



Creative Health

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Creativehealth.us

Novie^{oo} NeedleTM

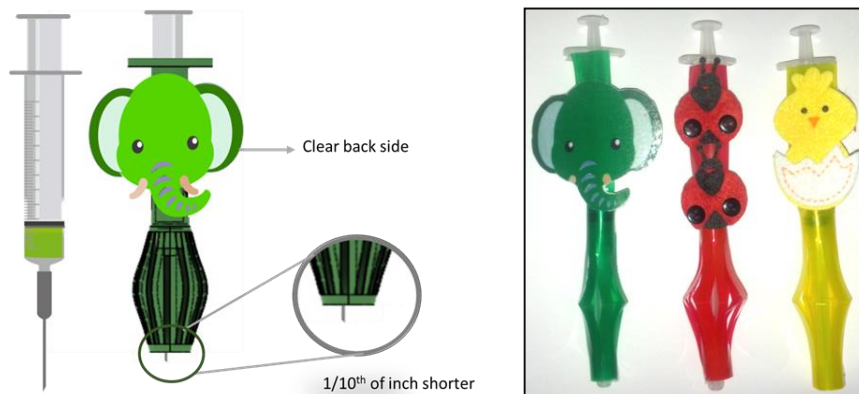


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1. Executive Summary

Company Overview: Creative Health, LLC. (CH) is a startup company from West Virginia whose mission is to produce innovative healthcare products in order to empower patients through sickness by adding a “fun” creative twist to painful medical procedures. Our products are innovative, affordable and improve the medical experience for patients, especially children as well as their families and health care professionals, i.e., nurses-- a female dominant occupation~ 92%.

Management Team: CH is founded and managed by two sisters. The CEO of CH is Reem Eldawud (Ph.D. candidate in Chemical Engineering with a minor in Biomedical Sciences). Ms. Eldawud’s expertise in material sciences, product design as well as her volunteering experience with Operation Smile (4 years) will provide a platform to develop and grow CH. The Chief Marketing officer of CH is Ms. Dina Eldawud, a clinical pharmacist at Ride aide pharmacy. Ms. Eldawud’s practical experience in the healthcare field through her work in hospitals and pharmacies are valuable for the future of CH and for establishing relations with healthcare facilities

Product and Services: CH’s first product is the Noview Needle™, a syringe cover designed to conceal the needle the barrel components of a syringe in order to minimize the psychological fear associated with viewing the actual needle and blood. The covers are designed in colorful patterns and fit onto any syringe while maintaining its accuracy, functionality and sterility. No similar product currently exist in the market. Founders are pursuing a provisional patent.

Market Need: Fear of needles is among the top 10 most prominent phobias in the US. According to a preliminary survey in Morgantown (112 participants), 28% of adults and 90% of children identified themselves to be fearful of needles. 60% of interviewed nurses and pediatricians indicated that the Noview Needle™ covers will be effective. No similar device/product exists.

Local Market Study for Viability: CH has performed initial market testing in pediatric clinics in Morgantown- WV (i.e., Children Hospital, Cardinal pediatrics). These facilities each use 20-30 syringes a day during normal, with higher usage in flu season. The next phase of this study is ongoing and CH is obtaining permissions from guardians to test the Noview Needle™ clinically.

Commercialization: CH is considering two marketing strategies:

- 1) Research, prototype and patent the Noview Needle™, and then outsource manufacturing.
- 2) The second strategy involves researching, designing, patenting, and licensing the Noview Needle™ covers to an existing medical technology company.

Target market: CH will seek a licensing agreement with a current medical/syringe manufacturing company. Specifically, CH Becton Dickinson (BD) (the largest Syringe manufacturer in the US and globally) and Covidien PLC are considered licensing candidates. However; if CH manufactures and sells independently, then the target markets are:

- 1) **Primary target market:** pediatric facilities, health clinics and hospitals
- 2) **Secondary:** Government agencies and vaccination centers. (Also for endorsement)
- 3) **Tertiary:** Patients and parents—selling directly through the website (possibly pharmacies)

Progress Report: During the last 8 months the founders achieved the following milestones:

- Designed and manufactured various functional **prototypes**. Several of these prototypes have been reviewed and tested by nurses and pediatric clinics such as Cardinal pediatrics, WVU Children's hospital and Monongalia Health Department.
- **Conducted a preliminary market survey** in Morgantown (112 respondents)
- **Consulted with a Medical Device Regulatory Consulting Company (Medicept LLC)** to ensure obtaining proper permits to market/sell Noview Needle™. (FDA approval not required)
- Established **connections** with the director of WVU Children's hospital and a local branch manager in Becton and Dickenson (largest syringe manufacturer in the US)
- CH founders are in legal counsel with a patent attorney to obtain a provisional patent.
- Founders are working with 2 graphic designers to build a website and an animation series.
- CH is currently working with an **industrial design company** (Bally Design) and a **manufacturer** for medical grade plastic/rubber products (SPARTON CORP) to build initial inventory.

