

Digistat® Smart Central

Centralized device surveillance



Visibility in healthcare

Visibility in healthcare settings is fundamental because it has a direct impact on many factors, including communication, teamwork and patient overviews.

It's preferable to maintain constant visual connection with the patient, because this functionality provides important contextual information, such as body language, when assessing patients.

There's a particular challenge to maintain visibility when the distance increases between colleagues and patients, for example, in instances where a patient comes from an open ward, to a single patient room.

In this scenario, patient visibility will be diminished but the overall caregiver's responsibility for looking after the patient will remain the same.

Enhancing visibility of patient conditions

Digistat® Smart Central enhances situational awareness in an ICU unit by providing an holistic view of the medical devices associated with patients, such as infusion pumps, patient monitors and ventilators, with a simple, user-friendly design.

Digistat® Smart Central provides an overview of the status of devices highlighting alarms and/or warnings occurring on any connected device, ensuring caregivers are informed at a glance about the situation on the ward.

Digistat® Smart Central supports caregivers to effectively manage the information and warnings from medical devices, enabling better management of alarm management workflows.



Digistat® Smart Central

- Can be installed on multiple workstations, in hallways and at central nursing stations to provide a visual overview of all the devices, updated in near-real-time
- Provides an insight for multiple beds on a single screen
- Provides support for device alarm management via alarms displayed in three different colours to reflect the priority (blue:low, yellow:medium, red:high)
- Assist with planning nursing staff workflows
- Assists with improving alarm event management and, in some cases, even prevents alarms, which reduces “acoustic stress” for patients and staff
- Tracks alarms, setting changes and other device-related information, providing nurses and doctors with a comprehensive picture of the situation
- The main screen dashboard provides a complete overview of occupied beds, enabling it to be used as a management platform for bed space availability

Comprehensive overviews from multiple systems

Nursing staff can use Digistat® Smart Central to view the status of various devices to verify that they are connected and transmitting data and events. Events include alarms as well as technical or clinical events, such as bolus in an infusion pump.

Digistat® Smart Central also enables nursing staff to plan their workflow based on the information displayed. Clinicians can review the history of patient events, tracking changes to device settings and alarms.

Biomedical engineers can verify a device's connection, gain insight about the data acquisition and identify technical alarms to evaluate maintenance needs.

Digistat® Smart Central provides a

comprehensive display of data and events from medical devices integrated to the system. In addition, this information is updated in near real time to provide timely device status data.

Every workstation with Digistat® Smart Central can be customized to display relevant patient data for a particular department.

Digistat® Smart Central features an intuitive user interface which operates without a keyboard or mouse.

This aspect makes the system ideal for mounting in corridors and even placing in out-of-reach positions. An audio signal, which alerts the incidence of new events in the department, is also an available option. Displayed notifications can also be generated by an embedded clinical decision support system (CDSS) which combines inputs from multiple devices or systems. For example, a high RR combined with Low SPO2 can trigger a potential Covid-19 alert for investigation by caregivers.¹



Enabling mobile workflows with Smart Central Mobile

One major benefit of enabling mobile access to patient data stems from the fact that information moves much more efficiently. Care providers are empowered to work using improved dynamic workflows because they have patient data at their fingertips.

Digistat® Smart Central Mobile is a mobile application designed to transfer Smart Central capabilities directly “into the hands” of clinicians. Clinicians using the application have

visibility on to connected medical device data and can view this information in near real-time. The application creates a comprehensive picture of the patient's physiological data and alarm conditions, consolidating information from various medical devices in an easy-to-navigate app. Medical device status is presented both visually and by sound, to keep caregivers informed about their patients.

