

There's an App for That: How and Why to Integrate Apps on Your Next Shift

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If it's one thing millennial doctors know well, it's apps. As millennial doctors are entering the specialty as young attendings, the use of apps on shift becomes more and more prevalent. Because emergency medicine is such a fast-paced specialty full of depth and breadth, easy-access smartphone applications have become a cornerstone of our practice so that we can mentally off-load facts we don't need to memorize and let technology help us.

When it comes to any kind of technology, however, its effectiveness is only as good as the user. I suggest playing with any application you plan on using in practice well in advance and understanding its limitations and abilities and when and how to best integrate it into your workflow. Below, is a list of some of my personal favorites and then some suggestions.

My five personal favorite apps on shift:

1. **A digital cloud service (Dropbox, Google Drive or Box):**

Pick one, but a central repository for policies and procedures for the ED that anyone can access at any time is key, especially in an electronic searchable format. Forgot which service admits certainly pathology? Makes the discussion with consultants much easier when you have written policy already handy. Be wary of hospital firewalls that may block these apps or websites, and if so, just know you'll have to be on cell data service and not WiFi.

2. **MDCalc:** I used to save smartphrases in my electronic medical record for every major decision-making tool (HEART, PERC, Wells, Glasgow Blatchford Score, etc.) until I realized I could calculate those on the fly and more with the help of apps like MDCalc. I particularly like that it has lesser-used tools (i.e., LRINEC score) that our consultants may like but that we don't use regularly. In practice, I find that bedside use of MDCalc actually helps give patients an idea of their risk stratification and how I'm using that information. It is compelling to tell a chest pain patient you're worried about their coronaries, but even more compelling to tell them they have a 30-day MACE of 12-16.6%.



3. **Evernote:** This is functionally an electronic notebook where you can write notes, link photos/audio and sort into "notebooks". I use this in non-shift life as well, but it's an excellent place to keep live notes of things you want to remember on shift. In particular, I keep a note of basic things like bathroom codes, crash cart codes, my username for EPIC and PACS, etc for each ED I work in. I also



keep one note running with certain dosing or points I don't want to forget (i.e., new policy on ancef vs. ceftriaxone for open fractures), and one last note for patients or items to follow up with (i.e., MR of interesting patient, or point I wanted to read up on later). This saves the problem of carrying tons of paper notes home and/or potentially losing them. However, make sure that you keep your notes HIPAA compliant.

4. **PalmEM, WikiEM, UpToDate (\$):** These are all "generalist" apps with a lot of information. I'm particularly partial to PalmEM and then WikiEM for emergency medicine relevant topics. These are helpful when I want to brush up on a topic I don't see too often but only need to know the basics. Again, these apps are definitely only as good as you know what it contains and how evidence-based or peer-reviewed it is. UpToDate is sometimes purchased by hospital licenses and physicians can use their own account on that license. Obviously, this is less "bullet points" than apps like PalmEM or WikiEM, but provides quick access information of less-familiar topics.

5. **Epocrates:** This is a popular drug application that contains information on dosing, pictures of pills, approximate pricing, interactions and toxicity. It gives good basic information if you don't have easy access to a pharmacist or just want to verify your own dosing.

This is not an exhaustive list, just personal preference. I've included below lists of other applications and brief descriptions to explore and play with. Some of these applications, unfortunately, do not get updates with new iOS or androidOS releases, so make sure you don't become too reliant, or at least check for software updates! ●

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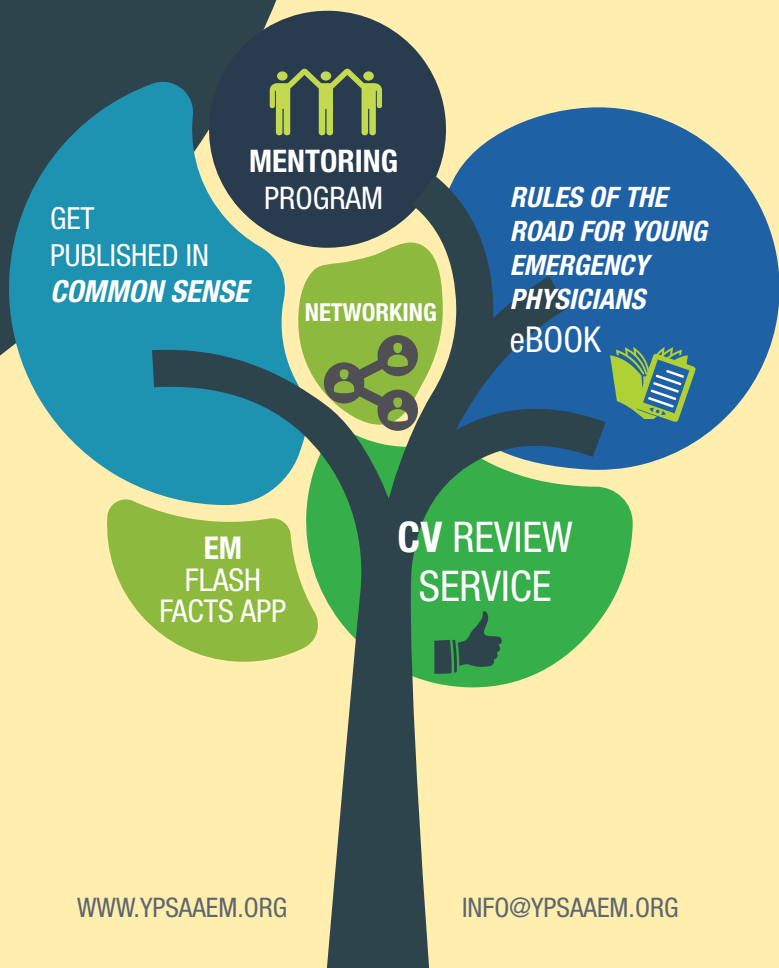
General or EM "Generalist" Apps	MDCalc ERRes 10SecEM PEPID UpToDate WikiEM PalmEM
Drug apps for assistance with choosing medicines and dosing	Epocrates Micromedex
Lactation-safe meds apps, to make it easy to review home meds	LactMed Infant Rush Mommy Meds
Orthopedic/Trauma/Ultrasound apps with imaging and help with anatomy	Traumapedia OrthoBullets SonoAccess Pocket EUS (Emergency Ultrasound)
Pediatrics apps, especially helpful those that don't work a lot of peds!	PediStat Palm PediLite PediSafe Safe Dose PediQuickCalc

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