

# HIGH IMPACT PRACTICES

Evidence-informed practices in home and community care that result in better care, better outcomes and better value.

## STAR TRAK Using Technology to Enhance Effective and Efficient Home Care Service Delivery

This High Impact Practice describes how a national home care provider implemented a mobile technology solution and customized application to enhance its efficiency and effectiveness, relieve frontline staff of their administrative burden, and improve client service.

Mobile technology solutions intuitively make sense for the mobile home care team. Applications to help staff access services, support, and supplies on a mobile device would increase efficiency and effectiveness of the home care provider.

The *STAR Trak* initiative (originally referred to as the Safe Time & Attendance Reporting program) implemented by We Care Health Services is an initiative that specifically addresses the paper-based, phone-driven Scheduling and Time and Attendance system for staff within a home care service provider. It consists of providing frontline staff - personal support workers<sup>1</sup>, with a BlackBerry® smartphone equipped with a special application designed to track 'time and attendance'. With minimal training, staff are up and running with the device.

This innovative application addresses the challenge within the home care sector to track distinct visits and duration for each client to support the current fee-for-service funding models. Confirmation of visit and duration of service are recorded and submitted to an administrative team so that the relevant information can be entered (generally manually) into billing and payroll systems for processing and reporting. Given the nature of home care service delivery—short visits across multiple locations—this need to track and monitor can place an increased burden on home care clinicians who can spend up to 25% of their time on administrative duties<sup>2</sup>.

With the *STAR Trak* Application, virtually all paperwork is eliminated from the process of assigning client visits, charting the visit and logging time into timesheets. Staff is able to quickly accept a referral and complete the documentation process for the client's service on the spot during a client visit. Communication with the office is improved and staff travel time to the office is reduced.

Additionally, by having a BlackBerry smartphone, staff are able to communicate with each other and the office more readily. More information that is relevant to care is shared as it is easier to do so. The reaction time to addressing concerns and acting on new client information is faster, improving the quality of care by the entire team.

Mobilizing personal support workers with the devices has also made an unexpected difference to staff morale. It has become a perk of the job – a device that not only helps staff do to their work, but benefits their lives, too.

**"In this job, you basically work alone. Now, if something happens at a client's house and I need help, I have a BlackBerry smartphone to reach out to my support network. That's really important for peace of mind."**

**— Louise Gerber, Personal Support Worker**

## BACKGROUND

Home care clinicians would agree that too much of their time is spent on documentation, managing paperwork and related administrative duties, such as photocopying, faxing, mailing and placing phone calls to the home office – often without the benefit of even a cellular phone. An estimated 20-25% of service provider time is spent on administration<sup>3</sup>.

As a highly mobile work force, home care staff – personal support workers, nurses and therapists – often work in virtual isolation providing care in clients' homes and having limited access to their supervisors and home office team. Contact with the office typically occurs through pager, the client's home phone or at the end of the day when staff drop off paperwork or fax it into the office from a home-based machine.

In many jurisdictions home care funding is based on a fee-for-service reimbursement model based on client visit and duration of time for each visit. To support this model, those responsible for overseeing the deployment of staff have tracking processes for ensuring that service has been authorized, communicated and delivered. Typically, assignments are confirmed by phone and duration is verified through timesheets completed by hand and then entered manually into a system for billing and payroll. Visits are reconciled with that which has been authorized and are reimbursed as long as the approvals are in place.

In an effort to improve upon the time-consuming manual process, We Care Health Services undertook to replace their paper-based, phone-driven Scheduling and Time and Attendance system. They anticipated that an automated approach would increase the efficiency and accuracy of the assignment and recording of visits; and it would streamline administrative processes for both clinical and administrative staff. This initiative would minimize the paperwork and time involved in confirming frontline staffs' shifts, tracking client information and sending completed timesheets to the We Care office for input into the organization's coordination and back-end billing and payroll system<sup>4</sup>.

