

Commercial apps and the evidence: Guide for providers



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App mania!



- As of May 2012, more than 40,000 health apps existed in the US, and the rate of proliferation is nearly exponential (West, 2012)
- Nearly one-fifth (19%) of US adults with a smartphone had at least one app designed to promote health (Leroux & Rivas, 2014)
- By 2017, 50% of mobile users are projected to have downloaded at least one health app (Leroux & Rivas, 2014)

Providers are cautious



- 37% of physicians recruited from an online social network prescribed health apps to their patients
- 42% said they would not prescribe apps without regulatory oversight
- 37% said they have no idea what apps are available

Gold, 2014

Why should providers care about apps?



Apps can facilitate patient self-management.

Early evidence shows many signs they are helpful tools that improve outcomes and adherence.

Many patients are using them and want input from their providers.

Providers remaining unaware of technological advances may fall behind in a rapidly evolving digital healthcare system.

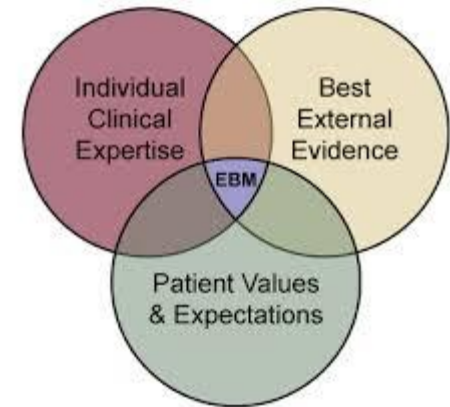
Providers need evidence/guidance or mobile tech will be the next...



