Surgical Safety Checklist

Eliminates major and minor operating errors

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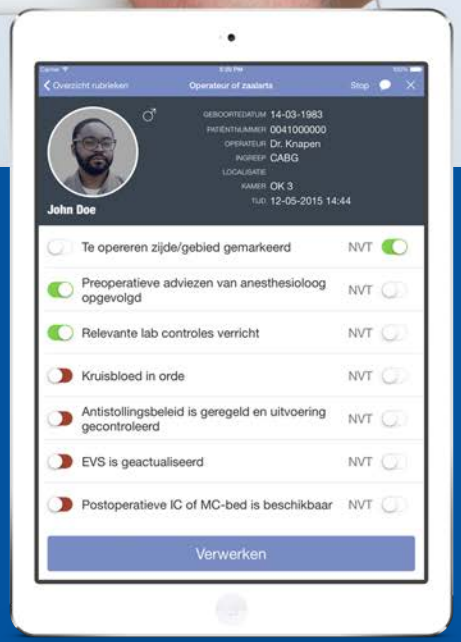

“Incidents in more than 50% of hospitals avoided thanks to checklist in surgery rooms.”
(Belga, May 2014)

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Failsafe digital control from check-in to waking up after anaesthesia and discharge from hospital

A surgical operation is never without risk. However, a lot more can be done to avoid mistakes, human errors or poor communication. Research conducted by the University of Hasselt has even revealed that only 17 percent of Flemish hospitals use the full surgical safety checklist drawn up by the World Health Organisation (WHO). The WHO checklist is a recommended list featuring a number of parameters to be checked before, during and after the operation. Hospitals now have their own checklists that are not always the same and, above all, not always observed as they should be.

The Mitch&Mates Surgical Safety Checklist is a digital, user-friendly and crystal-clear application that checks each step in the process and defines the responsibility of each individual user. If any steps are skipped or if checks are not carried out or forgotten, then the warning lights will flash. There is also a ‘stop moment’, in order to intervene or justify any deviations.

Error-prone paper versus hard data

That makes a world of difference compared to the current working method that often involves non-standardised, “paper-based” checks before, during and after the operation. Steps are not followed as recommended or even skipped. In short, the procedure is hugely prone to error.

However, according to the statistics, medical errors are seldom due to the ability of surgeons but to the process and lack of communication.

Doctors and health care providers stand to benefit from the fact that the Surgical Safety Checklist provides for well-defined responsibilities, as the Checklist gives executives a complete overview of all logs, from A to Z.

> “Errors relating to mixing up left and right, the identification of the patient, the available equipment or the counting of compresses are just a few examples of incidents that were avoided by using the checklist.”
>
> (Federal Government Department of Health, May 2014)

> “The Surgical Safety Checklist has been tested in a pilot study in various places around the world; the study showed a reduction in complications and mortality rate of more than 30%.”
>
> (New England Journal of Medicine, January 2009)

An application that will save human lives

Current operating procedures involve a considerable number of risks. A lack of supervision means that checklists may be incomplete, incorrectly filled in or not at all. How verifiable is the authenticity of a signature or initials? How does hospital management supervise the process?

As it is done in Belgium or in the Netherlands?

The WHO recommendations are limited to the three stages that take place within the walls of the operating room: just before the induction of anaesthesia (sign-in), before the incision of the skin (time-out) and before the patient leaves the operating room (sign-out).

This is also the current modus operandi in Belgium – the compulsory checks are limited to these three stages. What’s more, as already mentioned, this limited protocol is correctly followed in fewer than one in five hospitals.

The Netherlands goes one step further, however. In Dutch hospitals it is also mandatory to carry out a series of checks from the time of the patient’s admission to the department concerned until just before discharge after the operation.

The Mitch&Mates Surgical Safety Checklist (SSCL) can easily be used in Belgium, and therefore limited to the operating rooms, or extended to be used in the Netherlands. In Belgium there are 3 check moments, in the Netherlands, 11. With the SSCL, Belgian hospitals would be able to opt for the checks to be extended beyond the operating rooms.

> “Research tells us that compliance – i.e. ticking off and thus carrying out the key checks – varies between 45% and 96%... individual items are ticked off, but not actually checked or carried out…”
> (University of Hasselt, July 2015)

> “The average fill-in percentage (Belgium) for each of the three sections of the WHO checklist amounts to 77%, 53% and 46% respectively.”
> (Federal Government Department of Health, August 2012)

Winning on three fronts with SSCL

That patient safety will improve, is undisputed. The resulting benefits for the caregiver requires a lot more explanation.

Ticking off checks on the SSCL is faster than working with paper-based methods. In the Netherlands, when admitting the patient or at the beginning of the operation, the patient's details are scanned with a mobile device by the nursing staff, instantly creating the SSCL for that patient.

