# DERMAACCESS: ACCESS TO DERMATOLOGY VIA TELECOMMUNICATIONS

A PROJECT REPORT

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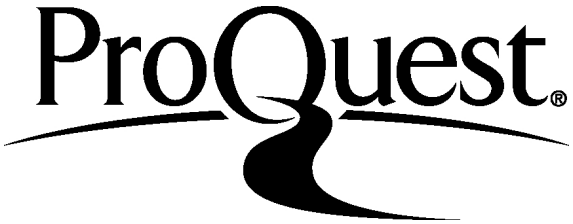

ABSTRACT

**DERMAACCESS: ACCESS TO DERMATOLOGY**

**VIA TELECOMMUNICATIONS**

By

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DermAccess is an emerging company that will provide teledermatology services to the rural health clinics (RHC) in California. The concept of DermaAccess is to provide access to specialty care for patients that reside in rural areas. This allows RHCs to provide healthcare services at a wider range, which improves the efficiency, affordability, and quality of care. RHCs will purchase a high-resolution camera and a monthly subscription to an online portal from DermaAccess. It allows them to have access to a dermatologist who will also have a monthly subscription to the online portal to access patient information.

Currently, the market size of telederamtology includes 271 RHCs in California. Whereas, the competition includes only one other company in California focused on similar concept as DermaAccess. This provides an early opportunity for DermaAccess to respond to the rapidly growing demand of increasing healthcare access, as the competition is likely to grow.

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# MARKET ANALYSIS

## Introduction

Healthcare has a fundamental responsibility to keep evolving itself in order to provide the best care. In the recent years, technology has made a tremendous impact in the way healthcare is delivered. A wide range of healthcare areas has improved because of technology, including, but not limited to, efficiency, affordability, and quality of care (Chaudhry et al., 2006, pp. 744-748). Rural communities benefit from services provided by telemedicine as it allows them to access necessary healthcare services without extensive traveling. Specialty care such as dermatology is an area of focus for rural communities as it is rare for specialty care physicians to practice where the demand may not be at an adequate level. Therefore, teledermatology, a specialty application of telemedicine, connects patients for diagnosis and consultation to specialists via telecommunications, specifically for patients who might not have traditional face-to-face access to dermatologists. For this reason, teledermatology may be a successful cost-effective approach to bridge the gap to reduce healthcare disparities (Coates, Kvedar, & Granstein, 2015, p. 564; Lenardis, Solomon, & Leung, 2014). Also, dermatology is a well-suited area to practice telemedicine due to its visual nature.

The company DermaAccess will provide teledermatology services to the rural community as a bridge between Rural Health Clinics (RHCs) and the specialist. The concept of teledermatology is not a new idea; image consultations have been a part of healthcare since cameras have been developed. There are two types of teledermatology: real-time and store-and-forward (SAF; Armstrong, Lin, Liu, & Sanders, 2009; Eminovic et al., 2010). Real-time teledermotology services require the use of software and a video camera with high resolution;

determinant of resolution is the number of pixels as more pixels improve the sharpness, therefore improving quality. This is used to capture all dimensions of the area to be diagnosed. On the other hand, SAF requires the use of a high resolution camera for the purpose of taking picture of the area to be diagnosed and is then forwarded to a dermatologist. Hybrid approach is a combination of both real-time and SAF, which DermaAccess may consider integrating in its model in the future.

## Industry Description and Outlook

Photography has been revolutionizing the field of medicine since 1839 (Romero, Garrido, & García-Arpa, 2008). When this approach started, it was only limited towards educational and training purposes, however, the high resolution imagining in the 20th century extended out to other services such as dermatology. Prior to 1980s, the use of technology for telemedicine purposes was limited because of its cost. However, in the late 1980s a tremendous increase in the use of technology via computers, video and photographic and communication resulted in an increasing supply, therefore decreasing its cost.

The start of teledermatology dates back to 1960s. A medical clinic located in Boston's Logan Airport was connected to Massachusetts General Hospital for the purpose of delivering dermatological care via accessing images (Romero et al., 2008, p. 508). This study revealed that skin related diseases diagnosed via live video conferencing and SAF were more accurately identified compared to a primary physician performing the diagnosis. Also, SAFs provide easier management, cost effectiveness, and are reliability. Another study conducted by Warshaw, Gravely, & Nelson (2015) of over 3,000 skin neoplasms with the use of teledematology presented the diagnosis as accurate or almost accurate compared to in clinic diagnosis.

Armstrong et al. (2012) conducted a survey to identify the active teledermatology programs in the United States using systematic approach. A total of 110 questionnaires were distributed and the respondent rate was 58% (64 programs). Out of the 37 programs that were identified as active, 30 used SAF. SAF is the most cost efficient technology to be utilized for the purpose of teledermatology.

The main reason SAF and other teledermatological approaches may be beneficial is because rural areas in general have limited number of primary care physicians but significantly lack access to speciality care physicians, such as dermatologists (MacDowell, Glasser, Fitts, Nielsen, & Hunsaker, 2010). Around 42% of the United States has been estimated to be dermatologist-underserved area (Barton, 2012). Due to the shortage of dermatologists, rural patients typically seek all types of care including dermatological care from primary care physicians who generally do not have formal dermatology training to accurately identify skin diseases (Vallejos et al., 2009, p. 200). It should also be noted that only an estimated of 40% of skin care diseases are diagnosed by dermatologists (Romero et al., 2008, p. 508). This may skew the results of diagnosis in many circumstances. A high cost is related to a delay in correct diagnosis and treatment of skin care diseases. Dermatologists can manage the diseases more effectively and prescribe treatments accordingly.

In other instances, primary care physicians may refer patients out to a specialist and the rural patients might or might not have transportation to travel to further distances to consult with the specialist. For patients, it may not be feasible to travel and many may even not take time to visit a dermatologist, therefore, increasing their chances of making the disease worse. Given the circumstances, teledermatology is a key determinant to solve this issue and provide access to good quality care for the rural communities without having to travel.

Improving the quality of care in rural areas where skin diseases are a major health problem has been an issue. Rural population is often farmers who are exposed to different irritants including pesticides, biological agents, and plants (Vallejos et al., 2009, p. 198). Quality of care is improved if diagnosis is made at an earlier stage and in this case, if an individual is able to seek care via teledermatology at the earliest convenience, their health is more likely to have a better status than if they waited to be referred out (van der Heijden, de Keizer, Bos, Spuls, & Witkamp, 2011). Overall, the primary aim of DermaAccess is to increase access to dermatological services for rural areas at a lower cost as well as connecting RHC with dermatologists.

## Research Methods

The methods used to collect information and data about the teledermatology in rural industry were online databases that included PubMed.gov, Medline, Google, and California State University Long Beach Library. The literature research was conducted using key terms such as telemedicine and quality, telemedicine and teledermatology, teledermatology and access, rural health access, technology and telemedicine, telemedicine market, and teledermatology growth.

## Organizational Structure

To steer the business objectives, a total of five individuals, as they appear in Figure 1, will play key roles in DermaAccess. CEO will focus on delivering the overall strategy of the business addressed in the business plan, allocate capital, build culture (a set of shared attitudes, goals, behaviors, and values within the company), and build strong teams. Marketing and Contract Coordinator (MCC) will promote the company's product and services and administer contracts with clinics and dermatologists. An attorney will be hired as needed to maintain

licensure area of the company and any other legal issues that may arise. He or she will also generate guidelines that include the rights and responsibilities of employees.

Base of DermaAccess requires purchasing photo camera from a supplier and the Accountant/Purchasing Manager (APM) will undertake this job. A degree in business with an emphasis on accounting will prepare them for invoicing, accounts payable and receivable, bookkeeping, and other responsibilities that include financial reporting, analysis and planning. Lastly, a front desk/shipping and handling clerk will be hired to greet customers, administer the shipping and handling of cameras, and any other tasks assigned.

