Digital Quality Management System

The internal business case

Contents

Introduction

This e-book serves as guidance for writing an internal business case for the purchase of a quality management system.

Is your organisation about to transition from a paper-based to a digital workplace? Or does the organisation already have a digital quality management system, but wants to replace it? In both cases it is advisable to develop a business case.

The business case describes the purpose of the project and provides insight into costs and benefits. A clear business case ensures involvement and improves the chances of successful implementation.

Why a quality management system?

When purchasing a quality management system, it is important to understand why the organisation needs such a system.

Most health and welfare institutions have designed processes to guarantee and improve quality and safety. However, in many organisations responsibility is divided between different parts of the organisation; between different departments; between different staff members.

When responsibility is divided between different parts of the organisation, the organisation has an insufficient clear view of where the risks lie. A digital quality management system provides the tools to identify the risks within the institution *and* to address them in a holistic manner. Activities are managed centrally, so the organisation knows what actions are taken, when, and by whom.

What is a quality management system?

Determine the definition of a quality management system together, so that it is clear what the organisation understands by a quality management system.

The quality management system forms part of an institution's overall management system and aims to improve patient safety, *and hence the quality of care.* This should ultimately lead to a maximum reduction of preventable errors in healthcare.

A quality management system combines methodologies to identify the risks within an institution. The following components are usually included:

- Retrospective risk analysis: "What went wrong?" Safe incident reporting and incident analysis.
- Prospective risk analysis: "What can go wrong?" Analysing care processes before an incident occurs. Care processes include all actions to be performed in order to meet a patient's healthcare needs, from the first contact with the healthcare facility until discharge.
- Complaints from patients, clients or their relatives
- OHS incidents
- Employee satisfaction
- Safety culture
- Improvement action tracking system

In order to define further objectives, it is worth considering what exactly has triggered the need.

What has triggered the need?

Since the end of the last century, there has been a greater focus on improving the safety of care. This was triggered by research into preventable hospital mortality. In order to find answers to improve the safety of care, other sectors, such as petrochemistry and aviation, were secretly observed.

For quite some time, Shell had already been using a system to manage safety within work processes. Shell was eager to share the experience gained, as the principles of safety management proved universal and deserved to be replicated in the healthcare sector. As a result, a safety management system (SMS) was developed for the care sector.

Advantages safety management system
- Tools to identify risks, implement improvements, establish policies
- Raising risk awareness within the organisation
- Management has insight into risks in healthcare
- Quality and safety are permanent agenda items

This allows managers of healthcare institutions to control the risks within the departments. There is a better perception of the number of preventable errors, which allows more determined action to seek improvements. This makes it possible to create a safer (work) environment for health professionals and patients.

Setting objectives

A quality management system may serve a wide range of objectives:

1. *Achieving organisational objectives*
   A quality management system forms part of an organisation's overall management system. Good, safe care is management's primary objective. The software shows where safety risks lie within the organisation. This knowledge allows management to take targeted decisions regarding risk priorities.

2. *Improving patient/client satisfaction*
   Preventable errors affect patients or clients. When special attention is paid to safety of care, patient satisfaction will increase. By being aware of preventable and unintentional errors in the care processes, specific measures can be taken to improve care, and thus patient safety and satisfaction.

3. *Cost management by reducing preventable errors*
   Preventable errors have an impact on a care institution's finances. Just think for example of the costs when a patient does not have an empty stomach when sent to theatre. At the first check-up, the patient is sent back. What are the costs of an entire surgical team doing nothing, as they have to wait for the next patient? By gaining insight into errors, costs can be reduced without having to implement any cutbacks.

4. *Increasing the organisation's effectiveness*
   Reported incidents give insight into the weak links within the organisation. Are there particular processes about which reports are received regularly? Analysing and subsequently improving these processes can increase the effectiveness immediately. A quality management system also contributes to process automation. This increases productivity. Tasks and responsibilities, relating to for example analysis and follow-up of incidents, are clear, as such matters are laid down in the quality management system.

5. *Improving customer service*
   When the effectiveness and safety are improved, the institution's customer service also improves. Assessments of reported incidents and complaints make clear which parts of the customer service can be improved.

6. *Improving the safety culture and risk awareness*
   A digital quality management system improves the safety culture. Incidents are no longer discussed behind closed doors, but are addressed in teams or committees. As a consequence, health professionals realise that it could have also happened to them. This increases risk awareness.

7. *Providing insight into performances at individual and team levels*
   Incident reports per department, team, process or individual provide insight into which parts of the organisation deserve greater attention. However, if most reports are received about a particular department, this does not necessarily always mean the safety of that department is below standard. It also says something about the culture and risk awareness of the department in question.

