Improving Nursing Practice with Information and Technology

Product Innovation through User Research

Anne Dabrow Woods, MSN, RN, CRNP, ANP-BC
Chief Nurse of Lippincott Williams & Wilkins and Ovid

Mark Barragry,
Director of Strategic Growth Markets at Ovid

Nick Scheponik,
Manager of Market Research, Lippincott Williams & Wilkins and Ovid

Introduction

This paper presents the major conclusions of a continuing program of research into the changes that are taking place in nurses’ use of information resources. It looks at their expectations of how and when access to information fits into their professional lives, and the consequent, rapid evolution of the resources nurses use.

This paper is based on research conducted to support product development at Lippincott Williams & Wilkins (LWW) and Ovid, part of the Wolters Kluwer Health Division family of businesses. Both LWW and Ovid work with customers globally to ensure the availability of information resources that support better patient outcomes, deliver clinically-relevant resources based on reliable research, and, wherever possible, use evidence-driven methodologies.

In order to achieve our objectives for our nursing products and customers, since 2007 LWW and Ovid have conducted a continuing global research program to analyze how nurses access and use information for practice, education, and professional development. In addition, LWW and Ovid investigate how technology influences information access.

This paper is based on the analysis of the research and provides a summary of LWW’s and Ovid’s work and conclusions relating to the provision of products and services for nurses in North America. Our findings focus on:

- Where and how nurses access information
- How nurses use information
  - For professional development
  - To change practice
  - To improve patient outcomes

In addition, information usage and access are explored.

Context

Nurses make up the single largest group of healthcare providers in the world today. According to the latest estimates, there are 13.1 million nurses globally, with 3.1 million in the United States alone.¹

Nursing practice has changed substantially since the days of Florence Nightingale and her publication “Notes on Nursing.”² Systematic reviews produced by the Cochrane and Joanna Briggs Collaborations, as well as other initiatives from many prestigious universities around the world, have brought evidence-based, best practice information into the hands of direct care givers.

Today, healthcare providers and institutions strive to provide cost-effective, efficient patient care that is backed by and based upon reliable research and best practice. Credible, easily accessible and actionable information must be delivered to nurses in a form that is tailored to the specific context of its use.
Whether a nurse is working in an acute care institution, in research, or in primary care has an impact on the selection and function of information and, consequently, the means of its delivery, structure, and presentation.

Even five years ago, information was generally only accessible to nurses in a print format via journals or books. The nurse had to either purchase a book or a journal subscription or go to the library to access the information.

The depth and breadth of published materials was truly inaccessible unless the nurse took the time to conduct a detailed search, which usually required a specific trip to the library, or at least to consult a more local repository of information. Then, as now, nurses did not often have time for this type of detour in their daily practice.

“The nurse is working in an acute care institution, in research, or in primary care has an impact on the selection and function of information and, consequently, the means of its delivery, structure, and presentation.”

The advent of technology and the Internet with Web 2.0 interactivity has streamlined the process of researching information. Does this mean that nurses are abandoning print products in favor of using the Internet to garner information? How and where are nurses accessing information? What do nurses do with the information once they have it?

It is important for information providers, healthcare facilities, and academic institutions to have a clear understanding of how information is accessed and utilized. If patient care is to be improved and professional development to be supported, a thorough knowledge and understanding of information access and use is of central importance.

Information Access: The First Step to Providing Evidence-Based Care

Where are nurses accessing information? How do nurses search for information and what do they do with it once they have found it?

The nature of the information required is significantly determined by the context in which it is to be used. In asking where nurses typically access print and online information, the answers the LWW and Ovid studies received were not surprising: at home, at work, and in the library.3

However, the implications are far reaching and point to new challenges and opportunities in delivering quality healthcare.

Where do you usually access information? (n=1,018)

<table>
<thead>
<tr>
<th>At home</th>
<th>At work</th>
<th>At library</th>
</tr>
</thead>
<tbody>
<tr>
<td>84%</td>
<td>68%</td>
<td>76%</td>
</tr>
</tbody>
</table>


At home

Professional development and staying up to date on healthcare and nursing issues remain two of the more common reasons that nurses access information at home. Continuing education (CE) activities and career building experiences are commonly completed via print nursing journals.

Nurses who subscribe to a print journal will often complete the CE activity in print. However, those who do not subscribe to a particular journal search for CE topics online and then complete the assessment online.
Nurses who are looking to change their place of employment will search for alternatives online at home. They visit job search sites or go directly to a hospital career site to look for potential job opportunities.

