Easily Applied Management Strategies for Pharmacy Practice

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Keep It Simple Stupid

In support of improving patient care, Idaho State University Kasiska Division of Health Sciences is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.
Disclosures

• The planners and presenter of this presentation have disclosed no conflict of interest, including no relevant financial relationships with any commercial interests
Objectives

Given a purchase price and the desired mark-up for a product, calculate a correct mark-up selling price

Given the results of a regression analysis with a significant R-value, create a moving cost formula for their pharmacy

Classify fixed and variable costs and determine contribution margin
People can remember 3 things, Given 4 they can’t remember any.

Pareto Criteria (80/20 Rule) – Monitor complaints, errors, etc.
Significant Few from Meaningless Many
The Rule of Three

• Create Focus and Vision

• Align Collective Efforts

• Create an environment where an employee understands and can recite your (no more than three) objectives when asked.

• NASA Example
NASA Mission (1960’s)

"I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space."

- President Kennedy, Address to Congress on Urgent National Needs, - May 25, 1961
Result of NASA Vision

• Mission commander Neil Armstrong and pilot Buzz Aldrin landed the lunar module Eagle on **July 20, 1969**. Armstrong became the first to step onto the lunar surface on **July 21**, Aldrin joined him about 20 minutes later.
Recent Vision Statement of NASA

The vision statement of the National Aeronautics and Space Administration is: "To reach for new heights and reveal the unknown so that what we do and learn will benefit all humankind."
Where is NASA Today?

- Space Plane
- Space Station on Moon
- Put Man on Mars
- Space Vacation
Operations/Production Management
Critical to Financial Success

Question 1: You want to increase your profit by $20,000. Your operating profit margin is 20%. How much would you have to increase your total sales to receive an increase in profit of $20,000?

Question 2: You want to increase your profit by $20,000. Your operating profit margin is 20%. How much would you have to decrease your operations/production costs in order to receive an increase in profit of $20,000?
Operations/Production Management
Critical to Financial Success

Question 1: You want to increase your profit by $20,000. Your operating profit margin is 20%. How much would you have to increase your total sales to receive an increase in profit of $20,000?

• $20,000/.20 = $100,000 increase in sales.

Question 2: You want to increase your profit by $20,000. Your operating profit margin is 20%. How much would you have to decrease your operations/production costs in order to receive an increase in profit of $20,000?

• Decrease operations/production costs by $20,000 in order to net $20,000 more profit (every $1.00 saved goes directly to the bottom line)
Variation in Service

Variation is the Enemy of Quality.

Variation impacts:

– Yield
– Cost and
– Cycle Time
Strategies to reduce Operations/Production Management Costs – Flow Chart

1. Pharmacy Receives order
2. Is a renewal needed for Rx?
   - Yes: Physician calls for approval
   - No: Enter Rx into computer system
3. Approval?
   - Yes: Pharmacist or technician counts out medicine or pulls medication
   - No: Advise customer that he or she should contact physician
4. Does patient have questions?
   - Yes: Pharmacist or technician answers questions
   - No: Customer directed to pay if necessary and is thanked
5. Was Rx filled by Pharmacist?
   - Yes: Label is prepared, printed and affixed to bottle
   - No: Customer ID is verified and Rx dispensed
6. Do questions require Pharmacist?
   - Yes: Pharmacist answers questions
   - No: Pharmacy Tech answers questions
7. Prescription is put in queue for Pharm or Pharm Tech
8. Completed Rx is placed in basket for pickup
9. End
Strategy - Rolled Throughput Yield (RTY)

• “Rolled Throughput Yield (RTY)” is a powerful operational metrics used to assess the “true” yield of a given process.

• Suppose the process of filling a prescription consists of 3 processes/steps - the pharmacy averages the following performance:

  – *Process 1: Receiving and entering the prescription.* 200 prescriptions were entered and 192 “good” prescriptions left this process (eight required fixing) a yield of 96%.
  – *Process 2: Filling the prescriptions.* 200 prescriptions passed through this process with 191 “good” prescriptions completed. (nine required fixing) a yield of 95.50%.
  – *Process 3: Final inspection.* In the final inspection the pharmacists discovered errors on 4 of the 200 prescriptions prepared. (four required fixing) a yield of 98.00%.

