



White Paper:

Solutions to Consumption-based Supply Chain in Healthcare

A Microsoft Dynamics GP Solution Paper

Executive Summary

The challenges confronting all healthcare providers / organizations today are numerous and often daunting. With the ever increasing revenue and cost challenges confronting all areas of healthcare, the large expenditures made in materials purchasing and management need to run efficiently and at the lowest possible cost per patient.

This paper determines that the truest solution for complex, healthcare Materials Management is one that works in collaboration with all key aspects of the organization – not in isolation.

The **Binary Stream Software Healthcare Materials Management** solution addresses these critical areas and more. With a solution that combines a wide footprint of functionality from internet-based applications to PC applications to Handhelds, it also offers powerful mass processing features designed to streamline many of the arduous tasks encountered by busy, Materials Management departments in healthcare organizations today.

Objective of this Document

The objective of this document is to define some of the key strategic issues facing healthcare as it relates to Materials. From here, the paper focuses on the main functional areas of Materials workflows, the difficulties encountered, and how Binary Stream's Healthcare Materials Management can help solve or streamline these functional areas in a busy Materials Management setting.

Who Should Read this White Paper?

This paper is focussed on healthcare organizations that have significant investments in materials that are used / consumed within the normal operations of their business. This is assumed to include larger patient clinics operations, as well as hospitals / hospital groups for the purpose of this paper.

People who will find value from this paper will vary but it is assumed that senior management – whether it be Materials-related, financial, operational, etc – are all key stakeholders in the overall “success” of a healthcare operation, regardless of how that success is measured.

The “Business” of Healthcare

The face of healthcare has changed greatly over the last fifty plus years due to changes in many aspects of life and society.

Traditional healthcare advocates maintain that healthcare has always been about easing pain and suffering first and foremost – that financial compensation for such services is at the least, secondary. This position has always maintained that healthcare and the practice of healthcare is a calling first – not a financial “means to an end”.

And while we can all take some solace from this more “romantic” view of healthcare, the realities of our world tell us something quite different. And that reality is that healthcare is – and has always been – a business. The business provides value to its customers and in return, receives value from its clientele – aka patients – in the form of financial compensation.

So now that we have suggested that healthcare is a business, what does it hope to achieve / maximize? For-profit organizations would argue that “profit” is the overall objective, quite predictably. Not-for-profits may not be in the “business” of maximizing profits but must derive enough funding or revenue to continue to operate to cover its operating costs.

Accordingly, healthcare organizations of today both profit-driven and non-profit must be able to finance themselves and be economically viable in today’s world.

Primary Cost Drivers in Healthcare

The primary cost areas in healthcare do not vary greatly from that of other organizations. It takes both human labor to drive operations and materials consumption to produce the services that are required for patient care.

Accordingly, the largest single cost a healthcare organization incurs is labor in the form of wages and salaries. The second largest cost a healthcare organization must incur is materials – whether it be in the form of daily “consumables” or items which have longer term usage in terms of their useable lifespan.

The management of materials resources has come under greater management scrutiny in recent years. “Patients deserve and expect a high level of service, medical professionals are adapting to new clinical demands and research solutions, and administrators must focus on managing resources as effectively as possible. These pressures have led to a rethinking of administrative approaches, especially for back office functions such as supply chain management.” (BPS Supply Chain Secretariat, 2006)

Primary to “managing” this large cost area are questions that must be defined within the healthcare organization:

- What is the determined level of care required by the organization in regards to the materials it must expend / purchase?
- How can this level of care be delivered in a way to minimize the total cost of materials – both consumable and longer term assets – in a consumption-based supply model?

It is this second question that we will investigate in greater depth within this paper.

Best Practices in Healthcare Supply Chain

This is a complex topic given the different types and levels of healthcare providers that exist. What may be relevant to effective materials management in a hospital environment may not be relevant to a physician clinic for example.

Accordingly, it is difficult to find contemporary articles that “guide” healthcare material practitioners toward an optimal model. There are usually more “vision approaches” suggested that cover specific strategic areas where the reader must then distil this vision down to more optimal ways of operating.

One such “vision statement” is cited in a Ontario Hospital Supply Chain Metrics Working Group report entitled “Performance Measurement” - (BPS Supply Chain Secretariat, 2006). The article suggests a 4 pillar vision:

Plan – Informed decision-making through effective anticipation of product supply and demand,

Source and Procure – Excellence in strategic and transactional interactions with end-users and suppliers, enabled by e-supply chain tools and processes,

Move – Right product, right place, right time – effectively and responsively, and

Pay – Realization of supply chain efficiencies through supply chain-payables integration and e-commerce.

These strategic vision “pillars” align very well to the functional areas covered in the Binary Stream Healthcare Materials Management solution.

Functional Areas in Healthcare Materials Management

Above and beyond the strategic nature of delivering materials at minimum cost to a desired level of patient care as described above, Materials Management in healthcare must be broken down into its functional, operating elements to see where its true challenges lie.

- Consumption areas – such as nursing units or clinical departments – that need to “**requisition**” the materials they need,
- The materials “acquisition” areas of the organization – usually purchasing – that “**procures**” all needed materials,
- How materials are received or “**fulfilled**” as needed,

- How materials are "issued" / distributed to each consumption site for its required use in patient care, and
- **Reporting and Finance** feedback which not only reports on current inventory levels on a site-to-site basis but also can report on item usages – now and forecast into the future, cost reports which determine the financial implications of these operations not to mention the tie-ins to other key areas of healthcare operations i.e. Patient billing.

*It is the understanding of the issues within each of these functional elements and the streamlining of them that the balance of this paper will concentrate on. We will attempt to show how software applications such as **the Binary Stream Materials Management solution for Healthcare** can help enable the objectives of a busy materials management environment in healthcare.*

Requisitioning of Materials

The requisitioning of materials to numerous consumption sites in a busy healthcare organization has always been a challenge for a number of reasons. Some of these reasons are:

- Large numbers of people within the organization need to requisition materials as they need them. These people may not know where these materials come from or the most efficient / cost effective way to obtain them – they only know that they need them to treat patients.

The large number of users that need to access a system to requisition goods translates into high software license cost that every organization tries to minimize.

To counter these potentially high user software costs, Binary Stream Software has enabled Healthcare Materials Management to "integrate" to particular, best of breed, third party internet-based requisition applications. In doing so, large number of requisition users can requisition items into the system at minimal cost. Please contact Binary Stream for the latest list of approved, internet-based requisition applications that we currently integrate to.

