Exhibit 1



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Financial and Market Analysis & Recommendations on Entering the Arizona Medical Marijuana Market

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## **Executive Summary**

Arizona voters passed the Arizona Medical Marijuana Act (AMMA) in November 2010. The AMMA decriminalizes the possession, use, cultivation, and sale of marijuana for medical purposes under Arizona law. Arizona is divided into 126 Community Health Assessment Areas (CHAA(s)) and each CHAA may only have one dispensary located within it. A dispensary is the only place patients are legally allowed to purchase medical marijuana (MMJ) in Arizona.

Ultra Health, LLC. (UH) was awarded three dispensary certificates: Duncan/Morenci (No. 83), Graham County (No. 84), and Gilbert E (No. 77). With these certificates, UH has the right to acquire, possess, cultivate, manufacture, deliver, transfer, transport, supply, sell, and dispense medical marijuana to qualifying patients and designated caregivers.

The purpose of this plan is to outline a market, customer, and industry analysis as well as financial analysis and projections under two different scenarios: 1) whether UH decides to wholesale purchase medical marijuana for retail sale or 2) whether UH opts to grow its own medicine for retail sale.

The federal government has classified marijuana as a Schedule I substance under the Controlled Substances Act (CSA) meaning that it holds marijuana to have no acceptable medical use. As of November 2012, 18 states plus the District of Columbia have approved the medical use of marijuana with Colorado and Washington approving the recreational use of marijuana as well.

There is an obvious conflict in this area of the law between the states and the federal government, and operating a dispensary carries a considerable amount of risk. While there is no way to definitively answer what would happen to UH once it opens its doors, a recent Arizona Superior Court ruling will allow dispensaries to continue operating within the state.

In *White Mountain Health Center v. County of Maricopa*, the court rejected the notion that the AMMA preempted federal law noting that Arizona has simply taken the same position on medical marijuana as the growing minorities of states have. While the Superior Court ruling is encouraging for UH and other dispensary owners in the Arizona, it has done nothing to limit potential liability under federal law. The ruling simply took away any of the uncertainty regarding the AMMA from being fully implemented.

There has been much turmoil in the medical marijuana industry over the past few years, but things seem to be turning for the better. Voters approved medical marijuana programs in more states and the government raids of the summer of 2011 have seemed to subside considerably.

Furthermore, new polling data came out showing strong national support for medical marijuana as well as for legalization in general.

The product UH will be selling is high-grade organic medical marijuana. MMJ is available in three different types: sativa, indica, or hybrid. UH will sell MMJ in a retail space in CHAA No. 99 of Casa Grande and it has decided to wholesale purchase their product rather than grow it.

Forecasts for MMJ sales for 2013 could reach \$1.5 billion. The MMJ market could be poised to more than double in 2014 as this is the first year recreational sales of marijuana would be legal in Washington and Colorado. According to the Washington State Office of Financial Management, a fully functioning marijuana market could generate upwards of \$1 billion. The market is also poised for growth because dispensary programs in several Eastern US states are scheduled to open in 2014. These projections could come in much lower if the government begins raids again.

The market could grow exponentially over the next five years as the number of states whose MMJ programs are in their infancy stages mature. The 2016 election will surely see more MMJ ballot measures. Depending upon those results, the number of patients and revenues could continue to grow in both new and established markets.

It is estimated that roughly 1.2-1.5 million patients currently use medical marijuana under state programs. This number could grow anywhere between 1.8-2.1 million. Patients, on average, spend between \$1,500-\$2,500 annually on MMJ. This figure could increase even more if the recreational outlets in Washington and Colorado launch without government interference, and could grow even more if tourists take advantage of the opportunity to use marijuana recreationally in those states.

The profitability of dispensaries is strong with nearly 85% of dispensaries nationally nearing breakeven or posting profits. On average, dispensaries have between \$400,000-\$500,000 in revenue with about 40% of dispensaries generating at least \$500,000 in revenue. 75% of dispensaries said it took them less than a year to turn a profit with 42% hitting profitability within a few months. This is encouraging for the Arizona market because the number of dispensaries that can open there is capped. This will create somewhat stable business conditions and could ease the competitive pressure.

There are four sectors in the medical marijuana industry: dispensaries, cultivation sites, edible companies, and ancillary businesses. Dispensaries are the retail outlets that sell MMJ to patients and can offer a variety of other products and services. Cultivation sites, or grow sites, are the businesses that cultivate, harvest, ship, and sometimes package MMJ. Depending on the state regulations, cultivation sites may have to be owned or at the very least associated with a licensed dispensary. Edible companies produce products that can be infused with MMJ such as brownies, pizza, as well as water, sodas, and juices. Finally, ancillary businesses consist of any business opportunities that may be ancillary to the medical marijuana market.

There are inherent risks for any business, but the risks that MMJ businesses face are unlike any other industry. Some key risks for MMJ businesses are federal laws, state and local laws, raids and civil forfeiture, volatility of the market, and business management & financial challenges.

The Arizona market is poised for growth in 2013 with estimated annual revenues from MMJ to be between \$38-\$58 million at current patient levels. There are currently about 37,000 patients in the state and this number has been steadily increasing since the program's inception in 2010.

The market is segmented by patient condition. Each condition comes with a specific set of ailments that particular types of strains treat. The geographic boundary for the market is the state of Arizona's borders because patients are not required to purchase from the CHAA in which they reside. While Arizona recognizes other states MMJ programs, the amount of out of state patients utilizing dispensaries will be so miniscule, it is not worth it for UH to focus on this segment of the market. UH's target market could be every cardholder in the state, but the most likely scenario is that people will not drive an unreasonable amount of time for MMJ. Therefore, UH should focus on the CHAAs immediately surrounding their dispensary locations.

There are no substitutes for MMJ in this market. Edibles and concentrates could be considered substitutes, but the only places where these products can be purchased are dispensaries. UH and other dispensaries' revenues should not be affected because the only place patients would be able to get these substitutes is through a dispensary.

The customer analysis revealed that UH should focus heavily on customer service. This can mean a variety of different things in this context. To some patients it means putting the patient first and rewarding loyal customers; while to others it means being friendly, helpful, and treating customers with respect. Patients also value testing and labeling of their MMJ. While testing is controversial because there are no industry standards or federal oversight, it is in UH's best interest to find a credible company to test its MMJ products.

More than half of the patients surveyed said having a wide selection of strains, edibles, and other products is a top factor for them when choosing a dispensary while 40% said it was nice to see. UH should also offer edible MMJ products as more than 70% of patients are interested in these products to some varying degree. Patients also value the atmosphere of a dispensary. A majority of them prefer a "mom-and-pop" feel rather than a chain-store operation. UH should also ensure that it has MMJ of varying potencies while staying competitive on all price levels. While organic MMJ is not a necessity for every patient, with 33% of patients said that they would switch dispensaries for organic MMJ, UH should ensure the product it receives wholesale is grown organically as a way for UH to distinguish itself from its competition.

