

## PDA Basics for Doctors

### What's a PDA?

This stands for Personal Digital Assistant and these are now really powerful palm sized computers which doctors may find invaluable in their daily lives.

There are now two leading operating systems (OS) in the market. The dominant one commanding the largest market share is Palm OS. PDAs running Palm OS include [Palm](#) (m500/m505/m105/m100/Vx/IIIxe/IIIc), Handspring, Handera (formerly TRGPro) and Sony Clies. Another one is Microsoft's PocketPC platform (the latest reincarnation of Windows CE. The most popular PocketPC powered PDA is Compaq's iPaq pocketPC with others from Casio and HP lagging behind in sales. There are a sprinkling of other PDA OS' in the market such as the Psion running Epoch OS (Psion has since recently declared it is resigning from the PDA market) but these are in the minority.

### What can a PDA do for me?



Lots! Do you find life getting too complicated? Cannot keep track of appointments, contacts? What about phone numbers – too many to recall and the little pocket diary you keep is out of date? Basic PDA functions include a Calendar, Contact/Addressbook/ Todo list and Memos. These are the most often used functions and in the case of Palm OS machines, are handily accessed by the four hardware buttons at the bottom (see pic)

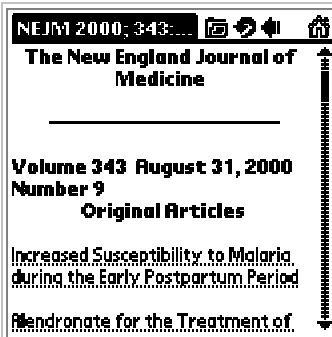
On top of that, a PDA can perform like a little computer and you can install and run numerous applications on it. The PDA software market is really burgeoning and there are lots of medical applications you can install.

A very good example is ePocrates (<http://epocrates.com>) which is a *freeware* Drug Formulary for the Palm OS (sorry, no PocketPC version!) which you can download and install onto your Palm PDA. With ePocrates, you literally have a Dims in your pocket whereby you can look up dosages, adverse effects etc. It also has a multicheck module with which you can look up possible drug interactions for any combination of drugs you choose. The beauty of ePocrates is that you can receive updates (new drugs, drug alerts etc) via the Internet by hotsynching your Palm and connecting to ePocrates at the same time.

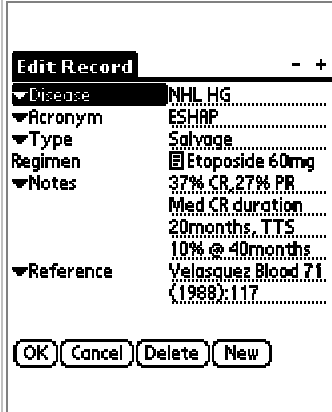
There are many other handy medical references you can take with you (see <http://www.skyscape.com> and <http://www.handheldmed.com>) if you are willing to purchase them.

There are many freeware/shareware medical applications for the Palm OS in particular and you may find them also at Palmgear (<http://www.palmgear.com>), Handango (<http://www.handango.com>) and at the Freewarepalm site (<http://www.freewarepalm.net>).

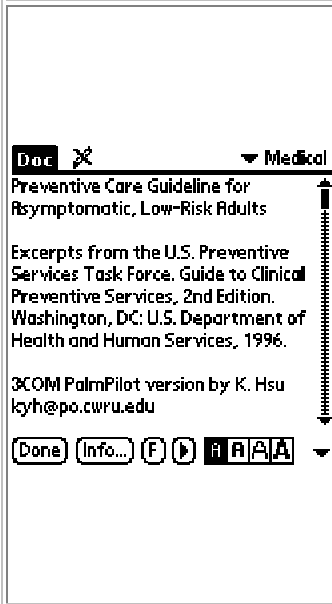
Here are some of the really nifty applications for the Palm powered doctor:




[Avantgo](#) is a freeware cool offline Web browser. It allows you to take updated Web pages with you on the road for reading during that lunch break or any spare bit of time you have. Pictured is the TOC from [The New England Journal of Medicine](#) but you could carry any web page(s) with you as you wish



[Jfile](#) was my previous choice database app on the Palm. This is still a quick and easy to use database application for the Pilot. I have since replaced this with [HanDbase](#) which allows one to link fields and appears to be somewhat more powerful than Jfile in this respect. Pictured here is my database of Chemotherapy regimens which I carry with me. This is updated on Microsoft Access and exported into HanDbase format. Data storage capacity is huge and a database of say 2000 records may occupy only about 200Kb. For a comparative review of Database Programs available for the Palm, see [Jim Thompson's Palm Database review](#)



I like [Quickword](#) for reading and writing Doc format files. I keep lots of text info/notes in Doc format as part of my "peripheral brain". You can create your own in Word and export it into Doc format or get plenty from sites like [Memoware](#). Others prefer [Wordsmith](#) which allows editing and retaining text formatting. Wordsmith also has a Truetype font import utility – really nice. Generally a Doc reader is a "must" since you will likely need to carry large text files for reference purposes larger than the 4Kb limit of the built-in Memo application. Other than Quickword, you may also want to check out [Tealdoc](#) (shareware) or [Aportis Doc](#) (free Reader) which are Doc readers only. There is another freeware Doc reader called [CSpotRun](#). For another review by Jim Thompson on Doc readers/editors, see Jim's [Palm Wordprocessing page](#). There are plenty of links there worth checking out.