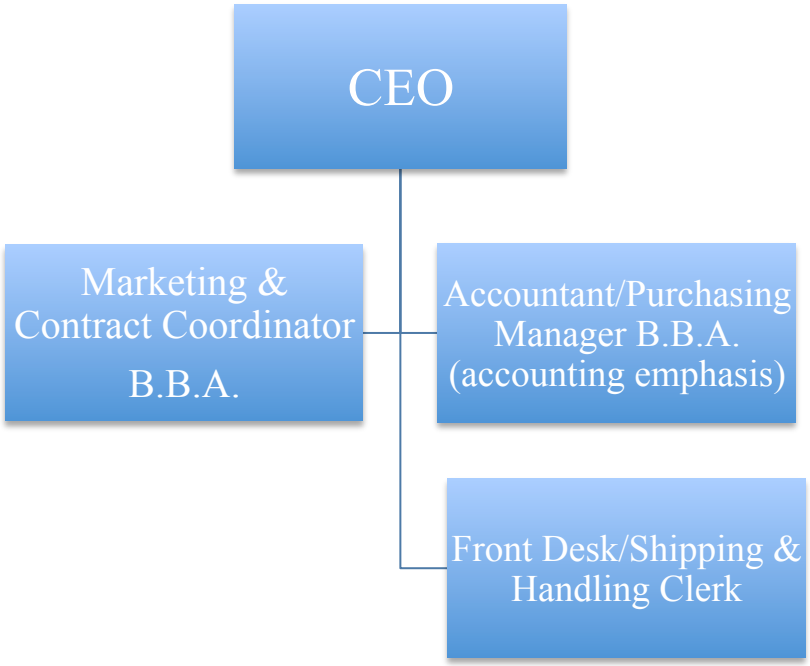



**FIGURE 1. Organizational structure.**

## Target Market and Size

DermaAccess target market consists of population within rural areas in California. Rural areas remain a challenge for delivering sufficient care. Rural patients often are obligated to travel

miles to get access to specialty care. For this reason, and other reasons such as cost, the growth of digital diagnosis will increase, as there is demand for specialty care. Overall, the telemedicine industry is expected to grow not only in the United States, but also globally. As of 2010, California HealthCare Foundation identifies 271 RHCs in 41 counties in California (California HealthCare Foundation, 2012). A RHC is only classified in this category upon meeting the requirements such as being in a non-urban rural area where shortage of healthcare is identified.

The median number of patients who were cared for in an RHC in 2010 was an estimate of 10,000 per year (California HealthCare Foundation, 2012). Only 47% of 271 RHCs utilized Information Technology (IT) for delivering healthcare while 97% had an adequate high-speed Internet. A key determinant for potential market for teledermatology is that majority of the RHC have not adopted telehealth as a part of increasing access to specialty care. California HealthCare Foundation (2012) also discussed the obstacles that hold back the RHCs from implementing telehealth into their practice and the top three included: cost of purchasing and installing equipment (52%), no network with specialists (48%), and lack of resources to adopt (41%). DermaAccess is the perfect teledermatology approach for RHCs as it addresses their top three obstacles.

Moreover, a study discussed earlier in the Industry Description and Outlook showed that only 34 teledermatology programs confirmed to be active (Armstrong et al., 2012, p. 941). Out of these 30 programs, a median (with a range from 5-6,500 consultations) concluded a total of 309 consultations in 2011. Same group conducted a similar study in 2003 and the results showed a total of 62 programs that were active. Armstrong et al. (2012) also point out the number of consultations per site increased; in 2003, the consultations median was 184 compared to 309 in

2011. The newer programs provided highest consultation volume in 2011 and this may be due to new financial models or a continued refinement in workflow.

The marketing strategy will consist of persuading RHCs to adopt the innovative teledermatology concept. The potential incentives will be explained to the RHC, which consist of having benefits of hiring a teledermatologist to at a very lower cost compared to hiring a dermatologist (Landow, Mateus, Korgavkar, Nightingale, & Weinstock, 2014). Providing this service to the patients will improve the quality of care as it reduces the diagnosis errors conducted by a primary care physician or a nurse practitioner. Dansky and Ajello state that a market strategy that shows an excellent clinical outcome by adopting telehealth has a better outcome (2005). In order to accomplish this, the CEO along with MCC will travel to different clinics and conduct a presentation that lists all the benefits of adopting teledermatology as a part of their care system. The presentation will include an introduction to the camera and the online portal that will be utilized as well as the fact of its convenience compared to traveling miles to visit a dermatologist. Additionally, adopting teledermatology also provides an incentive for RHC to stay up-to-date with advancements of technology.

## Competitor Analysis

Teledermatology is a new emerging concept of telehealth. The competition currently is not as challenging as there is only one other company in California focused on similar concept as DermaAccess. The company who has direct competition with DermaAccess is called Direct Dermatology (2015). DermaAccess provides cameras and online portal to RHCs; therefore the focus is in rural areas. However, Direct Dermatology has hired dermatologists who, after receiving photos from patients and providers, provide consult reports. Other indirect competition may include companies who provide online portal services or cameras for teledermatology.

Overall, DermaAccess has an advantage over the direct and indirect competitor as it has a concise, well developed, and well focused market.

## Business Description and Pricing Management

The operations of DermaAccess will be housed in an office located in Irvine, California. A photo camera and online portal will be provided to care providers directly; therefore, no patient contact is required. The business strategy comprises of DermaAccess generating contracts with clinics and the dermatologists providing care. Within contract a statement will address the requirements for monthly subscription for the clinics and dermatologists as well as warranty for services and products provided. Upon contract, an access to the online portal will be provided to clinics where patient seeks care as well as the dermatologist providing the care. The clinics will have to purchase a photo camera from DermaAccess to utilize SAF. Primary care physician will be required to login through the portal and submit the medical history of the patient. The dermatologist will also be required to login in order to provide feedback with diagnosis and treatment options.

The SAF has tremendous benefits as it can be sent and viewed at a convenience of time and location for the patients as well as dermatologists. The major cost to clinic for this approach is purchasing the camera, having access to online portal, and Internet. It is a one-time investment that will benefit the clinic in the long term.

The startup fee includes device price, shipping and handling, online training module to use the device and online portal and security deposit paid by the clinic. The clinic and the dermatologist will additionally be charged for monthly subscription to have an access to the online portal. Both the dermatologist and the clinic have a limit of 30,000 patients per month. The prices as indicated in the contractual agreement are as follows:

**TABLE 1. Cost of Implementing Teledermatology for RHCs and Dermatologists**

| | |
|---|---|
| Clinic teledermatology start-up fee (security deposit included) for clinics | $4,000 |
| Clinic monthly subscription | $700 |
| Dermatologist security deposit | $1,500 |
| Dermatologist monthly subscription | $500 |

# CHAPTER 2

# FEASIBILITY ANALYSIS

## Operational Feasibility

DermaAccess's simple model is an attraction to many low-income communities, especially communities within rural areas. The process begins as the marketing and contract coordinator (MCC) advertises the company and seeks ways to interact with RHCs. He or she will conduct research on a particular RHC and demonstrate the services and products in such way that they align with the needs of the clinic. DermaAccess is most beneficial to the RHCs as it provides its patients convenience to receive dermatologic care while improving the quality of care. These facts will be delivered to the clinics as the MCC provides incentives for them to contract with DermaAccess.

Upon signing a contract with the RHC, the MCC then will find a potential dermatologist who is willing to provide care for that particular clinic. Once a dermatologist has been located, the MCC will pass the their file containing all the certificates to office worker who will conduct a credential inquiry of the dermatologist. Once approved, a contract will be established between the dermatologist and DermaAcess allowing him or her to have access to online portal upon agreeing to pay for monthly subscription along with other legal issues stated in the contract.

After a contact is established between DermaAccess and the clinic and DermaAccess and the dermatologist, MCC will schedule an in-person meeting between the clinic and dermatologist, when possible. In cases where an in-person interview is not feasible, the meeting will take place via Skype. The clinic will go over their terms and conditions and establish a contract with the dermatologist. Next step for DermaAccess is to ship a high definition camera device specially designed for teledermatology purposes directly to the clinic. The company will

provide them with instruction on how to utilize it. They will also receive an access to the online portal along with training. An online portal access and training will also be provided to the dermatologist.

The online portal will not be complicated and will consist of a simple easy-to-follow design. A scenario for teledermatology application would be as following:

A patient arrives at the RHC, which does not have a dermatologist on-site, with a skin condition. The healthcare provider will sign onto the online portal and input patient's health history, with a description of the skin condition as well as the pain level, if any, into the online portal. He or she will use the high definition camera to capture five pictures of the skin condition and upload it to the patient's profile on the online portal. From that point, the dermatologist has 48 hours (2 business days) to review the profile and make an effort to diagnose the problem and possibly prescribe a medication, if the condition allows it. Upon receiving the diagnosis and prescription, RHC will contact patient about his health concerns.

The trust among the three, DermaAccess, RHC, and the dermatologist, is essential in order to utilize the practice of teledermatology at its best. The patients, in this case, will be required to sign a form with the clinic that acknowledges their knowledge about teledermatology and the product(s) that will be utilized for their diagnosis.