Ticking off checks also means putting a tick or a cross in a checkbox. That task is done within the different sections of the SSCL (sign-in, time out, etc.). The check marks in a section are then validated once by one or more supervisors using their badge.

Link to EPR/HIS

The SSCL is linked to the Electronic Patient Record (EPR) and to the Hospital Information System (HIS), resulting in the availability of the relevant patient and surgery details for the SSCL application. On the other hand, recorded data and process data are entered in a logical place in the EPR.

Moreover, the status of the SSCL is available in real-time and can be followed with the aid of agreed indicators in the OK overview.

Other important patient-specific matters can also be displayed in the SSCL via that link. The patient has a latex allergy, for example. Or there is an MRSA infection…

Winning on three fronts, you said?

> This checklist is not intended to be comprehensive. Additions and modifications to fit local practices are encouraged."

> A medical error is a culpable failing by the caregiver. For example, he has not carried out certain prescribed treatments and has made insufficient effort to prevent damage"
>
> (Flemish Patient Platform)

The hospital management can also win

As mentioned above, the SSCL provides intermediate validation moments. If, during such an interim validation, a check has not been performed or is negative, the entire operative process will be put on hold and a 'stop moment' created.

The procedure can only continue if that stop moment is 'overruled' or unblocked (i.e. the stop moment is not removed). To unblock the stop moment, the physician or the supervising member of staff must give a reason. Thereafter, responsibility can no longer be shuffled around.

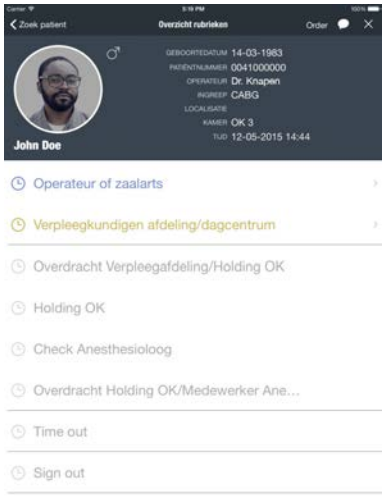
The SSCL gives insight

The SSCL gives a clear view of who does what. All data is logged and can be displayed in real-time through a web-based application (SSCL dashboard). In this way, the user of the dashboard can inquire how many checklists were launched for a certain period (today, last week, last month, etc.) and monitor how many stop moments were generated at any stage in the process...

The SSCL also offers the possibility of exporting data and distilling policy information from it. The checklist thus provides the basis for data mining and may be an important instrument for an internal hospital quality monitoring.

The Checklist in detail

A Checklist contains a series of sections. Each section covers a clearly-defined phase in the treatment, so to speak. As illustrated above, in the Netherlands this can range from the patient's admission to the department concerned and all stages in between to the patient's discharge; or in the Belgian situation remain limited to the three check points in the operating room: sign-in just before anaesthesia, time-out before the first incision and sign-out when the patient is ready to leave the operating room.



Sections

Each section consists of a number of questions or checks to be ticked off. This can be done by one of the people concerned. However, after going through the checks, the section also has to be validated. This is done by each person concerned in the section. For example, in the operating theatre a nurse can go over and verify the extensive list of ticks and validation will be performed by both this nurse and the surgeon, the anaesthetist and other people involved.

A caregiver who logs in, selects a patient and then a scheduled operation. The SSCL that is started in this way is linked to that particular operation. There can be only one SSCL active for each patient. When the patient is selected again, regardless of caregiver, place or device, the same checklist will appear.

Each caregiver who selects this patient will see one or more sections. These sections have a logical sequence. Some items can be opened and edited in parallel, some can only be opened if previous ones have been completed.

