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WHITE PAPER

**Telehealth:** Expanding the Continuum of Care  
**Improving Patient Outcomes**  
**while Reducing Costs**

**SYKES**<sup>™</sup> ASSISTANCE SERVICES  
CORPORATION

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Telehealth Division

[www.sykesassistance.com](http://www.sykesassistance.com)

1.866.522.6148

# The Challenges Facing the Health System

Already manifesting itself on various fronts, a crisis is growing in North America's healthcare system. Precipitated by a convergence of escalating costs, growing demand and aging infrastructure, the healthcare industry is scrambling to develop strategies to meet the systemic challenges posed by this rapidly rising tide.

Just some of the challenges we face:

- Access to care especially in rural and northern regions
- Prevention and management of chronic illnesses
- Supporting an aging population
- Healthcare human resources and physical infrastructure

## Access to Care

According to the 2010 Commonwealth Fund International Health Policy Survey<sup>1</sup> 65% of Canadians surveyed found it difficult to access healthcare after hours. This led to the finding that Canadians make more visits to emergency departments (44% having visited one in the past two years) than any other country surveyed\*. In fact almost half the Canadians surveyed (47%) stated that the care they received could have been delivered in their usual primary care setting if that had been available. This is instructive given that only 45% stated that they could get in to see their family physician on the same or next day when they are sick.

This situation is exacerbated in rural and northern Canada due to the geographic distances involved and the difficulty that the various jurisdictions have in recruiting and retaining healthcare providers in these regions.

\* (e.g. Australia, Canada, France, Germany, The Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States.)

## Chronic Disease

In Canada alone, over \$200 Billion<sup>2</sup> is spent on healthcare annually this represents 37.8% of total provincial and territorial spending.<sup>3</sup> The most prevalent chronic diseases (Cardiovascular Disease, Diabetes, Chronic Obstructive Pulmonary Disease and certain types of Cancer) are responsible for 42% of this amount or approximately \$84 Billion<sup>4</sup>. Costs associated with loss of productivity and other factors could increase the total financial impact of chronic illness to more than \$150 Billion annually. The financial impact alone does not tell the most important part of this story. It is estimated that over 16 million Canadians live with some form of chronic illness and as we age many of us have more than one problem. Another confounding issue is that up to 50% of people with chronic conditions are not diagnosed and up to half of those that do get a diagnosis do not receive or adhere to evidence

based treatment. In fact in the 2008 Canadian Survey of Experiences with Primary Health Care, respondents stated that 40% of them with one or more of the seven select chronic conditions did not make a treatment plan with their health care provider during the past 12 months<sup>5</sup>.

The good news or at least something that might provide us with some hope is the fact that many chronic illnesses can be mitigated and perhaps even prevented by changes in lifestyle. However, as you can see below in many cases Canadians have a long way to go.

Risk Factor	Average Incidence in Canada
Obesity and Over Weight	60% <sup>6</sup>
Hypertension	19% <sup>7</sup>
High Cholesterol	40% <sup>8</sup>
Tobacco use	18% <sup>9</sup>
Meet recommended physical activity	15% <sup>10</sup>

## The Impact of an Aging Population

The demographic wave of aging and often chronically ill Baby Boomers is another significant factor. It is expected that the number of seniors will exceed the number of children in Canada by 2030<sup>11</sup>. The Baby Boom population wave is just beginning to flood a healthcare infrastructure already straining under the multiple burdens of soaring costs, outdated delivery systems, and a shortage of certain types of healthcare providers.

Almost three-quarters (72%) of people over 65 years of age suffer from at least one chronic disease<sup>12</sup>. These individuals accounted for 40 per cent of health care use, had three times as many health care visits as seniors with no chronic conditions, and on average, take six prescription medications<sup>13</sup>.