Nurses use the Internet at home to stay up-to-date on the latest information in healthcare and nursing. They often visit news related sites to find the latest information, but they want the information to be written in such a way that it ties directly to nursing practice.

Whether at home or at work, nurses are busy people. Their general lack of time has led to a very strong preference to have information pushed to them, rather than pulled in by searching, and is a common theme in all of the research conducted. Nurses simply do not want to take the time to search for the latest clinical news or practice updates. Instead, they rely on resources like electronic newsletters that can deliver relevant information that can be accessed at their convenience.

If a nurse has a particularly challenging case or is faced with care of a patient with an unfamiliar diagnosis or treatment, our research has confirmed that, increasingly, a nurse will search using online resources at home, taking that information and using it in practice the next day.

“*If a nurse ... is faced with care of a patient with an unfamiliar diagnosis or treatment, our research has confirmed that, increasingly, a nurse will search using online resources at home, taking that information and using it in practice the next day.*”

Actually finding the right information is challenging. Our research shows that nurses are often frustrated with being unable to find answers to their questions and will accept information if it appears to be trustworthy, although the actual reliability of what they find can be questionable.

Nurses, of course, want credible and reliable information but are sometimes unsure which information sources can provide it. They often do not know where to begin their research or how to extend their investigation into a specific topic.

### Reasons for using print & online resources

<table>
<thead>
<tr>
<th></th>
<th>At home</th>
<th>At work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay current with nursing news</td>
<td>82%</td>
<td>59%</td>
</tr>
<tr>
<td>Research for pt. case</td>
<td>43%</td>
<td>81%</td>
</tr>
<tr>
<td>Earn CE</td>
<td>86%</td>
<td>47%</td>
</tr>
<tr>
<td>Shop online for work items</td>
<td>81%</td>
<td>35%</td>
</tr>
<tr>
<td>Read pertinent articles</td>
<td>77%</td>
<td>60%</td>
</tr>
<tr>
<td>Visit non-nursing news sites</td>
<td>96%</td>
<td>21%</td>
</tr>
<tr>
<td>Look for career opportunities</td>
<td>94%</td>
<td>19%</td>
</tr>
<tr>
<td>Network with friends</td>
<td>96%</td>
<td>15%</td>
</tr>
</tbody>
</table>


With the exception of PubMed®, most nurses do not have access to traditional bibliographic databases at home, and there is a widespread perception, particularly amongst nurses who have not recently been through a formal educational process, that this type of search tool is not relevant to a clinical or practice question.

Consequently, many nurses rely on general search engines like Google for their work at home. Our research supports the unsurprising but nonetheless worrying conclusion that Google is the nurse’s preferred search engine⁴, although amongst nurses with higher academic attainments PubMed and MEDLINE® are also widely used.

It is a major part of both LWW’s and Ovid’s mission to ensure that nurses, whether at the bedside or researching after hours, have access through their institutions to the validity-assured resources necessary to guarantee the quality of the care they give and to improving patient outcomes.

### At work

LWW’s and Ovid’s research has consistently demonstrated that there are two types of
information nurses need at work: synoptic materials and in-depth content.

When nurses are caring for patients, time is of the essence. Information needs to be available quickly and concisely and must be readily applicable to patient care. Synoptic content is written in a quick-read format that gives the nurse the “need-to-know” information that can be easily applied to a clinical situation. Drug information, disease monographs, step-by-step procedures, and treatment algorithms can be quickly accessed and put into practice.

Based on our research, the following types of synoptic content are the most frequently used information formats by nurses.

UptoDate®, a medical-based point of care tool, is being used by many nurses. However, nurses have stated that although the content meets their disease information requirements, they also require material that is specific to nursing practice. For example, they would like to have the nursing-specific implications of medical diagnosis and treatment decisions available.^5

If time allows or the context demands it, nurses conduct more in-depth research. In this situation, full-text articles and books accessed through their hospital library system or within the patient care unit are preferred.

Although access points vary, we have again found Google is often used at work.

Our research shows that the majority of nurses do not know how to conduct a proper search or literature review that produces results that are relevant to their inquiry. Also, they are unclear on how to evaluate their research for validity and reliability.^6

The disparity between the critical nature of a nurse’s need for appropriate information and the range of ability levels in how to effectively search and evaluate what they find presents a major challenge for nursing and hospital administrations.

