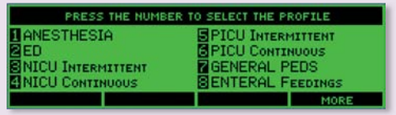
How to Program an Infusion:

- Select profile
- Select category
- Select drug program
- Program infusion parameters
- Prime pump and administration set
- Confirm all settings
- Press start
- Options soft key can be selected for additional programming choices

Note: *For timed infusions, a time entry will be required. An option to perform a flush could be prompted when the main infusion is complete.*

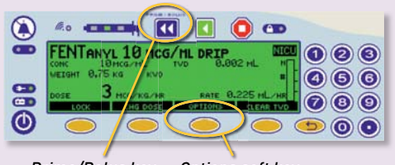


How to Program a Loading Dose:

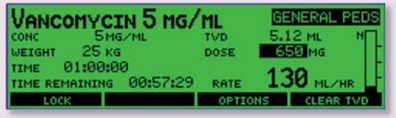
- Program the infusion
- Select Options soft key
- Select loading dose
- Program loading dose parameters
- Press start
- Confirm all settings
- Loading dose will begin and main infusion will start automatically when loading dose is complete

How to Program a Bolus Dose:

- Program the infusion
- Start the infusion
- Select Prime/Bolus key or the Options soft key
- Program bolus dose parameters
- Confirm bolus dose settings
- Start the bolus dose
- Main infusion will begin automatically when bolus dose is complete



Reverse Highlight occurs when a value was entered outside of the soft limits for any of the parameters while programming an infusion. An example of how this may look for a value that was overridden for a dose is shown at right.



FlowSentry™ Pressure Monitor and Occlusion Detection are two separate features in the pump that have separate algorithms, but work together to alert the clinician quickly about an increase in pressure within the infusion line. When pressure increases to the FlowSentry™ monitor sensitivity setting, the pump may trigger a pressure increasing or an occlusion alarm. A change in pressure can occur with more viscous solutions or positional IV access.

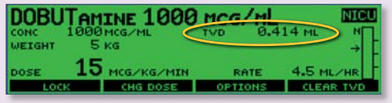
Override Occlusion Settings is a way to adjust the settings for the current infusion. This can be done by selecting the Options soft key, and selecting Override Occl Limit.

The current setting will be highlighted.

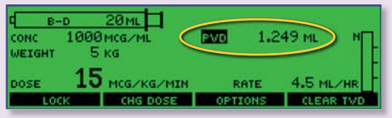
The choices are:

1. Very Low – Most Sensitive (the occlusion alarm will be triggered quickly)
2. Low
3. Normal
4. High – Least Sensitive (the occlusion alarm will be triggered slowly).

TVD is Total Volume Delivered. It appears on the display screen while an infusion is running. It is an accumulation of the amount of fluid that has been delivered during the time the pump has been powered on. This total includes the loading dose, bolus dose, and maintenance dose of the infusion. It is useful information for documentation of total fluid delivery to a patient.



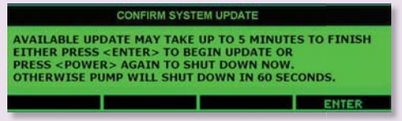
PVD is Programmed Volume Delivered. It appears briefly on the screen while the pump is paused, or by pressing the Back key. It is an accumulation of the amount of fluid that has been delivered from a specific drug program. This total includes the loading dose, bolus dose, and maintenance dose of the infusion. It is useful for documentation of specific volume of medication delivered to a patient.



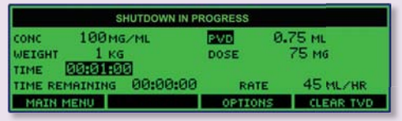
PDD is Programmed Dose Delivered. This option will have to be enabled in the PharmGuard® Toolbox software. It is available by selecting Change To Dose under the Options soft key selection. PDD is an accumulation of the dose that has been delivered from a specific drug program. It is only available for continuous weight-based infusion modes. This total includes the loading dose, bolus dose, and maintenance dose of the infusion. It is useful for documentation of specific medication dosing that has been delivered to a patient.

When powering off the pump, if an update to the pump is available, the message displayed below will appear.

Upon selection of the Enter soft key, the update will begin. The pump will power off when this is complete.



When powering off the pump, if no updates to the pump are available, the message "Shutdown in Progress" will appear briefly on the pump display prior to completing power off.



Note: *The examples provided were designed to serve as visual tools for the clinician using the Medfusion® 4000 syringe pump. These features may or may not display on your pump, depending on how your particular institution customized the PharmGuard® medication safety software.*

