

PDA Interface

The Case for the Personal Digital Assistant (PDA)

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This continuing series will be a valuable resource for both experienced and novice users of handheld computer technology. Topics will include how to evaluate hardware and software, clinical and business applications, and the development of a "digital peripheral brain." The authors will also discuss PDA organization skills that can maximize professional and personal efficiency. Direct questions or comments to Brent I. Fox or Bill G. Felkey, Auburn University, Harrison School of Pharmacy, Pharmacy Care Systems, 128 Miller Hall, Auburn, AL 36840. E-mail: foxbren@auburn.edu; felkebg@auburn.edu.

WHY YOU NEED A PDA

You may have seen them advertised on TV, the Internet, and in various magazines and journals. You have seen your colleagues with them. Your children or neighbors may even have them. "They" are Personal Digital Assistants (PDAs), and they are being adopted at an amazing pace by clinicians across this country. Do you have one? If you have one, are you using only 10% to 20% of its potential? Or are you like us—the alpha geeks in your organization—who find this tool an indispensable part of your workday?

This is the first article in a series of 12 that will focus on every aspect of the PDA. We will introduce you to the world of handheld, portable, and even wireless technology. It's a world that is creating quite a stir in health care. Those of you who already own a PDA will learn

advanced skills so that you can harness the other 80% of your PDA's power. Those who are new to the PDA movement will be taken from the initial purchase decision to the selection of software applications and hardware accessories that can maximize your professional and personal efficiency and effectiveness. We will cover topics that include operating systems, hardware selection, finding the best price, clinical and business software, and creating the digital peripheral brain.

We invite you to return to this space monthly. In the near future, we will solicit your clinical experiences with PDAs for sharing with our readership.

PERSONAL INFORMATION MANAGEMENT

Do you own a PDA? From our interactions with thousands of practitioners across the country, we know that pharmacists are eagerly adopting this technology. However, specific data about how many pharmacists use PDAs is lacking.

We know that your physician col-

leagues are beginning to warm up to PDAs. According to a Harris Interactive poll in August 2001, physician use of handheld computing devices increased from 15% in 1999 to 26% in 2001 (<http://www.harrisinteractive.com/news/printerfriend.asp?NewsID=345>). Traditionally, physicians have been reluctant to adopt new technologies and have often required that the worth of a new one be demonstrated before it is accepted. According to the Harris poll, it is estimated that 50% of physicians will use PDAs by 2004 or 2005. Your physician colleagues are beginning to realize the value of these devices, and we strongly recommend that you do the same.

Regardless of the operating system used, PDAs have some features that are consistent across platforms. These features are often referred to as the PIM (Personal Information Management) functions, and they include a calendar, address book, to-do list, and note pad. Do you have a thick day planner with literally hundreds of individuals' contact information painstakingly written on the pages? Is your desk covered with stacks of paper? Is the edge of your computer monitor covered in Post-it notes? Would you like to exchange these artifacts for an electronic device that fits in the palm of your hand and can hold thousands of contacts that can be categorized or randomly accessed? Not only can you replace your paper-based contact list with a smaller and more convenient PDA, but you can synchronize the PDA with your desktop or

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laptop computer, making this information available to you and anyone from your enterprise that you designate.

The paper calendar of the traditional day planner is also a thing of the past for those of us who use PDAs. Events entered into the calendar application of a PDA can be automatically set to recur at intervals defined by the user. For example, the monthly Pharmacy and Therapeutics committee meeting can be entered initially into a PDA and set to recur on monthly intervals, providing you with audible and visual alarms at predetermined times. Having a PDA can make your committed time (ie, your appointments) very manageable.

Your "To Do" list tracks activities that you should address during your discretionary time. After purchasing a PDA and getting comfortable with this feature by recording those important, must do activities, you can get rid of most of the little pieces of paper in your life. When we show pharmacists how to categorize and prioritize their "To Do's," they are amazed by the PDA's capabilities. Peter Drucker is quoted as saying that it is more important to "do the right things than it is to do things right." In other words, if your office is neat but you are not getting your "A" priorities accomplished, you may quickly end up with poor performance evaluations.