(1) Sutton RT, Pincock D, Baumgart DC, Sadowski DC, Fedorak RN, Kroeker KI. An overview of clinical decision support systems: benefits, risks, and strategies for success. NPJ Digit Med. 2020;3:17. Published 2020 Feb 6. doi:10.1038/s41746-020-0221-y



Enhancing patient dashboards using waveforms

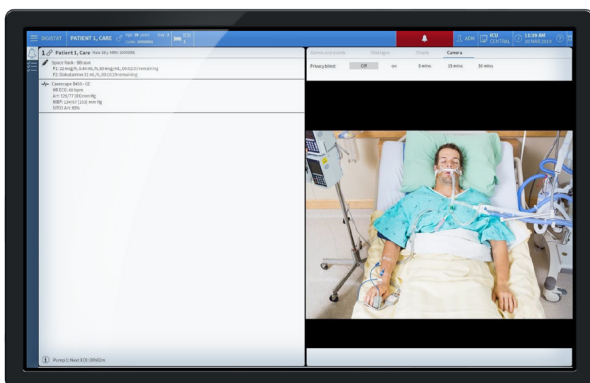
Visual information, including waveforms, provide caregivers with a better understanding of the patient condition and produce accurate contextual data which helps them to evaluate alarms.

Smart Central can display waveforms collected from medical devices either in near real time, or as snapshots synchronized with alarms. Waveforms can be displayed both in dashboard or mobile view to help support the workflows of caregivers.

The capability to view waveforms when away from the unit in near real time helps to streamline patient care whenever coordination with colleagues is required, to evaluate a patient's condition and decide on the best course of action. The automatic capture and syncing of waveforms snapshots with events helps to provide valuable context to alerts, which supports alarm management workflow.



Smart central live waveforms view



Smart central live webcam view

Supporting video streams

Live video footage of a patient provides additional support when monitoring his or her condition because it generates information which is not always visible within clinical data. Digistat® Smart Central can be configured to support the provision of video stream via a webcam. This functionality enables visual monitoring of the patient area, so that when an alarm condition occurs, the images for each patient can provide important contextual information. Caregivers and clinicians gain a complete view of the situation, with video views enabled via desktop and mobile.

Supporting vital parameter collection for units with no EMR

For units with no EMR solution, data collection is normally performed manually from multiple screens and cognitively applied to the individual patient situation to give clinical context. This process tends to be time-consuming and labor-intensive and can directly impact care quality. For instance, a critical care patient can be connected to 3 or 4 medical devices that generate over 2,000 distinct data points per day.

Digistat® Smart Central enables the capacity to view all connected medical devices status in one central dashboard, resulting in streamlined data collection, even retrospectively.

Clinical Decision Support System stays in your control

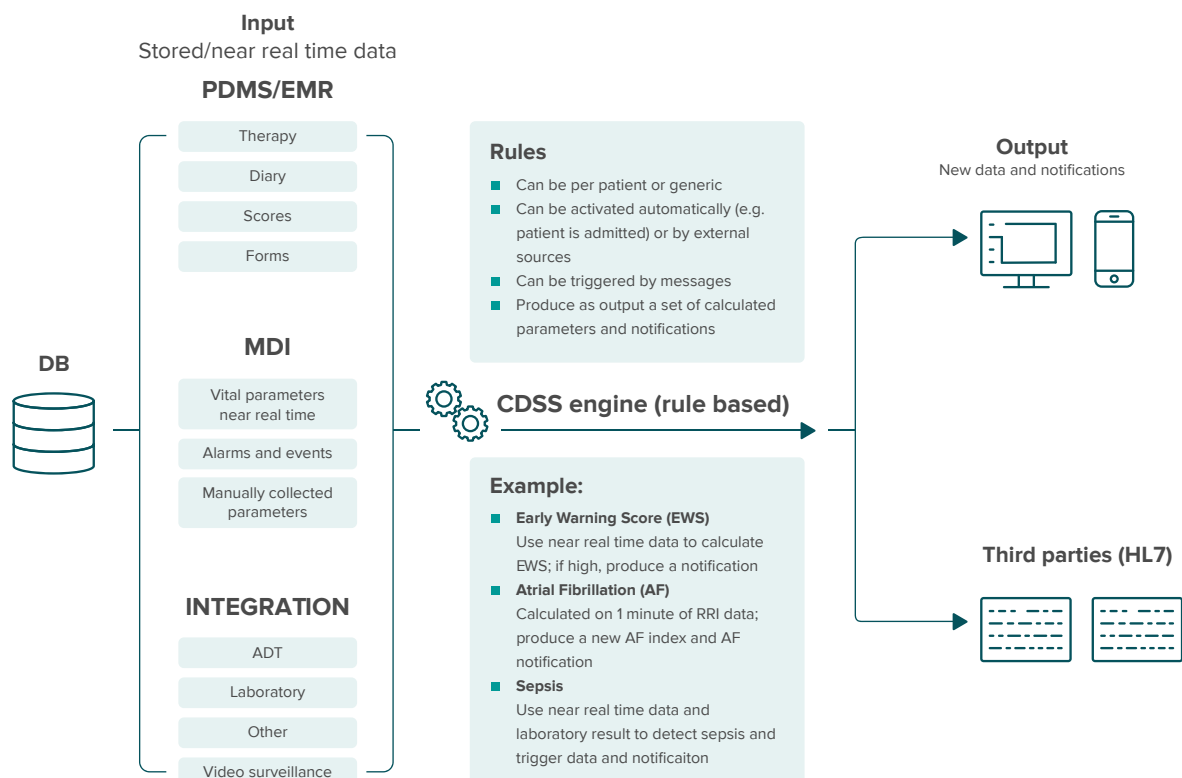
Collecting information from different sources and combining specific factors are key factors when making the right clinical decisions about therapy plans and supporting patient care.

