## Special Report

# Healthcare Without Bounds: Trends in Mobile Computing

**ABOUT SPYGLASS CONSULTING GROUP**

*Spyglass Consulting Group was founded in August of 2002 by technology industry veteran Gregg Malkary, a one-time Associate Partner at the venture capital fund Outlook Ventures in San Francisco. Malkary, who presently serves as Managing Director for Spyglass, has also held consulting and senior management operating positions in public and private technology companies including Exodus Communications, Liberate Technologies, Edify, SkyTel Communications, and Accenture. He has an MS and BA in computer science from Brown University, and was the recipient of the North American Philips Corporation Fellowship for his research work in graphical simulation environments.*

"Healthcare Without Bounds: Trends in Mobile Computing" is 54-page report detailing the results of a study conducted by the California-based firm Spyglass Consulting. Between June and October, 2003, Spyglass Managing Director Gregg Malkary (below) interviewed more than 100 practicing clinicians at leading health care institutions nationwide; his primary subject was the use of handheld technology in the health care industry, including its attendant benefits and limitations. The end product, summarized below, may be purchased online from Spyglass (http://www.spyglass-consulting.com/) for $1,195.

## Content Review

Broadly speaking, "Healthcare Without Bounds" is divided into three sections. Malkary begins with a brief

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discussion of the myriad forces driving the medical community in the direction of PDA technology. Malkary suggests that rising health care costs, a growing geriatric population, and the dizzying speed with which medical technology continues to advance have combined to create a need for a degree of efficiency that paperbased processes cannot satisfy. The report goes on to posit handheld computing as one possible solution to this dilemma. The bulk of the work is concerned with a much more detailed exploration of the ways in which handheld technology is infiltrating health care at every level. Malkary identifies eight categories of handheld applications representing the present and future of the PDA in medicine, among them e-prescribing, electronic medical record management, decision support, and other concepts familiar to regular MD Net Guide readers. His review is concise and well organized; for each type of technology, Malkary offers a rough overview, several specific examples (including images and case studies illustrating products at work), and—most useful of all—an examination of the concerns that have kept physicians from completely embracing the application. Highlights of this, by far the largest of the report's three sections:

- **E-Prescribing** has yet to gain a solid foothold among the physician population, chiefly because it has not proven to be a more efficient or time-saving process to date. However, Malkary describes a case study in which the institution of an integrated e-prescribing system helped catch prescription errors, improve formulary compliance, and increase the number of generic drugs dispensed.

- **Bar Coding Solutions**, which allow providers to check dosing, patient identification, and transfusion identification at the point of care, appear to be a powerful aid in the effort to improve patient safety. One hospital that implemented a bar code medication system "realized a 59% decrease in medication errors during the first six months of use."

- **Radiological Images and Video** are increasingly available to physicians, again at the point of care, thanks to integrated mobile computing.

The third, and shortest, section of the report explores current obstacles to the widespread deployment of mobile computing in the health care industry. The impetus for adoption will have to come chiefly from individual physicians, Malkary argues. He cites the instructive case of Cedars-Sinai Medical Center, which attempted to implement and make mandatory a CPOE system to replace its traditional paper-based system; a coalition of physicians "revolted and refused to use the system because it was taking longer to place orders than the previous [arrangement]." Before clinicians will embrace this form of technology, however, concerns about protecting patient and other data stored on mobile devices from intrusion or theft will need to be addressed, a reliable way of accessing legacy-based data will need to be developed, and hospitals and individual practices will need to make substantial investments of time, money, and training. Malkary closes with a schedule of recommendations aimed at increasing the scope and speed of

adoption.

All in all, a reading of "Healthcare Without Bounds: Trends in Mobile Computing" tends to confirm what we've been saying for some time here at MD Net Guide: handheld computing is destined to become an increasingly indispensable element of the physician and hospital practice environment. The applications described in the report are likely to become de rigueur in the years to come; the most successful physicians in the modern era will be those ahead of the curve, who identify and use every tool available—from the stethoscope to the PDA—as efficiently as possible.