## Healthcare Industry Drivers

### Soaring Costs

- Costs continue to rise unabated, limiting access to care

### Growing and Aging Population

- Baby Boomer population bubble
- Aging population is increasingly unhealthy
- Inadequate tax-base for long term funding of healthcare system

### Shrinking Supply of Healthcare Professionals

- Shortage of doctors, nurses and other healthcare professionals
- Incoming doctors choosing lucrative specialties rather than primary care
- Healthcare providers often located in urban centres; rural patients at geographic disadvantage

One factor that is often overlooked is the aging of Canada's healthcare workforce. Both physicians and nurses (two key players in the system) are under the same demographic influence as the rest of the population. While the number of healthcare providers has risen in the past few years due to extended recruiting efforts and more physicians and nurses being trained<sup>14</sup> we know that especially in the case of nurses we will see a significant wave of retirements over the next several years. In fact the Canadian Nurses Association states that there will be a shortage of 60,000 full time equivalent registered nurses by 2022<sup>15</sup>. While physicians have traditionally worked later into their lives than nurses one can expect a significant reduction in the hours worked by physicians as more women enter the field (now represent over 50% of physicians in Canada) and as physicians in general make choices favoring lifestyle.

One key final finding is that Canadian citizens over the age of 65 are continuing to ask for easy access to healthcare and may be more demanding than previous generations regarding the timeliness and quality they expect. The majority of experienced Canadians also believe that healthcare is a right and should continue to be paid for by government. While they appreciate the concern of their children and their healthcare provider team they want to remain independent and stay where they are as they age<sup>16</sup>. Traditional solutions like building more assisted living facilities, nursing homes and even hospitals may not meet this need. Even if significant investment is made in this bricks and mortar approach one doubts that Canadian baby boomers would be willing to take advantage of it until forced to do so.

## Telehealth: An Emerging Delivery System

While the last century has seen remarkable advances in healthcare and medicine, the delivery systems for providing that knowledge and treatment are still tied to an infrastructure that is aging, outdated and ill-equipped to meet a rapidly rising demand.

Designed in decades past, the current system is based on providing services in traditional institutional settings – a trip to the doctor's office, health clinic or hospital. While this might be appropriate for many situations – especially those that require hands-on treatment – it does not meet the needs of the vast number of people who require support for prevention and self care.

Such a facility-based system is also not accessible for individuals who live in isolated rural areas or those who lack convenient transportation for continuing treatments. This outmoded approach is not only needlessly inconvenient, inefficient and costly; it restricts access and discourages people from participating in the management of their own health and well being.

The dual dilemma of how to hold down costs while maintaining – or even improving – effective delivery of healthcare requires the system to adopt a transformational model integrating multi-channel technology and service solutions which are readily available in the digital age.

Technologies are now at hand which allow the healthcare system to move away from an outmoded reliance on institutional settings and adopt delivery systems that are more efficient for providers and more convenient, empowering and effective for patients. Significantly, they form the basis of a truly sustainable model for the future.

## A Modern Approach to the Continuum of Care

This paper investigates innovative new approaches to modernizing and extending the traditional continuum of care model. By using technology, healthcare providers can now initiate a patient relationship much earlier (prior to the onset of disease or chronic condition) and monitor follow-up treatment much later (on-going oversight of regimen compliance) than occurs in the current traditional approach.

The common usage of the phrase “continuum of care” relates to the coordination of all phases of a patient’s illness from diagnosis through various levels of care (doctor’s office, outpatient, inpatient) to placement in step-down facilities or to home recuperation. In her book, “Definition of Continuum of Care,” Connie J. Evashwich writes:

The continuum of care concept extends beyond the traditional definitions [to]... a comprehensive, coordinated system of care designed to meet the needs of people with complex and/or ongoing problems efficiently and effectively.

A continuum of care *is patient-oriented*, not provider or payer-oriented. The orientation is to organize services according to patient’s needs, not according to a provider’s convenience or a payer’s rigid guidelines. ...The ideal continuum takes a *holistic approach*... emphasizes *wellness rather than illness*... [and] need not be owned by a single entity. The key is to be able to give patients access to the services they need when they need them. The organizational arrangements among providers may be ownership, contracts, affiliations, or even informal but strong relationships... The continuum incorporates acute and long-term services, intertwining the two with common integrating mechanisms, rather than creating two separate systems of care.