It is important to patients that a dispensary offer ancillary services as well, but patients do not favor all kinds equally. 61% of patients surveyed said that the most important ancillary service a dispensary can provide is education. 41% of patients also said it was important for dispensaries to take an active role locally and engage with the community. It is extremely important that UH makes a concerted effort to be involved in the local Casa Grande community. If UH is an active,

upstanding member in the community, it is going to be more difficult for dissidents of the MMJ program to gain support locally to force UH out of business.

The projections made for this report were based on a certain number of assumptions available in more detail below. When looking at the projections and costs associated with acquiring or cultivating MMJ, it is clear that it is more profitable for UH to grow its own product. UH's cost per pound of MMJ wholesale is *significantly* higher with it costing almost twice as much to purchase the product wholesale rather than grow it. If UH were to grow its product, it would have net income of \$644,566 in October 2014 as compared to just \$442,161 if it buys its MMJ wholesale over that same period.

## Introduction

Arizona voters passed the Arizona Medical Marijuana Act (AMMA) in November 2010. The AMMA decriminalizes the possession, use, cultivation, and sale of marijuana for medical purposes under Arizona law. The AMMA designates the Arizona Department of Health Services (ADHS) as the licensing authority for the program. ADHS is tasked with issuing Registry Identification Cards (RIC) to qualifying patients, designated caregivers, and dispensary agents, as well as selecting registering and providing oversight for nonprofit medical marijuana dispensaries.

In order to qualify for a RIC, a patient must suffer from one of the following debilitating medical conditions: cancer, glaucoma, HIV, AIDS, Hepatitis C, ALS (Lou Gehrig's Disease), Crohn's disease, agitation of Alzheimer's disease, or a chronic or debilitating disease or medical condition that causes cachexia or wasting syndrome, severe and chronic pain, severe nausea, epileptic seizures, multiple sclerosis, or another debilitating medical condition approved by ADHS. A physician must also provide a written certification that the patient suffers from the debilitating medical condition.

Qualifying patients can legally possess and purchase medical marijuana for use under Arizona law as long as they hold a RIC. They acquire their medicine from non-profit medical marijuana dispensaries. These dispensaries acquire, possess, cultivate, manufacture, deliver, transfer, transport, supply, sell, and dispense medical marijuana. Arizona is divided into 126 Community Health Assessment Areas (CHAA(s)) and each CHAA may only have one dispensary located within it. Dispensaries are the only place patients are legally allowed to purchase medical marijuana in Arizona. Arizona law permits the number of CHAAs to change based on the number of registered pharmacies in Arizona.

Ultra Health, LLC. (UH) was awarded three dispensary certificates: Duncan/Morenci (No. 83), Graham County (No. 84), and Gilbert E (No. 77). With these certificates, UH has the right to acquire, possess, cultivate, manufacture, deliver, transfer, transport, supply, sell, and dispense medical marijuana to qualifying patients and designated caregivers. Under the Duncan/Morenci license, UH has the right to deliver MMJ to qualifying patients throughout the state of Arizona.

The purpose of this plan is to outline a market, customer, and industry analysis as well as financial analysis and projections under two different scenarios: 1) whether UH decides to wholesale purchase medical marijuana for retail sale or 2) whether UH opts to grow its own medicine for retail sale.

## Federal Preemption and the AMMA's Legality

The federal government has classified marijuana as a Schedule I substance under the Controlled Substances Act (CSA). Under such a classification, the government holds marijuana to have no acceptable medical use. As of the November 2012 election, however, 18 states plus the District of Columbia have approved the medical use of marijuana with Colorado and Washington approving the recreational use of marijuana as well.

There is an obvious conflict in this area of the law between the states and the federal government and therefore, a considerable amount of risk entering this industry. While there is no way to definitively answer what would happen to UH once it opens its doors, a recent Arizona Superior Court ruling has shed some light on how the state's judicial system interprets the apparent conflict.

Under federal law, it is illegal to manufacture, distribute, or possess marijuana. In one of the few times the U.S. Supreme Court has taken up the issue of medical marijuana, it held that state medical marijuana laws do not stop the federal government from enforcing the CSA. It is on this point that the Arizona court focused its analysis when deciding whether or not the AMMA conflicted with the CSA.

One way for the CSA to preempt AMMA is if the AMMA stands as an obstacle to the CSA. The court, however, found that not to be the case. Instead, it held that "while reflecting a very narrow but different policy choice about medical marijuana, [the AMMA] does not undermine the CSA's purposes." The court went on to say, "[T]he mere State authorization of a very limited amount of federally proscribed conduct, under a tight regulatory scheme, provides no meaningful obstacle to federal enforcement." Most importantly, the court noted "No one can argue that the federal government's ability to enforce the CSA is impaired to the slightest degree." In fact, the court went on to say that the AMMA actually helps in the CSA's objective in combating illegal drug use.

The court took time to note that Arizona could have attempted to fully decriminalize marijuana and put its laws in direct conflict with the federal government, but it did not. Rather, the court said that "Arizona took a far narrower and deliberative course opting to allow only the chronically ill access to it and only after a licensed physician certified that it might well relieve its citizens of suffering." The court rejected the notion that the AMMA preempted the CSA and it would not rule that "Arizona, having sided with the ever-growing minority of States and having limited it to medical use" has violated public policy.

The court made it clear, however, that "the AMMA affirmatively provides a roadmap for federal enforcement of the CSA, if it wished to so. Dispensaries are easily identified...ready targets for

federal prosecution under the CSA, should federal authorities deem it appropriate." Therefore, while the Superior Court ruling is encouraging for UH and other dispensary owners in the state, it is important to point out that this ruling has done nothing to limit potential liability under federal law. The ruling simply took away any of the uncertainty regarding the AMMA from being fully implemented.

In conclusion, UH should know that it faces the same amount of risk and liability it did when it was awarded its license to operate a dispensary in CHAA No. 99. If it felt that operating in this industry was worth the risk before the Superior Court ruling, nothing should have changed those feelings to the contrary.

## **Products and Services Offered**

The product UH will be selling is high-grade organic medical marijuana (MMJ). MMJ is available in three different types: sativa, indica, or hybrid. UH will sell MMJ in retail spaces in its three CHAAs. UH has decided to grow its MMJ, so it is operating in the retail and cultivation segments of the MMJ market in Arizona.

The effectiveness of MMJ in regard to symptoms treated is directly related to strain selection. Geneticists have begun to identify particular varieties that are effective for sleep, pain, appetite, and energy; as well as for specific conditions.

Sativa plants are taller and lankier than indicas and can reach heights of over 15-20 feet. They have narrow serrated leaves and loose spear-like flower clusters that can be extremely resinous. Primarily, sativas are more of a stimulant and are generally better for daytime use. Sativa strains are effective in appetite stimulation, relieving depression, migraines, chronic pain and nausea. These benefits can be particularly helpful for the psychological component of many illnesses.

Indica plants are normally shorter and stockier plants, reaching 3-6 feet in height with wide, deeply serrated leaves, and compact, dense flower clusters. The effects of indicas are predominantly physical. These effects can be characterized as relaxing, sedating, and pain reducing. Indicas are generally best for later in the day and before bed.

