Information Technology TRENDS and SOLUTIONS

# Practical Medical Office Solutions

*A White Paper By:*

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**The cost for software and hardware has kept a number of Medical Professionals from automating their core business and clinical functions – UNTIL NOW! This week, two giants in the technology industry, HP and Microsoft, have joined forces to offer Medical professionals an easy, all-in-one PC bundled solution created exclusively for healthcare professionals. The new HP Medical Office Solution gives physicians the basic tools they need to better manage their office for around $999.00/seat.**

## *Overview:*

For the past twenty years, physicians have progressively automated portions of their practice. In the 1980s and 1990s, the adoption of Practice Management Systems (PMS) was a widespread office practice. These systems were designed to handle the "business end" of clinical encounters by capturing patient demographics, insurance coverage, payment information and by generating bills and financial management reports. The rapid installation of these systems was fueled by the 1990s Medicare decision to pay electronically submitted claims ahead of paper submissions. Under that new policy, the number of physicians with PMS rapidly increased from 10% in 1985 to almost 95% by 2002. 1

By the late 1990s, physicians and health care executives were looking for additional software applications to improve office efficiency on the clinical side of the encounter. New applications, called electronic medical records (EMRs), document image management (DIM), lab interfaces, decision analysis, electronic dictations, and physician internet access were initially offered as discrete products and often lacked the features and functions of a fully integrated system. These early fragmented applications foreshadowed the evolution of the integrated EMR and Physician Order Entry System (POE).

The technology boom of the 1990s led to the optimistic prediction that by the end of 2000 more than 50% of physicians would use an EMR in their practice. Heady predictions, fueled by the technology boom of the 1990's suggested that there would be a greater than a 50% adoption rate of EMR systems by physician practices. However, limitations in the technology and declining practice reimbursement, coupled with the substantial costs of EMR implementation, left the estimated physician user rate at only 6% across all practice environments by 2000 year end. Furthermore, this average user rate, representing a blend across multiple practice environments, concealed an even greater discrepancy between community-based providers in solo and small group practice and those practicing in large academic institutions or multi-specialty clinics. By the summer of 2002, 38% of all

1 - 2002 Annual Survey of physician adoption rates by AC Group, Inc. (2,523 physician practices)

university and staff-model (Kaiser, Mayo, etc.) physicians were using an EMR, while <1% of community-based physicians used an EMR in any form.2

This dramatically different EMR user rate across different practice environments is a reflection of differences in:

- Costs of the various software and hardware components
- Capital reserves and expenditures
- Information systems expertise (in-house expertise)
- Needs to integrate multiple sites
- Greater economies of scale (greater savings in larger groups)
- Experiential examples shared among physicians of failed installs and EMR vendors going Chapter 11

Documentation of the clinical encounter using an EMR has the potential to be more comprehensive; thereby carrying with it increased coding compliance and greater practice reimbursement. However, physician data entry, particularly through a series of software templates and pop-up screens, can be labor-intensive and time-consuming, either transiently, or in some cases, permanently lowering provider productivity -in an already time bankrupt environment. Many medical professionals have indicated that they are not ready to "leap" into a comprehensive EMR solution. They have, however, indicated that they would embrace technology if there was a basic system that offered them forms-charting and clinical reference materials for under $1,500.

Most professionals realize that the time spent in clinical documentation may be offset by improved coding and charge capture, more rapid and efficient billing, a reduction in resources devoted to medical record storage, retrieval, and improvement in claims submissions. Many of these "back office" economies of scale may be easier to achieve in the larger practices. However for the small physician practice, the medical industry has been searching for a simpler solution, one that bundles basic software and hardware with the support of a national company. It appears that HP's new Medical Office Solution meets all of these requirements.

**How much does an EMR system cost today**? There are a broad range of costs associated with the purchase and implementation of a system. These include:

- Software licenses, which are typically sold on a per-workstation basis
- Hardware, consisting of both individual personal computers for office and exam rooms as well as central database servers, network hardware, and modems
- Training and implementation, which involves pre-installation planning as well as on-site training of individual users

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2 - 2003 Annual Survey of physician adoption rates by AC Group, Inc. (3,993 physician practices)

- Software support, represented as an annual contract typically sold as a percentage of the total sale, providing both help desk functions (technical support) and software updates
- Hardware and network support, which is primarily on-site or telephone support for hardware-specific issues and problems

The difficulty for most medical professionals is the total cost of ownership. Over a three year period, the typical hardware and software solution costs a practice between $15,000 and $30,000 per physician. Because of these high costs, many medical professionals have not been willing to invest in newer technologies that could improve operational performance and lead to improvements in overall patient care.

