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Surviving the Winter Blues … and the Flu!

Fall has finally arrived after a very hot and dry summer here in Northern California. Many of you across the country undoubtedly read news reports about the devastating wildfires that have affected California, Washington, and Montana, as well as many other western states. Coupled those disasters with the very active and destructive hurricane season experienced by residents of our southern states, and I think we would all agree that winter cannot arrive soon enough!

As the leaves change and the first flakes of snow begin to fall, this time of year reminds us how much we depend on the services of pharmacists — not only to help us stave off seasonal flus, but to prevent the winter blues. Fortunately, technological advances are making those services more effective and easier to obtain … and to provide.

Indeed, technology continues to evolve at a pace that is truly remarkable, and to touch every aspect of our lives, including our health care. In this edition of *JCPhP*, author Dr. Jason Lam reviews some of the pharmacy-based smartphone apps that are available today to assist patients and consumers with everything from reminding us to refill our prescriptions and helping us find a pharmacy to understanding the possible side effects of (and interactions between) the medications we take. Not only do these apps empower patients by providing a host of self-management tools, but they also enable pharmacists to extend their reach beyond the physical pharmacy or hospital to help patients who need more assistance managing their medications at home. By serving as important clinician “extenders,” these apps can help patients feel more secure and more connected to their health care providers — and because they offer easy and immediate access to information, the apps can ameliorate the isolated feeling that some patients (particularly those who are homebound or underserved) can experience when they are home alone, trying to manage their medications on their own.

One of the many useful features such smartphone apps typically offer is a pharmacy locator for such services as immunizations. As pharmacists prepare to ramp up and deliver these services in fall and winter, they will be pleased to read Dr. Keri Hurley-Kim’s update on the immunization recommendations by the Advisory Committee on Immunization Practices (ACIP) at the Centers for Disease Control and Prevention. In particular, Dr. Hurley-Kim discusses the latest influenza; human papilloma virus (HPV); meningococcal serogroups A, C, Y, W-135; meningococcal serogroup B; cholera; and yellow fever. These updates are timely and important for clinicians who are preparing to meet the preventive health care needs of the public as diseases like the flu begin their traditional seasonal ramp-up.

We hope you enjoy all the manuscripts in this edition of *JCPhP*, and we look forward to featuring many more contemporary practice features in coming editions. Wishing each of you a wonderful holiday season, filled with health and well-being!

Warm regards,

Jon R. Roth, MS, CAE
Executive Editor
What My Son Doesn't Know About Leadership but Taught Me Anyway

Karl Hess, PharmD, APh, FCPhA

My most prized possession is a four-inch tall Despicable Me figurine, aptly named “Carl,” which my son gave me around two years ago. At the time, I had developed appendicitis, was admitted to the hospital for about a week, and received treatment with antibiotics. The plan was to treat the infection until my abscess subsided and then remove my appendix a few months later after it had healed and the infection contained. Unbeknownst to me at the time, treatment with antibiotics was (and is) increasingly becoming an acceptable alternative for patients with uncomplicated acute appendicitis. At the time however, I wished an appendectomy was performed right away just to get things over with.

While I was in the hospital, I was visited by my wife and her family (my family resides in Utah). My kids initially did not see me, perhaps because my wife and I did not know how they would react to seeing me confined to a bed, but after being in the hospital for a couple of days, they came to visit. When they did come, it was a shock to them to see all the tubes and monitors I was connected to and to listen to the physicians when they entered the room. I believe this was shocking more so for my son, so as a reward for being “brave,” my wife took both of them to the toy store. The next time they came to visit, my son brought the Despicable Me toy with him. When he entered the room, I thought he was going to show me what he got, but instead he told me that he had used his own money to buy this for me and wanted me to keep it. My wife confirmed this. I was speechless. He never had done something like this before!

As heartwarming as this story may be, and while my son can certainly give, he can also take away (opening my Star Wars figures from their original packaging comes to mind). However, he has his moments, and this one reminds me of his selflessness and compassion for others, which challenges me to be the same. But why am I telling you this? What relevance does this story have to pharmacy, or to this Journal? I believe that this short story reflects some attributes of leadership traits and I believe that these, or more importantly the pursuit of these traits, can be applied to the advancement of pharmacy practice. So my son is a leader? Well, not quite, or maybe not just yet...

In the book The 9 Virtues of Exceptional Leaders: Unlocking Your Inner Potential by N. Karl Haden and Rob Jenkins, virtues that the authors contend are essential for leadership are detailed: humility, honesty, courage, perseverance, hope, charity, balance, wisdom, and justice. The main points in this book are: 1) that each virtue is equally important, 2) that each virtue needs to be practiced daily for the duration of one’s life, and 3) that each virtue may never be fully obtained or that all virtues may never be obtained at the same time.