- Many healthcare environments operate "24/7" and may need a combination of centralized vs. decentralized methods in which to get materials to patients within short periods of time.

Binary Stream's Healthcare Materials Management software can work in both centralized and decentralized modes. Using an approved, third party requisition application, materials requests can go through quick procurement cycles where the users can order goods directly through these internet-based applications described above – bypassing the more centralized processes of centralized purchasing. The resulting purchases still work their way down into

the rest of the Binary Stream Healthcare Materials Management system as needed.

In a centralized mode, third party requisition applications work only to pass “approved” requisitions to purchasing. When they do this, the system determines whether the item is one that is normally kept in stock (tagged as a “stock” item) or one that that must be brought in from a vendor as it is not kept in stock (called a “non-stock” item).

The screenshot shows the 'Item Maintenance' window for item 000007. The description is 'DRESS, POLYMEM 3X3 inch FERRIS'. The 'U of M Schedule ID' is CS/BX/EA. The 'Group Code' is 7150. The 'Quantity Decimals' is 0 and 'Currency Decimals' is 3. The 'Patient Charge Code' is 4. The 'Patient Charge Amount' is \$0.00. The 'Stock' radio button is selected, and it is highlighted with a red box. Other fields include 'Standard Cost' (\$2.500), 'Current Cost' (\$2.563), 'Purchasing Cost' (\$0.000), 'Issue Cost' (\$0.000), 'Patient Charge Cost' (\$0.000), 'Primary Vendor' (A02059 - CARDINAL - ALARIS PRODUCTS), 'Vendor Part Number' (RFG556), 'Phone' ((800) 482-4822 Ext. 0000), 'Fax' ((000) 000-0000 Ext. 0000), 'Contract ID', and 'Expiration Date' (0/0/0000). The 'Chargeable' checkbox is checked, and the 'Item Type' is 'Sales Inventory'.

Stock items can then be routed from an inventory “site” within the organization that has the item requested disregarding the need to purchase it unless it is out of stock from the replenishment site.

An approved requisition with a non-stock item – which is not kept in stock – gets sent immediately to a PO Preview queue that allows buyers to purchase it.

- Due to the financial ramifications of the requests, an approval process may be needed before such materials requests can be fulfilled.

The approval processes of the third party requisitioning packages are embedded into each product. They normally send email notifications to each approver. The approval process normally works on dollar amounts / limits.

Procurement

Note: As we have illustrated above, Binary Stream Healthcare Materials Management can work in both decentralized procurement mode - using third party requisitioning packages shown above – or in a centralized purchasing mode. The balance of this paper will focus solely on using Binary Stream Healthcare Materials Management in a centralized mode.

Consumption-based procurement normally operates in two distinct workflows

1. Ordering specific goods from a user requisition

This is somewhat illustrated above in the PO Preview example. Once an approved requisition comes down into purchasing – for say a non-stock item – it can either be purchased directly through PO Preview or procured through the PO Entry interface shown below.

Purchase Order Entry sa Healthcare Materials Mgt 8/25/2009

File Edit Tools View Options Additional Help

Save Blanket Actions Process

Type: Standard Hold

Project Type: None

PO Document ID: REQPO Vendor ID: A02059

PO Number: REQPO21 Name: CARDINAL - ALARIS PRODUCTS

Buyer ID: aadams Currency ID:

Date: 5/29/2007 Transmission Method: Email

Site ID: 04S Ship To:

Facility: 01 Trade Discount:

Allow Sales Documents Commitments

Line	Item	U of M	Quantity Ordered	Unit Cost	Contract ID
1	000007	CS/6/6	5	\$92.268	
	DRESS, POLYMEM 3X3 inch FERRIS	04S	0	\$461.34	
0			0.00	\$0.00	
			0.00	\$0.00	

Remaining PO Subtotal: \$461.34

Subtotal: \$461.34

Trade Discount: \$0.00

Freight: \$0.00

Miscellaneous: \$0.00

Tax: \$0.00

Total: \$461.34

Purch Addr Tax Sched:

Comment ID:

Note the following features specifically designed by busy healthcare situations:

PO Document Types – You can define Types different POs. For instance, you define a PO type for typical consumables, another for Capital Projects or maybe another for items that come from requisition requests as per the above example (a “REQ” PO type).

Site ID / Facility – The specific inventory “Site” and specific facility associated to the PO.

Project Type – Whether the PO should be assigned to a specific capital project or not.

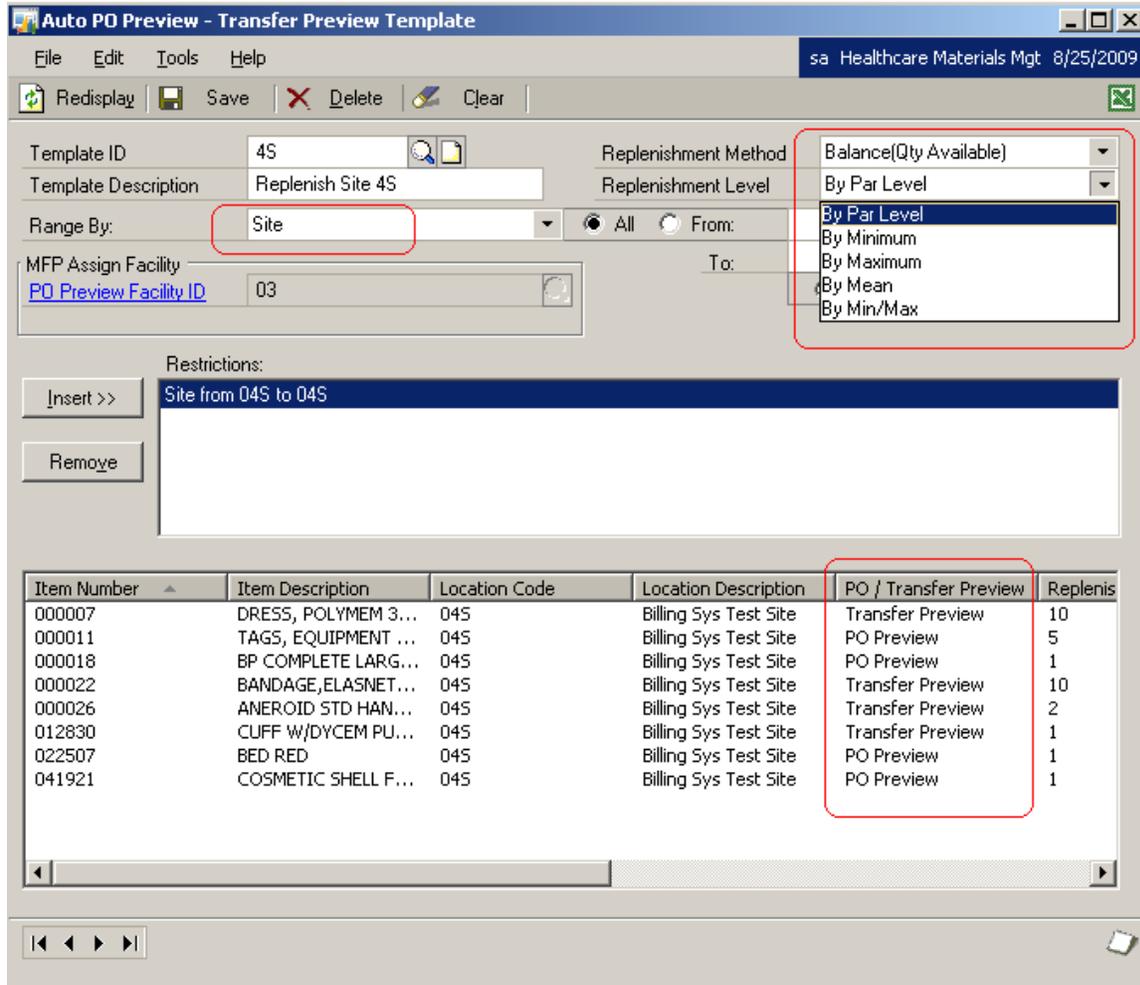
U of M – On every PO, the Purchasing Unit of Measure is defaulted – in this case, a Case of 6 boxes of 6 each (CS/6/6).

