

Medication Management Systems

September 2006



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through the right people and the right products



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Medication Management Systems (MMS)

Executive Summary

- Hospira - very well positioned in the MMS marketplace
 - A competitive technology leader
 - Broad portfolio of MMS products
 - Valued provider focused on meeting customer needs

- Evolving MMS marketplace offers attractive opportunities
 - Heightened focus on patient safety driving change
 - Information technology (IT) and hospital technologies rapidly changing; driving advancements in MMS technology
 - Changes to technology and products provide opportunities for upgrades and incremental, ongoing revenue streams



- Hospira is well positioned to take advantage of the many opportunities in the evolving Medication Management Systems (MMS) marketplace.
- Today, we are a highly competitive technology leader with a broad-based portfolio of MMS products – comprising advanced infusion pumps, safety software and supporting services – that meet customer needs for safety, innovation and flexibility. Furthermore, the industry is evolving rapidly, driven in great part by an increased focus on patient safety. Since becoming an independent company two years ago, Hospira has invested significant resources to address customers' changing needs, after years of relative under-investment in the product line.
- From a revenue standpoint, MMS offers opportunities for moving customers into upgraded, higher value-added products and also for incremental revenue from disposable sets, more sophisticated technology, software and related services.
- With the changes in customer needs and our newly launched products to address them, our MMS portfolio is expected to be a key growth driver for Hospira over the long term.

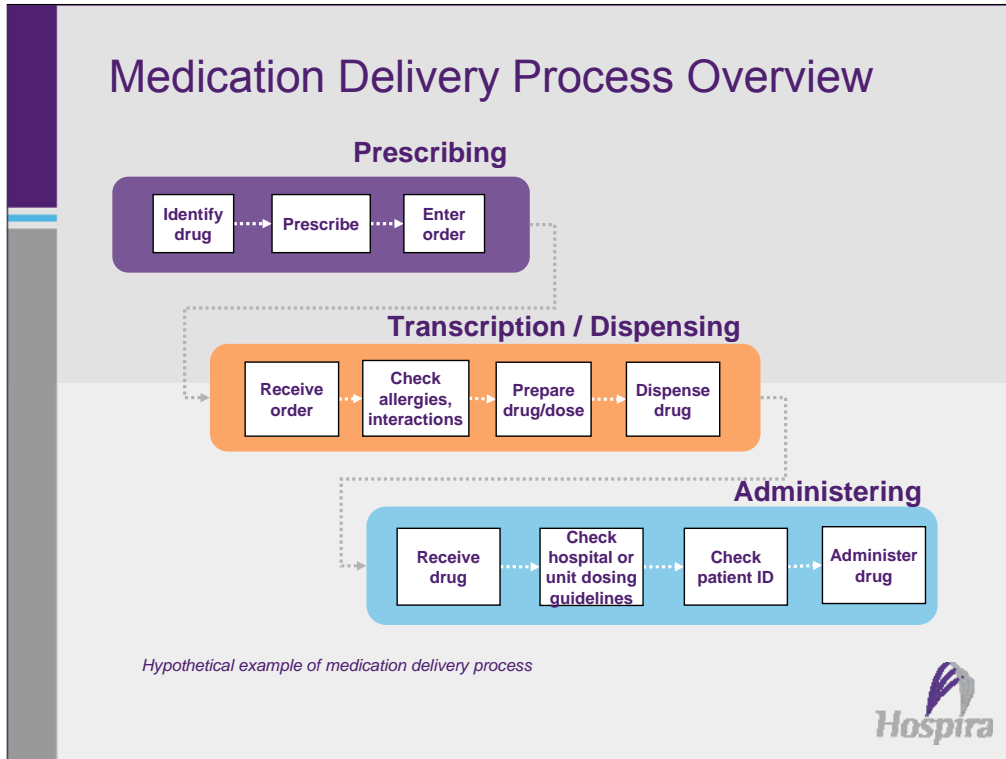
Medication Management Systems (MMS)

Overview

- Intravenous Medication Delivery Process Overview
- The Changing MMS Marketplace
- The MMS Value Proposition
- Hospira's MMS Portfolio
- Hospira MedNet® Software System
- Other Reference Material



- We have developed this tutorial to aid the investment community in understanding the industry, its evolution and Hospira's products and services.
- Most of our discussion focuses on the U.S. market for MMS products. However, we anticipate similar trends in developed countries outside of the United States over time.



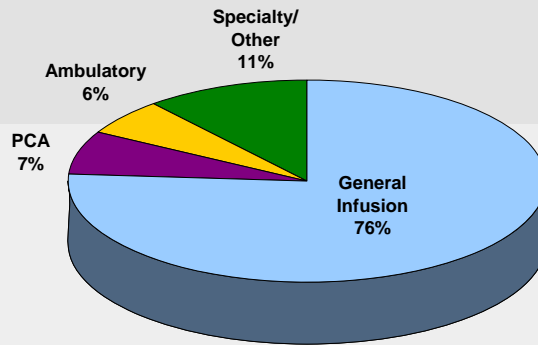
- This shows the overall process of administering medication and medical solutions intravenously to a patient in a hospital or healthcare facility.
- The process consists of several phases. First, a medication is prescribed for a specific patient. The prescription is then sent to the hospital pharmacy where it is transcribed and dispensed.
- Next, the medication is delivered to the caregiver responsible for the direct care of the patient, such as a nurse, who then administers the medication to the patient.
- The administration route is often intravenous by way of an infusion device such as a gravity I.V. set, or by using a more sophisticated electronic medication delivery system.
- Once the medication has been administered, the patient's records must be updated to reflect the details of the procedure.
- Finally, the billing group must be notified with the information about the procedure in order to process the invoicing.

