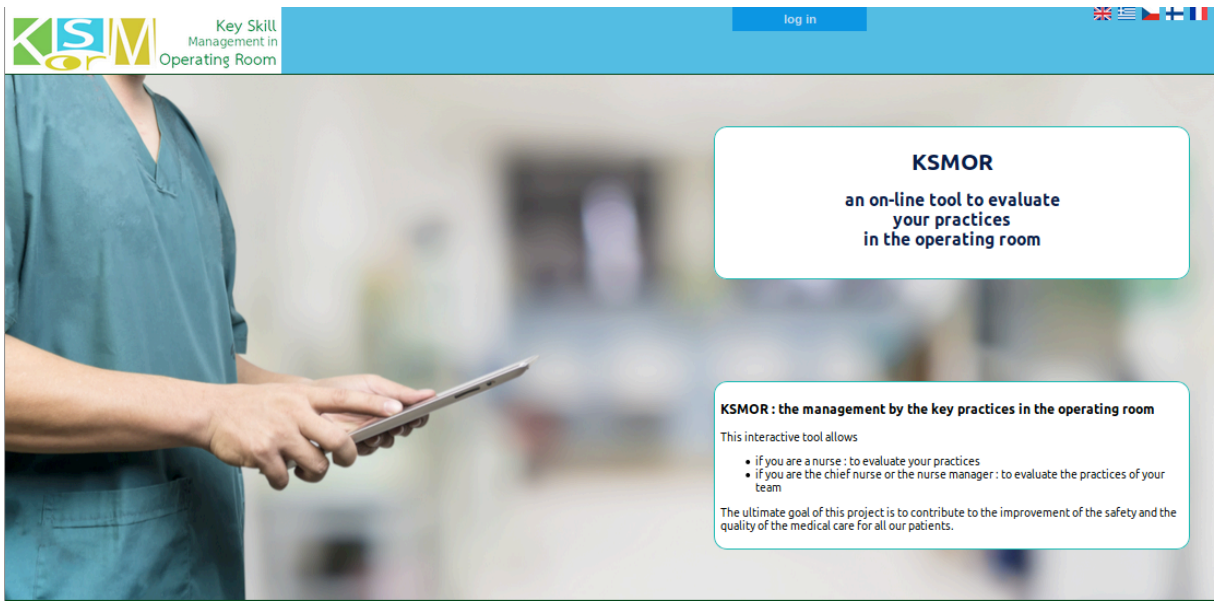
Key Skill Management in Operating Room KSMOR

A tool to evaluate the practices in the operating room



Partners of the project :

Cepraal : coordinator of the project

Czech Republic : Pardubice university

Belgium : Haute Ecole Léonard de Vinci

Finland : Savonia university of Applied Sciences

Greece : IDEC + GORNA

France : UNAIBODE + David Pasteau

Foreword

The user guide proposed for the KSM [1] approach is based on the collaboration of more than ten years with operating room (OR) staffs.
It was produced by Erasmus KSMOR project partners.
The user guide accompanies the KSMOR online application which is its essential complement.

Aknowledgements to the OR managers, the OR head nurses and the OR nurses who participated to test and comment the online application of KSMOR.
Thank you also to EORNA (European Operating Room Nurses Association) who participated in the dissemination of the tool.

1 KSM (Key Skill Management) approach was developed from 2006 to 2009 by David Pasteau for companies with a high level of reliability and risk. It has been experimented and adapted for operating room from 2010 to 2014 with the support of several schools of OR nurses, UNAIBODE and EORNA (European OR Nurses Association) and has been experimented for 3 years in hospitals and clinics in several European countries (Belgium, Finland, Greece, Czech Republic) as well as inheight French hospitals (2016-2019) and several hundred managers of OR field have been made aware of it.
It is a systemic method of quality management through key practices that draws its effectiveness from this which is used in companies with high security stakes; it finds its optimal use in areas where there are high requirements for reliability and safety, where practices are in place, and where the permanent evolution and the range of skills is very wide. In this way, surgical OR are an exemplary scope of application.

2 Sensitive practices are part of the KSM trilogy; they implement practices and know-how that are not addressed at this stage of the use of KSM
3 The common core questionnaire is an essential foundation; it is the minimum that every person must master quickly to work in an OR. So, you can't remove practices of the common core questionnaire.
4 The responsibilities and actions of the executive, tutor, mentors and the person being integrated must be formalized in writing format in the integration booklet.

1. Preamble :

To measure the relevance of KSM approach, several things must be considered:
In several countries, OR nurses don't have necessarily a specific training before working in OR.
This absence makes planning difficult when there are turnover or absenteeism.
The mastery of practices in the first two years for an OR nurse is a considerable challenge for the patient's environment and safety. The HAS (High Authority of Health in France) takes this variable into account and therefore, requires since 2015 that operating theaters, during certification audits, provide proofs that they have set up:

- traced and formal integration,
- regular professional evaluation of staff,
- updated training to adapt the staff to the requirements of the OR,
- information for temporary workers.

Any malfunction in the OR could be due to a lack of practice:
The dysfunctions concern the equipment, the medical devices of any kind of know-how :

- professional, attitude or control : there is a gap of functioning, a lack of practice in one or more people,
- the person knows what to do, but has forgotten or misexecuted,
- the person doesn't know the expected practice.

In both cases, it is a problem of mastering a practice. The OR head nurse must ensure that OR nurses are autonomous.

<u>To do this, he/she must ensure that:</u>

- Before, during and after the intervention all expected practices are clearly defined, updated and correctly applied by each staff member.

