

# eBook

Six must haves for early detection of patient deterioration

A smart  
**Alarm Management**  
solution

Enhancing patient care and safety





## Introduction

**Improved patient outcomes.** Increased patient and nurse satisfaction. **Reduced costs for all.** With the goals of the Quadruple Aim so clear, why is solving them so complex?

**350** alarms per patient per day

At Ascom, we build innovative technology solutions to help hospitals simplify the complex and connect the human and technical processes that elevate quality of patient care and safety.

**Whether it's providing tools in support of reducing alarm fatigue and cognitive burden or helping healthcare providers do more with less, we deliver the right information to the right person at the right time, from anywhere in the healthcare ecosystem, with the Ascom Healthcare Platform. We're already doing this at thousands of hospitals around the world.**

### Why smarter alarm management?

Did you know a nurse can experience more than 350 alarms per patient per day?<sup>1</sup> Distinguishing between what's actionable and inactionable can be daunting. Now consider if a hospital has 100 nurses and each of those nurses encounters just three five-minute work interruptions per day. It adds up to a staggering 9,125 hours of lost productivity per year—the equivalent to more than four staff positions.<sup>1</sup>

This comes at a time when U.S. federal authorities are projecting a nursing shortfall of 63,720 full-time RNs in 2030.<sup>2</sup> Add to this challenge an experience-complexity gap. Older nurses with more tenure are retiring and leaving the profession while younger, less experienced ones are coming in, and they're coming in to care for sicker patients. There's a clear need for better ways to manage patient care – to make it more efficient, predictive and personalized.

**Learn how we can help you in this eBook's essentials of smart alarm management.**



# 1.

## Highly configurable

From the start, Ascom's team of clinicians works with you to collect data and evaluate your workflows. Our team of clinicians has expertise across all areas of the hospital, from pediatrics to ICU to telemetry and general care.

**We configure alarm expression rules that not only reduce alarm fatigue but recognize patient deterioration and avoid adverse events.**

Our partnership allows us to recommend and design clinical workflows that strive to support your objectives around response times, falls reductions, care delivery optimization, etc. We configure alarm expression rules that not only reduce alarm fatigue but recognize patient deterioration and avoid adverse events. Since we're a trusted advisor at more than 2,000 acute care hospitals in North America, we're well versed on clinical best practices, from small, critical access hospitals to large health systems with multiple sites.

Reliable, trusted experts. We're with you throughout your technology implementation, and we'll continually work with you to improve your workflows as your goals and needs change.





## 2.

### Single pane of glass for actionable insights

Our smarter alarm manager solution aggregates vital parameters in an intuitive and user friendly way. We create a single pane of glass that leverages integrated analytics. By aggregating vital signs data across siloed devices to provide a centralized view, we transform disparate data into actionable insights. View data centrally on intuitive dashboards and/or deliver data to a variety of endpoints, including mobile devices.

**By integrating analytics to detect potential patient deterioration, you can respond earlier.**

By integrating analytics to detect potential patient deterioration, you can respond earlier. This system of action monitors output from patients' connected medical devices in near real-time, complementing the EHR as a system of record. Leverage reporting and analytics on the metrics that matter most and combine it with the power of our clinical team's consulting insights to create an action plan for clinical efficiencies.

### 3.

## Vendor neutral medical device integration

Our industry leading and ever expanding device integration library provides medical device integration across a vast portfolio of medical and ancillary devices. Our platform architecture integrates with hundreds of medical devices including monitors, ventilators, ECG, blood pressure, etc.



We meet you where you are in your digital transformation journey. That means giving you the flexibility to continue leveraging your current technologies while providing a path to meet your future needs. Being vendor agnostic, Ascom makes it easy to bring smart alarming and alerting to your nursing operations. We can enable smart alarming and alerting or provide you with a full clinical workflow management solution, from intelligent software and mobile devices to clinical surveillance and nurse call systems.



### 4.

## Strict security & compliance standards

Regulations help keep patients safe and their information secure. Our portfolio is Medical Device Certified under MDR and Cleared under the FDA and has full compliance with 60601-1-8:2020 and 80001-2-5:2014.

We ensure our entire portfolio is protected against cybersecurity vulnerabilities and meets all requirements set forth by local data protection regulations (e.g. HIPAA and GDPR). We're compliant with standards such as IEC/TR 80001-2-2 as best practice cybersecurity frameworks for industry. We also implement controls throughout the product lifecycle, including development and delivery to ensure the best possible protection against vulnerabilities. Ascom follows "privacy by design" and "privacy by default" practices to ensure the receipt, storage, transmission or display of all private data is secure.

