

A reliable rubric for evaluating medical apps

To help ObGyns evaluate mobile apps for use in clinical practice, the American College of Obstetricians and Gynecologists Presidential Task Force of Dr. Eva Chalas recommends a quantitative rubric that was developed by the American Society of Health-System Pharmacists (ASHP) for evaluating drug information apps (TABLE).¹ Criteria are graded on a point scale of 1 to 4, with 1 point indicating major deficiencies and 4 points indicating no deficiencies.

The ASHP used the following criteria in evaluating mobile apps:

- **Usefulness:** the app's overall usefulness in a particular practice setting
- **Accuracy:** overall accuracy of the app should be thoroughly examined
- **Authority:** it is critical to assess authority or authorship to determine that the developers are reputable, qualified, and authoritative enough to create the medical content in question
- **Objectivity:** to determine if content is fair, balanced, and unbiased
- **Timeliness:** given that medical information is continually changing, an app must be evaluated based on the timeliness of its content
- **Functionality:** how the app downloads, deploys, and operates across devices and software platforms (that is, iOS, Android)
- **Design:** well-designed apps are generally more user friendly and, therefore, useful. They should require minimal or no training and have easily discernible buttons, a clean and uncluttered format, consistent graphics layout, terminology appropriate for the intended audience, streamlined navigation

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without extraneous steps/gestures, appropriate-sized text, and sufficient white space to improve readability.

- **Security:** Many apps collect a wide array of personal and device data. Collected data has the potential for being sold to third parties for marketing and advertising purposes. Apps should disclose their privacy policy and provide an explanation as to why personal data are being collected. If personal identifiable information (PII) is collected, then the app should be encrypted. If protected health information (PHI) is collected, the app must follow

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TABLE ASHP rubric for evaluating mobile drug information apps

Criteria	4 points = no deficiencies, 1 point = major deficiencies			
Usefulness Points: ___/4	App is relevant and would be very useful in daily practice; will improve efficiency or knowledge base	App is somewhat relevant and could be useful in practice; may improve efficiency or knowledge base	App is not very relevant and probably won't be useful in daily practice; may or may not improve efficiency or knowledge	App is irrelevant and would not be useful in daily practice; may hurt efficiency or knowledge base
Accuracy Points: ___/4	Source material is appropriate and cited throughout; clinical content is thorough/comprehensive	Most source material is appropriate and cited; clinical content relatively thorough	Some material is inappropriate or has few citations; app lacks some important clinical data	No references to source material; missing important content; deficiencies may cause patient harm
Authority Points: ___/4	Publisher and/or authors clearly listed; app developers are considered to be content experts	Publisher and/or authors are listed; developers seem trustworthy and qualified	Publisher and/or authors difficult to locate; app developers may or may not be qualified	Publisher and/or authors not listed; app developers are not qualified/reputable
Objectivity Points: ___/4	Content is fair and balanced; no bias evident; app is only for clinical purposes	Content is relatively fair and balanced; no overt promotion of products is noticed	Content may be biased; some product promotion is evident	Content is heavily biased; app is only for promotional purposes
Timeliness Points: ___/4	Clinical content is current and will be updated regularly	Clinical content is relatively current; may lack some new data but will likely be updated	Content is somewhat old, but still useful to clinical practice; future updates unclear	Clinical content is out of date and irrelevant or harmful to practice; will not be updated in the future
Functionality Points: ___/4	Installs and functions perfectly; no technical problems are evident or anticipated	Rarely crashes, freezes, or has other technical problems	Occasionally crashes, freezes, or has other technical problems	Repeatedly crashes, freezes, or has other technical problems; contains malware
Design Points: ___/4	Incredibly easy to use and navigate; all design elements are consistent and easy to understand	Relatively easy to use and navigate; most design elements are consistent and easy to understand	Often difficult to use and navigate; design elements may hurt some of the app's usability	Very difficult to use and navigate; design elements definitely hinder usability
Security Points: ___/4	Free of malicious software; privacy statement available; personal data are encrypted/protected	Free of malicious software; privacy statement might be available; personal data are probably protected	May contain malicious software; privacy statement difficult to find; unclear if personal data are protected	Contains malicious software; privacy statement unavailable; personal data are not protected
Value Points: ___/4	Price of app is appropriate, given its content and features	Price of app is reasonable, considering its content and features	Price of app is a barrier and may not be worth the content provided	App is overpriced and not worth the cost
Totals: _____/36	Comments			

Abbreviation: ASHP, American Society of Health-System Pharmacists. Used with permission.

compliance with HIPAA/HITECH (Health Insurance Portability and Accountability Act/Health Information Technology for Economic and Clinical Health Act). Addition-

ally, apps should not compromise the security or functionality of the mobile device being used.