The goal of the *STAR Trak* application and mobile technology was to replace the paper-driven administrative system that home care workers (personal support workers, nurses and/or therapists) used to confirm their visits with home care clients. The expected outcome would be that staff has access to current and timely information about the services delivered so they can facilitate early identification of any problems related to the timing and length of the booked visit.

**“I don't know how I ever did my job before and I have worked for We Care for 17 years.”**

— Eldrina Martin, Personal Support Worker

## IMPLEMENTATION

In 2006 the We Care project team actively undertook to find a technology solution that was portable, user-friendly and durable. Despite the popular consumer use of mobile technology (32 million BlackBerry users worldwide), many home care workers are not accustomed to using technology as part of their work; in fact, some of the home support staff had never used a cellular phone, and several had never used a computer. Any smartphone<sup>5</sup> or mobile application deployed had to be easy to understand and use. The organization decided to build on its investment in the BlackBerry smartphone solution already in place for the business staff. The BlackBerry smartphone has the flexibility to allow activation of specific features - in this case the GPS, email and the *STAR Trak* application<sup>6</sup>.

Having determined the technology platform, We Care identified two appropriate applications to be tested with staff in four of its offices. Applications were reviewed for ease of use, compatibility to current operating systems, adaptability to business processes, responsiveness to issues identified by office and frontline staff and the ability to reduce workload in the office.

The first pilot was launched in 2007 in Waterloo and Ottawa and ran for one year. These sites were chosen primarily because of the proximity to the application vendor and leadership within the office sites. More-in depth pilots followed in Fredericton (2008) and Winnipeg (2009). The decision to test the initiative in Fredericton was to assess if it was possible to avoid introducing additional administrative staff (which it was). Fredericton and Winnipeg also provided the opportunity to test the applicability of the solution outside Ontario which was important to We Care as a national provider and to the partners who wanted to be assured of pan-Canadian relevance.

In order to apply the most rigorous test of the solution, the initiative included personal support workers who had expressly self identified as being uncomfortable with using technology. After a two to three hour training session on using the BlackBerry smartphone and the specific application, the personal support workers were using the system. In a few cases, individual follow up sessions were required, but most staff were confident with it very quickly. The *STAR Trak* program and the manual system ran in parallel for two weeks as part of the test and to provide staff with the comfort of the existing system as they became confident with the device. There was some hesitation from a small number of staff initially, but these staff quickly came to appreciate the advantages of the devices. In most cases, the staff was using the BlackBerry application within the week.

Clients were advised of the new system so they could understand why signatures on time slips would no longer be required and so they were aware that when staff were using their BlackBerry smartphone it was related to the client's care.

The home care funding agencies were also involved in understanding the nature of the pilots and the level of security. All information flows through the BlackBerry® enterprise Server

# STAR TRAK

## Using Technology to Enhance Effective and Efficient Home Care Service Delivery

which is a highly encrypted secure system. Passwords are utilized to ensure there is no inappropriate use of information and lost devices have information wiped clean immediately. The process and security have been approved by Privacy Commissioner of Ontario.

### The Process

When a home care worker arrives at their client's location, they use the BlackBerry smartphone to confirm their arrival. Just prior to leaving, they confirm they have completed the tasks they were assigned by checking off the tasklist on the device and indicate that they are leaving. This information is automatically sent to We Care's scheduling system. The home care workers also use the BlackBerry application to log basic chart information. If a client has an incident, which can range from mobility, cognitive or medication troubles, the staff can log the information into the chart section. In geographic regions where transmission is not possible, the staff's entries into the BlackBerry smartphone are stored until the worker is in an area with telecommunication coverage.

Because the BlackBerry smartphone is GPS-enabled, any attempts by personnel to log a service start at a location that is not consistent with that of the client creates an alert on the office scheduling system. Similarly, attempts to sign off service without completing all elements of the client's care plan is not permitted and a special exception note must be created which the office staff then enters into the client record. This provides the documentation that is so often required at a later date when someone is trying to understand the nature and rationale for the service that was provided.