If you are a manager, you can use your PDA's "To Do" feature to track the performance of staff who report to you. You can manage your staff by entering their activities and deadlines in the PDA, then track the accomplishment of these tasks. For example, you can enter notes on whether deadlines and quality expectations have been met. Retain these notes and you will be able to generate end-of-the-year personnel evaluations from your PDA.

Our clinical colleagues have found great utility in the PDA's memo application. They keep their PDAs with them during the workday so that they can record notes and details at the moment they arise. Memos are categorized so

that the pertinent facts can be retrieved in an intuitive way when making decisions. In this scenario, the value of the PDA is its portability and its limitless storage capacity. The PDA allows the individual to overcome the limits of human memory and avoid resorting to conjecture at the point of care.

The preceding examples discuss the advantages of a PDA for personal information management. Without a doubt, these are the most basic functions of the PDA, and while they are important, they represent only a fraction of the device's true utility. The real power of a PDA is harnessed when it is used for storing, retrieving, and recording clinical data.

AN INTRODUCTION TO THE CLINICAL USES OF A PDA

Pharmacists spend much of their time identifying, solving, and preventing drug-related problems. Documenting their clinical services to demonstrate their contribution as members of the health care team has become a critical activity. You are probably familiar with the maxim, "If it was not documented, it was not done."

Studies have demonstrated that pharmacists can use PDAs to document a variety of clinical activities in the patient care setting. Software applications that allow for documentation by simply checking the intervention performed can be created or purchased. This information can be synchronized on the desktop computer with other interventions performed, thus efficiently documenting the clinician's patient care activities.

In calculating drug doses, do you use equations that require multiple variables? Are these equations and the appropriate variables stored on numerous laminated sheets that you carry around in a coat pocket or folders? We can direct you to several free applications (eg, Med Calc and Med Math) that each contain more than 40 medical calculations for the PDA. You simply select

the appropriate equation(s) and enter the patient-specific parameters. You can even create your own equations with these applications.

At a time when many of us are suffering from information overload, we recognize that it is impossible to recall all the important details about thousands of diseases, thousands of prescription and over-the-counter medications, and the increasing number of herbal products. The tertiary electronic drug reference capability of the PDA is arguably, at this point in time, the device's most important feature for pharmacists. We would all surely acknowledge that in health care, information is the key to positive patient outcomes. When clinicians have all the information relevant to a patient's care, they can make informed decisions based on a holistic understanding of the patient. Disease and medication compendia that provide this needed information now exist.

Some of these references are free, and some are fee-based. As you might suspect, fee-based references usually provide more in-depth information. As of January 31, 2002, there were 250 medical references available for the Palm operating system (Palm OS). Many of these references contain detailed information on thousands prescription and nonprescription medications. In addition to providing standard information, such as medication dosage instructions and administration information, these references provide contraindications, pregnancy risk factors, drug interactions, and many other categories of information. Most references are updated on a daily basis and thus give the clinician access to the most current information available.

SUMMARY

As you can see, there are many reasons why the number of PDAs sold in US increased from 748,000 in 1998 to 9.6 million in 2001. Individuals are finding great value in these devices as

electronic organizers and more. Essentially, a device that fits in a shirt pocket and is less than one quarter the size of a day planner can store a library shelf of references and organize your life better than ever before. The next challenge is streamlining the documentation of pharmacy clinical services. We believe that, with a PDA, you can accomplish a new

level of patient care and then record this impact with ease.

We hope that we have convinced you that you need a PDA. If you are not yet convinced, we challenge you to follow this series of articles as we discuss the device and its uses in more detail. If you are already convinced, we encourage you to follow this series as well, as

we will describe new hardware and applications that may interest you.

Next month, we will evaluate the two dominant operating systems for handheld computers: the Palm OS (Palm Inc.) and the Pocket PC OS (Microsoft Corp.). This is a very interesting battle. [n](#)

COMING IN MAY

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for Osteoporosis Based on
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