SENIOR CARE CANADA
INSPIRING CHANGE

STATE OF THE INDUSTRY

2017

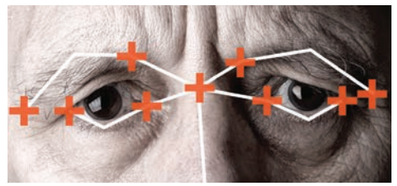
Second Quarter 2017

CONTENTS

Vol.19 No 2 Second Quarter 2017

Page 6

Page 16



What's New At SeniorCareCanada.com

We had such an overwhelming response to the *State of the Industry* that we couldn't put everyone's thoughts on each topic in the magazine. So check out the website for more great quotes and ideas from our 12 *State of the Industry* participants.

Welcome to the *State of the Industry* issue

This issue came about because we wanted to get to the heart of what is happening in the long-term care industry today. To that end, we devised six questions that we asked 12 participants; everything from 'What is the biggest issue facing long-term care today?' to 'What do you think the evolution of long-term care should be in the future?'

The answers we got were astounding; both thought-provoking and meaningful.

We had the opportunity to interview a great group of people, from long-term care administrators, to executive directors of associations, to government officials.

The result is a wide variety of answers from the perspectives of people in provinces across Canada.

And yet, there were many commonalities in people's answers. The struggle for resources and funding is real and one that cannot be ignored. The desire to innovate and think out of the box is a challenge because of constraints but needs to continue in order to have a vibrant sector.

But what resonated the most was everyone's passion. I firmly believe that those who choose to work in long-term care do it because they are passionate about their work. We certainly saw that reflected in the answers from the participants.

What you will see in the pages of this magazine is honesty about the industry, its challenges and what needs to come next. We know the long-term care industry isn't perfect but we also know that everyone strives each day to make it better.

It's the people in this industry that fuel it.

Here at Senior Care Canada, we feel honoured to be a small part of this industry, helping to make your jobs easier through the sharing of knowledge.

"There exist limitless opportunities in every industry. Where there is an open mind, there will always be a frontier."

– Charles Kettering

To that end, we have two feature articles in this issue that are fascinating. The first is about pain detection in people with dementia and using technology to help perform pain assessments.

The second is looking at a study that was done to improve the use of intravenous in long-term care. The results are very interesting.

I hope this issue inspires you to continue to push further to provide the best quality care possible for your residents. I know it can be a struggle at times, but this look at the state of the industry shows that you are definitely not alone and that working together is the solution.

There were so many great responses from all of the state of the industry participants, that we couldn't fit it all in the magazine. So we've included them on our website at: www.seniorcarecanada.com. Please check it out for more valuable insight into the industry.

I sincerely hope you enjoy this issue as much as I have enjoyed putting it together.

And thank you to all the participants of this issue.

Lindsey

Lindsey Patten,
Interim Publisher/Editor

SENIOR CARE CANADA
INSPIRING CHANGE

PUBLISHER/EDITOR
Kathryn Lymburner

INTERIM PUBLISHER/EDITOR
Lindsey Patten

GENERAL MANAGER
Mary Lymburner, M.Ed.

CREATIVE DIRECTOR
E. Jolene Dreja

12A-4981 Hwy 7 E, Ste 254,
Markham, ON L3R 1N1
admin@seniorcarecanada.com

VISIT SeniorCareCanada.com
LIKE facebook/SeniorCareCanada
TWEET @SeniorCareMag

Published by Blue Line Magazine Inc, which accepts no liability for any injuries to person(s) or property resulting from the application/adoption of any materials presented in this magazine.

Printed in Canada
ISSN: 1492-7209

Canada Post - Canadian Publications
Mail Product Sales Agreement
No 40561001

SUGAR'S 'TIPPING POINT' LINK TO ALZHEIMER'S DISEASE REVEALED

For the first time a "tipping point" molecular link between the blood sugar glucose and Alzheimer's disease has been established by scientists, who have shown that excess glucose damages a vital enzyme involved with inflammation response to the early stages of Alzheimer's.

Abnormally high blood sugar levels, or hyperglycaemia, is well-known as a characteristic of diabetes and obesity, but its link to Alzheimer's disease is less familiar.

Diabetes patients have an increased risk of developing Alzheimer's disease compared to healthy individuals. In Alzheimer's disease abnormal proteins aggregate to form plaques and tangles in the brain which progressively damage the brain and lead to severe cognitive decline.

Scientists already knew that glucose and its break-down products can damage proteins in cells via a reaction called glycation but the specific molecular link between glucose and Alzheimer's was not understood.

But now scientists from the University of Bath Departments of Biology and Biochemistry, Chemistry and Pharmacy and Pharmacology, working with colleagues at the Wolfson Centre for Age Related Diseases, King's College London, have unraveled that link.