The goal of the continuum of care is to facilitate patient access to the appropriate services quickly and efficiently. Ideally, a continuum of care:

- Matches resources to the client’s condition, avoiding duplication of services and use of inappropriate services
- Takes a multifaceted approach to the patient’s and family’s situation
- Monitors the patient’s condition and modifies services as needs change
- Integrates care provided in a range of settings
- Coordinates the care of many professionals and disciplines

- Streamlines client flow and facilitates easy access to services needed
- Maintains a comprehensive record incorporating clinical, financial, and utilization data across settings
- Pools and negotiates comprehensive financing

A true continuum of care should (1) enhance quality and client satisfaction through appropriateness, ease of access, shared information, and ongoing continuity of care; (2) increase provider efficiency; and (3) achieve cost-effectiveness by maximizing the use of resources.<sup>17</sup>

## What is telehealth?

Telehealth, telemedicine, e-health, tele-triage... In this emerging information industry, services delivered at a distance, rather than in person, are recognized by many similar-sounding names. In the same way that “curative” or “disease-related” terminology is evolving into the broader, more encompassing “health and wellness” perspective, so the information technology applications have yet to settle on one agreed-upon term for common usage.

In general, *telehealth* is defined as:

...“the use of communications and information technology to deliver health and health care services and information over large and small distances”.<sup>18</sup>

This rather static definition cannot fully capture the actual, dynamic break-through taking place in healthcare service delivery today. Whereas, in the past, medical information was controlled primarily by physicians themselves, now many types of non-physician practitioners – nurses, technicians, psychologists, social workers, counselors, coaches, dietitians, etc. – may use this technology to access and share clinical information with patients and their families. In addition, the patient will have easier access to pertinent information and answers to a wide variety of questions not normally addressed to physicians.

Telehealth may be simply defined as the exchange of clinical information from one site to another via electronic communications. For example, nursing or physician contact centres, physician-to-physician consults, remote monitoring of vital signs, continuing medical education, and accessing information on the internet are all considered part of telemedicine and telehealth.

From a suburban Baby Boomer with the potential to self-manage aspects of his/her chronic heart disease via remote monitoring devices and lifestyle intervention to an expectant mother in rural Canada able to access pre-natal health information via a toll-free call centre, new channels for the delivery of a wide variety of healthcare information, services and products are emerging. These applications can leverage a strategic combination of current communications technologies with best practice clinical and behavior-change protocols to create customized systems that strengthen and enhance patient care.

# Telehealth Solutions

Patients and their families have long been disconnected and disempowered by the traditional approach to healthcare.

The current generation has inherited a system designed for their parents, one that no longer has the capacity to serve them. Telemedicine and telehealth are critical components in the future of quality, affordable healthcare solutions.

This is more than just another new role for technology.

It is the 21<sup>st</sup>-century solution to a longstanding question: How can we increase access to, and delivery of, high-quality and safe health information and services in the face of a dwindling supply of healthcare resources?

## Telehealth answers the question:

How can we increase access to, and delivery of, high-quality and safe health services in the face of a dwindling supply of resources?

Telehealth is the answer because of its unique capacity to provide the right information at the right time, delivered in the right way. Evidence-based, real-time solutions delivered across a variety of channels by qualified healthcare professionals using best practices information offer a continuous, cost-efficient and – because of its ability to more actively engage patients in the management of their own conditions – more effective approach.

Striking a balance between high tech and high touch patient care, telehealth solutions allow nurses, physicians and coaches to provide appropriate clinical services in tandem with behavioral and motivational coaching.

A more convenient, consistent and efficient approach to the delivery of healthcare, telehealth solutions empower patients and their families to make better decisions – resulting in improved outcomes, lower costs and reduced pressure on limited resources.

# Industry Stakeholders

One system, many stakeholders – all participants in the healthcare industry stand to benefit from the incorporation of telehealth solutions, including:

## Patients

Telehealth is the first process improvement in healthcare that has really been designed to facilitate the convenience of the patient and their families. Telehealth by definition is patient centric. A basic telehealth service, telephone triage, has been described as the tool that moved the front door of the healthcare system from the hospital emergency department to the patient's living room.

## Payers

Payers are moving toward incenting providers to proactively improve patient health status, rather than wait for office visits, tests and treatments to become necessary. With services more and more aimed at prevention, keeping people healthy and at home – and out of expensive facilities – is increasingly the goal of both private and public payers. Telehealth services offer vital, cost effective solutions that support the fiduciary and economic requirements of health system payers.

## Providers

Providers come in all shapes and sizes: quaternary to community hospitals, individual practices or physician groups, mental health clinics, nurse practitioners, dietitians and physiotherapists, etc. Not only does Telehealth facilitate patient access it also enhances provider collaboration and efficiency. By helping people where they are physicians and others can reserve face to face, bricks and mortar care for more acute patients. Also for acute patients it helps providers obtain “just-in-time” expert advice and support from colleagues at other facilities or in fact anywhere in the world.