## Now every medical professional can afford technology

With the recent announcement from HP, now every professional can afford a base-line system, designed for ease of use, ease of installation, and with a suite of bundled software, that medical professionals will be able to use to automate basic clinical records. For around $999.00/seat, medical professionals can obtain a HP Compaq Business Desktop D330 or D530 configured with Microsoft Office 2003 packaged with industry leading medical software from Standard Register, Stedman's, Ovid, and Clinical Pharmacology Office Pak. With this new offering from HP, medical professionals can get all this on one CD, with one website for registration and, one phone number to call for support. It's a complete solution that helps keep medical business healthy, so that they can concentrate on keeping their patients healthy.

This solution is not only easy to use, but easy to order. A healthcare professional will immediately realize its benefits. The system is fully customizable on either the d330 or d530 business PC platforms and includes a 3-yr parts, 1-yr labor, and 1-yr next business day onsite warranty.

. The following applications are included:

HP Medical Office Solution Application CD
- *Gold Standard Multimedia: Clinical Pharmacology OfficePak (drug reference tool)*
- *Standard Register: ExpeData E-forms for Physicians (medical forms & templates)*
- *Stedman's: SEMD Plus: Stedman's Electronic Medical Dictionary & Spell Checker*
- *Ovid: Access to over 900 medical journals*

Microsoft Office
- Configurable with Microsoft Basic, Small Business, or Professional edition
- Starting price is $999* (This includes a d330 preloaded with MS Office Basic edition & the HP Medical Office Application CD)

The Medical Office Solution software focuses on the Lowest Common Denominator; i.e., the material that almost any healthcare professional needs. The software bundled solution includes:

- **Microsoft Office 2003** – The suite of Microsoft solutions includes: Microsoft Word 2003, the latest version of the best-selling word processing software. This new version of Word has is focused on enhancing the customer experience and has incorporated feedback from previous Word users to deliver innovations that medical professions can use to create impressive-looking documents and flexibility in information management. (One of the key enhancements found throughout Office 2003, is the ability, within the document creation process to toggle out to other databases, dictionaries, and research sources without having to leave the work in progress. This allows for reduction in time, ease of use, and more complete documentation in one session.). Microsoft Excel 2003 which enables medical professionals to turn practice data into information with powerful tools to analyze, communicates, and share results with other professionals. In addition, physicians can work with industry-standard Extensible Markup Language (XML) data to make it easier to connect with other business processes. The software suite bundle also includes Microsoft Outlook 2003 which is used by many medical professionals as their integrated solution for managing and organizing e-mail messages, schedules, tasks, notes, contacts, and other time management related information. Outlook 2003 delivers innovations physicians can use to manage their communications, organize their work, and work better with others—all from one place. Outlook 2003 uses an advanced Junk E-Mail Filter, a Trusted Senders List, and other features to better control the junk e-mail messages—or spam that medical practices receive today.

- **Standard Register's ExpeDataTM E-forms**– - Electronic versions of common forms – With the E-Forms Starter Pak, Standard Register merges electronic media with proven document management methods, creating technology savvy e-products. Utilizing their relationship with **Adobe Accelio™**, the market leader in e-forms technology and tools, the E-Forms Starter Pak has a variety of valuable tools for medical practices migrating to e-forms. The **Quick Start Pak®** comes with over 50 pre-designed forms for medical practices. These forms are ready for use "out of the box," customized with the practice's own company name and logo. The FormFlow® **99 Designer Software Package** allows the development of additional electronic forms.

- **Stedman's Electronic Medical Dictionary** – A medical dictionary and medical spellchecker – Stedman's Electronic Medical Dictionary v5.0 contains 102,000+ medical words and now includes over 1000 images directly from Stedman's Medical Dictionary, 27th Edition complete with definitions, audio pronunciations, etymologies, hyphenations, images, tables, and animations, it's the easiest and most complete electronic tool you can buy for medical writing, editing, transcription and ready-reference.

- **Ovid** – Featuring over 1,000 medical journals – Ovid is an internationally recognized leader in medical information services, providing customers a customizable suite of content+ tools+ services to fuel medical discoveries and patient care. With Ovid offices and distributors in more than 100 countries, Ovid serves information managers, students, clinicians, and researchers around the globe

- **Gold Standard Multimedia's (GSM) Clinical Pharmacology Office Pak** - Leveraging the existing Clinical Pharmacology OfficePak© solution GSM developed to work within the Research and Reference Pane architecture of the 2003 editions of Microsoft Office Word, PowerPoint, Excel, Outlook, Publisher, OneNote, and Visio applications, GSM provides HP medical office solution users with quick and easy access to Clinical Pharmacology's thousands of drug monographs and important medication management answers. Clinical Pharmacology OfficePak© arms healthcare professionals with up-to-date, peer-reviewed, clinically-relevant information on all U.S. prescription drugs, including off-label uses and dosage, as well as herbal supplements, nutritional and over-the-counter products, and new and investigational drugs. Award-winning information written by healthcare professionals and pharmacists, CP is accepted by the Board of Pharmacy in 48 States. Today, CP has been implemented as the frontline drug information reference and medication management resources in several of the country's largest retail pharmacy chains and consultant pharmacy companies, over 700 hospitals, hundreds-of-thousands of healthcare professionals and many medical schools and health-related web sites.