Contract ID – Whether a special Contract price is in force for this product for this vendor.

2. Ordering goods to replenish an Inventory site

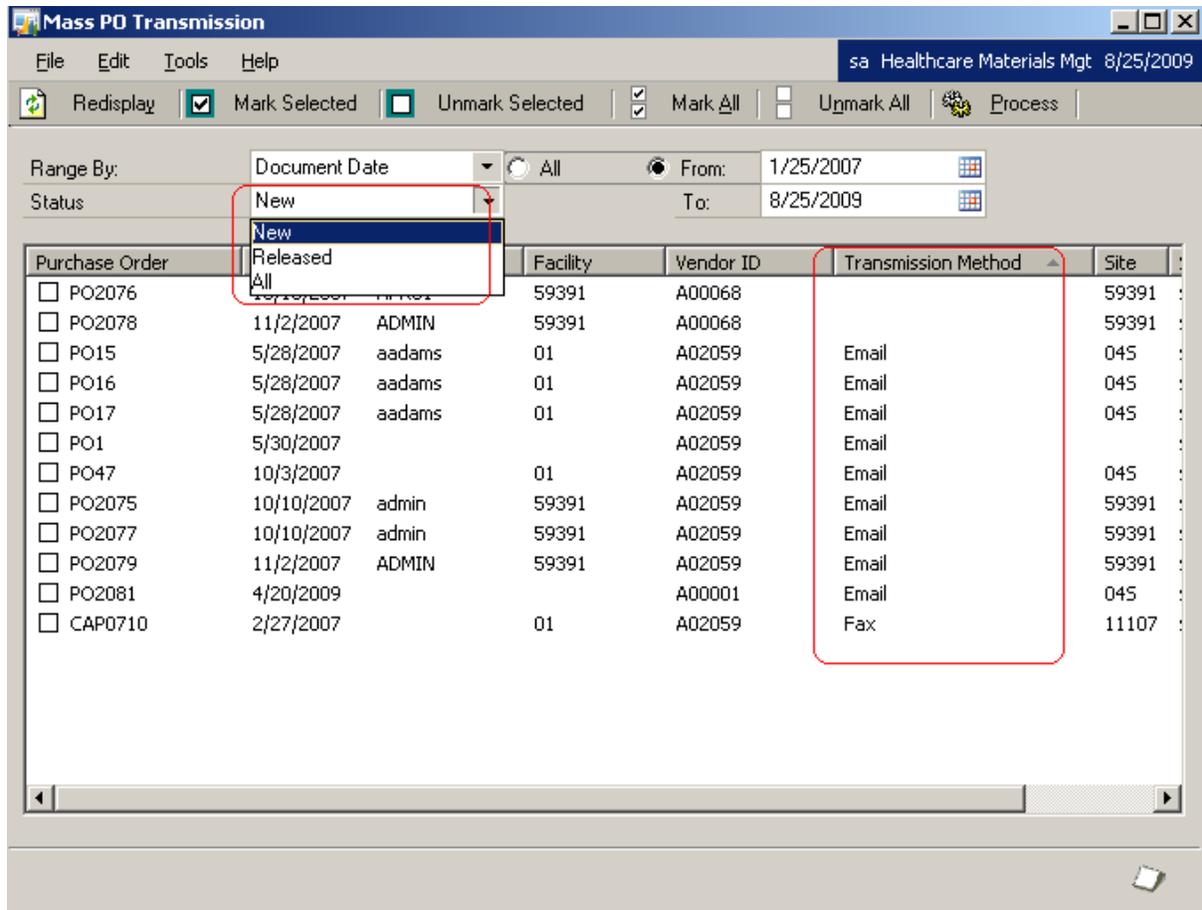
This is also known as site replenishment. Better Materials systems should have an automated way to replenish sites from their existing stock levels to a desired level – whether it be minimums, maximums, Par levels (which will be described later), etc.

Binary Stream Healthcare Materials Management provides this functionality and more.



One inventory site can be replenished at once or many. As well, where some items will be replenished from stock sites within the organization – the lines “Transfer Preview” above – others must be purchased from outside vendors – “PO Preview”.

Once many POs have been generated during a heavy day of purchasing and through the mass PO automation shown above, Binary Stream Healthcare Materials Management has automated tools to send all PO confirmations off en-mass versus one by one after each PO generation.



There are many different transmission methods from Email, Fax, EDI, etc. By selecting the appropriate lines and processing, all selected POs will be sent off to the individual supplier(s). Once sent, the PO status changes from “New” to “Released” in MS Dynamcis-GP.

Fulfillment

Fulfillment not only covers the receiving of goods into the organization but also Inventory Site Maintenance and Par level maintenance at each site.

As well, the use of handheld scanners is now becoming more prevalent in busier healthcare environments as a way of streamlining busier receiving areas.

1. **Receiving** – The receiving of goods in a typical consumption-based organization has two facets – the physical receiving of the goods and the delivery of such goods to specific consumption sites “on receipt” in some cases.