8. *Improving handling of complaints and reported incidents*
   The handling of complaints and incidents can be easily monitored through the quality management system. For each process step the system clearly shows what actions have been completed and what actions must still be carried out, when, and by whom. The tasks and responsibilities for each process step are also documented in the system.

Mapping the current situation

When purchasing the software it is advisable to assess the needs of the organisation. A proper baseline measurement shows where the organisation stands today, and what is required to improve the current situation.

There are a number of pillars that allow us to measure to what extent quality and safety are permanent items on management's agenda:

Who is responsible for quality within the organisation?

Attention to safety in care differs from institution to institution. In one organisation it is the quality officer's responsibility and in another it is everyone's responsibility. Safety is of course assured in daily work processes, and all healthcare professionals want to provide safe care, but the question is whether all are consciously pursuing it. When there is awareness throughout all layers of the organisation, safety has already become more integrated.

What is the current safety culture?

A healthcare institution's current safety culture can be measured by the safety ladder. The safety ladder recognises five different types of safety cultures (see picture). The higher the safety awareness in an organization, the higher the score on the safety ladder.

At the bottom of the safety ladder we find the pathological safety culture. Organisations that have a negative safety culture live in denial and don't want to waste their time with safety.

At the top of the ladder we find the generative culture, in which safety is an integral part of business operations.

In addition, the way safety is managed may differ from one department to another within an organisation. In the operating theatre, for example, there is likely to be more awareness of the importance of working safely than on a regular nursing ward or outpatient clinic.

Do you want to know how an organisation can climb up the safety ladder?
Please read the e-book on creating a safety culture in healthcare.

Does it contribute to operational objectives?

When it is agreed on an operational level to improve the quality of care, for example by reducing the number of serious incidents, a digital quality management system can support this. Objectives can be monitored by the use of management dashboards and periodic reports. This way, insight can be provided on the number of incidents (per department). Obviously, incidents can be identified per topic, like for example the number of falls.

Is the organisation able to structurally learn from incidents?

Many organisations have been reporting incidents for some time now. But how do you make an organisation learn from incidents? Many organisations still find this difficult.

A digital quality management system generally includes an improvement tracking system that supports the management of improvement projects. Improvement projects may be initiated in response to a specific incident, a trend, or a specific issue.

The system monitors tasks, actions and lead times, to ensure that ideas for improvement are actually implemented. This safeguards the PDCA cycle. It is difficult to achieve continuous improvement without a quality management system.

It is also important that incidents and improvement actions are shared internally with other teams or departments, so they can also learn from it and don't make the same mistakes. It makes the organisation aware of the risks within certain processes or departments.

A digital quality management system can be set up in such a way that incidents can easily be shared anonymously (without the names of those involved). Dashboards with notifications clearly show where the risks lie. Sharing these internally and showing them on screens in the staff restaurant or in the coffee room increases awareness among employees. This way you also give the message that incidents can be openly discussed. It facilitates discussion of incidents, thus creating a safe culture that focuses on learning from mistakes.

Do you want to learn how to enable a shift from recording incidents to optimising care processes?
Please read the Incident Management e-book.

Is the organisation able to learn proactively?

If a care institution only responds to incidents that are reported, the organisation is 'stuck' in the reactive behaviour step on the safety ladder. It is a good thing, of course, to initiate improvement actions to reduce the risk of recurrence, but if care institutions want to move up the safety ladder, they will have to proactively identify risks.

When multiple incidents are reported within a certain process, it is recommended to take a proactive approach and analyse the process prospectively. Weak links are identified and addressed ahead of time.

Safety becomes an integral part of business operations as soon as non-existent processes are already assessed for possible risks during the design stage, for example when opening a new department and initiating a new care process.

Parties concerned: who is affected by the change and what are the consequences?

When purchasing a digital quality management system it is advisable to check which professionals will be affected by changes as a result of the software. Set up a project team, so parties concerned from different disciplines can contribute their ideas regarding needs and wants with respect to the software. It promotes involvement during implementation and positively affects acceptance by the organisation.

Project team

Implementation of a digital quality management system affects all layers of the care institution. Therefor setting up a project team is an important first step. They name the bottlenecks of the current quality management system or paper-based method of working. This information can be translated into wants and needs with respect to the new system. At this point, decisions can also be made regarding various key positions and corresponding rights and responsibilities. In this chapter we will explain what will change for various key positions and possible consequences thereof.

Case

The quality manager wants to have insight into the number of incidents that are reported every year. The institution has already installed decentralised committees. A central committee is also in place.