**Technical Feasibility**

Once a contract(s) has been established, the accountant/purchasing manager (APM) will purchase cameras from Canfield Scientific, Inc. The camera, VEOS DS3, is specifically designed and developed with teledermatology in mind. All their VEOS devices, including this, feature 10X magnification, powerful digital imaging app, and a long-lasting lithium battery. Polarized and non-polarized lighting modes settings can be changed with ease when taking a picture. Also,

an integrated iPod Touch is included in the purchase as it allows convenience for the RHC taking the picture. A very beneficial aspect that Canfield includes in this device is that it allows RHC healthcare providers who take the picture to tag the lesions within the picture. This also allows the dermatologist to diagnose the site effectively. VEOS DS3 comes with a 1-year warranty and Canfield care also includes unlimited technical support, hardware warranty, training webinar, and software upgrades.

Along with purchasing the camera for taking pictures, the APM will also consult with a software company called Bridge Patient Portal to create an online portal. They can customize the portal as per the requirements of DermaAccess. The online portal that is both accessible by the RHC providers and the dermatologists is based on a fairly simple model. The portal can be accessed with a general computer; no specific computer is required. The portal will include a tab to set up a profile for the RHC listing their providers, number of patients, and the dermatologist can include their licenses, certificates, education, and employment history on the portal. One tab will have a page where you can input patient's information and health history, as well as upload pictures. This page will also have a button that will say, "Send as a message"; the patient profile will attach itself in a message within the portal and the RHC provider can send the message with any additional comments directly to the dermatologist for diagnosis. The patient information will be safe, as it will be encrypted.

Upon receiving the message with patient's profile and pictures of lesion(s) to be diagnosed, the dermatologist will have 48 hours to try to identify the problem and reply to the consultation. The dermatologist will reply with a possible diagnosis and/or comments relating to the lesion. He/she will also have an opportunity to prescribe medication if they are sure about the condition. The RHC provider will manage the case further once receiving the consultation.

## Economic Feasibility

A small office will be rented in Irvine, California. It will be about 1,000 square feet (SF) office property, with rent $1,500 rent per month. Additional assets such as five laptops ($1,000/each), desks, chairs, office supplies will be bought as the business starts. Additionally, DermaAccess requires devices (cameras) purchased from Canfield Scientific, Inc. The devices will be bought in bulk as a discount is provided; 5% discount after 10 devices and 10% discount after 50 or more devices are purchased. As the business is new, first only 10 devices will be purchased from Canfield because devices get updated periodically. The cost per device is $1,295, so a 5% discount will reduce the cost to $1,230.25 per device. That will conclude as a total of $12,302.50 for 10 devices plus tax. The inventory will then be stored in a designated safe place in the office.

As for the cameras, the clinics will pay for the price of $1,295 per device plus tax and shipping and handling. Office clerk will be assigned the work to ship out the devices. The clinics will also pay for subscription for the online portal monthly ($700), as well as the training required for it (a total startup fee of $4,000 including the device, training for both device and online portal, and security deposit). The dermatologists also pay a monthly fee of $500 to access the online portals and additional training fees as required. A security deposit for the dermatologists is $1,500.

Furthermore, the cost of the online portal for DermaAccess depends on the number of clinics and providers that utilize it. Only one provider at the clinic site can utilize the portal and only one dermatologist will be contracted per clinic. DermaAccess will purchase the 26-50 providers plan. This plan costs a total of $29,950 one-time fee and $895 monthly fee for 26-50 providers that have a limited 30,000 patients per providers. In this plan, training is included,

server and application setup, and client branding is also included. If contracts seem to exceed the number listed in the plan (50 providers/rural clinics), DermaAccess will upgrade to the next level which will include 50-100 providers and will have a one-time fee of $59,950 and $1,695 monthly fee for a limited 60,000 patients per user. Lastly, if 30 clinics and 20 dermatologists are contracted, the net profit will be approximately $328,965 for the first year.

**Strengths**

Demand to reduce the gap for access to care is growing rapidly. DermaAccess is the perfect approach to provide support to decrease the gap. Its concept is teledermatology, which provides an access to greater range of skin related diagnosis services to patients in rural areas. It is ideal for rural setting as rural areas generally lack specialty care services and implementing teledermatology provides access to missing care. A most important aspect of providing dermatology via technology advances is that it allows RHC providers to identify onset of serious skin related conditions of their patients. For example, if a patient has a spot on his body and their general care provider is unable to detect that it is a cancer at an earlier stage, the outcome can be terrible.

On the other hand, if teledermatology has been implemented and that provider takes a picture of the affected site and sends it to a specialist, the dermatologist in this case, they have a better chances of diagnosing it correctly as they have had extensive studying and training of such lesions. This increases the quality of care provided. Also, without the implementation of teledermatology, a patient who has a complex skin problem may have to travel long distances to seek care. Also, there is often a wait to visit a specialist. A reduction in travel and wait times can be reduced, if not eliminated, with DermaAccess.

DermaAccess will focus on SAF compared to live video-conferencing, as it is cost-effective as well as the quality of the picture is better. The photo camera is less costly compared to live video-conferencing equipment. For this reason, SAF has a lower start-up cost. Also, it is convenient approach for dermatologists as they can consult the patients' skin problems from anywhere within 48 hours. Last, but not least, the strength that may provide enticement to practice teledermatology is the design of DermaAccess business. SAF is based on a very simple concept: taking a picture of the lesion with a camera and uploading it to an online portal that is designed with simplicity in mind.

**Weaknesses**

There are challenges that come along when a new concept is developed. Use of technology in any field decreases the human-to-human interactions. This is true for teledermatology as well; a loss of connection between the patient and the dermatologist is often witnessed. The patient does not have one-on-one interaction with dermatologist, but rather through the primary care provider. Moreover, areas in California are still in the process of adopting Health Information Technology, for this reason currently there is not a wide range of competition for teledermatology (Moiduddin & Stromberg, 2009).

Additionally, correct identification of legal issues can also be classified as a weakness. Since the area of teledermatology is new, potential legal issues within liabilities have been difficult to identify. These potential legal issues may include the dermatologist not performing diagnosis him or herself, Health Insurance Portability and Accountability Act (HIPAA) violation, and provider uploading wrong photos to the patient's portal. A new area of issue may or may not arise after teledermatology is adopted. Lastly, issues with equipment, the camera, and

online portal may arise. These issues may include frozen portal page, technical issues with the camera, and issues with the battery of the iPod.

**Opportunities**

Adopting teledermatology also allows the community to be economically efficient as the care will be provided within the community and therefore, the dollars will circulate within the community as well. For example, if a patient travels to a specialist for diagnosis, he or she is skipping work for long travels and paying the specialist who is outside of the community. If in this case teledermatology service was to be utilized via DermaAccess, the patient would not have to skip the whole day of work to travel for treatment, additionally, his or her treatment will pay some amount to the clinic as it will be a bridge for their treatment.

Another opportunity DermaAccess provides for primary care providers in RHCs is helping them extend their network of dermatologists. They will be connected with a well-qualified dermatologist whose credentials have been approved. The networking creates a positive relationship that will allow RHC providers to trust and rely on the dermatologist to provide quality of care to their patients. This offers the RHC a source they can provide for their patients for their convenience. Additionally, an opportunity for DermaAccess includes adding a live video-conferencing feature to create a hybrid option. This will allow DermaAccess to reach out to the market that is interested in live video-conferencing.

**Threats**

The threats for adopting teledermatology include patients from rural areas may not accept being diagnosed through technology since they have not been exposed to it at an extensive level. Their trust level may be low when involving technologies with their health. Additionally, financial and reimbursement challenges the adoption of teledermatology in rural areas. In

general, rural areas tend to be underserved low-income areas. Medicaid insurance is usually the source of healthcare insurance for low-income population and the total number of rural residents who have Medicaid is 21% compared to 16% of metropolitan areas (Newkirk & Damico, 2014). Medicaid only reimburses when the skin problem is threatening, such as onset of skin cancer or a mild skin problem.

