# MODULE 4

## Procurement Management



SLMTA Participant's Manual

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NOTE: Print this document single-sided and in color if possible.

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#### **ACTIVITY SUMMARY SHEET**

#### **ACTIVITY** Forecasting and Calculating Ordering Amounts

Module 4

#### **PURPOSE:**

An effective procurement management system is one that ensures sufficient inventory is available to meet testing needs while simultaneously avoiding waste incurred from unused and expired reagents. In this activity, participants learn how to forecast and determine reorder levels for their laboratory. The concepts are reinforced with an assigned homework activity.

This activity supports the following laboratory management tasks and accreditation preparedness checklist items

#### Management Tasks



- 3.3 Monitor consumption rate and inventory level to determine when and how much to re-order
- 4.1 Accurately evaluate needs for equipment, supplies and reagents taking into consideration past patterns, present trends, and future plans
- 4.2 Place orders as necessary in accordance with needs and budgetary constraints
- 4.4 Appropriately document and maintain accurate records of all purchase orders and requisitions

#### Checklist Items



- 1.1 <u>Laboratory Quality Manual</u> Is there a current laboratory quality manual, composed of the quality management system's policies and procedures, and has the manual content been communicated to and understood and implemented by all staff?
- 2.3 <u>Annual Review of Quality Management Systems</u> Does the laboratory management annually perform a review of all quality systems at a management review meeting?
- 7.1 <u>Inventory and Budgeting System</u> Is there a system for accurately forecasting needs for supplies and reagents?
- 7.4 <u>Budgetary Projections</u> Are budgetary projections based on personnel, test, facility and equipment needs, and quality assurance procedures and materials?
- 7.8 <u>Laboratory Inventory System</u> Are inventory records complete and accurate, with minimum and maximum stock levels denoted?
- 7.9 Usage Rate Tracking of Consumables Is the consumption rate monitored?
- 7.10 <u>Inventory Control System Stock Counts</u> Are stock counts routinely performed?
- 7.15 <u>Laboratory Testing Services</u> Has the laboratory provided uninterrupted testing services, with no disruptions due to stock outs in the last year or since last assessment?

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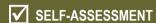


#### **KEY MESSAGES**

- An effective procurement management system is one that ensures sufficient inventory is available to meet testing needs while simultaneously avoiding waste incurred from unused and expired reagents.
- An orderable amount needed to sustain testing can be calculated instead of relying on guesswork by utilizing data available to laboratory staff.
- Due to the interrelationship between the procurement and inventory management systems, errors or oversight in one will affect the other resulting in service interruptions and decreased patient care.

#### Can you:

- Define key terms and concepts related to calculating and forecasting supplies?
- Calculate the correct amount of supplies to order based upon a given lead time and orderable unit?



For this activity, you will need:						
☐ Worksheet 1: Urinalysis (401)						
☐ Worksheet 2: Glucometer (402)						
Job Aid: Calculating Supplies (403)						

Urinalysis<sup>401</sup>

Procedure:

Routine Urinalysis with Microscopic				Number of Tests Performed in One Month: (a)  Patients: 500 Total QC: 70 ( normal and abnormal controls analyzed daily during workstation set-up, and each time a new reagent bottle is opened.					norning
		Item # needed to perform one procedure	Item # needed per month (Reserve Quantity)	Minimum Stock required for a three month lead time (Reorder Level)	Stock on hand (physical inventory)	Quantity to be ordered	Vendor's item amount	Orderable Amount (rounded <b>UP</b> to the nearest whole number)	Orderable Unit
	List Each Item	(b)	(a) x (b) = (c)	(c) x 3 = (d)	(e)	(c) + (d) - (e) = (f)	(g)	(f) / (g)	
1	collection cup				1000		1000 cups/bag		bag
2	cleaning towelette				1600		500 packets/box		box
3	urine dipstick			_	500		100 strips/bottle		bottle
4	4 x 4 gauze			_	2000		50 pieces/bag		bag
5	centrifuge tube			_	2300		100 tubes/box		box
6	plastic disposable pipette				1700		300 pipettes/box		box
7	slide				800		100 slides/box		box
8	coverslip				1900		50 slips/box		box
9	Normal QC	10 ml			1300		200 ml/box **		box
10	Abnormal QC	10 ml			650		200 ml/box **		box