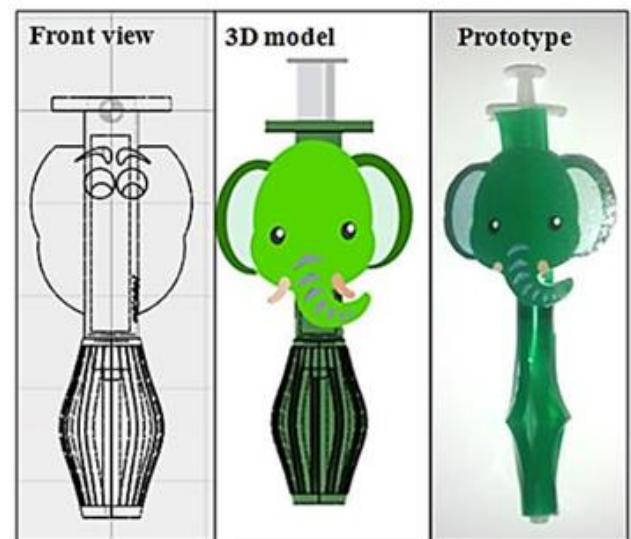
Financial Highlights: CH requires initial seed funding of \$50,000. These funds will cover research, prototype, patent, market testing and initial inventory. CH has raised \$12,500 (competition), 12,500 (NSF-IGERT innovation grant) and \$5000 (savings and family). The soft launch is anticipated in June 2016. The payback period on this investment is anticipated in 2 years.

2. Company Products

2.1 Problem: Needle phobia (Trypanophobia) is defined as an extreme fear of medical procedures involving shots/injections. It affects more than 10% of the American adult population and 70% of children under the age of 10. In fact, it has been reported that 20% of people suffering from needle phobia completely avoid ALL medical treatments as a result. Research shows that among the several varieties of needle phobia, the fear of sight or thought of the shot accounts for 80% of all cases, and is mostly developed in children between the ages of 2 to 6. Currently, two techniques are employed to administer shots/vaccines for children when no alternative medication exists. First is to hold the child down -- “he will get over it” and “it will be over in a blink”—the second is resort to different tricks, creams or games to distract the child from seeing the needle.

CH’s first product (the Noview Needle™ cover) addresses this problem and offers a unique and simple solution that empowers patients especially children over sickness. Using Noview Needle™ covers shifts the decision power to the child who will be able to choose between various colors and designs. This simple yet significant choice is important to the child’s development especially in the submissive hospital environment. Moreover, our product not only helps patients and their families but also assist nurses --which is a female dominant occupation (92%)-- to attend to more patients and have a more pleasant and efficient interactions.

2.2 Solution & Product: Noview Needle™, is a syringe cover innovatively designed to conceal the needle and the barrel parts of standard syringes to minimize the fear associated with viewing and anticipating the medical shot. Noview Needle™ covers are based on spring and origami patterns and can be used with standard disposable syringes from various manufacturers while maintaining their sterility, lightweight and efficiency for injection (drugs/vaccines) and withdrawing purposes. The back of the cover is clear to allow for accurate monitoring of the drugs. Noview Needle covers will come in different designs/colors with the ability to customize the design. (See appendix).



2.2 Intellectual Property: Noview Needle™ creates intellectual property. The founders of CH are currently with legal counsel with a patent attorney (Mr. John Giblin) to obtain a provisional patent application. Anticipated submission date is January

2.3 FDA Approval: CH has consulted with Medicept, LLC. a medical Device Regulatory Consulting Company to ensure obtaining proper permits to market/sell Noview Needle™. FDA approval is not required for Noview Needle covers.

2.4 Product Benefits: The table below shows the benefits of using Noview Needle™

Product Benefit	Advantages to Users
Improve healthcare experience	<ul style="list-style-type: none"> • Allows for a more pleasant and efficient interactions between patients and nurses, as well as parents (who have to watch/hold their child) • Minimizes the struggle to “hold down” or “distract” the child • The child will have a choice, which is empowering and important in the submissive hospital environment. • Comes in different designs/colors with the ability to customize it with licensed characters (i.e., Batman!)
Time saving	<ul style="list-style-type: none"> • Saves the health professional’s time and enables them to attend to more patients (Saving time translates into saving money)
Affordable	<ul style="list-style-type: none"> • Economically priced • Much cheaper and faster than other alternatives (i.e. creams, patches)
Compatibility	<ul style="list-style-type: none"> • Can be used with any syringe from various manufacturers • No need to change syringe manufacturer or use special syringes
Ease of use	<ul style="list-style-type: none"> • Can be applied in around 10 seconds • Using Noview Needle™ doesn’t require additional training
Efficiency	<ul style="list-style-type: none"> • Does not interfere with the functionality or sterility of syringes
Advantage	<ul style="list-style-type: none"> • Provides competitive advantage for the pediatric practices

2.5 Product development: The design of Noview Needle™ is being modified continuously based on recommendations from healthcare professionals (**appendix**). CH opted to manufacture the covers only rather than the syringe and the cover due to several market barriers, such as:

- (1) The Syringe and Needle Manufacturing industry is a mature and highly competitive.
- (2) Hospitals operate under group purchasing organizations and enter into long-term contracts. By manufacturing the covers only the start-up expenses are significantly lower, and CH will not be competing with the syringe manufacturing companies. On the contrary, CH will piggyback on this industry by entering with an accessory that can be fitted to disposable syringes. (**See appendix**)

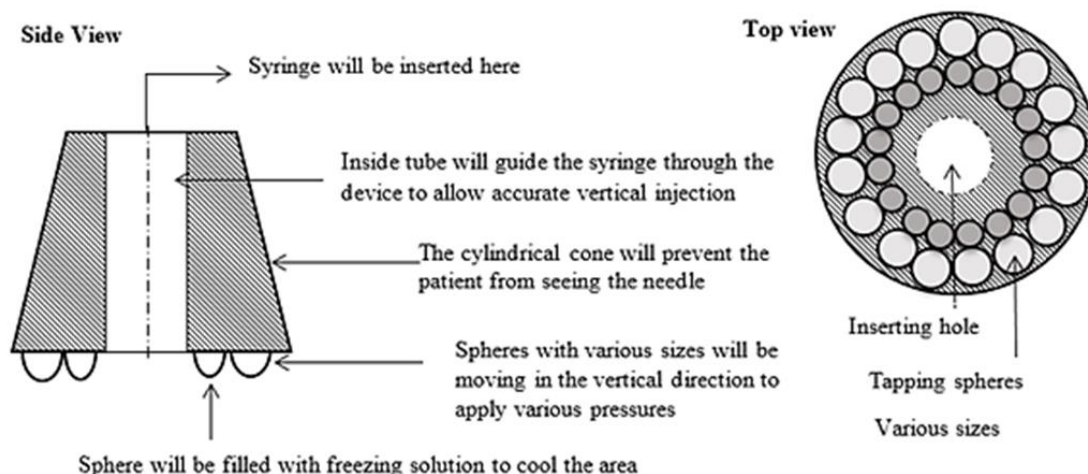
2.6 Completion analysis: Currently, there is no direct competition with Noview Needle™ cover, however; CH recognized the following companies/products as our indirect competition:

- The Alligator Needle Sleeve: a syringe sleeve used ONLY with special syringes (1cc retractable with short needles). Limited application to dental anesthesia only, expensive (\$5 a cover).
- Numbing creams or patches: the most common method used with needle phobic patients. Might cause allergic reactions and skin irritation, must be applied 10 mins in advance.
- Buzzy: a gate control device that relies on nerve signal interference to reduce the pain associated with needles. Buzzy is very different from Noview Needle™, that relies on vibration and cold for 10 mins to numb the area before giving a child a shot.
 - Since our mission is a long the lines of Buzzy, INC. We are looking forward to establishing connections with this company.



2.7 Future products:

Upon the commercialization of the Noview Needle™, the next step involves expanding the design and application to include the needs of the general population as well as dentistry and diabetic needs. Creative Health's future products are within the company's vision of empowering patients and improving their medical experience. **Our next product** aims to minimize the pain associated with self-administered shots such those involving insulin and allergy medications. **TAPZ™** is a battery operated device that provides external numbing and distraction by applying pressure and cold through a tapping circular motion to the injection area before and during the injection.



3. Industry Overview

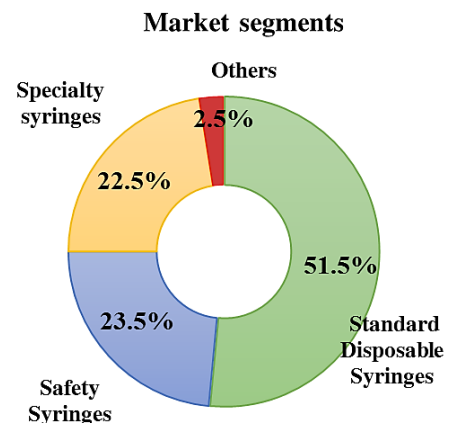
The relevant industry for CH, especially Noview Needle™ Cover, is classified within the Syringe and Injection Needle Manufacturing. This industry has experienced a steady annual growth of 3.5% in the last 5 years and is currently estimated at \$2.8 billion. According to IBISWorld, it is anticipated that this industry will continue to grow for the next 5 years at an annualized growth rate of 4.7% to reach \$3.5 billion.

The Syringes and Injection Needle Manufacturing Industry is a mature market, and competition in this segment is high and increasing. Currently, there are around 456 businesses in this field with two major competitors that control approximately 70% of the industry:



CH, as a company, will “piggyback” on this industry. When the syringe industry is healthy, CH will be healthy. CH will enter this industry with innovative products that will be patent-protected. This strategy has been successfully utilized by Retractable Technologies with their product Safety Syringes before being acquired by Becton Dickinson (BD). **It is important to note that there is absolutely no direct competitors for Noview Needle™.**

Market Segments: Currently, the Syringe and Injection Needle Manufacturing Industry is divided into four segments—standard disposable syringes, safety syringes, specialty pre-filled syringes, and others (including injectors, patches and pumps). CH will be targeting the disposable syringes as well as the safety syringes, accounting for 75% of the total syringe



4. Marketing Strategy

Target Market: Noview Needle™ cover is currently designed for children and young adults with the potential to expand its application to include dentistry and general public. The target markets are:

- 1) **Primary target market:** pediatric facilities, health clinics and hospitals
- 2) **Secondary:** Government agencies and vaccination centers. (Also for endorsement)
- 3) **Tertiary:** Patients and parents—selling directly through the website (possibly pharmacies)

CH will also seek a licensing agreement with a current medical/syringe manufacturing company. Specifically, CH Becton Dickinson (BD) (the largest Syringe manufacturer in the US and globally) and Covidien PLC are considered licensing candidates.