This context has led LWW and Ovid to the development of a series of next-generation solutions designed to bridge the gap between what nurses need and the ability of previous product paradigms to deliver it.

New technological and information science approaches, including simplified search tools, underpinned with new nursing specific ontologies and lexica, semantic searching, and smart navigation all have a role to play in solving this problem and speeding the nurse to the right information source. These and other functional approaches feature centrally in all of LWW’s and Ovid’s nursing products and tools.

"Our research shows that the majority of nurses do not know how to conduct a proper search or literature review that produces results that are relevant to the their inquiry."

Turning to a related aspect of nurses’ professional lives, healthcare institutions are required to provide and track staff development activities. These activities update nurses on new standards of care, training on technology and equipment protocols, and revised policies.

In addition, clinical staffs are frequently required to complete yearly competency evaluations that validate proficiency in designated clinical areas and ability in performing set procedures.

Many healthcare institutions use Learning Management Systems (LMS) to administer and track staff development and competency activities. The LMS produces reports that can be easily accessed for reporting to state, national, and other certification bodies.

While many large healthcare institutions use an LMS, smaller institutions often do not have the luxury of purchasing such a system. They rely on home-grown or manual systems to store their staff development and competency data.

The Changing Role of the Library

Changes in the way that nurses access information have had a profound effect on the function and position of the library in nursing
schools, hospitals, and universities. The stereotype of the librarian as the keeper of the physical journal and book collection has been replaced by a dynamic role with responsibility for the selection of electronic and print-based resources.

Librarians are now tasked with helping nurses understand how they can best use the resources available to them to improve the way they work and deliver better patient outcomes.

With this rapidly changing function, the librarian’s work extends well beyond the walls of the library and out into direct contact with nurses in all their modes - in practice, in education and research, in CE (at home as well as elsewhere), and as instructors and as managers and administrators.

“Librarians are now tasked with helping nurses understand how they can best use the resources available to them to improve the way they work and deliver better patient outcomes.”

In this role, whether delivering bedside access to resources through the use of Workstations on Wheels (WoWs) or via nurses’ own smart phones, or working with nursing management on approaches to attaining and maintaining Magnet® status, librarians have a pivotal position in their institutions and have been central to LWW’s and Ovid’s research.

Starting in 2007 with an extensive series of librarian and nurse interviews, LWW’s and Ovid’s research has delivered a number of conclusions about nurses’ expectation of resources delivered through their institutional information infrastructure.

Three central messages are clear:

- **Content:** Nurses prefer all their resources to be available to them in a single information solution.
- **Usability:** That information solution needs to be available in a format that is simple to use - but intelligent enough to respond usefully to searches that are incomplete or imperfect.
- **Work process:** The solution needs to plug directly into the way that nurse’s work; it must not require them to change their existing work practices and processes.

Looking in more detail at the information nurses need, the following are the most requested generally:

- Information that is concise, easily accessible, and supports clinical decision making and practice
- Evidence-based guidance and practice resources
- Quality-assured reference and research materials for education and ‘deep dive’
- Access to continuing education materials
- “Google-like” online tools that take them directly to content that provides the right answer

In the educational and professional context:

- Peer-reviewed high-quality journal literature
- Historical as well as current content
- Texts and supplemental reference material
- CE/Continuing Professional Development content, tests, and accreditation
- Professional journals

At the bedside:

- Drug dosage, delivery, and interaction information
- Clinical Decision Support (CDS) tools
- Specific material for Allied Health
- Specific information for maternity and infant care
- Patient advisory material
- Anatomical reference information
Considering what makes resources truly easy to use, nurses ask for the following features:

- One-stop, simple access to all information
- Bibliographics/Abstracting & Indexing information that takes the nurse to full text
- Synoptic content wherever possible
- Resources that are trustworthy, and verifiably so
- Tools that let nurses keep hold of what they found and use what others recommend

Print or Online: That is the Question

While many professions have quickly adopted the online medium for content delivery and use, nursing has been a little slower in moving to a predominantly online content model in North America. It is unclear why this is the case: some have suggested that it is because the average age of the nurse is higher than in other professions, or because healthcare and nursing processes are complex and online models have not until recently been sufficiently rigorous to ensure patient safety. It is likely that no single explanation is complete.

According to readership surveys on Nursing2010 and the American Journal of Nursing, 79% of nurses surveyed preferred reading full-text, in-depth articles on specific topics in print rather than online. However, online resources were favored if a nurse needs to search for a particular topic or for a topic collection.

