



The Connected General Practitioner

Increase Business Efficiencies 25 Percent
While Providing Better Patient Care

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Cisco Internet Business Solutions Group (IBSG)

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Introduction

Globally, general practitioners (GPs)¹ and allied health professionals, including dietitians, psychologists, and others, are on the front lines providing critical services through medical practices as part of larger, more complex healthcare systems. Although medical practices generally operate as small and medium-sized businesses (SMBs), they differ widely with regard to partnerships with allied health organizations and usage of information and communications technology (ICT).

When combined, general practices and allied health groups represent a significant market opportunity. To date, however, this subsegment of the overall healthcare industry has been poorly understood and widely underserved. This is in stark contrast to the hospital sector, which has been studied, mapped, analyzed, designed, optimized, and supported by increasingly effective use of ICT.

To address this gap, the Cisco® Internet Business Solutions Group (IBSG) examined the main processes, workflows, and ICT support required to deliver effective, team-based care for patients in community settings. The research focused particularly on elements required to provision ICT more effectively for the SMB market.

Cisco IBSG's research applies to most private primary-care services that are owned or operated by GPs. While the general practices that formed the qualitative sample base were selected from Australia, they are representative of the delivery of primary-care medicine across developed countries globally. This is especially true where the linkages between legislation and a dominant public health system are common. In other jurisdictions, where GPs deliver care outside of—or in the absence of—a public health system, Cisco IBSG believes many of its observations are still relevant.

In addition, the research was essentially qualitative, but also used time and motion calculations to address the practice environment of 100 clinicians and staff in Australia delivering almost 10,000 patient interactions during the month of June 2009. The main goal of the work was to answer the following question: How would better connectivity and the use of ICT benefit GPs and their businesses?

Among the many findings, the report showed that ICT can have a major impact by increasing business efficiencies 25 percent while providing better patient care. Before we discuss the complete results, let's first identify the current trends and challenges impacting GPs and allied health professionals.

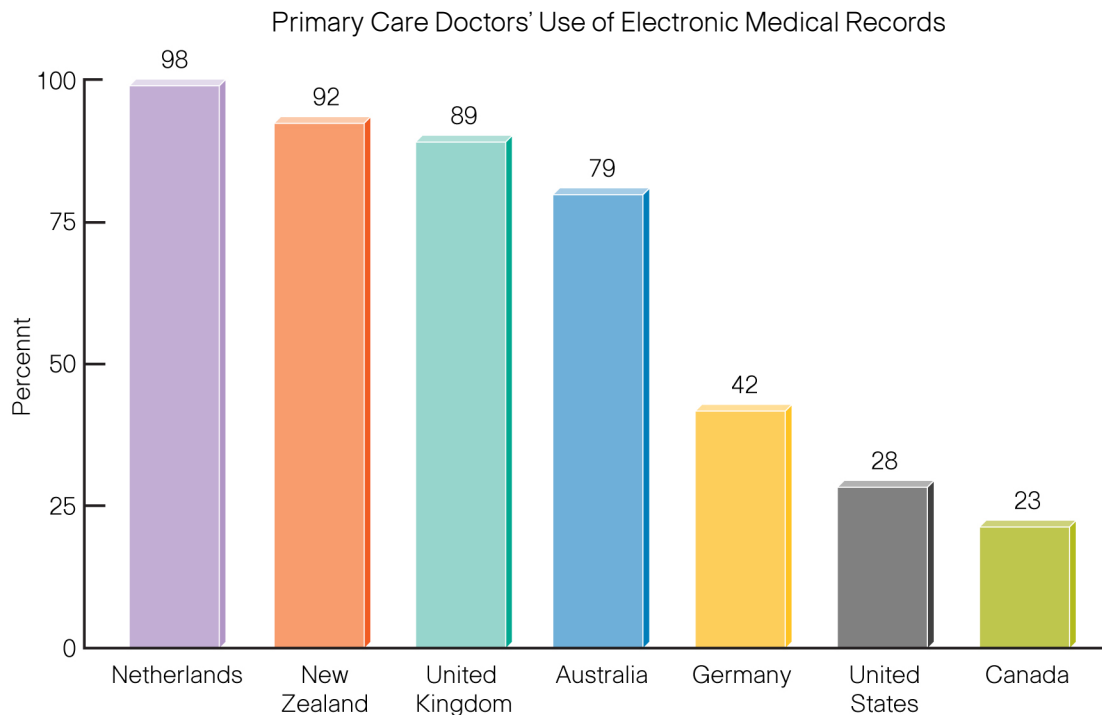
Trends and Challenges

As healthcare costs continue to rise, governments are shifting the burden of care from the expensive secondary sector (hospitals) to the primary sector (community), which includes GPs and allied health professionals. Consequently, the role of primary care medical practices is becoming increasingly critical for effective healthcare delivery.