Hybrids are often referred to based upon the dominant sub-species inherited from their lineage (e.g.: pure indica, mostly indica, mostly sativa, or pure sativa). Instead of using pure indica or pure sativa, many patients can benefit from the use of hybrid strains. There are a vast number of strains available for patients, each with a different cannabinoid profile and effect. For example, adding sativa to indica strains adds mental clarity and decreases sedation effects; indica-dominant crosses are good for pain relief, with the sativa component helping with energy, and activity levels. Sativa-dominant crosses are good for stimulating appetite, with the indica component helping to reduce body pain and increase relaxation.

Table 1: A Few Examples of Sativa vs. Indica Ailments Treated

Reduces depression Relieves headaches and migraines Energizes and stimulates Reduces awareness of pain Increases focus and creativity Reduces nausea Stimulates appetite Supports immune system Reduces pain Relaxes muscle spasms Stimulates appetite Reduces inflammation Aids sleep Relieves headaches and migraines Reduces intra locular pressure

## **MMJ Industry Analysis**

#### History

California was the first state to legalize MMJ for medical use in 1996. Since then, 17 other states and the District of Columbia have as well. Washington and Colorado have also legalized adult recreational use of marijuana. Advocates hope to legalize personal use—in some form or another—in another 14 states by 2017. Some industry estimates say today's \$1.5 billion market could quadruple by 2018.

From 1996 until 2009, the industry remained relatively small with a limited number of dispensaries in California opening up, but they were constantly under the threat of government raids. Things changed dramatically in 2009 when the Justice Department sent out the now famous "Ogden memo" instructing federal prosecutors to refrain from focusing their resources on prosecuting MMJ operations in states with MMJ laws. This led to the opening of several thousand dispensaries across the United States, creating the industry as we know it today. By early 2013, dispensaries existed in 10 states with more slated to open in new MMJ markets over the next few years.

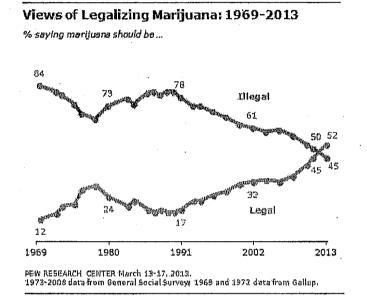
Things changed drastically, however, in the summer of 2011. The Justice Department sent out another memo instructing DEA officials and officials in the U.S. Attorneys Office to "treat medical marijuana shops as top priorities for prosecutors and drug investigators." The industry was poised for rapid growth in 2011, but as the climate quickly changed in the summer, the industry began to shrink as hundreds of dispensaries closed and patient numbers dropped in some states.

Over the course of the next year, conditions in the market worsened for to a number of reasons. First, credit card providers cut ties with the industry by refusing to accept payments from dispensaries. Second, most banks stopped opening new business accounts for dispensaries and then closed existing accounts entirely while others pressured dispensary landlords with foreclosure for legal—not financial—reasons. Third, the federal government began to conduct raids and threatened to seize buildings dispensaries were located in. Some states even changed their MMJ regulations to make it more difficult for dispensaries to remain open or operate any kind of MMJ business due to stricter zoning regulations.

The situation seemed to change for the better, however, in the fall of 2012 as there were a number of positive developments for the industry. Massachusetts' voters legalized medical marijuana. Colorado and Washington became the first two states in the nation to legalize marijuana for adult recreational use. The federal crackdown against MMJ subsided noticeably in the weeks before the presidential election and has slowed down considerably since then with the focus being on MMJ dispensaries that are violating state laws. Finally, a slew of new polls came out showing strong support for medical marijuana nationally as well as for legalization in

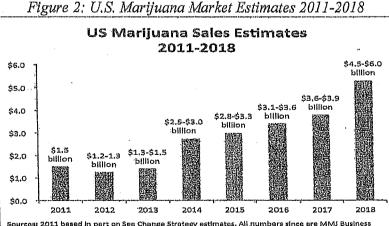
general. As Figure 1 below indicates, there has been a drastic change in public opinion over marijuana since the late 1960's and early 1970's.

Figure 1: Public Opinion on Legalizing Marijuana



These recent developments should be seen as encouraging for the MMJ industry moving forward. There is hope that President Obama will continue to take a much more liberal policy toward MMJ. It is important to note that while the Justice Department can take direction from the President, federal prosecutors are free to pursue their own agendas when it comes to prosecuting in their jurisdictions.

#### **Industry and Market Data**



Sources: 2011 based in part on See Change Strategy estimates. All numbers since are MMJ Business Dally's own analysis as of publication date, incorporating estimates from the Washington State Office of Financial Management on recreational merijuana sales.

As Figure 2 indicates, the forecast for MMJ sales in 2013 could reach \$1.5 billion, which is about a 10-15% increase from the previous year. This forecast takes into account a slight recovery in the California market as well as the opening of new markets in Arizona, New Jersey, Washington DC, Rhode Island, and several other states. These projections could come in much lower, however, if the government resumes crackdowns.

The MMJ market could be poised to more than double in 2014 because this is the first year recreational sales of marijuana would be legal. This projection is mainly influenced by data released by the Washington State Office of Financial Management, which predicted that a fully functioning marijuana market could generate upwards of \$1 billion. The same could be said for the state of Colorado. Furthermore, the market is also poised for growth due to the fact that dispensary programs in several Eastern US states such as Connecticut and Massachusetts are scheduled to open in 2014. Again, it must be stressed that these projections could come in much lower if the government resumes crackdowns.

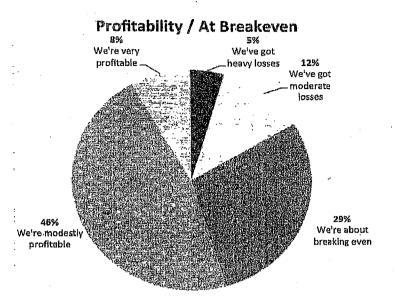
Projecting out even further, we see that sales could grow exponentially over the next five years as the number of states whose MMJ programs are in their infancy stages mature. 2016 will surely see more MMJ ballot measures and, depending upon those results, the number of patients and thus, revenues could continue to grow in new and established MMJ markets.

It is estimated that roughly 1.2-1.5 million patients currently use medical marijuana under state programs. With new states' programs becoming active in 2014, it is estimated that the number of patients could grow anywhere between 1.8-2.1 million. It is also believed that each patient spends between \$1,500-\$2,500 annually on MMJ. This figure could increase even more if the recreational outlets in Washington and Colorado go off without any government interference. The market could grow even further if tourists take advantage of the opportunity to use marijuana recreationally in those states.

#### **Industry Profitability**

Based on a survey of 134 MMJ professionals in 22 states plus the District of Columbia who answered a series of questions about their businesses and overall financial performance, it is estimated that about 83% of MMJ companies are near breakeven or already profitable. About 46% reported being "modestly profitable" and only 8% being "very profitable" with 29% of the respondents barely covering expenses.

Figure 3. Industry Profitability



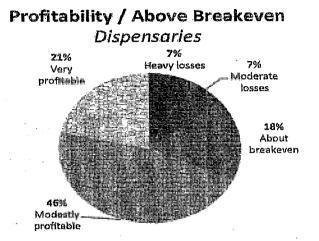
In terms of reaching profitability, 41% took only a few months to reach profitability with the majority of those companies being smaller cultivation sites, edible companies, and dispensaries in non-competitive markets. It took 33% between 6-12 months to reach profitability with about 25% needing a year or more.

