

# What's new in wayfinding?

Developments in hospital signage

By Randy Cooper & Craig M. Berger



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represent. For example, environmental leadership can be demonstrated by making sure signage and other wayfinding elements incorporate these features whenever possible:

- Paint systems that are low-pressure, high-volume and water-based;
- Low volatile organic compound paints and sealants;
- Modular products with paper or other recyclable inserts that allow signs to remain undisturbed when being updated;
- Energy-efficient lighting through such technologies as light-emitting diodes and solar power sources; and
- Screws instead of glues for assembly and mounting.

**Handheld technologies.** Health care facilities have been experimenting with handheld units tied to ceiling-concealed modules for interior use.

These systems are preprogrammed to various destinations along predetermined routes. From a technology standpoint, the same radio-frequency identification (RFID) systems that track equipment, beds and even personnel can be utilized as a foundation for a visitor wayfinding system.

Given their complicated medical terminologies, endless supply of abbreviations and mazelike traffic patterns, it's no wonder that complex medical facilities often cause patients and visitors to get lost, frustrated and resentful.

Today's health care design is driven by sustainability, new technologies and user-friendly environments. But many hospitals utilize the same basic signage systems that have been in place for decades.

However, there are many areas where health care wayfinding can be updated and improved to close the gap on advances in overall hospital design.

## Closing the gap

New developments in wayfinding include the following features and technologies:

**Green design.** Choosing a design firm that has experience using green products and fabrication processes can keep a wayfinding program from adding to the already large carbon footprint most hospitals

represent. For example, environmental leadership can be demonstrated by making sure signage and other wayfinding elements incorporate these features whenever possible:

In one variation, an RFID-based system uses a handheld “torch” to activate a marker that gives an audio response. Audio signs failed in the past because they were mainly based on motion detection activation and became a nuisance. However, this new technology, which is aimed first at the visually impaired, allows only those carrying the torch to activate the devices.

Other facilities are researching smart camera phones that read data tied to a URL address and bring up a picture or text keyed to a decision point. This will gain traction as phones become smarter, faster and are equipped with universal platforms.

**High-definition displays.** Perhaps no wayfinding technology is more user friendly yet underutilized in health care facilities than high-definition (HD) displays.

Liquid crystal displays (LCDs) and plasma monitors are limited only by the software that’s available and the designer’s imagination. For example, a television can be used in an emergency room lobby to help visitors pass the time while a split-screen view can be used to convey information such as Health Insurance Portability and Accountability Act policies, triage statements, separate billing policies and any other information that would be useful to the audience.

Used as welcome centers, HD displays can provide the time and weather, a list of daily events, directories, floor plans, service line promotions and videos set up by the marketing department. HD units also can be butted side by side as transom-mounted clusters that utilize icons, logos, colorful text and arrows for directional needs.

LCD and plasma monitors can be used in cafeterias to list food choices, prices and images of attractively plated meals. By combining this with a touchscreen kiosk, nutritional information can be supplied on demand, updated for the appropriate meal and menu with no additional cost.

HD technology also is being used along with life-safety plans to alert patients and caregivers to emergencies. At the push of a button, all monitors around a facility can be updated with emergency weather conditions or can provide directions during a catastrophic event. Likewise, several companies offer a standard monitor to mount next to the door of conference rooms, classrooms and boardrooms to show a schedule of events that can be updated from a centralized computer.



PHOTO COURTESY OF CHYRON

Perhaps no technology is more user friendly yet underutilized in wayfinding than high-definition displays.



PHOTO BY RANDY COOPER

Electronic message center technology can be used to communicate in multiple languages with reinforcing information provided by symbols, color coding and comprehensive room numbering.

**Limited English proficiency (LEP) and limited reading ability.** According to The Informatics Review, about 20 percent of the U.S. population is functionally illiterate in English; nearly half cannot read well enough to find a single piece of information in a short text, nor can they make low-level inferences based on what they read. Moreover, 75 percent of adult Americans with chronic health conditions scored in the lowest two literacy levels in a national literacy survey.

To remedy this, many health care organizations translated their signage into the languages most frequently encountered by the organization. Another option is the use of Universal Signage, which uses symbols instead of words. Symbols for a variety of terms used in health care facilities can be found on the Hablamos Juntos Web site on Language Policy and Practice in Health Care ([www.hablamosjuntos.org](http://www.hablamosjuntos.org)).

Such pictograms become increasingly important as facilities evolve to serve more than two dominant languages because signs depicting four or more languages quickly become visually overwhelming and expensive. This guidance should also be applied to written communications, phone translation services and staff training. These icons supplement other universal symbology systems such as Department of Transportation standards and Occupational Safety and Health Administration-required icons.

**Maps and user guides.** Fewer than half of all hospitals currently provide basic user guides and maps to aid in wayfinding. However, they can provide valuable assistance to patients and visitors and are fast becoming a necessity. Health facilities professionals should keep the following in mind:

- Is wayfinding information given out at the time of appointment or is a reminder adequate? In addition to time and department name, the flyer or brochure should direct people to a specific parking area, a designated door and a specific desk.
- Overly complex or dated maps are worse than no maps. For instance, one health facility used computer generated drawings that showed every room and door, resulting in a level of complexity that even confused insiders.
- Which things need to be in multiple languages? If signs communicate in more than one language, supportive material should too.
- Terminology in print materials must be consistent both within itself and with signs. Patients cannot be told to go to "Outpatient Registration" and then be expected to know they should use the entrance labeled "Day Surgery."