Receivings Transaction Entry sa Healthcare Materials Mgt 8/25/2009

File Edit Tools View Options Additional Help

Save Delete Void Post Auto-Rcv Reports Delivery Ticket PiggyBack

Type: Shipment
 Receipt No. RCT1179
 Vendor Doc. No. AWEF
 Date 8/13/2009
 Batch ID NEW BATCH
 Project Type None

Vendor ID A02059
 Name CARDINAL - ALARIS PRODUCTS
 Currency ID
 Site ID 04S
 Facility

PO Line	PO Number	Item	U of M	Site ID	Quantity Ordered	Quantity Invoiced	Extended Cost	Vendor Contract
2	053007-59391-1	000011			5	5	\$10.000	2
	BX/10	59391			5	0	\$50.00	123-7899
	TAGS, EQUIPMENT RENTAL			01	5	0	0.00	0
	0				0.00	0.00	\$0.00	
					0.00	0.00	\$0.00	
					0.00	0.00	\$0.00	0.00

1099 Amount \$0.00
 Payment Terms
 Landed Cost Func. Total \$0.00

Subtotal \$50.00
 Trade Discount \$0.00
 Freight \$0.00
 Miscellaneous \$0.00
 Tax \$0.00
 Total \$50.00

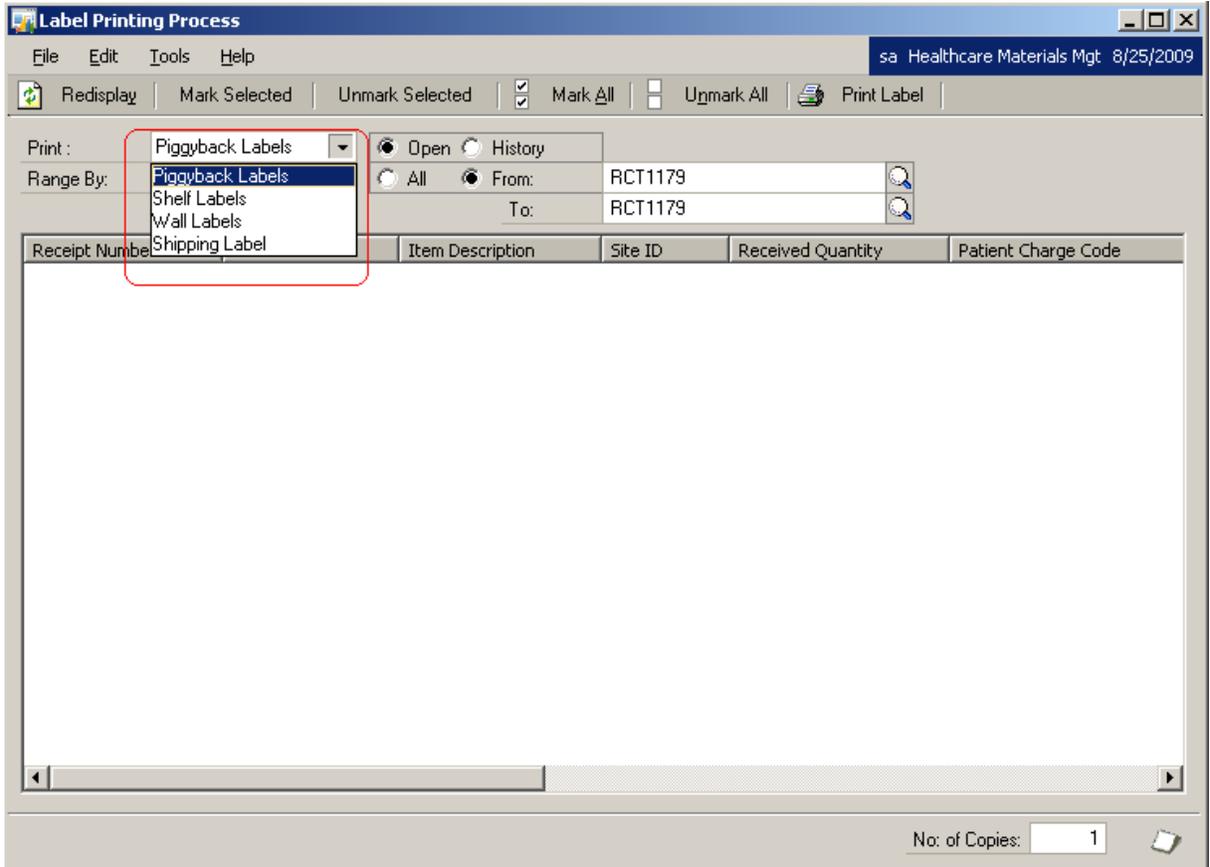
Tax Schedule ID

Landed Cost Distributions User-Defined

Auto-Receiving allows users to receive goods over many lines / many Pos very quickly. Goods received but destined for immediate shipment to a consumption department can be instantly sent with a Delivery ticket.

Facility Delivery Document										
Vendor : CARDINAL - ALARIS PRODUCTS 3698 COLLECTIONS CENTER DRIVE CHICAGO IL 60693				Comment:				PO Type: Shipment Composed by: sa Delivery Date: Purchasing LIC		
A02059										
Service Rep:		Phone: (000) 000-0000 Ext. 0000								
Description	Item Number	Contents	Mtg Catalog	Site	Site Description	Order Qty	Recvd to Date	Qty Recvd	Recvd Cost	Bin
TAGS, EQUIPMENT RENTAL	*000011*	BX/10	000011	*59391*	Central Supply	5.00	5.00	5.00	\$50.00	

Labels – whether needed to put goods into central supply locations or just used to identify goods – can be instantly run on demand during the receiving process.



2. **Inventory Site Maintenance** – Inventory sites in healthcare can have many functions – they can be as small as a nursing cart on a floor that only dispenses materials to patients, they can both dispense materials and replenish others or just replenish other sites.

Sites can have their items controlled at Par levels, can have the right to requisition goods in decentralized modes, to act as a replenishment site and to be replenished by a (default) replenishment site. So, whether a site is a small nursing cart or a large central stores, Binary Stream Healthcare Materials Management handles them through the same interface.

3. **Par Level Maintenance** – “Par” is a concept used extensively in healthcare. It is an arbitrary amount / inventory level of any item in stock. It is desired level of inventory for an item at a site. It may be different than a maximum number, a minimum number or an average. It is what the organization feels that they must carry to ensure proper patient care.