By studying brain samples from people with and without Alzheimer's using a sensitive technique to detect glycation, the team discovered that in the early stages of Alzheimer's glycation damages an enzyme called MIF (macrophage migration inhibitory factor) which plays a role in immune response and insulin regulation.

MIF is involved in the response of brain cells called glia to the build-up of abnormal proteins in the brain during Alzheimer's disease, and the researchers believe that inhibition and reduction of MIF activity caused by glycation could be the 'tipping point' in disease progression. It appears that as Alzheimer's progresses, glycation of these enzymes increases.

The study is published in the journal Scientific Reports.

Professor Jean van den Elsen, from the University of Bath Department of Biology and Biochemistry, said: "We've shown that this enzyme is already modified by glucose in the brains of individuals at the early stages of Alzheimer's disease. We are now investigating if we can detect similar changes in blood.

"Normally MIF would be part of the immune response to the build-up of abnormal proteins in the brain, and we think that because sugar damage reduces some MIF functions and completely inhibits others that this could be a tipping point that allows Alzheimer's to develop.

Dr Rob Williams, also from the Department of Biology and Biochemistry, added: "Knowing this will be vital to developing a chronology of how Alzheimer's progresses and we hope will help us identify those at risk of Alzheimer's and lead to new treatments or ways to prevent the disease.

Dr Omar Kassaar, from the University of Bath, added: "Excess sugar is well known to be bad for us when it comes to diabetes and obesity, but this potential link with Alzheimer's disease is yet another reason that we should be controlling our sugar intake in our diets."

Globally there are around 50 million people with Alzheimer's disease, and this figure is predicted to rise to more than 125 million by 2050. The global social cost of the disease runs into the hundreds of billions of dollars as alongside medical care patients require social care because of the cognitive effects of the disease.

We asked members of the long-term care industry what the biggest issue in long-term care is today, what the most positive thing is about the industry, how the government can help, and what long-term care should look like in the future.

Here's how they answered.

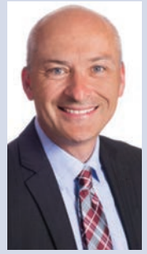
The PARTICIPANTS

CHECK OUT **SENIORCARECANADA.COM** FOR MORE GREAT QUOTES AND IDEAS FROM THESE 12 PARTICIPANTS.

DEBRA BOUDREAU

Debra Boudreau is an occupational therapist who has worked in acute care, home care, government and currently long term care. She is the administrator of Tideview Terrace Nursing Home in Digby, Nova Scotia, the first registered Eden Alternative facility in Atlantic Canada. Most recently, Debra led the rebuilding of a new facility and the introduction of a cross functional team model of care and is delighted to share her experience with others.

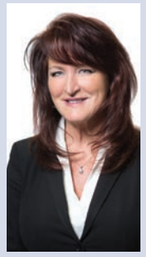
www.tideviewterrace.ca



DANIEL FONTAINE

Daniel Fontaine is the Chief Executive Officer for the BC Care Providers Association in Vancouver whose membership includes over 300 residential care, assisted living, home care and commercial members from across British Columbia. Over the course of his career he has worked in the private and not-for-profit sectors as well as government. He currently serves on the Board of SafeCare BC. In 2012 Fontaine was awarded the Queen's Diamond Jubilee Medal for public service.

www.bccare.ca



CANDACE CHARTIER

Candace Chartier, RN, CHE, MBA, ICD.D, is the Chief Executive Officer of the Ontario Long Term Care Assoication. She started her career as an RN and worked in the Acute Care Sector, Rehabilitation, Community Nursing and the Aeromedical Nursing fields. Candace is a strong advocate for long-term care both provincially and nationally as an executive with the Canadian Association for Long Term Care.

www.oltca.com

ANNETTE FOUGERE

Annette Fougere is the Chair of the Continuing Care Council for the Health Association of Nova Scotia and the Chief Executive Office of St. Anne Centre. She has worked in health care for the better part of 38 years. Her experience extends from acute care, public health and continuing care. The last 6 years have been spent as CEO of a small rural facility offering both acute care and long term care services.

www.healthassociation.ns.ca

DAVID CHEPERDAK

David Cheperdak, MPA, CHE is the Chief Executive Officer of Broadmead Care Society in Victoria BC that owns and operates 335 residential care beds on four sites for Veterans, seniors and adults with disabilities. BCS also operates the Better at Home Program that provides non-health survives to support seniors to live safely in their own homes. David has 28 years of experience in working for community-based, social service and health service organizations.

www.broadmeadcare.com

JODI HALL

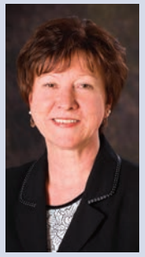
Jodi Hall is the Executive Director of the New Brunswick Association of Nursing Homes. Jodi has served as the Director of Education and Practice with the New Brunswick Licensed Practical Nurse Association and Administrator of Orchard View Long Term Care prior to beginning her work with the NBANHs. She has contributed to reports on aging and lead several provincial initiatives with nursing homes.