**Arimidex** 

**Usual Dosage**

Adults: I.V. (refer to individual protocols): 910 mg/m administered once daily as a 15-minute I.V. infusion, starting 30 minutes prior to chemotherapy  
 Reduction of xerostomia from head and neck radiation: 200 mg/m I.V. (as a 3-minute infusion) once daily, starting 15-30 minutes before standard fraction radiation therapy

**U**  
**U**  
**U**  
**W**  
**D**  
**C**  
**P**  
**D**

Fancy having DIMS in yourpocket? Lexidrugs from [Skyscape Consultants](#) is a comprehensive drug database that you can carry with you. It's not free but there's another one which is free - [ePocrates](#) - but you have to register first (foc) prior to downloading it. ePocrates has free updates you can get via the Internet. Latest version of ePocrates has a DocAlert feature (optional email notification of updates/alerts) and also a handy drug interaction tool. I highly recommend ePocrates - the price is right!

**Index**

**A** **B** A-G syndrome, Pregnancy-rel  
**C** **D** Abacterial meningitis  
**E** **F** abdominal  
**G** **H** abdominalis, Typhus  
**I** **J** abducens-facial syndrome  
**K** **L** Abnormal Pap smear  
**M** **N** Abortion  
**O** **P** Abortion, spontaneous  
**Q** **R** Abruptio placentae  
**S** **T** abruptio, Placental  
**U** **V** abscess  
**W** **X** abuse  
**Y** **Z** Lookup.....

5 Minute Clinical Consult is a handy pocket reference for Physicians. There are 2 versions - one from [Skyscape Consultants](#) (this one links with Lexidrugs nicely) and the other from [Handheldmed](#) (pictured here). Do check out [Handheldmed](#) for other medical books you can purchase (e.g. pocket Merck manual)

**Dates!** 7/9/00

**From** 7/9/00 Thu 251

**To** 27/12/00 Wed 362

Weeks: 14.....

Weekdays: 80 **D** **W**

0 Years 3 Months 21 Days

Count both dates.

**DateBook** **Reset**

Ever had a tough time figuring out how many days/weeks there are from a particular date? Or need to schedule an appointment 23 weeks from now and want to quickly know which date that is? I find [Dates!](#) incredibly useful and it's free too! The latest version has a Datebook button which takes you to the Day view of the Datebook application (you can launch Action Names too if you map AN to the Datebook button (set it in your system Preferences)

**Cholesterol**

**mmol/l** --> **mg/dl**

**130.00**

**Trig** **7** **8** **9** **/** **C**

**Exp** **4** **5** **6** **X** **<**

**Day** **1** **2** **3** **-** **Exp**

**Temp** **0** **.** **Convert** **+** **%**

**RCL** **STO**

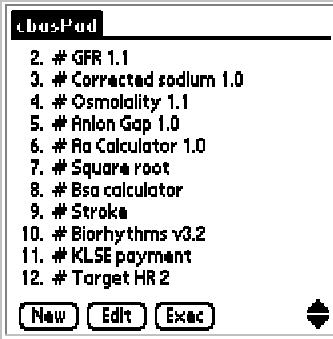
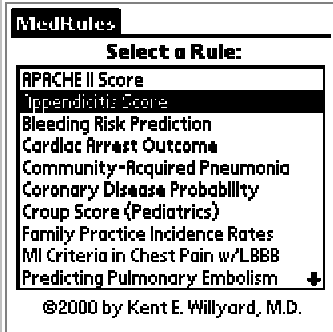
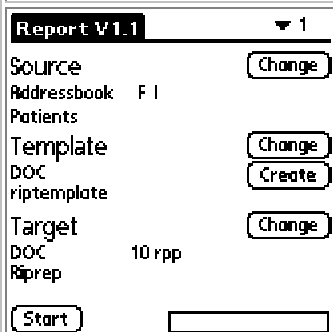
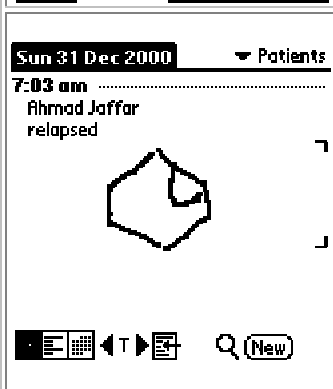

[Currency Calculator](#) is not only for currency conversions but I find it is pretty useful for those medical conversions e.g. cholesterol in mg/dl to mmol/l. It is customisable so you can programme your own conversions.