- All employees are trained and have the necessary know-how to identify, continuously, gaps in practices and address them in a planned and reactive manner by participating individually and collectively in continuous education.

- Any new project or activity in the OR results in new practices that are appropriate, identified, fixed and transmitted to the team.

For these reasons, KSM is based on the mastery by the OR head nurses of three types of practices:

- Risky practices
- Mentor practices,
- Sensitive practices[2]

2. RISKY PRACTICES:

2.1 Preamble: risky practices

These are practices that are not controlled to a sufficient level by a part of the personal. They are at the origin of a limited autonomy of these people and create difficulties in planning. In high turnover rates or absenteism, the proportion of risky practices can increase considerably.
The consequences are clear and all OR head nurses know them: planning of risky practices with people who are not autonomous leads refocusing planning on the competent team members, overwork of some nurses in the OR, bad mood of surgeons who work with persons not competent in that area, endangering the patient, etc.

KSM allows the OR head nurses to manage risky practices using five tools:
1) The common core questionnaire for individuals and teams
2) The individual and team surgical specialties questionnaire
3) The individual monitoring form and its statistical table
4) The table of polyvalence and autonomy of the OR
5) The integration booklet

2.2 Implement the "Common Core" questionnaire

2.2.1 Objective:

The common core consists of the minimum set of practices to be mastered by newcomers in the operating room so as not to disrupt the progress of an intervention and endanger the patient; it has been developed inside KSMOR project and is the professional integration questionnaire that is essential for an OR nurse. It is the only base that can be used regardless of the surgical specialty of the OR.

2 Sensitive practices are part of the KSM trilogy; they implement practices and know-how that are not addressed at this stage of the use of KSM

2.2.2 Here are the steps to implement the "Common Core" questionnaire effectively within the OR.

2.2.2.1 Take stock of the existing situation regarding integration procedures in your OR

- organization, used documents, traceability, systematism
- role of tutors, referents, etc.
- concerned staff (OR nurse, temporary worker, etc.)

This will allow you to assess the relevance of what is in place in view of the requirements of the authorities in your country.

2.2.2.2 Have official Tutors within the OR (this step is also valid for surgical specialty questionnaires)

Tutors are the professionals who supervise nurses in an integration situation. The Tutors have received training or have proven experience in coaching of people. When the OR has several specialties, the Tutor keeps the supervision of the person throughout the integration. On the other hand, the Mentors of each specialty will be the interlocutors of the person integrating for their specialty. It is highly recommended that the Tutor keeps the person's supervision throughout the integration process independent of specialties through which the newcomer will pass. This allows the person in integration to follow the integration process in a consistent and secure manner.

A Tutor management meeting with surgical specialty Mentors to discuss around the KSM approach must be organized to discuss the questionnaires and their handover, the different steps and to involve Mentors and tutorial referees in the preparation of documents and interviews of new recruits.

2.2.2.3 Adapt the questionnaire to your operating theater :

Two steps to adapt the questionnaire to your operating theater:

<u>Take ownership of the questionnaire</u>

The involved Tutors and Mentors are aware of the practices of the questionnaire and discuss with the OR head nurse to take ownership of the questionnaire in order to have the same meaning of each practice and its requirements and what it implies in terms of knowledge.

<u>Set up the questionnaire</u>

After discussion, it is possible to add or modify practices [3] to the questionnaire in the common basis if you wish in the KSMOR configuration

3 The common core questionnaire is an essential foundation; it is the minimum that every person must master quickly to work in an OR. So, you can't remove practices of the common core questionnaire.

phase and define, for each practice, the duration beyond which this practice must be acquired.

You have four periods to plan the acquisition of practices. Thus, you choose the learning rhythm for the new arrivals. Your common core questionnaire is now ready.

2.2.3 How to complete the common core questionnaire

2.2.3.1 The triangle of success is : OR head nurse, tutor, mentor

The first step is that the OR head nurse presents the questionnaire in a global way to the person in integration and explaining the issues involved. In addition, it is necessary for the OR head nurse to emphasize to the person his or her responsibility and the role of the tutor in the integration; the questionnaire does not take place in self-assessment but in interview with the tutor. [4]

2.2.3.2 The quotation

According to the quotation, the one used on KSMOR is as follows[5]:

- 0: Practice tells you nothing and you don't know what it covers.
- 1: For this practice, you know what to do, but you are not sure of what it covers, or you feel that you are not doing it completely, correctly or systematically (competence in progress).
- 2: You consider that you know exactly what the practice covers and on the other hand, systematically and correctly implement it (acquired competence).

It is necessary to clarify formally with Tutors and Mentors what cover levels 0, 1 and 2.

2.2.3.3 The duration

Experience shows that interviews should not take more than 45 minutes.

---

4 The responsibilities and actions of the executive, tutor, mentors and the person being integrated must be formalized in writing format in the integration booklet.

5 Cotation: if you wish, you can nuance ratings 0, 1 and 2; here is an example :

- 0 : the person is not trained in this activity and this concept will be discussed later
- 1 : the person is in the process of being acquired: he does not know the notion being questioned, after explanation the person must be able to put it into practice
- 2: the person is autonomous for the activity

The integrating person does not generally know the OR; he or she must find an educational opportunity. The interest of the pair is that the tutor guides, explains, clarifies and makes discover or deepen the concepts surrounding the activities raised by each practical. Each practice becomes a pedagogical pretext.