Medication Delivery Process Overview

Pump Types

- Major Pump Types

- General Infusion
- Patient-controlled Analgesia (PCA)
- Ambulatory
- Specialty



Estimated total U.S. hospital installed base: 1.1 million devices

Source: Market Dynamics, Inc. Medical Products Dynamics Report, 2H05



- Different types of infusion pumps are used for different applications, including general infusion, pain medication/patient-controlled analgesia, ambulatory and specialty pumps.
- As you can see from the slide, general infusion pumps are the most widely used infusion device in U.S. hospitals.

Medication Delivery Process Overview

Equipment Acquisition Process in the Industry

- Pumps can be leased or purchased
 - Lease contracts, including extensions, typically average 5 years
 - Ownership typically averages 7 years

- Additional consideration: GPO membership
 - GPO: Group Purchasing Organization
 - Most hospitals are members of one or more GPOs
 - Most GPOs negotiate contracts with MMS product manufacturers – “preferred sources”
 - On occasion, hospitals acquire pump systems independent of the GPO relationship



- Hospitals can either lease or purchase pumps outright. The estimated lease contract for infusion pumps has ranged from five to seven years. The majority of Hospira pumps today are sold outright.
- Also relevant to the acquisition decision is whether the hospital is a member of a Group Purchasing Organization (GPO), and if so, which manufacturers have contracts with that GPO.
- Most GPOs have negotiated contracts with one or two pump manufacturers as the preferred sources for their member hospitals. And while member hospitals generally purchase MMS products from the preferred-source manufacturers, they sometimes buy or lease pump systems outside of the GPO relationship.

The Changing MMS Marketplace

The Customer

- Hospitals are primary customer of MMS products
- Needs range on a variety of factors
 - Size
 - Capital resources
 - Technology needs
- But regardless of these factors, hospitals do share certain common needs



- Hospitals are the primary customer for infusion pumps, although certain types of pumps are used in alternative-site facilities, such as outpatient clinics or nursing homes.
- The roughly 5,000 hospitals in the U.S. market range from single, small hospitals to large medical institutions with many hospitals spread over a broad geographic area, so the specific needs of hospital clients can vary widely. Some are capital-constrained; some have more economic resources. Some have the need for more sophisticated technology than others.
- Regardless of their size or scope, however, hospitals do share certain common needs – needs which are driving change in the marketplace for medication management systems.

The Changing MMS Marketplace

Hospital Need – Reduce Medication Errors

- Medication errors present a serious problem:
 - Medication errors account for one of every 854 inpatient deaths¹
 - Most medication errors occur at the patient bedside
- A recent study of the Journal of the American Medical Association shows the pace of change is slow
- Medication errors create an estimated annual economic burden of \$77 billion¹

¹ Institute of Medicine (IOM) 1999 Study – *To Err is Human: Building a Safer Healthcare System*



- First and foremost, hospitals are addressing the serious issue of medication errors. According to a landmark 1999 study on medical errors, medication errors account for one of 854 inpatient deaths, most of which occur during the administration phase of the medication delivery process – and there hasn't been widespread improvement since the study was originally released.
- In addition to their often tragic consequences, medication errors are costly, creating an economic burden of an estimated \$77 billion annually.
- Patient safety is such a pressing issue that the organization that oversees hospital accreditation, the Joint Commission on Accreditation of Health Care Organizations (JAHCO), has instituted a program of National Patient Safety Goals. Accredited hospitals are evaluated for continuous compliance with the specific requirements associated with the goals, which are revised annually.

The Changing MMS Marketplace

Hospital Need – Improve Effectiveness and Productivity

- Effectively manage operating costs
- Streamline caregiver workflow
- Enhance patient care
- Enhance hospital efficiency and process effectiveness
- Track changes for continuous quality improvement initiatives



- Operating costs are another area of major concern to hospitals. That drives another over-arching need – to more effectively manage resources, both human and capital assets – aiming for greater productivity, while at the same time improving patient care and satisfaction.
- Hospitals also are increasingly looking to monitor and track progress on their quality improvement initiatives, creating the need for powerful, simple-to-use and actionable performance reporting tools.

The Changing MMS Marketplace

Hospital Need – Address Changes in Technology

- Advances in technologies driving greater IT needs
- Growing trend toward electronic medical records
- Hospitals are increasingly moving toward more automated processes
 - They need to be able to support these processes from an IT perspective
 - They want devices that can interface with their information systems



- The addition of so many new communication technologies and software-driven applications has resulted in burgeoning technology needs for hospitals.
- There is also a growing trend to switch to electronic medical records, as the U.S. government is strongly encouraging adoption of their use.
- With the increasing emphasis on patient safety, hospitals are moving toward using fully automated systems where possible, including the medication delivery process. They also want devices that can interface with their other systems to further reduce the potential for error as well as increase productivity.

The Changing MMS Marketplace

The Result – Evolution of Infusion Pumps

- **Yesterday:** Standalone, electro-mechanical I.V. pumps
 - Require supervision and manual programming
 - Labor intensive
 - Greater potential for medication error
- **Today:** Electronically controlled advanced pumps
 - Enhance patient safety
 - More automated; often support safety software
 - Programmable
 - Offer convenience and improve workflow
 - Can manage complex infusions seamlessly
 - Increasingly able to interface and integrate with other systems in the hospital



•The changing marketplace, therefore, has resulted in an increased focus on patient safety, productivity and interoperability, with safety being the main emphasis. This changing focus has driven the genesis of different criteria in the pump acquisition process, as hospitals are moving away from simple standalone pumps to more advanced infusion systems.

•Advanced infusion pumps are electronically controlled, and some can be connected to hospital and clinical systems, either via a wired or wireless network. Advanced infusion pumps often are compatible with software designed to reduce medication errors; these devices are often referred to as “smart pumps.”

