Inventory Control and Other Expense Benchmarks

Consumable inventory generally represents one of the two largest expenses in a practice along with labour costs. Efficiently managing this expense category has a trickle down effect to profitability, personal income for the owner(s) and ultimately practice values, which are based on profitability.

There are some commercially available systems that are capable of tracking holding quantities and advising the purchasing agent of a practice when they should re-ordering. I believe that an effective inventory control system answers three questions:

1. How much of a product should I have on the shelf as a maximum at any one time?
2. When should I reorder a product?
3. How much can I spend at each order?

Companion animal practices should be spending no more than 18% of their gross income on consumable supplies and products, large animal practices slightly more than that. The goals of an effective inventory control system are to “turn” your inventory 12 times per year, or once per month, meaning, you effectively sell or consume all your inventory once per month.

This figure is calculable as a starting point in determining how much maximum product you should have on the shelf. This is the starting point of 3 steps towards implementing a system. It is not necessary to start by calculating inventory turnover ratios for every product in the hospital. Often the top 25% of products will account for 80% of your sales, and this 25% of your total consumable products, if controlled will impact your overall inventory percentage.

Step 1: Calculate inventory turnover ratio. For each of your top 25% of products, determine the annual cost of good purchased and divide by the value
or cost of the maximum amount of product you have on the shelf once you order it. If this number is lower than 12, you are holding too much of this product and should reduce the denominator of this equation until the resultant value is 12. At the end of step 1, you have determined what amount maximum you should hold of a product.

Step 2: Determine when to order. Once again, your IT system should be able to tell you what you go through in a particular product or item in a given month or year. To determine the re-order point or point at which you should reorder: multiply your consumption rate per day X your lead time on getting an order filled. At the end of step 2 you will have determined when to re-order each product or item under consideration without running short.

Step 3: Set a spending cap. Most of us work on budgets and an excel spreadsheet can be created that will calculate, based on the actual income of the practice since the last order was placed, how much can be spent on this order. Subject to a small variance that can be evened off at the end of each month, inventory spending as a percent of revenue can be controlled. At the end of this step you will have capped spending on inventory as a percent of revenue (see spreadsheet below).

All three steps must be mastered for the system to work effectively. Once in place the products considered can be expanded to include more than the 25% of most frequently purchased products.

A number of other expense benchmarks exist in practice that affect our profitability and that we use to assess our management effectiveness. They include but are not limited to expense ratios for staff (20% of revenue), office supplies (2–3% of revenue), advertising and promotion (up to 3% of revenue), repairs and maintenance (1–2% of revenue), and occupancy (up to 7% of revenue). A distribution of revenue for profit centres in the hospital have also been established (see attached)

Practices can compare their fees, coverage ratios on their fees, staff ratios and satisfaction, production numbers, profitability, marketing acuity, and customer satisfaction, and can further receive recommendations if their practice falls into a lower percentile.
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Inventory Control Examples,
Part 1: Economic or Maximum Order Quantity

Example Calculation:

Hill’s J/d diet, 10kg bag:
Cost= $30 per bag

Annual cost of goods = $5500

Max. Inventory on Shelf=$600

What is the current inventory turnover ratio?_________________________

What should the maximum number of dollars worth on the shelf be?________________

How many bags of J/d would this be?______________________________

Example Calculation:

Amoxicillin 500 mg
Cost= $0.56 per pill, $125 per bottle

Annual cost of goods = $4000

Max. Inventory on Shelf=$500

What is the current inventory turnover ratio?_________________________

What should the maximum number of dollars worth on the shelf be?________________

How many bottles of Amoxicillin would this be?______________________________
Inventory Control Workshop Examples,
Part 2: Reorder Points

**Example Calculation:**

Hill’s J/d diet, 10kg bag:
Cost= $30 per bag

# units sold= $5500 worth per year, hospital is open 6 days per week

Takes 2 days to get order in: “lead time”

What is the reorder point?