Why do nurses go online? Our research reveals that nurses go online for a variety of reasons. Of those who go online for professional purposes, 96% do so to stay up to date with the latest nursing news and/or to research information regarding specific patient cases.

The top professional websites that are visited by nurses include:
- NursingWorld.com
- WebRN.com
- NurseZone.com

Our research shows that 89% of nurses who visit online nursing resources visit two or more of these sites. Nurses frequently visit non-nursing sites as well with Google® being the most visited.

Going online for specific reasons (n=1,016)

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay up to date with nursing news</td>
<td>96</td>
</tr>
<tr>
<td>Read articles related to their specialty</td>
<td>92</td>
</tr>
<tr>
<td>Research information for a specific patient</td>
<td>89</td>
</tr>
<tr>
<td>Earn CE credits</td>
<td>85</td>
</tr>
<tr>
<td>Visit non-nursing news sites</td>
<td>73</td>
</tr>
<tr>
<td>Shop for work-related items</td>
<td>60</td>
</tr>
<tr>
<td>Look for career opportunities</td>
<td>56</td>
</tr>
<tr>
<td>Network (Facebook, MySpace, AIM)</td>
<td>43</td>
</tr>
</tbody>
</table>


Yahoo!®, MSN®, WebMD®, Amazon®, eBay®, Facebook®, CNN®, MySpace®, and AOL® were also represented in the research. The variety of online resources being used by nurses speaks to the varying informational needs nurses have.

Overall, electronic newsletters are quickly becoming more popular than their print versions. In the research nurses echo this citing they provide cutting-edge and up-to-date healthcare news without requiring nurses to search for it. Electronic newsletters are the perfect venue for delivering clinical and professional development information directly into the hands of nurses.

According to a recent survey, 68% of nurses surveyed subscribe to at least 2 e-newsletters and 43% receive 3 or more. Overall, e-newsletters are perceived as being very useful. They provide nurses with current information and news as well as deliver continuing education opportunities directly to them.

When nurses in the survey were asked why they would delete an e-newsletter, 35% said they would do so if they did not have enough time to...
read it. When asked what would make an e-newsletter better, the majority of respondents said they wanted the e-newsletter to focus on clinical topics and diseases while providing content not found with a journal subscription.

“...Online resources were favored if a nurse needs to search for a particular topic or for a topic collection”

Nurses perceive e-newsletters as providing bonus content that is different than what they receive in a journal. New media features such as procedural videos that can be accessed via the e-newsletter are of particular interest. Since nurses want information pushed to them rather than having to search for it, electronic newsletters appear to be a perfect medium.

Whether proactively looking for new job opportunities or not, nurses are generally interested in staying current on the latest trends in the job market. They are also interested in advancing their careers through further education.

Job searches and career advancement opportunities are frequently done online at home. When we asked nurses whether they were currently searching for a new nursing job, 48% said they have looked within the past 2 years while 25% were currently looking for a new job.

Are you currently seeking a new job? (n=808)

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, within the past 2 years</td>
<td>48%</td>
</tr>
<tr>
<td>Yes, currently</td>
<td>25%</td>
</tr>
<tr>
<td>Yes, within the past month</td>
<td>7%</td>
</tr>
<tr>
<td>Yes, within the past 2-3 months</td>
<td>7%</td>
</tr>
<tr>
<td>Yes, within the past 4-6 months</td>
<td>7%</td>
</tr>
<tr>
<td>Yes, within the past 7-12 months</td>
<td>6%</td>
</tr>
</tbody>
</table>


Finding a new job can be difficult; nurses rely on the Internet as well as networking with other colleagues to help them find a new position. Some nurses still rely on print regional newspapers or journals to help them find a job. For a more thorough job search, nurses are using career sites like Monster®, CareerBuilder® and Nurse.com®.

Social Media and Handheld Devices - Information on the Go

While social media technologies have emerged rapidly as tools to maintain and grow personal networks, they are also slowly becoming a viable choice for expanding a nurse’s professional knowledge base and network.