# A Quiet Revolution

Telehealth has been described as “a quiet revolution in healthcare” because it is transforming patient access. Now we can envision a streamlined, patient-focused future in which ease of delivery, improved patient outcomes, and savings – in terms of both resources and lives – are being made available across a vast spectrum of the healthcare landscape.

Imagine a scenario in which the most current, highest-quality healthcare information, expert clinical services, and empathetic behavioral support flow freely and instantaneously between healthcare providers and their patients:

A 62 year-old diabetic man discharged from a downtown hospital in Toronto to his home in suburban Mississauga, has his daily follow-up regimen overseen by a dedicated team of telehealth professionals deployed via a virtual queue across Ontario. Utilizing telehealth technologies, they monitor his blood glucose levels, send informational emails, make phone calls reminding him to take his medication, and coach via video-conferencing technologies – while he remains in the comfort of his home. His family even receives reassuring text messages reporting on his condition and confirming that he is successfully following doctor’s instructions.

In a rural area of Cape Breton, Nova Scotia a 57-year old suffering from emphysema is receiving critical assistance to help him stop smoking through a toll-free telephone helpline. His personal coach, using techniques such as motivational interviewing, supports his quit attempt and provides him and his family with the information to support the challenge they are facing. He also has access to an on-line community forum where he can share his program with other people just like him.

A vascular surgeon in Vancouver consults via videoconferencing with a sub-specialist at a clinic in Calgary for a second opinion before proceeding with or even during a particularly difficult surgical procedure, increasing not only the likelihood of a successful outcome but also greater convenience and cost-savings, including savings to the patient who does not have to travel away from home.

## Remote Disease Prevention and Chronic Care

Remote medical devices that facilitate biometric data streams to monitor blood glucose, blood pressure and other basic vital signs offer additional enhancements for remote health support. Utilized in combination with consistent oversight by nurses, physicians, coaches and other practitioners, this technology enables staff to provide virtual hands on care for those patients who might have previously been considered difficult or geographically inaccessible.

Integrated with common communications technology and daily living devices such as motion sensors, medication reminders, and emergency response services, patients embrace the devices as essential to their care management programs. They also alleviate the need for institutional visits and help them manage their health optimally in their own homes.

For 30 years or more, telemedicine has been practiced by physicians to consult with each other, usually by a primary care or specialist needing another opinion from a sub-specialist or perhaps a physician located in a rural area needing help from physicians in a better-equipped urban medical centre (see the Ontario medicine Network <sup>19</sup>). “Recent technological advances, however, have expanded the scope of medical interaction that may be achieved. Whereas consultative services, examination of still documents (photos, x-rays, slides, or ECGs), and interactive voice sessions previously defined the state of the art, the telemedical event may now involve ‘live’ manipulations of patients and/or tissues ‘at a distance’.” <sup>20</sup>

The rapid development of telemedicine will continue to be driven by the implementation of enhanced broadband communications, immersive feedback and even nanotechnology.

## Clinical Health Triage Services

Virtual clinical contact centres create economies of scale using teams of healthcare and psychological service professionals including counselors, psychologists, sociologists, social workers and nurses to provide a holistic matrix of improved clinical care.

Highly skilled professional staff are supported by an electronic decision support system that provides, standards-based guidelines for health information, advice and support. Clinicians use the system to assess symptoms while they assist callers in making appropriate healthcare decisions.

Clinician-patient exchanges can include a wide array of situations, including, but not limited to:

- Advising on self care at home
- When and how to contact a doctor
- Accessing a local emergency department
- When to call 911 or in some cases actually making the transfer
- Information on poison and medication issues
- Public health concerns, (e.g. water contamination, West Nile Virus etc)
- Smoking cessation and gambling support programs

Managing over a million calls a year, a fully-functioning clinical telehealth service represents a large professional workforce that generates significantly better economies of scale than other health system outreach programs. Based on queuing theory, where calls / people arrive in a queue randomly at different times of the day each taking a different amount of time, a centralized queue even if distributed virtually with agents working in their own homes has tremendous advantages over smaller local offices using face to face or a traditional telephone system. The virtual queue can support huge incremental surges in volume, growing and shrinking in a way to match the rhythm of the contacts received. This makes this approach both more sustainable from a pure economic point of view and more effective at meeting surges. This approach also assures standards based care since this process facilitates the creation and maintenance of competence across the entire work force. In effect each caller, e-mailer and texter will get the same service delivered in the same way ensuring both safe and effective care.

