Case: Blood Bank

Bain, Round 2

Problem statement narrative

Our client is a blood bank that has operations spanning four states. They operate many sites from which their staff go out to different locations (e.g., schools and offices) in order to collect blood samples. Next, the blood is transported to centralized processing centers for testing, treatment, etc. (there is one processing center per state). Finally, the blood is transported from the testing centers to the hospitals that ultimately use the blood. The blood bank faces competition from other blood collection organizations. Only 80% of hospital demand for blood is currently being met. As a result, hospitals often have to share blood by transporting it between different hospitals, which is costly. There are no substitutes for human blood (synthetic substances or animal blood).

Their profitability has been slowly declining for some time and they are worried because new regulations are coming out that will require them to invest in an expensive new technology. The CEO wants to investigate potential areas to look at in order to improve profitability and wants to know how to prioritize among them.

Overview for interviewer

This is a basic profitability case but has a twist in that the candidate is asked to prioritize among the different possible mechanisms by which to improve profitability. This means that they will have to use their business judgment to assess the feasibility of different options.

Case Type: Profitability

Information to be provided upon request

See following slides for further detail.

Sample Issue Tree & Qualitative Analysis

Candidate may propose analysis / action in:

Internal Operations

- Revenues –opportunities to grow our top line?
  - Price – is there any flexibility in terms of the price we're currently charging hospitals?
  - Quantity – We know that there is unmet demand so how can we increase the volume of units of blood we sell to hospitals?
- Costs – opportunities to cut costs?
  - Variable costs – opportunities to improve procurement/labor?
  - Fixed Costs – opportunities to cut overhead/gain efficiency?

Possible follow-up and guidance to interviewer

Price – Given what we know about the market, what is your hypothesis in terms of our ability to raise our prices? Candidate should realize that unmet demand gives client pricing power.

Quantity – Candidate should quickly recognize that there is unmet demand they can easily fill if they increase the size of their donations.

Costs – Candidate should probe in this area and give ideas for cutting costs, but interviewer should tell candidate that the client has already been doing these and has cut costs as much as possible.

External Market Forces

- Customers (hospitals) – what's their elasticity of demand? What criteria do they use when purchasing blood?
- Suppliers (donors) – How can we increase the volume of donations? Increase # of donors or frequency of donations?
- Competitors – are our competitors profitable? Are they doing something we're not?

Possible follow-up and guidance to interviewer

Customers – A typical operation costs the hospital $40K and requires an average of 2.5 units of blood. Blood costs $100/unit. Candidate should realize blood is relatively low cost for hospitals. Interviewer can share that blood is seen as a commodity by hospitals.

Suppliers – Candidate should explore possibilities for increasing blood supplies to meet unmet demand. A good candidate will come up with multiple ways to increase supply. In actuality, most have been tried in real life and have not worked. Supply is essentially fixed.

Competitors – No additional info is known.

Question 1 – Math

Math Question	How can we tell if we are breaking even? Follow-up after answer: If we're losing money, what price do we need in order to break even? Follow-up after answer: Do you think this price is achievable?

Overall approach, good shortcuts & solution

Fixed Costs = $15M
Contribution Margin = $100 (Price) - $80 (variable costs) = $20
Break Even Volume = $15M/$20 = 750K units

The blood bank is not reaching their break even point (400,000 units).

To solve the second question, hold volume and fixed costs constant and solve for contribution margin:

$15M/400K units = $37.50 They need to raise prices by $17.50 per unit. This is an increase of nearly 100%.

To solve third question, evaluate the price impact on the hospitals:

An operation costs $40K, blood costs are currently 2.5 x $100 = $250. Blood costs are approximately 0.625% of total costs ($250/$40K). There should be ample room to increase these costs.

Information to provide up front

None

Provide information if asked

-Overall fixed costs are $15M a year
-Variable costs are $80 per unit
-Sales price is $100
-Current volume is 400K units
-Typical operation costs hospital $40K (also provided earlier)
-Typical operation requires average of 2.5 units of blood (also provided earlier)

Sample Recommendation

Recommendation	First and foremost, raise prices to improve margins. There is unmet demand and blood represents a small portion of costs. Second, continue to look for ways to increase quantity in order fill unmet demand. Finally, continue in efforts to keep costs minimal.
Risks	Risks are low, since blood is essential, has no substitutes and there is unmet demand.
Next Steps	Immediately implement price increases Invest new profits in order to try to increase donation levels