Par List Maintenance

File Edit Tools Help sa Healthcare Materials Mgt 8/25/2009

Save Clear Delete Copy Print Export Find Redisplay

Site ID: 04S Billing Sys Test Site Par Generic Location Date: 9/27/2006
 Default Replenishment Site 59391 Central Supply Requisition Replenishment Site User ID: mwheatley

Line Items by Order Entered

Item Number	Item Description	U Of M	Replen Site	Replen Site Description	Stock	Par Qty	Current Cost	Par Cost
012830	CUFF W/DYCEM PUSHNG	PR	59391	Central Supply	<input checked="" type="checkbox"/>	1	\$28.720	28.720
000022	BANDAGE,ELASNET SUR	BX	59391	Central Supply	<input checked="" type="checkbox"/>	10	\$0.000	0.000
000026	ANEROID STD HAND HEL	EA	59391	Central Supply	<input checked="" type="checkbox"/>	2	\$15.460	30.920
000011	TAGS, EQUIPMENT RENT		59391	Central Supply	<input checked="" type="checkbox"/>	5	\$0.000	0.000
000018	BP COMPLETE LARGE AD		59391	Central Supply	<input checked="" type="checkbox"/>	1	\$0.000	0.000
041921	COSMETIC SHELL FOR LF		59391	Central Supply	<input checked="" type="checkbox"/>	1	\$0.000	0.000
000007	DRESS, POLYMEM 3x3 in	CS/6/6	59391	Central Supply	<input checked="" type="checkbox"/>	10	\$92.268	922.680
022507	BED RED	EA	59391	Central Supply	<input checked="" type="checkbox"/>	1	\$42.000	0.000
					<input type="checkbox"/>	0.00	\$0.000	\$0.00
Totals:						31.00	\$136.44	\$982.32

Navigation: << < > >>

Sites can have their items controlled at Par levels, can have the right to requisition goods in decentralized modes, to act as a replenishment site and to be replenished by a (default) replenishment site. So, whether a site is a small nursing cart or a large central stores, Binary Stream Healthcare Materials Management handles them through the same interface

Handheld devices and Bar-Coding – One of the fastest growing areas in hospital materials management today. Handheld devices with bar code scanners make product recognition quick, simple and with less errors.



While Materials' Handhelds are primarily used by warehouseman in Central Stores, many more are being used at the consumption site level to keep current inventories in balance and issuing goods to patients.

Consumption / Issuance

To this point, we have covered many of the issues concerned with getting materials to the foot of the patient. But the act of "issuing" these goods is fraught with issues for today's healthcare centers.

The issue many healthcare organizations wrestle with is how and when to expense / relieve goods out of inventory. The problem is one of control. Many healthcare organizations do not have the workflows in place to instantly expense goods from a consumption site inventory to a patient i.e. perpetual inventory control. Staff at healthcare consumption sites have the primary responsibility of patient care – not relieving inventory from computers.

This has meant that many healthcare organizations still manage smaller, consumption site inventories periodically. In other words, unless a stock count is taken and the difference is written off against inventory in the financial system, the actual items in inventory versus what the computer is showing is almost always incorrect.

So, what many healthcare organizations have taken to is what is called an “issue” transaction when they get goods from either a supplier or another inventory site. An issue transaction says that as soon as the goods are received by a consumption site, they must be expensed – not put into the inventory valuation on the books. In this way, the organization is expensing everything as soon as possible meaning that they need only take year-end inventory counts of each consumption site.

While this appears to be a clean and efficient answer, many healthcare organizations still require greater control of their inventory. While the above solution solves accounting issues, it does not address inventory control / shrinkage / lost charges. These are areas many healthcare providers still want greater control over.

Binary Stream Healthcare Materials Management can handle both scenarios – those using expensed “issue” transactions and those wanting inventories to be “transferred” to inventory sites and then expensed as they are consumed.

Item Number	UoM	Qty	From Site	From Site Description	To Site	To Site Description	Room #	Patient ID	Delivery Bin
000011	EA	1	59391	Central Supply	04S	Billing Sys Test Site	401	PAT10001	
000018	EA	1	59391	Central Supply	04S	Billing Sys Test Site	402	PAT10002	
000022	BX/10	1	59391	Central Supply	04S	Billing Sys Test Site	402		
		0.00							

Materials can be sent either as an expensed issue transaction to a site or a more typical inventory transfer meaning that it can be expensed later in the consumption site.

Managing Vendor Contracts and Rebates

This is another area in healthcare where cost savings can have a significant financial impact. The problem here is that many healthcare organizations depend on manual methods to ensure that savings are realized – particularly, where discounts on POs must be applied on each PO to a vendor. Rebates are even more difficult to handle as they require after-the-fact tracing of documents to produce the amounts and paper trail needed to remit to vendors to claim a rebate.

Binary Stream Healthcare Materials Management handles both Vendor Contract PO discounts and rebates scenarios.

All rebate and discount “contracts” are entered into the system and are only valid if the date of the transaction falls between the contract start and end dates.

Contract Maintenance sa Healthcare Materials Mgt 8/25/2009

File Edit Tools Help

Save Clear Delete Copy

Contract ID [] Inactive

Contract Description Contract for Austin Medical

Contract Class HOSP CONSUM

Contract Start Date 4/1/2007

Contract Expiration Date 12/15/2009

Vendor ID A02059

Vendor Name CARDINAL - ALARIS PRODUCTS

Vendor Contract # 123-7899

2

Line Items by Order Entered

Item Number	U Of M	Start Qty	End Qty	Rebate	Purchasing Cost	Rebate %	Rebate/Discount	Contract Cost	Standard Cost
Item Description									
000011	BX/10		10						1,000
<input checked="" type="checkbox"/>		10,000	50.00%		50,000			50,000	100,000
TAGS, EQUIPMENT RENTAL									EA
000022	BX/10		10						1,000
<input type="checkbox"/>		35,000	93.00%		465,000			35,000	500,000
BANDAGE,ELASNET SURGILAST SZ 1									EA
								0.00	0.00
<input type="checkbox"/>		\$0.00	0.00%		\$0.00			\$0.00	\$0.00

For PO discounts, when a PO is entered for the item and vendor in the contract, the PO automatically reflects the contract pricing and shows the contract details on the PO.