**MedCalc** **All**

**Formulas and scores :**

Absolute neutrophil count  
 Age calculator  
 Allowable blood loss  
 Alveolar-arterial O2 gradient  
 Anion gap (plasma)  
 Anion gap (urine)  
 Apgar score  
 Basal energy expenditure  
 Body mass index  
 Body surface area  
 Cardiac output (Fick)  
 Cardiac valve area (Gorlin)

[Medcalc](#) is an excellent freeware medical application with lots and lots of various medical formulae and calculators built-in. Highly recommended

 <p><b>CbasPad</b></p> <ul style="list-style-type: none"> <li>2. # GFR 1.1</li> <li>3. # Corrected sodium 1.0</li> <li>4. # Osmolality 1.1</li> <li>5. # Anion Gap 1.0</li> <li>6. # Ra Calculator 1.0</li> <li>7. # Square root</li> <li>8. # Bsa calculator</li> <li>9. # Stroke</li> <li>10. # Biorhythms v3.2</li> <li>11. # KLE payment</li> <li>12. # Target HR 2</li> </ul> <p>New Edit Exec</p>	<p>I use <a href="#">Cbaspad</a> which is a freeware Basic Editor for the more complex calculations like <a href="#">Body Surface Area</a> which didn't take me long to write. Basic is a simple computer language which even doctors can master :) Even if you don't want to program, others have written quite a number of basic routines which you may find useful.</p>
 <p><b>MedRules</b></p> <p>Select a Rule:</p> <ul style="list-style-type: none"> <li>APACHE II Score</li> <li>Appendicitis Score</li> <li>Bleeding Risk Prediction</li> <li>Cardiac Arrest Outcome</li> <li>Community-Acquired Pneumonia</li> <li>Coronary Disease Probability</li> <li>Croup Score (Pediatrics)</li> <li>Family Practice Incidence Rates</li> <li>MI Criteria in Chest Pain w/LBBB</li> <li>Predicting Pulmonary Embolism</li> </ul> <p>©2000 by Kent E. Willyard, M.D.</p>	<p>There's another Basic utility out there called <a href="#">NSBasic</a>. People are already writing stuff for the Palm version like <a href="#">Medrules</a>. The run-time app is free.</p>
 <p><b>Report V1.1</b></p> <p>Source <input type="button" value="Change"/></p> <p>Addressbook F I</p> <p>Patients</p> <p>Template <input type="button" value="Change"/></p> <p>DOC <input type="button" value="Create"/></p> <p>riptemplate</p> <p>Target <input type="button" value="Change"/></p> <p>DOC 10 rpp</p> <p>Rprep</p> <p><input type="button" value="Start"/></p>	<p>You can check out <a href="#">Report</a> which is handy for generating reports of data stored in your built-in databases (like the Addressbook) or HanDbase. Sample pic is a report template with which I can generate lists of deceased patients in my Address book and output in Doc format..</p>
 <p><b>Sun 31 Dec 2000</b> Patients</p> <p>7:03 am</p> <p>Ahmad Jaffar relapsed</p> <p></p> <p><input type="button" value="New"/></p>	<p><a href="#">Daynotez</a> is a great Journaling application which you can use to jot down notes complete with Date and time stamp. This can be categorised in the usual manner (patients/work/palm whatever). I find it handy to keep track of Events which have occurred. There is a day, list and month view which you can filter by category and this makes it more useful than the built-in Memopad. Outlook users have the option of installing a conduit, otherwise there is a stand-alone desktop application to view your Journal. If you have <a href="#">TealNotes</a> installed, you can have graphics as well!</p>

## Which PDA should I buy?

Now that I have whetted your appetite, you might be bewildered by the choice of PDAs available in the market today.

The choice can be simplified by deciding on:

### 1. Palm or PocketPC?

Both of these have their pros and cons. Personally I prefer the Palm for ease of use, better battery life, slimmer and more compact (m500 series, V series), and most importantly, much more available software than the PocketPC. The PocketPC is better at multimedia and the iPaq has the nicest and brightest screen of all PDAs.

### 2. Colour or monochrome?

Actually colour is not all that important though it looks nicer. Beware some colour screens like the Palm IIIc and Handspring Visor Prism may look nice and bright indoors but are washed out by bright sunlight. The Palm M505 is an ok all-round screen which is readable both indoors and outdoors. The Sony Clie and Handera screens have the highest resolutions for Palm OS. The iPaq is a nice bright screen but this comes at the cost of more limited battery life.

### 2. Expandibility?

I think this is a must for doctors. You'll want to carry large references with you in no time. The expandable Palms are the m500 series, Handera and Sony Clie. The Palm m500s use SD/MMC cards which are the tiniest memory cards available today (up to 128 MB currently). The Handera uses both SD and CF whereas Sony uses their Memory stick modules. The iPaq has a sleeve (which makes it even more bulky) in order to take expansion modules. Mind you though, 8MB on the Palm is worth more than 32MB on the iPaq as Palm OS programs are on the whole much smaller.

For more information, you may want to check out the Malaysian Medical PalmPilot page (<http://medpilot.cjb.net>) where there are lots of hints, tips, links on Palm PDA for Malaysian doctors.

You may also join the Computing in Medicine section and forum in Dobbs ( <http://dobbs.com.my> ) where this article is also posted.

Dr. Alan Teh

(self-confessed Palm aficionado)