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Nutrition: Is There an App for That?

NUTRITION CONNECTION

AN OVERVIEW OF NUTRITION APPS AND HOW TO USE THEM

In today's world there is an unprecedented increase in the advancement and use of technology to improve health care. Common use is seen with mobile apps (applications) which are software programs developed specifically for use on small, wireless computing devices such as smartphones and tablets. We are also seeing wearable technology, such as watches or other types of gear, become available. Most consumers use the features of these wearable devices for fitness, notifications, music, and navigation. But in the future, we can envision integrated wearable technology for foodservice and healthcare workers as well as residents, elders, and their family members.

According to Amy Reaman, RDN, LD, MPS, Director of Development for Health Technologies, Inc., she finds the digital ordering in restaurant food service to be an invaluable trend in our industry as a whole. Use of technology in restaurants and room service operations has streamlined communication, accuracy, and productivity. For the future, self-serve kiosks or mobile apps may become more prevalent in healthcare food service.

In addition to mobile apps, today's unpredictable business environment with an ever-decreasing budget has made using a healthcare foodservice software system a necessity. Nutrition and foodservice management software systems

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continue to advance in capabilities and offer many options dependent on client needs.

These advancements further influence the life expectancy of the population, and the costs and methods of delivering health care and food service. Certified dietary managers, along with all healthcare providers, are challenged to effectively understand and use these technological advancements. This article offers some general guidance on how to evaluate and select both mobile apps and nutrition software systems.

NUTRITION APPS

As healthcare providers it's important to know what to consider when evaluating and selecting apps. This is not an easy task since many apps are developed from the business sector, and there is little or no quality control or regulations to ensure health apps are accurate in content or evidence-based. In 2012 there were more than 40,000 health apps in the United States, and that number continues to grow. It's very difficult to even know which apps are being used by consumers.

This is also challenging because there's no reliable measure of app quality for end-users as more and more health apps become

available. Although there have been some attempts to measure the quality of mobile healthcare apps, there is no widely accepted standardized method for end-users. This limits a person's ability to identify apps that offer reliable evidence-based features.

Most of today's popular nutrition apps are geared towards weight loss or maintenance, with a heavy focus on tracking calorie intake and physical activity. While each app has its own pros and cons, many make similar mistakes to include:

Inaccurate Calorie Counting

Almost every nutrition app includes some kind of calorie-counting feature, and many claim to have databases with the nutrition information of nearly every food imaginable. While this seems convenient, it's typically not managed by any nutrition professional to verify the sources are evidence-based. Inaccuracies show up not only in information for packaged foods, but for fresh produce as well, and many apps overlook macronutrients and micronutrients completely.

Inaccurate Physical Activity Estimates

Similarly, the most common physical activities are listed in many databases. The apps estimate calories burned from activities based

on a user's weight or body mass index (BMI). This can be a major flaw in exercise journaling. Plus, similar to the range of calories listed for foods, the range of calories burned for physical activity can vary based on the app used.

Motivational Features vs. Real Counseling

One of the most important missing components of nutrition apps is a lack of motivation and support. Many apps have tried combating this problem through incorporating Frequently Asked Questions (FAQs), community blog posts with other app users, user groups, and goal setting. While these aspects of nutrition apps are helpful for those who take advantage of them, for others they fall flat. These apps have yet to create ways to modify each user's behavior towards food and physical activity.

GENERAL RECOMMENDATIONS

Some general recommendations for selecting nutrition apps that are accurate in content and are evidence-based include:

Review Scientific Literature

Review scientific literature and utilize app clearinghouses such as Eat Right (www.eatright.org/appreviews). Sponsored by

the Academy of Nutrition and Dietetics, apps are reviewed and evaluated by registered dietitians. Information is then provided to include an overall synopsis of the app, pros and cons of the app, and a bottom line evaluation.

The Food & Drug Administration (FDA) does not regulate most of these types of apps, and the FDA's website suggests that it does not intend to expand regulation to nonmedical device apps. Consequently, barring a significant change in FDA policy, providers and healthcare organizations will have to use alternative methods of finding apps for use with their clients, such as app clearinghouses.

Examine Ratings and Reviews

Examine app ratings, user ratings, and reviews found in app stores. Many of the app stores now utilize a Mobile Application Rating Scale (MARS) which is a validated scoring instrument developed in 2012. The app quality criteria were clustered within the categories of engagement, functionality, aesthetics, information quality, and subjective quality, to develop 23 subcategories from which the 23 individual MARS items were developed. Each MARS item then used a 5-point scale (1-Inadequate, 2-Poor, 3-Acceptable, 4-Good, 5-Excellent), and descriptors for these rating anchors were written for each item. The expert panel scrutinized the MARS items and rating descriptor terminology to ensure appropriate and consistent language was used throughout the scale. However even as rating scales such as MARS have been developed, there is still no widely accepted standardized methods for end-users.