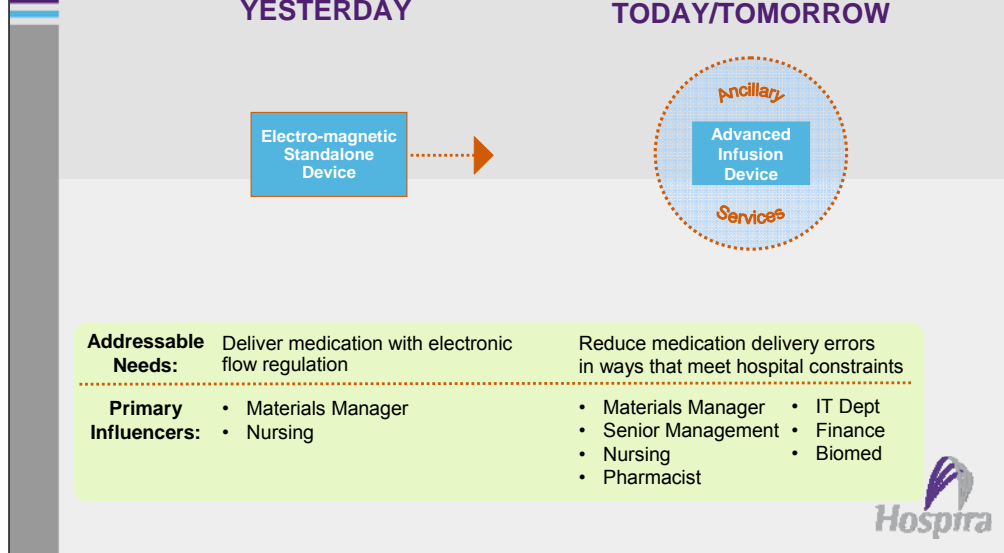
•Smart pumps are increasingly becoming the device of choice for hospitals because of the enhanced safety, convenience and efficiency they provide. Their software component helps reduce medication errors at the bedside, where they are most likely to occur – considerably enhancing patient safety.

•Smart pumps that offer networking or wireless connectivity add further value by enabling caregivers to spend more time on personal patient care.

For more discussion on the safety software component and how it helps reduce medication errors, see pages 22-23. See pages 24-25 for more information on the benefits of connectivity and interoperability.

The Changing MMS Marketplace

The Result – More Complex Purchase Decision



- With the evolution of the product comes parallel changes to the purchase decision process, and subsequently, to the sales cycle.
- When considering a standalone pump, the purchasing decision was usually determined by a hospital materials manager with some input from the nursing staff.
- With the advent of the more complex pump infusion systems that include software applications and networking potential, the functions involved in the decision-making process have expanded dramatically. In addition to the materials manager and nursing staff, the pharmacy group is often involved, as well as the hospital's IT department, Finance, Training ... the list continues, often to the C-Suite, where the Chief Information Officer (CIO) can be involved in assessing whether the system aligns with the hospital's IT roadmap. Even the Chief Financial Officer may provide input on the decision.
- Of note are the findings of the 2006 Healthcare Information and Management Systems Society (HIMSS) Leadership Survey, which showed that half of the CIOs surveyed ranked as among their top five IT priorities the implementation of technology to reduce medical errors and promote patient safety.¹

¹ 2006 HIMSS Leadership Survey – CIO Results; Healthcare Information and Management Systems Society

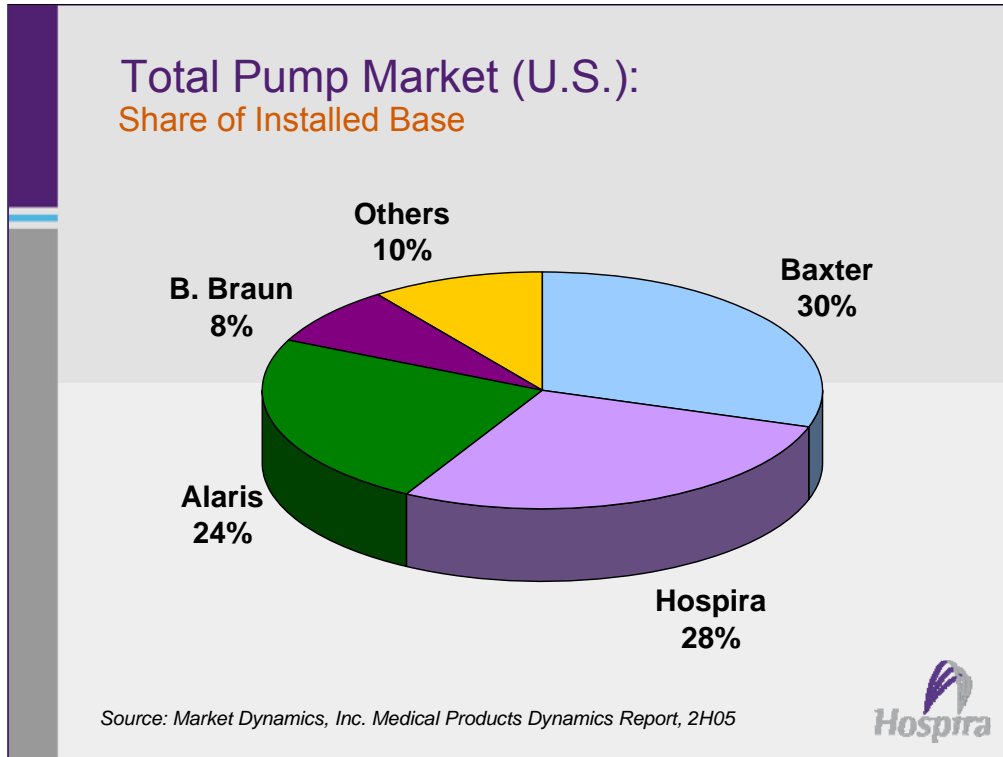
The Changing MMS Marketplace

The Result – Longer Sales Cycle, Longer Implementation Time

- Additional decision makers lengthen the decision process – and therefore the sales cycle
- Implementation of the advanced infusion system requires more time
 - If using safety software application, hospital needs to build and implement a drug database “library” under cross-functional committee oversight
 - If networked, server needs to be set up and interfaced with hospital information systems
 - Hospital optimizes processes to maximize the device benefits of productivity and patient safety