www.nbanh.com

TAMMY LEACH

Tammy Leach is the Chief Executive Officer of the Alberta Continuing Care Association (ACCA). Tammy has over twenty three years' experience as a strategic senior executive in the not-for-profit, government, community service and health care sectors. She has worked within the various facets of continuing care including adult supportive living, senior's housing and personal care.

www.ab-cca.ca



JAN LEGEROS

Jan Legeros is the Executive Director for The Long Term & Continuing Care Association of Manitoba which is a not for profit corporation with over 150 members. Its primary objective is to advocate on behalf of seniors in Manitoba and the staff at the residences who serve them, throughout the long term care continuum. Jan is a registered nurse whose involvement in healthcare began in the early 1970's in palliative and rehabilitation care.

www.ltcam.mb.ca

Prince Edward Island Nursing Home Association

BOB NUTBROWN

Bob Nutbrown is the owner/CEO of a nursing and retirement company in P.E.I. and is President of the P.E.I. Nursing Home Association, which represents all owners on P.E.I. He is also part owner of a facility in Ontario. He previously was a deputy minister and Secretary to the Cabinet in P.E.I. and spent two years with the Ontario government, before being introduced to the industry at Extendicare. Prior to purchasing his homes, he was a broker/owner of large real estate company where his personal practice focused on nursing home and retirement home transactions.

ANDRÉ PICARD

André Picard is a health reporter and columnist at The Globe and Mail, where he has been a staff writer since 1987. He is also the author of three bestselling books. He is an eight-time nominee for the National Newspaper Awards, Canada's top journalism prize, and past winner of prestigious Michener Award for Meritorious Public Service Journalism. André has also been honoured for his dedication to improving healthcare. He was named Canada's first "Public Health Hero" by the Canadian Public Health Association.

www.theglobeandmail.com

DARRYL PLECAS

Dr. Darryl Plecas was elected MLA for Abbotsford South on May 14, 2013. Darryl was appointed Parliamentary Secretary to the Minister of Health for Seniors in 2015. He previously served as Parliamentary Secretary to the Minister of Justice and Attorney General for Crime Reduction. Prior to his election as MLA for Abbotsford South, Darryl was the RCMP Research Chair and Director for the Centre for Public Safety and Criminal Justice Research at the University of the Fraser Valley, where he has worked for 34 years.

www.darrylplecasmla.ca

SOLANGE TAYLOR

Solange Taylor began her career as a registered nurse. She gravitated to long term care over 25 years ago and assumed many roles in the field including Knowledge Manager, Director of Care, Administrator and corporate resource. She is currently serving as Executive Director for Parkview Services for Seniors where she has enjoyed working with seniors living in Housing, Life Lease and Long Term care settings for the past 10 years.

www.parkviewhome.ca

Thank you to all the participants, we appreciate your involvement!

WHAT IS THE NUMBER ONE ISSUE FACING LONG-TERM CARE TODAY?

"The number one issue facing healthcare is resources. There is a demand that has to be met with efficient, effective and compassionate care. [Not just any resources] but resources that ensure that innovation is taking place."

– BOB NUTBROWN

"There are multiple issues but the one that stands out speaks to the complexity of care of the residents who are in our facilities and especially the added mental health comorbidities that people are presenting with."

– DEBRA BOUDREAU

"The funding of direct care hours. The provincial guideline[BC] is that care homes provide a minimum of 3.36 direct care hours per senior per day. Over 80% of care providers are not able to meet that due to the fact that they don't have the funding to provide that care."

– DANIEL FONTAINE

"Number one would be how we can respond to the complex needs of the aging population that we are seeing. It's certainly different than the population we saw ten or fifteen years ago."

– ANNETTE FOUGERE

"There are a number of challenges. The needs of the individuals are becoming more complex. Infrastructure is aging. 50% of our long-term care homes are 30 years or older."

– TAMMY LEACH

"The biggest challenge we are facing is that we lack consistent reporting mechanisms across the country. The Canadian Institute for Health Information (CIHI) collects and reports on quality indicators in long term care across Canada, however several provinces are still either unable to report or can only partially report due to the lack of systems necessary. We cannot move forward to make positive changes without knowing where we are today."

– JAN LEGEROS

"The challenge is how to get the right care to people at the right place and the right time."

– ANDRÉ PICARD

"Very glaring is the insufficient funding. We don't have enough funding to meet the current resident needs. We're dealing with complex care needs and responsive behaviours and we need additional staffing to keep everyone safe."

– SOLANGE TAYLOR

WHAT IS THE MOST POSITIVE THING ABOUT THE INDUSTRY?

"There's so much beauty in our work and it's sometimes lost in the all the negativity. It's very meaningful, it's very purposeful and having the opportunity to connect with another person and help with their life in the best quality way possible; there's so much beauty in that."

