Business Fundamentals: Marketing and Strategy

Virtual Session 5

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Focal Decision
(from Deliverables)

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Major Pros and Cons from Deliverables (bold = many mentions)

Substance Abuse		Once-A-Day	
Pros	**Cons**	**Pros**	**Cons**
Competitive advantage / Differentiation			**Market is crowded, not differentiated**
Good sized market	**Compliance low for segment and 2x dosing**	**Bigger market overall: number, compliance**	
Some docs care a lot substance abuse	**Docs want 1x dosing**	**Docs want 1x dosing**	
Some competitors w additional indications do well	Competitors with 2x dosing do poorly	Competitors with 1x dosing do well	
Better $ margin		Cheaper trial	Lower $ margin
2x ok because it can replace two drugs	May be harder to persuade customer of new benefit	Avoids substance abuse stigma	May have to re-brand for substance abuse later

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Major Pros and Cons Organized with 3 Cs

	Substance Abuse	Once a Day
Customer (segment(s) to target)	Specific market exists that may tolerate 2x dosing due to high value	Broader, bigger market potentially accessed as physicians/patients cycle through multiple drugs all at perceived parity
Company & Competition (competitive differentiation)	Unique substance abuse advantage provides differentiation but must overcome a clear competitive disadvantage of 2x dosing	Mitigates a clear competitive disadvantage of 2x dosing but positive differentiation (specific reason to try) is less clear

Focal tradeoff: Good differentiation in niche market versus more uncertain differentiation in broad market (breadth vs. depth)

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Wider Analysis

(Topics from class + additional content)

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Competitive Data

- Insights? What seems to drive share?
  - Once-a-day (1x) dosage associated with higher share; e.g., brands D and E with 2x dosage have very low share.
  - The time course matters. It seems earlier entrants tended to have higher shares.
  - Perceived efficacy does not seem to strongly drive share. This is notable and interesting. (Note: It likely reflects realities in this market where physicians believe several acceptable alternatives exist, and often try various options.)
  - Competitor C, the closest match to Zanstric, did particularly well with the combination of 1x dosing and a pain indication. (*Note*: C is modeled after Cymbalta. Zanstric, in turn, is a made-up drug modeled on Cymbalta but with a substance abuse indication instead of a pain indication.)

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Competitive Data

- Given we have overall sales data across time, it's possible to do a deeper look here, modeling the impact of competitor and market characteristics over time. E.g., the negative impact of 2x dosing on share would likely become stronger (more negative) over time, as more 1x dose competitors enter. We look for this in historical data.
- Actual sales levels are also instructive. E.g., this is a market where the total number of prescriptions are rising over time, but branded-drug prescriptions are falling. You must account for those time series effects (one positive on branded sales levels, one negative) in forecasting potential sales (not share) levels.
- Perceptual mapping could be useful because it would help represent how (physician or patient) customers understand the market (see the optional reading on perceptual mapping techniques if you are curious about the statistical methods).
- Overall, my goal with this discussion was to work though the link between current market descriptions (Table 1) and implications for **competitive differentiation** as well as for assessing which **sources of value** (e.g., additional indications versus convenient dosing) are most important. Your discussion did that very well!

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Physician Data

- Efficacy for Substance Abuse Versus Dosing:

Both means and standard deviations (variability) in preference data are important:

	Mean	Std Dev
Dosing	5.5	1.3
Efficacy-Substance	3.5	2.9

- Dosing has the higher mean; this is key. In addition, the relatively high SD for Efficacy-Substance suggests that a moderate mean may be masking two distinct segments: some think it's very important and others don't. E.g., the above mean could emerge by combining two groups: 1) importance mean = 1.1 (and a standard deviation of 0.4) and, 2) importance mean = 6.7 (standard deviation of 0.5). This insight would be actionable from a marketing perspective if we could further segment and treat the high-importance physicians as a specific segment (i.e., focus detailing on them)

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Physician Data

- Next Questions?
- Customer preference data is rarely in aggregated form; instead, we break these data into preference data by segment. Sometimes we already have a sense of our segments, but sometimes we use preference data to structure and identify segments (e.g., cluster analysis)
- If we noticed variability, but did not want to (say) assign our analysts or hire a market research firm to do a full-blown cluster/segmentation study, we could try dividing these preference data by characteristics that seem likely to be important. As discussed in class, these may include: Physician specialty, physician geography, patient payer mix or other patient variables (i.e., looking at the patients served by physicians).
- Overall, my goal here was to highlight the importance of variability in preferences (i.e., in benefits sought) and tie that idea to segmentation. Your discussion and deliverables did this very well!