<table>
<thead>
<tr>
<th>Professional use of social media (n=702)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn about the profession</td>
<td>29%</td>
</tr>
<tr>
<td>Ask nursing-related questions</td>
<td>26%</td>
</tr>
<tr>
<td>Learn about upcoming conferences</td>
<td>26%</td>
</tr>
<tr>
<td>Access additional content online</td>
<td>23%</td>
</tr>
<tr>
<td>Form opinions about products/services</td>
<td>22%</td>
</tr>
<tr>
<td>Network with other nurses</td>
<td>22%</td>
</tr>
<tr>
<td>Keep in touch with colleagues</td>
<td>14%</td>
</tr>
<tr>
<td>Connect with colleagues</td>
<td>10%</td>
</tr>
</tbody>
</table>


LWW’s and Ovid’s research has shown that gateways such as Facebook, Twitter®, and other social media are gaining more attention and use in distributing the need-to-know information nurses find valuable.

While nearly one half of the over 700 nurses surveyed use social media for personal reasons, 31% acknowledged its use for professional means. It might be expected that the most recently launched social media tools would be the most popular. However, respondents cited listservs and YouTube® as the most frequented. Listservs cater to nurses’ need to have information pushed to them, whereas YouTube offers readily available content for educational and training purposes.10
Our research also noted that blogs are becoming more and more popular as they reinforce the “nurses teaching nurses” concept that has become the cornerstone of how the profession prefers to learn.

Turning to the use of handheld and mobile devices, including smart phones, by nurses, managing schedules, communicating with colleagues, and entertainment are cited as the top reasons for using these technologies. Nurses are also using them for documentation, reference, educational pursuits, investing/financial concerns, and shopping. In asking nurses how often they use a handheld device, 38% are using them on a daily basis.11

Within the professional context, researching general treatment knowledge and finding patient information were the most frequent answers given.

We believe that use of mobile devices is also growing quickly as it is a medium that supports access to synoptic content. Clinicians of all types use mobile devices in practice for accessing information that can be immediately applied to the clinical situation. Drug information, disease information, therapeutic recommendations, and differential diagnosis are the most commonly researched topics by nurses.

<table>
<thead>
<tr>
<th>Commonly used mobile apps (n=230)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research general knowledge on treatments</td>
<td>61%</td>
</tr>
<tr>
<td>Look for patient education information</td>
<td>48%</td>
</tr>
<tr>
<td>Research a specific patient case</td>
<td>36%</td>
</tr>
<tr>
<td>Read abstracts of journal articles</td>
<td>25%</td>
</tr>
<tr>
<td>View multimedia, podcasts</td>
<td>19%</td>
</tr>
<tr>
<td>Search for articles in journal I do not subscribe to</td>
<td>19%</td>
</tr>
<tr>
<td>Access archived content</td>
<td>11%</td>
</tr>
<tr>
<td>Read full-text articles</td>
<td>10%</td>
</tr>
<tr>
<td>Do no access medical info via mobile</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: Mobile Devices: Professional Usage and Implications, LWW unpublished internal report, March 2009

Nurses employ a variety of clinical applications on their mobile devices. The most commonly used application is the drug database ePocrates.12 Use of other applications varies depending on the experience and position of the individual. However, underlying these differences is a strong preference for applications that offer synoptic content that can easily be accessed, reviewed, and immediately applied to practice.

What are the most important attributes when choosing a mobile application? Ability to read the screen, ability to search for content, ease, cost and speed of the download are all ranked similarly. Visual appeal is less important to the clinician than other attributes.13

### Importance of mobile app attributes (n=230)

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to read text on screen</td>
<td>4.86</td>
</tr>
<tr>
<td>Ability to search for content</td>
<td>4.78</td>
</tr>
<tr>
<td>Ease of downloading</td>
<td>4.78</td>
</tr>
<tr>
<td>Cost of download</td>
<td>4.67</td>
</tr>
<tr>
<td>Speed of downloading content</td>
<td>4.56</td>
</tr>
<tr>
<td>Visual appeal</td>
<td>4.01</td>
</tr>
</tbody>
</table>

Scale: 1 (not at all important) - 5 (very important)

Source: Mobile Devices: Professional Usage and Implications, LWW unpublished internal report, March 2009

Until recently, content was written by an author and delivered either in a book or journal by a publisher. There was no opportunity to ask questions of the author, pose alternate points of view, or add additional information to the content. The Internet has changed how we develop, deliver, and receive content.

Blogs have become one of the fastest growing social media venues in recent history. According to a study by comScore MediaMetrix, blogs attracted 77.7 million unique visitors in the United States compared to 41 million by Facebook.

