

# Impact of Health Literacy on Senior Citizen Engagement in Health Care IT Usage

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Alice M. Noblin, PhD, RHIA, CCS<sup>1</sup>  
and Ashley Rutherford, PhD, MPH<sup>1</sup>

## Abstract

**Objective:** Patient engagement in health care information technology (IT) is required for government reimbursement programs. This research surveyed one older adult group to determine their willingness to use health information from a variety of sources. Health literacy was also measured using the Newest Vital Sign (NVS) and eHealth Literacy Scale (eHEALS) tools. **Method:** Regression models determined engagement in health care IT usage and impact of literacy levels based on survey data collected from the group. **Results:** Although most participants have adequate literacy, they are not more likely to use health care IT than those with limited literacy scores. Knowledge of how to use the Internet to answer questions about health was statistically associated with IT usage. **Discussion:** Health care IT usage is important for healthy aging. The ability of older adults to understand information provided to them can impact population health including medication usage and other important factors.

## Keywords

health literacy, patient engagement, health care IT usage, Newest Vital Sign, eHEALS

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## Introduction

The number of Americans aged 65 and older is quickly increasing, and is expected to reach approximately 89 million by 2050 (Ortman, Velkoff, & Hogan, 2014). These numbers are being fueled by the aging baby boomers in addition to longer life spans than previously recorded. In addition, older women outnumber older men and about 46% of women aged 75 and above live alone (U.S. Department of Health and Human Services, 2014). Implications from this aging population will reach into public health, social services, and health care systems (Centers for Disease Control and Prevention [CDC], 2013). The need for professional caregivers and long-term care options will increase as the population ages and impacts of chronic diseases diminish the ability of older Americans to live independently (CDC, 2013). Promotion of healthy aging is an important initiative to offset the impacts of an older population, in terms of the effects on personal, familial, and economic factors.

In efforts to promote the engagement of patients in regard to their own health care, including chronic disease management, The Office of the National Coordinator (ONC) of Health Information Technology developed meaningful use criteria. These incentive-based criteria are used for provider reimbursement of electronic health

record purchases to encourage the use of consumer e-health in a variety of ways, most compellingly through patient communication with the provider in the form of a personal health record (PHR), patient portal, or other secure messaging system. Engagement has been challenging with 59% of adults considering online access to their health information important and 25% having access to those records (Birth, 2016). Those in the oldest age category, 70 years of age and above, indicated that access to health information was least important at 52%. This confirms the findings of Heart and Kalderon (2013) who concluded the preparation for adoption of health-related technology has not been adequate among older adults and many older adults do not believe these technologies will improve their quality of life. Improved access to health records via the Internet is likely to motivate people to be more involved in their care as they will be able to access this information whenever they desire rather than just when they visit their provider.

<sup>1</sup>University of Central Florida, Orlando, USA

## Corresponding Author:

Alice M. Noblin, Department of Health Management and Informatics, College of Health and Public Affairs, University of Central Florida, 4364 Scorpius Street, HPA2, 210, Orlando, FL 32816-2205, USA.  
Email: [alice.noblin@ucf.edu](mailto:alice.noblin@ucf.edu)



## Engagement

Physician–patient communication and increased monitoring of illness and decision-making involvement by the patient are vital components of a successful self-management program and improved patient outcomes (Clark & Gong, 2000; Heisler, Bouknight, Hayward, Smith, & Kerr, 2002; White & Danis, 2013). Many people find the ability to participate in the formation and ongoing supervision of their own care improves their satisfaction and actually motivates them to follow instructions and treatment plans. This information exchange improves the patient's health and satisfaction with care, and provides the potential of saving significant health care dollars (Maly, Bourque, & Engelhardt, 1999; Prey et al., 2014).

Tailoring information to a patient's condition not only personalizes and improves communication but also allows the patient to see the value of the numbers in relation to his or her own health status. Graphs of blood pressure levels over several visits for hypertensive patients can be considered a "motivator" by some of the patients to continue following therapeutic regimens. Patients like the flexibility of reporting blood pressure measurements when it is convenient to their schedule and based on their availability and need (Moore, 2009). Providers are encouraged to take time to tell patients the action steps that are needed and use multiple forms of communication to improve understanding and enhance health literacy (Oates & Paasche-Orlow, 2009).