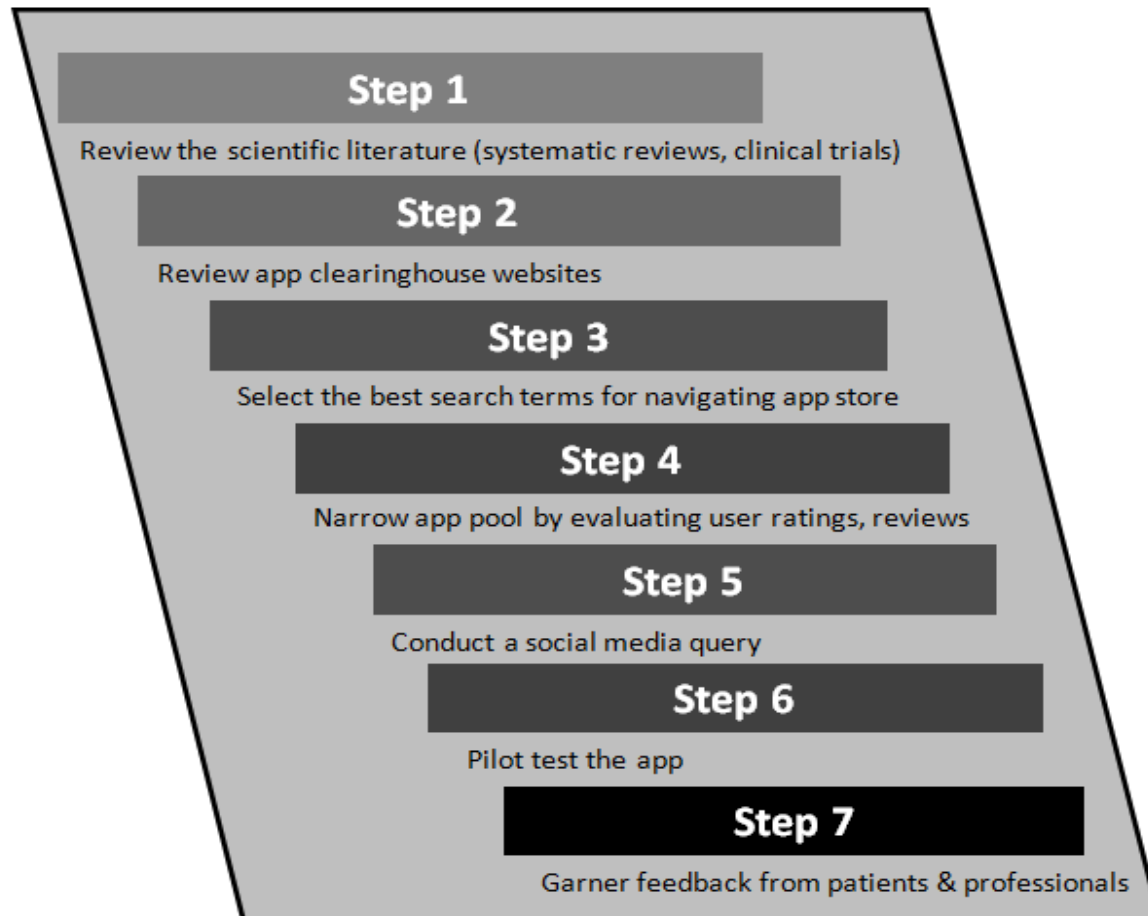
Search process

Parallels process we use to identify evidence-based treatments:

Evidence hierarchy, professional network, patient preferences, case studies, and pilot testing



Recommended Search Strategies



Step 1: Lit review

Search terms:

“randomized trial” or “feasibility” or “usability”

and

“mobile app”

and

the name of the condition (e.g., smoking)



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Results: 9

- [Randomized **trial** of a smartphone **mobile** application compared to text messaging to support **1. smoking cessation.**](#)
Buller DB, Borland R, Bettinghaus EP, Shane JH, Zimmerman DE.
Telemed J E Health. 2014 Mar;20(3):206-14. doi: 10.1089/tmj.2013.0169. Epub 2013 Dec 18.
PMID: 24350804 [PubMed - in process]
[Related citations](#)
- [The effectiveness of a suicide prevention **app** for indigenous Australian youths: study protocol for a **2. randomized controlled trial.**](#)
Shand FL, Ridani R, Tighe J, Christensen H.
Trials. 2013 Nov 20;14:396. doi: 10.1186/1745-6215-14-396.
PMID: 24257410 [PubMed - in process] **Free Article**
[Related citations](#)
- [Design and implementation of a randomized controlled social and **mobile** weight loss **3. trial for young adults \(project SMART\).**](#)
Patrick K, Marshall SJ, Davila EP, Kolodziejczyk JK, Fowler JH, Calfas KJ, Huang JS, Rock CL, Griswold WG, Gupta A, Merchant G, Norman GJ, Raab F, Donohue MC, Fogg BJ, Robinson TN.
Contemp Clin Trials. 2014 Jan;37(1):10-8. doi: 10.1016/j.cct.2013.11.001. Epub 2013 Nov 9.
PMID: 24215774 [PubMed - in process]
[Related citations](#)
- [Efficacy of a **mobile** application for **smoking** cessation in young people: study protocol for a **4. clustered, randomized trial.**](#)

Step 2: Review app clearinghouses

The screenshot shows the NHS Choices Health Apps Library website. At the top, there is a navigation bar with the NHS logo and the text "choices health apps library". To the right of the logo is a "Share" button and a search box labeled "Search for apps" with a "Search" button. Below the navigation bar is a dark grey menu with several categories: Home, Conditions, Healthy living, Health information, Social care, Developers, and About. The main content area features a heading "Safe and trusted apps to help you manage your health" in orange and black text. To the right of this heading is a welcome message: "Welcome to the Health Apps Library" followed by three bullet points: "Discover apps to help you manage your health", "Reviewed by the NHS to ensure they are clinically safe", and "Rated by you and the health care community". Below this is a section titled "Latest apps" which displays six app icons in a row. Each icon is accompanied by the app name and a brief description of its function.