- The growth in the number of decision-makers involved has led to a longer decision-making cycle, and therefore a lengthening of the sales cycle. The implementation time for more complex systems can be longer as well.
- If a hospital elects to use a safety software system with the devices, the hospital has to build the drug database for the system’s drug library, selecting the drugs, dosage parameters and therapeutic categories appropriate for its institution. The library’s content and parameters are often reviewed and examined by a cross-functional committee, adding further time to the process. If the devices are to be networked, the server must also be set up and interfaced with the hospital information system.
- In contrast, the implementation process for standalone pumps simply entailed plugging in the device and testing it to ensure the operability of the drug-infusion process.
- The longer sales and implementation cycles are one of the reasons hospitals want devices that are scaleable, enabling the hospital to upgrade its systems as its needs change. And they value devices that are able to interface with the hospital’s clinical and information systems.
- The opportunity is therefore clear for the MMS supplier whose product is technologically competitive, who has a reputation for quality and reliability, and who has demonstrated a clear ability to evolve with the changing MMS industry.



- The MMS marketplace is valued at approximately \$1 billion dollars and is growing at a projected annual growth rate of at least 4-6 percent.
- More than 1 million pumps are in the installed base of pumps in service in United States, and this base is estimated to be growing at a rate of 1-2 percent.
- Three companies – Hospira, Baxter and Cardinal (Alaris) – account for the substantial majority of market share.

The MMS Opportunity for Hospira Hospira MedNet® on Hospira Pump Platforms



Plum A+

2003: Launched first Hospira MedNet® software platform for Plum A+® Infusion System



Plum A+3

2005: Introduced wireless Hospira MedNet for both Plum A+® and Plum A+®3 (triple channel pump)

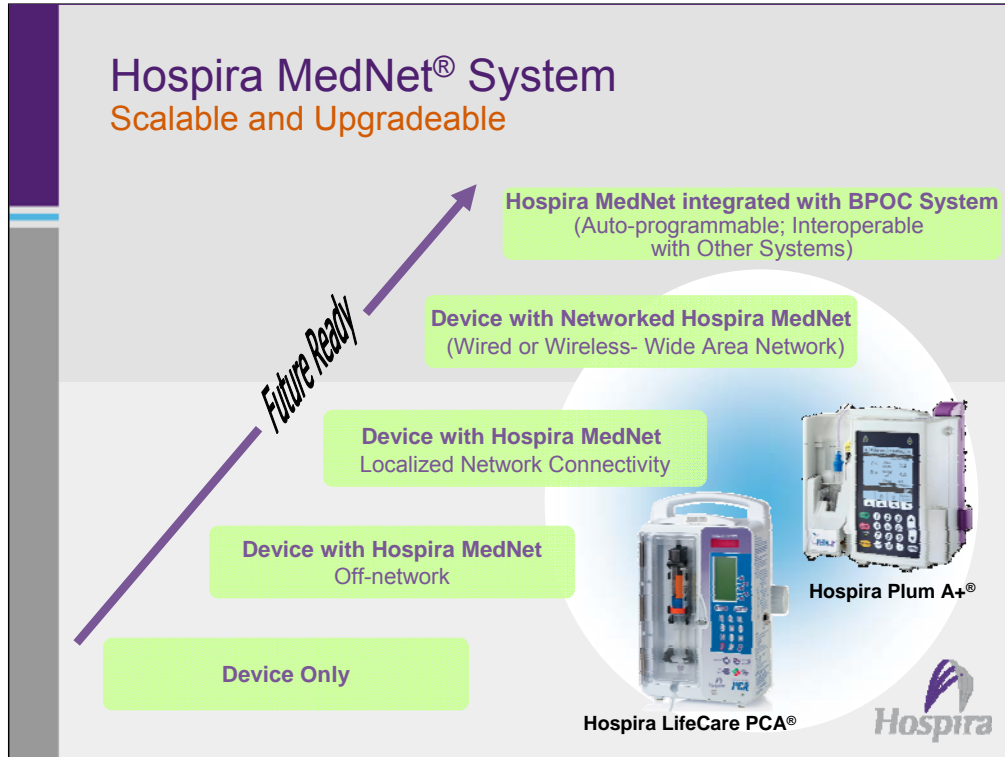
2006: Added wireless Hospira MedNet software for LifeCare PCA® Infusion System



Lifecare PCA



- Given the evolving nature of the industry and its expected growth trajectory, MMS offers a meaningful opportunity for Hospira.
- We have been working aggressively over the last three years to ensure that we can capitalize on that opportunity. Prior to that, while we had a solid line of infusion pumps, we were underinvested in product development and a follower in terms of safety software.
- After having increased our resources to develop our MMS portfolio, we've steadily launched new products and enhanced existing offerings.
- The most important development was the launch of Hospira MedNet®, our customizable, safety software system that promotes safety by defining medication dose limits and tracking I.V. drug delivery and administration. *(More detail on Hospira MedNet can be found on pages 22-25)*
- Last year we further enhanced Hospira MedNet by introducing a wireless version of the software application. Hospira MedNet currently operates on our Plum A+ general infusion and our LifeCare PCA patient-controlled analgesia pump platforms.
- With the launch of these products, we now have a fully competitive, technologically advanced line of offerings.