The telehealth operational model is inherently flexible and scalable and can be set up to meet the unique requirements of each client. Regardless of configuration, a telehealth contact centre is the nucleus of each client's health outreach efforts, staffed by numerous health professionals working in harmony in a fully-integrated, tele-triage system to ensure efficient, thorough and compassionate service to all its callers and patients.

## A Public Health Early Warning System

Opening up this new channel of access to health information can play a vital role in the event of a medical emergency or disaster, as well as in preventing and reducing the spread of disease and other threats to public health. Disease outbreaks such as the SARS epidemic in 2003 and H1N1 virus in 2010 caused call volumes to nearly quadruple. Telehealth systems using virtual queues and automatic call distribution systems are prepared to accommodate such surges, a capacity that no traditional, local telephone based service could manage.

## Wellness and Prevention Services

The potential for telehealth services to engage, educate and empower patients in actively managing their own healthcare is one of the more exciting aspects of telehealth.

While the demand for health services globally continues to increase due to an aging population burdened by chronic illnesses, many are conditions that can be directly linked to modifiable risk factors such as diet, lack of exercise and smoking. By extending the traditional continuum of care, telehealth services offer a full spectrum of preventive healthcare interventions, behavioral coaching and motivational support designed, to improve outcomes, save costs and increase convenience for patients and their families.

Encouraging people to make healthy behavioral changes in their daily routines, telehealth supported solutions can quickly transform passive recipients into better-informed, actively engaged partners in the management of their own fitness, health and wellbeing. This personalized interaction helps them feel confident in assuming responsibility for various aspects of their wellness regimens and disease management programs. It also results in a significant reduction of stress on the resources of a healthcare system struggling to meet the demands of a rapidly aging population afflicted with chronic diseases, many of which are either preventable or more efficiently managed with appropriate lifestyle targeting programs.

## Access Management Systems

Another component of some telehealth services is program (e.g. hospitals and clinics) access management solutions that centralize patient access, scheduling and pre-registration into more flexible, quality-controlled customer relationship management (CRM) platforms that:

- Improve outcomes
- Facilitate post-care access
- Ensure a more satisfying patient experience
- Reduce costs
- Reduce re-admissions
- Provide organized information/data to fulfill financial and regulatory requirements

Streamlined, patient-focused services automate many scheduling processes and improve accessibility. Utilization of hospital staff and equipment is optimized; lost appointments and no-shows can be significantly reduced. Patients can more easily and conveniently access the system to manage their appointments, obtain information and have questions answered.

At the end of the day, healthcare is still all about the *person-to-person* relationship between patient and provider. In many situations, telehealth can not only substitute for face-to-face contact, but expand and enhance it through a continuous, real-time conversation that more effectively engages and empowers people to take control of their own health and well being.

Telehealth solutions save time and money because they enable healthcare professionals to interact with and monitor patients remotely, adding value to service delivery models. Further, as the population continues to age, telehealth enables independent living by supplementing existing networks of care.

New applications are continuously being discovered for skillfully leveraging new communications technologies as an integral part of everyday healthcare practices. Precisely planned and executed through formalized, documented procedures to ensure continuous quality improvement, telehealth represents a vital component of healthcare's future.

## **Distance/Time Gap: No Longer an Issue**

By proactively leveraging multi-channel communications technology, highly skilled healthcare providers are able to more easily access, assess, monitor and motivate patients remotely in real time and at a much lower cost.

# Sykes Assistance Services – Telehealth Solutions

SYKES has been providing clinical telehealth solutions since 1997. Our services include patient access management, symptom management, health information, chronic illness support, and wellness and prevention programs providing evidence-informed, accessible healthcare that improves lives and saves money.

Scalable, flexible, streamlined and multi-channel, SYKES telehealth services integrate a full spectrum of the latest communications and medical device technologies with best practices in evidence-based clinical services and customer relationship management (CRM) systems to deliver improved outcomes for our stakeholders.