While my son has certainly not mastered all of these, I do believe he portrayed several of them with this one act:

- **Humility**: to think about others over himself
- **Courage**: to walk into the hospital room, not knowing what to expect
- **Perseverance**: to walk back into the hospital room
- **Hope**: to believe things will improve, even though they may not look good
- **Charity**: to serve others by providing for them
- **Wisdom**: to know when to put aside personal needs for the needs of others

The key to leadership however is in the daily pursuit of these virtues and the continuous attempt towards them as a means to improve not only ourselves, but the organizations and causes we serve. This key to leadership is also key to the advancement of pharmacy practice — a continuous pursuit toward something greater outside of ourselves.

When I graduated from the Massachusetts College of Pharmacy and Allied Health Sciences in Boston, my career options seemed to be 1) community pharmacy, 2) hospital pharmacy, or 3) residency (with the intent of going into community or hospital practice afterward). There are many more career options for pharmacy school graduates today, and the possibilities seem to be endless (informatics, clinical and regulatory affairs, and veterinary practice, to name a few). More to the point, the ability and scope of entry-level pharmacy school graduates has greatly expanded.
A Review of Community Pharmacy Smartphone Applications

Jason Lam, PharmD, CSSBB; Nova Edusada

Introduction

Smartphones are powerful, mobile devices that provide users with the ability to make phone calls, listen to music, connect with people on social media, and much more. In 2015, a technology study conducted in the United States showed that 92% of adults owned a mobile phone, and of those users 68% owned a smartphone. Demographic data from that study, as seen in Table 1, revealed that percent ownership was highest for adults between 18 and 49 years old (above 80%) and lowest for adults over 65 years old (30%).

The popularity of smartphones has been driven by the growth in smartphone applications, or apps, developed to meet public demands for everything from news to gaming to health and wellness. The two smartphone operating systems with the largest number of apps available for download are on the Apple App store and Google Play store. In 2014, a report showed that the Google Play store had over 1.4 million apps followed by the Apple App store with over 1.2 million apps.2 There are other smartphones that operate on other platforms (Windows, Blackberry), but they were not included in this review.

In 2003, community pharmacies dispensed over 3.22 billion prescriptions in the United States.3 As an added value to patients, pharmacy chains have developed smartphone apps to meet the needs of their tech-savvy customers. These pharmacy apps allow customers to find the nearest pharmacy location, see the hours of operation, and request prescription refills or transfers. Some pharmacy apps had more innovative features such as text alerts and reminders to promote medication adherence, or drug identification features. A few apps provide information about additional clinical services offered at their pharmacy chain, including immunization clinics and medication therapy management (MTM).

Numerous articles have been written on the principals of smartphone app design. Two essential elements in building app loyalty are design focus and its navigation. Design focus is the belief that apps should not add excess features at the expense of the quality of each feature.4 Secondly, an app’s navigation or user interface focuses on the ease and speed of how a user can find the information they are looking for.5

Beyond design, the success of a smartphone app hinges on the value that it brings to its user. The user’s experience and impression is formed as soon as the first time an app is launched. A common statistic used to evaluate an app’s adoption is the retention rate. In 2015, a mobile app market study showed that users who actively used an app during the first week after download had an 83% retention rate after 3 months, versus a 37% rate if the app was not used during the first week.6

Research on the usefulness of smartphone apps related to medications have mostly focused on medication adherence through the use of reminders and texts.7 A PubMed search of peer reviewed journals revealed very few publications on the topic of community pharmacy smartphone app and feature review. A study conducted in 2016 reviewed a single grocery store pharmacy chain’s smartphone app and determined that patients found most value in features that: 1. improve the convenience of their pharmacy experience, 2. enable them to self-manage their health, and 3. increase their access to their pharmacist.8 Publications comparing the common features seen in different community pharmacy chains apps were not found.

Methods

Many community pharmacy chains have a smartphone app for patients. Apps for pharmacy chains with operations in California were downloaded from the Apple App and Google Play stores. All features from each app were collected and tabulated to identify which were the most prevalent. This review was conducted between June and September of 2016.

Results

A search of the Apple App and Google Play stores revealed 10 pharmacy chain smartphone apps. All 10 apps were available for download on both stores, and most required a user account to be set up to access all of the features. The names of the pharmacy chains are not shown to allow readers to focus on the apps’ features, and to remove any of the authors’ bias for or against any of the apps reviewed.