- A key benefit of Hospira’s medication management systems is that they are scalable and upgradeable. We designed our Plum A+ and LifeCare PCA platforms to be scaleable because customers’ needs change over time. And Hospira MedNet, our safety software application, is available in several versions, offering different levels of features and benefits, including connectivity. This flexibility enables customers to meet their needs today as well as positioning them for the future.
- The range of choice spans from the standalone pump to a Hospira MedNet-enabled infusion device that is integrated with a bar-code enabled point-of-care (BPOC) system. The latter option eliminates the need for any manual programming and can communicate seamlessly with the hospital’s clinical systems.
- Approximately one-third of Hospira’s Plum General Infusion and LifeCare PCA pumps are Hospira MedNet compatible. As we upgrade older generations of our Plum and PCA platforms over the next several years to include Hospira MedNet compatibility, the potential sales of the software system increase as well. The cornerstone of our MMS strategy is, in fact, upgrading installed Plum A+ and LifeCare PCA pump base to the Hospira MedNet family of products.
- Hospira can benefit not only from upgrading our current customer base to more value-added products and making competitive captures, but also from ongoing revenue streams such as the disposable administration sets used in the infusion pumps, and software maintenance. As well, there are incremental revenue opportunities from implementation services.

The MMS Opportunity for Hospira

International Opportunity

- Approximately three-quarters of installed pump base is in U.S.
- International arena presents attractive longer-term growth prospects:
 - Most current pumps outside the U.S. are earlier-generation pumps, providing long-term opportunity
 - We're enhancing the pumps for the international markets
 - Developing language translations in key markets for Plum A+® and GemStar® pumps



- Our installed base of pumps is more than 400,000 worldwide, with approximately three-quarters of the base in the United States in hospital and alternate-site locations.
- Most of our international pump placements are earlier-generation pumps, representing a longer-term opportunity for the company. We are engaged in enhancing the pumps for international markets, beginning with language translations of Plum A+ and GemStar screens for key countries.

Hospira's MMS Portfolio



Plum A+®



GemStar®



Plum A+®3



Omni-Flow®
4000 Plus



LifeCare PCA®



- Hospira offers a portfolio of software solutions and infusion pump platforms.

Hospira's MMS Portfolio

Overview

- Multiple proprietary delivery platforms
 - Plum A+®, Plum A+®3 General Infusion System
 - LifeCare PCA® Patient-controlled Analgesia
 - GemStar® Ambulatory Pump
 - Omni-Flow® 4000 Plus Infusion System

- Hospira MedNet® Software
 - Customizable safety software system:
 - Helps hospitals define medication dose limits
 - Monitors and reports on I.V. drug delivery

- Client Services



•Our portfolio addresses customer needs by accurately delivering and monitoring infused patient medications. This in turn helps promote patient safety, improve caregiver workflow and confidence – and it also can enhance hospital productivity and efficiency.

•Hospira has four lines of infusion pump systems – Plum, LifeCare PCA, GemStar and Omni-Flow – each offering unique features that meet the needs of pump-controlled infusion therapy.

•Hospira MedNet is our safety software system that helps hospitals prevent medication errors with its drug library and I.V. drug delivery tracking features. It currently works with our Plum A+ and LifeCare pump platforms. We will continue to expand Hospira MedNet to additional infusion platforms in the future.

•We also offer MMS client services, such as implementation services to help customers realize the maximum benefits of the Hospira MedNet.

For more information on Hospira's infusion pump systems, see pages 30-33.

Hospira's MMS Portfolio

Infusion Pump Platforms

	Pump Segment	Applications
Plum A+®	General Infusion	Medication Dose Infusion
Plum A+®3	Specialty Infusion	Medication Dose Infusion (triple channel)
LifeCare PCA® LifeCare® PCA3	Patient-controlled Analgesia	Pain Management
GemStar®	Ambulatory Infusion Patient-controlled Analgesia	Pain Management Oncology All I.V. Infusions delivered in an Ambulatory Care Environment
Omni-Flow® 4000 Plus	Specialty Infusion	Advanced Drug Therapy Protocols



- Here is a summary of our infusion pump platforms by pump segment and applications.
- Our pumps are volumetric versus peristaltic, the two most common forms of I.V. delivery. Volumetric delivery uses dedicated disposable cassettes versus standard tubing. (Peristaltic delivery uses rotating rollers pressed against special tubing to create pressurized flow.)
- Cassette technology enables concurrent flow of medication for dual or triple channel medication delivery. It also enables positive valving, meaning that the cassette can be adjusted for primary, secondary or concurrent infusion without the need to adjust I.V. bag height for the proper gravitational flow.

Hospira MedNet® Software System

Features and Benefits

- A customizable software safety system that:
 - Helps hospitals define medication dose limits
 - Tracks I.V. drug delivery

- Hospira MedNet benefits:
 - Reduces medication errors
 - Enhances patient care and safety
 - Assists with performance enhancement efforts
 - Improves clinical workflow
 - Supports caregiver confidence
 - Is scalable

- Hospira MedNet “drug library” database:
 - Capacity for several thousand medication names
 - 18 critical care area designations



- Hospira MedNet, our innovative, customizable safety software system, works with Hospira’s Plum and LifeCare PCA infusion pump platforms to reduce risk and medication errors and their associated costs to hospitals. It also benefits caregivers by simplifying their work flow and providing additional levels of confidence in the medication delivery process.
- Simple to use, Hospira MedNet is designed to meet each hospital’s unique needs through its customizable features, its scalability and its ability to operate with various information systems and other hospital devices.
- Hospira MedNet currently has a capacity for several thousand medication names in its database, or “drug library,” for applications specific to the hospital’s multiple critical-care areas such as anesthesia, pediatrics or intensive care unit, which are designated by the hospital.

