DENTAL INVENTORY CONTROL

Nashville Area Practice Management Series
Cathy Hollister, RDH, MSPH, PhD
Dental Support Center
How Much?

- Dental supplies should comprise approximately 6%-12% of total operating costs

- Cost categories
  - Salaries and Benefits
  - Space Costs (maintenance, housekeeping, utilities)
  - Lab fees
  - Supplies
How Much do Supplies Cost?

- **Purchase Cost**: List price of the item
- **Order Cost**: cost of personnel required to place and track the order
- **Carrying Cost**
  - **Opportunity Cost**
    (money spent here cannot be spent elsewhere)
  - **Storage Cost**
Costs...

- **Overstock Costs**
  - Extra carrying costs (supplies that are not used within a normal time period but held over for an extended time)
- **Expiration**
- **New materials**

![Graph showing carrying costs over periods](image-url)
# How Much to Order?

Berman, Weeks, Kukla. *The Financial Management of Hospitals*

<table>
<thead>
<tr>
<th>Order Quantity</th>
<th>Purchase Cost/Unit</th>
<th>Order Cost</th>
<th>Carrying Cost</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td>40 Units</td>
<td>$1,000</td>
<td>$250</td>
<td>$120</td>
<td>$1,370</td>
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<td>50 Units</td>
<td>1,000</td>
<td>200</td>
<td>150</td>
<td>1,350</td>
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<tr>
<td>56 Units</td>
<td>1,000</td>
<td>200</td>
<td>150</td>
<td>1,347</td>
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<td>58 Units</td>
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<td>179</td>
<td>168</td>
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<td>60 Units</td>
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<td>167</td>
<td>180</td>
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<tr>
<td>80 Units</td>
<td>1,000</td>
<td>126</td>
<td>240</td>
<td>1,356</td>
</tr>
</tbody>
</table>
Costs...

- Understock Costs: Cost of holding an insufficient quantity
  - Clinic is not able to complete a service
  - Costs include monetary costs and non-monetary costs of extended pain, untreated disease and patient satisfaction
  - Lost present value and future value

- Understock costs are probably MUCH LARGER than overstock costs
Inventory Decisions-Certainty

- Certainty: the lag time between order and delivery is known AND the demand for the supplies is known

- Uncertainty
  - Time for order may be delayed
  - Actual demand for supplies may vary from expected
Stratification

- **Stratify supplies according to cost**
  - **A Items**
    - High purchase costs
    - High potential overstock cost (short expiration date, new material, seldom used)
    - Reduces the potential for redundant supplies
  - **B Items**
    - Routine supplies
    - Lower purchase costs
    - Do not expire
    - Few carrying costs (storage, opportunity costs)
Avoid the “Eye-ball method”

Establish for each inventory item

Determine a minimum and maximum for each item

Label each item

- Min & Max
- Supplier
- Special considerations (eg. New material, local anesthetic and temperature concerns)

Establish needs for each clinic
Just-In-Time Ordering

- **Goal:** minimize under stock and overstock costs

**Basic Principle**

Wait until the last possible moment to order supplies

- Started in the automotive industry
- Has been modified for medical and dental office inventory control
Dental Applications

- Roger Levin, DDS, MBA
- Publications in JADA and Dental Economics

**Recommendations:**

- Maintain a 30 day supply of most items

**Considerations**

- How much is used in 30 days
- Shelf life
- Cost
- Ordering lag time
Levin: Negative Inventory Factors

1. **Over supply**
   - Depletes cash and used storage space

2. **Inventory misallocation**
   - Too much of one thing, not enough of another

3. **Excessive purchase of new products and materials**
   - Do not perform as expected

4. **Not establishing ordering target**
   - Easily run out or have too much
JIT: Advantages to Dental Practices

- Improves cash flow
- Increases storage space
- Reduces waste of new materials
- Helps office staff understand what and how many supplies are needed
  - Composite kit 80/20 rule
- Creates an organized, planned inventory system
JIT Example #1

- Disposable Air-Water Syringe Tips
  - Bag/250 $75.00 $.30 Ea
  - Case/1,500 $325.00 $.22 Ea

Usage rate~200/month

Purchasing a case would tie up $250.00 that could be used for other purchases (new materials, items on sale). Even though the bulk purchase makes the per unit cost is lower, it would save money to buy the smaller amount.
JIT Example #2

- Fluoride Varnish
  - Package 50 $117.97 $2.36 ea
  - Package 100 $196.00 $1.96 ea

Usage rate ~ 80 per month

In this case it would be advisable to purchase in bulk because the items will be used within approximately 30 days and the per unit cost is lower with the bulk purchase.
Other Inventory Options

- **Sales rep management**
  - Advantage: reduces purchase costs including business office, tracks history
  - Disadvantage: reduced opportunity to compare costs

- **Software management**
  - Advantage: automated system, reduces purchase costs
  - Disadvantage: initial cost, significant start up time, requires expertise
Steps to Creating an Inventory System

1. Determine approximate supply costs as a % of all purchases
   1. Salaries
   2. Space
   3. Lab
   4. Supplies

2. Review order history for all items

3. Consider over or understock experiences

4. Create ordering targets (min and max)

5. Track items used at satellite clinics
More Information

- Dental Safety net manual: www.dentalclinicmanual.com
- Oral Health Program Guide
- Financial Management Texts:
  - Berman, Weeks, Kukla. The Financial Management of Hospitals
- Dental Economics, JADA