**TABLE 2. Summary of SWOT Analysis**

| Strengths | Weaknesses |
|---|---|
| • Ideal in rural setting as it provides access to specialty care.<br>• Teledermatology can be used to identify the onset of a condition that can worsen over time.<br>• Camera that is specially manufactured for teledermatology.<br>• Simple design of the online portal makes it easier for RHC providers and dermatologists to utilize it.<br>• Low start up cost, compared to bringing in a dermatologist in the clinic.<br>• SAF only as it is the most cost-effective and reliable compared to live video-conferencing and/or hybrid approach.<br>• Less waiting time for rural patients.<br>• Less travel time for rural patients to visit a specialist.<br>• Quality assurance. | • Loss of connection within patient and dermatologist.<br>• Legal issues.<br>• Equipment and online portal issues.<br>• Lack of electronic health technology in RHCs. |
| **Opportunities** | **Threats** |
| • Circulating the dollars within the community<br>• Extending network of RHCs with qualified dermatologists.<br>• Adding features such as live video-conferencing to make it hybrid option.<br>• Expanding DermaAccess to underserved communities. | • Technology diagnosis acceptance by patients.<br>• Financial and reimbursements challenges<br>• Competition adding live video-conferencing. |

# CHAPTER 3

# LEGAL AND REGULATORY ISSUES

## Introduction

The changing era of healthcare introduces a challenge for healthcare businesses to stay in compliance with the legal and regulatory issues. The complexity of healthcare delivery system in the United States makes it difficult to adhere to changes. Healthcare businesses are expected to address all levels of regulations and laws: federal, state, and city. DermaAccess is a subcategory of telemedicine and because telemedicine is a fairly new healthcare delivery strategy, the legal and regulatory environment is still developing. DermaAccess is a significant part of the changing aspect of healthcare, as it comprises enhancing the delivery of care via technology. There is a high level of responsibility for DermaAccess to stay in compliance with the legal and ethical principles in order to protect the organization and its clients. As there is an inclusion of online portal, DermaAccess is also responsible for legal and regulatory issues regarding exchange of patients' information online. To ensure that all DermaAccess employees stay in compliance, a contract will be established with an attorney who holds a Juris Doctor (J.D.) degree and Master of Business Administration (M.B.A.) so that he or she can best assist DermaAccess with their extensive knowledge of business and its legal issues. The attorney will also provide knowledge and a mandatory training to the new hires, as well as ongoing trainings about legal issues that may arise. He or she will address issues according to the employee's position in the business. For example, the MCC will consult with the attorney about any contractual issues and to obtain additional guidance in an area unfamiliar to him/her. These measures will protect the business from any complications that may occur.

## Organizational Liability

DermaAccess is a for-profit business that is the middleman between the RHCs and the dermatologists to provide dermatological care for the patients in rural areas. The services will only be provided to California RHCs, however eventually it may expand to other clinics within California and to other states. The company will have only one owner (sole proprietor) and will operate as a Limited Liability Company (LLC) as LLC is a hybrid structure that is a combination of both ownership and corporation. Also, the formation of an LLC is convenient and fast. According to Internal Revenue Service (IRS), a LLC operating with one member will reflect a as a sole proprietor on the income tax return unless otherwise filed to be affirmatively recognized as a corporation (2015).

According to State of California Franchise Tax Board, the main benefit of having a company, as LLC is the limited liability is only subjected to the financial investment of the owner, therefore, there will be no individual liability for debts (n.d.). It acts as a corporation when taxes are to be filed. The owner will have a responsibility of paying his or her share of the taxes. Additionally, DermaAccess will have insurances that protect all employees for any negligence such as errors in storing and transmitting patient information, workers compensation, disability insurance, and unemployment insurance tax.

Furthermore, DermaAccess is a third party business and therefore will be independent from any liability issues arising from the contractual terms between clinic, patient, and the dermatologist. Any negligence conducted by either the clinic or the dermatologist will be dealt with according to the contractual agreement. The company will act as an independent contractor. However, the company will be liable for any negligence during providing equipment and online portal access to the RHCs and online access to the dermatologist. Training to use both the

equipment and online portal will be provided by the entities from which DermaAccess receives the products and services to avoid such negligence.

Additionally, DermaAccess will have a general organizational liability insurance that will protect its employees. For the organizational negligence prevention purposes, training sessions will be provided to the employees of the company on a semi-annual and annual basis. As noted earlier, telemedicine is a new area of healthcare and its regulations and laws are evolving, so for this reason, the training sessions will address the changes in company guidelines as well as regulations and laws. It is vital for the company to keep its employees in compliance about the new laws to help prevent any issues that may arise.

**Contractual Liability**

The contract created between DermaAccess and RHCs will address terms that specify different aspects that DermaAccess is not liable for. A few of the main topics this contract will address are as following:

- DermaAccess is not liable for any complications from misdiagnosis made by the dermatologist.
- DermaAccess is not liable for any misdiagnosis or prescription of medications because of the quality of the photo taken.
- DermaAccess is not liable for any complication from wrong medication prescribed by the dermatologist.
- DermaAccess is not liable for any injuries occurring while handling the equipment.

Contracts will also be created between DermaAccess and the independent dermatologists. These contracts will include the responsibility of the dermatologist to DermaAccess and the

RHCs and the responsibility of DermaAccess to the dermatologist. A few of the main topics that this contract will address are as following:

- DermaAccess is not liable for any contractual disagreements between the clinic and the dermatologist.
- The dermatologist will keep his or her credentials in compliance with the state regulations.

Lastly, a contract will be conducted between the clinic and a dermatologist. This contract will be more in depth, as it is comprised of complex liabilities from each party. The contract will be provided as part of DermaAccess's service offering. A few main topics it will address are as follows:

- The dermatologist will not discriminate against any patient in the delivery of healthcare.
- The dermatologist will keep the patient information confidential.
- The dermatologist will not liable for misdiagnosis due to the quality of the images used in the screening and diagnosis of patients and provided over the telemedicine equipment.

**Employee Laws**

DermaAccess highly believes in Equal Employment Opportunity (EEO) and does not discriminate against employees based on color, age, sex, religion, gender, disabilities or national origin. However, it has strict substance use policies, therefore, each employee will be required to pass a drug test before being hired. This measure is taken to further enhance the quality of work. It also avoids any legal liability issues that may rise due to substance usage by an employee.

A total of four employees, the CEO, MCC, APM, and Front Desk/Shipping and Handling Clerk, will work full-time for DermaAccess. A lawyer will be hired on contract basis as needed and he or she will be paid an hourly rate. The CEO will be the top of the tier and will oversee

every other employee in the company. He or she will direct and supervise the duties to be carried out. Both the MCC and APM will directly report to the CEO, however, the Front Desk/Shipping and Handling Clerk may report to all three accordingly to his or her assignments. All employees will be salary based aside from the Front Desk/Shipping and Handling Clerk. Salaries of all employees will be determined based on the geographical salaries average.

**Service Laws**

A patient from rural areas may not be able to travel for required dermatological services. Based on a population survey conducted by Kaiser Permanente, it is reported that rural areas have lower income compared to metropolitan areas and the non-elder population was significantly more likely to utilize Medicaid (Newkirk & Damico, 2014). In FY 2010, Medi-Cal paid claims data reported a total of 566,000 Californians who visited RHCs (California HealthCare Foundation, 2012). Additionally, RHCs report a total of 42% visits that were paid by Medi-cal and 22% paid by Medicare. These statistics indicate the urgency for specialty care to be convenient and affordable. An incentive for the RHCs to adopt the practice of teledermatology is the fact that Medi-Cal covers SAF teledermatology (California Department of Health Care Services, 2015). For this reason, adopting teledermatology ensures a source of payment for the services provided by the RHCs.

As mentioned earlier, the services provided by DermaAccess directly to its consumers are independent contract base. They include shipping camera equipment, providing access to online portal, and checking credentials of independent dermatologist to ensure their right to practice. Firstly, MCC's qualification will include experience in credentialing. He or she will acquire formal paperwork from the dermatologist to ensure they meet the qualifications and their license is current. Under the Business and Professional Code Section 680-686, the healthcare

practitioner is required to disclose his or her name and license status (California Business and Professional Code, n.d.). DermaAccess will stay current with the Coalition for Affordable Quality Healthcare (CAQH). It will also examine state's regulations towards practicing dermatologists to stay protected from liability of having a non-qualified dermatologist practice. Having a non-qualified dermatologist practice for DermaAccess could result into outlawing the California Senate Bill SB 577, a law penalizing someone who practices or attempts to practice without a license.

Secondly, the camera is received from the vendor and stored in the office until it requires shipment to a clinic. There are not any particular service laws regarding this device, however it should not be left unattended around patients. Additionally, the patients' data/pictures should be deleted from the device immediately after being transferred to the computer to be transferred to the online portal. The terms to use this equipment safely will be provided in the contact(s).