## Health Literacy

Health literacy is defined as "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions" (U.S. Department of Health and Human Services & Healthy People, 2010). Some indicators of low health literacy include low education level, English as a second language, and senior age, with accompanying decreased hearing and vision (Heubusch, 2010; Schwartzberg, VanGeest, & Wang, 2005). Research has confirmed patients at risk for low literacy are willing to engage in the use of information technology (IT) to monitor their health, and they feel confident in their ability to use information they find online for health management decisions (Noblin, Wan, & Fottler, 2012). For those with the low literacy levels, seeking help is still difficult due to their lack of comprehension when they visit their providers. This leads to their difficulty to follow treatment plans, increased likelihood of visiting the emergency room, and decreased likelihood of managing their chronic conditions with medication (Miller, 2010).

## Summary

Wolter and Friedman (2005) believed that the patient must serve as the link between the provider and his or

her health information. This requires moving the health care focus from the doctor's office to the patient's daily routine at home. Adoption and ongoing usage of a PHR or patient portal can facilitate this link. These eHealth communication tools can provide direct and timely communication with the physician and empower the patient to be involved and participate in the decision-making process about his or her health (Ball, Smith, & Bakalar, 2007). According to Tang and Lansky (2005), this type of health care delivery and shift in patient behavior represents a fundamental change in our traditional system.

This research considered health literacy directly to determine if this plays a role in use of a PHR, portal, or Internet-based information system for health management in a group of older adults. In addition, we attempted to determine if the group is confident in their ability to find and interpret health information online. Literacy and health information seeking online are interconnected and overcoming the challenge of health information understanding may contribute to improved population health in an elderly population. Characteristics of the group who *are* using IT for health care may provide some answers to the dilemma of how to proceed with health programs to educate seniors about health care IT usage. In addition, understanding the connection between the older adult's perceived ability to interpret health information and his or her literacy level will assist providers in appropriate development and distribution of information for understanding of medication usage and other important health care factors.

With this in mind, several research questions are considered regarding impact of the following on senior citizen engagement in health care IT usage: "adequate" literacy scores on the Newest Vital Sign (NVS), perceived level of ability to find and appropriately use online health information based on eHealth Literacy Scale (eHEALS), and confidence in filling out medical forms. In addition, we will investigate if older adults with "adequate" literacy scores perceive a higher ability to find and use health information found online and feel confident in completing medical forms.

## Method

The study sample was comprised of older adults (aged 50+) who belong to the Learning Institute for Elders (LIFE) group that meets on campus weekly for educational sessions (hereafter referred to as "members"). There are over 400 members in the group. The majority of the members have college degrees and are retired. The survey was completed on site by attendees willing to participate on three consecutive Tuesdays in September 2015.

Survey questions were derived from a number of sources, including the research questions. The first two questions were used to measure engagement and asked if the participant currently uses a PHR or other Internet-based information system for health care. If the answer

is “no,” the second question asks if the participant is *willing* to use health care IT. The eHEALS literacy scale was used to determine how members feel about their ability to find and appropriately use relevant health-related information on the Internet (Norman & Skinner, 2006). One single question asked if the participant was comfortable filling out medical forms, and this has been shown to be a valid indicator of inadequate health literacy in a Veterans Administration population (Chew et al., 2008). To measure health literacy, the NVS was used in a self-reported fashion to determine understanding of nutrition label contents (Gutierrez, Kindratt, Pagels, Foster & Gimpel, 2014). A score of 1 to 3 indicates the possibility or likelihood of limited literacy, while a score of 4 to 6 almost always indicates adequate literacy (Pfizer, 2015). There were also questions related to demographic characteristics, including age, education, and gender. University institutional review board (IRB) approval was obtained prior to commencement of the research (including the pilot study). Required sample size was estimated to be 162 (population 400, margin of error .05, confidence interval .10, response distribution 50%). A US\$10 Target gift card was given as incentive upon completion of the survey.

A pilot study was completed to identify survey issues and for face validity. A total of 20 surveys were distributed to health care administrative professionals attending a professional conference, who were estimated to be 55 years of age or older (80% were 55 and older). Based on feedback from this group, no changes were required in the questionnaire.

## Results

### Description of the Sample

Descriptive analysis of sample characteristics was performed with Excel and SPSS (PASW® Statistics 21). A total of 181 members participated in the survey, with 131 females (72.4%) and 50 males (27.6%). The majority of members were in the 71 to 75 age range (29.8%), with 76 years and above being next at 29.3%. These two oldest categories accounted for 107 members. Education level revealed that the majority of members (41.4%) had a bachelor’s degree, while 39.2% had a master’s degree or above. These two highest education levels accounted for 80.6%, or 146 participants (see Table 1).

