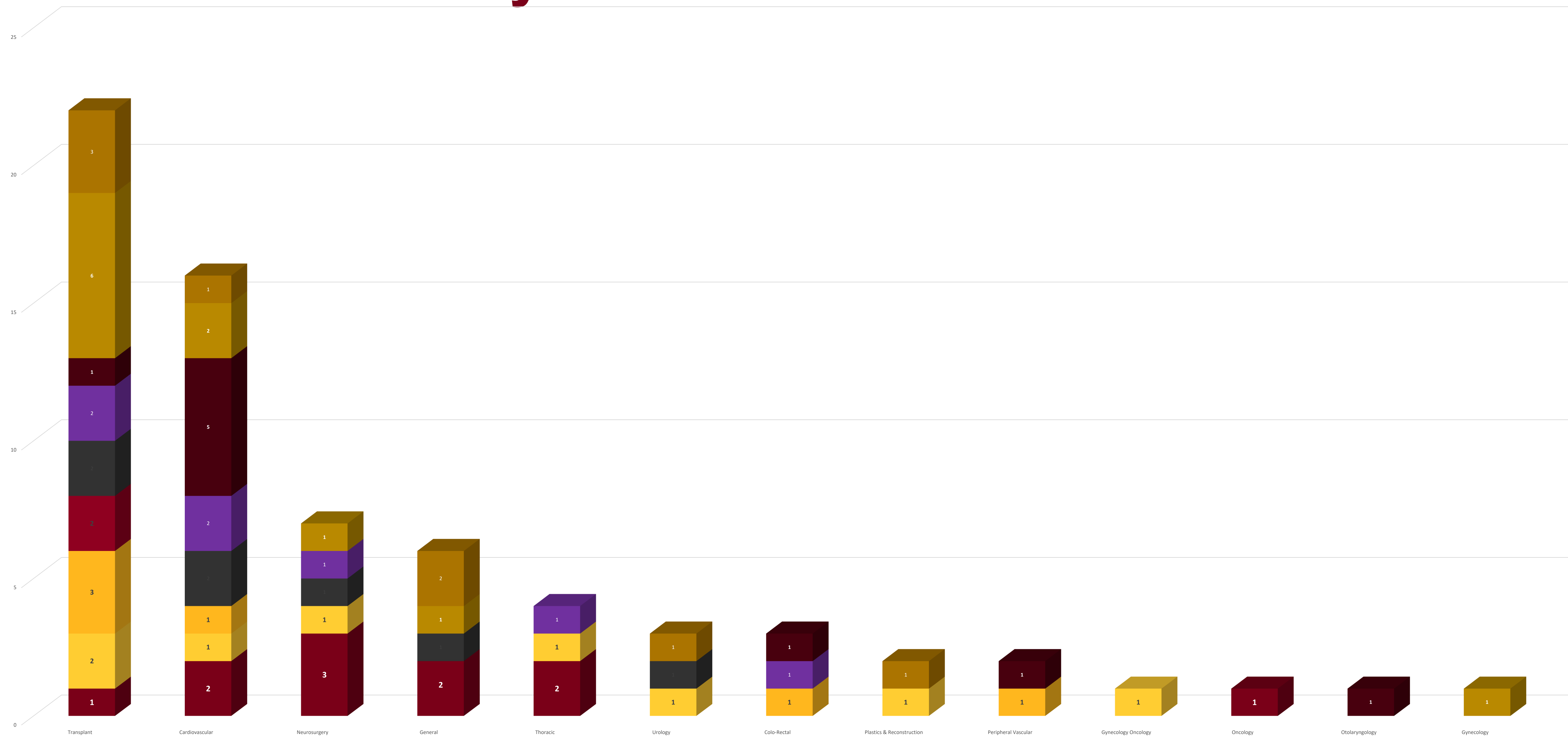
Average Incorrect Count Per Day



Average Incorrect Count Per Day



Incorrect Count by Service Service - 2025



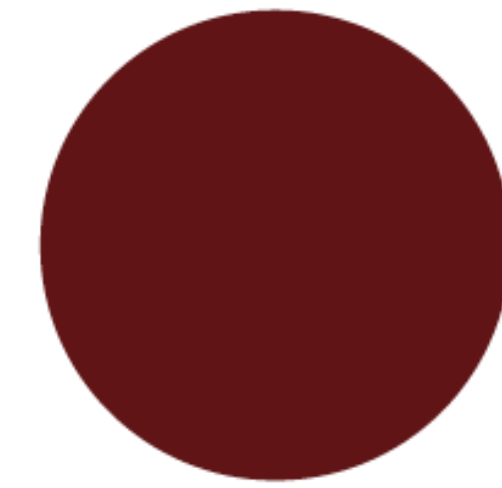
Theme Colors (from M Health Fairview Brand Standard guides):