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Patient Data (1)

- Pros and Cons of Segments? EX: Segment B for substance abuse indication
- Segment B has low average compliance. This is a major concern in that no one is helped by a prescription that is not filled (i.e., the patient doesn't get better and the drug company does not get revenue). A theme that we came back to a couple of times, however, was that perhaps compliance would increase with the appropriate drug and marketing plan. Stated generally, this means that we could think of compliance as a dependent variable (a target to improve) rather than an independent variable (a fixed characteristic of the segment). It would be difficult to know in advance if or how compliance would change; however, if this were a focal aspect of a marketing plan, then the company could: 1) devise and run targeted pilots aimed at changing compliance (testing their results), 2) become particularly vigilant about tracking compliance over time.

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Patient Data (1)

- The fact that this segment tends to change drugs and have multiple prescriptions written similarly suggests they and their doctors are actively searching for relief
- The segment is also young, suggesting potentially many years of treatment and alleviation of suffering
- The main goal of this discussion was to get a bit of practice tying aggregate patient characteristics (as we see in Table 3) to implications for marketing opportunities. Possible firm actions include both marketing interventions (product, promotion, etc) and what variables to address and track (compliance, change in Rx, etc). Again, your discussion and deliverables covered these concepts very well!

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Patient Data (1)

- How to Forecast Market Size? EX: Segment B
- The most logical approach is often to start with an entire population and then divide that population into smaller groups. The “trick” is to think logically about how to divide up the market, recognizing that important characteristics are nested within each other (e.g., the number of patients being treated for depression further breaks down into those using branded drugs versus those using generics).
- A first cut for number of prescriptions expected to be written to pts in Segment B would be:
  - 250m U.S. adults * .125 = 37.5m -> .125 represents the 1/8th seeking treatment
  - 37.5m * .3 = 11.25m -> . 30% who have a branded Rx
  - 11.25m * .15 = 1.69m -> Segment B is 15% of the market

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Patient Data (1)

- However, if you are interested in volume of drugs sold, you would have to **account for the low compliance** in this segment. The variable in Table 3 does not fully account for the average months of prescriptions filled per patient, but that would be relatively easy to estimate from historical data. (The table only tells us that 15% of patients are at 90% compliance or better, but it does not tell us how many patients, say, fill only one month versus fill 6 months a year.). These data would be a priority for market size estimates and would probably be relatively easy to estimate, as prescriptions are well tracked.
- A final point made in class is that any patient suffering from substance abuse would be a target for the substance abuse indication. For instance, 35% of Segment E reports some substance abuse issue and hence would be a potential target. Even if we did start with segment B, we would want to consider these potential customers as well.

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Patient Data (2)

- CLV and Patient Characteristics? (EX: Segment B versus Segment D)
- Essentially, the CLV framework will help you estimate the profit impact of various segment characteristics. You would most likely, in this case, want to use the per-year (not perpetuity) version of CLV (see the workbook “Perpetuity versus 10-year…” in the CLV excel file I posted to canvas).
- You might also use different CLV models to compare scenarios. For instance, you could compare average CLV for Segment B with the current, 15% full-compliance rate to the average CLV for the same segment **if you could raise that compliance rate** to, say 25%. This would help you determine what to prioritize (i.e., the variables with highest CLV impact) and also what to track (i.e., variables your strategy aims to improve).
- On the next slide, I will compare Segments B and D, pointing out the general implications of various segment characteristics for overall CLV

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	SGMT B	SGMT D	Implication for CLV model
% Compliant	15%	60%	In estimating **contribution margin** per customer, we would want to reflect the average amount of the drug actually sold, considering compliance. Put bluntly, unfilled prescriptions do not return revenues
% Change Rx	56%	28%	Segment B has been historically more likely to change prescriptions due to side effects. This will cause a lower estimated **retention rate** (i.e., a higher defection rate) for segment B
% Resistant	55%	16%	While the data in the table are not totally clear on this point, we might think that patients characterized as resistant to treatment are more likely to change drugs. So, pending further study, we might estimate that this resistance will also result in a lower **retention rate** for segment B
Treatment yrs	7	7	You would likely use a 7-year horizon for both segment's CLV models (versus 10 in the excel example)

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Targeting: Summary

	Higher P(success)	**Lower P(success)**
Higher Payoff | Success	Clear win!	1x Dosing Broad Market
Lower Payoff | Success	Substance Abuse Niche	Avoid!

This targeting summary restates the key tradeoffs from our earlier, 3-Cs analysis. It seems easier to construct a winning strategy for the substance abuse indication (and the associated segments), because Zanstric has clear, highly valued, differentiation However, a trial for 1x dosing would be more likely to tap the broader, more valuable market. A major goal of this case is for you to appreciate this tradeoff and more generally the implications of 3 Cs for targeting.