– JODI HALL

"The people who work in the industry. They're here because they want to be here. People have made that conscious choice that they want to work with this population; that's where their heart is drawn."

– DEBRA BOUDREAU

"The most positive thing would have to be the people. From the residents and families to the incredible staff who do so much each and every day."

– CANDACE CHARTIER

"Given all the challenges in long-term care, it's incredible the quality of compassionate care that is provided in the system especially given how incredibly regulated it is and how limited the resources are."

– DAVID CHEPERDAK

"What is very positive is that we are very engaged with the public. We're asking questions, seeking feedback and looking to work collaboratively around developing a very vibrant sector."

– DANIEL FONTAINE

"Number one is that our providers truly believe in providing good quality care an enhancing the wellness of life for the people that they serve."

– TAMMY LEACH

"The people who work in long-term care are very dedicated, very committed to their work. Everyone is striving to do the very best they can with the resources that are available."

– JAN LEGEROS

"What I find inspiring is the incredible collaboration amongst all the stakeholders involved. There's a level of sincere commitment. Everyone is on the same page."

– DARRYL PLECAS

"It's the heart and soul of the staff. The community feels it when you walk in the door. You don't work in long-term care unless you want to be here and really care for the elders. It's a special group of staff. It's such a difficult job and they do it with such grace."

– SOLANGE TAYLOR

WHAT DOES THE GOVERNMENT **NEED TO DO TO IMPROVE LTC** IN CANADA?

"Get out of the way. Government is here to fund our service and to set standards. That's their job. Often, those standards are basic and sometimes they work to hinder best practices. I need them to stand aside and let us do what that best practice is."

– DEBRA BOUDREAU

"They need to provide predictable funding for care and operations and they need to ensure that residents with dementia and other cognitive challenges are being afforded that specialized staff which we know makes such a real difference."

– CANDACE CHARTIER

"The province has a huge challenge. Thirteen percent of beds in acute care in hospitals don't need to be there. How do you redirect those acute care dollars into the community? It's about finding better ways to provide care in the community such as integrated care teams, mobile clinics, etc."

– DANIEL FONTAINE

"The industry has to be modernized. In order to do that, you have to invest in it financially. We can't do it with what we have now."

– ANNETTE FOUGERE

"This is one of the most complex social policies we've ever faced. We can't expect government to do this alone. It's going to take a large number of stakeholders and every day citizens who are willing to step up and take a role. Government doesn't always have to be the ones driving the program but really becoming deeply connected with non-profit agencies who are already in the community doing the work."

– JODI HALL

"I believe what would be helpful is for government to consult with long-term care providers. Their 'on the ground' assessment of what is needed would be beneficial."

– JAN LEGEROS

"The role of the federal government in health care should be to ensure that people have more or less the same care regardless of where they live in the country. And that's not the case anymore."

– ANDRÉ PICARD

"Get away from the bureaucracy. Listen to their stakeholders. We know what we need. They need to recognize our contribution and our expertise. I don't feel they do."

– SOLANGE TAYLOR

HOW SHOULD THE LTC INDUSTRY **RISE ABOVE NEGATIVE MEDIA** PERCEPTIONS?

"The industry can make itself more visible. It's about demystifying what the facilities are like and talking about their realities."

– ANDRÉ PICARD

"People go to the media when they feel they aren't being heard. That's why it is so important to include families of residents in the decision-making process and to make sure that when incidents occur, you have an effective reporting system that ensures full disclosure and communications with families, so there are no surprises. Things then aren't getting to the media because they are being addressed in meaningful ways."

– DAVID CHEPERDAK

"We need to work with our sector partners like our health authorities and our governments to collaborate and make an effort to promote a positive picture of long-term care."

– ANNETTE FOUGERE

"As a sector, we need to do a better job of getting our messaging out about what we do well. That being said, it can be incredibly challenging to get pick up on these positive stories."

– JODI HALL

"The biggest problem we have is lack of information and education for the public. We need to take a more proactive approach in letting the public know the good news too."

– JAN LEGEROS

"The organizations need to ensure that both sides of the story are told."

– BOB NUTBROWN

"It's about public education. Many people have this vision of residential care facilities as though they're places you never want to go. As if they're prison-like. Well nothing could be further than the truth."

– DARRYL PLECAS

"[The media] has to give us the opportunity to share success stories. We need to be able to let the public know what we do. But the media isn't always interested in good news stories. They need to get the stories from us."

– SOLANGE TAYLOR

WHAT DO YOU THINK THE **EVOLUTION OF LONG-TERM CARE** SHOULD BE IN THE FUTURE?

"I absolutely believe that long-term care sites in communities should become hubs where an array of services is networked into that community. It's a no-brainer."

– *DAVID CHEPERDAK*

"Today we're all talking about person-centered care. I think the evolution of that is person-directed. Really listening and following the resident or their family's directive."

