# Paul H. Broyhill Wellness Center

# Feasibility Report
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## Introduction

This feasibility report aims to present solutions to the lack of information concerning nutrition and healthy eating provided to advanced age patients at the Paul Broyhill Wellness Center in Boone, NC. The possible alternatives to deliver this information include creating a website, designing a booklet, or delivering a workshop. Our research evaluates the time, cost, attitude of audience, and lastly, the retention of presented information based on our three alternatives. In order to determine the best solution to our problem, we utilized various research methods such as websites, research articles, interviews of senior citizens, and specific calculations of costs. Based on our research, we conclude that creating a booklet will be the most beneficial avenue for patients to receive this health information from the Paul Broyhill Wellness Center.

## Alternatives

### Alternative 1- Create a website

We will create an interactive website to guide patients through lessons about nutrition and healthy eating. The website will provide a fundamental overview of healthy eating habits, different sections describing the five food groups, and tips for portion control and simple preparation. The website will be designed with a simple and engaging format, so users could navigate the site easily according to what information they wish to learn about. The website will offer printable guides on the information presented.

### Alternative 2- Design a booklet

We will design a printed booklet to teach patients about nutrition so that they will have a physical guide that they can refer to with future questions. The booklet will have a comprehensive overview of healthy eating, followed by a description of the five food groups, with an emphasis on portion control and simple food preparation. The booklet will be written at a simple reading level, and contain informational graphics and photographs to engage readers. We will include several blank lined pages at the back, allowing patients to make their own notes or write supplementary information. The booklet will be distributed for free to patients at the Wellness Center.

### Alternative 3- Host a workshop

We will organize and give informational workshops on healthy eating to patients at the Wellness Center. The workshops will take place in person at the Wellness Center. They will be delivered over two hours, every two weeks. These workshops will begin with a fundamental introduction to healthy eating, followed by in-depth lessons on the five food groups, and concluding with take-away tips on regulating portion control and simple food preparation. The workshops will also contain group activities and learning guides, so that the patients interact with the

information and have notes to refer back to. Currently, workshops are provided at a charge of $10 per person.

## Criteria

**Criterion 1- Time**
The alternative chosen should be assembled and distributed to patients at the Wellness Center fairly quickly. A target time frame for completion is between 12 and 16 weeks. The alternative chosen must be completed quickly due to the large need among patients for nutritional education. However, the alternative chosen must be designed and created effectively, so the proper time must be taken to ensure that it is well-done and thorough.

**Criterion 2- Cost**
The cost of the alternative chosen should be reasonable for both the Wellness Center and the patients. The Wellness Center should bear most of the cost, as the patients need access to the information provided regardless of their financial standing. The cost should not be excessive and should fit into the Wellness Center's financial capability.

**Criterion 3- Attitude of Audience**
The attitude of the audience towards the different presentation formats will be considered. The method they choose to absorb new information, given that we did not choose for them, will help determine what will be most effective. We must consider what method of learning patients at the Wellness Center are most likely to engage with best, and the method they are most likely to return to.

**Criterion 4- Retention of Information**
The information should be presented in a way that the audience will retain. This includes acknowledging any disabilities the audience might have. We must consider which alternative has proven to promote learning and retention of information the best, especially among older audiences.

## Research Methods

To form our conclusions based on the alternatives and criteria, we consulted several different sources of information. This includes research articles, price estimates, interviews, and surveys. To determine the cost of each alternative, we looked closely at the set prices for owning a website, installing and creating presentation materials, and the cost of paper and binding for a booklet. We used our own calculations to determine the specific costs for our alternatives.

In order to estimate the time needed for each alternative, we consulted informational online guides to creating websites, the projected timeline for printing and crafting a booklet from multiple printing services, and created a timeline for building a workshop presentation. We also considered the time needed to deliver the workshops.

We based our conclusions regarding the attitude of our audience on research articles detailing the prevalence of digital sources of information versus traditional paper sources of information among adults. We also conducted interviews with senior citizens Arthur Fandel and Barbara Lawrence. Questions asked during the interviews included:
- Would you rather read a print book or e-book?
- Would you rather read a print book or listen to an audio book?
- To learn new information, are you more likely to consult print resources or digital resources?
- To learn new information, would you rather read information or attend a lecture?
- How do you learn information best?

In order to predict how well the information presented in each alternative would be retained, we again consulted research articles. These articles focused specifically on how well information is retained from reading online, reading paper sources, and listening to lectures in person.

## Evaluation

**Table 1.**

| | *Time* | *Cost* | *Attitude of Audience* | *Retention of Information* |
|---|---|---|---|---|
| *Website* | 12-16 weeks | Wordpress: Domain name: $300/year = $25 month billed yearly<br><br>Squarespace: $216/year or $26/month to month<br><br>Wix: $25/month billed | Few older adults prepared to adapt to new technology, 75 percent would require assistance | Online reading not conducive to metacognitive learning regulation |

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| | | yearly ($300) or $30/month, billed monthly | | |
| *Booklet* | 12-16 weeks and distribution | Staples printing quote: $0.42 per page of booklet. (color ink, premium white, paper, 2-sided, landscape orientation)<br><br>Microsoft Word: One time purchase $229 for business.<br><br>Free infographic software: Piktochart. | More older adults read information on paper rather than a screen | Information remembered best when read from paper books and written by hand, not digital sources |
| *Workshop* | $10/ per workshop. 2 hours at a time, every 2 weeks. | Microsoft Powerpoint: One time purchase $229 for business. | No way to guarantee attendance or enthusiasm | Amount of lecture information retained among adults: 10 percent |

**Alternative 1- Creating a website**

*Criterion 1- Time*
The time we would need to reserve for the creation of a website, including alpha and beta usability testing, is between 12-16 weeks. The communication process and data retrieval could not begin until after the completion of the website, adding a significant amount of time to the expected completion date of the project.