This situation has placed the current model of primary care delivery under severe strain and is causing frontline health professionals to struggle with basic operational challenges. For example, the growing number of elderly and chronically ill patients being cared for in the community is increasing the workload and complexity of care for GPs. To address this challenge, effective care—improved health outcomes for patients—must be delivered with sufficient “throughput,” or efficiency, to maintain profitability.

Another important implication of the shift to primary care is that, in addition to holding longitudinal medical records, the primary sector is increasingly viewed as the source and custodian of care plans. Yet with the current fragmented approach to ICT provisioning, primary care practices are largely unable to assure the controlled availability of these critical documents to the rest of the healthcare sector. In fact, within GP practices, the understanding and use of ICT varies widely. In Europe, Australia, and New Zealand, for example, the use of electronic medical records (EMRs) in primary care is relatively advanced, while the United States and Canada lag behind (see Figure 1).

Figure 1. Europe and Asia Lead the United States and Canada in the Use of Electronic Medical Records



Source: The Commonwealth Fund, 2006

General Practice Profile

General practices in many countries share common traits and challenges. These include small business operations being aggregated into larger practices and branded chains, difficulties in linking with the secondary care sector and other organizations, insufficient business training, paper-dominated office operations, and limited connectivity among Practice Management Systems (PMS) outside of the single practice.

Many practices are owner-operated, with the spouses of GPs acting as practice managers (PMs). The position and function of the PM is critical for the survival and efficient management of the practice. In addition, as practice size grows, the importance of this role increases since clinicians tend to delegate all nonclinical matters to the PM.

A significant portion of older GPs have reduced or quit their general service activities to become employed with a chain operation or to specialize in higher-income areas such as cosmetic surgery, dermatology, or vasectomies. Larger chains often consist of multiple practices, with 50 or more GPs and hundreds of nurses and administrative staff operating under common brands. Typically, GPs establish a network of specialists for patient referrals and to seek support from colleagues. Almost all GPs are members of professional associations that offer strong skill development and admission to guilds and colleges.

Younger GPs often come together to form larger practices that operate in the same way as legal chambers, which are typical in Commonwealth² jurisdictions. These larger practices benefit from centralized administrative support and the ability to employ professional PMs. For GPs seeking part-time positions to promote a better work-life balance, larger offices provide a place to work without the overhead and time constraints of their own practice. Overall, consolidation into larger chains and practices is occurring in two ways: 1) integration of allied health services in the same physical building, and 2) partnering with local service providers.

Within general practices, emerging areas of specialty are community care and chronic healthcare, with colocated mental health, allied health, and community nursing. Wider health system inadequacies create serious bottlenecks for GPs dealing with chronic care and elderly patients in nursing homes. These challenges include different patient record requirements and formats between general practices and aged-care establishments, often with differing compliance reporting elements.

In the case of care management for chronic type 2 diabetes, for example, the sheer volume of interactions with allied health systems and the complexity of administering a paper-based care plan can result in the avoidance of providing care in this area altogether.

Most often, GPs do not receive training to help them run a profitable practice. This creates tension between operating the business aspects of the practice efficiently and meeting the clinical demands of patients. Cisco IBSG found that doctors who ignored the business side of their practices experienced a significant reduction in profitability.³ To mitigate this problem, some GPs specialize in areas with higher profit margins, while others move to larger, multiservice clinics.

In order to focus on patient care, GPs are either colocating with community and clinical care specialty groups and allied health professionals in the same facility, or they are establishing virtual partnerships. In the words of one Cisco IBSG focus group participant, "It seems that the rule of thumb for most practices is to throw administrative staff and nurses at [the problem] until [GPs are] left alone to [focus on] medicine."⁴ This implies that business efficiency improvements are not planned, systematic, or well supported by ICT. This thinking is also substantiated by overseas research. According to 22 percent of GPs in Germany and 65 percent of GPs in the United Kingdom, problems exist because care is not well coordinated across sites and providers.⁵

Most practices are hectic places that generate large volumes of paper. In fact, many practices are operated completely with paper-based processes and files (see Figure 2). While some practices are beginning to use PMS for noting, referral letters, prescription generation, and some clinical decision support, paper still dominates.