– *DEBRA BOUDREAU*

"The evolution of long-term care is really going to be around specialization. We need to explore what more long-term care homes can do over and above what they've traditionally done. We see more campus models and improved cultural programming."

– *CANDACE CHARTIER*

"We're going to have to evolve in the way we deliever care, construct buildings, use technology, fund care and provide choice to seniors."

– *DANIEL FONTAINE*

"We need to modernize the infrastructure. We need a model of care that reflects the realities of the people we serve and that means a more flexible way of funding. And we need to standardize the data system to measure resident satisfaction, what the quality of care is, etc."

– *ANNETTE FOUGERE*

"We need a lot more flexibility to be innovative. The system right now is system-centric not person-centric. Although you will hear governments across Canada say their philosophy is person-centered care, to actually deliver person-centered care is not happening."

– *TAMMY LEACH*

"We should always be striving to evolve and improve, no matter what long-term care looks like."

– *JAN LEGEROS*

"We have to start getting more creative about how we are going to pay for things. How can we create a more sustainable system? Part of this is focusing on quality of life. We need things like community health centres. Let's do as much as we can to lessen to need for someone to have to go to a hospital. We all know what to do. It's just finding ways to get there."

– *DARRYL PLECAS*

WHY DO YOU ENJOY WORKING IN LONG-TERM CARE?

"The people. I mean, there's no question. You work with a diverse group of people who really care about what they do and work well as a team. We know we make a difference and that's satisfying."

– *SOLANGE TAYLOR*

"People. The relationships that develop with the residents, with the staff who work here every day… it really, truly at the end of the day is the human element piece."

– *DEBRA BOUDREAU*

"I think long-term care is such an enriching environment. The staffs are history makers. When a home manages to improve a resident's condition, it means so much to the families."

– *CANDACE CHARTIER*

"People ask me what I do and a little tongue-in-cheek, I say I'm changing the world. The work that is done each day by everyone involved has a profound impact on people at one of the most difficult transitions in life."

– *DAVID CHEPERDAK*

"This isn't an easy business to be in. There's always a lot of challenges. It's emotional at times. But there's always an opportunity to innovate and move forward or be creative in approaches and connect with the residents. The meaningfulness of the experience keeps me here."

– *JODI HALL*

"You see people having a good meal, you see people smiling, you see workers providing compassion and care. That's very rewarding."