Purchase Order Entry sa Healthcare Materials Mgt 8/25/2009

File Edit Tools View Options Additional Help

Save Blanket Actions Process

Type: Standard Hold Project Type: None

PO Document ID: PO Vendor ID: A02059

PO Number: PO2082 Name: CARDINAL - ALARIS PRODUCTS

Buyer ID: Date: 8/25/2009 Currency ID: Transmission Method: Email

Site ID: 04S Ship To: Trade Discount: 0.00%

Facility: Allow Sales Documents Commitments

Line	Item	U of M	Quantity Ordered	Unit Cost	Contract ID
1	000022	BX/10	1	\$35.000	2
	BANDAGE,ELASNET SURGILAST SZ 1	04S	0	\$35.00	123-7899

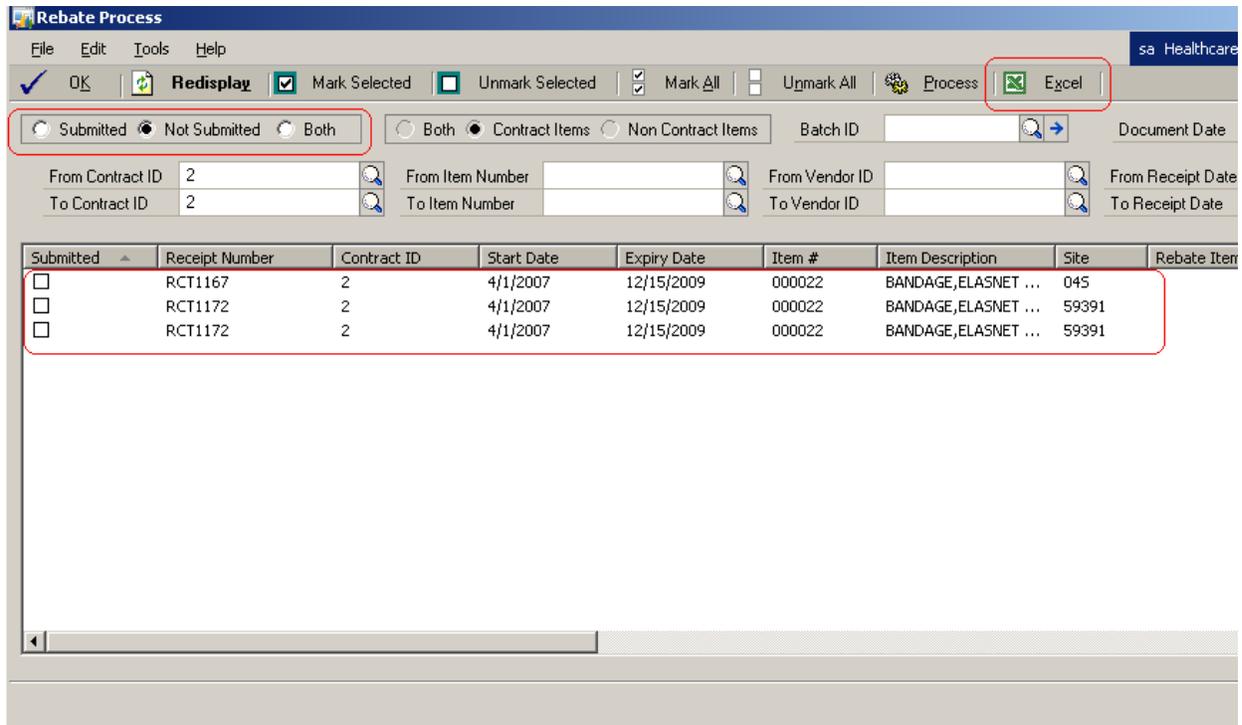
Remaining PO Subtotal: \$35.00

Subtotal: \$35.00
 Trade Discount: \$0.00
 Freight: \$0.00
 Miscellaneous: \$0.00
 Tax: \$0.00
 Total: \$35.00

Purch Addr Tax Sched: Comment ID:

PO Number: PO Status: New Revision: 0

For rebates, the items first be received through receiving. Once received, the item is eligible for a rebate back to a supplier. Rebates Processing may be done at any time.



Once you retrieve your outstanding rebates, you can export them to Excel to create a report for your vendor. At this point, when you process the rebates, an automatic AP credit note is put against the vendor. This ensures an audit trail and comparison when the vendor remits their credit note and/or check for the rebate you have asked them for.

Lost Charges

Many healthcare organizations wrestle with inventory shrinkage. The inventory should have 10 in stock but we actually only have 5 on the shelves...

In many busy and for-profit healthcare environments, materials can get used up in many ways and become unaccounted for. While theft is always a prevailing issue, defective items, spoiled or expired items sometimes get disposed of in consumption areas and do not get accounted for / relieved from computer inventory balances.

In for-profit healthcare situations, inventory shrinkage due to items physically consumed but not issued off computer item balances is called **Lost Charges**. For example, if we start with an inventory balance of 10 units and 3 are actually billed out to patient care, we then should have a balance of 7 remaining. If we do a stock count and find that only 5 are remaining, we have potential lost charges of 2.

So, the question is then how healthcare organizations bring in data from a billing software package and blend it with materials data? While the data can be extracted manually in some cases when the amount of data is small, what happens when you need to analyze data over many items?

Microsoft Business Solutions
Business Portal

My Settings | The World Online

Home | Employee | Company | To Do List | Manager | Finance | Sales | Purchasing | Inventory | Payroll | HR | Site Settings | Quick Links

Benefits | Policies | Directory | Charge Analytics All | Charge Analytics Restricted

Charge Analytics All

Modify Shared |

Department Accounts

Department Accounts All

Department	Segment	Year	Period	PTD Actual	PTD Budget	PTD +/- Bud...	PTD +/- Bud...	YTD Actual	YTD Budget	YTD +/- Bud...	YTD +/- Bud...
411	10	2005	6	\$1,300	\$1,512	(\$212)	-14 %	\$2,550	\$10,790	(\$8,240)	-76 %
611	10	2005	6	\$1,300	\$1,000	\$300	30 %	\$2,550	\$7,712	(\$5,162)	-67 %
741	10	2005	6	\$1,300	\$1,000	\$300	30 %	\$2,550	\$7,712	(\$5,162)	-67 %
912	10	2005	6	\$1,300	\$1,000	\$300	30 %	\$2,550	\$7,712	(\$5,162)	-67 %