In addition, Cisco IBSG's research found that practices using EMR software often mimic paper-based processes. GPs were also observed using mixed paper- and electronic-based processes within their practices. Because of these issues, GPs and practice staff do not see significant benefits from using EMR software.⁶

Figure 2. A Typical Paper-Based Practice

According to the Cisco IBSG survey, a typical practice with two GPs uses five or more pieces of paper for each consultation, sets aside at least 15 percent of office space for paper storage, and consumes 20 percent of a full-time staff resource to support paper-based processes. These processes include walking documents from room-to-room, photocopying, scanning, searching, and collating.

A dedicated nurse, working full-time with chronically ill patients, processes approximately 10 health assessments and transfer-of-care forms per week. In addition, each process takes 3.5 hours of the nurse's time, a minimum of three pieces of paper per allied health referral, and a total of five printed, multipage documents. This is addition to four internal messages, one phone call, four faxes, and two mail items per provider.

Additionally, prescription details and national health priority reporting requirements are linked to numerous regulatory and compliance steps that differ among states and countries. In countries like the United Kingdom, Australia, and New Zealand, for example, paperwork related to compliance consumes approximately one full-time administrator for every five GPs in a practice.

Source: Cisco IBSG, 2009

Depending on the jurisdiction and the national demographic profile where practices are located, most GPs face other common issues, including:

- Practices built on outdated, inefficient operating delivery models
- Increased loss of clinicians due to the difficulties of operating a small business
- A population base and service area where chronic conditions are increasing exponentially, yet the ability to work and collaborate in clinical teams remains difficult
- An aging population where access to patients and adequate financial returns remain challenging
- A rapidly escalating mental health workload without adequate training and follow-through support
- Inability of GPs in rural areas to obtain clinical outreach services
- Unreasonable working hours due to staff shortages

Impact of ICT

In most practices, the role of ICT ranges from limited to nonexistent. This is because GPs do not understand how ICT can be used to improve patient care, redesign and replace paper processes, and make their practices more efficient and profitable. The ICT implications identified in Cisco IBSG's study are profound.

- The introduction of connected and hosted ICT services to simplify office processes and reduce paper usage can provide a 12 percent gain in both clinician and administrative staff time.
- The ability to use a secure and architected network to exchange data, voice, and video with other practices,⁷ specialists, and allied health professionals suggests that doctors and support staff could save up to 12 percent and 25 percent of their time, respectively, related to case management for chronically ill patients.⁸
- Internet-based collaborative tools like Cisco WebEx™, combined with portable devices such as PDAs and tablet computers, can provide 12 percent efficiency gains for mobile services, including home healthcare and aged-care visits.

Cisco IBSG estimates that an ICT-enabled practice with six GPs, six support staff, and an average 40-hour work week can achieve efficiency gains of 9.2 hours per week per full-time staff member. In addition, more than 150 paper documents can be eliminated per day.⁹

Collaboration Is Key

Collaboration among practices, specialists, and allied health providers is an essential element of effective case management. Already, a number of jurisdictions are providing incentives to GPs who use case management approaches for chronically ill patients (see Figure 3). Collaboration in this context refers to team-based care with allied health providers and specialists, and includes the exchange of patient information, condition alerts, drug compliance information, and reminder notifications for patients and clinicians alike.

The Cisco IBSG survey indicated that today's practice-management and EMR systems do a poor job of supporting collaboration across care teams. Many technology solutions, however, can link different specialty groups, irrespective of their location, to:

- Provide shared desktops and case notes
- Eliminate faxing and reduce scanning
- Reduce onsite document storage
- Exchange patient information and imagery
- Provide case management support in the chronic care arena¹¹
- Administer staff rostering and patient follow-up appointments
- Provide wireless capabilities within each practice to allow improved communication

- Incorporate voice services on the network to reduce the need for traditional and expensive phone lines
- Use Internet technologies for better patient management, research, and decision support¹²

Figure 3. Example of Internet-Based Care Plan Management

Ann is a 70-year-old woman who was recently diagnosed with a chronic illness. Her GP determined that she could benefit by attending therapy sessions with allied health professionals and educators. Ann's GP used an electronic-care planning system to develop a team care plan tailored to her specific needs.

Her GP used the system to access a registry of care providers and searched for suitable health professionals. During a consultation, Ann and her GP used geographic location to help identify which care providers she would prefer to meet. A printed map of each location was generated to assist Ann in attending the appointments. The GP then sent an electronic notice to invite each healthcare provider to participate in Ann's care.

Once the invitations were accepted, Ann gave her GP permission to send the relevant information from her electronic medical record to each team member. When Ann arrived for her appointments, each member of her medical team knew her medical history and had her basic information.

In this case, the provision of systematic information and the creation of a specialized care team are likely to prevent Ann from entering into a medical crisis and being admitted to the acute care sector—saving Ann and the medical system both time and money.