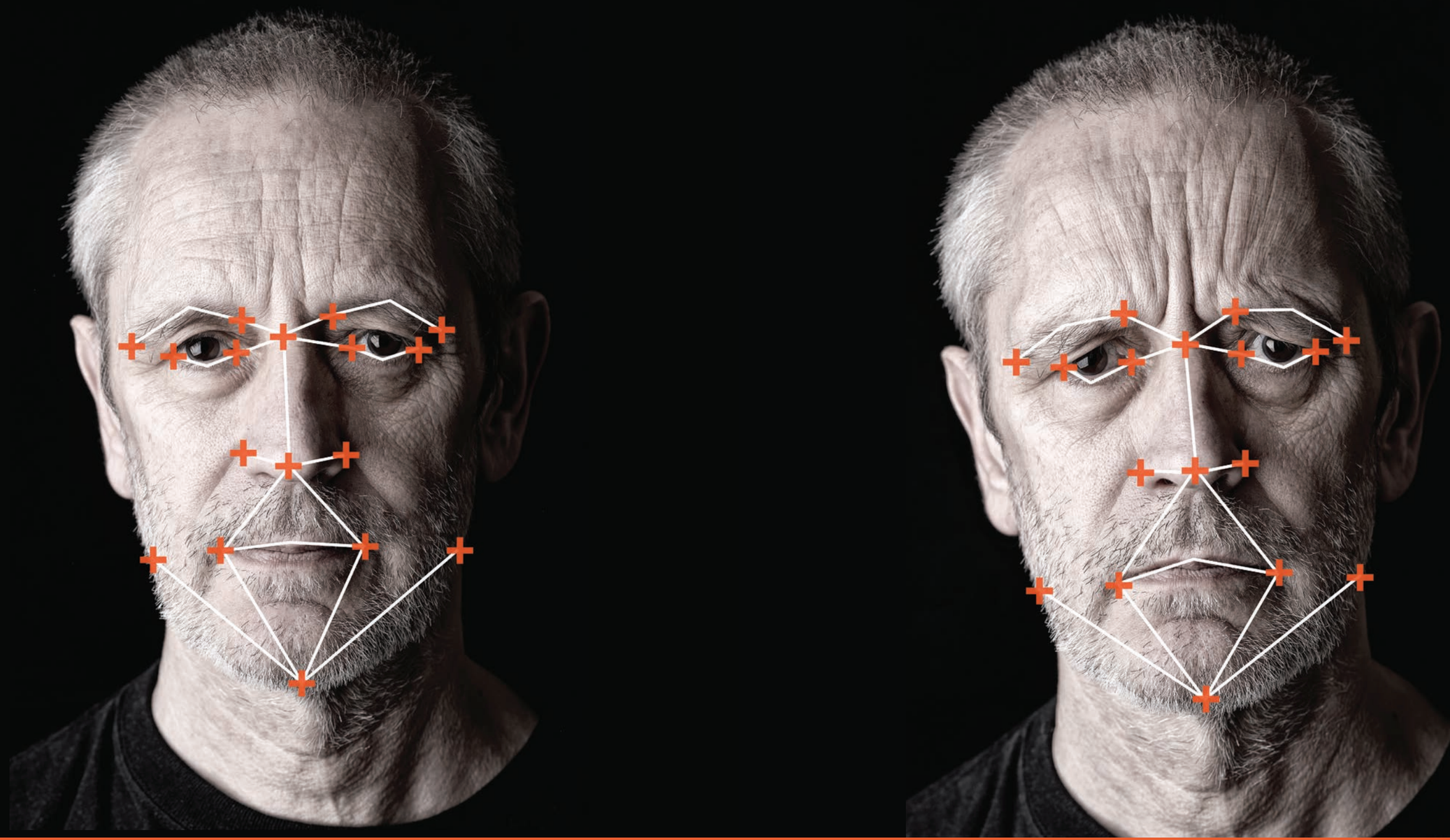
– *BOB NUTBROWN*

"I like writing about it because it has a real impact on people."

– *ANDRÉ PICARD*

"There's so much to do, there's so many challenges. There are always issues but everyone's trying hard to fix them. I'm proud of our health care system in Canada."

– *DARRYL PLECAS*



Pain Detection + Dementia

by Lindsey Patten

Long-term care staff are faced with challenges when it comes to the care of residents with severe dementia. One of these is pain detection, assessment and monitoring, which can be quite difficult, depending on the resident.

One study aims to change all that by helping long-term care staff with pain assessments through technology.

"Pain is highly prevalent in old age," notes Dr. Thomas Hadjistavropoulos, co-lead of the AGE-WELL research project along with Dr. Babak Taati.

"According to some estimates, as many as 80% of those who live in long-term care have persistent pain."

And those with dementia are often under treated for their pain or treated incorrectly.

"Seniors with advanced dementia often have limitations in their ability to communicate," says Dr. Hadjistavropoulos. "This includes limited ability to express pain verbally."

Because they are under assessed, staff members sometimes doesn't even know there is a problem and severe problems such as abscessed teeth and even fractures can go undetected for days or even weeks.

"One study showed [dementia patients] were six times less likely to receive an analgesic medication," points out Dr. Hadjistavropoulos. "But more critically, when people with dementia have pain and cannot communicate, they often end up showing behavioural disturbance such as aggression."

What happens then, Dr. Hadjistavropoulos notes, is that staff attributes that aggression to a psychiatric issue rather than pain.

"So instead of treating that problem with analgesics, they treat it with psychotropic medication."

THE STUDY

"My work for many years, before AGE-WELL, focused on the evaluation of pain behaviours like specific facial gestures," says Dr. Hadjistavropoulos, a health psychologist who holds a Research Chair in Aging and Health at the University of Regina.

"Over time we developed various methods for evaluation of pain in people with severe dementia including an easy to use checklist for clinical staff who can then record the number of pain-related behaviours and produce an estimate based on those about how severe the person's pain is."

Dr. Hadjistavropoulos was then turned on to the idea that this same pain assessment could be aided by the use of technology.

The study started with a CIHR grant and then they were funded by AGE-WELL which Dr. Hadjistavropoulos notes "expanded the scope substantially."

"The aim of the study is to develop an easy-to-use, relatively inexpensive computer vision system that could be installed in nursing homes and would be able to detect and monitor pain behaviours in the residents as they go about their daily routines," says Dr. Hadjistavropoulos.

How the system works is revolutionary.

"The system will be able to detect pain behaviours as [residents] go about their daily routines," notes Dr. Hadjistavropoulos. "When a certain threshold of pain behaviours has crossed, the system will then be notifying the nurses' station so that they know which resident to follow up with."What the study researchers are working on now is making this technology affordable and easy to use in the long-term care environment.

"The technology is already possible," Dr. Hadjistavropoulos points out. "But it only works under ideal circumstances; with high quality, HD cameras facing the person directly. And it's not clear whether it works on an older face with wrinkles."

Instead, they want to be able to make it work so that pain behaviours can be captured while residents go about their daily business. This means developing an algorithm that not only takes an older face into account but side angles of the camera as well.

This technology is aimed at helping staff with their jobs.

"What this allows us to do is it makes it automatic and it addresses a very serious problem which is a resource issue in long-term care," says Dr. Hadjistavropoulos. "It's not that nurses can't do a [pain assessment] themselves. They can but assessments cannot be done often enough because of resource constraints."