Nurses are using blogs to keep up to date with what is going on in healthcare and the profession. AllNurses.com, NurseZone, and AJN’s blog, “Off the Charts” are some of the top blogs used by nurses today.
The Future of Information Access

So what does the future hold for information access and use? What impact will the future have on how LWW and Ovid develop content and provide it to care providers? Agility will be the presiding theme across content development, delivery, and utilization.

Agile content development

The paradigm of authors developing content and then having it delivered by a print journal or book is changing. Authors will still develop content but it will be developed and tagged so it can be delivered in numerous formats. User generated content will become more popular and widely accepted.

Simultaneous writing and peer reviewing will allow content to be delivered more quickly and that will keep the content up to date. Content that is published only online will become more accepted in the future.

Agile content delivery

Information is not static and can no longer be delivered in only one format, so agile publishing practices are needed to deliver the evidence-based, best practice information nurses expect. Content will be developed and tagged in such a way that delivery via print, online, and as a downloadable application will become the norm. Rich media, including webcasts, podcasts, video clips, and animation, will be a core part of all content sets.

Nurse and patient education will move from a two-dimensional view to a three-dimensional one.

Information providers will take advantage of new technology, such as e-books and the recently released Apple® iPad, to deliver content to end users. Information exchanges will be fully interactive adding to the end users experience.

Creating and providing content to nurses that is agile, credible, and fits into their workflow, gives nurses the tools they need to improve patient outcomes.

Opportunities to Improve Practice, Improve Patient Outcomes

Patients rely on nurses to provide them with the best care possible and nurses strive to deliver on this point. With healthcare information changing on a daily basis, it is difficult to stay up to date with the latest practice breakthroughs and changing standards of care. It is incumbent on healthcare information providers to deliver healthcare information in a format that meets the needs of all nurses.

“Creating and providing content to nurses that is agile, credible and fits into their workflow, gives nurses the tools they need to improve patient outcomes.”

How will healthcare institutions respond to this changing paradigm?

Healthcare institutions are tasked with delivering cost effective and efficient care to their patients. Having systems in place that provide clinicians with the level of informational access that is required for a particular use case is of particular importance, especially with the integration of electronic medical records.

Having immediate clinical answers, access to the latest standard of care, and a documentation system that ensures maximum compliance and reimbursement is of the utmost importance to a facility’s economic survival.

Staff development instructors and educators have the opportunity to leverage the Internet and social media venues to educate nurses with an interactive approach. Healthcare facilities can keep their nurses up to date on the latest policy and practice updates. At the same time, individual nurses can use social media and career and CE resources to network with colleagues and further their professional development.
Healthcare is one of the most challenging issues facing the world today. Without a doubt, ensuring that we put the right information resources, including evidence-based materials, into the hands of nurses and other health professionals will improve practice and patient outcomes.

NOTES


5 Nurse Workflow Study, unpublished LWW internal report, January 2009


11 Mobile Devices: Professional Usage and Implications, LWW March 2009

12 Mobile Devices: Professional Usage and Implications, LWW March 2009

13 Mobile Devices: Professional Usage and Implications, LWW March 2009
About this White Paper

This white paper was the basis of a Webcast called Improving Nursing Practice with Information and Technology broadcast on April 29, 2010.

- To view the archived Webcast, register here; once you are registered, you can view the webcast on demand (archive available through April 2011)
- To listen to the podcast version, click here (link will open with iTunes) (podcast version will be available May 2010)

Nursing Resources at LWW and Ovid

Visit www.nursingcenter.com to sign up for Lippincott NursingCenter eNews, a free e-newsletter delivered every other week, packed with time-saving clinical and topical news, research findings, new CEs and articles, job opportunities, updates, and more.

Visit www.ovid.com/nursing for more information about Nursing@Ovid and the books, journals and databases available for subscription and purchase at your institution.

About Wolters Kluwer Health

Wolters Kluwer Health is a leading provider of information and business intelligence for students, professionals and institutions in medicine, nursing, allied health and pharmacy. Major brands include traditional publishers of medical and drug reference tools and textbooks, such as Lippincott Williams & Wilkins and Facts & Comparisons®; and electronic information providers, such as Ovid®, UpToDate®, Medi-Span® and ProVation® Medical.

Wolters Kluwer Health is part of Wolters Kluwer, a market-leading global information services company. Professionals in the areas of legal, business, tax, accounting, finance, audit, risk, compliance, and healthcare rely on Wolters Kluwer’s leading, information-enabled tools and solutions to manage their business efficiently, deliver results to their clients, and succeed in an ever more dynamic world.