GL Accounts Summary

GL Accounts Summary All

Year	Period	PTD Actual	PTD Budget	PTD +/- Bud...	PTD +/- Bud...	YTD Actual	YTD Budget	YTD +/- Bud...	YTD +/- Bud...	YTD-1	YTD-2	YTD-3
2005	6	\$1,300	\$1,512	(\$212)	-14 %	\$2,550	\$10,790	(\$8,240)	-76 %	\$1,000	\$0	\$0
2005	5	\$1,300	\$1,451	(\$151)	-10 %	\$2,550	\$9,278	(\$6,728)	-73 %	\$1,000	\$0	\$0
2005	4	\$1,300	\$1,512	(\$212)	-14 %	\$2,550	\$7,827	(\$5,277)	-67 %	\$1,000	\$0	\$0
2005	3	\$1,300	\$2,315	(\$1,015)	-44 %	\$2,550	\$6,315	(\$3,765)	-60 %	\$1,000	\$0	\$0
2005	2	\$1,300	\$2,000	(\$700)	-35 %	\$2,550	\$4,000	(\$1,450)	-36 %	\$1,000	\$0	\$0
2005	1	\$1,250	\$2,000	(\$750)	-38 %	\$1,000	\$2,000	(\$1,000)	-50 %	\$1,000	\$0	\$0

Charge Code Summary

Charge Code Summary All

Charge Code	PTD Qty	PTD Qty %	PTD Actual	PTD Actual %	YTD Qty	YTD Qty %	YTD Actual	YTD Actual %
31100084	10.00	9.52 %	\$100.00	7.69 %	20.00	9.76 %	\$350.00	13.73 %
31100090	10.00	9.52 %	\$100.00	7.69 %	20.00	9.76 %	\$350.00	13.73 %
31100092	10.00	9.52 %	\$100.00	7.69 %	20.00	9.76 %	\$350.00	13.73 %
31100993	10.00	9.52 %	\$100.00	7.69 %	20.00	9.76 %	\$350.00	13.73 %

Normal Charge Code Detail

Charge Code Detail All Normal

Patient	Payer	Qty	Actual
IP	Commercial	\$10.00	2.00
IP	Medicaid	\$10.00	2.00
IP	PrivPay	\$10.00	2.00
MNP	Commercial	\$10.00	2.00

The answer is Binary Stream Healthcare Materials Management Business Portal Charge Analytics. Business Portal Charge Analytics allows organizations to read data from third party billing packages and blend this data with Binary Stream Healthcare Materials Management data on an item by item basis. Accordingly, the above example can be represented easily and net a result that shows that 2 items have been lost / not charges for.

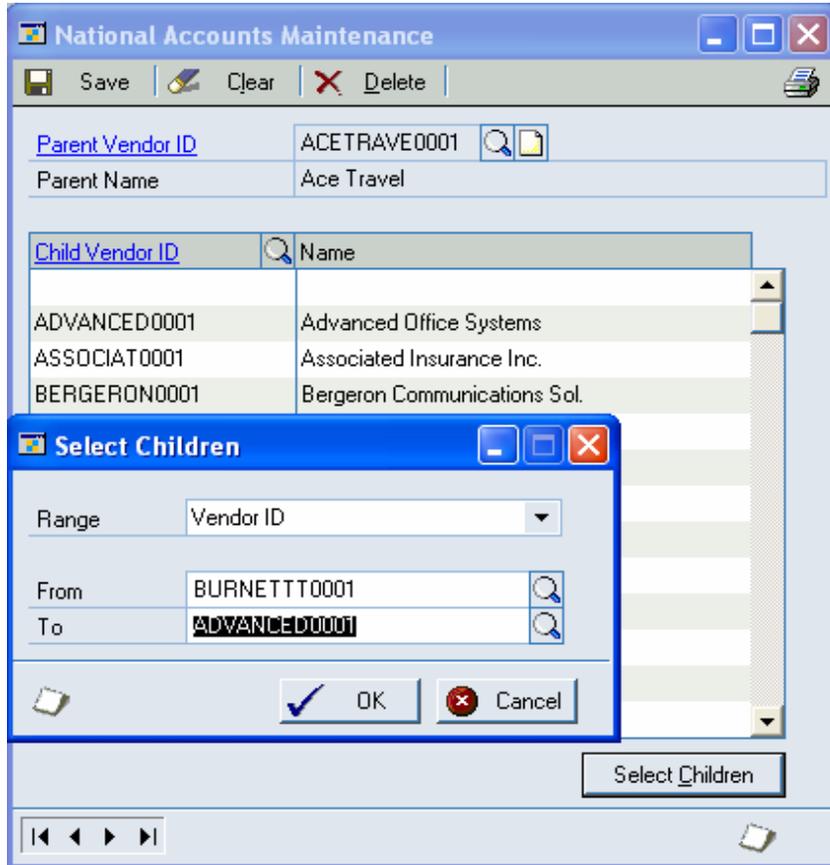
Finance – “Completing the Loop in Materials Management”

Traditional thought in Materials Management was to view Finance departments as the “necessary” evil that paid vendor invoices once goods were procured from vendors.

However, contemporary thought views finance as an integral part that “completes” the materials acquisition cycle. Citing the Ontario Hospital Supply Chain Metrics Working Group and its four pillars “functional vision”, it refers to the last pillar as “Pay – Realization of supply chain efficiencies through supply chain-payables integration and e-commerce”. (BPS Supply Chain Secretariat, 2006)

In response to this need to streamline and complete the materials acquisition cycle, Binary Stream Healthcare Materials Management has produced a fully integrated module called *National Accounts for Payables*.

National Accounts for Payables recognizes that many healthcare vendors have multiple offices and shipping points. Each of these points may generate different invoices but may accept payment in central, accounts receivable areas. To generate many checks to different offices is a time consuming and hence, expensive task.



National Accounts for Payables allows you to “associate” numerous vendors in Microsoft Dynamics GP and create Parent-Child relationships. Once established, one check can be cut to a parent vendor versus to many vendors.

National Accounts for Payables sits on top of Microsoft Dynamics GP Payables Management and is required.

E-Commerce and EDI

Recent Materials management reports have demonstrated the distinct financial benefits and patient care advantages in the implementation of e-Commerce and EDI. “A wealth of evidence demonstrates that implementing e-commerce and other supply chain leading practices can improve patient care, enhance service levels and produce financial savings.” (BPS Supply Chain Secretariat, 2007)

As in requisition management, Binary Stream Healthcare Materials Management produces integration to both e-commerce and EDI in a best of breed approach.

E-Commerce functionality is handled through the “punch-out” capabilities provided through our approved requisition management vendors. EDI functionality is handled through approved integration to best of breed EDI vendors. Please contact Binary Stream for a list of approved EDI vendors.

Reporting

Most Materials systems always rely on robust reporting – and it is also one of the greatest areas of concern for contemporary Materials Management.