## What does this mean for the medical community?

The physician market represents over 800,000 individuals in the US market alone. Over 70% of these physicians work in active practices that treat patients in an ambulatory setting. The other +29% is working in non-patient care settings or is primarily involved in education and research. When evaluating physician needs and their ability to afford comprehensive software and technology solutions, we find that it is useful to understand how they would benefit by the announcement and availability from HP and Microsoft of their bundled medical office solution. The easiest way to do this is to structure and approach to the physician market that takes into account use models by practice size. As shown below, AC Group has attempted to divide the 30,000+ physician practices to into seven discrete markets.

| | Market Segment | Total number of Practices | Avg No of Physicians per Practice | Total Physicians per Market Segmentation | % of Total Physicians |
|---|---|---|---|---|---|
| A | 1 to 5 Physicians | 14,230 | 2.30 | 32,729 | 4.0% |
| B | 6 - 9 Physicians | 9,200 | 7.74 | 71,208 | 8.8% |
| C | 10 to 49 Physicians | 3,756 | 31.30 | 117,563 | 14.4% |
| D | 50 to 99 Physicians | 1,945 | 75.30 | 146,459 | 18.0% |
| E | 100 to 249 Physicians | 452 | 193.00 | 87,236 | 10.7% |
| F | 250+ Physicians | 300 | 395.00 | 118,500 | 14.6% |
| G | Non practicing Physicians | | | 240,000 | 29.5% |
| | Total | 29,883 | | 813,694 | 100.0% |

The physician EMR software vendor community traditionally targeted the large practices, those with over 250 physicians. However, the number of large practices is limited to only an estimated 300 practices with more than 250 physicians. The bulk of the practices, then, are actually in the 1 – 9 physician practice size. This is the group that can benefit from HP's new medical office solution. As shown on the table on the next page, 47% of the active practices have less than 6 physicians within the group. Additionally, 78% of the practices have less than 10 active physicians. Therefore, it would appear that the market opportunity for HP's new medical office solution could meet the basic technology requirements for over 78% of the practices today.

| | Market Segment | % of Total Physicians | % of Practicing Physicians | % of Practices |
|---|---|---|---|---|
| A | 1 to 5 Physicians | 4.0% | 5.7% | 47.6% |
| B | 6 - 9 Physicians | 8.8% | 12.4% | 30.8% |
| C | 10 to 49 Physicians | 14.4% | 20.5% | 12.6% |
| D | 50 to 99 Physicians | 18.0% | 25.5% | 6.5% |
| E | 100 to 249 Physicians | 10.7% | 15.2% | 1.5% |
| F | 250+ Physicians | 14.6% | 20.7% | 1.0% |
| G | Non practicing Physicians | 29.5% | | |
| | Total | 100.0% | 100.0% | 100.0% |

## Competition for HP?

The medical software community has realized for years that selling to small physician groups was not as profitable as selling to mid-size and large practices. The overall cost of "sales" is relatively the same for a $40,000 sale as a $500,000 sale. The only real difference is in the sales commission, and thus, the sales team would prefer to sell to large practices. But, can 250 vendors survive on only 10% of the potential population? The answer is no. The healthcare industry only requires between 5 and 10 vendors in each of the market segments, not the 150 to 200 we have today. Therefore, the market will create winners and the market with crush vendors who have weak functionality, limited marketing funds, and vendors that cannot prove long-term financial viability. That's were HP will shine! With their new bundled solution, medical professionals can easily obtain basic software and receive top-quality support from a national company. HP's bundled solution will not meet all of the medical professionals needs, and is not considered a true EMR solution. However, the bundled solution will provide each medical professional with a standard system for recording of patient notes using Standard Register's ExpeData e-Forms, clinical reference guides and the tools and reference capabilities to help complete documentation, drug lookup at the point of encounter-before prescribing, and integrate with other office tasks more easily.