When incidents were still reported on paper, she was under the impression that the number of reports per decentralised committee was too low. She always wondered if the numbers were correct. She noticed that not all questions on the report forms were answered. She also didn't know which improvement actions had been initiated and if they were safeguarded.
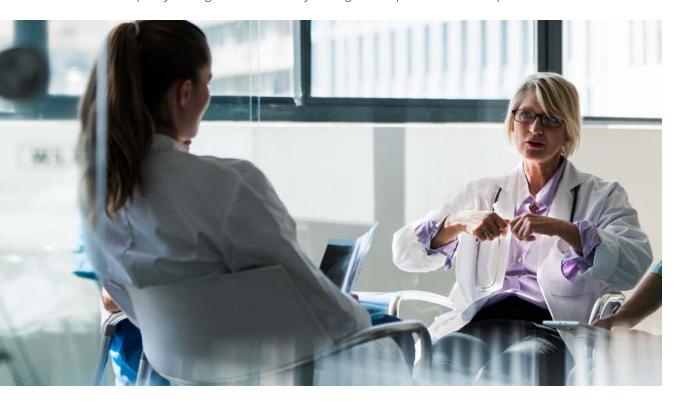
Now that reports are made digitally, she has much more control of the incident reporting process. The dashboards show the exact number of reports per team and per department. She can also see which safety topics require attention.

The improvement actions can be monitored up close, allowing her to make adjustments when necessary. An important indirect benefit to her is the fact that the reports can be shared anonymously with other departments, allowing other departments to learn from the incidents. This reduces the risk of recurrence and improves the safety of care.

Quality manager

The quality manager is usually responsible for internal accountability (towards management and supervisors) and external accountability for obtaining quality labels and accreditations. Without a digital system, a lot of time is wasted on gathering information from files from different staff members who bear the operational responsibility.

A digital quality management system allows the quality manager to immediately gain insight into the quality of care within the entire care institution. When incidents are consistently reported in the system, it not only provides an accurate picture of the weak links within the different departments, but also of the entire care processes and different safety issues. This enables the quality manager to immediately manage those processes that require attention.

Improvement projects from the entire organisation are recorded and centrally monitored in a digital improvement action tracking system. This allows the quality manager to gain a perception of the improvement plans drawn up by the departments themselves, their progress and the results achieved.

All reports (incidents, complaints, etc.) generate real-time management information. This is presented in the form of graphical dashboards and reports. By applying the filter function, the quality manager can check the current state of quality and safety per department, division or topic.

All in all we can say that a digital quality management system gives a quality manager more control over the quality and safety of the care institution and at the same time allows the manager to exert more influence.

Department head

The head of a care department does not need to assess each incident in terms of content. This can be left to the department's quality officer or the incident/safety committee. A quality management system, however, allows the department head to stay informed on the department's safety, as the management dashboards can be set up as desired. This provides the head with real-time information regarding safety issues that require attention within the department. The department head can generate periodic reports from these dashboards to provide feedback to management as to whether or not the quality and safety in his department are guaranteed. With a quick glance at the dashboard, the department head can respond directly to questions from the Board of Directors.

Healthcare providers

When healthcare providers (doctors, nurses/carers, paramedics) want to report an incident, they can do so digitally by submitting an online reporting form via desktop, tablet or telephone.

The notifier is informed proactively of the status of the report. For example, when the report is being processed and when an improvement project is being initiated.

As the notifier is kept informed of the status of the incident, (s)he feels taken seriously. This increases involvement and willingness to report, ultimately benefiting the safety in the care institution.

Board of Directors

The Board of Directors always has a clear perception of the state of affairs in the care facility through dashboards and reporting tools. Dashboards can be set up as desired, allowing the BoD real-time access to the required operational control information. It supports them in making informed choices with respect to quality and safety.

The quality management system can be set up in such a way that the BoD is immediately notified in the event of a calamity. This allows the organisation to respond quickly and take the right decisions.

Safety committee

The safety committee has the right to examine all reports. Roles and rights can be assigned to each committee member, for example depending on the severity of the incident.

In the past, incident analysis was mostly done on paper. This process will become much simpler for this committee, as they can now analyse the incidents from the quality management system, and through the system, initiate improvement actions and assign responsibilities for implementation.

As mentioned earlier, the notifier is actively informed about the status of the incident by the safety committee, which increases the visibility of the committee within the organisation.

ICT department

The digital quality management system can be offered from the cloud as Software as a Service (SaaS). Software updates will be automatically installed in the cloud. Updates, backups and performance are no longer subjects that require the ICT department's attention.

Security meets the highest standards and system monitoring, uptime and performance are the responsibility of the supplier 24/7 and are quickly adjusted in critical situations.