Box of QC material = 4 bottles/box x 50ml/bottle

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## Glucometer<sup>402</sup>

Procedure:

	Glucose by Glucometer			Number of Tests Performed in One Month: <b>(a)</b>	Patients: 300 Total QC: 66 (low and high controls analyzed daily during phlebotomy workstation morning set-up, and each time a new reagent bottle is opened)					
		Item # needed to perform one procedure	Item # needed per month (Reserve Quantity)	Minimum Stock required for a two month lead time (Reorder Level)	Stock on hand ( <i>physical</i> <i>inventory</i> )	Quantity to be ordered	Vendor's item amount	Orderable Amount (rounded UP to the nearest whole number)	Orderable Unit	
	List Each Item	(b)	(a) x (b) = (c)	(c) x 2 = (d)	(e)	(c) + (d) - (e) = (f)	(g)	(f) / (g)		
1	lancet				400		1000 lancets/box		box	
2	alcohol pad				800		100 packets/box		box	
3	2x2 gauze				100		50 pieces/bag		bag	
4	reagent strip				800		50 strips/bottle		bottle	
5	QC Low**				75		50 tests/bottle	,	bottle	
6	QC High**				25		50 tests/bottle		bottle	

<sup>\*\*</sup> Manufacturer's QC package insert specifies that the quantity in each bottle is sufficient for 50 tests (dispense 1 drop, wipe, test second drop)

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### Calculating Supplies<sup>403</sup>

(f) The calculation takes into An efficient procurement management system will provide the amount of required supplies to account your reorder level and fulfill needs without waste due to the expiration of unused supplies. includes a reserve quantity. To avoid wastage from expired (a) Determine the average number of **Key Terms and Concepts:** reagents, the calculation subtracts patients, survey samples, and QC Lead Time - time between placing an order and receiving it. the available stock you currently performed for a month. To obtain an Average Usage - number of test kits, reagents or supplies used in a given time period. average, review several month's Minimum Stock -amount of stock required to support testing operations until additional worth of tally data to reflect an (g) Catalogs and order requisitions supplies are received. accurate testing volume/ Many sites can be used as a resource to Reorder Level - the minimum stock level at which you should reorder the item and the will include a 10% wastage factor to determine the vendor's amount. amount you should reorder. accommodate repeat testing, training For example, if you list a test kit as Reordering Equation - Average Usage x Lead Time = Minimum Stock (Reorder or competency assessments. an essential supply and the test kit Level). However, by including column (c) as accommodates 20 individual tests. a reserve quantity into the equation then the amount is 20 tests per kit. (b) Determine the used to calculate column (f) that may Likewise, if you indicated 3 ml of a **Calculating Ordering Amounts** List the essential amount of supply not/be necessary. If testing volume stain is required for each test in supplies required needed to fluctuates for specific time periods column b for AFB testing and the to perform the perform one stain comes in a liter bottle, then Number of Tests procedure. the amount is 1000ml per bottle. Performed in One Ensure proper units are used to Month: (a) Item# calculate the correct orderable needed to perform Item# Minimum Vendor's needed Stock Quantity to be Orderable Orderable Stock on procedure per month hand ordered amount Amount Unit (f) / (g) Always round up to the Item (a) x (b) (c) x lead time (c) + (d) - (e)(b) (g) (f) / (g) (e) nearest whole number. This =(c)= (d)number is the amount to indicate (d) This is the minimum stock you must (e) You determine the stock you have on on the ordering requisition for the have on hand to support testing until hand by performing a physical stock count, specific catalog number or additional supplies are received. When (c) This is the average physically counting the available supplies. description this quantity is reached, you must usage for the month for The available stock should never run reorder. You will not sustain testing test kits, reagents or below the minimum stock level. To services for this procedure if you go supplies. This amount determine the correct quantity, the below this quantity. Lead times may stockroom must be organized and will also be used as the vary for different vendors. Review your maintained. The inventory records must reserve quantity previous ordering/receiving history to