The *STAR Trak* program allows the We Care coordinators to know when service has not been initiated and intervene promptly. If a staff member does not confirm they are at a scheduled visit within 15 minutes of the expected start time, the co-ordinator is notified by an alert on their computer. This allows them to attempt to determine the nature of the delay and to keep the client informed. Similarly, if a staff person does not confirm they have completed their shift within 15 minutes of their scheduled end time, the co-ordinator is notified and can call the client to ensure the safety of the client and the staff. These prompts improve client responsiveness and both client and staff safety. The office staff can also run variance reports that show the number of times that service is not initiated on time; does not end on time; etc.

The *STAR Trak* program allows the co-ordinators to communicate the need for a staff member to accept a new referral or to be advised of a change in client assignment via the BlackBerry smartphone. There is no need for a telephone call to the client's house and once the staff is able, they can quickly confirm acceptance of the information and ability to make the requested changes. For new referrals, the coordinator sends out a group email to those staff that would be appropriate to provide the care. The ability for staff to respond almost immediately improves We Care's ability to confirm to the client the name of their worker and anticipated time of service. In addition, once the shift has been

assigned, a second e-mail is sent advising the staff that the need no longer exists, reducing 'call backs' from staff on this matter. In one week alone, care coordinators experienced a reduction in the number of calls from 145 to 72, because home care workers were accepting assignments via their BlackBerry smartphone.

### Policies

The *STAR Trak* program has required a review of current policies at We Care and the development of new ones. The existing policy regarding the prohibition of using cellular phones or texting while driving was reinforced. New policies regarding personal use of the device, use for communication amongst team members, loss or damage of devices are some of the areas that have been addressed. We Care is developing policies related to costs for replacement of lost devices that escalate in the event that someone repeatedly loses them. To date one device has been lost but, because of the GPS, was found in a cab.

### EVALUATION

After a detailed review of the applications, in December 2009, We Care chose the CellTrak<sup>7</sup> application with several enhancements to meet the company's needs for implementation across the organization. An internal evaluation of the system has involved qualitative and quantitative analysis of the *STAR Trak* program in the four pilot communities. A number of key indicators have been, and continue to be, tracked to evaluate the system. These included measures such as time to fill a shift, number of calls taken by a coordinator per day, and payroll errors, among others.

Almost immediately the pilot sites experienced an almost 25% reduction in calls between care coordinators (day and overnight on-call) and staff when trying to book visits. Prior to the introduction of the program, when a shift became available a coordinator would call up to 25 care workers to find someone available to fill it, usually leaving messages for the majority and thus having up to 25 calls returned, even after the shift was filled. The number of missed visits has decreased because of the timely communication. Staff also appreciate that the device shows them their schedule for two weeks, allowing them an opportunity to plan around scheduled shifts.

Another change was getting Time and Attendance in near-real-time. The step of requiring staff to deliver their timesheets has been completely eliminated, saving them time and inconvenience. Also eliminated is the requirement for office staff to manually input the data into the coordination, billing and payroll systems. It is now immediately recorded via the BlackBerry solution and instead of a data "lag", the organization has real time information about the services rendered.

**"The STAR Trak program dramatically reduces the administrative load for staff."**

— Janna Chindamo, Branch Director Waterloo

## OUTCOMES

As a result of the *STAR Trak* program We Care is able to realize:

- Cost savings through streamlined administrative processes and improved ability to notify staff of assignment changes
- particularly for the last minute changes that typically occur within the sector. The extent of the net financial savings is still being determined.
- Improved client service through immediate communication of client care changes to staff.
- enhanced staff loyalty as a result of the efforts by the organization to reduce the burden of administrative work and to provide better access to support particularly relevant as they work alone. We Care hopes that the use of technology will help with staff retention. There has been little objection by the frontline staff to using the device and the close monitoring of their activities. Indeed, staff feels supported with the knowledge that the office knows where they are.
- Increased safety for clients and staff as communication with the office can be immediate in the event of a situation.
- Improved timeliness of service delivery changes through communication about attempted visits where the client was not at home or refused service.