### Data Analysis

SPSS (PASW® Statistics 21) was used for remaining data analysis including Pearson’s chi-square for statistical significance of the variables, binary logistic regression for four research questions, and multinomial logistic regression for one research question. Binomial logistic regression predicts the probability that an observation falls into one of two categories of a dichotomous

dependent variable. Multinomial logistic regression was used for the last research question because it predicts a nominal dependent variable given one or more independent variables (Do older adults with demonstrated “adequate” literacy on the NVS perceive they are “very confident” in filling out medical forms?)

Although five choices were available on the questionnaire for the engagement, eHEALS, and filling out medical forms questions, the answers were transformed and re-coded to dichotomize the choices to agree (strongly agree and agree) and disagree (strongly disagree, disagree, and neither agree nor disagree). Dichotomizing these variables allowed for a cleaner delineation of the respondents between two choices, rather than spreading responses among the original five choices. For the “filling out medical forms” question, the answers were transformed to very confident (strongly agree and agree) and somewhat/not confident (strongly disagree, disagree, and neither agree nor disagree).

NVS results showed that 154 (85%) of members have “adequate” health literacy, and of those, 113 are willing to use health care IT (73%). A second literacy measure is a question about confidence in filling out medical forms. The results of this measure showed 165 (91%) of members are very confident in their ability to complete medical forms, and of those, 117 (71%) are willing to use health care IT.

On the eHEALS questions, there are two questions with the highest number of agree responses (145 [80%] and 149 [82%], respectively): “I know how to find helpful health resources on the Internet” and “I know how to use the Internet to answer my questions about health.” The majority of members who agree with these statements are also willing to use health care IT (73% and 76.5%, respectively).

A logistic regression was performed to ascertain the effects of “adequate” literacy scores on the likelihood that participants engage in health care IT usage while controlling for gender, education level, and age. The logistic regression model was not statistically significant,  $\chi^2 = 14.758$ ,  $p = .141$ . The model explained 11.2% (Nagelkerke  $R^2$ ) of the variance in engagement in health care IT usage and correctly classified 73.5% of cases. Those participants with a high school diploma/general education diploma (GED) as the highest level of education achieved were associated with an increased likelihood of engagement in health care IT usage ( $p = .027$ ). However, gender, age, and “adequate” literacy scores on the NVS were not statistically associated with an increase in the likelihood of engagement in health care IT usage.

A logistic regression was performed to ascertain the effects of the perceived level of ability to find and appropriately use online health information on the likelihood that participants engage in health care IT usage while controlling for gender, education level, and age. The logistic regression model was statistically significant,  $\chi^2 = 24.491$ ,

**Table 1.** Sample Description.

Survey questions	Citizen engagement	
	Willing	Not willing
Age		
55-65	21 (11.6%)	4 (2.2%)
66-75	72 (39.8%)	31 (17.1%)
76 and older	36 (19.9%)	17 (9.4%)
Gender		
Male	37 (20.4%)	13 (7.2%)
Female	92 (50.8%)	39 (21.6%)
Education		
High school graduate/ General education diploma (GED)	2 (1.1%)	1 (0.6%)
Some college	10 (5.5%)	12 (6.6%)
AS or AA degree	5 (2.8%)	5 (2.8%)
BS or BA degree	58 (32.0%)	17 (9.4%)
Master's degree or above	54 (29.8%)	17 (9.4%)
Newest Vital Sign (NVS)		
Limited	16 (8.8%)	11 (6.1%)
Adequate	113 (62.4%)	41 (22.7%)
Confidence in filling out forms		
Not/somewhat confident	12 (6.7%)	4 (2.2%)
Very confident	117 (64.6%)	48 (26.5%)
eHealth Literacy Scale (eHEALS)		
Which resources are available/agree	92 (77.3%)	27 (22.7%)
Which resources are available/disagree	37 (59.7%)	25 (40.3%)
Where to find resources/agree	99 (72.8%)	37 (27.2%)
Where to find resources/disagree	29 (65.9%)	15 (34.1%)
How to find resources/agree	106 (73.1%)	39 (26.9%)
How to find resources/disagree	23 (63.9%)	13 (36.1%)
How to use Internet to answer questions/agree	114 (76.5%)	35 (23.5%)
How to use Internet to answer questions/disagree	15 (46.9%)	17 (53.1%)
How to use health information to help me/agree	102 (76.1%)	32 (23.9%)
How to use health information to help me/disagree	27 (57.4%)	20 (42.6%)
Have the skills needed to evaluate resources/agree	87 (73.1%)	32 (26.9%)
Have the skills needed to evaluate resources/disagree	42 (67.7%)	20 (32.3%)
High quality vs. low quality/agree	59 (68.6%)	27 (31.4%)
High quality vs. low quality/disagree	70 (73.7%)	25 (26.3%)
Confident in using information to make decisions/agree	56 (78.9%)	15 (21.1%)
Confident in using information to make decisions/disagree	73 (66.4%)	37 (33.6%)