## The Right Technology

SYKES provides a comprehensive suite of telehealth services and tools such as contact centres, helpdesks, live chat support, Interactive Voice Response/Recognition (IVR), web sites, remote monitoring, virtual coaching, access to personal health records, email, and Bluetooth enabled monitoring devices.

Demographically-appropriate platforms such as text messaging for teens and young adults, and social networking tools with which patients of all ages are becoming increasingly comfortable are being used by SYKES to “close the gap” in terms of both service and distance. Telehealth solutions are facilitating a transformation to a multi-modal healthcare delivery system that empowers communities, caregivers and patients alike.

## A Careful Balance of Accessibility and Privacy

As technology evolves, so too will the ability to monitor patients more closely. There will be more sophisticated, simpler and less costly tele-monitoring and tele-homecare devices. Patients will be able to upload their health data into their physicians' electronic medical records (EMR), and patients may have their own electronic personal health records. Concurrently, SYKES is ensuring that secure networks meet the increasing need to protect the personal health information of our users. Each new service is supported by a security and privacy impact assessment to ensure that each program meets or exceeds the requirements of Federal and Provincial privacy legislation. Our staff are trained initially on their role in protecting and advocating for the individual's right to privacy. In addition to this annual refreshers ensure that privacy is embedded into the culture of Sykes Assistance Services.

## Ensuring Clinical Excellence

In keeping with our exacting standards of excellence, SYKES recruits only highly qualified clinicians and support personnel. Our clinical staff places the healthcare needs of patients at the forefront, ensuring the highest possible standard of evidence-based care at every contact.

Extensive personal and professional development, specifically designed to deliver improved care and customer satisfaction, is required of all agents and healthcare staff working at SYKES. Our clinicians are provided rigorous orientation to tele-practice, supported by individual mentors and ongoing coaching to assure a safe evolution from novice to mastery.

Quality assurance and continuous quality improvement are at the core of what SYKES delivers. Our pioneering approach to operational excellence has allowed us to match the best practices of customer relationship management with evidence-based clinical practice.

SYKES has embedded continuous process improvement into the culture of the organization. Our five step Continuous Improvement Process – Define, Measure, Analyze, Improve, and Control – underlies all performance analyses and improvement recommendations. SYKES has implemented Lean and Six Sigma continuous process improvement using tools such as value stream mapping, A3 Plan-Do-Study-Act cycles, root cause analysis and Kaizen events. The fusion of Lean and Six Sigma works particularly well in healthcare because of its emphasis on customer/patient value. By eliminating waste and improving value, one can reduce costs and improve patient satisfaction and loyalty.

## High Touch Patient Care

Every interaction that we implement has elements of best practice communications, behavior change and support – delivered in a thoughtful balance of high-tech and high-touch patient care. The technology of telehealth enables the right provider to be available at the right time; it is the competencies and communications process used by the healthcare provider that makes the difference in patient outcomes.

SYKES views the concept of telehealth coaching in its broadest sense:

- If we are supporting a scheduling service, our callers or users will have a different experience than if they called another program. They will feel cared for and at the centre of the process – not someone being shuffled through the system and treated like a number.
- If we are performing triage, we build a relationship with the callers so that they see the process as a journey taken together. They feel empowered and are more likely to follow the advice provided because, in effect, they were part of the decision itself.
- For Wellness and Disease Management clients, we carefully consider the whole person and all other aspects of their life situation. Through the use of motivational interviewing, cognitive behavioral counseling, and social learning processes, SYKES professionals help our clients to envision, commit to and achieve lasting, positive health behavior change.

## About Us

A member of a family of global businesses delivering business process outsourcing services, SYKES sets the standard for excellence in customer service. With 15 years of experience delivering healthcare through more than 10 million clinical interactions using the latest telehealth technology, our professionals provide interventions that are:

- **On target**

Personalized, evidence-based and accurate

- **Just enough**

Efficient, satisfying to the user and no more or less than needed to solve the problem

- **Just in time**

Available to users the way they want it, where they want it and when it makes the critical difference

Helping people make health decisions, SYKES delivers services that are always current and relevant.

SYKES creates working partnerships with clients to meet the complex healthcare challenges of the 21<sup>st</sup> century.

Sykes Assistance Services Corporation, 248 Pall Mall Street, London Ontario Canada N6A 4T4 1.866.522.6148

[www.sykesassistance.com](http://www.sykesassistance.com)

# Footnotes

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