Outlook in the industry is good as well with 34% of the respondents saying that they are expecting large growth in the next year and 49% are hoping for moderate growth. This is in stark contrast to the less than 3% that are expecting to do worse or the 14% that believe they will sustain little to no growth.

Looking specifically at dispensaries, the average annual revenue is between \$400,000-\$500,000 with about 40% of dispensaries generating at least \$500,000 in revenue. The majority of dispensaries, however, report annual revenues below \$500,000 with the majority generating between \$100,000 to \$250,000. 27% of dispensaries reported annual revenues of more than \$1 million.

In terms of profitability, nearly 85% of dispensaries nationally are either near breakeven or posting profits. This number is slightly higher than the overall MMJ industry. This can be attributed to the fact that 21% of dispensaries report themselves as "highly profitable" as opposed to 8% for the overall industry. 75% of dispensaries said it took them less than a year to turn a profit with 42% hitting profitability within a few months.

Figure 4. Dispensary Profitability



These are very encouraging numbers when thinking about the Arizona market. The number of dispensaries that can open in Arizona is capped, which will create somewhat stable business conditions and could ease the competitive pressure.

#### Four Key Industry Sectors

Table 2: Average Annual Revenues by Business Type

Dispensary	\$400,000-\$500,000
Cultivation Sites	\$75,000-\$125,000
Edible Companies	\$150,000-\$200,000
Ancillary Businesses	\$125,000-\$175,000

**Dispensaries.** These are the retail outlets that sell MMJ to patients. They can offer a variety of other products and services, including hash oils, headshop paraphernalia, as well as MMJ-infused drinks, snacks, and other edibles. They can also offer classes and educational publications as well as alternative healthcare therapy such as massage and acupuncture. The current estimated number of dispensaries in the US between 1900-2300 as of early 2013. It is believed that this number could grow to 2,000-2,500 in 2014 because of the introduction of new MMJ markets. Dispensaries can also be called medical marijuana centers, compassion centers, access points, and a variety of other names depending on the state.

**Cultivation Sites.** Also known as grow sites, these are the businesses that cultivate, harvest, ship, and sometimes package MMJ. Depending on the state regulations, cultivation sites may have to be owned or at the very least associated with a licensed dispensary. Many cultivation sites, however, tend to operate under the radar and tend to be small organizations because they do not want to attract unwanted attention from the federal government. The estimated number of cultivation sites in the US is between 2,500-3,500, but this figure does not include home growers or caregiver sites that operate under specific state laws.

Edible Companies. Edibles are considered anything that can be infused with MMJ such as brownies, pizza, as well as water, sodas, and juices. Infused products also include oils, lotions, and balms. The estimated number of edible companies in the US is between 600-1,000.

Ancillary Businesses. Ancillary businesses in the MMJ market include any business opportunities that may be ancillary to the market. The product and service catalog includes: dispensary landlords, security systems for dispensary and cultivators, accounting services, legal services, insurance, alternative payment processing and other financial services, business consultants and training services, testing labs, inventory tracking software, and headshops.

#### **Risks for MMJ Businesses**

There are inherent risks for any business, but the risks that MMJ businesses face are unlike any other industry. The following is a list of key risks for MMJ businesses:

**Federal Laws.** As discussed earlier, federal laws pose a huge risk to MMJ business owners because MMJ is still 100% illegal on the federal level. Anyone associated with a MMJ business is exposing himself or herself to criminal prosecution and possible jail time.

State & Local Laws. In addition to federal laws, MMJ businesses still have to worry about state and local laws as well because they change frequently. Some municipalities try to force the business out of town or make it almost impossible for them to operate.

**Raids & Civil Forfeiture.** Federal and local agents have raided MMJ businesses in almost every state with dispensaries. In some cases, the government targets dispensaries that are violating state MMJ laws, but there are other situations where agents have raided operations that have good standing in the community. Landlords of dispensary properties have also received forfeiture notices from the government if they did not evict their dispensary tenants.

**Volatility of the Market.** The MMJ market is defined by one thing—uncertainty. As we have seen just in the past two years, the market was at an all-time high that was almost immediately followed by an all-time low. MMJ businesses that can weather these storms by embracing change, rather than fighting it, have a better chance at success.

**Business Management & Financial Challenges.** Due to the high number of regulations and security requirements, average costs for a MMJ business can be much higher than other industries. Businesses spend a considerable amount of time and money ensuring they are compliant with all laws and regulations. To complicate things even more, it is extremely difficult for MMJ businesses to deal with anything financial. Since most banks refuse to lend money, many dispensaries are forced to run an all-cash business model.

## Arizona Market Assessment

The Arizona MMJ market is poised for growth in 2013 with estimated annual revenues from marijuana to be between \$38-\$58 million at current patient levels when allowable dispensaries are operating. There are currently about 37,000 patients in the state as Table 4 indicates below

and this number has been steadily increasing since the program's inception in 2010. Dispensaries are the *only* place where patients with RIC can purchase MMJ.

MMJ Business Daily has given Arizona an "A" rating for opportunity for 2013, citing that:

"Although there are still plenty of unknowns, the opportunities for MMJ businesses [in Arizona] are high. Nearly 100 dispensaries will be opening up this year, and there are still roughly two dozen open slots left for additional centers. This will create a thriving industry with opportunities for support businesses and services."

Table 3: Percentage of Patients by Medical Condition

Table 4: Percentage of Patients by Age and Gender

In order to qualify to receive MMJ in Arizona, a patient must qualify for one of the following debilitating medical conditions: cancer, glaucoma, HIV, AIDS, Hepatitis C, ALS (Lou Gehrig's Disease), Crohn's disease, agitation of Alzheimer's disease, or a chronic or debilitating disease

or medical condition that causes cachexia or wasting syndrome, severe and chronic pain, severe nausea, epileptic seizures, multiple sclerosis, or another debilitating medical condition approved by ADHS. A physician must also provide a written certification that the patient suffers from the debilitating medical condition.

The Arizona MMJ market is segmented by patient condition. Each condition comes with a certain set of ailments that specific types of strains treat. The geographic boundary for the market is the state of Arizona's borders because patients are not required to purchase from the CHAA in which they reside. UH's target market could be every cardholder in the state because it has the ability to offer a delivery service out of Clifton, AZ. However, UH should focus on the its three CHAAs as well as the immediate surrounding CHAAs to try to expand its built-in customer base. While the delivery service is an excellent opportunity, the majority if UH's business will be derived from dispensary sales of MMJ.

Growth in the market is tied directly to how many patients decide to enter the Arizona MMJ program. As discussed earlier, there has been constant growth since the inception of the program in 2010 so there is no reason to believe that market will not continue to grow. In April 2011 there were 579 patients with RIC. One week later, there were 1,193 applications approved. This is about a 106% increase in a week. By January 2012, the number of active patients was 17,852. One year later, there were 36,363 patients in Arizona. That means that the AMMA saw an 87% increase in patients during its first full year in existence.