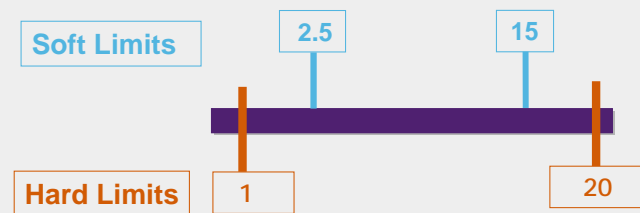
Hospira MedNet® Software System

Key Features

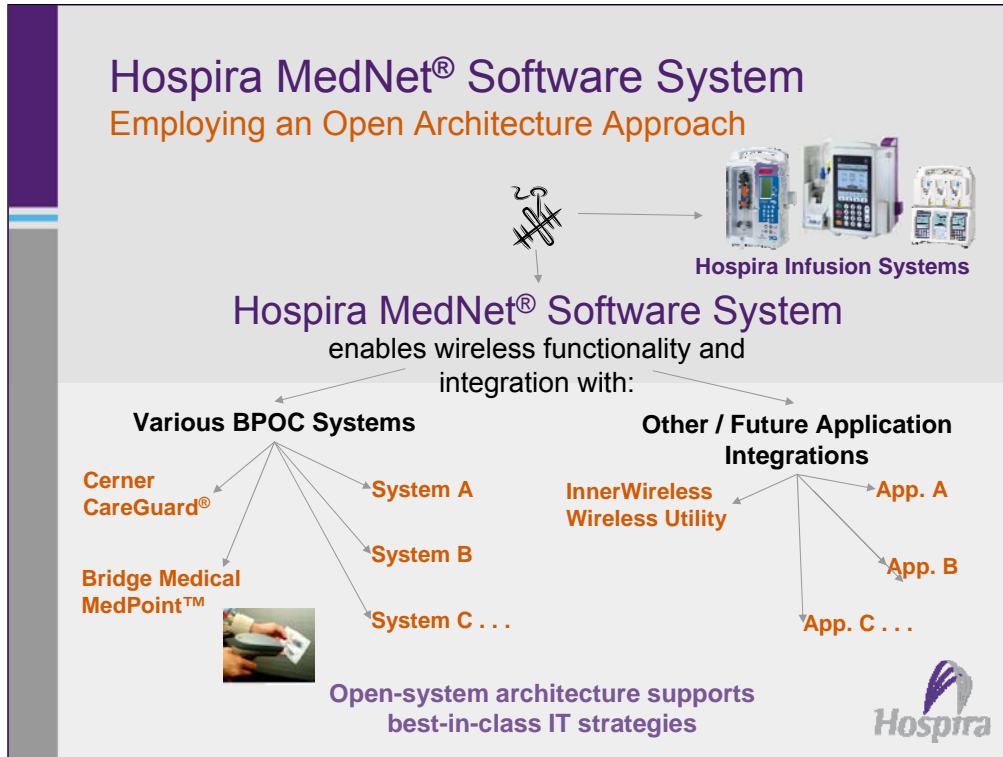
- Allows for customization of drug-name library in device
- Customization of allowable programmed doses on the device, setting soft and hard limits for each drug

Soft Limits – can be overridden by clinician

Hard Limits – canNOT be overridden by clinician



- The hospital chooses which drugs to include in its customized drug library, and defines the dosage limits for each medication.
- Hospira MedNet was the first drug-library software to offer both “soft” and “hard” dose and rate setting limits for both primary and secondary infusions, which allows caregivers to tailor medication doses and rates suitable for their patients, in accordance with the hospital’s best-practice guidelines. Soft limits can be overridden by the caregiver after confirming the medication parameters; hard limits cannot be overridden.
- The limits are determined before the drug library database is installed by the hospital’s pharmacists, nurses and other clinicians with the support of Hospira’s pharmacy consultants, who leverage an extensive knowledge base.
- Once the Hospira MedNet-enabled pump is in use, if a dosage is set outside the soft limits, the pump displays an alert, requiring the caregiver to confirm the dosage parameters. A dosage outside the hard limits generates an alert requiring the caregiver to completely reprogram the infusion parameters. This feature – which cannot be overridden – is designed to prevent potentially serious medication errors.



- We engineered Hospira MedNet to be able to operate and integrate with other hospital technologies, employing an “open architecture” approach. This means that, unlike some safety software applications that interface only with certain vendor information technologies, Hospira MedNet supports integration between Hospira’s pump platforms and multiple hospital technologies, systems and devices.
- Among the systems of increasing interest to hospitals are those employing bar-code enabled point-of-care (BPOC) technology. BPOC systems allow caregivers to identify and confirm key information, such as patient identity, medication and the infusion device – all with a simple scan of a BPOC device.

Hospira's Collaborative Approach

Focus on Integration and Interoperability

- Hospira is working with a number of hospital technology providers to integrate product offerings with existing hospital platforms
 - Announced:
 - Cerner
 - Bridge Medical
 - Also working with other clinical information system (CIS) providers
- Example: Hospira/Bridge Medical
 - Collaboratively integrating Hospira MedNet® and Bridge Medical's MedPoint™ bar-code enabled point-of-care (BPOC) system
 - Supports enhanced patient safety
 - Eases caregivers' workflow and increases confidence
- Partnering with other providers as well
 - Hospira's relationship with InnerWireless: helps improve patient safety by guaranteeing secure and reliable wireless in-hospital data transmission



- Hospira is partnering with most other industry-leading hospital technology providers, using a collaborative approach to integrate our MMS product offerings with existing clinical information platforms and other systems. Integration and interoperability are increasingly important as hospitals continue to drive increased patient safety and reduce medication errors.
- Hospira's collaboration with Bridge Medical is a good example of this approach. Working together, we are integrating Hospira MedNet® with Bridge Medical's Bridge MedPoint™ bar-code enabled point-of-care (BPOC) system for caregivers.
- The resulting integration means that Hospira's infusion devices become interoperable with BPOC devices, further helping to ensure the patient's "five rights" – right drug, right patient, right dose, right time and right route of administration – and reducing the risk of medication error at the patient bedside. The integration also enables automatic programming of the pump, which means the caregiver has more time to devote to personal patient care. And in many cases the integration boosts caregiver confidence in managing bedside delivery of infusions.
- Hospira is working with other providers as well. We were the first infusion therapy device provider to offer interoperability with the InnerWireless Medical-grade Wireless Utility, an in-building wireless system designed to guarantee wireless coverage inside hospitals and other large buildings. Connectivity between the utility and Hospira's medication management systems works to ensure the secure, reliable transmission of data wirelessly in the hospital, further helping to improve patient safety.

