

## Market Analysis

The Pill Server company is a part of the global healthcare and pharmaceutical industry, as it pertains to pharmaceutical development and doctor distribution of medical prescription drugs, by working against overdosing and underdosing prescription drug medications in the elderly community. This industry is massive, combining numerous different pharmaceutical companies and agencies, the federal government legislation, the FDA, and numerous clinics and medical practices, as evidenced in reputable sources. In addition, with the vast number of people taking prescription drugs, a great deal of them belonging to the elderly demographic, the target population in the industry for this company is large, which suits a rapid growth and development of this company.

Trends within the industry are quick to change and sometimes unpredictable. The overdosing and underdosing problem has been statistically analyzed, and the trends are generally upward in terms of the death rate and medical problems caused by them, though they rapidly fluctuate. Moreover, the elderly population proportion within the American citizenry is an important factor for the evolution and design of the company. The industry is also quick to adopt new technologies in both prescription drugs, through pharmaceutical and research laboratory innovations on existing medications, and deliver mechanisms, with a rapid adoption of electronic services for medical records and prescription ordering. These trends may prove hard to adapt to, but are vital for the success of the business.

This product takes a closer look at the problems of drug dosage, specifically offering a vastly novel perspective on the underdosing problem, a problem that gains little light on current media. This is solved through the emergency contacts implementation and the alerting of the user

through the alarm system. In addition, the product takes a closer look at a specific demographic adversely affected by drug dosage issues, that being the elderly community, which also gains little coverage on the media. This is solved through the product being outfitted for particularly this community, as the material used in the product is made such that the users cannot easily break into the product and take pills without proper access to the server module.

The target market is the elderly population that takes prescription drug medications. Around one-fifth of the American citizenry is in the elderly demographic sector, and most of them take at least 5 medications daily. Not only is keeping track of medications a problem for these individuals, but the timing, consistency, and health consequences of taking these medications cannot be easily evaluated by this population, making the use of this device extremely important. Around one-third to one-half of the industry of healthcare and pharmaceuticals is made of this target market, which indicates extensive competition in the field, but also indicates a huge market that the company can pursue without requiring to immediately get a large market share in the industry.

The big picture of the business is to provide widespread access of a technological refined pill dispenser bottle to the elderly community, with the major benefits of addressing the overdose and underdose challenges in the community today. Our company helps solve these problems, as opposed to many of the competing companies, which mainly serve to procure data and provide research on the general scope of these problems and their effects on the target population. There is plenty of room in the current economy for this product, and it is likely that it will take up significantly more market share as the company expands and the technology becomes refined. There will be many governmental or political benefits, as drug delivery and healthcare are

controversial and heated issues in these organizations. The ethical service this product gives appeals to the social aspect of the company, and the technological simplicity and functionality of the product add to its appeal. Moreover, there are a great deal of economic appeals that this product has, and these will be explored during the growth and scaling of the company as it progresses from the New England pilot area to the full United States market.

Our business has a great deal of strengths and opportunities, most centered around the ability to save lives and the effective nature of the solutions addressing the overdose/underdose problems in the elderly community. An effect of this is governmental support, and possible pharmaceutical or healthcare company support for this product. The consumer education aspect of the company is also significant. However, weaknesses and threats do exist, primarily in the form of how adaptive the company and the technology of the product can be, as technology in society changes over time, the elderly population fluctuates, and the enormity and severity of the drug dosage problems changes. However, these can be turned into strengths and opportunities through more intensive modeling of how the company can adapt, possibly through running simulations and performing extensive research during the pilot program for the direction of both the company and the target population in society.

Many SMART goals can be made from this analysis, and some include developing a quantitative model for the progression of drug dosage problems within the next five years, to be accomplished during the pilot program; and a survey or analysis of effective methods to educate the consumer on drug dosage problems and the relevance of our solution, to be accomplished during the testing phase of the product and company strategies. In these ways, the Pill Server company can take a significant market share of the pharmaceutical and healthcare industry, and

can stand against the competition with a far superior and more long lasting product capable of solving these issues.

## Attached Material

### PEST Analysis

Political	Economical
<ul style="list-style-type: none"> <li>Reduces healthcare costs</li> <li>Healthcare initiatives will become altered</li> <li>Improves environment due to biodegradability of PET component</li> <li>Reduces scope of drug dosage dilemma</li> <li>Less drug outreach program funding required</li> <li>More focused legislation on drug overdosing in younger population</li> </ul>	<ul style="list-style-type: none"> <li>Advantageous due to an established year-round market</li> <li>Consumers are more confident in their medication</li> <li>Consumers are more confident in their doctors and healthcare</li> <li>Pharmaceuticals and doctors are held more accountable for drug dosage errors, and can have monetary repercussions</li> <li>Can rapidly scale</li> <li>Government grants could scale project</li> </ul>
Social	Technological
<ul style="list-style-type: none"> <li>Educates public on overdose/underdose problems</li> <li>Saves considerable numbers of lives</li> <li>Responsibility of drug dosage problems that were correctly prescribed becomes held by devices, not by doctors</li> <li>Influence comes primarily from drug legislation and drug dilemmas in the everyday community</li> <li>Technology to be implemented is widespread in the current society</li> <li>Ethically beneficial and appropriate</li> </ul>	<ul style="list-style-type: none"> <li>Build technological awareness in elderly community</li> <li>Addresses the problem as opposed to simply collecting data on it</li> <li>Rapid communication to emergency contacts or services</li> <li>Risk of technological malfunction exists</li> <li>Major innovation potential exists</li> <li>Competition is manageable, if not able to be cooperated with and built off</li> </ul>