• To calculate RTY we multiply these yields together giving us a composite yield for the day. Doing this gives us: 96% x 95.50% x 98.00% = 89.85%
Cost of Rolled Throughput Yield (RTY)

- You have evaluated your costs to fix errors in production

### Existing Results

<table>
<thead>
<tr>
<th></th>
<th>Cost to Complete a Prescription</th>
<th>Cost to Rework a Prescription</th>
<th>Cost to Scrap Prescription Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$11.50</td>
<td>$6.00</td>
<td>$4.00</td>
</tr>
<tr>
<td></td>
<td>Finished</td>
<td>Finished</td>
<td>Finished</td>
</tr>
<tr>
<td></td>
<td>192</td>
<td>191</td>
<td>196</td>
</tr>
</tbody>
</table>

### QI Results

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<td></td>
<td>198</td>
<td>198</td>
<td>198</td>
</tr>
</tbody>
</table>

Rolled Throughput Yield = 89.85%  
Cost per Finished Rx = 12.55  
Total Scrap Cost = 84.00  
Total Rework Cost = 126.00  
Scrap+Rework, Pct of Cost = 9.13%

Rolled Throughput Yield = 97.03%  
Cost per Finished Rx = 11.80  
Total Scrap Cost = 24.00  
Total Rework Cost = 36.00  
Scrap+Rework, Pct of Cost = 2.61%

Cost = $210 per day  
Repeated for 260 days = Saving of $39,000

Cost = $60 per day – Saving of $150 per day
Understand Cost Relationship

- Can you Identify the Fixed Costs in your pharmacy?
- Can you Identify the Variable Cost in your pharmacy?
- Can you identify your Contribution Margin?
- Given a number of prescriptions can you accurately project your costs?
- Can you calculate your break even point?
Understand Cost Relationship

Fixed Costs

Fixed Costs are costs that do not change (in total) in response to changes in volume or activity.
Relationship of Cost Per Unit Under Fixed Costs

Often Referred to as Leverage
Understand Cost Relationship
Variable Costs

Variable Costs are costs that change in response to changes in volume or activity. The relationship between variable costs and activity is proportional. If production volume increases by 10%, then variable costs in total will rise by 10%.
Contribution Margin

• Price per Unit minus Variable Cost per Unit = Contribution Margin

• Contribution Margin can be looked at as the amount of money I earn per unit sold. i.e. If price per unit is $80, variable cost per unit is $60, then Contribution Margin = $20. ($80 - $60 = $20)

• It can also be measured as Contribution margin percentage, i.e. 20/80 = 25%. For every dollar of sales I earn 25 cents.

• Fixed Cost divided by Contribution Margin = Break even Point

• The point where Total revenues = Total Costs
Regression Analysis with Total Costs

You have observed the following data from your IV Compounding Lab. Is this data predictable at a high degree of Confidence?
Regression Analysis

You run a regression analysis on your data from your IV Compounding Lab and obtain these results.

Is this data predictable at a high degree of Confidence?

What is the projected cost if 460 IV’s were to be filled?
Regression Analysis

You run a regression analysis on your data from your IV Compounding Lab and obtain these results.

Is this data predictable at a high degree of Confidence?

What is the projected cost if 460 IV’s were to be filled?

460 x $34.98 (VC) = Variable Costs ($16,091)

$411.08 = total Fixed Costs ($ 411)

Total Costs = ($16,502)
Monthly Costs for Filling Prescriptions

You have observed the following data from your monthly filling of prescriptions. You have run a regression analysis on your data and obtained the shown results.

<table>
<thead>
<tr>
<th>Regression Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>

| Regression | 1 |
| Residual   | 24 |
| Total      | 25 |

<table>
<thead>
<tr>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
</tr>
<tr>
<td>X Variable 1</td>
</tr>
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</table>

Is this data predictable at a high degree of Confidence?

Determine your projected costs if 5,500 prescriptions were to be filled in the next month.

What is your moving budget formula?
Monthly Costs for Filling Prescriptions

You have run a regression analysis on your data and obtained the shown results.

- Is this data predictable at a high degree of Confidence? - 93.25 explained Variance

- Determine your projected costs if 5,500 prescriptions were to be filled in the next month.
  \[ VC = (5,500 \times 56.02) = 308,110, \text{ FC } = 269,371 \]
  Total Projected Costs = $577,481

- What is your moving budget formula?
  \[ (VC \times \text{ Volume}) + (FC) = \text{ Moving Budget (Total Costs)} \]
Break Even point for Filling Prescriptions

You have run a regression analysis on your data and obtained the shown results.

- If my Price per unit = $80 what is my Breakeven Point?

  - Contribution Margin can be looked at as the amount of money earned per unit sold. i.e. If price per unit is $80, variable cost per unit is $56.02, then Contribution Margin = $23.98.

  - Fixed Costs = $269,371

  - Break Even point = Fixed Costs/Contribution Margin
    - $269,371/$23.98 = 11,233 Prescriptions

  - For every prescription over Breakeven Point I earn $23.98 in Operating Revenue
Break Even point for Filling Prescriptions

• Break Even point = Fixed Costs/Contribution Margin
  – $269,371/$23.98 = 11,233 Prescriptions

• For every prescription over Break Even Point I earn $23.98 in Operating Revenue

• If I fill 60,000 prescriptions what is my Total Operating revenue?

  • 60,000 minus Break Even (11,233) = 48,767

  • 48,767 times Contribution Margin $23.98 = $1,169,433
Mark-Up of Products for Sale

• The policy at your Pharmacy site is to realize a profit of 30% of all products not subject to insurance.

