

# MARKET RESEARCH BASICS FOR THE START-UP BIOMEDICAL COMPANY

## OR: "YOU DON'T KNOW WHAT YOU DON'T KNOW"

Presented by:

Fred Dotzler, Managing Director  
De Novo Ventures

*The new product didn't work as promised and benefited only a small percentage of patients. Furthermore, because of its high price, insurance companies, HMOs and the government would not pay the cost. One year after the product's launch, sales were insignificant, the sales force was discouraged, inventory levels were high, and the company ran out of cash.*

With proper market research, the problems which faced that company could have been avoided. Understanding the marketplace is vitally important, especially in today's healthcare environment. Few products, medical procedures or providers are sacred. Without proper market intelligence, the chances of commercial success are small.

Start-up companies spend significant sums of money on product development but often spend almost nothing on understanding the marketplace. There are several reasons for inadequate market

research. First, founders often come from science and engineering backgrounds and have had little exposure to this valuable tool. Second, market research conjures up images of spending large amounts of money to obtain information that is "already known." Third, entrepreneurs are sometimes so convinced their products are needed by prospective customers, they don't see the value of asking anyone for feedback.

Nothing is more important for a start-up company than developing a product that customers want and will buy. The start-up's survival usually depends on being able to sell the first product it develops.

### Conducting Market Research

Primary market research is any formal or informal process for eliciting information and feedback from prospective customers. For a start-up company, the initial objective of this research is to assess whether or not there is a need for a potential product or service, and to help determine the market potential. Later, feedback from prospective customers can provide important insight into what is needed to make the company's product more attractive to buyers. Market research also can help the company

determine an appropriate price, gain a better understanding of competitive products, identify the ideal selling channel (direct, OEM, dealer, distributor, manufacturer's rep), and even test promotional materials such as mailings, advertisements and brochures.

I have served on the board of directors of several biomedical companies that have used market research successfully. The following are real examples.

- A start-up wanted to verify the need for a new device to treat female urinary incontinence. Market research in the form of focus groups confirmed that there was great dissatisfaction with currently used products and that the company's product concept matched patient requirements. This information helped the start-up secure development funding and a distribution agreement with a large consumer products company.
- A company that had developed a diagnostic device wanted to understand how best to sell its new product. A series of depth interviews indicated that clinical pathologists and emergency room physicians influence purchasing decisions. The sales force was trained to sell to both, and sales grew rapidly.

- A start-up wanted to determine if its device to treat prostatic hypertrophy addressed a large enough market to justify development costs. Quantitative research conducted at a urology meeting showed that the market size was substantial. This information helped the start-up to sell the device to a public company.

- A new company used product testing with a small group of physicians to evaluate the potential of its tissue retraction system. Test results led the start-up to realize that demand for its invention was insufficient to justify continued development. The project was stopped, and the engineering team began working on products with greater potential.

- A device company used test marketing to determine if a direct sales force was cost efficient at selling its single-use devices to general surgeons. The results were negative, prompting the company to sell through established distributors.

The key to good market research is to avoid influencing the results. Company employees tend to lack the discipline and objectivity necessary for such research; so if the start-up has the resources, it is advisable to employ a professional market researcher. The following is a description of various types of market research and how they can best be used by young companies.

## Exploratory Research

The objective of exploratory or qualitative research is to increase understanding of the factors that influence prospective customers to buy a given product.

### I. Focus Groups

*Description.* A focus group is generally a two-hour meeting during which a moderator induces participants to communicate their feelings toward a general topic (a procedure, diagnosis, service, patient

type) and a product concept. The moderator's objective is to lead the group to talk openly about predetermined subjects. Issues raised by one participant trigger comments from others, opening up nooks and crannies for exploration during a session. All responses are recorded for future review and analysis.

*Value.* Focus groups are an efficient way, in time and money, for a start-up to uncover many issues concerning a proposed new product. They can be used to identify a prospective customer's beliefs about a product category, obtain preliminary reaction to a product concept, and surface issues for quantitative research. Focus groups are also valuable for generating ideas for new products and identifying possible product enhancements or modifications.

*Technique.* Prior to the focus group meeting, company management should work with the market researcher to develop an interview guide of questions to be addressed by participants. The questions should be open-ended, encouraging discussion rather than yes or no answers. See Exhibit I for sample questions.

Typically, eight or ten prospective users of a product or service are invited to attend a focus group. Since most participants work during the day, focus groups often are held in the early evening or at trade shows. Physicians and scientists are paid an honorarium of approximately \$150, and pharmacists and nurses are paid up to \$100. It is advisable to recruit more participants than are needed, to accommodate drop-outs.