To meet cybersecurity requirements within U.S. government environments, we've completed security assessment and organizational compliance with the National Institute of Standards and Technologies' Federal Information Processing Standards (FIPS) and the Department of Defense Risk Management Framework (RMF).

To ensure our cryptographic module meets government protocols required to support secure wireless communication in the Veterans Affairs and Department of Defense healthcare facilities, we achieved FIPS 140-3 certification under the Cryptographic Module Validation Program (CMVP).



A major California hospital **reduced alarm flood** for caregivers after implementing Ascom's smarter alarm manager solution.

The hospital **used configured alert filtering** rules designed to send only clinically relevant information to caregivers.

## 5.

### Part of clinical collaboration & communication solutions

For customers who already have Ascom nurse call and/or mobility solutions, enhancing your capabilities with Ascom's smarter alarm management is the next step to elevating your clinical workflows.

This also holds true for non-Ascom customers who'd like to leverage our smart alarming and alerting capabilities with their existing medical devices and infrastructure (including nurse call).

[Read the case study](#)

## Results

**32% reduction** in alarm messages sent to caregivers through basic filtering rules.

**38% further reduction** in alarm notification messages achievable by using 10 second delay filter.





## 6.

### Proven ROI

Ascom worked with Hobson & Company, a research firm focused on Return on Investment (ROI) studies, to quantify the operational and business benefits that can be realized with an alarm management solution.

We offer an ROI calculator that takes your unique inputs into account to assess the expected impact of implementing an Ascom smarter alarm manager solution. We've found many customers report investment payback in as little as 18 months.<sup>3</sup>

In the study, customers found that an Ascom solution addressed their challenges and delivered measurable results and a strong return on investment.

### Driving ROI. The business case for an alarm management/patient safety solution<sup>3</sup>

#### Customers reported the potential for:



**20% REDUCTION** in the number of alarms that require response



**40% REDUCTION** in time spent on alarm data collection and analysis



**10% REDUCTION** in preventable codes / patient deteriorations and patient falls



## Experience the Ascom difference

Adopting a smarter alarm manager solution can help elevate the quality of care and safety for patients as hospitals and health systems embrace digital transformation. While traditional alarm and alert management systems cover the basics, like filtering and escalation, we add an intelligent layer of clinical surveillance that truly makes a difference in reducing cognitive burden and alarm fatigue.

**Need more  
information?**

Check out our [Buying Guide](#) to help you evaluate solutions.

In this eBook,  
we've explored **six  
important areas** that  
matter when choosing  
an alarming and  
alerting solution.

1. **Highly configurable**
2. **Single pane of glass for actionable insights**
3. **Vendor neutral medical device integration**
4. **Strict security and compliance standards**
5. **Part of clinical collaboration and communication solutions**
6. **Proven ROI**

## Are you ready to experience the Ascom difference?

**Book a demo**, either virtually or in-person, at our Ascom Center of Excellence to see our smarter alarm manager solution first hand and understand how it can enhance your workflows.

[Book Online](#)

### Endnotes

1 Mitigating alarm fatigue and improving clinical productivity – the role of intelligent middleware in delivering efficient care. Ascom whitepaper. 2018.

2 HRSA Health Workforce. Nurse Workforce Projections, 2020-2035. November 2022. <https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/Nursing-Workforce-Projections-Factsheet.pdf>

3 Driving ROI. The Business Case for an Alarm Management/Patient Safety Solution, Hobson & Company, 2021. <https://www.ascom.com/north-america/news/resources/the-business-case-for-early-warning-scoring-and-predictive-analytics-solution-white-paper/>



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**About Ascom**

Ascom is a global solutions provider focused on healthcare ICT and mobile workflow solutions. The vision of Ascom is to close digital information gaps allowing for the best possible decisions – anytime and anywhere. Ascom's mission is to provide mission-critical, real-time solutions for highly mobile, ad hoc, and time-sensitive environments. Ascom uses its unique product and solutions portfolio and software architecture capabilities to devise integration and mobilization solutions that provide truly smooth, complete and efficient workflows for healthcare as well as for industry and retail sectors.

Ascom is headquartered in Baar (Switzerland), has operating businesses in 18 countries and employs around 1,300 people worldwide. Ascom registered shares (ASCN) are listed on the SIX Swiss Exchange in Zurich. For more information, visit [www.ascom.us](http://www.ascom.us) and follow [@AscomAmericas](https://twitter.com/AscomAmericas) and [LinkedIn](https://www.linkedin.com/company/ascom).