Perfusor® Space^plus Syringe Pump and Infusomat® Space^plus Volumetric Pump Proficiency Document

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Organisation:

Ward:

Role:

Name:

Date:

Scan the following QR code for B. Braun SpacePlus training videos. There is a training video segment for each proficiency, please use this resource to support your learnings.

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SHARING EXPERTISE

Introduction

Aims and objectives

The aim of this proficiency document is to aid the participant in demonstrating a practical knowledge and appropriate clinical use of the Perfusor® Space^{plus} Syringe Pump and Infusomat® Space^{plus} Volumetric Pump.

This document is for use within all clinical areas and has been designed to be used in conjunction with the B. Braun digital learning material and Quick Reference Guides. These are to be used to help reinforce the knowledge and skills gained during your training.

Should you require assistance please contact your B. Braun Clinical Therapy Specialist (CTS) or Ward / Unit Super User.

This document contains instructional steps to support you in becoming proficient in the clinical use of B. Braun Space^{plus} infusion pumps.

Step one: First line training

This training phase will be carried out using the B. Braun Space^{plus} digital learning resources. The training will take about 20-30 minutes and provides you the overall information about the system. This is to help ensure you have acquired the relevant knowledge and skills to commence using the infusion pumps within your clinical setting. Please complete this proficiency document to review your learning, seek further support if required from your B. Braun Clinical Therapy Specialist (CTS) or your Ward / Unit Super User.

Step two: Clinical application

You will be supported by members of the B. Braun Clinical Therapy Specialists (CTS) and your Ward / Unit Super User whilst you start to use the devices clinically. You will have continued access to the B. Braun digital learning resources, use these materials to review and reinforce your knowledge.

Step three: Review (assessment / annual review)

To keep your knowledge and skills up to date, you may be required by your organisation to attend / complete an annual training review.

Space^{plus} Perfusor® Syringe Pump

Self-assessment of proficiency should be measured against the following statements:

These statements are designed to indicate proficiency to use this device. Responsibility for use remains with the user, so if you are in any doubt regarding your proficiency to use the Perfusor® Space^{plus} Syringe and Infusomat® Space^{plus} Volumetric Pumps, you should seek education to bring about improvement (self-directed learning, coaching, formal training.)

	Sign	Date
Syringe loading		
■ When powering on the Space^{plus} perfusor pump, the drive head will automatically extend ■ Open the pump screen, then open the syringe bracket by pulling towards you and turning fully to the right ■ Insert the syringe with the wings upright, ensuring that the syringe wings are between the syringe holder and the pump housing ■ Hold the syringe barrel in place with one hand and return the syringe bracket to the closed position with the other hand ■ Confirm the syringe suggestion on the touch screen or select appropriate syringe from the complete list ■ The drive head will automatically close		
Programming an infusion		
■ Select 'new patient' or 'same patient' as required ■ Select the appropriate care area (ED) ■ Commence typing the name of the drug you wish to select (e.g. paracetamol) ■ Press 'confirm' ■ Acknowledge any clinical advisory notes ■ If appropriate, select the drug concentration ■ Work across the information tabs at the bottom of the touch screen to input the required information ■ The tab headings highlighted in green will require completion ■ Once all the required information is populated, the green START INFUSION tab will be visible ■ Press 'Start Infusion' to commence the infusion		
Changing a dose rate		
■ To alter a dose rate, press the 'dose rate' tab on the touch screen ■ Press the numerical digit in the unit column you would like to alter ■ Select the numerical change from the number tabs below ■ Press 'confirm' to confirm change		