VISUAL IDENTITY 1.5

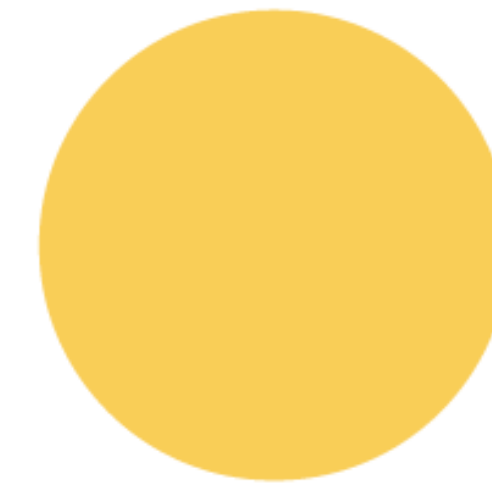
COLOR: DIGITAL

35

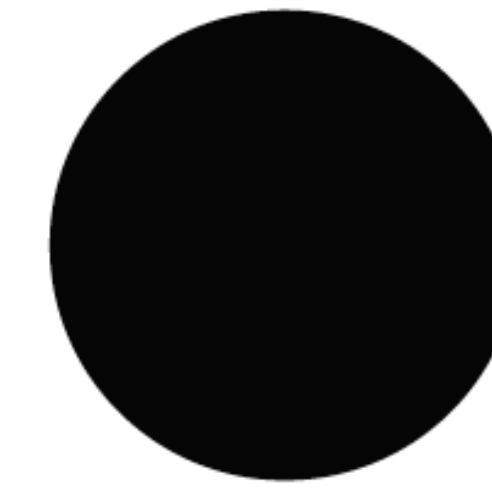
The official maroon, or gold, or both should be the primary colors used for any digital or video communication.



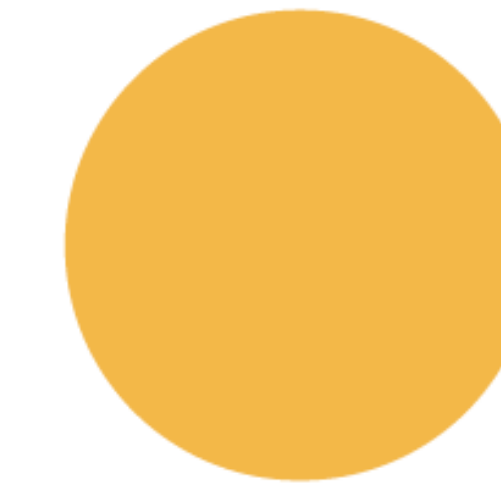
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HEX 6A0910



GOLD (OFFICIAL UMN)
RGB 255 204 051
HEX FFCC33



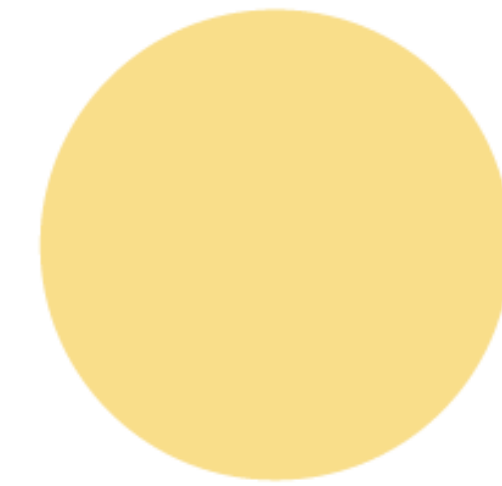
BLACK
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HEX 000000



DARK GOLD
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HEX FFB71E

MHFV APP

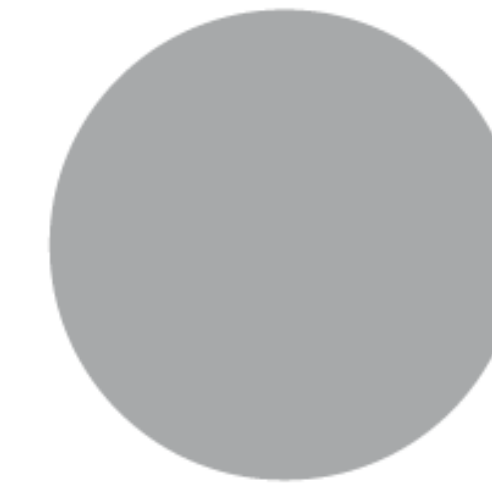
The official maroon is slightly different. Please use the break below in app communication. The remaining colors are the same.