It is unreasonable to believe that this type of patient growth is sustainable, but while the rate of growth will decrease over time, there is no data to indicate that patients will stop entering the system all together. As the program becomes more mature and, as MMJ becomes more mainstream and less stigmatic, there is the possibility that we could see increases similar to these numbers in the future.

One of the greatest attributes of the Arizona MMJ market is that competition is capped. The maximum number of dispensaries that can be open in Arizona at any point in time is 126. The AMMA is one of the most heavily regulated medical marijuana programs in the country. When applicants submit an application to operate a dispensary, there is no guarantee they will be chosen as the finalists are selected by random lottery. Furthermore, applications are chosen on an annual basis and the winners given 12 months to open their doors or they lose their dispensary license. Therefore, while the percentage increase in patients has declined, it should not be alarming to UH because the barriers to entry in this industry are extremely high in Arizona as opposed to other states. Subsequently, the threat of decreased profitability is not as severe as in other types of industries or markets.

There are no substitutes for MMJ in this market as it is the only approved medicine to be sold under the program. Edibles and concentrates could be considered substitutes, but the only places where these products can be purchases are dispensaries. While there may be substitutes for MMJ, UH or other dispensaries' revenues should not be affected because the only place patients would be able to get these substitutes is through a dispensary. Customer bargaining power is extremely high in this industry and that will be discussed in more detail below. Bargaining powers of suppliers is low in the Arizona market because cultivation sites must be tied to a licensed dispensary.

Dispensaries that choose not to grow their own product and instead decide to purchase wholesale become customers, but with a much lower bargaining power than patients. If a dispensary does not have product on its shelf, it must close its doors for the day. Hence, there is a chance a dispensary purchasing MMJ wholesale could end up paying premium pricing for MMJ simply to be able to operate. Furthermore, there is tremendous opportunity in growing your own product in the Arizona MMJ market because any surplus of MMJ that a dispensary grows can be sold to other dispensaries. If UH decides to go this route, it could have dispensary revenue from retail sales to patients as well as additional revenue from wholesale MMJ sales.

This wholesale strategy could help dispensary owners recoup their initial investments faster. One of the challenges in this industry is that the dispensary owners invest high capital upfront and, with additional wholesale revenues, they can produce higher margins and make back their investments early on. This is important because as the industry matures and completion increases, margins will be smaller and it will be more difficult to recover initial investments as quickly.

## **Customer Analysis**

The data used for analysis in this section comes from a nationwide, anonymous survey of patients over a two-week period in October 2012. Patients were asked a series of 31 questions about "preferences, buying habits, and the factors they consider when choosing a dispensary." The following are the top takeaways from the survey and highlight the areas in which UH should focus on when developing its launch marketing strategy. The methodology and demographics for this survey can be found in Appendix B.

**Customer Service.** One of the key aspects to the dispensary business is not only attracting patients, but also keeping the ones you already have. When thinking about marketing and advertising expenses, it is more costly to get patients into your dispensary for the first time than it is to get them to come back if they have already been there and made a purchase. Little things such as "a friendly face who remembers [a patient's] name and knows [his or her] favorite strain or a helpful budtender [sic] who can make recommendations." Patients seek the highest quality in customer service. In fact, customer service is the top reason that a patient will leave one dispensary for another.

This can mean a variety of different things in this context. To some patients it means putting the patient first and rewarding loyal customers; while to others it means being friendly, helpful, and treating customers with respect. Patients want "trained, knowledgeable employees who can help them learn more about the various strains [available]." 60% of respondents said that they would switch dispensaries for better customer service. Patients noted that they want a more personal experience and that "having a safe, secure place to buy medical cannabis" because "[w]alking into a dispensary is still a nerve-wracking experience for many people." Therefore, it is

important to make sure customers feel as if the purchase of MMJ feels just as if they were purchasing anything else.

UH should utilize MJ Freeway's (discussed in more detail below) ability to track patient purchases so you can better offer personalized service to your patients. It is also important to keep up with patients via email offers and special discounts to repeat customers. An example could be a multi-pronged marketing strategy to cover your patient base: email newsletters can help stay in contact with patients who only make a few purchases per month, and also employing in-store specials and a rewards program to keep more frequent buyers happy.

**Testing & Labeling.** As discussed earlier, MMJ is illegal on the federal level so there are no industry-wide-standards, rules, or regulations covering safety, quality, pesticides, or potency for MMJ or MMJ-infused products. Therefore, it makes sense that testing and labeling are very important to patients with more than 71% saying it is "very important" to test MMJ and MMJ-infused products. The main reason for this is that patients want to know that their medicine is free of pesticides and whether it is high in potency and labeled with such information. Patients do have a right to know what they are putting into their bodies and offering testing and labeling are great opportunities for UH to build a solid, loyal client base.

Selection. More than half of the patients surveyed said having a wide selection of strains, edibles, and other products is a top factor for them when choosing a dispensary while 40% said it was "nice to see." 58% of patients said that they would switch dispensaries if they could find a better selection elsewhere.

This makes sense because American consumers love to have choices. It is why there are so many different kinds of pain relievers, vitamins, and even cereals on the each grocery store aisle. The survey did find that there is a trend away from selection as the number of patients who would switch dispensaries for a better selection is down 14% from the previous year. So, it is becoming evident that other factors are becoming more important than selection.

However, selection does not stop at MMJ. UH should also offer MMJ-infused products or "edibles." More than 70% of patients are interested in these products to some varying degree. So, while these products will not make or break UH's business, it is important to at least have a few options available for patients because 36% of patients would switch dispensaries for a better selection of edibles. UH can also not forget about other MMJ products such as extracts, concentrates, oils, and tinctures. Nearly 33% of patients say that these products are "critical" to see.

Ideally, UH should try to sell all of these types of products from the first day that it opens its doors. A way to highlight the importance of offering all of these products from the beginning is to think of the UH's dispensary as a liquor store: even if beer is the best seller by a wide margin, many customers still want to purchase liquor, wines, and other kinds of alcohol. Essentially, UH does not want to give its customers incentive to seek out other dispensaries services.

Atmosphere. 82% of patients want a highly local dispensary that resembles a "mom-and-pop shop versus 13% who prefer chain stores with multiple standardized locations. At the end of the day, patients prefer a more personalized setting, and they value diversity and uniqueness.

Another key factor patients are looking for is "a professional ambiance" that makes the dispensary feel like a legitimate business. 35% of patients want an "upscale, relaxed atmosphere – like a Starbucks" while 25% want the dispensary to resemble a clinic or healthcare facility.

**Potency.** The best thing a dispensary can do is to make sure it has strains that cover various points on the potency scale. The MMJ industry is "quickly moving toward stronger, more potent medicine" because patients want it. 57% of patients said that it was "critical" for dispensaries to offer highly potent strains and nearly 40% of patients said that they would switch dispensaries on this fact alone. It is also crucial to have lower potency strains too for patients who aren't seeking such strong medicine. Make sure to hit every point on the potency scale.

