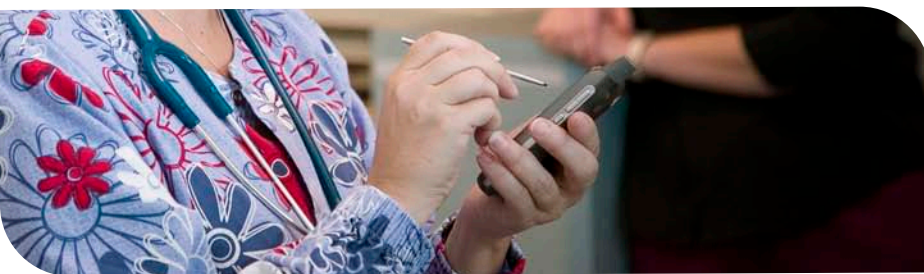# Skyscape References Put Learning Power in Pockets of Drexel Nursing Students

At Drexel University's College of Nursing and Health Professions (CoNHP), hundreds of student nurses are learning to bring volumes of specialized knowledge to bear, right at the point-of-care.

The CoNHP students' status as full-fledged nurses may be a few months or years away. But all are already armed with a tool that will be vital to their professional futures: pocket-sized personal digital assistants (PDAs) loaded with Skyscape medical references. These handheld computers carry all the information once borne by thousands of pages of textbooks - now ready for instant access in mobile form. Skyscape is the leading provider of medical, health, and wellness references formatted specifically for mobile devices

At its campus in the Center City area of Philadelphia, Pennsylvania, the school's nursing program is at the forefront of an information shift that is helping revolutionize healthcare. Thanks go to a Technology Initiative that creates new capabilities for the school in areas such as distance learning, virtual presence - and handheld electronic references.

More than 300 trusted mobile references, including:

Harrison's Manual of Medicine
internal medicine

Red Book pediatrics

The AHA Clinical Cardiac Consult
cardiology

Harriet Lane pediatrics

The Washington Manual
internal medicine

A to Z Drug Facts pharmacy

The AJCC Cancer Staging Handbook
oncology

DSM-IV-TR psychiatry

And many more!

47 full-time faculty and more than 150 adjunct faculty members get handhelds and Skyscape references at no charge through the Technology Initiative.

- Drexel University's College of Nursing and Health Professions

WHY SKYSCAPE?

Fran Cornelius, Ph.D., RN, CoNHP assistant professor in charge of the initiative, recalls how far they've come. "In the old days," she said, "you had to deal with all those heavy reference books, and of course you couldn't carry all the ones you needed. So the students would share them out: 'You bring this one today, and I'll lug this one.' And you used cardboard flashcards to drill all the knowledge into yourself. "We saw how powerful these newer computer-based learning models were. And we said, 'We can do it even better now.'"

So the school furnished its first handhelds with software to nursing students in 2001. However, choosing which references to include proved problematical. For instance, some vendors tried to squeeze printed references into a PDA format without considering differences in screen size and navigation. The results were virtually useless. The school needed references that permitted the user to quickly access important information, designed by a supplier that clearly understood how a healthcare professional needed to access information at the bedside. For Drexel, the choice was obvious. The program quickly settled on Skyscape, with its intuitive, easy-to-use smARTlink navigation, as its main supplier of handheld references.

Skyscape offers the industry's most comprehensive portfolio of trusted medical and nursing references for handheld, PDA, or Smartphone devices. It provides over 300 titles covering 35 medical specialties, including at least 34 references for nursing alone. More than 475,000 healthcare professionals already rely on Skyscape's clinical, drug, and lab references for accurate, confident, informed decisionmaking at the point of care, helping reduce medical errors and improve patient care.

References used in the Drexel program today include Skyscape versions of Diseases and Disorders: A Nursing Therapeutics Manual; Nursing Procedures; Davis's Drug Guide for Nurses; Practical Guide to Health Assessment Through the Life Span; and Nurse's Manual of Laboratory and Diagnostic Tests; as well as Stedman's Medical Dictionary. Students and faculty often purchase additional references as well.