$p = .027$ . The model explained 18.2% (Nagelkerke  $R^2$ ) of the variance in engagement in health care IT usage and correctly classified 73.9% of cases. Participants who had knowledge of how to use the Internet to answer questions about health (eHEALS Question 6) were 0.265 times more likely to engage in health care IT usage. The level of education attained ( $p = .084$ ; specifically noting a maximum education level of a high school diploma/GED,  $p = .009$ ), and knowledge of how to use the Internet to answer questions about health (eHEALS Question 6;  $p = .034$ ) were associated with an increased likelihood of engagement in health care IT usage. However, other demographics (gender and age) and the remaining eHEALS questions (see the appendix) were not statistically associated with an increase in the likelihood of engagement in health care IT usage.

A logistic regression was performed to ascertain the effects of the perceived level of ability to find and appropriately use online health information on the likelihood that participants demonstrate "adequate" health literacy while controlling for gender, education level, and age. The logistic regression model was not statistically significant,  $\chi^2 = 14.549$ ,  $p = .336$ . The model explained 13.8% (Nagelkerke  $R^2$ ) of the variance in "adequate" health literacy scores and correctly classified 86.1% of cases. Participants who had knowledge of where to find helpful health resources on the Internet (eHEALS Question 4) were 4.016 times more likely to have "adequate" health literacy scores, and were also statistically associated with an increased likelihood of "adequate" health literacy scores ( $p = .089$ ). None of the demographics or remaining eHEALS questions (see the

appendix) were statistically associated with an increase in the likelihood of “adequate” health literacy scores.

A logistic regression was performed to ascertain the effects of confidence in filling out medical forms on the likelihood that participants engage in health care IT usage while controlling for gender, education level, and age. The logistic regression model was not statistically significant,  $\chi^2 = 16.191$ ,  $p = .239$ . The model explained 12.2% (Nagelkerke  $R^2$ ) of the variance in engagement in health care IT usage and correctly classified 73.5% of cases. Those participants with a high school diploma/GED as the highest level of education attained ( $p = .018$ ) were associated with an increased likelihood of engagement in health care IT usage. Gender, other levels of education, age, and confidence in filling out medical forms were not statistically associated with an increase in the likelihood of engagement in health care IT usage.

A nominal regression was performed to ascertain the effects of “adequate” literacy scores on the likelihood that participants are “very confident” in filling out medical forms while controlling for gender, education level, and age. The nominal regression model did not have an abnormally large Pearson chi-square value,  $\chi^2 = 88.115$ , and is not statistically significant ( $p = 1.00$ ), so the model fits the data well. Overall, the final model was not statistically significant,  $\chi^2 = 47.692$ ,  $p = .188$ . “Adequate” literacy scores ( $p = .050$ ) was statistically significant, but the demographics of gender, education, and age were not statistically significant. The parameter estimates demonstrate significance for bachelor’s level education ( $p = .092$ ) and for male gender ( $p = .079$ ), indicating that these members feel “very confident” in filling out medical forms (see Table 2).

## Discussion

Members with “adequate” literacy scores on the NVS for the most part are not more likely to engage in health care IT usage than those participants whose NVS scores demonstrated possible limited health literacy. Those participants with a maximum education level of high school diploma/GED were associated with an increased likelihood of engagement in health care IT usage ( $p = .027$ ). However, there were only four members in this educational category who participated in the research, so interpretation is not highly meaningful for the population overall. Most LIFE members hold bachelor’s or graduate degrees and are retired professional or business people, and large amounts of variability in such a sample would not be expected. Other demographic variables of gender and age for the members with “adequate” literacy scores on the NVS were not associated with an increased likelihood of engagement in health care IT usage over members who have limited health literacy.