**Pricing.** The majority of patients think it is "nice to see" discount MMJ while only 27% see it as "critical." 50% of patients will switch to dispensaries for better price alone, but at the same time 50% would not. This split in percentages appears confusing but becomes clearer when looking more closely at the relationships of the numbers. Patients who said that discount MMJ was "nice to see" essentially base their decision to switch dispensaries only in part to price while those who said it was "critical" are most likely looking for the cheapest MMJ in town.

UH's key takeaway from this data should be to not get caught up in a "race to the bottom" when it comes to pricing. It should not just stock its shelves with low-quality, dirt-cheap strains. It would be best for UH to offer MMJ of varying qualities while staying competitive on all price levels. UH could offer limited time sales to all customers or even make it exclusive and try to incentive customers by only offering sales through a reward program. It is important to find a balance on price that allows UH to stay competitive without destroying its profit margins.

**Organic.** Patients prefer organic products because they are easier on the environment and, for the most part, taste better and more pure. 33% of patients said that they would switch dispensaries for organic MMJ while 35% said it was a "critical" factor for them. 40% of patients said that organic MMJ is "nice to see." So while it is not entirely crucial that UH offer organic MMJ products, it might as well ensure that the product it receives wholesale was grown organically. At the very least, it will be a way for UH to distinguish itself from its competition.

Ancillary Services. It is important to patients that a dispensary offer ancillary services, but patients do not favor all kinds equally. 61% of patients surveyed said that the most important ancillary service a dispensary can provide is education. UH can offer this to patients in various forms whether in the form of classes focusing on the various aspects of cultivation to ensuring employees are extremely knowledgeable and can help patients understand the differences between the strains so that each can choose one that is ideal for their condition. These classes can help UH foster a much closer relationship with its patients and establish its brand as a true expert in the Arizona MMJ industry. This, in turn, can also create an extremely loyal customer base over the long term.

41% of patients also said it was important for dispensaries to take an active role locally and engage with the community. It is extremely important that UH makes a concerted effort to be involved in the local Casa Grande community. A few ways UH can do this is to donate portions of its proceeds to local Casa Grande charities such as youth sports or the Casa Grande School District. Other examples include general fund-raising efforts, food drives, and partnerships with local non-profit organizations. UH should also actively try to employ veterans who are having a tough time finding work. Another way since its location is in close proximity to the VA Hospital. Their roles could vary from security guard to cashier. The important thing to remember is that if UH is an active, upstanding member in the community it is going to be more difficult for dissidents of the MMJ program to gain support locally to force UH out of business.

## Strategic Implementation

Even though UH has decided to purchase it MMJ wholesale, since growing its own product could lead to much higher margins, I have included this section as a reference in the event UH decides it is in its best interest to grow its own product in the future.

#### A. Wholesale and Inventory Tracking

UH has decided to not grow its own product and, instead, has decided to purchase its MMJ wholesale. UH has contracted with a private grower who will grow MMJ at a commercial grow site under UH's dispensary license. The parties have agreed at a price of \$1,700/lb and to equally split the proceeds for every pound of excess product grown and subsequently sold on the wholesale market. UH will also collect a \$200 "Administrative Fee" for every pound of excess product sold.

It is recommended that UH and its contracted grower use MJ Freeway GramTracker <sup>TM</sup> and GrowTracker <sup>TM</sup> for the inventory control systems for MMJ. Inventory of marijuana should be precise, down to  $1/100^{\text{th}}$  of a gram for some purposes. UH should use precision scales that are calibrated daily. All weights must fall within specific tolerance ranges to ensure there is no inventory shrinkage.

The inventory of MMJ will cover seedlings, mature plants, packaged marijuana, food products, drying and curing marijuana, and items in quarantine or awaiting disposal. This ensures that all products, byproducts, and discarded items in the operations are accounted for.

Daily operations are to be defined by critical transitions: opening for business, harvesting or packaging plants, acquiring, selling, delivering, or disposing of inventory, closing for the day, etc. The inventory tracking system will be designed to enable UH to document inventory status/flow for each critical transition event.

#### **B.** Cultivation

The details of cultivation procedures may evolve as UH moves forward, but initially it should plan to employ the procedures for cultivating medical marijuana described below.

a. Cultivation Targets

UH should gear production to anticipated needs and demand and use patient self-assessment records to determine which strains, strengths, and dosages are effective for each patient. This will help UH ascertain what combinations will be most suitable for patients with specific types of diseases and conditions. This also will allow UH to forecast demand for each variety it produces and avoid overproduction and waste. Tracking this data will also ensure UH's retail employees have up-to-date information for every patient that enters the dispensary. This will ensure that UH has the ability to offer the high customer service patients are seeking.

UH should employ a "perpetual harvest" growing method that provides small weekly harvests. Based on projectable plant yields and actual growing conditions, harvest projections will be conducted at regular intervals. UH's computerized system will then estimate the dry yield of plants currently under cultivation.

b. Planting and Harvesting

Crop plants are grown from seeds or cuttings. Seeds and cuttings are normally taken from mother plants. UH's original stock of mother plants will come from ADHS authorized external sources. Mother plants are to be kept in a separate grow room or area from crop plants. They are recorded in the inventory with their unique identification numbers as mother plants. These plants remain in inventory as long as they remain useful. Then they are used for making processed marijuana products or destroyed.

As soon as a cuttings or seed is planted in the cultivation room to become a crop plant, it receives a unique number that identifies it with its source (mother plant) and birth date. Crop plants are grown in trays, usually of 8 plants each. Each crop plant has a unique tray assignment, batch number, and strain type. The plants remain in cultivation inventory until the whole tray is harvested at once.

At maturity, the MMJ is removed from the plants, dried, cured, then weighed and entered into inventory. Trimmings should be separated for use in the processing of marijuana products such as concentrates or designated for disposal. The residual plant stalk (possibly with the trimmings) should be destroyed after the Inventory Control Agent verifies that all usable MMJ has been removed. The destruction of the residual plant material will follow the same rules as the destruction of medically unusable marijuana (see below).

c. Recordkeeping

For each batch of MMJ cultivated, the inventory tracking system should document:

• The batch and individual plant numbers;

- Whether the batch originated from seeds or cuttings;
- The origin and strain of the seeds or cuttings planted;
- The number of seeds or cuttings planted;
- The date they were planted;
- All chemical additives, including nonorganic pesticides, herbicides, and fertilizers used in the cultivation;
- The number of female plants grown to maturity;
- Harvest information:
  - o Date of harvest,
  - o Weight of the usable dry yield,
  - The name and registry identification number of the dispensary agent responsible for the harvest;
- Disposal information:
  - o Description of and reason for the marijuana being disposed of, including, where applicable, the number of male, failed, contaminated, infested, or otherwise unusable plants,
  - o Date of disposal,
  - o Method of disposal, and
  - o The name and registry identification number of the dispensary agent responsible for the disposal.
  - d. Processing

UH should aim to utilize every aspect of the physical MMJ plants to produce different forms of medicine for its patients. UH may therefore use MMJ trimmings, by-products, and MMJ that is not suitable for medicinal use without further processing for the production of other medicinal products. This can be done by extracting the medicinally active ingredients and using the extract to create concentrates or to infuse other products such as edibles. Edibles give patients an easier and more popular alternative to consuming marijuana by smoking, and concentrates deliver the most effective therapeutic and palliative benefits.