2.2.4 The polyvalence table of the common core questionnaires

This table summarizes the responses to the questionnaires for each nurse in the O.R. The common core questionnaire is therefore shown. A color code and a level in each cell allows you to see where the person is in the completion of the questionnaire and the performance achieved.

The OR head nurse can thus monitor in real time the evolution of the tutor's work and the status of the tutor progress of achievements among people in integration.

2.3 IMPLEMENT THE SURGICAL SPECIALTIES QUESTIONNAIRE

2.3.1 Objective:

To know the minimum base in the specialty (s) of the OR to participate in a safe surgical intervention.
Each surgical discipline has a specific questionnaire to its specialty. It may be different from an OR to another one in the same specialty since it is composed of Implantable Medical Devices (DMI) and Non-implantable Medical Devices, therefore dependent on the technical platform and the surgical activity of the surgeons on duty.[6]

2.3.2 Adapt the surgical specialties questionnaire to your OR :

2.3.2.1 Take ownership of the questionnaire

The tutors or persons in charge in each specialty of the person's accompaniment in integration are familiar with the practices of the questionnaire and discuss with the OR head nurse to take ownership of the questionnaire and have the same meaning of each practice and its requirements.

---

6 Technical data sheets: some OR have chosen to create a practical two-sided use sheet for each DM reviewed in the surgical specialty questionnaire. Thus, there is a direct link between the practical user sheet and the questionnaire which includes the main phases of it.

2.3.2.2 Set up the questionnaire

After exchanges, the OR head nurse can modify if he/she wishes, the surgical specialty questionnaire on KSMOR. The OR head nurse has the possibility during the configuration to modify, delete or add items and/or sections for the different surgical specialties. He/She can thus adapt a questionnaire to the specificities of each OR.

2.3.2.3 Test the questionnaire

Test on newcomers by three-way interview (Mentors/Tutors + OR head nurse + Newcomer) to identify constraints, difficulties and positive points. Importance of the confrontation of ideas and opinions to build a tool that is as consensual as possible.

2.3.3 How to complete the surgical specialties questionnaire

The same applies to the common core; the OR head nurse can decide with his/her team a chronology for the different sections; in any case, a formal point must be made with the person in integration[7] by the OR head nurse once a month. This point may be very brief, but marks the follow-up of the integration process.
At the end of the validation, it is important to review the situation between the newcomer, the tutor and the OR head nurse. The acquisition of the activity is then validated by the trio that is involved in the integration of the new nurse.

2.3.4 The polyvalence table of surgical specialty questionnaires

Located on the same page as the common polyvalence table, the surgical specialties allows the OR head nurse and the Mentors/Tutors to know the progress of each new nurse by integration and level of knowledge.

2.4 Use the monitoring sheet (or progress sheet)

2.4.1 Objective:

The follow-up sheet is a support (KSMOR) on which the new nurse records daily the different interventions of the surgical specialty in which he/she has participated during the day.

---

7 The OR nurse who comes from another OR naturally enters the process of integration. The two questionnaires not only allow him to validate his/her knowledge more quickly but above all to discover the characteristics of the new surgical specialty. Integration may then be shorter in time, but it is necessary and supervised.

All the recorded data are gathered in a statistical table that allows the OR head nurse, the tutor and the person in integration to have a clear view on their autonomy and their progress. This makes it easier to develop his/her progress plan and ensures that the planning ahead of his/her presence in the OR is well-documented and secured.
The monitoring form strongly secures the on-call duty, contributes to collective awareness of the reality of the OR's operation and allows those who have not been accompanied by the KSM tool to question themselves and secure their practice.

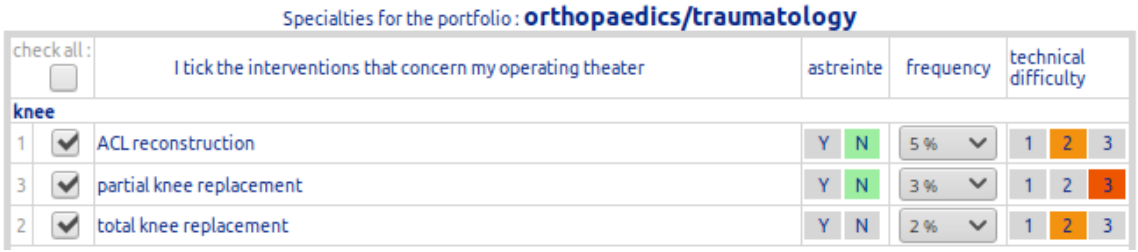
2.4.2 Parameter setting of the follow-up sheet by the OR head nurse

The OR head nurse can configure with tutors and mentors using the KSMOR application the follow-up sheets in order to adapt them to his/her OR.
A list of interventions is provided with the application in each specialty. From this list, the OR head nurse and surgical specialty mentors can:

- validate those that correspond to his/her OR
- create or delete subspecialties and interventions
- modify their formulation
- for each intervention, he/her specifies:
  - the interventions that are likely to occur during an on-call duty
  - the frequency of this intervention in the specialty's interventions or if the specialty is rare (in which case it will not be taken into account to validate the person's autonomy)
  - the technical difficulty of the intervention[8]

A highly participatory approach must be considered to ensure that the precise formulation of interventions corresponds to the specificities and requirements expected from a person in a situation of integration. In this way, you can group together similar interventions having the same technical requirements in a single formulation. Similarly, if the same intervention requires really different approaches because of the differences in technique used by two surgeons, you can create two formulations if you feel it necessary.
Realism is the basis for the design of the evaluation form, which is not the administrative listing of all the interventions performed within your OR.

