

# All Aspects of the Industry: Health Science & Medical Technology

## RG Prosthetics

RPG is a traditional and family run business. Mr. Guth inherited the business from his father and is grooming his son to continue. The prosthetic business is a vibrant career that grows during war times specifically because of technical advancements in the military and amputees from war wounds, but is also an expanding business because of increases in life expectancy and diabetes. This particular company has only nine employees and prides itself on efficiency, personalization, and communication. The prosthetists themselves are specialized in education, which is developing towards a need for a Masters Degree, but the technicians that can work in the industry are mainly mechanically inclined and trained for the specific technical needs of prosthetics. With the increasing insurance and bureaucracy, writing is becoming increasingly important to justify funding, even with a need of empathetic writing and storytelling ability to emphasize individual needs. The clerical staff has developed a writing component of the application process to recognize writing skills immediately. The application process also included a personality test and a trial period to make sure that people working in the company had the correct empathy and personality to deal with disabilities.

### 1. Planning

- a. Adjustments to the company are made on a needed basis but not planned
- b. No marketing (it is generally looked down upon in the field); Word of mouth is preferred

### 2. Management

- a. 9 employees
  - i. Tom Guth, the Owner, involved in front and back office
  - ii. Carla Carroll, an MBA, controls front office and clerical
  - iii. Everyone has a stake
  - iv. Overlap in abilities
  - v. Communications were handled with informal talks
  - vi. Purchases made as needed

### 3. Finance

- a. Billing

- b. Purchase inventory ahead of time
- c. Bonus for entire group not individuals

#### 4. Technical skills

- a. Technician
  - i. Mechanical background
  - ii. Like to work with hands and take things apart
- b. Prosthetist
  - i. BS in science, going to MS soon
  - ii. 10 month technical skills certificate
  - iii. Paid internship
  - iv. National exam

#### 5. Technology

- a. Continued education
  - i. Physics
    - 1. Robotics
    - 2. Engineering
  - ii. Math
  - iii. Chemistry
  - iv. Anatomy
  - v. Computers
  - vi. Writing

#### 6. Labor issues

- a. Excellent benefits
- b. Flexibility
- c. Health choices

- d. Bonus
- e. No sick time
- f. Vacation time
- g. Shared opinions with management
- h. Nothing spelled out
- i. Cross trained
- j. Management defines roles
- k. Open communication
- l. No evaluation
- m. Defined work areas
- n. Protective equipment

7. Community issues

- a. Paralympics
- b. MADD
- c. Aware of patients
- d. Donations as needed

8. Health and safety

- a. Defined work areas
- b. Protective equipment
- c. Geared for disabled
- d. Safety equipment
- e. MSDS apparent OSHA compliance

9. Personal work habits

- a. Flexible
- b. Four ten hour days is an option

- c. Pets/ kids welcome
- d. All work valued
- e. Weekends handled as a team
- f. Good attitude
- g. Casual front office
- h. Lab wear for techs and prosthetists
- i. Company policies “hire the best and keep them”, “if we have to baby sit you, you’re gone”

## Center for Physical Fitness & Exercise

The Center for Physical Therapy & Exercise is a specialized clinic for patients recovering from injuries, operations and traumas. Local physicians own the company and it is run by Kristen Hayes, the managing therapist, and the other therapists who work in the clinic. The therapists range in abilities and educational backgrounds. There are volunteers that can help in limited capacities, Physical Therapist Assistants with A.A. degrees who are able to carry out plans drawn up by the therapists, and Physical Therapists with M.A. and Doctorate degrees designing and implementing the therapy plans. The clinic prefers athletically minded workers and encourages collaboration and teamwork among the therapists. They like to have empathetic people with psychological backgrounds in order to motivate and train patients appropriately. The managerial aspects of the clinic are increasing with a need to understand business models and the ability to write rationales for proposals and supplies.