**Example Calculation:**

Amoxicillin 500 mg
Cost= $0.56 per pill, $125 per bottle, 225 pills per bottle

Annual cost of goods = $4000

# Units sold = 55 /day

Lead time = 2 days

What is the reorder point?
**Decision Audits:**

Any business will increase its productivity and performance if it is able to outperform its competitors. One way to achieve that is to make and execute key decisions faster than the competitors. To see if your decisions are in fact optimal, i.e. made fast enough, translated into action in a reasonable time frame or at all, made with minimum effort and barriers, is to consider conducting a decision audit. A decision audit is a structured way to evaluate both your thinking and your actions when it comes to the business decisions that occur every day in your practice.

Before conducting a decision audit, consider that there are two types of decisions: the non-recurring large, impactful, often expensive decision, and the smaller more routine decisions that usually do not have as much value added to each one. An audit is generally a look back in time. Start your audit by considering both types of decisions you have made over the last six months or a year, and categorize them as major or routine. Chart who made them, was there an opportunity cost, were there barriers, did the same decision have to be made many times, was the desired outcome actually achieved?

What will this ‘chart’ tell you. If you are repeating a lot of minor decisions the autonomy or responsibility over a given decision may be in the wrong hands. You may be assigning decisions based on a ‘turf war’, your more influential managers and staff may be ‘hogging’ decisions they really should not have ownership of, while your weaker or less influential managers or staff members may be too over accommodating and too easily relinquishing decisions they should control. The problem may lay in too broad an assignment of responsibilities, or on the flip side too much micromanagement leading to a practice that has such unnecessarily complex decision making, it becomes that much more difficult to communicate decisions and change behaviours. Symptomatically, these practices will suffer from disjointed communications, power struggles, and too much wasted time clarifying decisions.

To increase the effectiveness of decisions, the age-old concept of delegation applies as effective decisions need to be made by individuals closest
to the functional area of the practice regardless of their position in the hierarchy. True team based delivery reflects such a culture, one which is harder to implement in practice than in theory. To achieve such a culture, owners and senior management will need to provide incentives and motivation, determine communication flow, assign decisions, and finally evaluate through further and future decision audits the effectiveness of the individuals. Owners must be committed to helping develop the capabilities and skill sets of staff members they are prepared to empower, a return that will reduce their own opportunity cost and benefit the practice.

Decision audits therefore serves as a retrospective check and balance and provides a metric to measure the practices productivity and redundant staff efforts.
Evaluating Capital Expenditures

Capital expenditures or ‘capex’ are those expenditures, typically larger cash or financed outlays that cannot be deducted as an expense in the year in which they occur. Sometimes the pivot point between an expense and capital expenditure is based on the amount of dollars under consideration, but more often the usual criteria is that if the expenditure results in acquisition or upgrade of an asset or investment in a property or leasehold improvement that has a useful life longer than the fiscal year in which the expenditure occurs, it is a capital expense. Therefore items such as major equipment acquisitions, facility upgrades, land and building acquisitions or restorations among others would fit into this category. The asset acquired then is subsequently depreciated as an expense in order to reduce taxable income.

Capital budgeting and evaluating capital expenditures is to help guide the decision maker’s decisions. In an environment with limited investment resources as most vet practices are, sound fiscal decisions and informed due diligence is both practical and logical to ensure a positive return on any investment.

A capital budgeting decision under question may fall into one of several categories: where there is a single investment being considered, and where there are mutually exclusive choices being considered. In the case of single decision, i.e. one item or one project, is under consideration the criteria for making the decision to proceed or not, arrived at through the application of several formulas, is simply that the investment decision results in ‘net present value’ that is positive. Present value measures the practice today resulting from future improved or marginal increases in after tax cash flows as a result of the investment. The greater the value of the future cash flows, the greater will be the net present value. For instance, assume a practice is considering the purchase of a digital x-ray system at a cost of $65,000. Assume the installation of this system generates and additional $10,000 a year after taxes for the hospital and the lifespan of the equipment is ten years before another significant upgrade or additional capital expense occurs.
This additional after tax cash flow represents 10 years x $10,000 at face value=$100,000 but that is over a ten year period. Because the value of money is diluted with time because of inflation, this $100,000 must be ‘discounted’ to allow 10 x$10,000 to be converted into an equivalent value in dollars for the year of the investment. As such a ‘discount rate’ is applied. The discount rate is a measure of risk and the risk is the expected return a practice owner should see from any such investment, i.e. the gravy or extra earnings they get for being a practice owner above and beyond what they’d make from simply being an employed veterinarian. This return in our industry is based on the sum of the risk free rate or return (like a T–bill return or CD) plus the industry rate of return for owning a veterinary practice and the equipment and investment decisions in the facility to sustain it as a business enterprise.