Market Penetration: To introduce Noview Needle to the Market a “door to door” approach will be used. The initial focus will be on clinics and hospitals in Morgantown area/ WV.. As demand grows CH is considering two marketing strategies:

- The first is to research, design, prototype, patent, **outsource manufacturing and sell** independently. Pricing will be dependent on the design and purchase volume.
- The second strategy involves designing, prototyping, patenting, and **licensing** Noview Needle™ to an existing medical technology company. (2-3% royalties are expected)

Advertising Marketing Plan and Sales Strategy:

- **Initial stages of advertising:**
 - The “**door to door**” approach will be used by visiting and demonstrating the properties of the Noview Needle™ to clinics, pediatricians and healthcare professionals. The initial focus will be in Morgantown/ WV and surrounding cities (radius of 50-70 miles). With each visit, the team will be giving free samples and flyers for the company.
 - **A Social media** (such as Facebook, YouTube, Twitter) platform will be used to reach out to the community by sharing stories and pictures with children, parents, and healthcare workers. **Facebook** is considered a very valuable advertising channel, since most clinics and pediatrics in the Morgantown area have active Facebook pages that can be used to reach out to healthcare workers and patients.
 - **Interactive website, flyers, and brochures.**

- **Future advertising** will involve renting booths at conferences and medical instruments exhibitions as well as contacting medical magazines and hiring sales representatives.

Distribution: In early stages, the founders will visit clinics and hospitals in Morgantown and surrounding cities (tri-state area) to introduce Noview Needle™ to the market and demonstrate its features. At this point the mail system will be used for delivery and distribution. When a certain economy of scale is reached, CH will hire sale representatives and will utilize drop shipping to directly deliver Noview Needle™ to customers. Furthermore, CH will establish agreements with distribution companies and group purchasing organizations (GPOs) in order to meet increasing distribution demands.

Early Adopters: CH has been in direct contact with different clinics and facilities such as cardinal pediatric, Monogolia Health Department, the management at WVU Children's hospital, as well as a local branch manager in Becton and Dickenson (the largest syringe manufacturer in the US and worldwide). WVU-Children hospital is one of our early adapters, we are in contact with the director of the hospital (Ms. Cheryl Jones) and other officials in the hospital.

SWOT analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Background and expertise of founders (a Ph.D in biomedical engineering student & Clinical pharmacist) • Unique- patent protected products that shifts the decision power to patients (especially children) • Noview Needle covers can be used with any standard disposable syringe, • No direct competition • No FDA or medical training requirements 	<ul style="list-style-type: none"> • CH's main weakness is the Limited funds available. CH has raised a total of 25,000 from competitions & \$5000 from family. In the near future, CH will be seeking investments from angels and venture capitalists. • CH's second weakness is finding a reliable manufacturing facility that is capable of building quality products at low volume and costs.
Opportunities	Threats
<ul style="list-style-type: none"> • Expand the application of Noview Needle covers to international markets • Introduce new products to meet the diabetic and dental needs • The syringe and needle manufacturing industry is a \$2.8 billion with annual growth rate of 3.8% which creates great opportunities for growth and expanding. 	<ul style="list-style-type: none"> • Patent infringements (Patent insurance and a patent defense fund will be established) • Liabilities and quality issues associated with outsourcing manufacturing • Syringe and Needle Manufacturing industry is mature. • Hospitals operate under a system in which group purchasing organizations (GPOs) and manufacturers

5. Operational plan:

CH is in the early stages of development and is currently focused on optimizing the design and prototype while securing intellectual property protection. The founders are currently negotiating with a medical device manufacturer in Ohio (SPARTON CORP) to manufacture the initial inventory to start clinically testing Noview Needle™ covers.

CH is also seeking to expand its network and has been in direct contact with pediatricians, nurses, the Monongalia Health Department, the management at WVU-Children's hospital and a local branch manager in BD.