NHS choices health apps library Share ▾ Search







[Home](#) [Conditions ▾](#) [Healthy living ▾](#) [Health information ▾](#) [Social care](#) [Developers](#) [About](#)

Safe and trusted apps to help you manage your health

Welcome to the Health Apps Library

- Discover apps to help you manage your health
- **Reviewed by the NHS** to ensure they are clinically safe
- Rated by you and the health care community

Latest apps

					
CF MedCare Condition tracker	MouseTrack Communications aids	Minimal Pair Pack Communications aids	iReminisce Communications aids	iRelief Fitness	iDialysis Diabetes

Available Clearinghouses for Selection of Health Mobile Apps: Description and Review Standards

Clearinghouse (website)	Target Audience	Description	Review Standards	Who Reviews
National Health Service (NHS) Health Apps Library	United Kingdom	Offers a library of health apps for patients and aims to provide quality assurance to ensure that apps are clinically safe.	All submitted apps are evaluated to make sure they are: 1) relevant to those living in England. 2) comply with data protection laws, and 3) comply with trusted information sources	Reviewed by a NHS Clinical team that consists of doctors, nurses, and safety specialists.
Happtique	United States – patients, physicians, and medical organizations	A mobile health application store and app management solution that allows organizations to create individually branded, secure, multi-platform application stores for staff and patients.	The app certification program is based on meeting standards related to: 1) operability, 2) privacy, 3) security, and 4) content.	The content of apps are evaluated in partnership with medical professional societies.
iMedicalApps	United States-physician, patients, and mHealth analysts	This is an independent online medical publication. Its goal is to provide reviews, research, and commentary of mobile medical technology.	Reviews are based on the reviewers' own hospital and clinical experiences.	Reviewers are 4 editors and 5 writers all of whom are physicians, physicians-in-training, allied health professionals, or mHealth analysts

From Boudreaux, Pagoto, et al under review)

Clearinghouse (website)	Target Audience	Description	Review Standards	Who Reviews
Eat Right	Worldwide	Academy of Nutrition and Dietetics.	Reviewers write a brief evaluation based on 1) overall synopsis of the app, 2) pros and cons, and the 3) bottom line. Reviewers also rate apps from 1 to 5 stars.	The website specifically names 3 reviewers all registered dieticians.
IMS Health's <u>AppScript</u>	Providers, payers, govt agencies, policymakers, researchers	IMS Health is a information, services, and technology company	. The overall IMS Health App Score is based on a combination of 1) functionality, 2) peer and patient reviews, 3) certifications, and 4) their potential to improve outcomes and lower the cost of care	IMS
<u>HealthTap's AppRx</u>	United States- primarily for patients/consumers	This is a specific function of the larger <u>HealthTap</u> app. The <u>AppRx</u> function allows consumers to read health and medical app evaluation/recommendations from a network of 60,000+ physicians.	Doctors in the network review the apps based on 3 questions: 1) Is the app medically sound?, 2) Is the app useful?, and 3) Is the app easy to use and understand?	Physicians from a network of >60,000

Step 3: Search app stores

- Specific search terms important
- “alcohol” will produce drinking game apps, cocktail recipe apps, as well as apps that help to reduce drinking.



Step 4: User ratings



High volume of ratings combined with high ratings will likely produce the best apps

Note distribution of ratings

Top lists in “health and wellness” categories are the most highly rated and downloaded apps

This may eliminate gimmicky apps (e.g., tummy fat vibration app vs My Fitness Pal)

Step 5: Social media query



Query your professional social network for suggestions

Sermo, Researchgate

Linked In mHealth, Digital Health communities

Twitter using #mhealth, #digitalhealth hashtags

Use healthcare hashtags #bcsm, #hcs

“Looking for recs from docs and patients for GOOD smoking cessation mobile apps”

Step 6: Pilot test



Provider, nurse, or other allied health care professional can be tester

Use for a short period to capture all functionality

Evaluate: usability, accuracy of info, inclusion of desired functionality

Apps that provide coaching for a cost might require more intensive testing to insure advice/coaching is acceptable, evidence-based

Step 7: Patient feedback



Ask patients what they are using

After recommending an app, follow up with patient after a week or so to get feedback.

If more than one app fits your needs, get feedback on multiple to see which patients like best.

Next steps



Compile a list of apps you recommend to patients and use as a guide for other patients.

Evaluate use of apps in patient evaluations.
Make mobile apps part of the conversation with each patient.

Disseminate your resource! Other providers need it!