8 The OR head nurse can set the technical difficulty of the intervention at 3 levels: 1, 2 and 3; each OR or hospital can (must) formally define what it means by technical difficulty of the intervention; risk to the patient, duration of the procedure, equipment to be used or any other complexity; the objective is that the executive and the person in integration are aware that these types of interventions have a higher level of requirement.


Specialties for the portfolio : **orthopaedics/traumatology**

check all :	I tick the interventions that concern my operating theater	astreinte	frequency	technical difficulty
knee				
1 ☑	ACL reconstruction	Y N	5 %	1 2 3
3 ☑	partial knee replacement	Y N	3 %	1 2 3
2 ☑	total knee replacement	Y N	2 %	1 2 3

2.4.3 Take the follow-up sheet in hand for daily use

Using the follow-up form for the person in an integration situation is very simple and time-saving. KSMOR is available on smartphone or PC. 15 seconds are sufficient to complete a sheet and, for 6 interventions in a day, 1mn and 30 seconds.

The person in integration clicks on his/her specialty, subspecialty and intervention; then he/she clicks to specify if he/she has intervened as a circulating nurse[9] or scrub nurse[10] and finally, if he/she was supervised or helped.

2.4.4 Decide with the individual summary sheet

The individual summary sheet gathers the degree of autonomy of a nurse for each intervention, with the number of interventions made.

The OR head nurse can sort these procedures according to four criteria:

- frequency of interventions
- difficulty of interventions
- subspecialties
- alphabetical order

---

9 Doubled (supervised) circulating nurse: the person is not alone to circulate on the intervention, a person is present to guide him/her.

Assisted circulating nurse: the person is alone but the scrub nurse is an experienced person who can guide the assisted circulating nurse if he/she needs help.

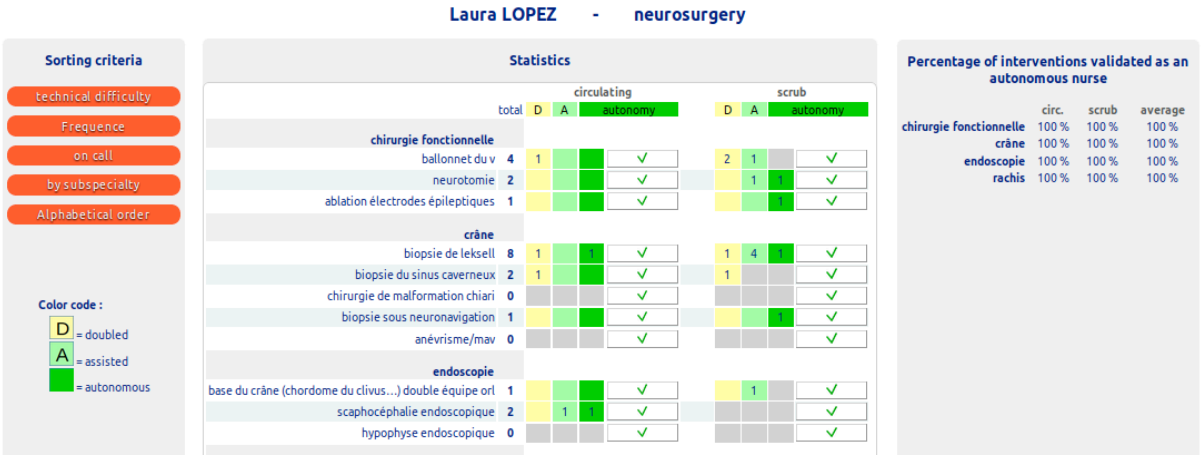
Autonomous circulating nurse: the person is completely autonomous on this intervention. He/she knows the equipment and anticipates the needs of the scrub nurse.

10 Doubled scrub nurse: the person is not alone to instrument, another scrub nurse is present on the surgical site.

Assisted scrub nurse: the person is alone on the operating field, but the circulating nurse is a scrub nurse who can guide the assisted scrub nurse if necessary.

Autonomous scrub nurse: the person is completely autonomous for the instrumentation. He/she can have in the OR an inexperienced circulating nurse. He/she is in a position to guide.

In addition, the chronology can be accessed by intervention



Thanks to this sorting system, you can have a particular look at the nurse's journey to guide his/her program and training for the next weeks.
In addition, there is a list of interventions in which the nurse participated in integration with the dates and role he/she had; this allows you to visualize very quickly where the person is in his/her evolution and interventions.