Lastly, the online portal requires a variety of regulations and laws as it stores and transfers patients' information. According to the Bridge Patient Portal, a software company that will customize the online portal for DermaAccess, the portals designed goes through multiple rounds of third-party security testing to comply with HIPAA (Bridge Patient Portal, 2015). HIPAA (Pub.L. 104–191, 110 Stat. 1936, enacted August 21, 1996) is an act conducted by federal government to protect the patient health information. Bridge Patient Portal's software program is ONC 2014 certified and therefore, meets and/or exceeds all security requirements for software that stores and transfers patients' information. The company also requires its customers, in this case the DermaAccess, to sign a Business Associate agreement for HIPAA compliance purposes. DermaAccess will also require Bridge Patient Portal to sign a legal contract that includes guaranteed safety of its customers' information. In a case where a breach of HIPAA

occurs, the HIPAA Breach Notification Rule requires covered entities, in this case the RHC, DermaAccess and the dermatologist, to notify individuals being affected and the Secretary. HIPAA violation penalties are decided according to the severity of the violation.

Bridge Patient Portal will provide training to both the clinics and the dermatologist to ensure they comply with the regulations of HIPAA and handle patient information accurately. Upon the completion of the training, DermaAccess will require this software company to obtain a signed written acknowledgement from both the clinic and the dermatologist that states that they have completed the training. A copy of this agreement will be shared with DermaAccess and the software company will keep one copy to protect themselves from any future liabilities.

## Gap Analysis

It is necessary for DermaAccess to conduct a gap analysis, a technique developed by businesses to assess the need of steps required for a transition from the current stage to a desired stage. To identify the current stage of DermaAccess, the MCC will obtain feedback from the clinics, as well as the dermatologists. The feedback may or may not include complaints for the equipment or online portal, positive and negative reviews from both the clinic providers and patients about the product and services, positive and negative review from the dermatologist, and/or any suggestions that either the clinic, its patients, or the dermatologist have for DermaAccess.

The data from the feedback will be analyzed precisely and the report will be forwarded to the company's CEO for a review. The CEO will analyze the situation(s) and proceed accordingly. If an areas shows a high potential for improvement, for example the patients and clinic is not satisfied with the SAF only method of teledermatology and majority of them are requesting a live video-conferencing session as well, the CEO will take this feedback in

consideration and may decide to include video-conferencing depending on the demand. Another example is if a complaint was made involving the online portal, the staff will look into the issue to identify the factors and to confirm that it was not a legal issue. They will also inform Bridge Patient Portal about the issues.

Moreover, if the complaint was relating to the opposite customer (clinic vs dermatologist), DermaAccess will examine it and provide suggestions to solve the matter at an early stage. However, if the complaint is towards the company or its employees, the company will review its internal policies to keep it from reoccurring. If a company's employee is at mistake, the company will provide another training for the employee to stay in compliance with internal policies.

Additionally, currently the services are provided to only RHCs, however the future goal of DermaAccess is to extend its business to urban areas as well, focusing on underserved areas where a lack of specialist is recognized. DermaAccess seeks ways to extend the quality and accuracy of its services provided to its customers. Ongoing feedback will allow the company to adhere to the suggestions and make changes accordingly after an in-depth review is conducted between the CEO and the rest of the employees.

# CHAPTER 4

# FINANCIAL ANALYSIS

## Introduction

DermaAccess, a teledermatology company, is a segment of the innovative technology market called Telehealth. Teledermatology is a fairly new, but highly feasible concept introduced to the market to provide rural communities with access to dermatology care. Therefore, financial projections developed in the Excel sheets are not derived from pervious financials or another similar business. Rather, they are determined on the basis of current market and potential demand for teledermatology in the future. The current fiscal year that represents the financial statement for DermaAccess is 2016. The financial analysis presented will benefit the company in determining its value and help creditors provide funds to the company.

## Startup Costs, Expenses, and Sales

Firstly, personal capital will be contributed towards start-up costs for a total of $50,000, which the CEO will provide. For additional funding of $17,800, capital will be raised through bank loans at three-year terms with 6.5% interest rate. The startup cost will total $67,800 and will include tenant improvements, equipment (computers and online portal access), furniture (chairs and office desks), permits and legal expenses, initial stock (cameras), grand opening promotion, cash on hand contingency funds, and consultant fees. Additionally, ongoing fixed expenses were also calculated as $7,100 per month and they consist of rent, utilities, maintenance, marketing, insurance, and any other expenses that occur.

Monthly sales are forecasted to be $31,000 for the first month with a growth of 10% per month. The projections are derived from contracting with 30 clinics ($4,000 startup fee and $700 monthly subscription fee) and 20 dermatologists ($1,500 startup fee and $500 monthly

subscription fee). Starting with 30 clinics that represent 11% of the potential market (271 RHCs in California). For this reason, DermaAccess will make efforts to reach out to the remaining clinics; therefore the prediction of 10% revenue growth per month was generated.

## Breakeven Analysis

Analyzing a period of time when the company is able to cover the expenses and move forward with building profit is essential. However, it is a challenge to determine the exact time when a breakeven point occurs, as the variable costs and sales revenue, which determines the breakeven point, are fluid. An estimated $21,812.22 in revenue per month is needed for breakeven sales. Therefore, based on the projections the breakeven point is 4 months after operations begin.

## Balance Sheet Analysis

A company's balance sheet provides a clear image portraying the company's financial position by specifying its assets, liabilities, and shareholder's equity. DermaAccess's balance sheet includes assets totaling in $401,712, liabilities $12,247, and shareholder's equity of $189,465. A throughout analysis was conducted using the working capital ratio. DermaAccess has a working capital of $201,712 and this provides sufficient working capital to ensure that the company will be able to pay bills, make loan payments, and pay its employees. The company's assets exceed its liabilities; therefore, there is a greater chance of success in paying bills in a timely manner.

## Income Statement Analysis

The income statement includes revenue, expenses (operating, income tax, and other expenses), and net income. DermaAccess has revenue of $576,600, operating income from operations of $324,853, and new income that totals $189,465. An income statement indicating

the company as a profitable investment can attract lenders. To thoroughly analyze the income statement and how profitable the business will be, an after tax profit margin was considered. The after tax profit margin was calculated to be 33%, which indicates the profit the company will make from total revenue after all expenses are deducted.

## Cash Flow Analysis

The statement of cash flow provides an understanding of the company's capability to compensate for its current operating costs and future growth. DermaAccess's cash flow statement indicates a total of $189,465 from operating activities, $39,498 from investing activities, and $12,247 from financing activities. The company will have a total of $149,912 cash resources at the end of the fiscal year, which will be utilized towards employee bonuses, hiring additional employees, and marketing teledermatology techniques to gain new clients.

## Finance Valuation

The present value of the company is $61,538.36, which indicates the company has money to invest in its present state to earn a return. On the other hand, the terminal value is calculated to be $330,000, which is a projection of a present value for a time in the future. Hence, it can be determined from the estimated increase in the company's value that it will be a profitable company.

## Future Growth Opportunities

DermaAccess has an opportunity for future growth as its one of the few companies that has an innovative idea and focus. The financial statements of DermaAccess correspond to only 11% of the market, a total of 30 RHCs. Hence, a market of 271 RHCs presents a great opportunity for growth. Currently, the goal of the company is to increase the monthly sales by 10% per month; a number that is easy to reach with the help of a highly qualified staff. The

company has no production cost, as the contracted RHCs will pay for the cameras that DermaAccess will purchase from Canfield. DermaAccess purchases the cameras for a discount when purchased in bulk, however it will charge the clinics per unit price as listed by Canfield. The clinics and the dermatologist are also responsible for monthly subscription fees for the online portal. With a start-up fee of $29,950, the online portal will only cost $895 per month for 26-50 providers with a limitation of 30,000 patients per provider. With a current client base of only 30 clinics, expanding services further will result in profit for the company with only very minimal costs.

## Conclusion

The financial statement analysis provides a broader understand of the profitability and valuation of DermaAccess. Furthermore, the area of delivering healthcare via technology, telehealth, is expanding at a high rate. The market for teledermatology is likely to expand as well as it is a feasible opportunity for bringing specialty care to the rural areas. An innovative idea such as teledermatology attracts the market at a higher level compared to brining a dermatologist to a RHCs, which can be a challenge and costly. DermaAccess is a profitable company that will set off with the intervention it presents.

