



augment**OR**[™] Portal

From Data to Decisions: The Role of Surgical Dashboards

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01 Introduction

Dashboards have become an integral part of our daily lives in everything from health and wellness to financial management, to tracking social media engagement - which underscores their significance in providing real-time insights and facilitating daily decision making. Consider, for instance, the fitness tracker on our smartphones which gives immediate access to performance metrics such as heart rate, duration, and environmental conditions impacting efficiency. Much like in other areas, the ability to monitor performance metrics and discern influential variables is critical in healthcare. Dashboards in this context serve multifaceted roles, with a primary emphasis on enhancing hospital operational efficiency and elevating the quality of care delivered.¹ Per a recent survey, 100% of respondents believe that intra-operative digital solutions provided by Asensus Surgical will support surgeon decision making.² While these digital solutions will be used intra-operatively, it can also be useful to see metrics of how these digital tools were used during the procedure to further refine surgical techniques. However, access to these capabilities remains a challenge leaving the potential for augmenting decision-making processes largely untapped. Thus, there is a compelling imperative to extend the utility of dashboards from a focus on hospital efficiency and cost metrics to encompass surgical workflows, thereby fostering enhanced surgical decision support mechanisms and ultimately improving patient outcomes.

With the importance of analytics clearly top of mind for surgeons, access to these critical data sets is becoming increasingly more important to ensure the evolution of surgical data is keeping up with technology and big data. Surgeons are increasingly reliant on these datasets to inform and refine their practice. Therefore, the seamless integration of cutting-edge technology and expansive data is not merely desirable but imperative for the continued advancement and refinement of surgical techniques, ultimately contributing to improved patient care and outcomes.⁴

87.5%

of surgeons believe post-operative analytics will drive better clinical outcomes and/or better efficiencies in the OR.³

However,

76%

of surgeons have no experience with other surgical robotic systems and their clinical analytical dashboards or websites.²

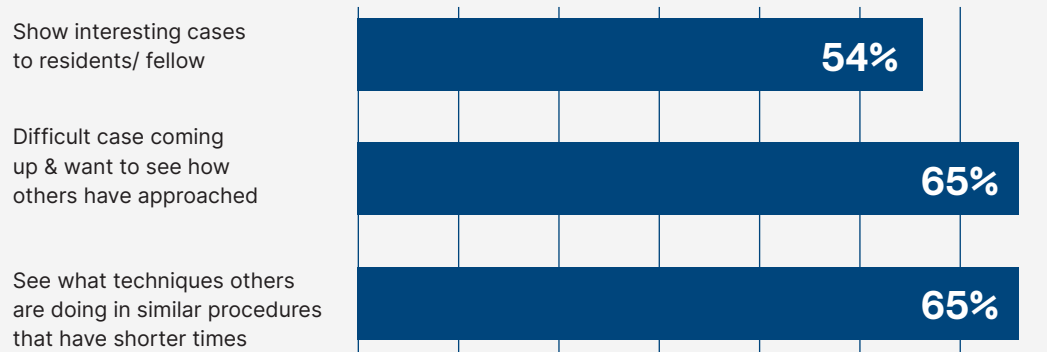
02 A Collaborative Need

The concept of dashboards and big data is not new to healthcare. Typically, hospital dashboards focus on efficiency, cost, and outcomes for the hospital. These metrics are often generated from patient records. However, beyond the confines of the EHR, industry partners are now actively gathering data across these categories with a view specific to the surgeon. Yet, while many companies provide data in these categories, a critical question persists: how do these isolated data points truly empower surgeons to enhance their practice?

Surgeons generally have a keen interest not only in harnessing post-operative analytics but also in fostering collaborative learning environments. Recent survey findings support the idea that surgeons prioritize collaborative endeavors and knowledge-sharing over individualistic pursuits when leveraging intra-operative data.² By championing collaboration as a cornerstone principle, a surgeon-centric dashboard for intra-operative data can serve as a catalyst for interdisciplinary dialogue, facilitating continuous learning and enhancing surgical performance across the board.

