

# Robotic surgery

*For theatre nurses*

*Basic proficiency requirements for  
the safe use of robotic surgery*



These proficiency requirements have been determined as a result of the work of the expert group comprising:

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The following were involved on behalf of the NIVEL

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Dear reader,

The proficiency requirements you are looking at have been developed by the NIVEL in collaboration with a number of experts in context of the project “Proficiency of users of medical technology”. The aim of this project is to work for and with the sector in the development of a practical and feasible generic road map to ensure that the users of medical technologies have the required knowledge and skills. An element of this is the development of proficiency requirements for three specific technologies, that is to say robotic surgery, infusion technology and electrosurgery. The proficiency requirements for the use of robotic surgery have been developed for the medical specialist and the theatre nurse, but comparable proficiency requirements also could be developed for other members of the operation team in the future. The version you are reading here is the version for operation assistants.

The proficiency requirements have been developed during two meetings with an expert group, consisting of a surgeon, a urologist, a gynaecologist, a theatre nurse, a clinical physicist and test developers. These proficiency requirements are the minimum proficiency requirements in order to make use of robotic surgery safely. In other words, what someone must be able to do as a minimum in order to be able to work with robotic surgery. The total proficiency of a person or team is more than that which is described by these proficiency requirements but these requirements form the essential basis. In addition, teamwork is an important element in the use of robotic surgery, and this is something which is not specifically included in the proficiency requirements.

These proficiency requirements can be used in the training of operation assistant and also for more advanced assistants in order to assess whether their proficiencies are still sufficient. The proficiency requirements can be used as part of a training schedule or as part of a test to be taken. These requirements have been produced generically so that they can be adjusted to a local context.

The research team

<b>Robot functionalities</b>	
1.1	The theatre nurse name and explain the advantages and limitations of the use of the operating robot
1.2	The theatre nurse can demonstrate how the arms are brought into position
1.3	The theatre nurse can demonstrate how the trocars can be connected to the arms
1.4	The theatre nurse can describe the functionalities of the tower
1.5	The theatre nurse can describe the functionalities of the robot
1.6	The theatre nurse can demonstrate how collisions between the arms of the robot can be dealt with
1.7	The theatre nurse can name and demonstrate how the arms of the robot can be fixated
1.8	The theatre nurse can name and explain how control of the arms can be taken over from the console
1.9	The theatre nurse can describe what to do if the instruments do not move/react well
<b>Image</b>	
2.1	The theatre nurse can explain and demonstrate how the 3D is calibrated correctly
2.2	The theatre nurse can name and demonstrate how the laparoscopic instruments are brought in under view correctly
2.3	The theatre nurse can name why and demonstrate how the instruments outside the image have to be sought with the camera
2.4	The theatre nurse can describe and demonstrate how the camera can be taken over from outside the console
2.5	The theatre nurse can demonstrate it is possible to change from which camera the image is displayed
2.6	The theatre nurse can explain what the various on-screen icons mean
<b>Preparation</b>	
3.1	The theatre nurse can explain and demonstrate how the robot can be moved around safely
3.2	The theatre nurse can explain and demonstrate how the robot can be connected safely
3.3	The theatre nurse can explain and demonstrate how all articulating instruments can be checked
3.4	The theatre nurse can explain and demonstrate how the robot is wrapped in a sterile way
3.5	The theatre nurse can explain and demonstrate how the robot is positioned
3.6	The theatre nurse can explain and demonstrate how the robot is docked
3.7	The theatre nurse can explain demonstrate how instruments are put into place and how they are exchanged
3.8	The theatre nurse can explain and demonstrate how the service lives of the instruments can be checked
3.9	The theatre nurse can describe how they take into account beforehand that the table can no longer move after docking
3.10	The theatre nurse can explain and demonstrate how the patient can be brought into position safely
3.11	The theatre nurse can explain and demonstrate how the patient is fixated in place
3.12	The theatre nurse can explain and demonstrate how patients' faces are protected during the

	procedure
<b>Communication</b>	
4.1	The theatre nurse can demonstrate that he / she can give good instructions in line with the closed loop principle due to the lack of eye contact and view of the medical specialist on the patient
<b>Emergency situations</b>	
5.1	The theatre nurse can explain and demonstrate how to convert in an emergency situation
5.2	The theatre nurse can demonstrate how the robot can be disconnected with the help of an Allen key
5.3	The theatre nurse can name where the sterile Allen key is kept
5.4	The theatre nurse can describe and demonstrate where the robot's emergency stop is located
5.5	The theatre nurse can describe and demonstrate how the pressing of the emergency stop can be reversed
<b>Power supply</b>	
6.1	The theatre nurse can name and demonstrate how to handle a cut in the power supply
6.2	The theatre nurse can name and demonstrate how to check if the battery is charged
6.3	The theatre nurse can name and demonstrate how to check if the battery is working