PRECISE MEDICAL – Self-revealing case
Handout #1

Precise Medical is a new start-up company organized by two young people currently completing their university education. James Madison is an engineering student at the University of Toronto in medical engineering and Dawn Sovereign is an M’Acc student at the University of Waterloo. James has perfected a very low cost Continuous Glucose meter (CGM) suitable for youngsters who have Juvenile Diabetes. The CGM uses a tiny sensor that is imbedded in the skin of the child that sends information to a small receiver the child wears on his or her body. While the sensor must be replaced monthly by a medical technician, the new, smaller CGM gives a higher level of precision than existing CGMs, records the periodic information (every 2 minutes) and sounds alarms if the reading is outside of physician prescribed bounds.

James became interested in the medical technology field when his younger sister was diagnosed with the disease and this has been his passion since high school. However, his administrative skills have not been strong, and realizing this, he has partnered with Dawn for the past three years as the development work has progressed. Beyond the CGM, he is convinced that the technology he has perfected has application for a variety of different medical conditions.

Dawn has been employed as an analyst at a major pharmaceutical manufacturer for her co-op placements and has discussed the possible sale of the device to her employers, but they are not interested in untested products. James estimates that another two years of testing through various testing agencies will be necessary for the CGM to become commercially viable.

James and Dawn have come to you as someone who has experience in obtaining financial support for start-ups and would like your advice on how to provide funding for the next two to three years. Dawn has estimated that it would require $375,000 to support the project for the next year. You decide to lay out the alternatives and recommend a course of action for the amount of cash needed.
After careful consideration and discussion of the alternatives that you have proposed, Dawn (and James) believe that they can raise the needed funding from crowdsourcing and their families. What documentation should they prepare and what actions should they take before putting this plan into effect?
James and Dawn decide that they can raise $50,000 from crowdsourcing, and an additional $325,000 from their two families and friends if they:

1. Produce a business plan that demonstrates the benefits of the new technology along with specific milestones that will need to be completed in the year and resources (additional staff, equipment and facilities) necessary to complete the milestones.
2. Prepare a cash budget that demonstrates the “burn rate” that will get them through the first year.
3. Initiate a patent application that their investment in the technology will be protected,
4. Negotiate a clear, legally binding covenant with their family and friends on the funding provided in the form of a percentage of the company. Five family members and friends now will hold 20% of the company.

As the end of the year approaches, the device has performed better on the tests than James had hoped. They have hired one full time and one part-time technician and rented a small lab where James has managed the testing process and done additional development work. However, the burn rate has turned out to be higher than anticipated, and cash is rapidly running out. Again, James and Dawn approach you with concerns about the remaining year of testing and development. Because human trials will be required, the amount of funding they anticipate will be needed is in the order of $1 - $1.5 million for the next year. A number of staff need to be hired to support James, particularly in the management of the field trials.

Dawn has completed her M’Acc and CPA, but alas, James has left his program without graduating to focus on Precise Medical.

Recommend a series of actions to provide funding for the next year and ensure the program of testing goes well.
You recognized that now it is time to have an angel (local investor) along with grants from the JD Society to raise this amount of money. Funding from the angel investor of $1,000,000 was obtained along with a grant for $500,000 from the JD Society. The Angel investor required 19% of the company, leaving Dawn and James with 51% of the equity.

Funds needed to be expended on completing the patent process and beginning to fight infringements of the patent.

Dawn’s time has been taken up with administration, focusing on hiring the necessary staff and preparing financial statements for investors and granting agencies. Dawn is now full-time, along with James, and spends much of her time in selling the potential of the device to various organizations who are interested in wholesale and retail potential of the device. International enquiries need to be answered, and the pace of the operation has increased substantially. James is frequently demonstrating the advantages of the product and both of them are engaged in developing a manufacturing process to produce the predicted number of units that can be sold.

The good news is that the approval of the US FDA is anticipated in the first quarter of next year, followed by Health Canada.

When Dawn and James approach you at the end of this year, they anticipate a need for $12.5 million to support the operations of the company for the next year. What recommendations do you make for them?
Precise Medical’s approach to Therapeutic Ventures Associates for $12.5 million dollars was successful, but the firm did require 20% of the shares of the firm. The testing was completed, and in the middle of the year, manufacturing commenced. Sales to the retail and wholesale distributors began and a small revenue stream was established. In this industry, trade credit is important, the Precise Medical found itself holding high levels of Accounts Receivable. Unfortunately, as a start-up company, suppliers were very tight with trade credit. The predictions for success were high if an adequate volume of sales could drive the manufacturing costs down to the level that James had forecast.

James was overjoyed with the success of his medical device and immediately buried himself in a new application as a cardiac monitor using much of the technology he had developed. His needs for additional research staff sent personnel costs soaring as his requirements involved higher level technicians and scientists Ph.Ds. in engineering technology and medicine, along with medical doctors to handle the biological and disease requirements.

Dawn, on the other hand, was overwhelmed by the rapid success of the company. Realizing that she had a tiger by the tail, she and James approached you as additional funding requirements loomed large.

What is your recommendation for Precise Medical?