1. Planning
  - a. Adjusted to patient needs, physician needs, and current economic conditions
2. Management
  - a. Managed by outside company – later assign duties to personnel
  - b. Outsource billing
  - c. PT, PT assistant, and PT aid
3. Finance
  - a. Outsource/ insurance
4. Technical skills

- a. Minimum Masters degree
- b. 2012 Doctorate of PT
- c. Associates for assistant
- d. 30 hrs CE/ 2yrs
- e. Volunteers accepted
- f. Empathy
- g. Coursework in psychology
- h. Bedside manner
- i. Working with/ on humans
- j. Patience
- k. Outgoing
- l. Nurturing
- m. Creative – individual plans
- n. Can be physically demanding

#### 5. Technology

- a. Minimal advance technology
- b. Computer skills for front end

#### 6. Labor issues

- a. Flexible hours
- b. 4 tens or per diem or PT
- c. Vacation and sick time lumped
- d. No weekends
- e. No on call
- f. PT \$30-35/hr starting
- g. PT assistant \$22-28/ hr starting

7. Community issues
  - a. People who volunteer at marathons
  - b. School athletics
8. Health safety
  - a. Standard or default work conditions
9. Work habits
  - a. Athletically minded
  - b. Responsibly
  - c. Educated
  - d. Aids well educated
  - e. Team work
  - f. Shared clients

## SENOMYX

SENOMYX is a burgeoning company that works with food companies on developing new chemicals and products to enhance food flavors and lower cholesterol and sugar intake. They have divided the bulk of the work in their company into the four flavor receptors that they have designated: sweet, salty, savory, and bitter. They have chemists and biologists working on new discoveries and tastes that they give to taste testers in order to get the appropriate taste response for the companies who are their clients. The company also has administration and public relations elements. These positions are based more on presentation and public relations skills and designed to attract investors and clients. The CEO and administrators stay current with global trends in food production and supplies so that they are aware of competition and possible consumer mentalities, which could affect the chemicals or tastes they are developing. The administrators are also in charge of writing proposals and press releases to promote the company within the legal parameters set by the clients and companies they work with.

1. Planning
  - a. CEO and involving all employees
  - b. Scientist Board of trustees including Roger Tsien from UCSD

## 2. Management – 135 Employees

- a. 75% in Research and Development of that 33 have PhDs
- b. 25% general and administration
- c. There are 4 sensor groups: sweet, salty, savory, bitter blockers. There are scientists and others assigned to each one of these groups. They also share a chain of development after something is discovered.

## 3. Finance

- a. Publicly owned company since September 1998
- b. Main collaborators including Cadbury, Coca Cola, Campbell's, Ajinomoto, and Nestle. Collaborators can pay up to 50% of their R & D costs and then if they get a product out to the public, they would receive a royalty between 3-5%

## 4. Technical Skills

- a. General and administration
  - i. High School Diploma Entry (Office assistants, Admin, Exec. Assistants)
  - ii. BA (Associate, Analyst)
  - iii. Advanced Degree (manager, Director)
- b. Scientists
  - i. BA (lab assistant, research assistant)
  - ii. MS (Sr. research)
  - iii. PhD (Scientist, executive Dir)

## 5. Technology

- a. Biology
  - i. Identification and function of taste receptors
  - ii. Isolated cells and tested activity
- b. Chemistry
  - i. Synthesized molecules which showed possible receptor activity
  - ii. Created a library of "favor enhancers" 500,000

c. Taste Testing

i. Controlled Testing (controlled environment)

6. Labor Issues

- a. Workers don't pay for any benefits - great health, medical, dental, vision benefits
- b. Hours are flexible especially for the scientist
- c. Wages are hourly for admin and usually salaried for scientist
- d. Bonus opportunities - published bonus schedules for the employees
- e. Received stock options
- f. Offer internships, paid

7. Community Issues

- a. Advertise to the community for tasters
- b. Company is focused on fundamental benefits to societal eating habits; i.e., an enhancer could reduce the amount of sugar needed which could benefit diabetics

8. Health and Safety

- a. A new building where everything is in compliance with laws and all of the equipment is state-of-the-art