The implementation of a clinical decision support system (CDSS) puts in place best practice rules across various information streams, to help guide the care decision-making process so that the risk of a patient seriously deteriorating is reduced. To support these clinical needs, Digistat embeds a powerful CDSS engine which allows the configuration of a logical rule using a state-of-the-art programming language. Using online vital parameters, laboratory data or any other patient record information, configured rules enable clinicians to automatically calculate new parameters or indicators related to changes in the conditions of patients. These calculations trigger notifications that are displayed in Smart Central or directly redirected to the mobile platform, depending on the set care workflows.

Smart Central is enhancing the usage of CDSS engines because it enables clinicians to directly control the Digistat CDSS using the following features:

- Enable/Disable rules per patient: some rules can be on by default, while others can be switched on depending on a patient's general condition and the needs of clinicians
- Add thresholds per parameter, or change thresholds for existing scores, used for notification
- Create rules based on literature-supported algorithm or based on local studies
- Customize rule settings per patient: rules can be tailored on a patient basis, so that they are more effective and reduce the number of unnecessary notifications

CDSS workflow



Trend Analysis and Statistical Dashboard

Digistat® Smart Central can provide a detailed picture of a patient's overall clinical condition, supporting the activities and streamlining the workflows of health care staff.

Access to historical data and trends

Vital signs for each patient are categorized and can be filtered for different time ranges. The data can be displayed both in graphical trends and tables. These resources can be helpful for clinicians, enabling them to easily retrieve data and trends which have occurred over time. Smart Central provides the flexibility to consider different timespans and multiple or single device data. The filter feature gives clinicians the ability to remove irrelevant information, so they can just focus on what's most relevant. The use of this feature is dependent on a clinician's judgement, with him or her deciding what relevant data to include for each patient.



Statistical Dashboard

Digistat® Smart Central logs events collected from medical devices. By storing all medical device data, including alerts and events in the system, the application supports the generation of statistical dashboards. This functionality means alarms and events can be evaluated, either by patient, or holistically, over a given time period. These comprehensive dashboards help identify when and where nuisance alarms are occurring and assess support workflow changes to eliminate these alarms. Regular review of dashboards helps to reduce the overall number of alarms on the ward, which can aim in reducing both sound stress and alarm fatigue.



About Digistat®

Digistat® Suite is the clinical information system developed by Ascom to manage patient data in different areas (e.g. Intensive Care Units, Operating Rooms, etc.).

It is a medical device according to local legislation, depending on modules used. The solution may not be available in a particular country or region as subject to regulatory clearance.

Please check with Ascom UMS or your local Ascom representative, for the availability of the solution in your market and for detailed technical specifications or compatibility restrictions. Specifications are subject to change without notice.

Digistat Smart Central and Smart Central Mobile are specific solutions of Digistat® Suite.

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 subsidiaries in 15 countries and employs around 1,300 people worldwide. Ascom registered shares (ASCN) are listed on the SIX Swiss Exchange in Zurich.

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