Current Milestones and on-going operations:

- **Prototype:** Designed and manufactured various functional prototypes. Several of these prototypes have been reviewed and tested by nurses and pediatrics in Morgantown.
- **Conducted a preliminary market survey** in the Morgantown area (112 respondents)
- **Conducted case studies** in pediatric clinics, Ruby Memorial Children's Hospital, and the Monongalia County Health Department. **Interviewed** pediatricians and nurses in order to incorporate their experiences in modifying and improving the Noview Needle™ cover.
- **Online presence:** working with graphic designer (to build animations and a website)
- **Registered** Creative Health, LLC. in West Virginia.
- **Patent:** CH is in legal counsel to obtain a provisional patent
- **Raised seed money from different awards:**
 - Winner of the WV Technology Entrepreneurship Challenge, awarded \$12,500 (2015).
 - Finalist in the WV State Wide Business Plan Competition, \$1000 (2015).
 - Awarded \$12,500 from the NSF-IGERT-Innovation program.
- **Consulted with a Medical Device Regulatory Consulting Company (Medicept LLC), for FDA approval**
- Established connections with the director of WVU Children's hospital and a local branch manager in Becton and Dickenson (largest syringe manufacturer in the US)
- CH is currently working with an industrial design company (Bally Design) and a manufacturer for medical grade plastic/rubber products (SPARTON CORP) to build our inventory.

Anticipated Soft launch is June 2016

6. Market Research in Morgantown-West Virginia

6.1 Preliminary Market Research: Through a preliminary survey of 112 participants in the Morgantown area, 28% of the participants identified themselves to be fearful of needle shots and a total of 61% presumed that using Noview Needle would reduce their fear and improve their medical experience. Further, we have interviewed 21 pediatrics, pharmacists and healthcare professionals and demonstrated the concept and features of the Noview Needle™ cover. Results showed that 66% of those surveyed anticipate that using Noview Needle might facilitate administering the shot and save time, and less than 23% were unsure/needed to test.

6.2 Local Market Size (Morgantown area): There are more than 10 pediatric clinics, or children's' health care facilities in Morgantown. Results of the market analysis are below:

Facility	Daily Syringe use	Daily Syringe use (flu season)	Most Common syringes	Low Estimate of Boxes used
Children Hospital	25-30	25	1cc	20 boxes/month
Pediatric Practice (POC)	20-30	30	1cc and 3cc	20 boxes/month
Cardinal Pediatric	5-10	10	1 cc	10 boxes/month

* Each box contains 20 Noview Needle™ covers—initial phases

6.3 Global Market size and trend:

The worldwide market for syringes is 12 billion units annually. The demand per hospital bed per year is 1,200 syringes, and is rising at annual rate 7.1%. The 3cc syringe dominates the market because most doses require 2cc injections. Next to the 3cc syringe, demand is greatest for the 1cc version followed by the 5cc and 10cc syringes.

7. Pricing Strategy and Cost analysis:

If CH follows the first strategy, which includes outsourcing the manufacturing and selling independently. Then, CH will sell Noview Needle™ covers in sterilized envelopes packaged in boxes containing 20 covers. The cost of outsource manufacturing of Noview Needle™ depends on the purchase volume and location of manufacturing facility (inside vs outside the US):

- 1) **Cost for initial inventory:** manufacturing will be done through SPARTON CORP, a medical grade manufacturer in Ohio (early stages negotiations):
 - The estimated cost for a box containing 20 Noview Needle™ cover–each package individually and sterilized- is around \$4 (\$0.20 each).
 - The Manufacturer’s Suggested Retail Price (MSRP) for a box containing 20 items is \$10 (\$6 profit margin).
- 2) **Cost for high volume manufacturing (out of states):** is anticipated at 8 cents per item (Optimistic estimation is 4 cents per item). At this stage, CH will sell Noview Needle™ covers in boxes containing 50 pieces. The price mark-up will be at a variable rate depending on the target market the purchased volume and duration of contract.

Estimations	Cost of a cover	N# of covers per box	Selling price (per cover)	Selling price (per box)	Cost per box	Profit per box	Mark-up Percentage
Optimistic	\$0.04	50	\$0.20	\$10	\$2	\$8	%400
Conservative	\$0.08	50	\$0.20	\$10	\$4	\$6	%150

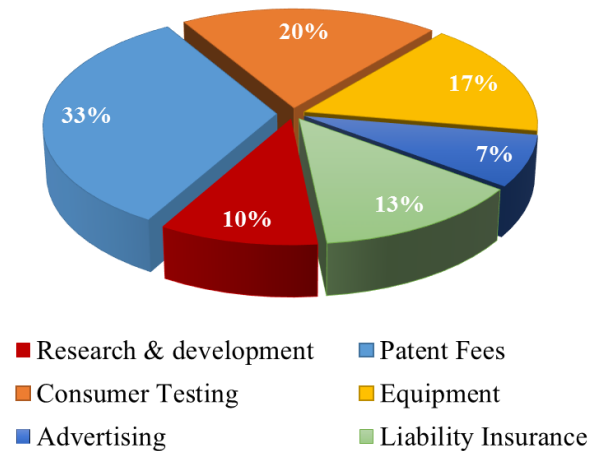
According to our financial analysis, CH needs to sell 135 units a month to break even. Payback period for investment is 2 years.