The devices are now deployed to over 70 staff, mostly personal support workers. Plans are underway to issue the BlackBerry smartphones to all frontline staff that work on average more

than 15 hours per week and realize the benefits of the technology on a larger scale.

## KEY SUCCESS FACTORS

- Technology and programming partners who are flexible with and willing to modify their systems to accommodate the organization's processes
- Patience and support to address technical problems associated with start-up
- Strong committed leadership to support implementation

## CONCLUSIONS

The *STAR Trak* program is an effective means of reducing the paper-driven administrative system that staff uses to confirm their visits with home care clients. The air time costs are still significant enough to require caution as to the extent of usage and the lack of broadband coverage in all areas of the country compromises full implementation.

We Care plans to provide most staff with a BlackBerry smartphone by 2012. We Care is continuing to work with vendors on other applications that will enhance the ability of their staff to provide the highest quality of care. As importantly, staff is assured that their employer is committed to ensuring they are safe and supported.

- 
- 1 Personal Support Workers are also referred to as health care aide, community health worker, home support worker, and continuing care assistant in other jurisdictions.
  - 2 Krebs, D. (2007) *Wireless Home Care Solutions: Addressing the Quality of Service and Performance Gap*. Venture Development Corporation, p.4
  - 3 Ibid, p.4
  - 4 We Care uses the Procura system which is a comprehensive and fully integrated software solution for point-of-care, clinical and back office administration.
  - 5 A smartphone is a mobile phone offering advanced computer like capabilities enabling various software applications to be adopted.
  - 6 We Care consciously deactivated the telephone feature as a means of containing costs. The company is currently exploring creative options for staff to avail themselves for additional BlackBerry services such as the telephone.
  - 7 More information at [www.celltrak.com](http://www.celltrak.com)
- ©2010 Research In Motion Limited. All rights reserved. BlackBerry®, RIM®, Research In Motion®, SureType®, SurePress™ and related trademarks, names and logos are the property of Research In Motion Limited and are registered and/or used in the U.S. and countries around the world.

---

We Care Health Services (We Care) is the largest, independently owned home health care company in Canada, with 51 locations serving over 800 communities across the country. We Care's 4000 staff provide service to 14,500 clients per week, in their home, in long-term care facilities or wherever else they may be. We Care has been providing the highest standard of excellence in the provision of care to Canadians for more than 25 years and this year received "Full Accreditation without Report", from Accreditation Canada. The company excels in responding to changing needs within the community through the development of dedicated programs of training and service standards for their clients and staff. More information can be found at [www.wecare.ca](http://www.wecare.ca).

Special thanks to the following individuals who provided advice, answered our questions and reviewed this paper:

John Schram, President & CEO We Care Health Services

Barbara Toccacelli, Director Human Resources and Communications, We Care Health Services

Julie Stevenson, Senior Marketing Manager, Healthcare, Research in Motion

Thank-you to our High Impact Practices Partner: The Canadian Home Care Association gratefully acknowledges the funding from BlackBerry (Research in Motion) which enabled the documentation of this High Impact Practice. Research in Motion (RIM) is a leading designer, manufacturer, and marketer of innovative wireless solutions for the worldwide mobile communications market. RIM's portfolio of award-winning products, services, and embedded technologies include the BlackBerry® wireless platform, the BlackBerry smartphone product line, software development tools, radio-modems, and software/hardware licensing agreements. [www.rim.com](http://www.rim.com)



The Canadian Home Care Association is a national not-for-profit membership association dedicated to ensuring the availability of accessible, responsive home care and community supports to enable people to safely stay in their homes with dignity, independence, and quality of life. Members include governments, administration organizations, service providers, researchers, educators and others with an interest in home care. The Canadian Home Care Association advances excellence in home care and continuing care through leadership, awareness, advocacy and knowledge.

[www.cdnhomecare.ca](http://www.cdnhomecare.ca)

@CdnHomeCare

©Canadian Home Care Association