OTHER ADVANTAGES

The excellence of its products was not Skyscape's only advantage. Drexel administrators report they also preferred its consistency and ease of navigation; unique smARTlink™ cross-referencing technology; smARTupdate™, which keeps all references current with up-to-the-minute downloads of the latest material; and capacity for students to make linked notes on bookmarked text passages. Also, unlike other PDA references, Skyscape doesn't tie students down to one preprogrammed path through the material.

Students bring their knowledge-packed PDAs for constant use in classrooms, laboratories, libraries, clinics, and community health centers, as well as for home study. The Drexel program shows them how to use their PDAs and access information in the Skyscape references - all while they're learning how to think like a nurse.

SCOPE AND COSTS

The program now covers every nursing student at Drexel. That includes enrollees in the school's Accelerated Career Entry (ACE), cooperative, and RN-BSN programs, as well as advanced nursing degree candidates. Altogether, more than 600 Drexel students are currently using Skyscape references. The school takes full advantage of Skyscape's flexible institutional discount program. Student costs for PDAs and software references are included in lab fees as part of standard tuition.

In addition, 47 full-time faculty and more than 150 adjunct faculty members get handhelds and Skyscape references at no charge through the Technology Initiative. They receive hands-on instruction via training sessions and monthly lunchtime workshops, and can consult resource materials 24/7 at a site on the faculty intranet.

LESSONS LEARNED

Use of the PDA references is so integral to today's nursing that Drexel has learned to teach their use at the start of each degree program. This usually commences with a course in Nursing Informatics. "The first day of our PDA lab section, we have a stack of six big reference books on the professor's desk," said Cornelius. "And we ask the students, 'Would you rather carry these each time you go to a clinical situation?'" This brings home the value of PDA references very quickly.

In class, students go onto the Web and are guided through downloading and installing their first reference. They then download the rest on their own, in the lab or at home. By courses' end, students become quite skilled at using PDAs. They're simply part of their standard nursing toolset. Said Cornelius, "We train use of the devices in the right context, so the nurse can make decisions based on the valuable information the PDA provides. That's ultimately what's most important: what do you do with that information?"

Of course, there are always minor adjustments. Some students are a bit technophobic; others eagerly adopt new technology. The program has learned to seek the right balance. At first, the program also permitted students to use PDAs of their choice. However, it proved difficult to provide technical support for many different devices. The program now standardizes on Dell Axim handhelds for every participant. Another recent improvement: a growing number of Skyscape handheld titles are available also for the PC desktop. "I'm absolutely delighted about that," says Cornelius. "Now students can use the greater screen size on their desktop PCs to toggle around between different references simultaneously, preparing clinical assignments for the next class day."

BENEFITS AND RESULTS

Overall, the program's effect has been significant. "We can, for one important example, have a real impact in reducing medication errors - at the bedside, right at the point of care," said Cornelius. "The nursing student doesn't have to go all the way down to the nurses' station now, to look up meds in an outdated book."

The convenience of the handheld references also makes it easier for nurses to fulfill one primary task, that of educating the patients. This education even extends to other nurses. "Our students go onto different units of a hospital and quickly become resources for the rest of the staff," Cornelius said. 'Oh, do you have that on a PDA?' 'Look this up on your PDA.' We've had cases where a former student went to work on a unit, and pretty soon all the nurses on the unit were asking for PDAs of their own."

Cornelius says she's constantly recommending Skyscape to other institutional planners who are eager to adopt a progressive program like Drexel's. "As an educator, I'd have to give Skyscape a grade of A-plus. Not just for their reference products, but for their responsiveness to our needs. The openness and willingness to collaborate have been exceptional. "We've tried other vendors. Quite frankly, no one else has even come close."

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- Fran Cornelius, Ph.D., RN, CONHP Assistant Professor at Drexel University