	Sign	Date
Understanding the drug therapeutic range		
■ The drug library will have a programmed therapeutic range for each drug, with pre-set hard and soft limits. A soft limit can be overridden but a hard limit cannot		
Overriding a soft limit		
■ When altering the dose rate or running rate to deliver an infusion within a soft limit, the indicator line on the therapeutic range limit bar will be in the yellow zone		
■ Press 'confirm' to confirm change		
■ Press 'override soft limit' to run the infusion		
■ When the infusion is running outside of the therapeutic range, in a soft limit, the dose and running rate numerical will be displayed in yellow on the run screen		
■ It is not possible to exceed a soft limit low or a soft limit high value. These numerical digits will be greyed out		
■ To select the appropriate drug press the drug button on the touch screen		
■ Select drug choice and concentration		
Syringe delivery screen		
■ The syringe delivery screen displays a visual representation of the syringe with its fill level, syringe type and syringe size		
■ Press the 'change view' button to switch between the delivery screen and the syringe view screen		
Delivery screen variable parameters		
■ The two infusion parameters that are displayed on the delivery screen, depend on the user selection		
■ To change a parameter, press on one of the two values and select the parameter required (e.g. downstream pressure)		
■ The parameters available to you will depend on the pump configuration		
Delivering a bolus		
■ There are three options for administering a bolus - a programme bolus, reusing a programme bolus and a manually administered bolus		
■ Whether all 3 options are available to you or not depends on the configuration of your pump		
Delivering a programme bolus		
■ Press the 'bolus' button on the touch screen		
■ In the bolus menu select 'programme bolus'		
■ Depending on the configuration... this bolus option may be pre-populated or may have open programmable parameters to be populated		
■ To initiate the bolus, press the 'start bolus' button on the touchscreen		
■ The bolus can be stopped at any point by pressing the 'stop bolus' button		
■ The option of resuming or cancelling the bolus is available		

	Sign	Date
Reusing a programme bolus		
■ To administer a previously used bolus, press the 'bolus' button and select the 'use last bolus' button in the bolus menu ■ Review the onscreen bolus amount and duration ■ To initiate the bolus, press the 'start bolus' button on the touch screen		
Administering a manual bolus		
■ To administer a manual bolus, press the 'bolus' button on the touch screen ■ Press and hold the 'manual bolus' button in the bolus menu ■ The pump infuses the bolus for as long as the button is pressed ■ The manual bolus will be interrupted after 10 seconds and an audible signal sounds. To continue, release and repress ■ At the end of each of the three bolus methods, the dose delivered will remain on-screen until confirmed by the user		
Resetting the pump volume to zero		
■ To clear the pump volume, press the 'home' button ■ Press 'totals and info', select the 'totals' button and press the 'volume' button ■ Press 'clear' ■ Dependant on the configuration of the pump you will be able to clear the total and / or the intermediate volume		
Altering and understanding the pressure level settings		
■ To alter the pressure alarm tolerance, press the 'home' button on the touch screen, select the desired pressure level setting and press 'confirm' ■ The pump will automatically revert to the run screen ■ By changing the cut off pressure the alarm activation time for occlusions can be kept low ■ It may be necessary to change the pressure level due to various influencing factors (e.g. fluctuations in syringe friction, the length and inner diameter of line, fluid viscosity, and the use of filters within the system) ■ As a general rule, the cut off pressure level should always be set higher than the pressure within the infusion system ■ Start with a low pressure and adjust if necessary to ensure shorter alarm times ■ If pressure alarms are triggered despite no occlusion within the infusion system (e.g. due to frictional forces, the pressure level must be increased)		
Display lock		
■ The display lock is designed to protect the pump against accidental use ■ The display lock will automatically turn on when the pump is not touched for a few seconds ■ Press 'unlock' to deactivate ■ The display lock can also be manually applied via the 'home' button and pressing the 'lock display' button on the touch screen		

	Sign	Date
Activating and deactivating the code lock		
■ The pump can be protected from unauthorised use by activating the code lock		
■ To activate the lock manually, press the 'home' button, press the 'device settings' button, press the 'data lock' button and select 'on'		
■ At this point you will be required to input the data lock code pertinent to your organisation		
■ The pump will automatically revert to the run screen		
■ NB when the code lock is activated, the data lock code will be required to make any changes to the infusion		
■ To deactivate the data lock, press the 'home' button, press the 'device settings' button, press the 'data lock' button and select off		
■ Input the organisation specific data lock code		
■ The pump will automatically revert to the run screen		
Alarms		
■ The pump distinguishes between two types of alarm priority		
■ **High priority alarms** where the infusion has stopped, are visually indicated by a red alarm window and a flashing red LED (e.g. syringe empty, an occlusion alarm or battery empty)		
■ Upon the visual and audible red alarm, press the 'mute' button, observe the on-screen information, address the issue, and 'confirm'. Resume infusion when safe to do so		
■ **Lower priority alarms** such as notifications and pre-alarms are indicated by a yellow alarm window and a flashing yellow LED (e.g. infusion almost ended, syringe almost empty or battery almost empty)		
■ Upon the visual and audible yellow alarm, press the 'mute' button to silence, observe the notification and take the required action		
Standby function		
■ To place the pump into standby mode when the disposable is inserted, press and hold the 'on/off' button for 3 seconds		
■ Adjust standby time as required		
Infusion complete, end the infusion, remove the syringe, and switch the pump off		
■ When the infusion is complete, press to mute the red operation alarm and minimise		
■ Press 'end infusion' and confirm 'yes' to end infusion		
■ Pull the syringe bracket towards you and turn fully to the right, the drive head will open automatically		
■ Open the display screen and remove the syringe		
■ Return the syringe bracket to the closed position		
■ Press and hold the 'power' button to switch the pump off		
■ The syringe drive head will close automatically		

