Drug Information and Drug Actions:
Examples of How Literature Evaluation and Drug Detailing can Influence Prescribing

Nelda Murri, Pharm. D.


II. Advertising

A. Psychological Objectives
   1. To convince consumers that the product will provide a certain reward more effectively than the competition.
   2. To teach a new use for the product.
   3. To convince consumers that they can avoid something distasteful with the product.
   4. To associate the product with a desirable symbol.
   5. To remind consumers of a slogan they already know.
   6. To show how the product will satisfy some subconscious desire.

B. 6 Principles of Influence: The Psychology of Persuasion (Robert Cialdini)
   1. Reciprocation = The tendency to want to give back.
   2. Scarcity = The tendency to desire rare things.
   3. Authority = The tendency to want to follow the lead of the experts.
   4. Commitment Consistency = The tendency to want to be logically consistent.
   5. Consensus = The tendency to not want to be left behind.
   6. Liking = The tendency to prefer to say yes to people we know and like.

C. Techniques
   1. Use of Words
      a. Helps: Provides no information as to how much, how little, or how; avoids a direct statement of the degree of the "assistance" provided.
         Example: Helps prevent cavities.
      b. Like: Like means "similar to" but implies the "same as."
         Example: Dismiss (a 3-oz douche) cleans like a quart.
      c. Up to, As Much As: Most people tend to ignore the lower limit of the range that up to implies (zero), and want to believe that they will only experience the upper limit of the range; tells nothing about the conditions under which the upper figure was achieved.
         Example: Up to 8 hours of relief.
      d. Fight, Fortified, Enriched: Powerful words which imply something extraordinary. Fight: "passive process of being rendered more resistant"; Fortified, Enriched: "contains"
         Example: Fortified with iron.
   2. Word Assembly Technics
3. Visual Images
   a. **Beautiful People**: Beautiful people are portrayed in ads for beautiful products. Homely people are portrayed in ads for non-sexy maladies such as constipation, back pain, indigestion, psychoses.
   b. **Extraneous Demonstrations** Demonstrations which have nothing to do with the product under conditions of actual use, but which lead you to assume that the same thing will happen when you use the product. Example: Pepto-Bismol is shown coating the sides of a glass container implying the coating of your stomach when swallowed.
   c. **Colors** Blue: Warm, appealing, easy to read; Red: Not generally used except antibiotic ads directed at surgeons; Green: Generally not considered acceptable for advertisements; Current Trend: Silver, Gold

*Clinical Pearl* In general, a new drug must make back the money spent on its R&D in the first 6 months that it is on the market or it will never make a profit for the company.

III. Pharmacist-Provided versus Pharmaceutical Industry-Provided Drug Information Services in Organized Health Care Settings

A. **Goal of Pharmacist-Provided Services**: Appropriate, Cost-effective Prescribing
   1. Drug Formulary Considerations
   2. Drug Budget Considerations/Purchasing Considerations
   3. Development of Drug Use Policies
   4. Clinical Pharmacy Services: The role of the Drug Expert

B. **Goal of Pharmaceutical Industry-Provided Services**: Brand-loyal Prescribing

C. In organized health care settings the two forces are often in opposition
IV. Organizational Structure of Pharmaceutical Companies and the Implications for Pharmaceutical Industry-Provided Drug Information

A. Research & Development Branch of the Company (Basic Scientists)
   1. Biologists
   2. Formulation Chemists
   3. Toxicologists
   4. Pharmacologists
   5. Clinical Research Coordinators

B. Sales/Marketing Branch of the Company
   1. Manufacturing Personnel
   2. Market Research Personnel
   3. Product Managers
   4. Medical Information Personnel
   5. Adverse Drug Reaction Reporting
   6. Service Representatives

C. Implications for Organized Health Care Setting-initiated requests for information from the Pharmaceutical Industry

D. Implications for Drug Detailing in Organized Health Care Settings

Analysis of the Sales Division of Representative Pharmaceutical Companies (circa 1985-1992)

<table>
<thead>
<tr>
<th>Company</th>
<th># Employees</th>
<th># Marketed Products</th>
<th># Reps</th>
<th># Products Trained</th>
<th># Products Actively Marketed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eli Lilly</td>
<td>37,000</td>
<td>&gt;153</td>
<td>1,000</td>
<td>7-10</td>
<td>3</td>
</tr>
<tr>
<td>Syntex</td>
<td>8,000</td>
<td>16</td>
<td>200</td>
<td>5-7</td>
<td>2-3</td>
</tr>
<tr>
<td>Cetus</td>
<td>800</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Centocor</td>
<td>-</td>
<td>0</td>
<td>200</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Clinical Pearl*: A major source of funding for drug studies is the pharmaceutical industry. In general, publication of research results are biased towards positive results unless a significant toxicity or adverse-effect is uncovered.

V. HA-1A Story: A Timeless Example Illustrating Opportunities for Pharmacy (if time permits)

A. Investigational antibody against endotoxin which is thought to be important in Gm(-) sepsis (a type of infection associated with a very high mortality)
B. Expensive: Projection ~ $3,500/dose; Exceeded DRG (cap that the government will reimburse for a given diagnosis)
C. Basic Problem: Patient Selection
   1. Must be given early in the course of the illness
   2. ~1/2 recover without the drug
   3. There is no rapid test to diagnose Gm(-) sepsis
D. General sense is that organized health care settings would place the drug on some type of restricted formulary status
E. Response of the Industry: The company hired a sales force of 200 representatives to promote the product
F. Postscript: Centocor withdrew nebacumab (Centoxin\textsuperscript{R}) from all European markets in 1994 and from further investigation in the United States for lack of efficacy.


A significant decrease in mortality in patients with gram-negative bacteriemia was observed in one study. However, the results of this study were questioned because of the statistical methods used and substantial concern exists over the high cost. A subsequent study showed no decrease in mortality at day 14 of treatment in patients with septic shock and gram-negative bacteremia. Nebacumab has not been shown to have an impact in infections where the causative organism cannot be determined. In addition, the presence of endotoxin cannot always be verified. Although criteria for patient selection are available, it has not been determined whether they will be widely used.

A follow-up study designed to confirm the efficacy of nebacumab for treating gram-negative sepsis was interrupted when excess mortality was observed when nebacumab was used in patients who did not have gram-negative sepsis.