### SWOT Analysis

Strengths	Weakness
<ul style="list-style-type: none"> <li>Simplicity to the technology used in the product</li> <li>Addresses problem that has been unexplored before</li> <li>Takes new stance on issue through addition of rapid emergency contacts</li> <li>Ethical responsible business and socially aware</li> <li>Unique due to consumer education about true overdose/underdose problem in elderly community</li> <li>Addresses environmental awareness through biodegradability of plastic PET component</li> </ul>	<ul style="list-style-type: none"> <li>Technology must be innovated and refined considerably</li> <li>Consumer education will require a great deal of resources</li> <li>Marketing will be hard, especially to pharmaceutical industries or doctors and clinics</li> <li>Company must become more adaptable to the changing features of the nationwide drug dosage dilemma</li> <li>Company must adapt and refine its strategies as new scientific studies come out</li> <li>End consumer must become educated about the importance of product</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>Company market is open year-long and has a strong need for this product</li> <li>Not only complies with but adds measures to existing governmental regulations and legislation regarding dosage issues</li> <li>Target market has great need for product</li> <li>Social changes will not hinder enormity of the problem being addressed</li> <li>Competitors do not address problem</li> <li>Many partnerships can be sustained</li> </ul>	<ul style="list-style-type: none"> <li>Competitors can be formed at a rapid pace, expanding on our base</li> <li>The severity of the drug dosage problem can dwindle or change unpredictably</li> <li>Many market developments can be made that cause difficulty for company to adapt</li> <li>Company must refine the product as new data and studies about the product come out</li> <li>Technology will require major refinements as the technology used in everyday life improves</li> <li>American population's proportion of elderly people, the target market, is volatile</li> </ul>

## SMART Goals

<b>What do you want to achieve?</b>	<b>Specific</b> Who is involved? What do you want to accomplish? Why is this important?	<b>Measurable</b> How will you track progress? How often, how many, how much?	<b>Attainable</b> How will you accomplish this goal? What steps will you take?	<b>Relevant</b> Is this a realistic goal? Is it worth spending time on?	<b>Time-bound</b> What time constraints are involved? Where is the deadline?
Goal 1: Create a final design and prototype of the Pill Server product to be sold by the company on the company website.	The Pill Server team would be involved, specifically the designing and engineering portions of the team. The complete design of the product is important to accomplish in order for the product to be testable and put on the market.	Progress will be tracked through progress reports on the design and functionality of the product over the course of refinements and testing. The goal will have been reached when the product is ready for distribution.	The goal will be accomplished through the Engineering Design Process and careful examination of all the functionality and efficacy required for the product to address the problems it and the company are designed to address.	This is a completely realistic and pragmatic goal that is important to the success of the company, and can be performed by all involved. It is relevant as a foundation for the company to begin marketing and producing revenue.	The major time constraints are confined to the business plan strategy of the company, where around 6 months will be devoted to developing and refining the product and its design.
Goal 2: Design the company website for consumer education and selling the Pill Server product.	The Pill Server team, especially the marketing team, would be involved in this goal. The production of a fully functioning and captivating website would be the end accomplishment of this goal.	Progress will be tracked through progress reports on the design and functionality of the website through testing the website using random surveying responses. The goal will have been reached when the website is ready to be published.	The goal will be accomplished using a variation on the Engineering Design Process and careful examination of all the functionality of the website required to provide consumer education of the product, as well as facilitate the marketing of the product.	This is a realistic and practical goal that is important to the success of the company. It is important due to the influence it has on the marketing and publicity of the product, and can be performed by the marketing and public affairs sections of the company team.	The major time constraints coincide with the testing and design phase of the company's product, the Pill Server. This would permit around 6 months for the website to reach the required functionality and capabilities.
Goal 3: Perform and collect data on a testing phase of the product with the target market, to analyze the product's efficacy.	The Pill Server team, specifically the engineering and public affairs sections of the team, would be involved in this goal. The end accomplishment of this goal would be to have collected meaningful and valuable data on the functionality and efficacy of the product at addressing societal issues.	Progress will be tracked through how prolific and meaningful data is achieved by the company, as well as through studies and statistical analyses on the data collected. The goal will have been reached when scientific analysis reveals a productive design of the Pill Server product.	This goal will be accomplished through distribution of surveys and the creation of a testing program reaching the target audience. Steps will be taken to distribute surveys, get feedback from participants, analyze the data, make conclusions about the product's design, and refine the design.	This is a realistic and practical goal that is important to the success of the company. It is important due to how it states how effective and functional the Pill Server product is, and how it applies and helps solve the real world issues the company is designed to address.	The time constraints would be around 3 months following the designing and refinement phases of the product. The deadline would be set 9 months after the onset of the company, and the final three months would be devoted to this goal of surveying and collecting data on the product.

## Works Cited

- Chau, Diane. "Opiates and Elderly: Use and Side Effects." *Clinical Interventions in Aging* Volume 3 (2008): 273-78. Web.
- Esposito, Lisa. "Silent Epidemic: Seniors and Addiction." U.S. News. U.S. News, 2 Dec. 2015. Web. 12 Oct. 2017.
- Harmon, Katherine. "Prescription Drug Deaths Increase Dramatically." *Scientific American*. Scientific American, 6 Apr. 2010. Web.
- The Fault Lines Digital Team. "Doctor: Seniors Have 'highest Rate of Drug Overdose Death'." Al Jazeera America. Al Jazeera, 26 Aug. 2015. Web. 11 Oct. 2017.
- MD Magazine. "How Many Pills Do Your Elderly Patients Take Each Day?" MD Magazine. MD Magazine, 04 Oct. 2010. Web. 12 Oct. 2017.