Validate the nurse's autonomy on the summary sheet

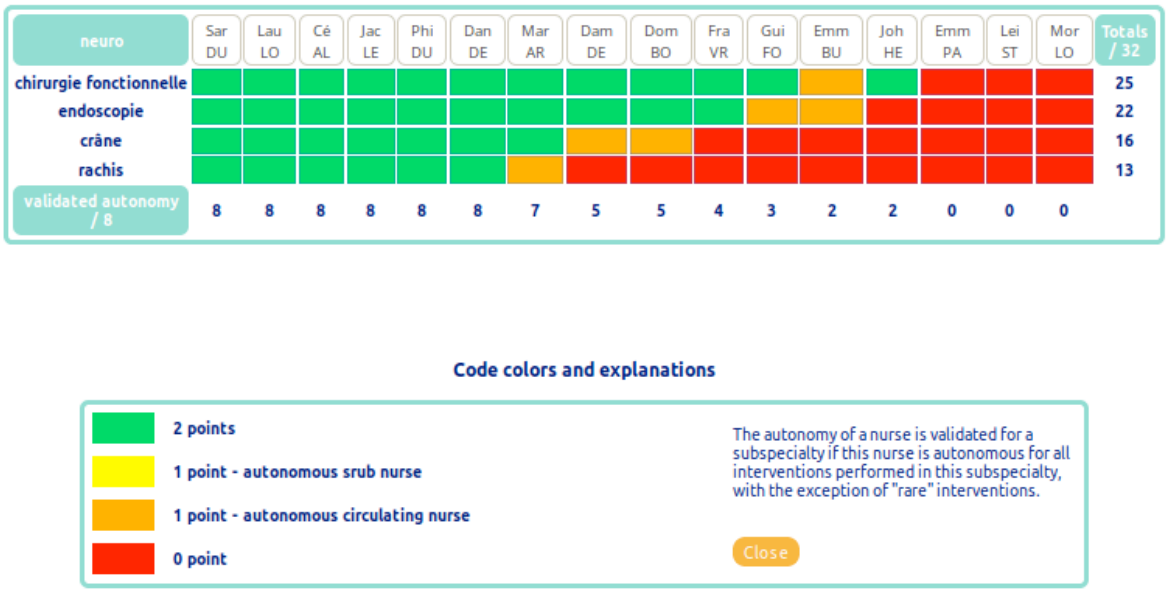
From this individual summary sheet, the OR head nurse can, in collaboration with the tutor, validate the autonomy of a nurse as a circulating nurse or as a scrub nurse. The surgeons can naturally be asked for validation.
For people who are not in an integration situation, the OR head nurse can quickly validate the autonomy without having to go back follow-up sheets that are reserved for nurses arriving in the OR.
Although this can be done throughout the year, yearly interviews can be an opportunity to carry out this validation point.
So, the OR head nurse characterizes, intervention by intervention, the degree of autonomy of each member of his/her team.

2.4.5 Manage the team with the OR polyvalence and autonomy table

This table is particularly appreciated and motivating for OR head nurses; it brings together the profiles of each OR nurse; it allows in real time:

- to identify areas of individual and collective fragility,

- to have a view quickly to the subspecialties where there is a lack of skills[11]
- to formalize and plan the integration of new nurses into the OR and to control the new technologies
- to increase nurse's skills through a factual tool to assist in the yearly interview
- to identify resource persons and have the possibility to increase the multi-specialty
- to integrate in real time the inputs and outputs of the OR of any category of OR nurse
- to use a factual dialogue support in the provisional management of employment and skills within the OR and with the hierarchy



With the polyvalence table, the manager is equipped with a managerial tool that allows him/her to manage, in the short and medium term, human resources within the OR.
You will find here the degree of autonomy of each OR nurse with colour codes on a summary table :

- 0 (red): the person is not autonomous in the specialty or subspecialty
- 1 (orange): the person is autonomous as a circulating nurse
- 2 (green): the person is autonomous as a scrub nurse

The notion of autonomy over an intervention as scrub nurse or circulating nurse must be formalized in a document in each hospital, it is important for all OR head nurses and tutors to have the same meaning of terms). You can sort by degree of autonomy or alphabetically by members of your operating theater.
In addition, by clicking on each boxes, you can directly access the profile or the file of summary of individual follow-up sheets, for each nurse of your team.

2.5 The integration booklet

This is the support that attests that the OR head nurse sets up an integration process to new arrivals, temporary workers, or new staff; from one side, all the informations needed to work in your OR, and on the other one, the formalization of the process of integration of new team members, the organization of this process, its steps and supporting documents.
Each hospital is free to define the structure of the integration booklet. Here, it is just proposed a guide that each OR in connection with its direction will have the possibility to exploit. It is of course understood that currently all ORs have documents for newcomers; but the advantage of the integration booklet is that it should be standardized, updated and considered as an institutional tool shared in its structure by all the ORs and which gives to the newcomer a sense of belonging.

2.5.1 Reception and mapping of the operating theater

- Welcome and objectives of the integration booklet
- Operating theater mapping with support and contact processes and storage
- Operating theater charter and code of conduct
- Description of the integration process
- Role of the OR head nurse
- Role of the Tutor
- Role of Mentors
- Integration documents
    - The common core questionnaire
    - The specialty questionnaire
    - The intervention monitoring form
- Intermediate and final validations

2.5.2 The dashboard of the OR

- The management objectives of an OR (different ratios)
- Quantitative indicators related to the use of resources

- Quality indicators and Operating theater certification

2.5.3 Hygiene in the OR

- The dressing
- The notion of progressive asepsis
- Traffic in the OR: patient, staff, waste
- Plan of the operating theater with hygiene zone and circulations
- Diagram and instructions for patient circulation
- Diagram and personal traffic instructions
- Waste flow diagram and instructions

2.5.4 The management bodies of the OR

- The cluster
- The OR committee
- The senior manager
- The OR head nurse

2.5.5 Who does what in the OR (with phone numbers if necessary)

- Surgeons (list with specialties)
- Anesthesiologists (list)
- The nurses (list)
- The OR head nurse(s)
- Mentors and Tutors
- Caregivers
- Cross-functional services (sterilization, biomedical, pharmacy, etc. with numbers in case of emergency)

2.5.6 Description of a typical day in the OR with the different steps of an intervention (before, during, after)

- Describe each step in terms of objectives
- Who does what, who is responsible for what

2.5.7 List, access and function of documents used in the OR

- Information documents (technical sheet, operating time sheet, protocols)
- User guides (and their computer access)
- Traceability documents
- Documents for the control, counting and registration of grains of sand and malfunctions
- Documents linking with services

(For each document, present the name, goal, paper or electronic possibility, classification and access)

2.5.8 OR computing: the different softwares used in the OR

- The name of the software, its purpose, who uses it, how it is accessed, the codes possible, where to find the mode of user manual.
- What information does an OR nurse need to look up in the computer system?
- In case of failure: who to contact, who does what?

