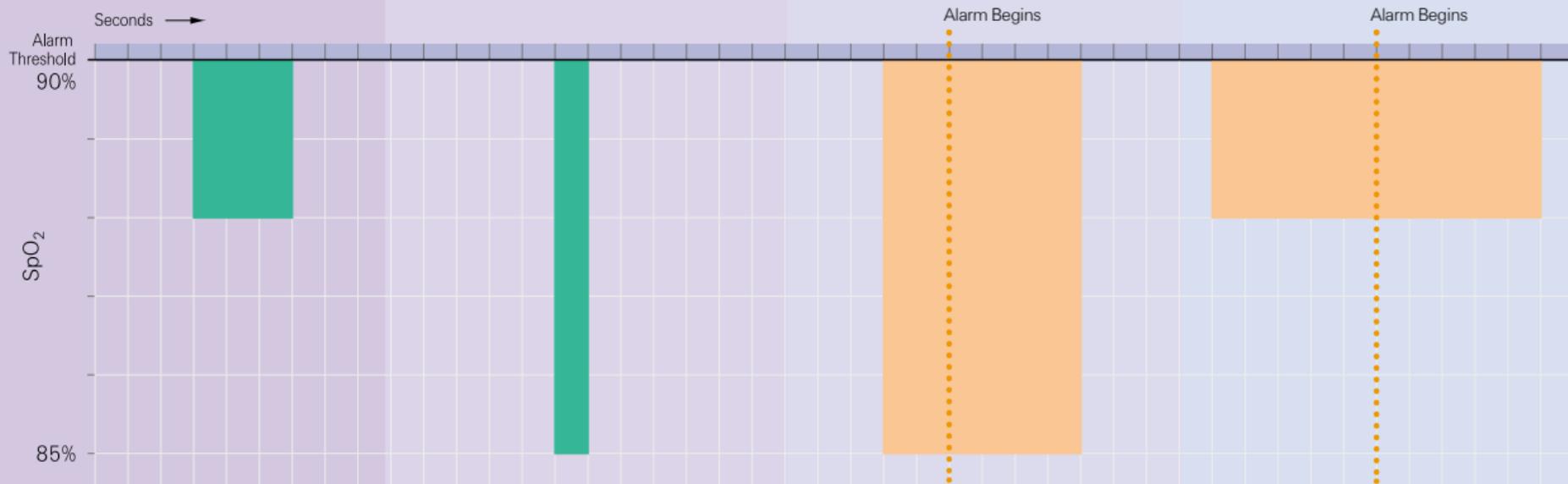
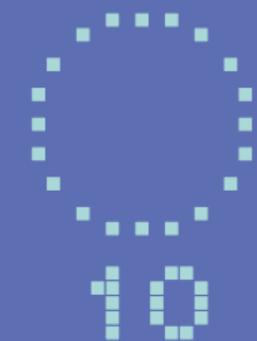


SATSECONDS™ ALARM MANAGEMENT

Let's take a look at some patient scenarios in which the pulse oximeter's low SpO₂ alarm is set at 90% and the *SatSeconds* "clock" is set to 10.



2-point drop in SpO₂
x 3 seconds

6 SatSeconds
No alarm.



5-point drop in SpO₂
x 1 second

5 SatSeconds
No alarm.



5-point drop in SpO₂
x 6 seconds

30 SatSeconds
Alarm sounds in 2 seconds.



2-point drop in SpO₂
x 10 seconds

20 SatSeconds
Alarm sounds in 5 seconds.



Bar D represents a desaturation only 2 points below the alarm limit, but that lasts for 10 seconds. The alarm is triggered in 5 seconds, because 2 x 5 equals 10 *SatSeconds*.

CONCLUSION

By distinguishing clinically insignificant events from events of consequence, the Nellcor *SatSeconds* feature provides a smarter way to manage alarms. Without the *SatSeconds* feature, the minor and brief desaturations depicted in bars A and B would result in nuisance alarms. However, even with *SatSeconds* set at the lowest level (10), nuisance alarms are avoided in both instances.

Clinicians may not want to miss the desaturation events depicted in bars C and D. Bar C shows a fairly deep desaturation, and the alarm is triggered in two seconds. Bar D could be a patient hovering near the alarm limit for some time, and if the SpO₂ alarm limit had been lowered to 85%, clinicians would miss this condition.

Bar C shows a desaturation 5 points below the alarm limit that lasts 6 seconds. An alarm is triggered 2 seconds into the desaturation, because 5×2 equals 10 *SatSeconds*.

Bar B shows a desaturation 5 points below the alarm threshold that lasts only 1 second. This event equals 5 *SatSeconds* (5×1). Again, an alarm is not triggered.

Bar A represents a desaturation 2 points below the alarm threshold that lasts 3 seconds. Therefore this event equals 6 *SatSeconds* (2×3), which does not trigger an alarm, because the *SatSeconds* limit was set to 10.

False or nuisance alarms are a common concern with pulse oximetry monitoring. Nuisance alarms are often triggered by minor and brief desaturation events that are clinically insignificant. Clinicians tend to manage these alarms by ignoring them, turning off the alarms or monitor, or widening the alarm limits. Nellcor's *SatSeconds*™ Alarm Management feature offers a better way to manage nuisance alarms without sacrificing patient safety.

The *SatSeconds* function can be activated by selecting a *SatSeconds* limit, or "clock," of 10, 25, 50 or 100 *SatSeconds*. Clinicians who choose to employ the *SatSeconds* function should select a limit suited to their clinical environment and patient conditions. Think of *SatSeconds* as the product of magnitude and time a patient exceeds SpO₂ alarm limits. For example, 3 points below the alarm limit for 10 seconds equals 30 *SatSeconds*. An alarm is only triggered if a desaturation event occurs that reaches the *SatSeconds* limit you selected. As a safety net, when three or more SpO₂ alarm violations occur within 60 seconds, an alarm will sound even if the *SatSeconds* limit has not been reached.

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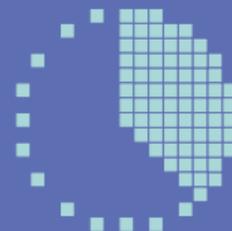
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SATSECONDS™

ALARM MANAGEMENT

An effective tool
for controlling
pulse oximetry
nuisance alarms



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