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BEV for Clinical Trial Costs

- How many prescriptions needed to cover cost of clinical trials?
  - **1) For Substance Abuse Indication:**
    - Clinical trial has an estimated fixed cost of $50m, a monthly sales price of $250 and a monthly variable cost of $15.
    - Basic breakeven = $50m / ($250-$15) = 212,766 *months* sold
    - 212,766 / 12 = 16,367 annual, full compliance patients
  - **2) For the 1x indication**
    - $35m / ($150-$10) = 250,000 months = 20,833 annual, compliant patients

- As we discussed in class, the BEV complements the strategic path – you may decide to pursue both segments at some point – this might help choose where to start

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BEV for Clinical Trial Costs

- Relate to Market Size (Potential Market)
- The complete, potential market for branded drugs is the 250m US adults, *12.5% who are in our potential market *30% who take branded drugs
- 250m * .125 * .3 = 9,375,000
- Hence, the breakeven levels for our next step (clinical trials) represent very small market shares.

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Substance Abuse Indication as Innovation

- Rogers' Framework
  - Relative Advantage – Must convince market of our advantage. Regulation requires clinical proof of efficacy, so at the least an advantage over no treatment (or vs. gold standard)
  - Compatibility – 2x dosing is somewhat incompatible with the prevailing 1x dosing, likely causing some perceived switching costs. (e.g., habit change)
  - Complexity – Low: this market has seen a long line of (different) antidepressant pills
  - Trialability – Detailing: salesforce provides free samples drug, but efficacy is not always quickly observable; may require deep discounts for extended period.
  - Observability. - Can be created or simulated by a marketing plan that encourages physicians to speak with each other, e.g., using Key Opinion Leaders. (Patients might also "observe" each other through patient advocacy groups). Overall, observability is likely low if left to chance but (like trialability) can be an objective of marketing plans.

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Differential Salesforce effort: BEV implications

Assume Salesperson Cost is Fixed (hire & train dedicated personnel).

Imagine that you will need 40 new salespeople to launch a substance abuse indication because of intensive education efforts (physician education, patient compliance, developing new pitches, etc.)

Cost - $250k per year/pp = an additional fixed cost of $10m (=$250k*40). Now, monthly fixed cost of $833,333 (= $10m/12).

To cover this additional cost, how many incremental monthly prescriptions need to be filled? This is simple to estimate:

$833,333 / ($250-$15) = 3,546 months or about 296 (fully compliant) annual patients!

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Differential Salesforce effort: BEV implications

- Assume salesforce cost is variable (e.g., more effort per script) vs.fixed. This is appropriate if you have a dedicated salesforce with multiple drugs for sale, but they must shift incremental effort towards the new indication.
- Imagine that one extra hour/ month of salesperson effort is needed to support every 10 patients. Imagine salespeople cost $130 per hour. This means that there is an average monthly variable cost of $13 per patient ($130 / 10). Note: could also be estimated in terms of bonus or commission for the sale)
- So, in this case, our contribution margin for the substance abuse indication drops from $235 to $222, that is: ($250-$15-$13) = $222

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Implementation of Promotion Claims: 6 Ms

Example Claim: Breakthrough Innovation for Substance Abuse

Market	Pt & Physician Segment(s)	Pt-Physician pairs managing depression with co-morbid substance abuse (i.e., start with customers who are searching for a solution to this problem(
Mission	Value Proposition	Build awareness of major new benefit (substance abuse alleviation)
Message	Value Proposition & Segment	Scientific, technical proof, but also re-assuring: "Finally, a drug cares about you (your patient)"
Medium	Pt/Physician Coordination	In-office educational material supporting physicians in efforts to gain patient acceptance and compliance
Money	*determined by above*	Lower budget, relatively contained market and message
Measurement	*determined by above*	Beliefs regarding efficacy for depression and substance abuse (e.g., ultimate goal may be for the physician to help patient desire treatment with this drug).

Note: The key idea here is to note how promotional claims are likely to differ for the two different strategies we're considering, as the market, value proposition, etc differs. You can see this by comparing this slide to the next one.