• An over the counter product costs you $10.00. You policy is to realize a 30% profit.

• What price do you “Mark-up” this product?
Mark-Up of Products for Sale

• What price do you “Mark-up” a $10.00 item to realize a profit of 30%?

  $10.00 times 1.30 = $13.00       $3.00 /$13.00 = a profit of 23.07%

• $10.00/(1-Mark-up percentage) = $10.00/.70 = $14.29
  $4.29/$14.29 = a profit of 30.00%
Marketing and Our Behavior

We Spend Thousands of Dollars Devoted to Developing a Marketing Strategy in Order to Increase a Providers Load, Increase Prescription Count, and Increase Market Share yet Continue to Practice “Anti-Marketing” Behavior.
"Your call is important to us. Please stay on the line until your call is no longer important to you."
Barriers to Entry

Location / Geographical – Natural Barriers or Superior Location

Economic – Cost is Prohibitive

Psychological – Position Held in the Mind of the Customer
Management of Perception – Examples
People will not remember what you said, only how you made them feel

• Picking Beans

• Waiting Time

• Maître de
  – Greet
  – Hospital patients,
  – Community recognition
  – Crystal Bell
Economic Impact of Perceptions and Process Improvement

Perceptions:
- Revenues go up
- Market share increases
- Customers sing our praises

Outcomes:
- Processes improve
- Productivity improves
- Costs go down

Performance Improves

Profit Improves

Talent:
- Coaching individuals
- Facilitating teams – Great Systems
Self Examination Exercise

Examine your own processes. What does pharmacy do in the name of efficiency that frustrates it’s customers?

What would it cost to change it?

Would the trade-off in good-will be worth it?

How would employees like it?
Human Relations Theory - Hawthorne Studies

• Hawthorne studies were conducted from 1927 to 1932 by Harvard Business School Professor Elton Mayo.

• Purpose of study was to examine what effect monotony and fatigue had on productivity and how to control them with variables such as rest breaks, work hours, temperature, and humidity.

• Work Conditions Prior to Study - Under normal conditions, the work week was 48 hours, including Saturdays. There were no rest pauses.
Experiments

• Experiment One - Workers were put on piece-work for eight weeks.
  – Results - Output went up

• Experiment Two - The workers were given two rest pauses, five minutes each, in the morning and afternoon for a period of five weeks.
  – Results - Output went up again.
Experiments

• Experiment Three - Rest pauses were increased to ten minutes each.
  – Output went up sharply.

• Experiment Four - The workers were given six five minute breaks.
  – Output fell slightly.
  – Workers complained that the work rhythm was broken by frequent pauses.
Experiments

• Experiment Five - The two original rest pauses were put back in place, and the workers were given a free hot meal by the company.
  — Results - Output went up

• Experiment Six - The workers were dismissed at 4:30 p.m. instead of 5:00 p.m.
  — Results - Output went up.
Final Experiment

• Experiment Seven - The workers were dismissed at 4:00 p.m.
  – Output remained the same.

• The Big Moment the Researcher's were waiting for. Experiment Eight: All improvements were taken away and the workers returned to their original working conditions.
  – Results - Output was the highest ever recorded!
Explanation of Findings

• The experimental group had considerable freedom of movement compared to other workers in the plant.

• The group developed an increased sense of responsibility and discipline no longer needed to come from a higher authority, it came from within the group.
Real World Example

• Workers improve their productivity when they believe management is concerned with their welfare and pay particular attention to them.

• Productivity can also be explained by paying attention to the workers’ social environment and informal groupings.

• This Research was a critical contribution in Human Relations Management Theory.
Herzberg Motivation Hygiene Theory

- **Hygiene factors** determine a person’s level of satisfaction with their job and strongly influence employee retention.
  - If hygiene factors are not met, they lead to job dissatisfaction and cause employees to look for better opportunities elsewhere.
  - The addition of more/better hygiene factors over a certain baseline will not increase job satisfaction or performance.

- **Motivation factors** influence how a person performs on the job.
  - When an employee is motivated, they invest more of themselves in their work and strive to do better.
Herzberg's motivators and hygiene factors
(achievement through to personal growth are motivators; the others are hygiene factors)
Herzberg Motivation Hygiene Theory

“How much of an allowance did you get as a teenager per week?”

ME: I was allowed to live there.
Herzberg Motivation Hygiene Theory

• **Myth: Money Is the Motivator** –
  – “Employers believe that workers stick around for the pay and the benefits package.
  – Employees report that what they want most is a boss they can trust, one who builds their self-esteem, and treats them fairly.”

• **Myth: Work Environment is Secondary to Pay** –
  – The prevailing wisdom among many managers is that it’s not how you feel; it’s how fat your paycheck is.
  – Employee surveys consistently show that the quality of the workplace has the most impact on the psyche.
The Power of One

Special Thanks to Vital Smarts “Crucial Conversations” for permission to use this video.
Any Questions?