9. Personal Work Habits

- a. Scientists have flexible work hours
- b. General Admin were more traditional

## Pomerado Hospital

Pomerado Hospital is a well-organized, multi-faceted facility, with state-of-the-art technology and rehabilitation centers. There is a CEO and board of directors, but also a wide variety of departments and careers with individual focuses and needs. Decisions and planning are made with the vision of all employees and needs in mind from the CEO to the facilities. They have an overall mission statement that gives a vision of the future that they see for themselves, and it includes specific traits that they want in their workforce. The Human Resource department highly emphasizes hiring people who are analytical and critical thinkers, and they use tests in the interview process to try and judge empathy, flexibility, compassion, and integrity. These personality traits are constantly evaluated as patients are

asked to complete surveys upon being discharged. There is a good deal of teambuilding and they have been recognized as a top 100 employer in the country. They encourage promotion and schooling in all aspects of the hospital, even offering scholarships in some areas.

1. Planning

- a. Organized by overall missions and goals
- b. Mission plan is posted throughout the hospital
- c. Testing and evaluating themselves through satisfaction surveys
- d. Planning is an open process involving all aspects of workers
- e. Adjusting to the new hospital expansion
- f. Volunteered for an accreditation process to become a Magnet Hospital
- g. Engaged in a program to be a top rated employment agency
- h. Human Resources handled marketing at promotion of the hospital

2. Management

- a. Governing Board in charge
  - i. Elected community members
  - ii. CEO – approachable and non-MD
- b. Departments manage themselves with individual hierarchies
- c. Partnership with ARAMARK for Food Services

3. Finance

- a. Not for profit organization
- b. HIS – Health Information Services kept track of insurance information and medical records in order to receive payment

4. Technical skills

- a. Patient Care
  - i. Compassionate, empathetic assessed through the interview process
  - ii. Few LVNs, mostly RN with AA to MSN degrees accepted

- iii. Nurses certified for areas such as ED, ICU, OBGYN, Interventional Radiology, OR, Peds
- iv. ER Techs
- v. Medical Assistance
- vi. Unit Secretary
- vii. HIS with AA going to BA or MA

b. Ancillary Care

- i. Pharmacy
  - 1. Pharmacists with a Pharm.D
  - 2. Certificated Pharmacist Tech
- ii. Imaging
- iii. Laboratory
- iv. Rehab - Physical, Occupational, and Speech Therapist with a BS toward PhD; Assistant with an AA

c. Support Services

- i. Food and Nutritional Services
  - 1. Chef – culinary school
  - 2. Cooks, Café workers – high school diploma with experience
  - 3. Registered Dieticians - BS
- ii. Facilities
- iii. Human Resources
- iv. Computer Database Administrators - Certified

5. Technology

a. Specialized and varied for the departments

- i. Coding Programs
- ii. X-ray machines

iii. Patient Monitoring

6. Labor issues

- a. Unionized Workers, not management or M.D.
- b. Excellent benefits
- c. Flexibility
- d. Health choices
- e. Bonus
- f. Paid Time Off – Sick or Vacation
- g. Shared opinions with management
- h. Specialty trained
- i. Open communication
- j. Annual Evaluations, Daily Customer Evaluations
- k. 90 Day probationary period
- l. Safety Awareness
- m. Employee Manual
- n. Encourages Promotion from Within

7. Community issues

- a. Blood Drive on day of visit
- b. Customer Satisfaction is highly emphasized
- c. Aware of patient's need and comfort

8. Health and safety

- a. Defined work areas
- b. Protective equipment
- c. Geared for disabled
- d. Safety equipment

- e. MSDS apparent OSHA compliance

#### 9. Personal work habits

- a. Flexible Hours – multiple shifts
- b. All work valued
- c. Analytical skills
- d. Critical Thinking
- e. Deal with adversity and diversity
- f. Teamwork
- g. Empathy
- h. Flexibility
- i. Compassion
- j. Integrity
- k. Dependable
- l. Good attitude