- **Value:** appropriateness of an app's cost. ●

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ACOG PRESIDENTIAL TASK FORCE SERIES ON PREVENTIVE HEALTH CARE

Focus on cancer risk



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Hereditary cancer risk assessment is the key to identifying patients and families who are at increased risk for developing cancer. The knowledge generated by cancer risk assessment impacts clinical decisions that obstetricians and gynecologists and their patients make every day. Previvors—patients predisposed to developing cancer, because of their family history or a pathogenic gene variant, who have not had cancer—benefit from counseling, heightened surveillance, and medical and surgical options.

For the last 25 years, this field has been growing dramatically, and although the scientific advances are present, only 15.3% of patients with a personal history of breast or ovarian cancer who meet hereditary cancer testing criteria have been tested.¹ As many as 1 in 4 women who present for a gynecologic examination may have a personal history or a family history that qualifies them for genetic testing.²

Cancer risk app considerations

The ability to leverage mobile device applications can provide clinicians and patients with

a useful screening tool to identify women who are at increased cancer risk. Only a handful of apps are available today and most are geared to patients. Such apps explore the different testing modalities, including genetic testing, as well as treatment options. When evaluating the best app for patients, using the ACOG-recommended rubric shown on page 35, the qualities to keep in mind and that should score 4 out of 4 include design, authority, usefulness, and accuracy.

A few apps provide reminders for appointments, such as mammograms, magnetic resonance imaging, or breast self-exams, and allow patients to track treatment plans. To date, no app addresses prevention and treatment opportunities that are specific to patients who have a hereditary predisposition. At least one app lists hereditary cancer testing guidelines. Many more apps are geared toward individuals with cancer rather than toward previvors.

As ObGyns, we have an opportunity to educate and identify women and, subsequently, better counsel women identified as at increased risk for developing cancer. We can utilize medical apps to efficiently incorporate this screening into clinical practice. ●

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**ACOG PRESIDENTIAL TASK FORCE SERIES ON PREVENTIVE HEALTH CARE
PART 3 OF 3**

Mobile apps in ObGyn practice: Tools for enhancing women’s preventive health care

Mobile apps are putting evidence-based medicine, society guidance, and health recommendations at your—and your patients’—fingertips. An ACOG Presidential Task Force describes their goals in recommending an ASHP-developed rubric to evaluate medical apps and how apps can fit into the preventive health care discussion at the annual visit.



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Dr. Eva Chalas’ American College of Obstetricians and Gynecologists (ACOG) Presidential Initiative “Revisit the Visit” was established with a vision of what the future holds for obstetrician-gynecologists. As ObGyns, we are often the first physician to care for the patient in her adulthood, and we continue to do so across the entirety of her life. This gives us the opportunity to form long-term partnerships with women to address important preventive health care measures. The annual visit can serve as a particularly impactful point of care to achieve specific preventive care objectives and offer mitigation strategies based on patient-specific risk factors. With an eye to the future, we have a great opportunity to continue to reinvent ourselves and highlight the positive impact we can make on women’s long-term health.

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Evolutionary changes in ObGyn

Preventive medicine guidelines have evolved to reflect enhanced cervical cancer screening tests, longer-acting contraceptive options, and better data on the lack of utility of the annual pelvic exam that has changed the focus of the annual visit for both physicians and patients.¹ These changes allow us to pivot and leverage the trust we build with our patients to make meaningful impacts in preventing chronic disease, improving prepregnancy health, reducing maternal mortality and morbidity, and improving the quality and longevity of our patients’ lives. New guidelines, coupled with the knowledge of the leading causes of morbidity for women, provide the chance to incorporate areas of screening and intervention that, while we are capable of addressing, we traditionally have not done so for various reasons.

The ACOG Presidential Task Force identified 5 areas of preventive health that significantly influence the long-term morbidity of women: obesity, cardiovascular disease,



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preconception counseling, diabetes, and cancer risk. ObGyns are uniquely positioned to identify and initiate the conversation and subsequently manage, treat, and address these critical health areas. To make this daunting task more manageable, the Task Force not only published webinars to address the clinical knowledge pertaining to these areas of health but also specifically looked at how to use technology to aid obstetrician-gynecologists in addressing them with patients.