### Criterion 2- Cost

To maintain a website on Wordpress, the cost would be $14.99/year plus $7.99/month (Wordpress). The cost of Squarespace is $216/year or $26/month (Squarespace). Wix costs $25/month billed yearly ($300) or $30/month, billed monthly (Wix).

### Criterion 3- Attitude of audience

The projected internet use of people aged over 65 in the year 2018 is 60.7 percent. Current numbers suggest the 41 percent of this age group abstain completely from internet use, and 53 percent lack home broadband access. A scarce 18 percent feel prepared to teach themselves how to operate new technology, like tablets and smartphones, and over 75 percent feel they would require assistance from an outside source (James). Interviews also found that paper books would be chosen over e-books, however, audio books are considered more desirable than paper books. A senior citizen interviewed also stated that when they want to learn new information, they would turn to digital resources like search engines, while another stated they would turn to print books or other people.

### Criterion 4- Retention of information

Information is remembered best when read and written on paper sources, such as physical books and written notes, based on data surveyed from university students in Europe and Asia. Information has a lower retention rate when learned from digital sources. ("Pen").

## Alternative 2- Designing a booklet

### Criterion 1- Time

The time it takes for design and distribution is around 12-16 weeks. It will take four weeks to gather all information that will be included in the book. An additional four weeks will be necessary to compile the information, add it to the booklet, and format. Between four and eight weeks will be used to edit, troubleshoot, and receive feedback before the book is distributed. The remaining time will be used for printing and distribution.

### Criterion 2- Cost

The total cost of paper, ink, and labor before the booklet is released will be about $0.42 per page. A subscription to Microsoft Business will be a one-time charge of $229. A free infographic software that can be used, however, is Piktochart.

### Criterion 3- Attitude of audience

Physical copies are easier for people to hold onto and reference, particularly for older generations. Despite the easy accessibility and large prevalence of digital reading formats, paper books still outrank e-books and audio books in popularity. For example, within the past year about 65% of American readers read a paper book, compared to just 28 percent of American

readers who read an e-book and 14 percent who chose audio books in the same time period (Perrin).

### Criterion 4- Retention of information

Older audiences and those more comfortable with print are more likely to prefer a physical copy over an electronic one. According to the Scientific American, "at least a few studies suggest that by limiting the way people navigate texts, screens impair reading comprehension… Because of their easy navigability, paper books and documents may be better suited to absorption in a text" (Jabr). A senior citizen interviewed stated that they learn best through a combination of reading, listening, and discussion, while another senior citizen stated they learn best solely reading print books.

## Alternative 3- Hosting a workshop

### Criterion 1- Time

Hosting a workshop will be the most time consuming due to the preparation of the workshop and eventual delivery of information. We may need to plan multiple presentations to accommodate an aging audience, who may not retain information as well due to hearing difficulties or impaired memory.

### Criterion 2- Cost

Microsoft Powerpoint: One time purchase $229 for business. Workshops are delivered for 2 hours at a time, every 2 weeks ($10/per workshop). Workshops limit number of participants based on classroom size (current method utilized by the Wellness Center).

### Criterion 3- Attitude of audience

With a workshop, there is no way to guarantee attendance or enthusiasm, and these two factors could vary week-to-week. Furthermore, there is no way to guarantee that patients will be attentive during the workshop or recognize the validity of the material they are presented with. However, workshops have been found to spark motivation in participants. In a study of workshop effectiveness from the lens of woodland management education, it was found that "Three-fourths of those with a 'low' level of intention to manage before participation expressed 'medium' or high' levels of intention afterward. Over half of those with a 'medium' level of intention before the workshop expressed a 'high' level afterward. Four-fifths of those with a 'high' level of intention before participation maintained that level…Workshops provide opportunities for information transfer and spontaneous personal communication between landowners" (Decker). Interviews indicated, however, that senior citizens would rather read information than have it presented to them in lecture format.

### Criterion 4- Retention of information

Despite the high levels of motivation that are incited by workshops, they often fail to deliver

long-term results. The short-lived nature of a workshop is damaging to retention and motivation often wanes. "The good thing about bringing people together in a room is that you can inspire them," says Barry Kayton, CEO and co-founder of edtech company Cognician. "You can hire a great speaker and really boost morale. The downside of that is everybody returns back to their drab office at the end of the weekend, and it's back to normal, and people backslide into their comfort zones, and you don't see the behavior change you're looking for" (Blacharski). Training sessions and classroom lectures typically yield a meager 10 percent retention rate among adults (Blacharski).

## **Conclusions and Recommendations**

In order to effectively communicate nutritional guidance, we recommend designing a booklet. The booklet has the shortest start time as far as design and distribution. We will be able to use free online graphic software to reduce the initial cost of the booklet, especially since they will be distributed to patients for free. A physical copy will prove to be the most beneficial to our audience, given that they will be able to refer back to the booklet, retain the most information possible, and give them a more comfortable learning experience based on personal learning preference. While the other alternatives may serve the basic needs that we are looking to address, they will not be the most effective for the demographic for which we are serving. A print booklet will assist our audience best.

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