Some examples of edible products have been described above.

#### C. Resource Needs

Since UH has contracted out the growing of its MMJ it only needs to hire a retail staff to run the dispensary during operating hours. It is recommended that UH retain an accountant and lawyer with experience in the MMJ industry. It is also recommended that UH contract the security operations to a reputable independent security company.

As indicated in the pro forma, UH has made a capital call of \$300,000 to its partners to be used as start-up capital for the dispensary.

# **Financial Projections**

The projections made for this report were based on a certain number of assumptions. This was necessary for a few reasons. First, there is no actual data for the Arizona MMJ program other than the monthly patient report put out by ADHS because the AMMA goes to great lengths to protect patient privacy. Second, dispensaries have not been open long enough in the Arizona to have gathered enough data to make accurate projections based on patient consumption. Therefore, the assumptions outlined in the cash flow statements of the pro forma are based on the buying frequency of patients from the previously discussed nationwide, anonymous survey of patients over a two-week period in October 2012.

The majority of patients -60% – purchase MMJ between one and three times a month while about 31% purchase it between four and nine times a month. There are also extremely active patients—9% visit dispensaries more than ten times a month. It was also assumed that about 15% of patients from surrounding CHAAs would frequent UH's location in Casa Grande because it will be in closer proximity to their homes than the dispensary in their home CHAA.

When looking at the projections and costs associated with acquiring/cultivating MMJ, it is clear that it is more profitable for UH to grow its own product:

	Grow	Wholesale
Cost	\$27,666.67	\$52,846.49
Cost/lb	\$890,00	\$1,700.00

Table 5: Cost Differentiation – Grow vs. Wholesale

Based on the assumptions described above, it was determined that to comfortably meet patient demand, UH should be prepared to have at least 32 pounds of MMJ available every month for sale. As Table 5 indicates, UH's cost per pound of MMJ wholesale is *significantly* higher with it costing almost twice as much to purchase the product wholesale rather than grow it. If UH decides to stay with its decision to purchase its product wholesale, it must understand that it is missing out on a significant amount in after-tax revenue. If UH were to grow its product, it would have net income of \$644,566 in October 2014 as compared to just \$442,161 if it buys its MMJ wholesale over that same period.

There are valid reasons for UH's decision not to grow. The main one being that the federal authorities have focused on raiding dispensaries with large, commercial grow operations. There is also the uncertainty of whether or not the program will continue to remain operational with some state lawmakers and officials adamant about trying to get the program repealed. Their efforts have been futile thus far as evidenced by the *White Mountain* case discussed earlier. Therefore, it makes sense that UH does not want to outlay the necessary capital to build-out a grow operation with all of the uncertainty surrounding the industry. When and if the industry becomes more settled, however, UH should *seriously* reconsider its decision not to grow its own product.

## Conclusion

By following this plan, UH will meet its financial goals. Despite the legal uncertainty surrounding the program, the only information we have to base current risk off of is the *White Mountain* case discussed above. Based on this case, UH should assume that the program will continue to operate as voters intended until there are any other indications to the contrary.

The Arizona market is poised for growth in 2013 with estimated annual revenues from MMJ to be between \$38-\$58 million with no indication that patients will not continue to enter the program. The profitability of the dispensaries is also very encouraging for UH with nearly 85% of dispensaries nationally nearing breakeven or posting profits. 75% of dispensaries said it took them less than a year to turn a profit with 42% hitting profitability within a few months. This is encouraging for the Arizona market because the number of dispensaries that can open there is capped. This will create somewhat stable business conditions and could ease competitive pressures.

One of the main takeaways from this plan should be that patients—above everything else—value phenomenal customer service. This single aspect of UH's business can be the difference between success and failure. While there are plenty of other factors that go into whether or not UH is successful, it is clear from the survey that patients place a high value on customer service as it is the main reason they switch from one dispensary to another.

Finally, after a thorough analysis of the costs associated with growing vs. wholesaling MMJ, it is clear that it is more profitable for UH to grow its own product. UH's cost per pound of MMJ wholesale is *significantly* higher with it costing almost twice as much to purchase the product wholesale rather than grow it. While there are risks associated with growing your own MMJ, as long as the grow operation is kept on a smaller scale, it should not raise any flags among government agencies.

# Appendices

# Appendix A. Pro Forma

### SOURCES OF FUNDS

	Capital Call Total Sources of Funds	\$ 300,000	\$	300,000
USES OF	FUNDS			
9 <u>(</u> C)	LEGAL-Not for Profit APPLICATION FEES - DH1 APPLICATION FEES - City	5,000 5,000 365		
	Total I les of Tunds		¢	10 365

## Pre-operating Expenditures: Product Grown

### Pre-Operating Expenses (Product Grown)

SOURCE OF Bayeons & Uses Pla Opening Exp. (Grow). Cash Flow (Grow). RUNDS

	SUNK COSTEXP	ARITAL NDITURES		
LOANS/CAPITAL - Sources				300,000
CAPITAL EXPENDITURES - STARTUP		•		
TENANT IMPROVEMENTS-GROW		30,000		
TENA NT IMPROVEMBNTS-Retail		100,000		
EQUIPMENT - GROW SITE		45,000		
EQUIPMENT - RETAIL		20,000		
EQUIPMENT - INVENTORY CONTROL		5,000		
SECURITY EQUIPMENT		5,000		
SOFTWARE - POS		3,798		
SOFTWARE - INVENTORY CONTROL		794		
OFFICE EQUIPMENT		20,000		
LEGAL-Not for Profit	5,000	0		
APPLICATION FEES - DHS	5,000	0		
APPLICATION FEES - City	365	0		
REFUNDABLE DEPOSITS-Lease		5,000		
REFUNDABLE DEPOSITS-Utilities		2,500		
GROW OPERATING COST AUG-OCT			83,400	
TOTALS	10,365	237,092	83,400	300,000

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LENDER NAME		AMITMENT MOUNT	
Medical Pain Relief, Inc		\$ 300,000.00	
T	OTAL CAPITAL COMMITED	\$ 300,000,00	

Because this is a non profit compantion, the capital investment will be financed by loans. Interest will be paid monthly at the rate of (First three months of the loan tenn will contain 0% interest)

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## Appendix B. Survey Methodology

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#### Marijuana Business Factbook 2013

#### SURVEY METHODOLOGY

This survey is based on the results of a 31-question survey posted on MMJ Business Daily's website in October 2012. The survey specifically targeted medical marijuana patients, not dispensary owners or other industry professionals. Given the sensitivity and risks surrounding the industry, we did not require respondents to provide names or any other identifying information – to protect the privacy of patients. All but one of the questions involved multiple-choice answers to ensure consistency and make comparisons between responses easier. We did, however, ask patients to write in their answer to the final question about what's most important to them when choosing a dispensary. This allowed patients to state what they really want in their own words and offer direct advice to MMJ businesses.

This report includes all submitted responses - even those from people who didn't answer every question (though blank entries were not included in the analysis of particular questions).