Validation

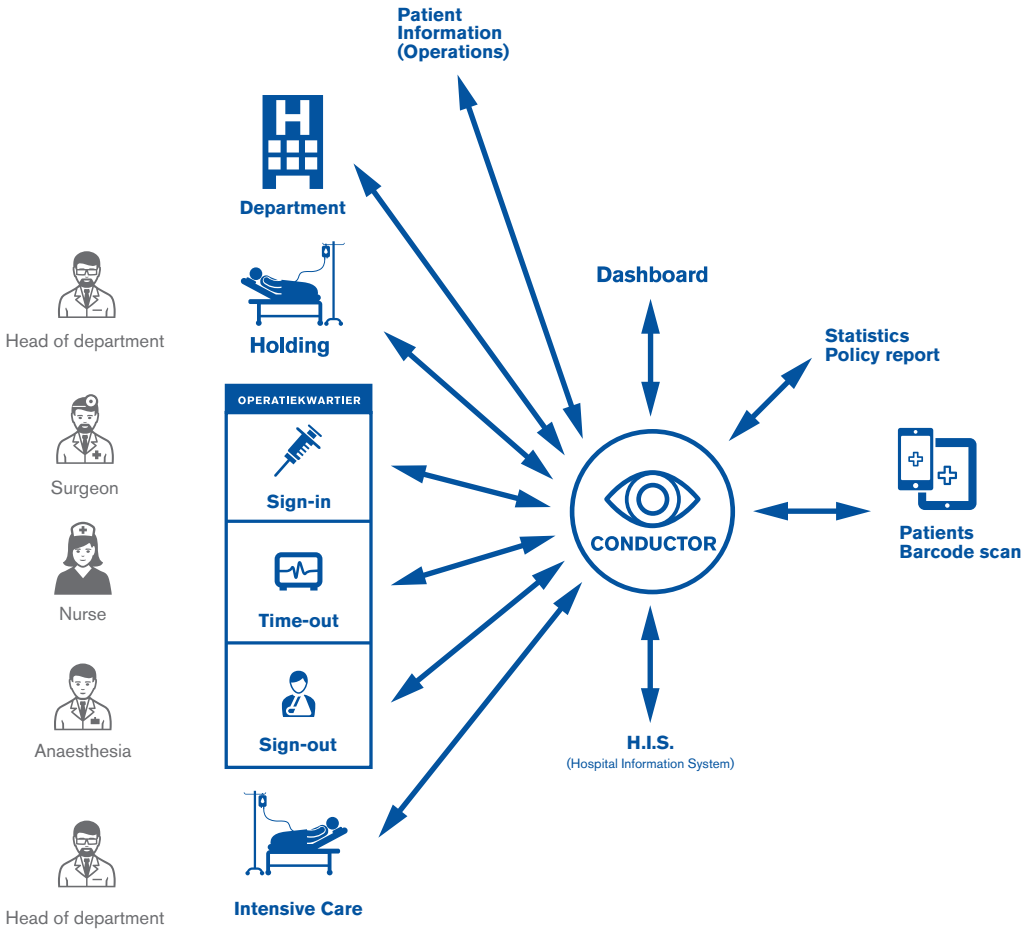
The checks in those sections are ticked off by clicking on rounded checkboxes – typical rounded iOS checkboxes – on a screen. Once all boxes have been ticked off the section can be edited – by clicking on 'Edit' below.

The following screen shows the list of those responsible. They must click on their role and scan their badge to validate. (third print screen)

Stop moments

If a tick is missing, then the whole process will be put on hold and the doctor or responsible health care professional has to state a reason in order to continue.

There is also a second type of stop moment – namely, a manual stop or 'freeze'. It may be necessary to interrupt the operative process in the event of a sudden incident such as heavy fever, a haemorrhage, … In order to carry on with the operation – 'unfreeze' – a reason must be specified as well.



“The conductor makes the difference”

As with other products from Mitch&Mates, the SSCL builds on the basic solution for patient and care information: the Conductor.

Relevant patient information – such as the aforementioned latex allergy – and newly-entered information in the SSCL of each patient are available in real-time via the Conductor. It is a conductor that orchestrates data and data flows.

Meet the Conductor

The Conductor – as shown in the diagram – is the intermediate machine, the skin between the Electronic Patient Record (EPR) and the Hospital Information System (HIS). The Conductor retrieves information from and provides information to systems according to IHE standards.

No replacement, but a supplement

You don’t need to replace your current IT solutions. The Conductor works on the basis of the prevailing communications standards and protocols in the healthcare sector. The interface speaks your language. This allows you to keep your trusted way of working but increases the efficiency of your data flows and processes.

Sustainable and complementary solution

With the Conductor we implement a bespoke system without you falling into the trap of IT customisation. Because our solutions are complementary to your existing systems. But also because you can smoothly maintain additional changes yourself.

This way you will not have to depend on Mitch&Mates for your further developments. If there is a change to an existing IT solution, then the Conductor will carry on doing its work.

Mitch&Mates
healthcare is our domain

Mitch&Mates is 100% Belgian and specialises in systems for the healthcare sector. Owners Yannic Sterken and Filip Bollen have many years of experience in Hospital Information Systems and Electronic Patient Records. That information is now being injected into the Mitch&Mates systems thanks to its 15 in-house IT experts.

Their vision: the integration of technology makes healthcare accessible and affordable for everyone. This will eventually lead to the ultimate comfort for patients and the best return on investment for all healthcare providers.

Their mission: be part of an evolution that leads to a revolution in healthcare IT. And that through systems that break down internal and external barriers, involve patients and referrers in the provision of information and regulate data traffic in a logical way between the back office and front office.

More information: **www.mitchandmates.com**

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MORE INFO?

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