#### Centre for Health Care

Centre for Health Care is doctor-owned and doctor-run so that the decisions are made with the concept that the doctor and patient relationship is the highest priority. They have designed their clinic for easy access among the various departments and close proximities for doctors to collaborate with each other. They believe in personalizing healthcare to the point where doctors and patients are matched based on personality traits that coexist well together. The center is actively involved in the community as a part of the PUSD partnerships in education and by offering free wellness classes and packages to help patients with multiple ailments. They have an Urgent Care that is open 360 days a year and works in conjunction with Palomar ER and Rady's Children's Hospital for covering of all areas. They are developing extensive electronic records that give immediate feedback to pharmacies and multiple departments, so technology training is becoming a must for the clinic. All of the business and management decisions are handled on site as well, encouraging the interconnectedness of their departments.

#### 1. Planning

- a. Decisions made by Board of Directors (Physicians), Shareholders, and Administrative Team
  - b. Marketing
    - i. Website
    - ii. Brochures
2. Management
- a. Owned and managed by Physicians
    - i. Radiology contracted by Valley Radiology
  - b. Both Primary and Specialty care on-site
  - c. Partnerships
    - i. Pomerado Health
    - ii. UCSD
    - iii. Rady's Children's Hospital
  - d. Case Management Teams work together in planning health care needs of patients with extensive ailments.
3. Finance
- a. Accounting and financial operations on-site.
4. Technical skills
- a. Certifications as necessary
  - b. On the job training
5. Technology
- a. In process of full implementation of electronic health records
  - b. Specialized medical equipment
6. Labor issues

- a. Observed orderly, professional, clean working conditions
- b. No Union
- c. Flexible hours
- d. Benefits packages

7. Community issues

- a. Free Wellness classes offered to community
- b. Member of PUSD Partners in Education
  - i. Career fairs
  - ii. Provide physicals

8. Health and safety

- a. Defined work areas
- b. Protective equipment
- c. Safety equipment
- d. MSDS apparent OSHA compliance

9. Personal work habits

- a. Attributes: flexible, dependable, positive attitude, team player, like working with people

## Sharp Memorial Hospital

The hospital is a beautiful, welcoming, non-profit, state-of-the-art facility. There are many job opportunities available, with a shortage of nurses. The hospital's primary goal is to make patients and their family members comfortable and cared for. Each admitted patient has a private room with many items to help speed their recovery, such as an iPod speaker system, electronic picture frame, and a couch that pulls into a bed for family to sleep overnight. They have a very low employee turnover and offer all employees medical, retirement, paid vacation, along with bonus opportunities. Management believes community outreach is vital and gives \$186,000,000 in this area each year.

1. Planning

- a. CEO and the Board of Directors included input from all employees when drawing plans for the new hospital

## 2. Management

- a. CEO & Board of Directors
- b. Directors for each department
- c. Core Value: Honor and thank those from past and present who made the hospital what it is today.
- d. "Sharp is transforming health care in San Diego to be the best place to work."
- e. Pillars: Technology, quality, finance, growth, community.
- f. Patient and family centered

## 3. Finance

- a. Billing department handles billing insurance companies and collecting from patients when necessary.

## 4. Technical Skills

- a. Medical records department – changing over to all electronic files
- b. Received National Quality Award
- c. Heart Center within hospital
- d. Life Flight
- e. Emergency Room has large screen in entrance for paramedics to see which room patient should be taken to.
- f. PBX operators – four on staff 24 hours/day, flexible hours, can be 17 years or older.
- g. Offer a 14-month program for those with current bachelor's degree wanting to pursue career in nursing.
  - i. University of Oklahoma, School of Nursing BSN program for Sharp.
  - ii. Loan forgiveness program if work with Sharp three years after graduation

## 5. Technology

- a. Private rooms for all patients admitted to hospital
  - i. iPod player, electronic picture frame, couch converts to bed for guests, TV, WiFi.
  - ii. Malcolm Baldrich Quality Award