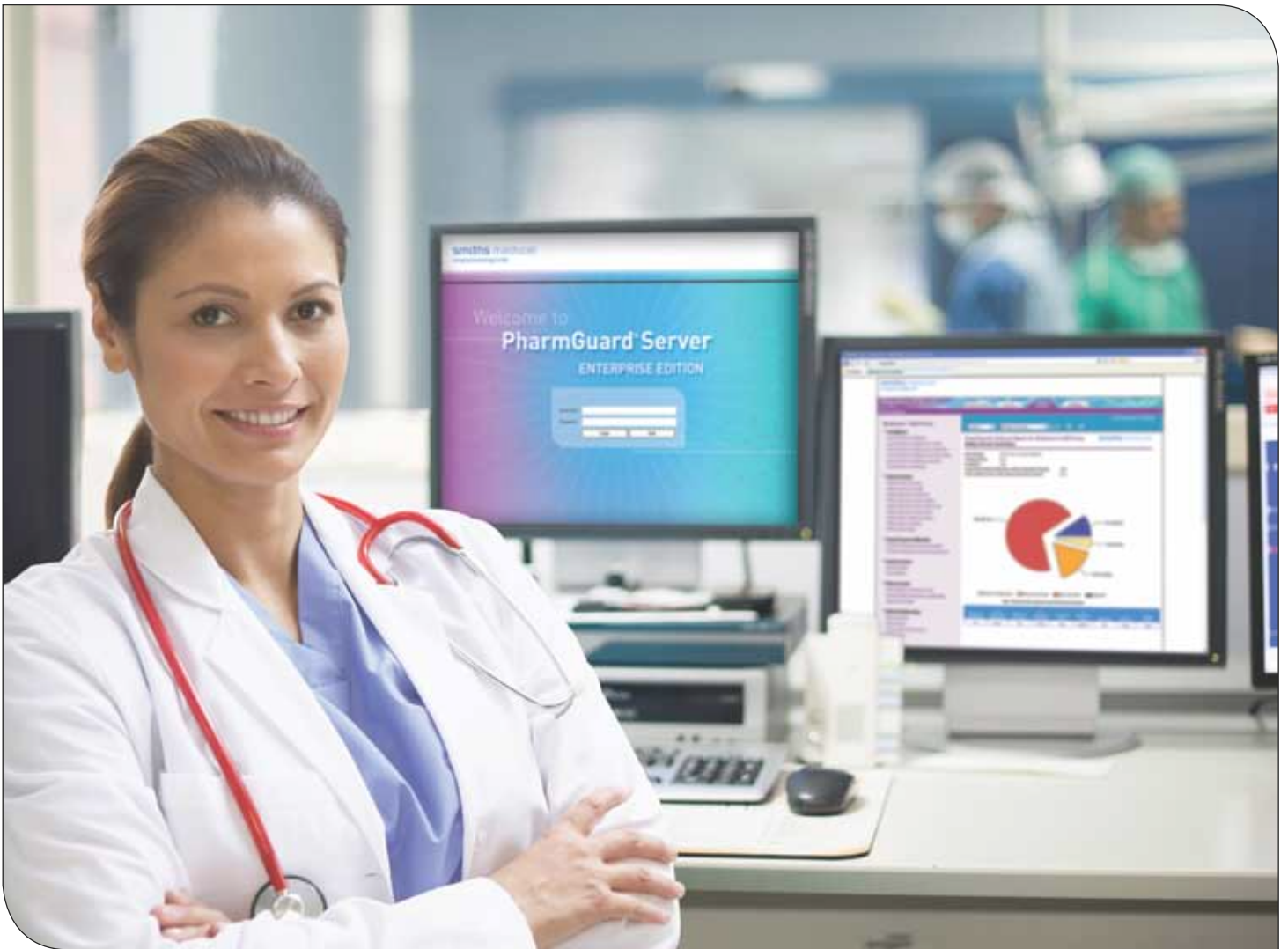


NEW!

smiths medical
bringing technology to life

PharmGuard® Server Infusion Management Software



**Continuous quality improvement through
evidence-based information management**

*Infusing Confidence
with every medication delivered*

medfusionTM

PharmGuard® Server Infusion Management Software

Promotes continuous quality improvement (CQI) of infusion therapy by capturing and managing infusion data

- ✓ Designed for pharmacy, nursing, biomedical engineering, medication safety officer and medical administrators
- ✓ Securely distributes pump software updates (firmware) and drug libraries to devices connected to the PharmGuard® server software
- ✓ Provides hospital staff the reporting tools to analyze trends, compare against compliance goals, and measure infusion safety to make evidence-based practice decisions

The PharmGuard® server software consists of several components:

Device Reports: Reporting tool to measure infusion therapy and make evidence-based practice decisions

Medical Device Server (MDS): Data capture software to communicate with your fleet of devices

PharmGuard® server software databases: Data repository for device reporting

PharmGuard® server software web portal: User website accessible from any computer in your network with proper credentials.