There are two variables to consider then when making the decision and three evaluation formulas to determine whether or not an investment makes sense. The higher the risk or discount rate, the lower is the present value of the investment. The lower the future increase in after tax cash flows are from an investment, the lower the present value will be over the lifespan of the investment. In the above example assuming we use a discount rate of 10% since the equipment is forecast to last ten years, the present value of the $100,000 in additional after tax cash flow during that time is $77,215. This is greater than the $65,000 invested in 2013 to make the investment in a digital system so the investment is financially worthwhile. Now let’s assume the digital system only generates $7,000 a year x 10 years or $70,000 in after tax additional income. On the surface this looks like a minimal gain over the $65,000 spent to buy the system, but by the time you factor in the discount rate the $70,000 gain over 10 years is really only $54,025 in today’s dollars, not a financially sound investment. A point worth noting is that investing in equipment and facilities does not translate on a dollar for dollar basis towards increasing the value of the practice. Any capex needs to generate additional after tax profit for the practice, i.e. the ‘gravy’, to add to the value of the practice.
So what evaluative formulas should a manager do to help determine whether or not the net present value is positive? There are three financial metrics that should be applied:

Time to breakeven

1. Breakeven point (Initial cost outlay/1−variable costs)
2. Payback period (Initial cost outlay/Additional monthly revenue(or cost savings) − Additional monthly expenses)
3. Return on investment or asset (Yearly incremental revenue or cost savings/Initial cost outlay)

Examples will be demonstrated in the lecture. Proper due diligence on capex will facilitate sound decision making on the part of the practice and provide for better returns.
**Pricing Strategies**

There are over 20 different ways to price services and products in business; in veterinary medicine we have traditionally relied on only a handful as our templates for pricing our services and products. The most common strategy employed in veterinary practices is ‘cost–plus’ or markup pricing along with less commonly used strategies such as loss leader pricing (spays and neuters often fall into this category), predatory pricing (price wars), psychological pricing (often guess work), pay what you want (when we give it away).

Having an effective pricing strategy is an important part of the practices operations and financial structure and helps facilitate profit and value. Pricing strategies should also align themselves with general behaviours and attitudes of clients towards prices. Prices and changes in prices are influenced in particular by what the public will tolerate. The concept that price wars and undercutting is an effective means to increase traffic and revenue/profit is a fallacy for a number of reasons including:

- you cannot turn a price war on and then off when you like
- competitors may match your discounts accelerating the price war
- you attract more low potential, low frequency clients who contribute little to the practice margin and are not practice builders
- you confuse clients who previously paid higher fees.
- every dollar you decline in profit takes $3–5 dollars off the practice value

In volatile times we encourage business owners to ‘cover their margins’ and with that concept in mind an emerging pricing strategy has gained more relevance for us. Margin based pricing or contribution margin based pricing is a pricing strategy whereby the margin on a service or product is considered, calculated, and prioritized and the price set on that margin. In some cases it may result in a price increase and in some cases a price decrease depending on where prices are set now in your practice.
Contribution margin pricing is based on the formula: \( \text{price} = \frac{\text{contribution margin per unit/service}}{\text{variable costs per unit/service}} + \text{price} \). In this case the variable costs are considered to be labour and supplies, roughly two thirds to three quarters of our cost base in practice. For example a lab test may cost us $55 and we mark it up 30% for a cost to the client of $71.50. The formula for a margin based price fee is: \( \frac{\text{variable costs} \times (-1)}{(\text{desired margin} - 1)} \). In this case assume that our variable costs for the test are $55, the calculation results in a fee of \( (-55/-0.7) = $78.50 \). This technique has built in a margin of 30% rather than taking an additional 30% of the cost of the test.

According to the Pareto Principal, 80% of your revenue is going to come from 20% of your services. Applying this formula to the top 20% of revenue generating activities will have significant impact on protecting the margin that supports both owners’ incomes and drives practice value.