An observation from surgical congresses suggest there is a growing consensus that surgeons want tools to either make their jobs easier or improve patient outcomes.⁵ In addition, insights currently being offered can feel overwhelming to many as there is a key distinction between “data overload” and providing the right data at the right time to a surgeon.⁵ Many tools offered today are focused on video insights and/or skills training, leaving an opportunity to address a critical surgeon need.⁵

Per a recent survey, the majority of respondents report the following top 3 reasons they would use data²:

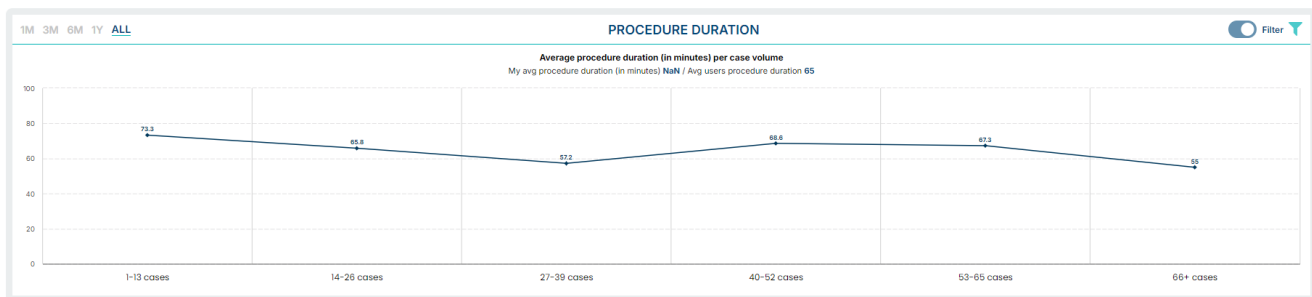


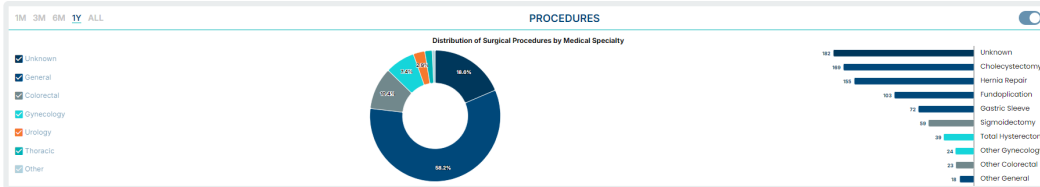
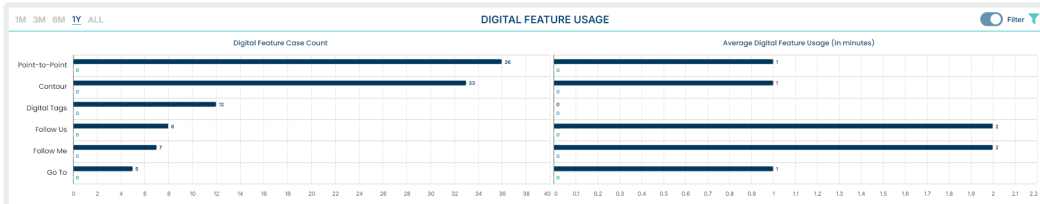
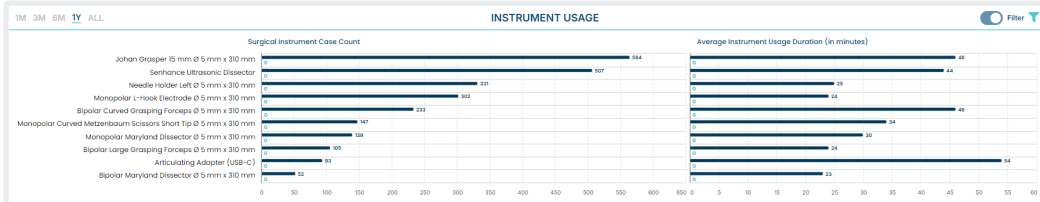
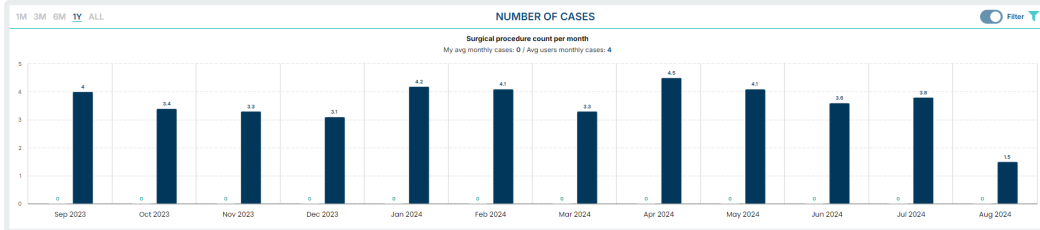
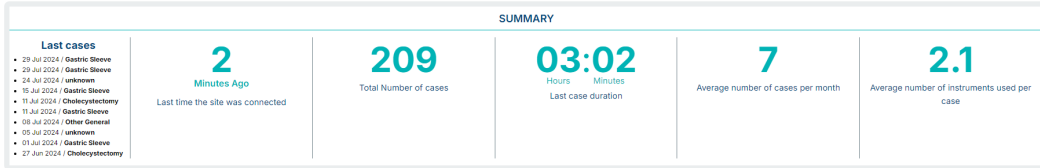
“The most effective dashboards of today allow a surgeon to quickly identify trends in their personal practice as well as draw comparisons to colleagues, whether at the institutional or national level.”⁶

With the availability of the augmentOR™ Portal, Asensus is expanding a portfolio of real-time intra-operative digital capabilities to further drive its pioneering role in the future of ‘digital surgery’. With this latest addition, Asensus is providing analytical insights from intra-operative surgical data collected from the ISU™ (Intelligent Surgical Unit) addressing the rising interest in surgical innovation, enhanced precision from digital techniques, and improved post-operative care via pre-surgical planning.