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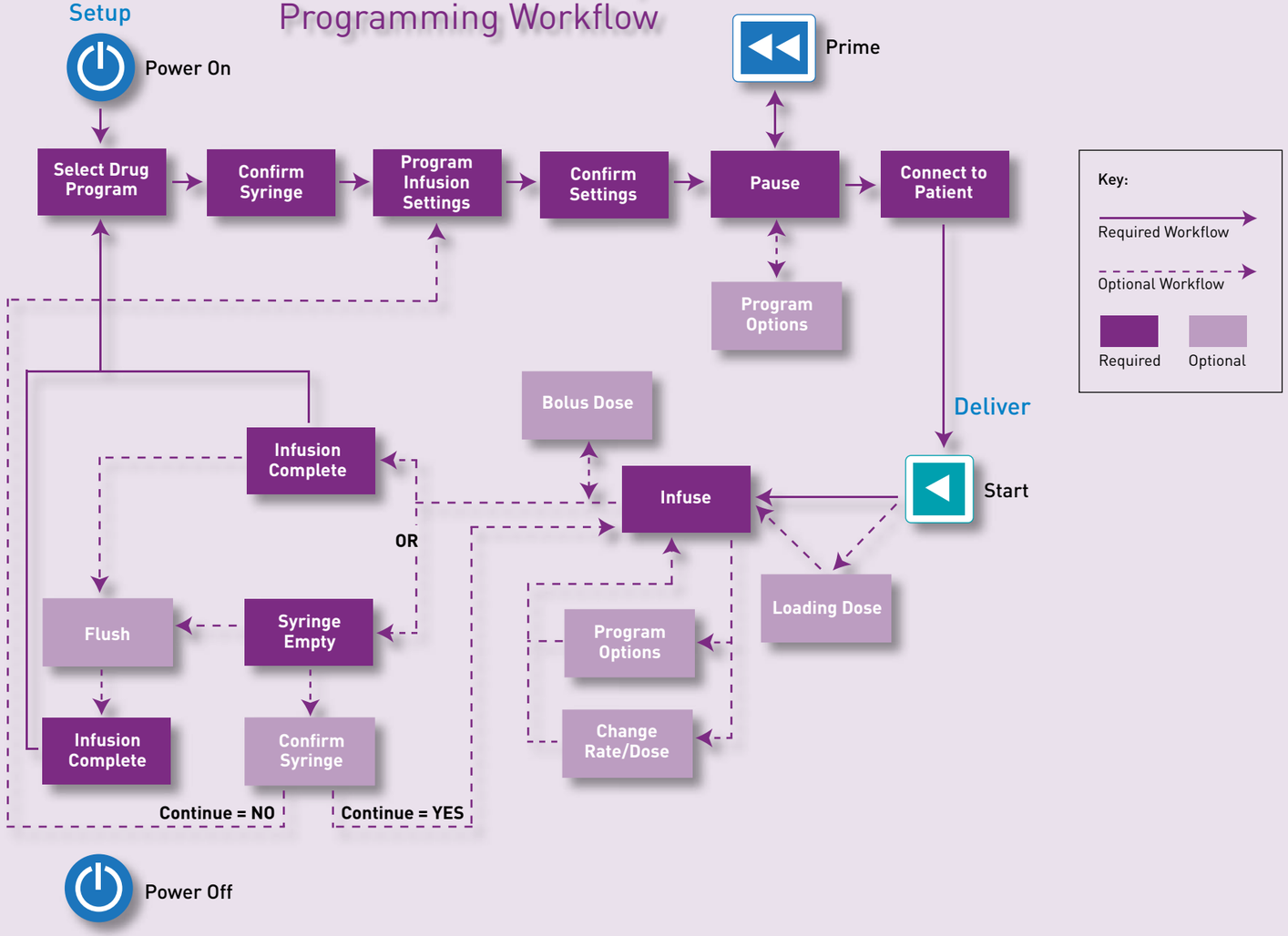
Quick Reference Card

Medfusion® 4000 Syringe Pump

For detailed instructions, specifications, warnings, and additional information on the Medfusion® Model 4000 pump and PharmGuard® medication safety software, please refer to the Operator's Manual.

Medfusion® 4000 Pump Programming Workflow



Program Options

Options: Applies to the current infusion only.

Loading Dose: Ability to allow a specific loading volume or dose to be delivered. Dose will be programmed and delivered in the parameters of that specific infusion. Loading dose must be enabled for the specific drug for this feature to appear on the pump and will be delivered before the start of the main infusion.

Bolus Dose: Ability to allow a specific bolus volume or dose to be delivered. Dose will be programmed and delivered in the parameters of that specific infusion. Bolus dose must be enabled for the specific drug for this feature to appear on the pump.

Periodic Callback Alarm: Allows programming of an alarm to be generated at a programmed period of time. It can be set in either hours or minutes. The maximum allowable time is 8 hours.

Standby: Allows pre-programming of an infusion then postponing the start for a programmed interval of time. Standby mode begins after entering the time parameters. Do not press the start key until it is time to start the infusion. The pump does not automatically start at the end of the standby period. The pump will sound an alarm notifying the clinician that Standby mode has ended. The infusion can be started at any time during standby by pressing the start key.

Delayed Start: Ability to pre-program an infusion then postpone the start for a programmed interval of time. Delayed Start mode begins after entering the time parameters. Do not press the Start key until it is time to start the infusion. The pump will automatically start the infusion at the end of the delayed start time. The infusion can be started at any time during delayed start by pressing the Start key.

Volume Limit: Allows a specific volume limit to be determined for an infusion. Once the pump has delivered the volume limit, the pump will alarm and stop. This is only available for continuous infusions.

KVO: Ability to allow a KVO (Keep Vein Open) rate to be delivered between infusions. A volume limit must be programmed for KVO to function. KVO rates are determined by the minimum flow rate for the syringe currently being used and the current infusion rate, whichever is less.

Override Alarm Loudness: Ability to override the profile selection for a specific infusion. Able to select from a higher or lower value. The alarm cannot be totally disabled.

Override Occlusion Limit: Ability to override the profile selection for a specific infusion. Able to select from a higher or lower value.

Toggle FlowSentry™: Ability to override the profile selection for a specific infusion. Will either disable or enable FlowSentry™ pressure monitor.

Toggle Near Empty Tone: Ability to override the profile selection for a specific infusion. Will either disable or enable Near Empty tone.

Toggle Volume Near Empty Tone: Ability to override the profile selection for a specific infusion. Will either disable or enable Volume Near Empty tone.

Toggle PVD/PDD: Ability to have one or the other display on the pump during infusions. PVD is an acronym that means Programmed Volume Delivered. PDD is an acronym that means Programmed Dose Delivered.

For detailed instructions, specifications, warnings, and additional information on the Medfusion® Model 4000 pump and PharmGuard® medication safety software, please refer to the Operator's Manual.

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