Effective reporting in Materials Management not only looks at performance “after the fact” but should help anticipate how to manage for the future. Again, citing the Ontario Hospital Supply Chain Metrics Working Group and its four pillar “functional vision”, it refers to the first pillar as “Plan – Informed decision-making through effective anticipation of product supply and demand.” (BPS Supply Chain Secretariat, 2006)

This reference mentions both supply and demand. While most of this article has concentrated on the supply side, what does the demand side entail? The demand side in healthcare usually centers on historical material usage or consumption to infer future demand.

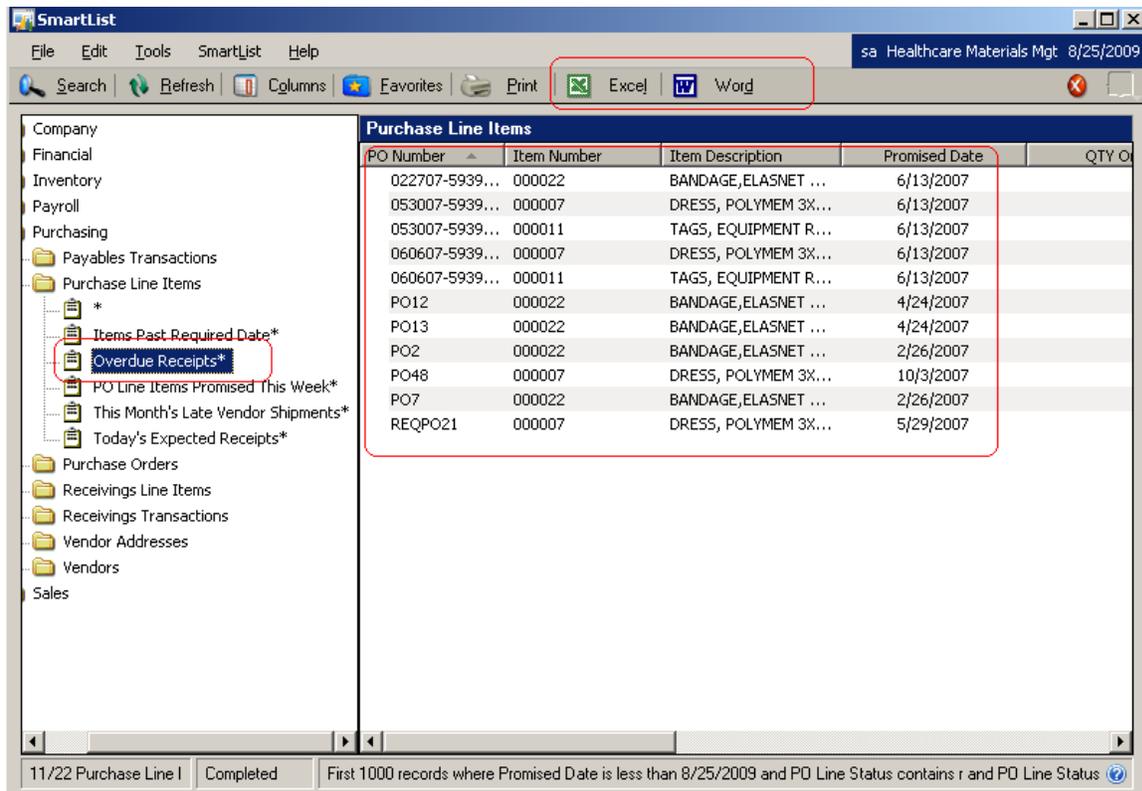
Site	Item Class	Item Number	Description	Issue U Of M	PTD Number	PTD Quantity
01-N	RETAIL	24X IDE	24x CD-ROM	Each	2	12

Item Usage reports can be run across one site or many, over time periods or across multiple items. And as in most reporting screens in Binary Stream Healthcare

Materials Management, report outputs can be easily exported into Excel for further analysis.

Looking more at the supply-side once again, a flexible Materials application will have out of the box “canned” reports as well as the ability to create quick “queries” on the fly.

One of the greatest advantages that a Microsoft Dynamics-GP application brings to the table is its data accessibility. Using Microsoft Dynamics GP SmartList , we can run relevant and user friendly queries on the fly.



This is quick query developed to show receipts that are now past the promised delivery dates. Many relevant queries such as this are supplied out of the box with Binary Stream Healthcare Materials Management as well as queries you can develop on the fly using Microsoft Dynamics GP SmartList Builder.

What else you need to know about Binary Stream Healthcare Materials Management

- Binary Stream Healthcare Materials Management is a modular solution that requires Dynamics-GP Purchase Order Processing and Inventory Control modules.
- The modules of Binary Stream Healthcare Materials Management are
 - Core Module
 - **Mandatory**
 - Contains the bulk of the inventory / Purchasing control functionality described in this paper
 - Vendor Contracts and Rebates
 - Described in detail in this paper
 - Requested in most systems.
 - Bar Coding and Handhelds
 - Described in this white paper
 - Only the Handheld application is supplied – handheld device and operating system must be purchased separately
 - Please contact Binary Stream for a list of compatible handheld devices and operation systems.
 - National Accounts for Payables
 - Allows you to pay related vendors on one check versus many
 - Integrates to Dynamics-GP Payables Management
 - Materials Management WebView
 - A small internet-based application giving users a number of inquiry only screens from Binary Stream Healthcare Materials Management
 - Equipment Manager
 - A light application that lets you track owned and rented equipment in your facilities
 - Also tracks the duration of time at any one place so that equipment billing can take place.
 - Business Portal Charge Analytics
 - Brings data in from third party data sources and Binary Stream Healthcare Materials Management into a single >NET spreadsheet for detailed analysis of data
 - Ideally used for organizations that want to meld billing data and Materials data to investigate **Lost Charges**
 - Cerner Integration to Healthcare Materials Management
 - Cerner billing integration into Binary Stream Healthcare Materials Management
 - Also available for other billing applications
 - Either one way or two way integration.

- Manage your individual facilities effectively with **Multi-Facility Processing**
 - Allows organizations to keep many healthcare entities in **one** Microsoft Dynamics GP database. Users can only see the data for the facilities / entities that they have access to.
 - Integrates seamlessly to Binary Stream Healthcare Materials Management.

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Works Cited

BPS Supply Chain Secretariat, T. B. (2006). *Performance Measurement - A report by the Hospital Chain Metrics Working Group*. Toronto: Ontario Ministry of Finance.

BPS Supply Chain Secretariat, T. B. (2007). *Supply Chain Modernization in Ontario Health Care*. Toronto: Ontario Ministry of Finance.