The augmentOR™ Portal allows surgeons to view historical cases in an unprecedented way. Many insights can be gleaned from comparing a surgeon’s own data to overall user averages including instrument usage, digital tool utilization, case duration, and average case volumes.

Diving deeper into their own surgical cases, surgeons can quickly review recorded videos and see a unique timeline noting where key instruments or digital tools were used.





Of the respondents, at least half agreed the following are the top use cases for an analytical dashboard²

Early feedback on the augmentOR™ Portal demonstrates this dashboard can potentially fill the need to have access to post-operative feedback on their surgical workflows and techniques.

Optimize workflow to improve efficiency

Pre-operatively prepare by viewing other surgeon's cases to see something comparable (for upcoming challenging cases and to understand how they prepared for their case)

Review complex cases to improve own technique with post-operative analytics

Homepage > Cases > [Case ID]

Case Info

Date & Time: [Time]

Session Duration: **02:01:12**

Case Duration: **00:26:10**

Hospital: [Name]

Surgeon: [Name]

Procedure: **Unknown**

Labels: **No labels**

Summary: [Text]

ISU info:
VM21AS014220 (ver2.7.5.17)

Camera:
 Stryker Advanced Imaging 5mm Endoscope Adapter

Digital features:
 Smart Zoom (23)

Warnings:

Instruments:
 Senhance Ultrasonic Dissector,
 Bipolar Maryland Dissector Ø 5 mm x 310 mm

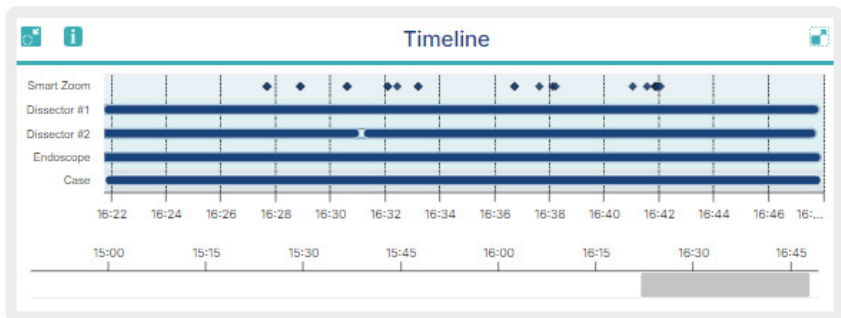
User Action:
 Camera Connected, Mode2D, Login,
 Left Handle Assigned, Right Handle Assigned,
 Logout

Video

0:00 / 26:10

16:21:44.mp4

Download Video



04 Conclusion

In conclusion, the integration of advanced digital technologies such as the augmentOR™ Portal marks a pivotal advancement in surgical practice, poised to enhance patient outcomes and make surgeons' lives easier. By harnessing intra-operative data analytics, surgeons are empowered with unprecedented insights into their performance metrics. This not only addresses the pressing need for improved decision support in a surgical setting, but also fosters a collaborative environment where continuous learning and innovation thrive.

05 References

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06 About Asensus

Asensus Surgical, Inc. and our amazing 200+ team members in 12 countries are committed to developing technology that helps surgeons deliver life-changing patient care with better outcomes for all.

For so long, the industry has focused on incremental advancements in robotic equipment; innovations that bring speed, dexterity, and a clear view of what's in front of us to do surgery. Augmented Intelligence goes further by giving surgeons a sense of what's around the corner. And as a surgeon builds on their digital legacy, our technology only gets smarter, ensuring that every surgery that follows will be, too.

Asensus Surgical is revolutionizing surgery with the first intra-operative Augmented Intelligence technology approved for use in operating rooms around the world. Recognized as an award-winning leader in digital technology, Asensus is committed to making surgery more accessible and predictable while delivering consistently superior outcomes. The company's novel approach to digitizing laparoscopy has led to system placements globally. Led by engineers, medical professionals, and industry luminaries, Asensus is powered by human ingenuity and driven by collaboration. To learn more about the Senhance® Surgical System and the new LUNA™ System, visit www.asensus.com.

Please visit www.asensus.com/indications-for-use or contact your local representative for information about your area.



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