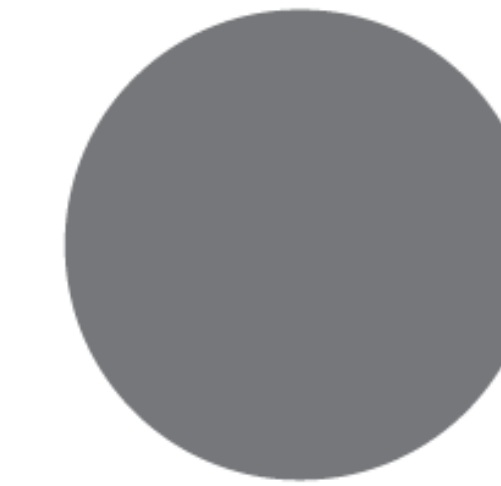
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HEX FFDE7A



LIGHT GRAY
RGB 208 211 212
HEX D0D3D4



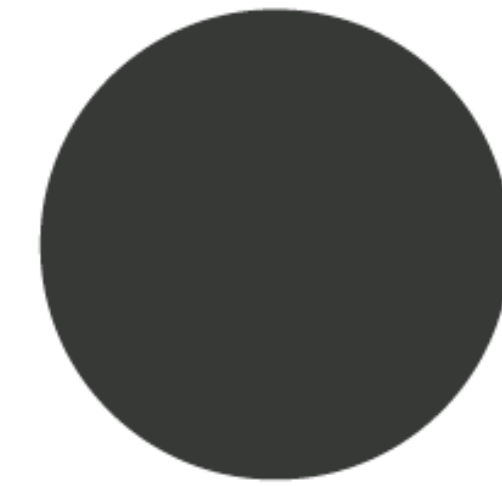
MEDIUM GRAY
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HEX A7A8AA



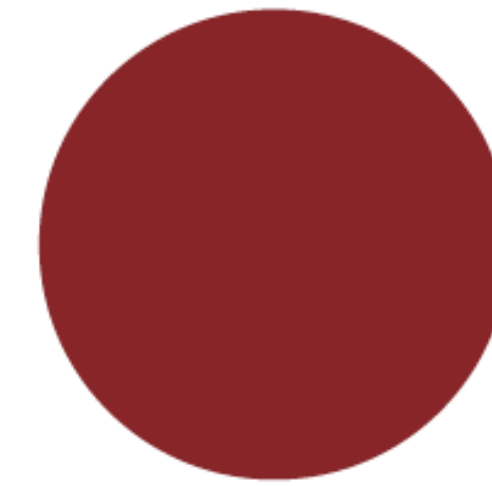
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HEX 75787B

MAROON (OFFICIAL UMN)

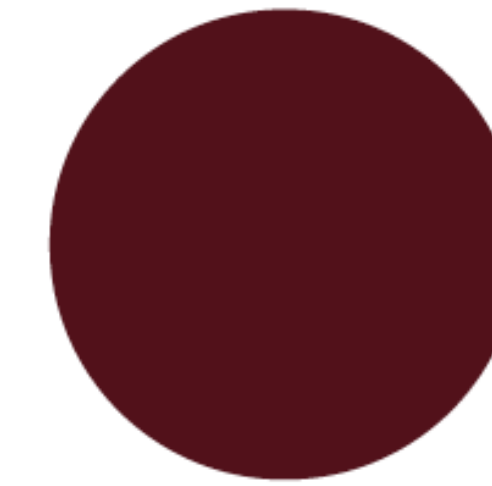
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HEX 7A0019



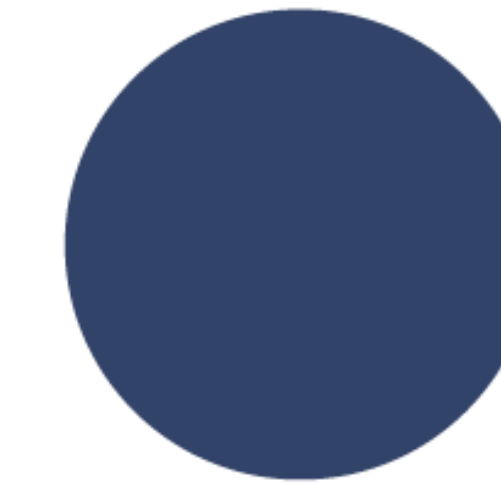
DARKER GREY
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HEX 373A36



LIGHT MAROON
RGB 144 000 033
HEX 900021



DARK MAROON
RGB 091 000 019
HEX 5B0013



BLUE
RGB 046 066 107
HEX 2E426B