



CQO:
The Health Care
Supply Chain

Inventory Turns



Purpose:

Measures the hospital or health system's ability to manage its inventory of products to support the delivery of care.

Value:

Allows hospital executives and supply chain leaders to understand the organization's ability to order, store and deliver its products required for the delivery of care.

Equation:

Firstly, add the opening inventory dollars at the beginning of the month and closing inventory dollars at the end of the month, and divide this sum by two (2) – this will provide the '**Average inventory**'. To calculate the key, simply divide the **Total Inventory Supply Expense** by the average inventory.

$(\text{Opening inventory dollars at month start} + \text{closing inventory dollars at month end}) \div 2 = \text{Average inventory}$

$\text{Total inventory supply expense} \div \text{Average inventory} = \text{Inventory turns}$

Note: it is favorable to have a higher value for this Key. The higher the value the better.

Example:

- Total inventory supply expense = \$550,000
- Opening inventory dollars balance = \$600,000
- Closing inventory dollars balance = \$400,000

$\$600,000 \text{ Opening inventory dollars balance} + \$400,000 \text{ Closing inventory dollars balance} = \$1,000,000$

$\$1,000,000 \div 2 = \text{\$500,000 Average inventory}$

$\$550,000 \text{ Total inventory supply expense} \div \$500,000 \text{ Average inventory} = 1.1 \text{ monthly inventory turns}$



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Input Descriptions and Sources:

Input Name	Includes	Excludes
Total inventory supply expense	All medical and non-medical inventory supply expense. For medical, include expenses for Surgery, Cath Lab, EP Lab, Interventional Radiology and Interventional GI departments. For non-medical, include Office Supplies, Purchased Services, Facilities, Information Technology, Maintenance, etc.	All direct-ship/on-consignment expenses, purchased services, labor and labor-related expenses and services (salaries, bonuses), real estate, physician payments, capital, utilities, some tangible items that are frequently provided as part of service costs (e.g. toner that is part of a print contract), taxes, reimbursements to individuals or contractors, insurance, bad debt, depreciation.
Opening inventory dollars	If your opening balances are recorded across multiple cost centers, sum all Opening Inventory Dollar amounts to arrive at this value. This value is for the month you are submitting data for, not a rolling 12 months period.	
Closing inventory dollars	If your closing balances are recorded across multiple cost centers, sum all Closing Inventory Dollar amounts to arrive at this value.	

Points of Clarification:

- This metric can be utilized to understand trends and performance over time to determine if the hospital or health system’s strategies to increase or decrease turnover are yielding results.
- Typically, health care organizations calculate inventory turns by category or procedural areas to further target and identify areas of improvement. (e.g. the operating room or cardiac cath lab).
- Reporting by area provides a more advanced calculation of the hospital or health system’s ability to manage its inventory of products.
- The audience should recognize that a lower metric may be justified in some instances; for example, lower turnover may be needed to ensure that sufficient clinical supplies and products are available to support delivery of patient care.
- Labor costs to support inventory management should be factored when determining value delivered through higher inventory turns metrics. For example, a hospital that is relying on additional staff to increase inventory turns may not be as efficient as one that is leveraging technology and automation to increase efficiency levels.
- In general, a higher metric suggests that the hospital is effectively managing its inventory by ordering and delivering the right amount of products to support patient care. Furthermore, a higher metric indicates that the hospital is ordering and turning over supplies at an optimal level, reducing unnecessary inventory and holding costs and improving overall profitability of the organization.
- However, hospital executives and supply chain leaders must also understand that maximizing inventory turns is not the desired outcome. Higher inventory turns must be balanced with the need to have enough products on hand to support patient care.