#### DEMOGRAPHICS

We received responses from 403 patients in 43 states plus the District of Columbia - making this a truly national survey. Of the respondents, roughly 31% reside in either California or Colorado (20% and 11%, respectively). Patients in Michigan represent almost 7% of all respondents, while those in Arizona account for 6% of the total. Other top states include Illinois, Oregon, Texas, Washington State, Florida and Tennessee. We made a conscious decision to include responses from patients in states that do not currently have MMJ laws on the books, rather than narrow it down only to those who live in areas where medical cannabis is legal. There are several reasons behind this, one of which is that we did it last time too and wanted to ensure valid year-to-year comparisons. More importantly, we feel that including all responses paints a clearer picture of what the overall MMJ consumer base wants - which will help not only existing businesses but also those that will launch in new cannabis states this year and in the future. Additionally, the results don't vary much either way, so no key findings were altered with this methodology.

In some respects, the state breakdown of respondents mirrors the overall patient population from a geographical perspective. The majority of medical marijuana patients in the United States reside in California and Colorado, with other states coming in a distant second.

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Strains	Ailments Treated
Afghanica	Nausea, pain
Afghanie x Haze	PMS
AK-47	Pain, nausea, depression, insomnia, headache
Alien Train Wreck	Asthma
Apollo 13	Back pain
Auntie Em	Crohn's Disease, MS
Aurora B	Nausea, joint pain, arthritis
Berry-Bolt	Insomnia, joint pain
	Used to sedate and relieve stress & anxiety amongst sufferers
Big Bang	of severe anxiety, etc.
Big Kahuna	Herniated disc pain, arthritis
Black on Blue Widow	HIV, back pain
Black Vietnamese	Nausea, muscle spasms, pain
Blue Fruit	Crohn's Disease, muscle spasms
Blue Moonshine	Anxiety, depression, insomnia
Blue Satellite x Jack	
Herer	Depression, nausea
Blue Satellite	Pain, nausea, insomnia, anxiety, muscle tension
Blueberry	Nausea, insomnia, pain
Bog Sour Bubble	Pain, anxiety
Bonzo Bud	Body pain, migraine
Budacolumbia	Nausea
Burmaberry	Migraine, depression
Burmese kush	Anxiety, depression
C99 x Great White	
Shark	Anxiety
Cali-O	Nausea
Catalyst	PMS
Cinderella 99	Nausea
CIT	Pain, nausea, insomnia
Citral	Insomnia
	Ankylosing Spondilitis, Hepatitis C, Degenerative Disc
	Disease, IBS, Interstitial Cystitis, Chronic Rotator Cuff
Cripple Creek	Disease
Deep Chunk	Joint pain, insomnia
Dynamite	Asthma, Crohn's Disease, Hepatitis C
NYC Sour Diesel	Edema, epilepsy, fibromyalgia, radiculopathy
El Nino	Nausea, insomnia
Fieldale Haze	Anxiety, back pain
Fig Widow	Back pain, psychosis
Firecracker	- Anxiety, depression, nausea
G13 x HP	Nausea, joint pain, insomnia
G-13	Depression, pain, ADD, ADHD
Grapefruit	Arthritis, Hepatitis C, pain, nausea
Green Queen	Epilepsy, neck/spine pain
Green Spirit x	RLS, insomnia, migraine, joint pain
Stoon ophit X	noomna, mgrame, joint pain
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Appendix C. Examples of Strains and Uses

Timewarp x Herijuana	
Green Spirit	Nausea, headache, body pain
Herijuana x Trainwreck	Diabetic neuropathy, joint pain, insomnia, MS
Herijuana	Pain, nausea, insomnia
Ice Princess x	
Bubblegum	Migraine
Jack Herer	Anxiety, fibromyalgia
Juicy Fruit	Insomnia, joint pain, anxiety
Kali Mist	Nausea, depression
Kal-X	Body pain
Killer Queen	Depression, back pain
Krinkle x Kush x	
Freezeland	MS muscle spasms
Leda Uno	Insomnia
Legends Ultimate Indica	
x Herijuana	Muscle spasms, pain
Legends Ultimate Indica	Insomnia, IBS
Lemon Chemo	Insonnia, back pain, migraine
Lemon Haze	RLS, chronic fatigue
Lifesaver	Nausea, headache, pain, insomnia
	Cachexia, degenerative bone/disc disease, edema, general
 I	pain, general seizures, glaucoma, migraine, MS, nausea,
Lollipop	Post-Traumatic Stress Disorder
Lowryder	Nausea, pain, headache
LSD	Nausea, anxiety, depression, headache
M-39	Depression
Magic Crystal	Migraine, PMS, depression, SADS, mania, nausea
Mango x Northern	
Lights # 5	Pain, nausea, insomnia, anxiety
Mango	Back pain, nausea
Masterkush	Nausea
,,,,,,	Diabetic neuropathy, general pain, general seizures,
Medicine Woman	glaucoma, Hepatitis C, muscle spasms, nausea, radiculopathy
Misty	Hepatitis C, back pain, insomnia, nausea
Motarebel Oguana Kush	Nerve Pain, muscle spasms, back pain, headache, insomnia
Mountainberry	Insomnia, migraine, pain
Northern Lights # 1	Arthritis
Northern Lights # 2	Nausea, insomnia
Northern Lights x	· · · · · · · · · · · · · · · · · · ·
Jamaican	Arthritis
Northern Lights x	
Cinderella 99	Depression
Northern Lights x Shiva	Body pain, back pain, toothache
Northern Lights	Anxiety, radiculopathy, insomnia
Northernberry	Pain
Oregon 90	Insomnia, joint pain, RLS, pain, nausea
Original Mystic	Epilepsy
OG kush purple	
	Cachexia, degenerative bone/disc disease, Post-Traumatic Stress Disorder

Sensi Star	Migraine
Shiskaberry x Dutch	ivingitutite
Treat	Migraine, anxiety, insomnia, nausea
Shiskaberry x Hash	Angrand, and off moonning hadoa
Plant	Anxiety, nausea
Skunk # 1	Nausea
Snow White	PMS
Sour cream	Insomnia, joint pain, nausea
Stardust 13	Pain, nausea, insomnia
Strawberry Cough	Back pain, depression
Super Impact x AK-47	Pain, insomnia
Bupor Impuot & Fire 17	Nausea, insomnia, muscle pain, depression, anxiety, SADS,
Super Impact	mania
Super Silver Haze	Nausea, depression
Super Thai	Depression
	Degenerative bone/disc disease, diabetic neuropathy, edema,
Sweet Blu	fibromyalgia, muscle spasms, nausea, neck/spine pain
Sweet Tooth # 3	Depression
Trainwreck x Herijuana	Nausea
Trainwreck	Anxiety, arthritis, diabetic neuropathy, depression
TW x LUI	Arthritis, nausea
	Arthritis, asthma, general pain, general seizures, glaucoma,
Τ̈́X	MS
Ultra Green	Insomnia
Wakeford	Anxiety, nausea, insomnia
White Rhino - aka	
Medicine Man	Body pain, back pain, joint pain, insomnia
White Russian	Pain, nausea
White Widow x Big	
Bud	Depression
White Widow	Cachexia, Hepatitis C, Post-Traumatic Stress Disorder

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