Members who had knowledge of how to use the Internet to answer questions about health were found to be more likely to engage in health care IT usage than

those members who perceived that they lacked this knowledge. The sample utilized for this study should not be biased toward Internet knowledge as all group activities including weekly meetings are conducted in the face-to-face format. However, many members are retired from professional careers and therefore variability is lessened. Confidence level in ability to find appropriate health information is an important first step in motivation to become involved in the health care process. Highest level of education attained, especially those with a maximum education level of a high school diploma/GED was also linked to usage of health care IT.

Members who know where to find helpful health resources on the Internet were more likely to also have “adequate” health literacy scores than those members who have limited health literacy. As noted above, the ability to find resources improves patient willingness to become involved in health care IT.

Members who are “very confident” in filling out medical forms are not more likely to engage in health care IT usage, although those participants with a high school diploma/GED as the highest level of education attained were associated with an increased likelihood of engagement in health care IT usage. According to Chew et al. (2008), confidence in filling out forms can be a good measure of health literacy, but is not necessarily associated with more Internet use for health care use.

Members with demonstrated “adequate” literacy on the NVS also state they are “very confident” in filling out medical forms. This demonstrates a consistency between the results of the NVS score and a positive statement about ability to complete medical forms. While the final model as a whole was not statistically significant, the parameter estimates demonstrate significance for education at a bachelor’s degree ( $p = .092$ ) and for males ( $p = .079$ ), indicating that these specific groups feel “very confident” in filling out medical forms.

## Limitations

Survey research can result in numerous limitations. In this research, we used the NVS, which is recommended to be given by a health care provider as part of a patient’s history and physical examination, as a face-to-face interview, yet for the purpose of this study, was utilized as a self-reported measure. The self-reported method has been used by Gutierrez et al. (2014) in conjunction with a second measure of health literacy, the question about confidence in completing medical forms. The combination of these two measures improves validity of the self-reported method. However, because it was self-reported, a participant’s ability to read and write may have played an unknown role in the types of responses received.

Anticipated sample size of 162 was exceeded by 19 surveys. It is possible that additional members would have participated, but the funds for gift cards became the limitation. In addition, because convenience sampling at

**Table 2.** Model Results.

Research question	$\chi^2$	df	p	Nagelkerke ( $R^2$ )	Overall % correct
1. To what extent do members with "adequate" literacy scores on the Newest Vital Sign (NVS) engage in health care IT usage?	14.758	10	.141	0.112	73.5
2. To what extent do members with a higher perceived level of ability to find and appropriately use online health information engage in health care IT usage?	24.491	13	.027	0.182	73.9
3. Do members with a higher perceived ability to find and appropriately use health information found online demonstrate "adequate" literacy as demonstrated on the NVS?	14.549	13	.336	0.138	86.1
4. To what extent do members who are "very confident" in filling out medical forms engage in health care IT usage?	16.191	13	.239	0.122	73.5
5. Do members with demonstrated "adequate" literacy on the NVS perceive they are "very confident" in filling out medical forms?	47.692	40	.188	0.267	NA

only one time period was employed, the sample size was limited. My preference was to have a consistent methodology, including the incentive offered, for all participants. Subjects were not randomly selected or matched to establish similar sample characteristics. Due to uneven distributions of respondents in terms of gender, age, and education, the results may have been biased to those particular groups and may not be generalizable to the entire senior adult population.

The final and main limitation of this study is that the data were self-reported. Researchers must rely on the honesty of participants in their reporting. Even if participants report honest answers, they may not possess the introspective ability to accurately depict their true nature. For instance, individuals may believe that they are knowledgeable or possess a certain skill, yet in reality, they may not be as knowledgeable or skillful as they believe or when compared with others. Another aspect of self-reporting pertains to the participant's interpretation or understanding of the question or subject matter. Rating scales may also be interpreted differently or may be more difficult to respond to than a simple yes/no answer. Last, it is impossible to control for responder bias; people may respond in a manner that they believe the researchers desire, or they may respond in a way that makes them appear more knowledgeable than they actually may be.