2.5.9 The key practices page: DO NOT FORGET

Sometimes, key practices are insignificant practices which, because of their hazardous and repetitive nature, jeopardize the smooth running of an intervention when they are not correct or are missing.
They should be listed, specifying at what stages they occur and what should be done to do, to control in order to anticipate their appearing. This may involve forgotten controls, ways to use this or that Medical Device (MD).
Key practices can also refer to a succession of practices to be known in case of emergency or exceptional situation during an intervention. They must be formalized in writing and grouped together in an accessible place.

2.5.10 Integration documents and the role of the tutor and/or mentor, and the OR head nurse

- The professional integration questionnaire (how it will be used and the time of appropriation)
- The speciality questionnaire (idem)
- The MD use sheets of the specialty (idem)
- The intervention follow-up form (its use and control)
- Validation of the integration
- Integration Perception Questionnaire
- The use of KSMOR

3. MENTORING PRACTICES:

For the OR head nurse, installing Mentor functions makes possible to secure the operation of his/her operating theater by setting up a vertical and transversal network of responsible professionals who are in constant communication with him/her.

3.1 SET UP SURGICAL SPECIALTY MENTORS:

3.1.1 Preamble: why Mentor Practices? Why the term Mentor[12]?

Why Mentors? The OR head nurse is not, is no longer or has never been an expert in some surgical specialty of his/her OR; therefore, he/she must create and rely on a network of resource persons who are daily in the OR, in contact with their colleagues and surgeons, and are experts in their field: « the Mentors ». He/she must learn to set up and manage a controlled delegation with those persons who are the interlocutors in their field of expertise surgeons and their colleagues.

3.1.2 Objective of Surgical Specialty Mentors:

Surgical Specialty Mentors must ensure that, in their field, the expected practices of OR nurses are in line with what is expected by the profession. To take into account technological and medical developments, Surgical Specialty Mentors must ensure that these practices are updated, formalized and applied.

Once the general information on KSMOR provided to the team, to efficiently install Mentors within your operating theater, you must proceed in several successive steps:

3.1.3 Make a formal list of the existing mentors with the members of the OR

Who, what fields, what activities, formalization, systematization, balance sheet, table, official or unofficial character, etc3.1.4 Define the terms used: for the avoidance of doubt, the terms used in the future (in the establishment) should be defined in writing with the referees [13]

---

12 Referent or Mentor? Culturally, the term referent is used in the OR; this term does not make the difference between functional responsibilities and expertise; by introducing the term Mentor which puts in value functional (and not hierarchical) responsibilities, then, the function of expertise is distinguished;

13 Therefore, we can keep the term “referent” for OR nurses who are experts in a field, but without functional responsibilities; this distinction has the merit of not devaluating nurses who are experts and yet who do not have functional responsibilities in a field. An operating theater can be composed of 80% of referees if the persons are all specialized and experienced nurses.
Regarding members of the team: they are persons who do not yet have the expertise but who are associated with the "Mentor" group for educational purposes. The OR head nurse can rotate for Mentors, Referents and Members between the different Mentor groups. In general, it is appropriate to involve all teams in the overall operation of the OR, with the exception of people in integration situations who must focus on increasing their autonomy.

Referent: any person who is an expert in a given field (autonomy as scrub nurse and circulating nurse)
Mentor: an experimented nurse choosen by the OR head nurse inside the team. He/she must have pedagogical qualities and want to invest him/herself for the team; he/she is entrusted to the Mentor(s) of the functional responsibilities under the KSM approach
Member: a person who is not an expert in the field under consideration, but who can contribute to assist the group around the Mentor(s).

The "Mentor" function must consist of a duplicate of referees. Referrals and members may be added for purposes of pedagogical (there is then a Mentor group) by subspecialty.

3.1.5 Delimit the limits of each surgical subspecialty:

Assigning too wide a scope of responsibility to a Mentor may present a risk; the work covered by the Global Work Mentor function is regular; if the scope is too large, the workload will be too heavy for the Mentor. The point is not to do when you have time, but to guarantee that you do it regularly.

3.1.6 Formalize the role of Mentors in the form of a function sheet

In a participatory way with surgeons, mentors from the example function sheets that are provided in annex; define with them what a quality indicator can be (e.g. frequency of implementation of the update of technical data sheets, operating time sheets, proper use of the technical sheets for preparing carts, etc.). Substitute these cards in place of those that may be existing.

3.1.7 Naming Mentors: Mentors are people chosen by the OR head nurse

The volunteerism may not necessarily correspond to the hopes of the OR head nurse. It's about putting people on the job, knowing that it's not Ad Vitam Aeternam and that a rotation can be done every two to three years if you think it's necessary to enrich people's experience and make them progress.

3.1.8 Establish a table of public polyvalence of Mentors by surgical specialty

This allows the manager to see which people are involved in your OR group. The strong point is that all the people in your team must be involved; it is part of the normal function of an OR nurse (specialized or not).