**APPENDICES**

## APPENDIX A

## STARTUP COST, YEARLY EXPENSES, MONTHLY EXPENSES, FINANCIAL NEEDS, AND SALES

| | DermaAccess | | |
|---|---|---|---|
| **Current Fiscal Year** | 2016 | | |
| **Contributed Capital** | $50,000.00 | | |
| | | | |
| **Startup Costs** | | | |
| Tennant Improvements | $1,000.00 | | |
| Equipment | $38,147.50 | | |
| Furniture | $1,350.00 | | |
| Permits | $2,000.00 | | |
| Legal Expenses | $3,000.00 | | |
| Initial Stock | $12,302.50 | | |
| Grand Opening Promotion | $1,000.00 | | |
| Cash On Hand Contingency Funds | $5,000.00 | | |
| Consultant Fees | $4,000.00 | | |
| | | | |
| **Yearly Expenses** | | | |
| | **Year 1** | **Year 2** | **Year 3** |
| Total Employee Compensation | $160,000 | $170,000 | $180,000 |
| | | | |
| **Monthly Expenses** | | | |
| Rent | $1,500 | | |
| Utilities | $400 | | |
| Maintenance and Repairs | $200 | | |
| Insurance | $1,000 | | |
| Marketing Budget | $2,000 | | |
| Additional Monthly Expenses | $2,000 | | |
| | | | |
| **Financing Needed** | | | **$17,800.00** |
| Capital to be raised | $17,800 | | |
| Term Loan Interest Rate | 6.50% | per year | |
| Length of Term Loan | 3 | in years | |
| | | | |
| **Sales** | | | |
| Average COGS | 0.00% | | |
| Initial Monthly Sales Estimate | $31,000 | | |
| Monthly Sales Growth | 10.00% | | |
| | | | |
| **Effective Annual Tax Rate** | 40% | | |

## APPENDIX B

## CASH VALUE OF LOAN, COMPANY VALUATION, AND BREAK EVEN ANALYSIS

| | |
|---|---|
| **Financing Shortfall** | $17,800.00 |
| **Percentage Debt Financing** | 100% |
| **Percentage Equity Financing** | 0% |
| **Amount Borrowed** | $17,800.00 |
| **Percentage of Company Sold to Investors** | 0.00% |
| **Founder Ownership** | 100.00% |
| **Amount Due To Shareholders** | $0.00 |
| **Number of Payment Periods** | 36 |
| **Actual Monthly Interest Rate** | 0.54% |
| **Total Cash Value of Loan** | $19,639.88 |

| *Company Valuation* | |
|---|---|
| **Total Estimated Market Size** | $1,000,000.00 |
| **Percentage of Market to be Captured** | 3% |
| **Years to Exit** | 5 |
| **Compareable P/E** | 11 |
| **Desired IRR** | 40% |
| **Desired Equity Investment** | $0.00 |
| **Currently Issued Shares** | 0 |
| **Capitalization Rate** | 18% |

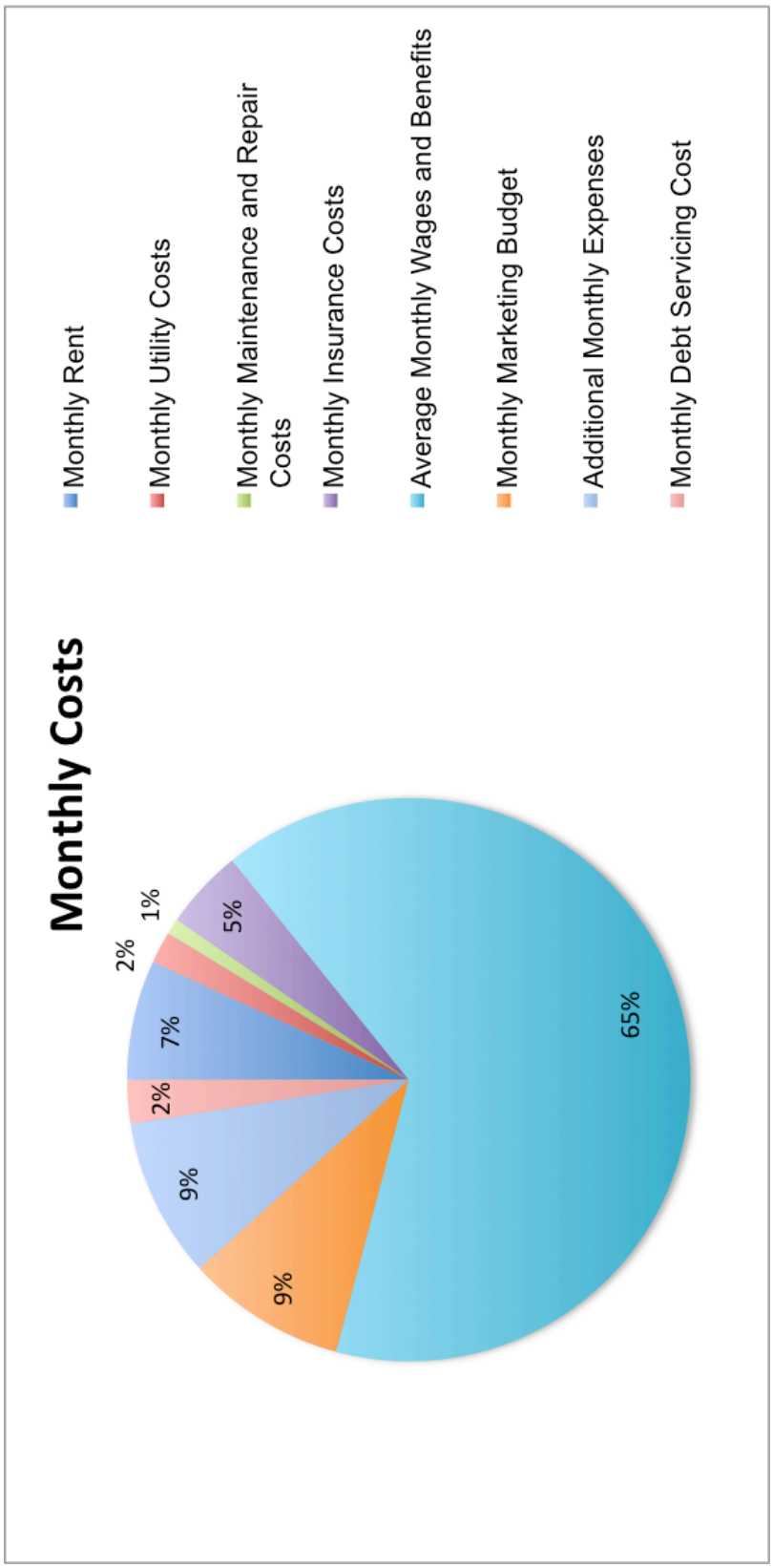
| **Venture Capital Valuation Method** | |
|---|---|
| Terminal Net Income | $30,000.00 |
| Terminal Value | $330,000.00 |
| Estimated PV of Company | $61,358.36 |
| Shares to Issue to Investor | 0 |
| Share Price | #DIV/0! |