## Conclusion:

The private practice physician market in the US is clearly segmented into large group practices and small and medium physician office practices. Clearly, the largest number of physicians practice in the below 50 person practice. Regulatory changes, patient pressure for the physician to be more efficient and better informed at the point of encounter, and the overwhelming amount of electronic information demands adoption of more integrated and automated methods of data management. The evolution to EMR systems by competitive practices and the efficiencies of instantly being able to collect, lookup, and integrate information-while working with patients, is the goal of every practice. Yet, the cost and disruption to the smaller physician practices of trying to implement at total EMR is keeping many on the sidelines. Buying technology and trying to create an EMR for a practice based on technology alone is also an arduous task and beyond the skills of office staff. The HP –Microsoft Medical Office suite offers a bridge to beginning the journey to the EMR in several ways:

- It helps the physician practice incorporate and gain familiarity with tools that provide better documentation
- reduces the time to incorporate and standardize on office forms for data capture and documentation
- allows for lookup and integration of reference and standard medical protocols
- updates office operating environments with the latest tools for security, spam blockers, and mail systems
- provides a standards based infrastructure which can easily integrate with a full EMR package-when the practice chooses to take that next step

Technology is only a tool and, if used effectively, can improve the flow of information and potentially improve the efficiency of the physician's practice. We learned in the 1980's that we needed to change the process of billing for services – or we would not be paid in a timely and effective manner. Therefore, the practice of medicine, from the business point of view, changed. Now with creative packaging of standard technologies from companies like HP, government regulations, and the right financial incentive, physicians have an opportunity to embrace new levels of technology that were not available just 5 years ago. Perhaps physicians in small to medium practices will look to leaders like HP for guidance and innovation on their path to the complete EMR.

## *More about the Author:*

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**Mr. Anderson** is one of the nation's premier IT research futurists dedicated to health care. He is one of the leading national speakers on healthcare and physician practices and has spoken at > 300 conferences and meetings since 2000. He has spent the last 30+ years focusing on Healthcare – not just technology questions, but strategic, policy, and organizational considerations. He tracks industry trends, conducts member surveys and case studies, assesses best practices, and performs benchmarking studies.

Prior to joining AC Group, Inc. in February of 2000, Mr. Anderson was the worldwide head and VP of healthcare for META Group, Inc., the Chief Information Officer (CIO) with West Tennessee Healthcare, the Corporate CIO for the Sisters of Charity of Nazareth Health System, the Corporate Internal IT Consultant with the Sisters of Providence (SOP) Hospitals, and the Executive Director for Management Services for Denver Health and Hospitals and Harris County Hospital District.

His experience **includes 32+ years working with Healthcare organizations, 7 years in the development of physician-based MSO's**, 17 years with multi-facility Health Care organizations, 15 years Administrative Executive Team experience, 6 years as a member of the Corporate Executive Team, and 9 years in healthcare turnaround consulting. Mr. Anderson received his BS in Business, is completing his MBA in Health Care Administration, and is a Fellow with HIMSS. Additionally, he serves on numerous healthcare advisory positions and has developed programs including:

- **Developer of the Six-levels of Healthcare IT for Hospitals and the Physician Office**
- **Researcher and producer of the 2003 EMR Functional rating system**
- **Advisory Board and Content Chairman - Healthcare IT Outsourcing Summit, 2002, 2003**
- **Advisory Board and Content Chairman - Patient Safety and CPOE Summit, 2002, 2003**
- **Advisory Board and Content Chairman – Consumer Driven Healthcare Conference, 2003**
- **Advisory Board and CPOE Chairman - Reducing Medication Errors, 2003**
- **Advisory Board of TETHIC 2003, 2004**
- **Advisory Board of NMHCC 2000, 2001, 2002, 2003**
- **Advisory Board of TCBI Healthcare Conference 2000, 2001, 2002, 2003**
- **Advisory Board of TEPR and MRI, 2000, 2001, 2002, 2003**
- **Past President of Local HIMSS Boards – Houston, Tennessee, Southwest TX**
- **Editorial Board of Healthcare Informatics 2001, 2002, 2003**
- **Judge, MSHUG ISA, 1999-2003, TEPR Awards, 2001-2003, TETHIE 2003, HDSC 2003**
- **National HIMSS Chapters Committee 2001, 2002**
- **National HIMSS Fellows Committee 2001, 2002**
- **National HIMSS Programs Workgroup Committee 2001, 2002, 2003**

### More about AC Group:

AC Group, Inc. (ACG), formed in 1996, is an information technology advisory and research service designed to save healthcare industry participants' precious time and resources in IT decision-making. More than 500 healthcare organizations worldwide have approached their most critical IT challenges with the help of trusted advisors from ACG. Since 1972, ACG advisors have been helping IT professionals make better strategic and tactical decisions. ACG offers clients the advantage of the finest industry research available anywhere, as well as a resource equally valuable – the collective hindsight of hundreds of companies whose IT experiences it has monitored and analyzed in detail. This unmatched combination of market research and real-world IT assessment gives clients the tools they need to eliminate wasteful IT spending, avoid the inefficiency of trial and error, and discover a superior alternative to "guess" decisions. For our healthcare vendor clients, ACG provides independent advisory and consultative services designed to assist vendors in their Business Strategies, Market and Customer Strategies, Competitive Analysis and Product Profiling.