3.1.9 Communicate with medical teams and OR authorities

On the Mentors of surgical speciality, on their function in order to give them visibility, responsibility and recognition by medical teams; display of the polyvalence table, data sheet function, etc.

3.1.10 Plan formal and regular appointments with Mentors

If the OR head nurse has given a number of functional tasks to individuals, it must intend to make a regular review to ensure that it is working properly. Set up meetings with each Mentor is the beginning of the management. In addition, a meeting was held collective two to three times a year from the different surgical specialty mentors will improve their function and will provide a set of information to the OR head nurse.

3.1.11 Provide a formal and traced internal communication system

Given the organization of working time in the OR, it is important for the OR head nurse to organize the transmission of information between Mentors who are in the OR in contact with their colleagues and surgeons. In this way, it will be possible to specify the nature of the information which must be transmitted in both directions. A professional mailbox for each nurse is therefore essential[14].

3.1.12 Conduct a yearly individual and collective review

With the Mentors, on their activities and the possible improvements (during the yearly interview); it is natural in terms of management that the OR head nurse makes a precise point during the yearly interview with each vertical and horizontal mentoring on the last year, his/her feeling, perspectives, points, improvement, etc.

3.2 SET UP TRANSVERSAL MENTORS:

3.2.1 Preamble: Why Transversal Mentors?

The OR works with a lot of transversal services. If one of these services is missing (per, pre or postoperative) patient safety can be engaged. It is therefore imperative to control the quality of the services provided to the OR. Transversal mentors are those who, in a privileged way, are in charge of monitoring these services at a qualitative level.

3.2.2 Objective of Transversal Mentors:

Transversal (horizontal) specialty mentors must ensure that, in their field, the services or organization provided by services within or outside the OR are in compliance with the expected level of requirement.

14 Some operating theater have organized a thematic communication system through "WhatsApp" or social networks that allows them to share segmented information in real time. This naturally raises questions to people who do not used these communication systems. However, the OR users of these systems see there an effective alternative to the traditional "liaison notebook".

The services affected are primarily sterilization, pharmacy, biomedical, hygiene.
Nevertheless, transversal mentors must be assigned to other mentor's cross-functional services, whose consequences on the progress of interventions and on the patient can be serious.

3.2.3 Make a formal assessment of the existing referents with the teams of the OR

First of all, it is important to take a look at the existing situation regarding transversal referents: who, what fields, what activities, formalization, indicators, systematization, balance sheet, official or unofficial character, etc.
The summary table provides a synthesis of the elements and comparison with the other ORs. The main point is not to check whether there is or there is not an efficient referral system, but to know precisely the real basis on which KSM can be deployed.

3.2.4 Define the areas where you want to set up transversal Mentors

Sterilization - Pharmacy (pharmaceuticals, medical devices) - Biomedical - Health - Safety - IT - Quality - Integration new staff - trainee integration specialized nurse- trainee integration nurse - Regulation - Planning - Evidence Based Nursing - Logistics Order, ...
Each OR head nurse with his/her team according to his/her priorities and organization can break down or group together transversal functions in order to place them under the guidance of a Mentor.
The objective is that all the operational elements that contribute to the functioning of the OR are distributed among the professionals in the OR; the OR head nurse has a responsibility to manage everything. It's the same thing for Surgical Specialty Mentors, the scope of the Mentor must be adapted in his/her work time.

3.2.5 Appoint transversal mentors

As with Vertical Mentors, you assign functional responsibilities to cross-functional mentors. A vertical mentor can also be a transversal mentor in a specific domain. The ideal is to put a duplicate. An OR nurse can be a Mentor in two areas. The configurations are highly variable, flexible and depend on the professionals you have and what the executive wants in your company staff involvement.

3.2.6 Develop the versatility chart for transversal mentors

In addition to the vertical mentors, the OR head nurse produces the table of transversal mentors.
By this way, in the OR, there is a readable organization of the functional delegations that the executive has set up within its OR. This table must be

displayed in such a way that each person in the OR knows who the interlocutors are in each specific area.

3.2.7 Define acceptability thresholds :

For each transverse activity, a requirement threshold acceptable to the OR must be defined. So, you can track the corresponding indicator that can be monitored[15].

From the moment, a transversal activity is under surveillance, it is a question of knowing how its results evolve according to the requirements of the OR.

The question you may raise as an OR head nurse is: does a particular transversal service meet the requirements quality and safety of my OR ? Is this service improving or deteriorating?

In terms of quality: yes or no and how? It is therefore advisable to search with your teams and especially with your transversal mentors the points you want monitor in priority.

3.2.8 Teach Mentors to record deviations from required expectations by characterizing the phenomenon as much as possible

Any improvement in transversal services requires a recording of reality.

Without a trace, without a recording, you cannot discuss and consider the slightest improvement with any internal or external supplier to the OR. As an ORhead nurse, you are the client of the service from out off the OR; you set your requirements and the latter must implement quality plans to comply with them. On the other hand, to base your requests, you must present a factual statement of the existing situation in order to be able to communicate on a shared basis and consider improvements.

It is therefore advisable that you set up a table on EXCEL that allows you to draw the differences observed among internal service providers with their characteristics in the form of coding (date, name, etc.). Quality is co-constructed (supplier + customer).

3.2.9 Set up a QOS (Quality Operating System) on the control points

Once you have selected, among the gaps found at a service provider, the one you want to solve in priority, you set up a QOS (Quality Operating System) to manage the quality level and monitor corrective actions over time.