The quality management system is a total solution in which different components regarding quality and safety can be integrated. As a consequence, expensive, additional software packages become obsolete.

Application management is easy and can be handled by the Quality Department.

Implementation – How can you make your quality management system a success?

Implementation of a digital quality management system leads to a new way of working. This may hamper acceptance by employees. There are, however, a few steps/matters that will contribute to a successful implementation.

It is important that the software is introduced to the employees and its importance clearly communicated.

Involving employees in decision-making and sharing results and outcomes are key factors enhancing acceptance and use of the quality management software.

Project team

Setting up a project team is an important first step. The main stakeholders should form part of this team. They communicate on behalf of their colleagues and can share their ideas as to what requirements the software should meet. This is where commitment starts. When you do not set up a project team or if you do not do this rigorously enough, you already start at a disadvantage at the implementation stage.

We have already briefly mentioned the parties involved in the previous chapter. However, important participants in a project team are representatives of the medical and nursing staff.

Trainings

Committees are first introduced to the software when they are trained in the use of the software. During the training it is important to explain why the digital management system was purchased. The importance of patient safety should be included in this respect. Employees will start considering the quality management system as a means to make care safer instead of it being an additional administrative burden.

Dashboards

It may be an incentive to share (the first) results with the organisation. You may, for example, put up dashboards in theatre or the staffroom. This increases awareness and encourages reporting.

Do you want to create awareness for a certain topic? Select a different topic each month for people to report on and show the results on the dashboards. This may, for example, include topics like falls or medication safety.

Sharing results

Dashboards do not only provide insight into the number of reports, but they can also be used to share improvement actions. This way, departments can share improvement actions with each other and thus promote the organisation's learning ability.

Return on Investment

An important part of the business case is calculating the Return on Investment. What does the organisation gain by using a digital quality management system? Initially, the software will result in additional costs, and no clear proceeds. One needs to look at the savings that the quality management system will bring the organisation.

Investments

As the quality management system is a SaaS solution, the system does not require major investments.
Costs consist of a one-off investment and monthly subscription fees.

Implementation and trainings are one-off investments. During the implementation stage, the software will be set up as desired, in accordance with existing processes.

Subsequently, monthly subscription fees are charged for use of the software.

Does the organisation want to make adjustments to (the set-up of) the system or extend it with new applications over time? In this case, a one-off investment is required.

Proceeds

A quality management system does not immediately provide the organisation with revenues. The proceeds mainly consist of (cost) savings!

Reduction of healthcare costs

When organisations learn from incidents in healthcare, specific improvement actions may be carried out, thus reducing the likelihood of recurrence. Processes become more efficient and less prone to error. This results in cost savings for the organisation:

- Less reoperations
- Less readmissions
- Shorter hospital stays
- Fewer obstacles in care processes, for example because a patient is not brought to theatre without an empty stomach or should have received light sedation in the endoscopy room.
- Less time spent correcting errors due to wrong medication, falls, patient mix-ups, etc.

Savings as a result of claims

Each complaint is automatically recorded in the quality management system. The staff member concerned can then monitor its lead time and status to prevent the complaint from falling off the radar. A correct and timely follow-up can prevent complaints from turning into claims.

Time-saving

Incident reporting takes less time. Handling the incident is also less time-consuming. The notifier has filled in all relevant information, so the staff member does not waste any time gathering the information. All information is incorporated in the reporting system. On the basis of all notifications a report can easily be generated per department, division or safety topic, depending on the information required.

This makes it really easy and less time-consuming to draw up a report for the Board of Directors or management. This ultimately leaves healthcare professionals with more time for the provision of care and the quality manager has more time available to improve the quality of care!

More information?

Do you want to receive more information about the possibilities of a quality management system? Or would you like to receive assistance in drawing up an internal business case? We will gladly help you!

Please contact The Patient Safety Company via:
+31 (0)72 8200 400
info@patientsafety.com
www.patientsafety.com

Sources

Mavim. (z.d.). Een veiligheidsmanagementsysteem is onmisbaar in de organisatie.
Retrieved from https://www.mavim.nl/veiligheidsmanagementsysteem-vms/

Schwab, F. (1999, 19 januari). Stappenplan voor succesvol selectie- en implementatieproject.
Retrieved from https://www.computable.nl/artikel/achtergrond/erp/1429571/1444691/
stappenplan-voor-succesvol-selectie-en-implementatieproject.html

VMS Zorg - Nederlandse Vereniging van Ziekenhuizen. (2018, 7 mei). Wat is een VMS?
Retrieved from https://www.vmszorg.nl/vms-in-uw-ziekenhuis/wat-is-een-vms/