Device Reports

PharmGuard® server software device reports are categorized by six report types:

Drug Program Compliance Reports

Track the use of the PharmGuard® medication safety software (drug program library) versus generic, manual programming for confirmation that pharmacy dosing and administrative guidelines are being enforced and patient safety measures are being tracked

Safety Event Reports

Track soft limit overrides and reprograms, hard limit override attempts and abandons to confirm accurate safety limits are in place to help reduce medication errors

Drug Program Utilization Reports

Analyze drug program utilization within drug libraries and each profile

Device Event Reports

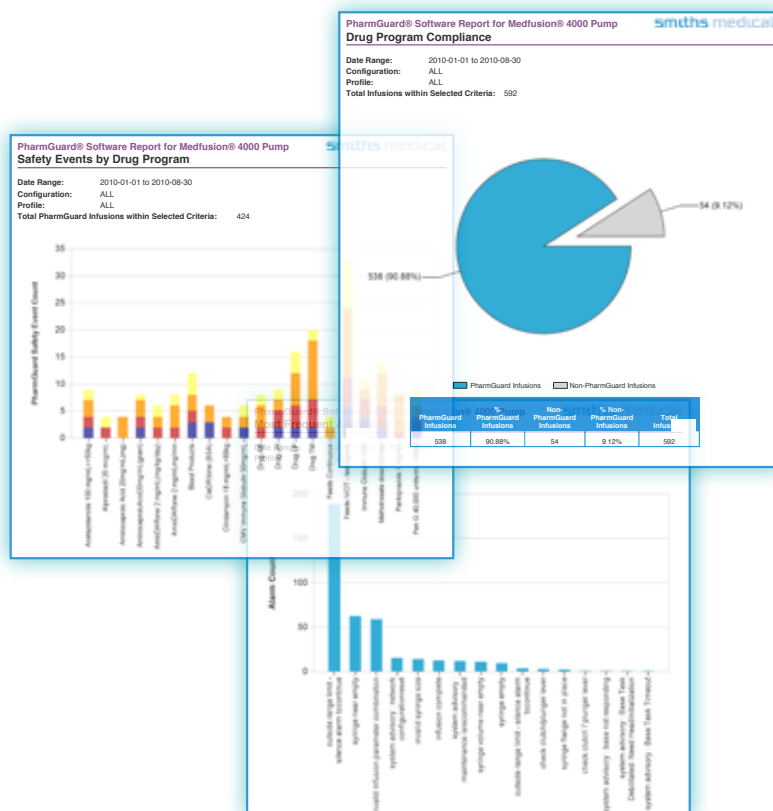
Capture the event history so clinicians can trace infusions, clinical events and medication errors that were averted

Alarm Event Reports

Help determine how quickly alarms are addressed, identify if safety limits need adjusting, or if a pump needs to be serviced

Clinical Engineering Reports

Assist in tracking pump location and status to identify preventative maintenance or connectivity issues and confirm firmware library compliance



Solutions for Your Entire Infusion Management Team



Pharmacy Management

- Track enforcement of pharmacy dosing guidelines
- Review actual drug usage, and determine medication safety by reviewing dosing overrides by drug program
- Establish smart pump investment usage and peace of mind knowing safety limits are in place to help reduce medication errors

Nursing Management

- Track and analyze data at the unit level to promote compliance with the use of smart pumps and usage of PharmGuard® medication safety software (DERS software)
- Improve clinical practice by monitoring generic, non PharmGuard® software infusions and tracking dosing overrides, alerts, and drug program abandons
- Spot trends and act upon the data to help prevent medication safety errors
- Measure how quickly nurses are responding to alarms and if alarm fatigue is occurring