Space^plus^ Infusomat® Volumetric Pump

	Sign	Date
Infusion set loading		
Programming an infusion		
Changing a dose rate		

Infusion set loading

- When powering on Space^plus^ Infusomat®, the door will automatically open
- To open the door if the pump is already powered on, press the 'open door' button once
- Insert the infusion line starting on the right side using the locating pins on the first clip
- Insert the second white clip ensuring that the silicone segment is not twisted, using the asterix markings
- Ensure that the green release lever is pressed down and that the yellow hazard light is flashing
- Insert the anti-free flow clip with the hook facing outwards
- When correctly inserted, the yellow hazard light will stop flashing
- Ensure that the line is fully engaged into the channels
- Close the front door by pressing firmly with both hands. Press and hold until you hear and feel the motorised locking mechanism closing the front door
- Select the appropriate infusion line from the list
- Open the roller clamp on the infusion set and confirm with 'ok'

Programming an infusion

- Select 'new patient' or 'same patient' as required
- Select the appropriate care area (ED)
- Commence typing the name of the drug you wish to select (e.g. paracetamol)
- Press 'confirm'
- Acknowledge any clinical advisory notes
- If appropriate, select the drug concentration
- Work across the information tabs at the bottom of the touch screen to input the required information
- The tab headings highlighted in green will require completion
- Once all the required information is populated, the green START INFUSION tab will be visible
- Press 'Start Infusion' to commence the infusion

Changing a dose rate

- To alter a dose rate, press the 'dose rate' tab on the touch screen
- Press the numerical digit in the unit column you would like to alter
- Select the numerical change from the number tabs below
- Press to 'confirm' change

	Sign	Date
Understanding the drug therapeutic range		

■ The drug library will have a programmed therapeutic range for each drug, with pre-set hard and soft limits. A soft limit can be overridden but a hard limit cannot

Overriding a soft limit

■ When altering the dose rate or running rate to deliver an infusion within a soft limit, the indicator line on the therapeutic range limit bar will be in the yellow zone

■ Press 'confirm' to confirm change

■ Press 'override soft limit' to run the infusion

■ When the infusion is running outside of the therapeutic range, in a soft limit, the dose and running rate numerical will be displayed in yellow on the run screen

■ It is not possible to exceed a soft limit low or a soft limit high value. These numerical digits will be greyed out

Delivery screen variable parameters		

■ The two infusion parameters that are displayed on the delivery screen depend on the user selection

■ To change a parameter, press on one of the two values and select the parameter required (e.g. downstream pressure)

■ The parameters available to you will depend on the pump configuration

Delivering a bolus		

■ There are three options for administering a bolus - a programme bolus, reusing a programme bolus and a manually administered bolus

■ Whether all 3 options are available to you or not depends on the configuration of your pump

Delivering a programme bolus

■ Press the 'bolus' button on the touch screen

■ In the bolus menu select 'programme bolus'

■ Depending on the configuration - this bolus option may be pre-populated or may have open, programmable parameters to be populated

■ To initiate the bolus, press the 'start bolus' button on the touchscreen

■ The bolus can be stopped at any point by pressing the 'stop bolus' button

■ The option of resuming or cancelling the bolus is available

Reusing a programme bolus		

■ To administer a previously used bolus, press the 'bolus' button and select the 'use last bolus' button in the bolus menu