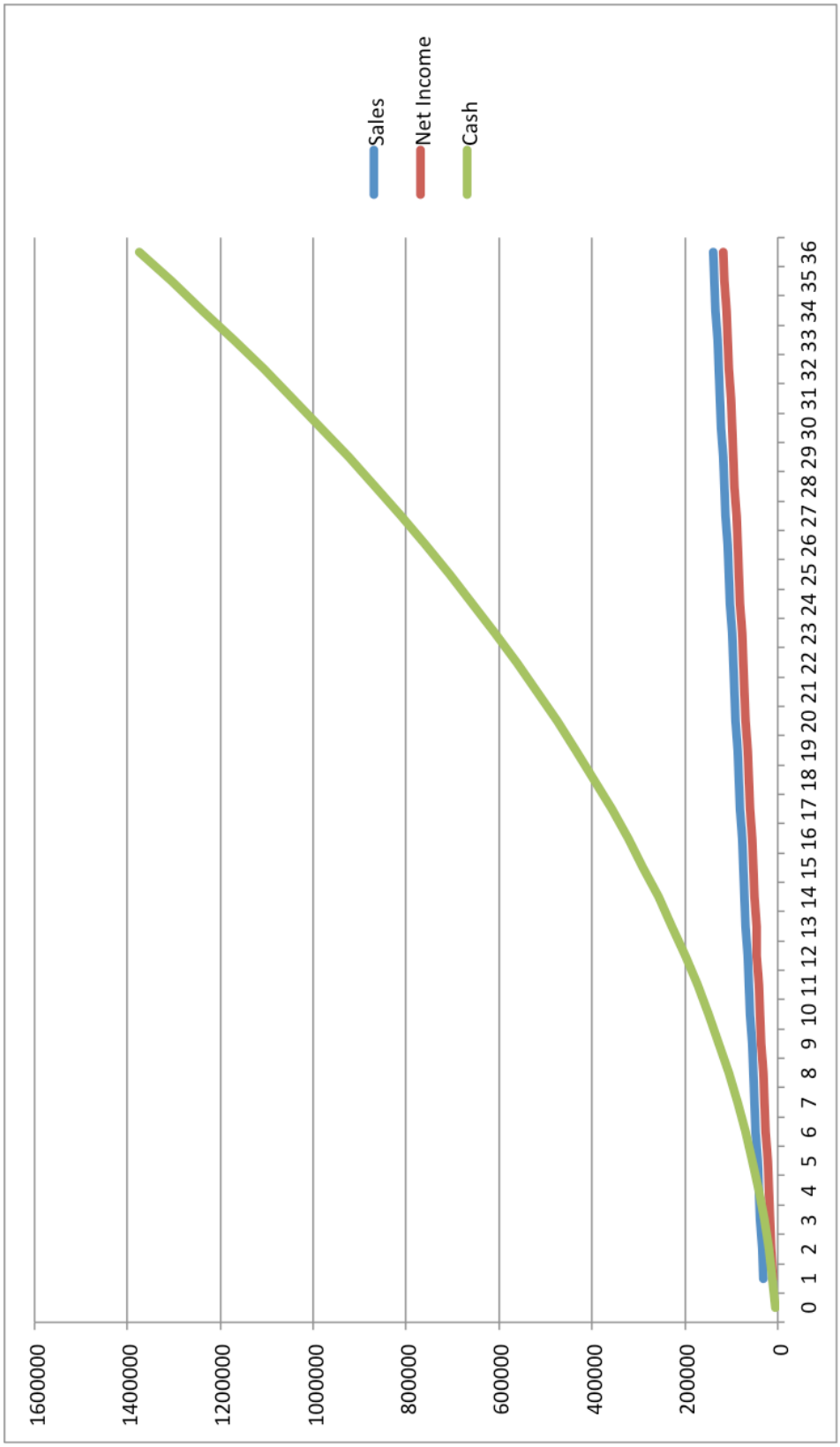
| **DCF Valuation Method** | | | |
|---|---|---|---|
| DCF NPV | $2,231,234.19 | | |
| **Year** | **Income From Operations** | **PV of Cash Flow** | **Residual** |
| 0 | -$62,800.00 | -$62,800.00 | |
| 1 | $324,853.37 | $232,038.12 | |
| 2 | $761,253.37 | $388,394.58 | |
| 3 | $1,197,653.37 | $436,462.60 | |
| | | | $1,237,138.89 |

| *Break Even Point Analysis* | | | |
|---|---|---|---|
| Monthly Rent | $1,500.00 | | 6.88% |
| Monthly Utility Costs | $400.00 | | 1.83% |
| Monthly Maintenance and Repair Costs | $200.00 | | 0.92% |
| Monthly Insurance Costs | $1,000.00 | | 4.58% |
| Average Monthly Wages and Benefits | $14,166.67 | | 64.95% |
| Monthly Marketing Budget | $2,000.00 | | 9.17% |
| Additional Monthly Expenses | $2,000.00 | | 9.17% |
| Monthly Debt Servicing Cost | $545.55 | | 2.50% |
| | $21,812.22 | | 100% |
| | **Sales Margin** | 100.00% | |
| | **Needed Revenue** | $21,812.22 | |

**APPENDIX C**

**CHARTS: MONTHLY COSTS; MONTHLY SALES AND INCOME PROJECTIONS**





**APPENDIX D**

**YEAR 2016, 2017, AND 2018 PROJECTIONS**

| | | 2016 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | Sales % | 100% | 110% | 120% | 130% | 140% | 150% | 160% | 170% | 180% | 190% | 200% | 210% |
| **Income** | | | | | | | | | | | | | |
| Sales | | $31,000.00 | $34,100.00 | $37,200.00 | $40,300.00 | $43,400.00 | $46,500.00 | $49,600.00 | $52,700.00 | $55,800.00 | $58,900.00 | $62,000.00 | $65,100.00 |
| **COGS** | | | | | | | | | | | | | |
| COGS | | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Expenses** | | | | | | | | | | | | | |
| Rent | | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 |
| Utilities | | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 |
| Maintenance & Repairs | | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 |
| Insurance | | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 |
| Wages & Benefits | | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 | $13,333.33 |
| Marketing | | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Misc. Expenses | | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Debt Servicing | | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 |
| **Total Expenses** | | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 | $20,978.89 |
| **Income Before Taxes** | | **$10,021.11** | **$13,121.11** | **$16,221.11** | **$19,321.11** | **$22,421.11** | **$25,521.11** | **$28,621.11** | **$31,721.11** | **$34,821.11** | **$37,921.11** | **$41,021.11** | **$44,121.11** |
| Taxes Due | | $4,008.45 | $5,248.45 | $6,488.45 | $7,728.45 | $8,968.45 | $10,208.45 | $11,448.45 | $12,688.45 | $13,928.45 | $15,168.45 | $16,408.45 | $17,648.45 |
| Cash Out | $62,800.00 | $24,987.33 | $26,227.33 | $27,467.33 | $28,707.33 | $29,947.33 | $31,187.33 | $32,427.33 | $33,667.33 | $34,907.33 | $36,147.33 | $37,387.33 | $38,627.33 |
| Cash In | $67,800.00 | $31,000.00 | $34,100.00 | $37,200.00 | $40,300.00 | $43,400.00 | $46,500.00 | $49,600.00 | $52,700.00 | $55,800.00 | $58,900.00 | $62,000.00 | $65,100.00 |
| Cash On Hand | $5,000.00 | $11,012.67 | $18,885.34 | $28,618.01 | $40,210.67 | $53,663.34 | $68,976.01 | $86,148.68 | $105,181.35 | $126,074.02 | $148,826.69 | $173,439.36 | $199,912.02 |
| | | | | | | | | | | | **Year 1 Pre-tax Income** | | **$324,853.37** |
| Loan Principal Balance | $17,800.00 | $17,350.86 | $16,899.30 | $16,445.28 | $15,988.81 | $15,529.86 | $15,068.43 | $14,604.50 | $14,138.05 | $13,669.08 | $13,197.57 | $12,723.51 | $12,246.87 |
| Principal Payment | | $449.14 | $451.57 | $454.01 | $456.47 | $458.95 | $461.43 | $463.93 | $466.44 | $468.97 | $471.51 | $474.07 | $476.63 |
| Interest Payment | | $96.42 | $93.98 | $91.54 | $89.08 | $86.61 | $84.12 | $81.62 | $79.11 | $76.58 | $74.04 | $71.49 | $68.92 |
| Total Loan Payment | | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 |

| | 2017 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| | 220% | 230% | 240% | 250% | 260% | 270% | 280% | 290% | 300% | 310% | 320% | 330% |
| **Income** | | | | | | | | | | | | |
| Sales | $68,200.00 | $71,300.00 | $74,400.00 | $77,500.00 | $80,600.00 | $83,700.00 | $86,800.00 | $89,900.00 | $93,000.00 | $96,100.00 | $99,200.00 | $102,300.00 |
| **COGS** | | | | | | | | | | | | |
| COGS | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Expenses** | | | | | | | | | | | | |
| Rent | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 |
| Utilities | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 |
| Maintenance & Repairs | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 |
| Insurance | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 |
| Wages & Benefits | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 | $14,166.67 |
| Marketing | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Misc. Expenses | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Debt Servicing | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 |
| **Total Expenses** | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 | $21,812.22 |
| | | | | | | | | | | | | |
| **Income Before Taxes** | **$46,387.78** | **$49,487.78** | **$52,587.78** | **$55,687.78** | **$58,787.78** | **$61,887.78** | **$64,987.78** | **$68,087.78** | **$71,187.78** | **$74,287.78** | **$77,387.78** | **$80,487.78** |
| | | | | | | | | | | | | |
| Taxes Due | $18,555.11 | $19,795.11 | $21,035.11 | $22,275.11 | $23,515.11 | $24,755.11 | $25,995.11 | $27,235.11 | $28,475.11 | $29,715.11 | $30,955.11 | $32,195.11 |
| | | | | | | | | | | | | |
| Cash Out | $40,367.33 | $41,607.33 | $42,847.33 | $44,087.33 | $45,327.33 | $46,567.33 | $47,807.33 | $49,047.33 | $50,287.33 | $51,527.33 | $52,767.33 | $54,007.33 |
| Cash In | $68,200.00 | $71,300.00 | $74,400.00 | $77,500.00 | $80,600.00 | $83,700.00 | $86,800.00 | $89,900.00 | $93,000.00 | $96,100.00 | $99,200.00 | $102,300.00 |
| Cash On Hand | $227,744.69 | $257,437.36 | $288,990.03 | $322,402.70 | $357,675.37 | $394,808.04 | $433,800.70 | $474,653.37 | $517,366.04 | $561,938.71 | $608,371.38 | $656,664.05 |
| | | | | | | | | | | **Year 2 Pre-tax Income** | | **$ 761,253.37** |
| | | | | | | | | | | | | |
| Loan Principal Balance | $11,767.66 | $11,285.85 | $10,801.43 | $10,314.38 | $9,824.70 | $9,332.36 | $8,837.36 | $8,339.68 | $7,839.30 | $7,336.21 | $6,830.40 | $6,321.84 |
| Principal Payment | $479.22 | $481.81 | $484.42 | $487.04 | $489.68 | $492.34 | $495.00 | $497.68 | $500.38 | $503.09 | $505.81 | $508.55 |
| Interest Payment | $66.34 | $63.74 | $61.13 | $58.51 | $55.87 | $53.22 | $50.55 | $47.87 | $45.17 | $42.46 | $39.74 | $37.00 |
| Total Loan Payment | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 |