Hospira's MMS Portfolio Strengths and Strategy

- **Significant scale and presence in U.S. hospital and alternate site markets**
 - Installed base of more than 400,000 pumps worldwide
 - Multiple proprietary electronic drug delivery infusion system platforms
- **Opportunity for growth in international markets**
- **Integrated solutions to medication delivery addressing medication errors**
 - Hospira MedNet® System with wireless capability
 - Hospira MedNet – customizable “Drug Library”
 - Interfaces with the hospital information systems using an open architecture approach
- **Scaleable, upgradeable solutions provide growth opportunities**
 - Upgrading the installed Plum A+ and LifeCare PCA base to Hospira MedNet® software system is the cornerstone of our MMS strategy.

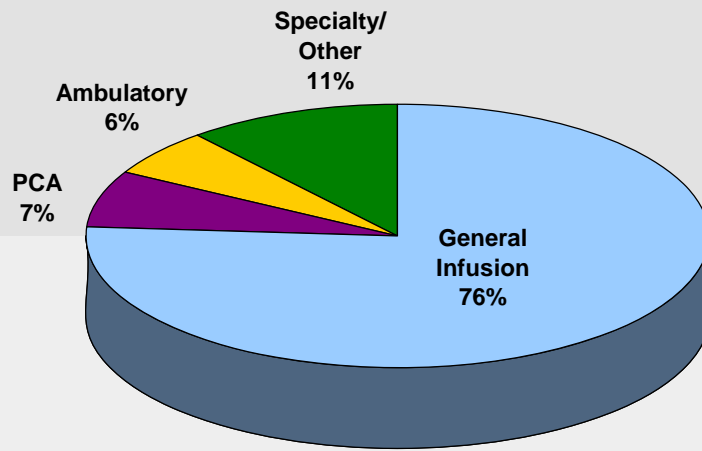


- You can therefore see how, by enabling safe, efficient medication delivery, Hospira's portfolio of Medication Management Systems products clearly works to meet the growing needs of hospitals in many ways – helping them reduce medication errors and enhance patient safety; enabling continuous quality and productivity improvement; giving them more flexibility and choice; protecting their existing technology investments and at the same time positioning them to flexibly and effectively meet their future medication and technology needs.
- We believe that the investments we have made over the past several years position us very competitively within the MMS market. We plan to continue enhancing our MMS product portfolio through our innovative and integrated approach, as we see substantial opportunity in the MMS market to drive growth.

Other Reference Material



U.S. Installed Base By Pump Type



Estimated total U.S. hospital installed base: 1.1 million devices

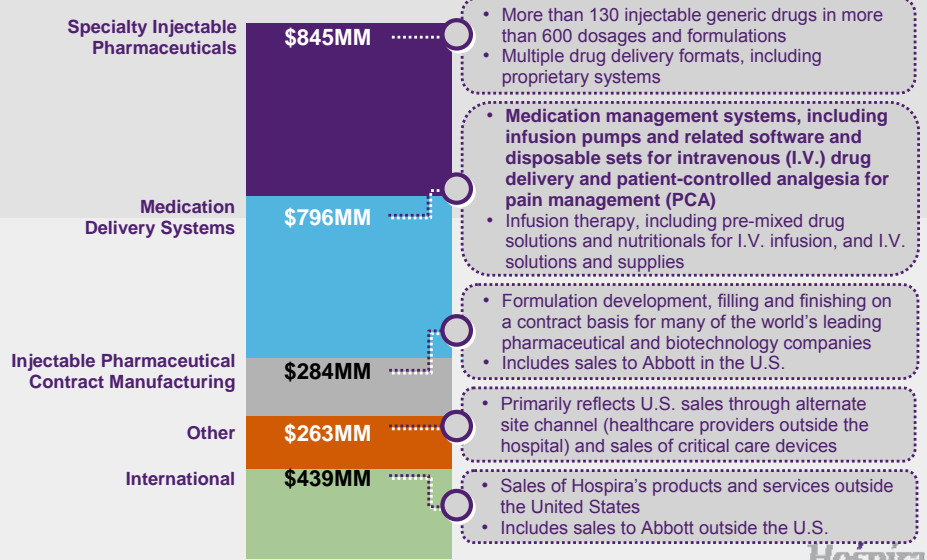
Source: Market Dynamics, Inc. Medical Products Dynamics Report, 2H05



- The profile of Hospira's installed pumps is similar to that of the general U.S. market.

Balanced Portfolio of Products

\$2.6 Billion in 2005 Sales



30



Hospira's Infusion System Platforms

Plum A+® and Plum A+®3

- **General infusion devices**

- Multi-purpose, multimodal device – provides precise delivery for multiple therapies across the general spectrum of clinical care

- **Features and benefits**

- PlumSet® IV tubing and cassettes enable safe and accurate programmed infusion delivery:
 - Supports primary and secondary (“piggyback”) infusions
- Dual medication channels (three lines); three channels (six lines) for Plum A+3
- Programmable standby settings and mandatory accuracy checks
- Backflow feature eliminates air in tubing
- Anti-free-flow protection prevents unintended flow of medication when the I.V. set is removed from the device
- “Plug & Play” platform enables instant onsite software enhancements, upgrades and customization

- **Compatibility**

- Compatible with Hospira MedNet® safety software



- The Plum A+ line of pumps offer precise delivery of general infusion therapies across multiple areas within a hospital or clinic for patients receiving general or specialty infusion therapy.
- Versatile and easy-to-use for the clinical staff, the pump systems provide strong overall performance in a variety of settings and allow healthcare workers to view and program three screens at one time and in one place helping to simplify medication management.
- Our most recent addition to the Plum line, the Plum A+3 infusion system with built-in Hospira MedNet software, is a single device that combines three Plum A+ general infusion pumps with Hospira MedNet software into one unit. This wireless-enabled system supports up to six intravenous (I.V.) lines to help healthcare professionals better manage complex medication-dosing regimens typically seen in emergency rooms, intensive care units and oncology centers. The pump's multi-channel design enables the administration of several infusions simultaneously or in specific tiered sequences based on the individual patient's needs – using only one device, which helps address space-constraint issues. And because the clinician can view and program three screens at one time and in one place, the Plum A+3 can help simplify overall medication management.
- Well-established with a strong track record for quality care, Hospira's Plum pumps are compatible with Hospira MedNet safety software.