■ Review the onscreen bolus amount and duration

■ To initiate the bolus, press the start bolus button on the touch screen

	Sign	Date
Administering a manual bolus - To administer a manual bolus, press the 'bolus' button on the touch screen - Press and hold the 'manual bolus' button in the bolus menu - The pump infuses the bolus for as long as the button is pressed - The manual bolus will be interrupted after 10 seconds and an audible signal sounds. To continue, release and repress - At the end of each of the three bolus methods, the dose delivered will remain on-screen until confirmed by the user		
Resetting the pump volume to zero - To clear the pump volume, press the 'home' button - Press 'totals and info', select the 'totals' button and press the 'volume' button - Press 'clear' - Dependant on the configuration of the pump you will be able to clear the total and / or the intermediate volume		
Altering and understanding the pressure level settings - To alter the pressure alarm tolerance, press the 'home' button on the touch screen, select the desired pressure level setting and press 'confirm' - The pump will automatically revert to the run screen - By changing the cut off pressure the alarm activation time for occlusions can be kept low - It may be necessary to change the pressure level due to various influencing factors (e.g. fluctuations in syringe friction, the length and inner diameter of line, fluid viscosity, and the use of filters within the system) - As a general rule, the cut off pressure level should always be set higher than the pressure within the infusion system - Start with a low pressure and adjust if necessary to ensure shorter alarm times - If pressure alarms are triggered despite no occlusion within the infusion system (e.g. due to frictional forces, the pressure level must be increased)		

	Sign	Date
Display lock		
■ The display lock is designed to protect the pump against accidental use ■ The display lock will automatically turn on when the pump is not touched for a few seconds ■ Press 'unlock' to deactivate ■ The display lock can also be manually applied via the 'home' button and pressing the 'lock display' button on the touch screen		
Activating and deactivating the code lock		
■ The pump can be protected from unauthorised use by activating the code lock ■ To activate the lock manually, press the 'home' button, press the 'device settings' button, press the 'data lock' button, and select 'on' ■ At this point you will be required to input the data lock code pertinent to your organisation ■ The pump will automatically revert to the run screen ■ NB when the code lock is activated, the data lock code will be required to make any changes to the infusion ■ To deactivate the code lock, press the 'home' button, press the 'device settings' button, press the 'data lock' button and select 'off' ■ Input the organisation specific data lock code ■ The pump will automatically revert to the run screen		
Alarms		
■ The pump distinguishes between two types of alarm priority ■ **High priority alarms** where the infusion has stopped, are visually indicated by a red alarm window and a flashing red LED (e.g. syringe empty, an occlusion alarm or battery empty) ■ Upon the visual and audible red alarm, press the 'mute' button, observe the on-screen information, address the issue, and confirm. Resume infusion when safe to do so ■ **Lower priority alarms** such as notifications and pre-alarms are indicated by a yellow alarm window and a flashing yellow LED (e.g. infusion almost ended, syringe almost empty or battery almost empty) ■ Upon the visual and audible yellow alarm, press the mute button to silence, observe the notification and take the required action		
Standby function		
■ To place the pump into standby mode when the disposable is inserted, press and hold the 'on / off' button for 3 seconds ■ Adjust standby time as required		

	Sign	Date
Infusion complete, end the infusion, remove the infusion set and switch the pump off ■ When the infusion is complete, press to mute the red operation alarm and minimise ■ Press 'end infusion' and confirm 'end infusion' ■ Press the 'open door' button on the right-hand side of the pump, confirm 'open door' on the touch screen ■ Acknowledge the close roller clamp notification and press 'open door' ■ Once the door releases, pull the door open until the anti-free flow device unhooks from the inside of the front door ■ Press and click down green release lever until the yellow hazard light starts to flash ■ Remove the infusion line ■ Close the front door by pressing firmly with both hands ■ Press and hold until you hear and feel the motorised locking mechanism closing the front door ■ Press and hold the 'power' button to switch the pump off		

I certify that I am aware of my professional responsibility for continuing professional development and realise that I am accountable for my actions. With this in mind I make the following statement:

I am proficient in the use of the Perfusor Space^{plus} syringe pump / Infusomat Space^{plus} volumetric pump and I am aware of the support material available to me.

Print: _____ Date: _____

Signed: _____

Proficiency Assessment

This form is to be completed by yourself and your Unit / Ward Super User during your assessment.

The assessment is designed to establish that self-proficiency has being achieved within your clinical practice.

Trainees Name: _____ Date: _____

Signed: _____

Assessors Name: _____ Date: _____

Signed: _____

If you have any further questions or queries then please do not hesitate to ask your B. Braun Clinical Therapy Specialist (CTS) or your B. Braun Clinical Super User.

This space is designed for your Trainer to note any action points, (if required) for further practice following your assessment.

Your Trainer may also set a date that you may be required to attend an annual update or complete a further self-assessment.

Review Date	Notes/Training Update Required

Notes

Notes