8. Financial Highlights

8.1 Startup Funding: The initial seed capital required to launch this business is \$50,000. Specifically; this seed money will be allocated for research and development of the design and prototype, intellectual property protection (patent), consumer testing (demonstrations and free samples), securing outsource manufacturing facility for making the initial samples (or licensing Novview Needle), advertising (website and flyers), and for initial liability insurance. **The tables below shows the financial analysis if CH outsources the manufacturing and sells Novview Needle):**

Startup Funding	
Startup Expenses to Fund	\$50,000
Startup Assets to Fund	\$11,700
Total Startup Funding Required	\$61,700
Assets	
Non-cash Assets from Startup	\$1,700
Cash Requirements from Startup	\$10,000
Additional Cash Raised	\$20,050
Total Assets	\$21,750
Liabilities and Capital	
Liabilities	
Current Borrowing	\$0
Long-term Liabilities	\$20,000
Accounts Payable (Outstanding Bills)	\$0
Other Current Liabilities (interest-free)	\$0
Total Liabilities	\$20,000
Planned Investment	
Founder Savings	\$5,000
BPC (awarded)	\$12,500
NSF IGERT-Business grant (awarded)	\$12,500
Business Competitions/grants	\$30,000
Investors	\$20,000
Total Planned Investment	\$80,000
Total Funding	\$81,750

Start-up expenses

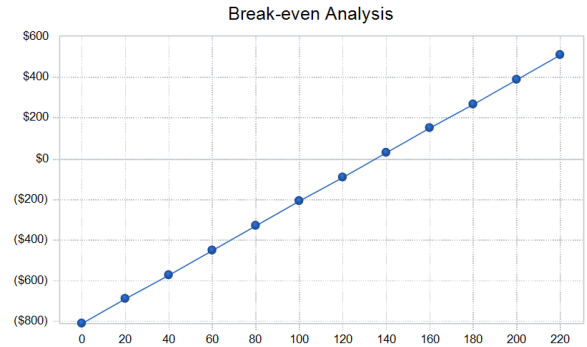


Start-up expenses

Startup Expenses	Amounts
Research & Development	\$11,000
Intellectual Property Protection	\$12,000
Consumer Testing	\$9,000
Manufacturing Equipment	\$7,000
Advertising	\$5,000
Liability Insurance, and legal fees	\$6,000
Total Costs	\$50,000

8.2 Break-even Analysis

Monthly Units Break-even	135
Monthly Revenue Break-even	\$1,350
Average Per-Unit Revenue	\$10.00
Average Per-Unit Variable Cost	\$4.00
Estimated Monthly Fixed Cost	\$810

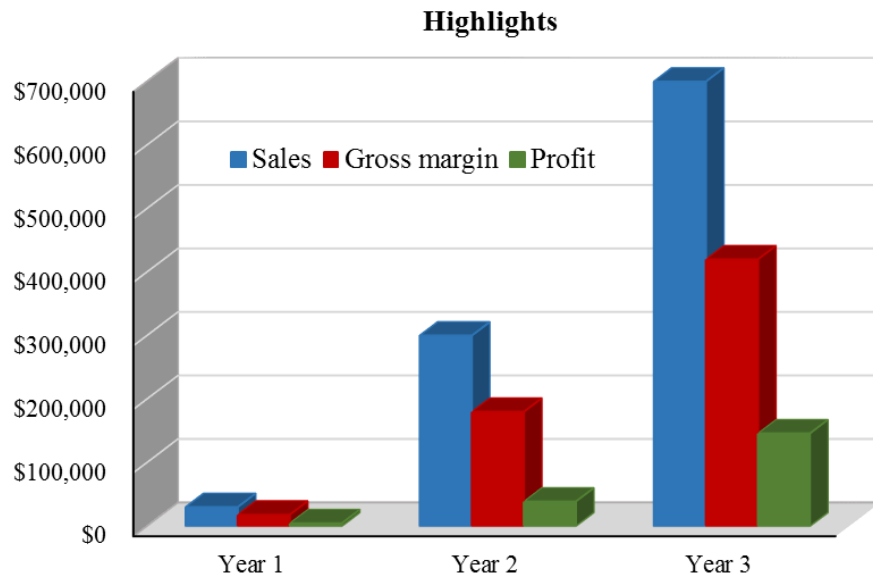


8.3 Sales Forecast

	Year 1	Year 2	Year 3
Total Unit Sales	3,000	30,000	70,000
Unit Prices	\$10.00	\$10.00	\$10.00
Total Sales	\$30,000	\$300,000	\$700,000
Direct Cost of Sales	\$4.00	\$4.00	\$4.00
Subtotal Direct Cost of Sales	\$12,000	\$120,000	\$280,000

8.4 Cash Flow

<i>Cash Flow</i>	Year 1	Year 2	Year 3
Cash Received			
Cash Sales	\$25,499	\$251,320	\$583,552
Cash from Receivables	\$3,274	\$36,420	\$87,842
Subtotal Cash from Operations	\$28,774	\$287,740	\$671,393
Additional Cash Received			
Sales Tax, VAT, HST/GST Received	\$720	\$7,200	\$16,800
New Investment Received	\$0	\$20,000	\$30,000
Subtotal Cash Received	\$29,494	\$314,940	\$718,193
Expenditures from Operations			
Cash Spending	\$0	\$44,431.75	\$96,356.97
Bill Payments	\$21,841	\$201,418.00	\$402,836.00
Subtotal Spent on Operations	\$21,841	\$245,850	\$499,193
Additional Cash Spent			
Sales Tax, VAT, HST/GST Paid Out	\$720	\$7,200	\$16,800
Principal Repayment of Current	\$600	\$600	\$800
Long-term Liabilities Principal	\$0	\$2,500	\$7,500
Subtotal Cash Spent	\$23,161	\$256,150	\$524,293
Net Cash Flow	\$6,333	\$58,790	\$193,900