Hospira's Infusion System Platforms

LifeCare PCA®, LifeCare® PCA3

- **Pain management**

- Patient-controlled analgesia (PCA) device
 - Allows patients to control pain medication within carefully prescribed limits

- **Features and benefits**

- Provides precise dosage and flexible programming capability
- Provides dosing controls for self-administration of pain medications
- Uses pre-filled bar-coded drug syringes
- Integrated bar-code technology promotes safety and efficiency
 - Automatically identifies drug name and dosage
- Logs all system events, alerts and actions

- **Compatibility**

- Compatible with Hospira MedNet® safety software



- The LifeCare PCA infusion system is a patient-controlled analgesia (PCA) device with additional capabilities that allow hospital patients to control the flow of their pain medication, within carefully specified limits.
- Hospira is recognized in the industry as a pioneer in the field of PCA technology, introducing the industry's first PCA pump more than 20 years ago while part of Abbott. Today, seven out of 10 PCA devices used in hospitals in the U.S. are Hospira products, and we continue to enhance the pumps' capabilities and safety features.
- To this point, LifeCare PCA is the first and only pain management medication delivery system with a built-in bar code reader compatible with pre-filled, bar-coded medication vials – including pharmacy-generated bar codes for custom-filled medication vials. The bar-code reader ensures that the patient is receiving the right drug in the right dosage, and the device requires a review and confirmation of all data before any infusion begins.
- LifeCare PCA was designed specifically to help hospitals reduce the potential for error in administering pain management medications, which are mainly analgesics – or narcotics – the class of drug with the highest frequency of adverse drug events (ADEs). And with its compatibility with Hospira MedNet safety software, the LifeCare PCA system provides additional patient safety features, enabling precise dosages and administration flexibility, as well as logs of all the system's events, alerts and actions.

Hospira's Infusion System Platforms GemStar®

- **Ambulatory pump**
 - Multi-therapy single-channel device

- **Features and benefits**
 - Small, lightweight, and durable
 - Portable; useable across the full spectrum of care
 - From ambulatory to acute-care use
 - From hospital settings to patients' homes
 - Easily programmable with advanced software for customized therapy configuration
 - Versatile
 - Enables delivery of multiple therapies
 - Supports patient mobility



- The GemStar Infusion System is a small, lightweight single-channel pump with advanced software enabling customized therapy configurations. Its keypad and programming designs have been developed to improve the speed and accuracy of clinician programming and data entry.
- GemStar comes in three color-differentiated models, allowing for easy identification of the pump's application. The yellow GemStar denotes pain management applications. The gray GemStar delivers six therapies, excluding pain management. The blue GemStar can infuse seven different therapies, including pain management.
- GemStar's enhanced security features – four keypad lockouts (preventing non-authorized people from programming the device), free-flow protection, pain management hard dosage limits, and mandatory confirmation screens – all support patient safety, a key consideration of all Hospira devices.
- GemStar can be used in a variety of settings. Its small size, durability and light weight make GemStar an invaluable support for patients making the transition from the more restricted hospital environment to settings where they need greater mobility, such as at home or in public settings. Even within restricted environments, GemStar gives patients a much greater degree of mobility and sense of independence.

Hospira's Infusion System Platforms

Omni-Flow® 4000 Plus

- **Specialty pump**

- Multi-channel device

- **Features and benefits**

- Enables efficient, safe delivery of complex therapies in a streamlined manner
 - Can deliver four medications/solutions concurrently through one line
 - Closed-delivery system reduces risk of exposure for clinicians to toxic oncology medications
- Can be programmed up to 24 hours in advance for continuous and/or intermittent dosing
- Has a unique flush capability that helps in delivery of incompatible medications
- Is small and compact; ideal for “real-estate short” areas such as operating rooms
- Ease of operation facilitates complex medication regimens



- The Omni-Flow 4000 Plus infusion system was designed to address the high demand that specialized care frequently requires. Needed in a wide variety of hospital settings, where space is often limited, special infusion use can range from simple nutritional support to complex, multi-stage chemotherapy.
- Omni-Flow is a compact infusion system that can infuse as many as four medications and solutions through one patient line, freeing up time caregivers would otherwise have to spend managing multiple single-line devices. Furthermore, its closed-delivery system provides an additional layer of caregiver safety when priming and administering often toxic chemotherapy solutions.
- Its programming features allow caregivers to program treatments up to 24 hours in advance for continuous and/or intermittent dosing, useful in workflow management.

To Learn More

Online Information

- **Hospira Overview**
 - Hospira Corporate Profile
 - Hospira Investor Presentation
- **Hospira MedNet®**
 - Hospira MedNet® Software
 - Bar Coding and Patient Safety
- **Hospira Infusion Systems**
 - Plum A+® Infusion System
 - Hospira Introduces Plum A+®3 Infusion System with Hospira MedNet® Software
 - Hospira Introduces LifeCare PCA® Infusion System
- **Medication Management Reference**
 - Medication Management Systems Glossary of Terms



- Click directly on the document title to go directly to its location on Hospira's Web site or visit the Web site at www.hospira.com.

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Advancing Wellness™ ...

through the right people and the right products



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