| | 2018 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| | 340% | 350% | 360% | 370% | 380% | 390% | 400% | 410% | 420% | 430% | 440% | 450% |
| **Income** | | | | | | | | | | | | |
| Sales | $105,400.00 | $108,500.00 | $111,600.00 | $114,700.00 | $117,800.00 | $120,900.00 | $124,000.00 | $127,100.00 | $130,200.00 | $133,300.00 | $136,400.00 | $139,500.00 |
| **COGS** | | | | | | | | | | | | |
| COGS | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Expenses** | | | | | | | | | | | | |
| Rent | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 | $1,500.00 |
| Utilities | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 | $400.00 |
| Maintenance & Repairs | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 | $200.00 |
| Insurance | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 | $1,000.00 |
| Wages & Benefits | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 | $15,000.00 |
| Marketing | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Misc. Expenses | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 | $2,000.00 |
| Debt Servicing | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 |
| **Total Expenses** | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 | $22,645.55 |
| **Income Before Taxes** | **$82,754.45** | **$85,854.45** | **$88,954.45** | **$92,054.45** | **$95,154.45** | **$98,254.45** | **$101,354.45** | **$104,454.45** | **$107,554.45** | **$110,654.45** | **$113,754.45** | **$116,854.45** |
| Taxes Due | $33,101.78 | $34,341.78 | $35,581.78 | $36,821.78 | $38,061.78 | $39,301.78 | $40,541.78 | $41,781.78 | $43,021.78 | $44,261.78 | $45,501.78 | $46,741.78 |
| Cash Out | $55,747.33 | $56,987.33 | $58,227.33 | $59,467.33 | $60,707.33 | $61,947.33 | $63,187.33 | $64,427.33 | $65,667.33 | $66,907.33 | $68,147.33 | $69,387.33 |
| Cash In | $105,400.00 | $108,500.00 | $111,600.00 | $114,700.00 | $117,800.00 | $120,900.00 | $124,000.00 | $127,100.00 | $130,200.00 | $133,300.00 | $136,400.00 | $139,500.00 |
| Cash On Hand | $706,316.72 | $757,829.38 | $811,202.05 | $866,434.72 | $923,527.39 | $982,480.06 | $1,043,292.73 | $1,105,965.40 | $1,170,498.07 | $1,236,890.73 | $1,305,143.40 | $1,375,256.07 |
| | | | | | | | | | | **Year 3 Pre-tax Income** | | **$1,197,653.37** |
| Loan Principal Balance | $5,810.53 | $5,296.45 | $4,779.59 | $4,259.93 | $3,737.45 | $3,212.14 | $2,683.99 | $2,152.98 | $1,619.09 | $1,082.30 | $542.61 | $0.00 |
| Principal Payment | $511.31 | $514.08 | $516.86 | $519.66 | $522.48 | $525.31 | $528.15 | $531.01 | $533.89 | $536.78 | $539.69 | $542.61 |
| Interest Payment | $34.24 | $31.47 | $28.69 | $25.89 | $23.07 | $20.24 | $17.40 | $14.54 | $11.66 | $8.77 | $5.86 | $2.94 |
| Total Loan Payment | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 | $545.55 |

## APPENDIX E

## BALANCE SHEET, INCOME STATEMENT, AND STATEMENT OF CASH FLOW

| DermaAccess | |
|---|---|
| Balance Sheet | |
| As At 2016 | |
| | |
| Unaudited | |
| | 2016 |
| **ASSETS** | |
| CURRENT | |
| Cash | $ 199,912 |
| Accounts Receivable | - |
| Deposits and Prepaid Expenses | 150,000.00 |
| Inventory | 12,303 |
| | 362,215 |
| | |
| PROPERTY, PLANT, & EQUIPMENT | 39,498 |
| INVESTMENTS | - |
| | 401,712 |
| | |
| **LIABILITIES** | |
| CURRENT LIABILITIES | |
| Line of Credit | $ - |
| Accounts Payable and Accrued Liabilities | - |
| Long-term debt - current portion | 5,925 |
| Income Tax Payable | - |
| | 5,925 |
| | |
| LONG-TERM DEBT | 6,322 |
| | 12,247 |
| | |
| **SHAREHOLDER'S EQUITY** | |
| CONTRIBUTED CAPITAL | - |
| RETAINED EARNINGS (DEFICIT) | 189,465 |
| | 189,465 |
| | 201,712 |
| | |
| APPROVED | |

| DermaAccess | | |
|---|---|---|
| Statement of Income and Retained Earnings | | |
| For The Year Ended | | |
| | | 2016 |
| UNAUDITED | | |
| | 2016 | |
| **REVENUE** | $ 576,600 | |
| **COST OF SALES** | | |
| Opening Inventory | 12,303 | |
| Purchases | - | |
| | 12,303 | |
| Closing Inventory | 12,303 | |
| | - | |
| **GROSS PROFIT** | 576,600 | |
| **OPERATING EXPENSES** | 251,747 | |
| **INCOME FROM OPERATIONS** | 324,853 | |
| **OTHER INCOME (EXPENSES)** | | |
| Loss on disposal of property, plant and equipment | - | |
| Gain on sale of investment | - | |
| Miscellaneous | (5,447) | |
| | (5,447) | |
| **NET INCOME BEFORE TAXES** | 319,407 | |
| **INCOME TAX EXPENSE** | 129,941 | |
| **NET INCOME** | 189,465 | |
| **(DEFICIT) - Beginning of Year** | - | |
| **DIVIDENDS** | - | |
| **RETAINED EARNINGS (DEFICIT) - End of Year** | $ 189,465 | |

| DermaAccess | | |
|---|---|---|
| Statement of Cash Flow | | |
| For the Year Ended | | |
| | | 2016 |
| UNAUDITED | | |
| | 2016 | |
| **CASH FLOWS FROM OPERATING ACTIVITES** | | |
| Net income for the year | $ 189,465 | |
| Adjustment for: | | |
| Amortization | - | |
| Loss on disposal of property, plant and equipment | - | |
| Gain on disposal of investment | - | |
| Cash derived from operations | 189,465 | |
| | | |
| Decrease (increase) in working capital items | | |
| Accounts receivable | - | |
| Deposits and prepaid expenses | - | |
| Inventory | (12,303) | |
| Accounts payable and accrued liabilities | - | |
| Long-term debt - current portion | - | |
| Income tax payable | - | |
| Cash flows from operating activities | 177,163 | |
| | | |
| **CASH FLOWS FROM INVESTING ACTIVITIES** | | |
| Acquisition of property, plant and equipment | (39,498) | |
| Proceeds from disposal of property, plant and equipment | - | |
| Proceeds from disposal of investment | - | |
| Dividends | - | |
| Cash flows from investing activities | (39,498) | |
| | | |
| **CASH FLOWS FROM FINANCING ACTIVITIES** | | |
| Advances from (repayments to) shareholder | - | |
| Acquisition of (repayment of) long-term debt | 12,247 | |
| | 12,247 | |
| | | |
| **NET INCREASE (DECREASE) IN CASH RESOURCES** | 149,912 | |
| CASH (DEFICIENCY) RESOURCES - Beginning of Year | - | |
| **CASH RESOURCES (DEFICIENCY) - End of Year** | $ 149,912 | |

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## REFERENCES


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