8.5 Table: Profits and Loss- Yearly

	Year 1	Year 2	Year 3
Sales	\$30,000	\$300,000	\$700,000
Direct Cost of Sales	\$12,000	\$120,000	\$280,000
Total Cost of Sales	\$12,000	\$120,000	\$280,000
Gross Margin	\$18,000	\$180,000	\$420,000
Gross Margin %	60.00%	60.00%	60.00%
Expenses			
Payroll	\$0	\$50,000	\$97,543
Marketing/Promotion	\$7,500	\$51,228	\$83,608
Storage Facility	\$560	\$6,147	\$11,148
Utilities	\$480	\$5,464	\$8,918
Insurance	\$1,000	\$3,415	\$2,787
Payroll Taxes	\$0	\$7,684	\$14,631
Other	\$180	\$683	\$557
Total Operating Expenses	\$9,841	\$125,850	\$219,193
Profit Before Interest and Taxes	\$8,159	\$54,150	\$200,807
EBITDA	\$8,159	\$54,150	\$200,807
Interest Expense	\$1,643.82	\$3,473.57	\$2,575.17
Taxes Incurred	\$1,984	\$11,913.06	\$52,209.83
Net Profit	\$4,531	\$38,764	\$146,022
Net Profit/Sales	15.10%	12.92%	20.86%

8.6 Investment and Payback:

Projected Payback Calculation	Investment	Year 1	Year 2	Year 3
Cash Returns by Year	\$61,700	\$6,333	\$58,790	\$193,900
Combination as Income Stream	(\$61,700)	\$6,332	\$58,790	\$193,900
Cumulative Net Cash Flow to Investors	(\$61,700)	\$55,367	\$3,423	\$197,324
Payback Period	2 years			

- **Financial analysis for licensing marketing strategy:**

IF CH opts to license Noview Needle covers to an existing syringe manufacturing company such as Becton Dickinson (BD) or Covidien PLC, then the startup costs will be reduced to \$42,000 and will include prototyping, patenting, initial consumer testing, legal fees and costs incurred to obtain the licensing agreement.

For this strategy 2-3% royalties on sales of Noview Needle™ is expected. This percentage is based on a recent deal between Med-Design Corporation and Becton Dickinson and Company.

A conservative estimate of CH 's revenue from this strategy based on the syringe and needle manufacturing industry and the market share of Becton Dickinson and Company in this industry is calculated assuming that:

- 1) Used only with disposable syringes (50% market segment)
- 2) Only 5% of disposable syringes are used with children
- 3) Only 20% of these syringes are used with Noview Needle covers
- 4) 2% royalty rate

Then the estimated revenue for CH is around **\$210,000 annually**.

Creative Health, LLC was founded by two sisters who are passionate about creating a change and empowering children by producing innovative and affordable products that add a “fun” creative twist to painful medical procedures. Our products are not only pleasant for children and their parents but also allow healthcare professionals (especially nurses) to have a more efficient and delightful interaction with children.

“I am 27 years old, and I am terrified of Needles!!” Reem Eldawud- Founder

“Being a female entrepreneur and starting my company are among the most challenging and rewarding experiences I have ever done, especially while still being a student in the STEM field. I know that the road ahead will not be easy but I won’t quite till Noview Needle is a stable in every hospital”

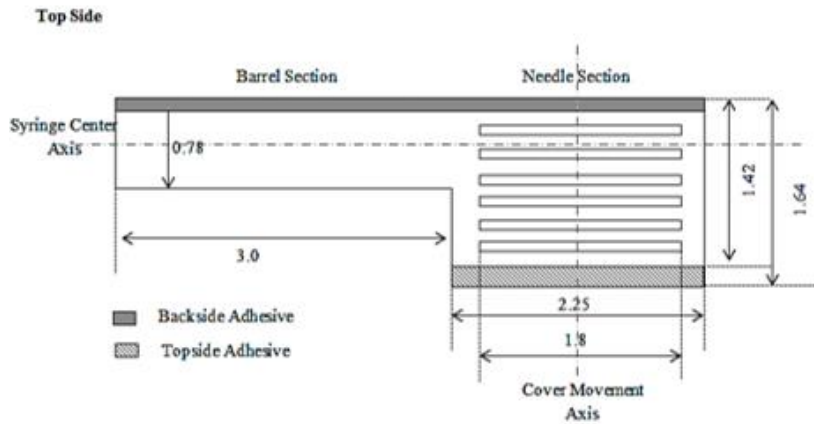


CreativeHealth

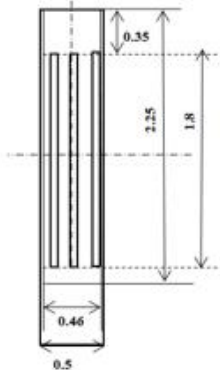
9. Appendix:

Product diagrams:

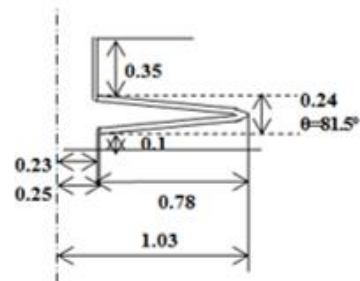
Topside (Open)



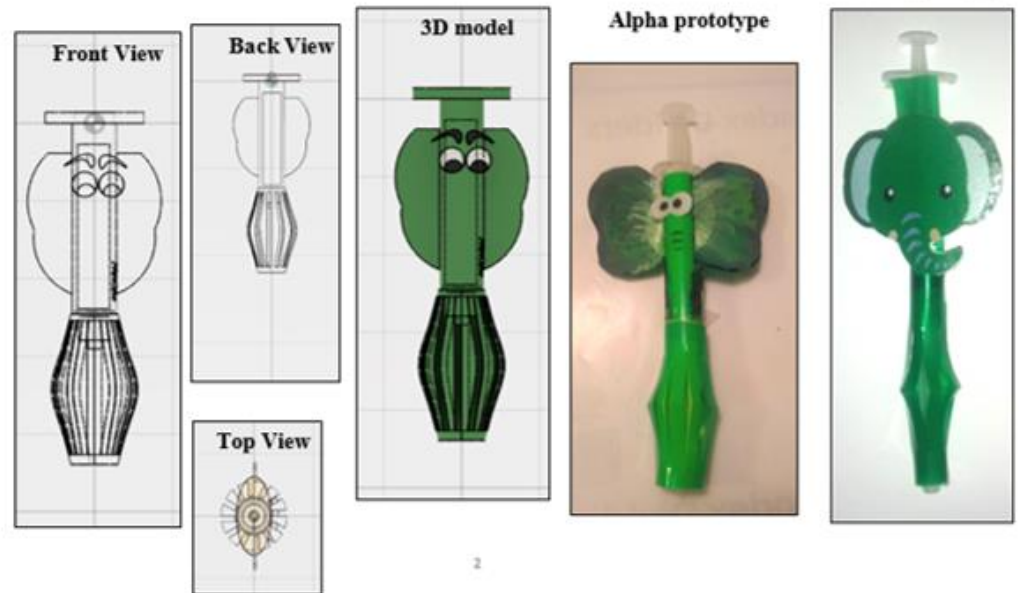
Side view (Closed)



Side view (Open)



Modeling of the Lantern cover design



Different cover designs



2. Product Development

Sterilization:

Noview Needle covers will be sterilized using ethylene gas (used commercially to sterilize the syringe and the needle), and will be sold in sterilized-sealed envelopes.

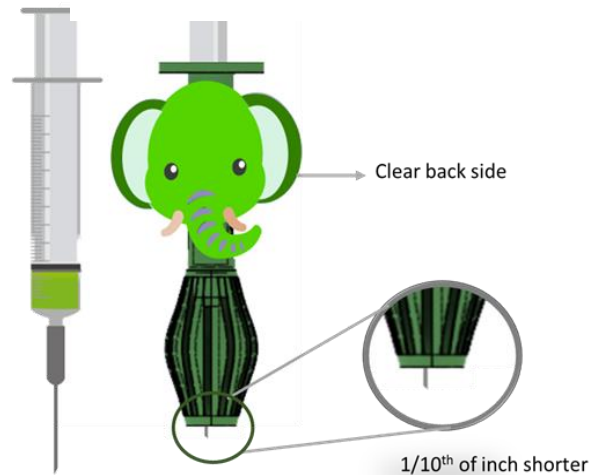
Sterilization envelopes



Accuracy:

Based on recommendations by pediatrics and nurses several changes were made to Noview Needle, including:

- 1) The backside of the syringe is completely uncovered to allow the healthcare professional to administer the shot effectively
- 2) The needle cover is less than $1/10^{\text{th}}$ (2mm) shorter than the needle to maximize accuracy.



Noview Needle™ prototypes
(used on 3cc standard syringes)



3. Early adopters:



“A+ for such a clever idea. Keep up your work and I am sure **WVU Children Hospital** will be one of your customers.”

Cheryl Jones, RN, MSN,
Director of WVU-Children Hospital



“This is a great product, and will have great impacts on children’s development especially when they are hospitalized for months...No-one really asks the child if he wants to get a shot, and using the covers will give them a choice! It is simple yet very valuable”

Rachel Delevett, CCLS
Life Specialist
Pediatric Supportive Care and Child Life Program

Lucy M.-mother

“I cannot wait till Noview Needle covers are in the market! I have three children under the age 6 and getting them to take shots is a terrifying experience!”