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Implementation of Promotion Claims: 6 Ms

Example Claim: Convenient, new option for broad depression market

Market	Pt & Physician Segment(s)	Physicians who prescribe a variety of depression meds, looking for a good match between patient and drug (in terms of efficacy, side effects, etc). This market isn't looking for Zanstric per se.
Mission	Value Proposition	New option for trial, at parity with others.
Message	Value Proposition & Segment	Reassuring but probably simple: "We expand your options"
Medium	Pt/Physician Coordination	Salespersons provide samples for trial, encourage trial
Money	*determined by above*	Likely need a bigger budget, especially at first, to build awareness across the broader market
Measurement	*determined by above*	Physician awareness (e.g., ultimate goal may be very broad awareness)

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Implications for Future Branding

- Substance Abuse Start: Well-defined, but constrained? The risk here is that it may be hard to break out of the “substance abuse” branding, particularly because it likely has a stigma associated with it.

- Once-A-Day Start: Unconstrained, but unclear? The risk here is that you never create a brand image in the first place. It’s hard to be perceived as special once you have been perceived as average.

- Ultimately, it is important to recognize that wherever your brand starts will influence and constrain how it can develop (with new indications, etc.)

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Product Line Implications – e.g., you are the leading drug for substance abuse

- Sales Force Implications: May be perceived as expert in this domain, which creates physician trust and helps move them through purchase funnel.
- Profitability Implications: Think about cannibalization if you lose substance abuse drug sales. For instance, imagine that the contribution margin on your substance abuse drug is $40 per month. Also imagine that half (50%) of your new Zanstric prescriptions will be to patients who discontinue your substance abuse drug. The effective contribution margin for Zanstric is reduced by ~$20 ($40 margin *.50, p of lost sale of old drug):
  - ($250 - $25 - $20) = $215 / month = new contribution margin
- Consider how your various products relate to each other, both operationally (e.g., where does your salesforce have expertise? What is your brand known for?) and financially (e.g., will my new product take sales from my old?)

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Summary: Zanstric Case

- Example of Marketing Analysis within Healthcare Context
  - Complex and multifaceted decisions driven by technological advances
  - Coordinated across patients and physicians
- Many important insights for other contexts
  - Using analytics to determine potential market size and share
    - Funnel decisions
  - Different Tactics for different segments

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Summary: Zanstric Case

- Targeting Decisions
  - Require 3 Cs understanding
  - Tradeoff Payoffs and Probabilities
- Even (relatively) simple market research requires interpretation
  - Standard deviations and means
  - Segments are multidimensional, present tradeoffs (e.g., need versus likely compliance, size versus likely loyalty)
- Tools for Implementation
  - BEV, CLV for some precision
  - Rogers to understand challenges
  - 6 Ms for rigorous tactical implementation

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Summary: Zanstric Case

- Across contexts Marketing framework guides analytics
- Some examples:
  - Measurement of 3 Cs for Strategic Decisions
  - Estimates of p(success) and (payoff | success)
  - Inputs to breakeven (and other financial modeling)
  - Segment characteristics for Customer Lifetime Value
  - 6 Ms: Framework drives measurement

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Case was based on a similar decision at Cymbalta's launch: Cymbalta: what happened

- Decision: Approval for pain indication or single dosing
- Lilly decided to focus initially on approval for single dosing (1x)
  - Nov 2001: Applied for single-dosing approval, with plans to generate revenue to cover pain indication trials
  - Oct 2002: Approval put on hold bc of manufacturing issues at Lilly (unrelated to Cymbalta)
  - So, timing converged
    - August 04 = FDA single dosing approval for depression
    - Sept 04 = FDA pain indication approval
- Dilemma
  - How would you market?
  - How would you develop the market over time? (Start broad or start with pain indication?)

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Cymbalta Marketing at Launch (Oct. 2005)

- Unbranded DTC sales efforts
  - Avoid naming brand to avoid listing side effects (per FDA rules)
  - Market growth strategy focuses on increasing patient awareness that pain can be part of depression (worked b/c only drug with pain indication)
- April 2006, added branded advertising
  - Initial Creative: "Depression Hurts"
    - Educate patients (end users) about wider array of depression symptoms treated by Cymbalta
    - Plus continued attempt to overcome stigma, increase treatment propensity
  - Later Creative: Portray struggle to meet obligations due to depression/pain
    - Depression as a physical disability
- TV and online ads to patients, supported by salesforce visits to physicians
  - Goal: Drive patients into physician offices, help physicians understand what patients are seeking and write prescriptions specifically for Cymbalta

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Cymbalta Product Development Strategy

- Late 2004: indication for diabetic nerve pain
- Feb 2007: indication for generalized anxiety disorder (re-instated "depression hurts" for this target)
- June 2008 : indication for Fibromyalgia
- Nov 2010: indication for chronic musculoskeletal pain
- 2014: Cymbalta loses patent

- Notable efforts to expand reach of the drug while it was still on patent!

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