Biomedical Engineering Management

- Access the preventative maintenance schedule and any pumps that are coming due for maintenance
- Track battery status, location and detailed usage history of all pumps
- Monitor fleet of pumps for any faults and identify any maintenance required
- Track pump location

Medication Safety Management

- Track and analyze drug programs that are prone to excessive dosing limits
- Investigate the events that led up to near-misses or safety events, and those events that occurred immediately afterward
- Report near-misses caught by the PharmGuard® medication safety software, and review with medication safety committee

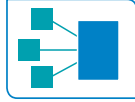
Evidence-based reporting to help make more informed clinical practice decisions

PharmGuard® Server Software Specifications

Server Configurations

PharmGuard® server software components can be configured on a single or a multi-tier server configuration based on your hospital needs and server architecture.

Single Server



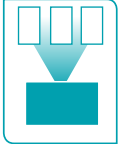
With the single server configuration, all PharmGuard® server software components are installed on one server to provide simplicity of installation, configuration and administration. A single connection point is provided to all devices by one medical device server with PharmGuard® server software.

Multi-Server



The multi-server option provides increased flexibility, scalability, and performance distributing PharmGuard® server software components over separate physical or virtual servers on your network.

Virtual Server



Both configuration options can be installed in a virtual server environment to save on hardware and software acquisition costs. The virtual environment can be either a Microsoft® Server 2008 Hyper-V® or VMWare® ESX 4.X or higher environment.

Technology Support

Device Network

- Wired Ethernet or wireless 802.11 b/g
- WPA (TKIP) / WPA2 (AES/CCMP) Personal (PSK) & Enterprise (EAP: TLS, TTLS, PEAP-MSCHAPv2, GTC, LEAP)
- Dynamic or Static IP address support
- NTP time synchronization

Clients (PharmGuard® Server Software Web Portal)

- Windows® operating system with Microsoft® Internet Explorer® v8.0 or higher

PharmGuard® Server Software

- Install on hospital-selected vendor-independent hardware
- Microsoft® Windows Server® 2008/2008 R2 (native or virtualized)
- Microsoft® SQL Server® 2008/2008 R2 Standard or Enterprise edition
- Microsoft® Internet Information Server (IIS)
- Requires Microsoft®.NET Framework v3.5
- Supports VMWare® ESX 4.X, and Microsoft® Windows Server® 2008 Hyper-V®
- Transactions: XML/SOAP via secure sockets using SSL

Minimum System Requirements

Single Server Configuration

Hardware:	Software:
Combined web, database, and medical device application server with: <ul style="list-style-type: none"> • One (1) 4 Core Intel® Xeon® class 2.4 GHz or greater processor (virtual server = 4 processors) • 16GB of RAM or better • 146GB+ HDD or better for operating system and application • 450GB+ for device event data storage 	<ul style="list-style-type: none"> • Microsoft® Windows Server® 2008/2008 R2 • Microsoft® Internet Information Server (IIS) • Microsoft® SQL Server® 2008/2008 R2 • Microsoft®.NET Framework v3.5

Multi-Server Configuration

Hardware:	Software:
Separate database server with: <ul style="list-style-type: none"> • One (1) 4 Core Intel® Xeon® class 2.4 GHz or greater processor (virtual server = 4 processors) • 16 GB RAM or better • 450GB+ HDD or larger for data storage (minimum) 	<ul style="list-style-type: none"> • Microsoft® SQL Server® 2008/2008 R2 • Microsoft®.NET Framework v3.5
Separate web server with: <ul style="list-style-type: none"> • One (1) 2 Core Intel® Xeon® class 2.4GHz or greater processor (virtual server = 2 processors) • 4 GB RAM or better • 146GB+ HDD or larger for web server 	<ul style="list-style-type: none"> • Microsoft® Windows Server® 2008/2008 R2 • Microsoft® Internet Information Server (IIS) • Microsoft®.NET Framework v3.5
Separate medical device application server (MDS) with: <ul style="list-style-type: none"> • One (1) 2 Core Intel® Xeon® class 2.4GHz or greater processor (virtual server = 2 processors) • 4 GB RAM or better • 146GB+ HDD or larger for medical device application server 	<ul style="list-style-type: none"> • Microsoft® Windows Server® 2008/2008 R2 • Microsoft®.NET Framework v3.5



SureLink™ software from Smiths Medical provides remote support for PharmGuard® server software

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