So how is this technology going to be achieved?

It takes a lot of research.

"One of the things we've done over the years is consulted literature that has identified facial responses that are most likely to occur during pain," notes Dr. Hadjistavropoulos.

"It's important to differentiate between a pain state versus a non-pain state. But certain behaviours are very likely to occur during pain and if you have enough behaviours occur at the same time, you have a very high likelihood that pain is present."

In terms of progress, Dr. Hadjistavropoulos notes that his team in Regina have collected all the clinical data they need from nursing homes. This meant staring at video screens, and then manually coding different non-verbal pain behaviours, thousands of frames worth.

The data collected in Regina is now being used to develop an algorithm. This is the job of Dr. Taati's engineering and computer vision team at the Toronto Rehabilitation Institute-University Health Network.

Once a prototype is built, the plan is to evaluate it in two long-term care homes.

And the research team has taken things like privacy into account.

"We're very sensitive on the privacy concern," Dr. Hadjistavropoulos says. "The cameras will not be recording videos. They will be feeding the computer with what's going on but nothing will be recorded other than whether a pain expression has occurred."

So what does Dr. Hadjistavropoulos and his team hope to achieve?

"The ideal is that we will be able to detect pain and monitor pain in a way that allows for early, effective and appropriate treatment," states Dr. Hadjistavropoulos. "The result would be less pain-related suffering and better quality of life for residents. We are also hoping to see substantial cost-savings for the health care system through earlier detection and treatment of pain-related problems."

He also notes that it would help with staff stress.

"We did a study that showed that when pain is assessed on a regular basis, staff stress goes down, possibly because residents with dementia become less likely to show behavioural disturbance."

This technology will positively impact long-term care in many ways but most importantly, will ensure that residents with severe dementia will be able to be properly assessed and treated for pain.

Lindsey Patten is the Interim Publisher/Editor for *Senior Care Canada*. She can be contacted at: *Lindsey@SeniorCareCanada.com*.

AGE-WELL is a federally-funded Network of Centres of Excellence established in 2015 to support Canadian research and innovation in the area of technology and aging. AGE-WELL is dedicated to the creation of technologies and services that benefit older adults and caregivers. Its aim is to help older Canadians to maintain their independence, health, and quality of life through technologies and services that increase their safety and security, support their independent living, and enhance their social participation.

SENIORS TRAIN TO TACKLE EMERGENCIES

Around 100 seniors have been armed with the skills to help themselves and others in an emergency situation thanks to a disaster reduction training initiative instigated by the Bermuda Red Cross.

The charity's disaster manager Diane Gordon has helped bring together multiple organisations who have worked in tandem to inform seniors how to escape a fire, stay safe during a hurricane and in some cases even administer life-saving treatment to a friend or neighbour in the case of a medical emergency.

Ms Gordon made contact with the Bermuda Police Service's community action teams, which helped to identify a priority list of vulnerable communities to participate in the charity's Disaster Risk Reduction Programme.

PC Cerepha Bridgeman, who is responsible for Southampton Parish, was quick to identify Bermuda Housing Trust development Dr Cann Park as a location that could benefit significantly from such a programme – a community which she had already worked within.

Dr Cann Park, located on Sea Express Lane, Southampton is a residential area of five blocks inhabited entirely by seniors, many of whom live alone in their home.

As part of the programme, the community was given a Vulnerability and Capability Assessment designed to identify the dangers present in the community, the skills, tools and other resources available, and the actions that can be taken to reduce risk in a disaster.

In addition, surrounding businesses and organisations have joined forces to support the programme and provide any service that might be needed to assist the seniors in case of an emergency.

For instance, Dalton E Tucker Primary School and the Calvary Gospel Chapel could provide a roof over their heads in case of a hurricane, Port Royal Gas Station has food supplies and an ATM, the Bermuda Fire Service has staff to implement evacuation plans, and the police service occasionally sends officers to keep an eye on the area.

Speaking on the project at Dr Cann Park, whose residents are being offered the training free of charge, Ms Gordon said: "We learnt that very few of the seniors had skills such as First Aid or CPR [cardiopulmonary resuscitation] training or knew about AED [automated external defibrillator] training. We were able to sit down with them and see if this was something that they needed and they did.

"This group of seniors, who range in age from about 70 through to 90, are a very savvy group. They created team leaders for each block and those who did not attend meetings could always be advised by them.

Those team leaders were also trained by the Bermuda Red Cross in First Aid, CPR and AED, so if anything happens, then they have the ability to help themselves as a community first before calling on additional help or waiting for help to arrive. It is all positive work we are doing within the communities. We are looking at additional communities for 2017 through 2019."

Ms Gordon has launched similar initiatives around the island, including the Fentons Drive and Rambling Lane areas of Pembroke where certain vulnerable members of the community reside. She is also reaching out to various youth clubs and organisations around the island, attracting community members who could be considered vulnerable for their own specific reasons.