One study looked at the top 30 apps in iTunes and Google Play for each of the terms "diabetes" and "diabetes management." Their initial search yielded a total of 120 apps, and they evaluated the 120 using their own selection criteria and MARS. Using this approach with reviewers then scoring the apps, they selected two apps that had the highest scoring and integrated all six diabetes management tasks.

The writers stated the study presented some limitations in that the apps selected for the study were free and it is possible that apps that are paid for might rate better in respect to the MARS scoring. In addition to some of the limitations of the apps selected, additional work is needed to assess the clinical significance of apps for diabetes self-management.

Check Social Networks

Check with social or professional networks for comments or recommendations from healthcare providers about their experiences with particular apps. Many professional organizations have social interaction mechanisms where evaluation and recommendations can be shared. The Association of Nutrition & Foodservice Professionals (ANFP) members have access to an online member community (ANFPConnect) where they can network with peers and discuss topics of interest.

NUTRITION AND FOODSERVICE MANAGEMENT SOFTWARE PROGRAMS

On the other hand, when we look at nutrition and foodservice management software programs we need to understand there are many capabilities that all these programs must do to be called nutrition software programs. What distinguishes the highest rated and used programs are the advanced capabilities offered. When reviewing or evaluating nutrition software here are a few areas to consider:

• Know what you want and need.

> **Nutrition Care Management:** electronic cardex, tray tickets, menu development, allergy identification and flagging, diet order management, Health Information System interface, satisfaction surveys and scoring, educational resources for clients.

> **Foodservice Operations:** menu development and production, online and direct food ordering, pricing updates, Hazard Analysis Critical Control Point (HACCP), inventory control, meal counts, forecasting, cost analysis, budget management, etc.

> **Other Needs:** to include payroll, human resources, digital menu board interface, HL7 interface, credit card security, etc.

- Gather information from available software programs and systems. Be sure to obtain estimated costs of all components.
- Once you narrow down the software programs that interest you, request hands-on demonstrations which allow you to see and evaluate actual performance.
- Perform a final evaluation and make a decision.

THE BOTTOM LINE

As technology continues to advance, healthcare providers will need to effectively understand and use it to communicate, share information, maintain security, and engage in social networks. Mobile apps and nutrition/ foodservice management software are critical components in meeting the needs of clients while also maintaining an effective and efficient operation.

While nutrition and foodservice software programs continue to expand and offer components that can be evaluated to ensure they are accurate and evidence-based, much more research is needed to be able to evaluate mobile apps.

So in response to the question "Nutrition: Is there an app for that?" the answer is definitely yes. Many apps are available, however the challenge is selecting and using apps that are accurate and evidence-based. We as healthcare providers need to know how to select and evaluate technology, and also how to offer professional guidance to our clients. **E**

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NUTRITION CONNECTION

Reading *Nutrition: Is There an App for That?* and successfully completing these questions online has been approved for 1 hour of continuing education for CDM, CFPPs. CE credit is available ONLINE ONLY. To earn 1 CE hour, purchase the online CE quiz in the ANFP Marketplace. Visit **www.ANFPonline.org/market**, select "**Publication**," then select "**CE article**" at left, then search the title *"Nutrition: Is There an App for That?"* and purchase the article.

1. Mobile applications (apps) are software applications developed specifically for use on small _____ computing devices, such as smartphones and tablets.
   A. Wireless
   B. Expensive
   C. Magnetic

2. Advancements in technology influence:
   A. Life expectancy of the population
   B. Costs and methods of delivering health care and food service
   C. Both A and B

3. In 2012 there were more than _____ medical apps in the United States.
   A. 35,000
   B. 40,000
   C. 45,000

4. Some common mistakes seen in nutrition apps include:
   A. Inaccurate calorie counting and physical activity estimates
   B. Lack of motivation and support
   C. Both A and B

5. App clearinghouses such as EatRight, sponsored by the Academy of Nutrition and Dietetics, may be a resource for selecting apps that are:
   A. For food only
   B. Accurate in content and evidence-based
   C. Free

6. Healthcare apps are regulated by
   A. Food & Drug Administration
   B. The Joint Commission
   C. Neither A or B

7. As technology continues to expand, healthcare providers will need to effectively understand it and use it in:
   A. Communication and information sharing
   B. Security and social engagement
   C. Both A and B

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The Nutrition & Foodservice Education Foundation has developed the NFEF Disaster Relief Fund. Donations to this fund will go directly to ANFP members experiencing hardships due to natural disasters. The fund will help these individuals with dues, certification fees, and other items pertaining to their ANFP membership or CDM certification.

To donate, visit **www.NFEFoundation.org**

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Were you affected by a recent natural disaster? The NFEF has established a new grant program to assist ANFP members impacted by a natural disaster with their membership dues and/or certification fees for 2017-18. Grants will be awarded to members on a first come, first served basis. Dues and certification fees will be funded through the Foundation on a weekly basis until the application window closes on December 31, 2017, or earlier if all funds are allocated.

To apply online, visit **www.NFEFoundation.org**