Making use of technology in clinical practice

Technology is emerging as an influential player in health care. Major corporations, such as Amazon, Google, Apple, and Facebook, are making headlines in health care as they consider strategies (moves) to revolutionize technology and, in turn, patient visits like we have never seen before. Examples include incorporating artificial intelligence in a patient's care and allowing better access for primary care.

The changes that we will see over the next 10 years, influenced by industry, will be more than those seen in our lifetime. To prepare for these changes, we need to incorporate technology into our daily practice. This encompasses much more than just the electronic medical record. Consequently, the Task Force intentionally looked at mobile medical apps to aid physicians in addressing the 5 specific areas of preventive health identified.

While a small step compared with what is to come, apps are a great resource to leverage in making this transition. However, with hundreds of thousands of medical apps available in app stores and the constant updates and iterations of each, it would be impossible to recommend any single app. There is much value in having a framework to use to efficiently measure the benefit of an app that you or your patient comes across in clinical practice. The objective of this series was to provide clinicians with an effective tool to evaluate a medical app that could be used, for example, when addressing obesity or optimizing pre-pregnancy health.

The recommended rubric for evaluating apps

To evaluate mobile drug information apps, the Task Force members recommend a user-friendly, convenient rubric developed by the American Society of Health-System Pharmacists (ASHP) (see page 35). The rubric can help obstetrician-gynecologists evaluate and compare the value of various medical apps that specifically address obesity, diabetes mellitus, cardiovascular disease, improving maternal morbidity with enhanced preconception counseling, and cancer risk assessment.

The authors of this Task Force series have attempted to highlight the key features of an app as it pertains to a particular area of focus. It is important to keep in mind the primary user and the goal when choosing or recommending an app for practice or for patient use. The ASHP's rubric is a tool meant to aid clinicians in evaluating medical apps, but it is ultimately the user's decision to determine if the deficiencies of an app should deter its use. Although all the criteria are relevant and important, as medical experts it is incumbent on us to pay careful attention to the accuracy, authority, objectivity, timeliness, and security of any app we consider incorporating into clinical practice.

While integrating the use of medical apps into clinical practice will be novel for some, for others, junior Fellows in particular, it has become part of their practice and education. Dr. Eva Hoffmann, Chief Resident in the NYU Langone Health System, offers this perspective: "As medical trainees we use mobile apps to enhance our patient interaction and guide high-quality, continuous care. In today's modern technological world, apps help keep us up to date with the ever-changing guidelines in pregnancy and routine gynecologic care as well as communicate directly and discreetly with a patient whenever the need arises. The most significant apps provide guidance on abnormal Pap results, indicated deliveries prior to 39 weeks, and the ability to respond to obstetrical emergencies. They also allow for quick society-endorsed references in seconds. Apps have changed the way

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that we practice by providing evidence-based medicine literally at our fingertips—in a shareable and communicable way—making the practice of medicine even more efficient and effective.”

Opportunity to reaffirm expertise

Dr. Chalas’ initiative was meant to shed light on the opportunity obstetrician-gynecologists have to reassert themselves as women’s health experts, to consider redefining their practice by incorporating new preventive guidelines, and to leverage medical apps for achieving better health outcomes for women across their lifetime. We hope that by opening a dialogue about how ubiquitous medical apps are (for both physicians and patients) in today’s health arena, how many apps are inaccurate and/or misused, and how a simple rubric can be used to assess an app’s value, you are inspired and feel more comfortable to incorporate medical apps into your practice.

Health care will continually undergo advancements, and as a specialty we must evolve to address women’s needs. Obstetrician-gynecologists are well suited to contribute significantly to the well-being of women and mothers. We can leverage technology-

based apps to help us redefine our roles and priorities at the patient’s annual visit. We can reaffirm ourselves as the leading women’s health care physicians.

An additional resource

To enhance your understanding of apps and how to evaluate them, Dr. Katherine Chen’s App Review series in OBG MANAGEMENT is a great resource and building block for enhancing your toolbox for the annual visit. Dr. Chen’s own research and APPLICATIONS scoring system is used to evaluate selected mobile apps.² In addition, each article includes a table that details the apps’ features based on a shortened version of the APPLICATIONS scoring system, APPLI (app comprehensiveness, price, platform, literature used, and important special features).

In appreciation

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