PHOTO COURTESY ROCKDALE HOSPITAL, CONYERS, GA., COLLATERAL MATERIAL BY MEDMAPS INC.

Less than half of all hospitals currently provide basic user guides and maps to aid wayfinding, such as these printed guides in English and Spanish.

**Touch-screen kiosk units.** Electronic kiosks are moving well beyond the simple directories of the past and are now becoming information systems that link departmental information with wayfinding and can also be used to convey donor information, physician referral programs, maps and even provide a virtual guided tour along predetermined routes to specific destinations. Most kiosk-based systems are also integrated into the health care facility's Web site, allowing a seamless transition between the virtual and physical worlds.



PHOTO BY RANDY COOPER

Signs can be designed to have minimal environmental impact, such as those featuring reusable holders that accept cardstock inserts.

Options available for kiosks include touch screens, interactive maps, printers and multilingual audio. The kiosks also can be housed in desks and walls as well as in freestanding units. These units utilize hardware and software with which most IT departments are familiar and can be linked and remotely updated. Software companies have also developed standardized platforms to drive kiosk design and can provide complex search programs for wayfinding.

A common request is for hard copies of the information presented on screen. That can be easily accomplished, but facilities professionals should be prepared to keep the printer supplied with paper, ink and have a trash can close by in case kids use it to entertain themselves.

**Online information.** Again, it's important to make sure the information and terminology is consistent with information on signage and in print materials. For each destination, a Web site should show patients and visitors

where to go, what parking area to use, what door to enter and the hours the entrance will be open. Increasingly, people use online services to get where they're going, so give a street address rather than a central mail drop or post office box. Hospital Web sites also need to give addresses of off-site clinics, urgent care centers and affiliated services.

Web sites also can be designed to be interactive, allowing the user to scroll over a site map where a photo of the building, building name, address and its function pop up to help visitors become familiar with complex campus settings. As with any communicative tool, care should not be limited to the initial launch but also to keeping the sites up to date.

If online tools are linked to touch technology in a hospital kiosk, health facilities professionals need to keep in mind that a touch-screen interface does not work like a typical computer interface. Web sites available at on-site kiosks must be designed to be friendly to the touch of the finger versus the precision of a mouse or roller ball, and pull-down menus and drag-and-click items should be avoided.

## Sidebar - Measuring effectiveness of a wayfinding system



PHOTO BY CRAIG M. BERGER

An integrated approach to wayfinding includes signs, print and a Web-based system that can be accessed from an information kiosk.

In the past, environmental graphic designers used mostly experiential data, staff surveys and their own experiences to formulate an educated guess about the effectiveness of specific wayfinding approaches. Today, environmental graphic designers are involved in research aimed at the following:

- Establishing benchmarks to substantiate return on investment (ROI) of improved wayfinding;
- Using project stakeholders to measure effectiveness; and
- Evaluating products and processes that work through specific field observation and measurement.

The most important outcome of this research has been a concerted strategy toward the integration of all human and physical components of wayfinding. Thus, instead of the engineering department handling signs, information technology handling information disseminated at kiosks and on the Web, and marketing turning out brochures and on-site user guides and maps, one organizing group manages a complete and consistent wayfinding system.

Another major result of research is for designers to think well beyond signs and toward a management approach to wayfinding that incorporates all employees, including help desk personnel and interpreters. This approach has resulted in some of the greatest

gains in facility efficiency as doctors and nurses are freed from providing directions in favor of more profitable pursuits.

## Sidebar - Codes, standards and best practices



PHOTO BY CRAIG M. BERGER

The ADA now clearly allows for text in raised and (grade two) Braille.

A recent trend is the movement of health care facilities toward getting a handle on Americans with Disabilities Act (ADA) standards for signage. With the federal justice department about ready to approve the new ADA Accessibility Guidelines (ADAAG), a number of changes will affect signage design and placement, including the following:

- **Size and placement standards revisions.** The new standards include changes in the height of signs off the floor and distance of signage elements from one another.
- **Clarification on typestyles.** The new ADAAG includes greater restrictions on tactile type, but increased flexibility on how type can be utilized on signage. ADA now clearly allows for text in raised and (grade two) Braille for the visually impaired with a parallel system for the sighted.
- **Braille placement.** New standards include changes in the position of Braille to the floor and the distance of Braille from other surface elements.

Some states, such as California, also are developing their own ADA standards, which will be separate from the ADAAG standards.



**Randy Cooper** is president of Cooper Signage & Graphics Inc., based in Loganville, Ga., with locations nationwide. He can be contacted via e-mail at [rcoper@wayfindingforhealthcare.com](mailto:rcoper@wayfindingforhealthcare.com).



**Craig M. Berger** is director of education and professional training for the Society for Environmental Graphic Design, Washington, D.C. His e-mail address is [craig@SEGD.org](mailto:craig@SEGD.org).

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