A good moderator makes sure all group members participate and does not allow vocal participants to dominate discussions. The moderator also is alert for unanticipated subjects that might provide valuable additional insight.

At a minimum, the company should conduct two focus groups, because the opinions of one group might not be representative of the medical specialty. Opinions may also vary from location to location. So if the company has funding available, two focus groups in each of two geographically separated cities are advisable. The total cost of a focus group, including the interview guide, participant recruitment, honoraria, facility rental, recording, analysis and a written report is usually \$5,000 to \$7,000.

### II. Depth Interviews

*Description.* A depth interview is a face-to-face meeting with a physician or other potential customer. A series of questions are posed regarding the individual's beliefs and attitudes about a procedure, diagnosis, product or service.

*Value.* Compared to focus groups, depth interviews can usually be conducted more quickly and in greater detail. Since they involve one individual at a time, a rented facility is usually unnecessary, and costs can be lower. On the minus side, there is no interaction among participants to trigger new ideas.

*Technique.* The most important component of a depth interview is the guide used by the interviewer. Great care must be taken to ensure that all topics of interest are covered. Interviews are scheduled ahead of time with appropriate respondents and can be held in person or by phone. A thorough interview takes from thirty minutes to two hours, depending on the breadth of the topic to be covered. The encounter can either be documented in writing or taped for later transcription and analysis.

If the start-up company wants to glean information from physicians, scientists or patients, it is usually necessary to pay for their time. The amount offered can

be as little as \$25 for a patient interview and up to \$300 for a specialist.

## Quantitative Market Research

This type of market research is undertaken to measure or quantify the broader market's reaction to a product concept or procedure. It is useful for projecting market size and sales potential, ranking a product's attributes and identifying product voids, better understanding currently used products and procedures, and defining the market share of competing companies.

Quantitative research is conducted with numerous participants, so that the results can be projected to a universe of customers (e.g., all dermatologists). Usually 50 to 100 completed questionnaires per medical specialty are sufficient.

The objective is to obtain quantifiable responses to a written questionnaire. Preferably, the questionnaire is no longer than four pages, since respondents may not complete a long survey or give sufficient thought to their answers. The questions should follow a logical flow, usually beginning with background information and ending with specific reactions to a product or service. Simple questions that require only a checked box, circled number or short answer are completed more frequently than open-ended questions needing lengthy responses. Furthermore, a consistent response format decreases the potential for mistakes. So if participants are asked to rate a product attribute on a 1-to-5 scale, it's best to avoid asking them to rate something else on a 1-to-10 scale. Similarly, if a percent response is desired in one question, it is unwise to ask "How many times..." elsewhere.

Before administering the survey to large numbers of respondents, the questionnaire should be tested on a small subset

of perhaps five respondents. This pre-test will help ensure that the questions are clear and that the answers are amenable to analysis. See Exhibit II for examples.

There are three major ways to conduct quantitative surveys: face-to-face, mail or phone. The cost for each ranges from \$50 to \$100 per participant, including mailing costs, incentives paid to respondents, answer tabulation and analysis.

### I. Face-To-Face Surveys

*Description.* With face-to-face surveys, the questionnaire is completed in person.

*Value.* The researcher can qualify participants to be sure they fit the profile of the ideal respondent and can ensure that all questions are answered.

*Technique.* Face-to-face surveys are usually conducted at medical specialty meetings, where the concentration of potential respondents is high. The cost is usually lower than with other types of surveys because participants receive an item of modest value (e.g., tennis balls, flashlight, sewing kit, T-shirt) in return for five to ten minutes of their time.

### II. Mailed Surveys

*Description.* Respondees complete the questionnaire, which has been mailed to them at their office or home.

*Value.* Mailed surveys are the most convenient to conduct. However, they also tend to be the least valuable, because there is no assurance that the addressee is the person answering the questions. The response rate is usually 30% or lower, and the delay in receiving completed surveys can be up to two months.

*Technique.* The questionnaire and a \$5 to \$10 check is sent to targeted respondents, along with a letter asking that the questionnaire be completed and returned in

an enclosed, pre-stamped envelope. The response rate is usually higher when the survey is sent via overnight delivery.

### III. Phone Surveys

*Description.* With phone surveys, whoever is conducting the market research asks the questions and fills in the answers.

*Value.* The questioner has the opportunity to ask more open-ended questions than is possible with either a face-to-face or mailed questionnaire. Typically, the researcher can get up to fifteen minutes of a physician's time, either during office hours or in the evening. However, because physicians have major commitments, they are difficult to reach by phone. Usually, a large number of physicians must be called in order to get a sufficient sample size.