Future research should expand upon this study by surveying a larger sample with more varied and evenly distributed characteristics. It would also be nice if additional demographic information pertaining to area of residence (rural vs. city), insurance type, and perceived health utility could be asked of participants. Further questions relating to Internet patterns, such as home Internet access (yes/no), uses of the Internet (search engines, downloading, email, video communication, travel, social networking, paying bills, news, etc.), non-Internet sources of information (radio, television, books, newspapers, magazines, word of mouth, professionals, etc.), weekly Internet

usage, duration of Internet use, and the mode by which one learned computer or Internet skills (self-taught, family or friends, computer course, etc.) would be useful in analyzing health seeking behaviors (Gutierrez et al., 2014). It would also be interesting to see how health literacy varied by setting and type, such as common-place information versus primary, secondary, or tertiary care. Last, at least one comparison group (perhaps located in a different area, comprised of younger individuals, etc.) is needed to compare health literacy scores and engagement. Creation of a tool which requires Internet searches to find specific information would provide additional data for more in-depth health literacy analysis.

## Conclusion

Two measures of health literacy (NVS and confidence in completing medical forms) were used to ascertain if the participants with higher literacy scores were more willing to engage in health care tracking sources such as PHRs, portals, or other electronic sources. The survey results did not indicate statistically significant findings to support the associated research questions linking higher levels of health literacy with health care IT engagement. The findings did show that the majority of members have adequate literacy levels on both measures used, so the challenge of engagement remains, as noted in the Harris Poll (Birth, 2016). For those seniors who are willing to use the Internet for health care, additional education and encouragement will need to be a priority for primary care providers as well as acute care facilities. This will be important for the ONC meaningful use criteria for reimbursement of electronic health record systems, but more importantly for population health in this aging demographic. Members with "adequate" health literacy who are not (currently) willing to use health IT are in the minority (27%) and are an important population for future consideration of additional educational or training programs as well.

eHEALS questions are perceptions of how participants feel about their ability to find and use health information online. One question from eHEALS was associated with members who are willing to be engaged in health care IT: use of the Internet to answer questions about health. An additional question from eHEALS was associated with members who were noted to have “adequate” health literacy on the NVS: ability to find helpful health resources on the Internet. These eHEALS results do offer some hope that these older adults are using the Internet for health information resources and perhaps with encouragement can become more engaged in health care IT usage as well.

## Appendix

### Questionnaire

#### Engagement in IT usage

1. I currently use a personal health record (PHR) or other Internet-based information system for health care.
2. If you answered strongly disagree or disagree to #1, would you be willing to use a PHR or other Internet-based information system to manage your health care?

#### eHEALS questions

3. I know which health resources are available on the Internet.
4. I know where to find helpful health resources on the Internet.
5. I know how to find helpful health resources on the Internet.
6. I know how to use the Internet to answer my questions about health.
7. I know how to use the health information I find on the Internet to help me.
8. I have the skills I need to evaluate the health resources I find on the Internet.
9. I can tell high-quality health resources from low-quality health resources on the Internet.
10. I feel confident in using information from the Internet to make health decisions.

#### Health literacy

11. I feel confident in filling out medical forms by myself.

#### Demographics

12. Gender
13. Highest level of education
14. Age

**Newest Vital Sign.** This information is on the back of a container of a pint of ice cream (Figure A1).

1. If you eat the entire container, how many calories will you eat?
2. If you are allowed to eat 60 g of carbohydrates as a snack, how much ice cream could you have?
3. Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stop eating ice cream, how many grams of saturated fat would you be consuming each day?
4. If you usually eat 2,500 calories in a day, what percentage of your daily value of calories will you be eating if you eat one serving?

Pretend that you are allergic to the following substances: penicillin, peanuts, latex gloves, and bee stings.

5. Is it safe for you to eat this ice cream? If no, why not?

Nutrition Facts		
Serving Size		½ cup
Servings per container		4
Amount per serving		
Calories	250	Fat Cal 120
		%DV
<b>Total Fat</b> 13g		20%
Sat Fat 9g		40%
<b>Cholesterol</b> 28mg		12%
<b>Sodium</b> 55mg		2%
<b>Total Carbohydrate</b> 30g		12%
Dietary Fiber 2g		
Sugars 23g		
<b>Protein</b> 4g		8%
*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.		
<b>Ingredients:</b> Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.		

**Figure A1.** Ice cream nutrition label for Newest Vital Sign (Pfizer, 2015).

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