

## **Tablet and Smart Phone Applications for the Care of Older Adults**

There's an app for that! Most likely there really is. The software blog accessible at <http://blog.softwareadvice.com/articles/medical> documented this growing trend in 2010. Houston Neal in his blog entitled "The Best Medical iPhone Apps for Doctors and Med Students" noted that from 2009 to 2010 the number of medical apps for iPhone had grown from just over 1500 to more than 10,000. Lipmann (2013) notes that currently it is difficult to know how many smartphone apps are available for health care, estimates range from 17,000 to more than 40,000 and growing. Clearly the development of Health Apps is a booming business and with this explosion there is increasing concern about the accuracy and reliability of the apps that are available given the lack of regulation and peer review. In a recent review of apps for opioid conversion, Haffey, Brady, and Maxwell (2013) noted that over half had no medical professional involved in their development and their sources were not referenced. This is just one example of the potential risk in depending on just any available app. Other authors such as Dr. Jones (2012) in the inaugural issue of the International Journal of Nurse Practitioner Educators have warned against believing that more costly apps are more reliable, the cost is often a result of fancy graphics rather than more valid content. In that article she laid the groundwork for choosing and using apps. In this article the goal is to address apps that are especially useful in caring for older adults, however many of the apps referred to apply to more broad population as well.

Apps serve a number of roles in the area of health care. There are apps that are useful as references for students and providers, there are apps that are intended to be used by patients to monitor or improve their health, and increasingly there are apps that allow the smart phone to become

a diagnostic device which in the future could make expensive bulky diagnostic equipment obsolete. Attaching a “medical peripheral” to the phone allows the provider to collect actual physical assessment data, such as performing an EKG, spirometry, or ultrasound, scanning a skin lesion for determination of risk, and the list goes on. In 2011 the Food and Drug Administration proposed rules for regulation of apps that are used as an accessory to a medical device, such as reading xrays, or used as a mobile platform for a regulated medical device, such as an EKG. In the UK, any app that is considered a medical device must be registered with the Medicines and Healthcare Products Regulatory Agency. (McCartney, 2013) Regardless of the purpose of the application, there is a need for better regulation to protect the patient. The future of Apps for older adults is not just in the hands of health care. In his master’s thesis, Sposaro (2012), a software engineer, presents a suite of apps for monitoring falls and wandering using Android devices. Recognizing the growing population of older adults, he notes that to best meet their needs a multidisciplinary approach will be required. Voluntary certification of apps is being offered by a company, Haptique, ([www.haptique.com](http://www.haptique.com)), like the “Good Housekeeping Seal of Approval” the goal is to help professionals and patients alike identified apps that have been carefully reviewed for accuracy and reliability. The “Leading Physician review of medical and health care apps, iMedicalApps ([www.imedicalapps.com](http://www.imedicalapps.com)), is edited by physicians, medical students, and pharmacists (no advanced practice nurses) and they report that the Cochrane Collaboration has identified them as an evidenced based trusted Web 2.0 website. As noted by

Personally, if I could only have one Medical App on my smart phone it would be the Epocrates Essentials. I am not alone, Lipmann (2013) cites a survey done in 2012 that put Epocrates on the top of the list of apps used by physicians. In addition to a reliable pharmaceutical reference it offers

information on disease management, laboratory choice and interpretation, coding and billing, tables and calculators, and a medical dictionary. There is also a directory of other apps that you may find useful and many of those can be downloaded for free. The subscription is \$159.99 a year but there is a lot that is provided for that fee there is also a free version that offers fewer options. I appreciate their Doc Alerts, although some of those are more like a product theatre, you are alerted when they are. Other general apps that everyone should evaluate include: Medscape by Web MD and two offered free of charge by pharmaceutical companies: Merck Medicus, and Pfizer Pro. Merck Medicus offers access to the Merck Manual, the Lancet Journal, and the PDR. PfizerPro offers access to the 5 minute Clinical Consult also for free. For apps useful in caring for older adults two excellent and reliable resources include: American Geriatrics Society ([www.americangeriatrics.org](http://www.americangeriatrics.org)) and ConsultGerIRn ([www.consultgerirn.org](http://www.consultgerirn.org)) sponsored by the Hartford Institute for Geriatric Nursing. The table below is a review of several applications that are worth evaluating for your own Smart Phone or tablet. Many of them are only available for IOS format now, but with the growing Android market, I would suspect they will see adaptations.

<b>App</b>	<b>Available Formats</b>	<b>Price</b>	<b>Description</b>
Annals of LongTerm Care Clinical Geriatrics	IOS and Google Play	Free subscription required	Two clinical journals from the American Geriatric Society that are available for iPad
ConsultGerIRN. Hartford Institute of Geriatric Nursing	iPad	\$1.99	The popular evidence based geriatric topics or I need help stat now in a tablet format.
FRAX Doctot International Osteoporosis Foundation.	IOS	\$5.99	The World Health Organization Osteoporosis risk assessment tool in an interactive app, Additional features to save data and communicate results with patients.

Geriatrics at Your Fingertips American Geriatric Society	IOS and Google Play	\$19.99	This iconic reference for providers who care for older adults is updated annually.
Geriatric Depression Scale Yesavage Stanford University	IOS and Android	Free	The classic 15 item version calculates but does not interpret the score
Geriatrics Pocket Cards Börm Bruckmeier Publishing LLC	IOS, Android, Windows, Blackberry	\$4.99	The cards include Information on the assessment of the older adult: activities of daily living, cardiac risk, dementia, depression, incontinence, and alcohol abuse as well as scales: 10-item Geriatric Impairment Inventory, Clock Drawing Test, Barthel Index of Activities of Daily Living, Geriatric Depression Scale and Functional Assessment Staging in Alzheimer
iGeriatrics American Geriatrics Society	IOS and Google Play	\$2.99	All of the free information offered by AGS into one app including: Beers list, Geriatrics Cultural Navigator, GeriPsych Consult, Guide to Common Immunizations, Management of Atrial Fibrillation, Prevention of Falls Guidelines.
Neurology i-Pocketcards Börm Bruckmeier Publishing LLC	IOS	\$3.99	Like the Geriatrics version includes quick reference guides for a neuroexam, SLUMs Mental Status Exam, and the Glasgow Coma Scale
NIH Stroke Scale Pavilion Neurology	IOS	\$2.99	Calculates the Stroke Score useful in evaluating acute stroke patients
Pneumonia Joshua Steinberg, MD	IOS	Free	Well referenced guide for management of pneumonia in multiple settings.
Shots Society of Teachers of Family Medicine	IOS	Free	CDC immunization schedules including supplemental material

In my practice which includes providing care for older adults in an ambulatory clinic and a long term care institution, these resources provide with a quick reference for just about any problem that I might face. If you can't find it in an app, there's always Google!

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