*Technique.* When doing phone surveys, the researcher calls the recipients, asks the questions, and fills in the questionnaire. As with mailed surveys, a remuneration (usually \$25) is desirable.

## Testing or Experience-Based Market Research

This type of research helps to measure product performance or the strength of marketing plans, before large sums are invested in the product launch.

### I. Product Testing

*Description.* A number of potential customers are given samples of the product to use, and feedback is obtained regarding the user's perception of the product's advantages and disadvantages.

*Value.* Early product testing enables the company to determine potential customer attitudes that are important to the sales and marketing effort. It may also uncover deficiencies in product design that can be corrected before launch.

*Technique.* Test participants are given a pre-production version of the product. Company engineering or marketing people observe them using the product or ask them to complete a questionnaire after product use. If the test findings prompt the company to change the product design, prospective customers should again be asked to use the product and provide feedback. Through this iterative process, the company can more effectively ensure that the product will be well received in the marketplace.

## II. Test Marketing

*Description.* Test marketing is used to evaluate sales and marketing plans – including the selling channel (sales force, distributor organization or marketing partner) as well as the sales and advertising approach. It is conducted in a confined geographic area, prior to a full product launch.

*Value.* If the test marketing is successful, the company is in a position to expand the product roll-out. If it is unsuccessful, the company should have enough information to determine what did and did not work well. For example, were there deficiencies in the product pricing, quality of the sales force, customer training or some other variable?

*Technique.* If a company intends to sell the product direct to customers, two or three sales people may be sufficient for test marketing. If the company intends to sell through distributors, the organization can be employed to first cover a limited geographic area. After the sales effort is initiated, the company itself should follow up with customers, to make sure the product is being used, to determine the level of satisfaction and to identify any problems. Adjustments in the sales and marketing approach may be necessary before proceeding further.

## EXHIBIT I FOCUS GROUP OR DEPTH INTERVIEWS

Good exploratory market research questions begin with words such as what, when, how, who, where, explain, describe, compare, and contrast, or they use phrases that elicit an open-ended response. For example:

1. What variables do you consider when deciding whether to perform a laparoscopic-assisted vaginal hysterectomy instead of an abdominal hysterectomy?
2. From your perspective, what are the major differences between a laparoscopic-assisted vaginal hysterectomy and an abdominal hysterectomy?
3. What is the most time-consuming step in performing a laparoscopic-assisted vaginal hysterectomy? Why?
4. What is the most difficult step in performing this procedure? Why?
5. Describe the tools you use in a laparoscopic-assisted vaginal hysterectomy.
6. After describing a new product Gismo for this procedure, the following questions might be asked:
  - a. What are the perceived advantages and disadvantages of Gismo?
  - b. Describe the type of patient on whom you would use Gismo.
  - c. How would you improve Gismo?
  - d. Would you purchase and use Gismos?
  - e. From a pricing or economic perspective, what product(s) is comparable to Gismo?

## EXHIBIT II QUANTITATIVE SURVEYS

Good questions for quantitative research are easy to answer – check a box, circle a number, write a number or name. Respondees will usually answer two or three open-ended questions that require written answers.

1. How many laparoscopic cholecystectomies do you perform per month? \_\_\_/Mo.
2. Describe the suture(s) you use to close the fascia after a laparoscopic cholecystectomy. Suture type \_\_\_\_; Suture size \_\_\_\_
3. Rate your satisfaction with the following devices used during laparoscopic surgery by circling the appropriate number.

	VERY DISSATISFIED				VERY SATISFIED
Clip applicators	1	2	3	4	5

4. What percent of your laparoscopic cholecystectomy cases involve a cholangiogram device manufactured by the following?
 

Company A, ___%	Company B, ___%
Company C, ___%	Company D, ___%
5. On average, how much does your hospital charge non-Medicare patients for a laparoscopic cholecystectomy? \$\_\_\_
6. How important are the following features for the trocar used in laparoscopic surgery?
 

	NOT IMPORTANT				VERY IMPORTANT
Retractable tip	1	2	3	4	5
7. What step during a laparoscopic cholecystectomy is most difficult and why?
8. What new devices or tools would make this step easier?

# DE NOVO

V E N T U R E S

De Novo Ventures is a lead venture capital investor focusing on the early stage financings (the seed, start-up and first round) of medical companies in the western U.S., particularly in California.

De Novo Ventures  
1550 El Camino Real, Suite 150, Menlo Park, CA 94025  
650-329-1999 FAX: 650-329-1315  
www.denovovc.com

©2001 De Novo Management