Note: More than 50 percent of doctors do not follow best-practice guidelines, and 30 to 50 percent of patients with chronic disease are hospitalized because of inadequate care management.¹⁰

Given this situation, there is an opportunity for GP representative groups such as the Divisions of General Practice to provide hosted ICT services using standard desktop tools and connectivity services. In particular, common tools and data exchange gateways could quickly take the healthcare industry from its current state of using “200-year-old administrative practices” to employing 21st century solutions. The key is to treat ICT as a utility (such as gas and electricity) and to tailor services that support clinical activities and improve GP business outcomes.

It is also important for general practices, specialists, and allied health professionals to collaborate to ensure success. To help with this, a number of jurisdictions are now offering incentives to GPs who adopt case management approaches for the chronically ill.¹³

Next Steps

In today's healthcare environment, most GPs do not have time to understand how ICT can improve patient care and make their business operations more efficient and profitable. This creates an opportunity for organizations that oversee general practices to develop strategies that satisfy a range of professional, market, and jurisdictional demands. In addition, health authorities and the ICT industry have an opportunity to work together to:

- Develop and sustain an architected, secure, and purpose-designed network
- Incorporate a standards-based set of prescriptive ICT tools and hosted services
- Offer areas of innovation that meet general practice needs and regional requirements

Examples include:

- Creating an “office of the future” for GPs and PMs
- Building a networked connection between practices and local allied health professionals
- Providing the roadmap, design, and installation for:
 - Mobility services for off-site clinical care
 - Collaboration design for video-based clinical services with peers and specialists
 - Internet technologies to link emerging wellness and fitness sectors with general practices

By moving toward a new approach for the global healthcare sector—populated by more than 2 million practices¹⁴—GPs can take their place at the e-health table to improve their business outcomes and, most important, to provide better patient care.

Endnotes

1. A general practitioner (GP) is a medical practitioner who provides primary care and specializes in family medicine. A GP treats acute and chronic illnesses, and provides preventive care and health education for all ages and both sexes. GPs have particular skills in treating people with multiple health issues. Source: Wikipedia, http://en.wikipedia.org/wiki/General_Practitioner
2. The Commonwealth of Nations, previously known as the British Commonwealth, is an intergovernmental organization of 53 independent member states. Most of them were formerly parts of the British Empire. Source: Wikipedia, 2009. For a full list of Commonwealth countries, go to: http://en.wikipedia.org/wiki/List_of_members_of_the_Commonwealth_of_Nations
3. Source: “The Connected General Practitioner,” Cisco IBSG, June 2009.
4. Source: Cisco IBSG GP focus group comment, Brisbane, Australia, April 2009.
5. Source: “2006 International Health Policy Survey of Primary Care Physicians,” The Commonwealth Fund, July 2006, <http://www.commonwealthfund.org/Content/Surveys/2006/2006-International-Health-Policy-Survey-of-Primary-Care-Physicians.aspx>
6. Source: “The Connected General Practitioner,” Cisco IBSG, June 2009.

7. About 80 percent of primary care practices in Australia employ desktop electronic services (one of the highest usage rates in the Western world) for patient records and administration. Less than 2 percent, however, are interconnected across a district in any form whatsoever. Sources: Cisco IBSG, 2009; National Health and Hospital Commission, August 2009.
8. In Western countries in particular, approximately 60 percent of the population has a significant chronic illness. Source: World Health Organization, 2008.
9. Source: "The Connected General Practitioner," Cisco IBSG, June 2009.
10. Source: "The Quality of Healthcare Delivered to Adults in the United States," McGlynn, E.A., S.M. Asch, J. Adams, J. Keeseey, J. Hicks, A. DeCristofaro, E.A. Kerr, *New England Journal of Medicine*, 348, 2635-45, 2003.
11. Source: "Web 2.0 and Chronic Illness: New Horizons and New Opportunities," Neil Seeman, *Healthcare Quarterly*, Volume 11, No.1, 2008.
12. For example, Google has found that certain search terms are good indicators of flu activity. Source: Google, 2009, <http://www.google.org/flutrends/>
13. GPs in Australia can attract up to \$3,000 (AUD) per defined chronic patient per year if appropriate case management and associated collaboration are in place. Source: Australian Medical Benefits Schedule, 2009.
14. Source: Cisco IBSG, 2009.

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More Information

The Cisco Internet Business Solutions Group (IBSG), the global strategic consulting arm of Cisco, helps CXOs and public sector leaders transform their organizations—first by designing innovative business processes, and then by integrating advanced technologies into visionary roadmaps that address key CXO concerns.

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