---

15 Priorities: we can never repeat it enough, we must start with the problems that seem most damaging to the functioning of the OR. Indicator monitoring begins with the detection, then identification and follow-up of the most disruptive elements. The criteria that may be used taken into account to prioritize are in the wrong order: frequency, severity for the patient, consequences for the program, cost, waste of time, work of surgeons and anesthesiologists, etc.

4. SENSITIVE PRACTICES

These are the practices that result in regular or random deviations from people, sequentially or concomitantly. Best case scenario, they go unnoticed. In the worst case, they result in an undesirable event, whose consequences can be dramatic. It is understood that the bad quality of a supplier is the responsibility of the policy put in place with him.
Sensitive practices are based on experience and observations[16] that lead to very high costs (waste of time and MD cost) for an operating theater. Fighting against sensitive practices is a quality investment with significant and immediate benefits; but it requires a strong willingness at the care management because it means an investment of time.
The control of sensitive practices by the OR head nurse has been the subject of developments that are part of the policy of permanent OR improvements. Tools and methodologies on sensitive practices is the third part of the KSM approach. They are lead to key competencies for the OR head nurse that go beyond the scope of this guide.

5. HOW TO OPTIMIZE THE DEPLOYMENT OF KSM IN A HOSPITAL?

We reviewed what an OR head nurse should master as practices in an OR and how he/she can implement them. However, the fact remains that implementing KSM in a hospital has Human Resources dimensions (yearly interviews, integration) quality (certification, control of transversal processes) IT (mailbox, Internet website for the application). Depending on the size of the facilities, several steps should be respected while deploying KSM. You will find them here below with the recommendations from experience.

5.1 Inform and involve the OR hierarchy (OR head nurses, senior managers, direction of care,…)

This information, or even training, is essential; managers are the relay for the explanation and follow-up of the approach with the teams; their support is essential (the greatest of the forces is inertia); their deep understanding of the process is not always acquired from the start, because it calls into question certain habits of managerial functioning and brings a new transparency and readability shared on their action.

16 An 18-month survey in 2014 in a Operating Theater of 25 people (90% specialized nurses) showed that in his/her OR, each nurse recorded 2 grains of sand per week, or 50 grains of sand for the team per week, or 200 per month and 2300 per year. About these grains of sand recorded during the investigation, the time lost was measured in minutes. 70% of the sand grains were time-consuming and the average waste of time was 27 minutes per grain of sand. Material and MD losses completed the waste of time.

- To make OR managers aware of the vocabulary, issues, methods and know-how (external intervener if necessary) from KSM
- To dialogue to collect comments and specify steps, obstacles, benefits
- To demonstrate links with the facility's care policy and certification from authority
- To announce the project group
- To validate the participation in the process
- ....and thank you.

5.2 Involve the General Management and the senior management of the hospital :

This step is naturally essential; it can look like a meeting of two hours so that the direct hierarchy understands that the KSM approach:

- is a management system coming from other sectors much more demanding than ORs in terms of safety and quality,
- has been adapted to the OR for five years with the support of the project's partners organizations and European professionals
- provides significant benefits in terms of costs, safety, waste of time in the OR, and human resources management (turnover, absenteeism, versatility, autonomy)

5.3 Create a project group (OR head nurse, Specialized OR nurses, nurses)

5.3.1 Operating mode of the project group:

Sketch the planning and communication methods towards the ORs and the management. The members of the group are the project's ambassadors. They will be over time trained repeatedly by the project manager.

5.3.2 Choice of deployment type:

5.3.2.1 An OR pilot (for 4 to 5 months), and then, simultaneous deployment on all the other ORs.

This approach requires a very precise and meticulous breakdown of the steps of deployment within an operating theater, well-trained operational staff and involved in all the ORs, a demanding work for the pilot.
Advantages: the establishment vision, synergy, emulation, homogeneity appear quickly and federate the ORs.
Disadvantages: Disparities of any kind between ORs must be taken into account to move the group forward on the same pace.

5.3.2.2 A OR pilot (for 4 to 5 months), and then, progressive deployment on all the other ORs at a predetermined pace (e.g. one or two ORs enter the process every two months).
Advantages: more flexible, less demanding, more educational, benefits of OR pilot experience, less stressful pilot work.
Disadvantages: flexibility can turn into delay without rigorous supervision, the global vision must wait for the last ORs.

5.3.3 Selection of pilot:

He/she must be a professional convinced of the validity of the KSM approach and convinced of the gains in terms of security and increased level of security of skills in the ORs. It is important to have a knowledge of the certification process to put KSM in context, and basic knowledge to manage the project and OR head nurses (who does what, for when and how). The pilot is a project manager; he or she must have the authority and the diplomacy.

5.4 Gather the team from each operating theater

5.4.1 Present the KSM approach

- Explain the vocabulary, present the target objectives: integrate new security professionals, manage skills and autonomy and permanent improvement
- Give meaning to the change of method, role of specialized nurse,…
- European experience, importance of the team, accreditation, ...

5.4.2 Present the modalities of the approach within the OR:

- The state of the existing system, the planning, the pilot, the project group, the deployment
- Dialogue, listening
- Present the materials, questionnaires, follow-up sheets, versatility chart, etc.

5.5 During the deployment, gather the tutors of each OR with the OR head nurse and the pilot

This meeting with the project pilot, the OR manager and his/her tutors/Mentors is a point of essential reinforcement. It focuses on the key relationship within the operating theater (Executive, Tutor, Mentor) and formalizes their roles and responsibilities in a formal way. It is the basis of the integration and management of skills within the ORs.

6. INDEX