Ms Gordon added: "We want to get as many people as possible to get themselves properly trained in certain areas so the community is at a level to be able to do basic things for themselves. We also are training a number of community members as site social responders, so if something happens in the community, you have the various organisations.

"Setting up such a programme within a vulnerable community is never a straightforward task. First, a vulnerable community needs to be identified as such before contact is made. Then a degree of trust is carefully built with the help of existing organisations such as the Bermuda Police Service. To run the programme effectively there also needs to be a degree of buy-in and commitment from a number of those involved."

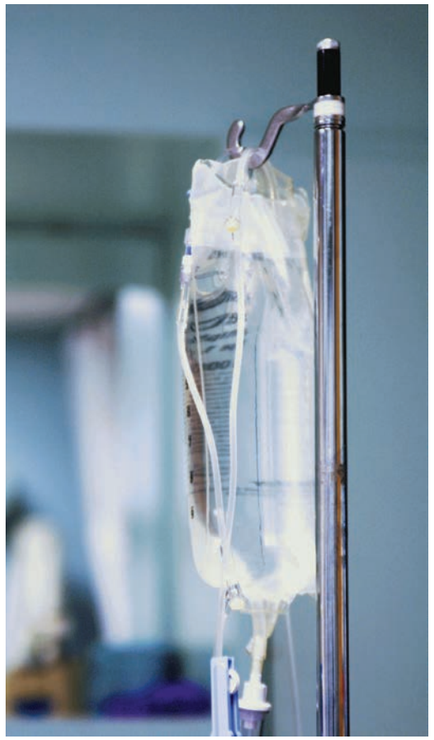
Bermuda Red Cross was initially faced with "a degree of scepticism" at Dr Cann Park but made some inroads through some small, yet important, breakthroughs, including the installation of outdoor lighting in the area and better trash collection.

PC Bridgeman said: "Going forward, we would like to get more on board. Are they prepared? Do they have an evacuation plan if something happens? A lot of people take these things for granted."

Asked how the seniors in the area responded to the 12-week exercise, Ms Bridgeman added: "They were really elated – we had our activists who are always there and willing.

"The response was overwhelming – they really expressed how elated they were to be exposed to something like that. It is amazing. I have a soft spot in my heart for young people and seniors because I see them as very vulnerable.

"You can do a lot with little and people are empowered."



The LIVE Study

GERAS CENTRE

IV Treatment in Long-Term Care

by Lindsey Patten

In long-term care, it can be a struggle when you have to send your residents to hospital. Studies have shown that hospitals can have a negative effect on frail seniors and may not be the place that they need to be.

To this end, GERAS Centre (Geriatric Education and Research in Aging Sciences) conducted a study to see if hospital visits could be avoided if some treatments occurred in long-term care homes.

"The aim of the study was to target intravenous therapy for with antibiotic treatment or hydration that would prevent residents from having to go to hospital," says Loretta Hillier, Project Coordinator for the Long-Term Care Homes' IntraVenous Therapy Experience (LIVE) study.

"The study was driven as a quality improvement initiative. We know that frail seniors don't do well in the emergency department or in hospital," she notes. "Oftentimes, there are adverse events associated with hospitalization."

Hillier points out that the transition from home to hospital can be stressful for the resident and their family members.

"We know that residents prefer to receive as much medical care as possible within their long-term care home," she states. "There's real value to having the people providing the medical care know the patient."

THE STUDY

Hillier notes that "typically, not in all long-term care homes, but probably the majority, when a resident is suspected of having an infection that may require IV antibiotics, they're transferred to hospital."

The aim of the study was to reduce those transfers.

"We had four homes participate in the study," says Hillier. "It ran for nine months and we had 12 residents access the service."

While the numbers do seem low, Hillier points out that there were low rates of infection in the Niagara region during the study which was one of the reasons why there weren't as many participants.

And of course, there are criteria as to whether residents can be treated on site.

"These are medical criteria like whether they are able to eat or drink," Hillier comments. "There are criteria around pulse rates, respiratory rates, oxygen saturation and blood pressure. If they meet those criteria, they can stay in the long-term care home."

LACK OF RESOURCES

So why don't more long-term care homes provide IV therapy?

"It's a matter of resources," Hillier says. "They may not have the nursing capacity to administer or monitor IV's. They may not have access to equipment that's needed and they may not have access to the consultation support — that decision-making process that is needed to determine what the best treatment is for infection."

In recognizing that these were important barriers, part of the implementation of the study, Hillier says, was providing those resources.

"Each home was provided with nursing support and had access to the nurse practitioner outreach team that could help them with the decision-making process."

Medical Pharmacies Group Ltd was a partner and helped connect them with the supplies needed as well as provided consultation with a pharmacist.

"One of the things we learned in this study is that this kind of service can't happen in isolation," Hillier states. "It really needs support in terms of education, nursing, and pharmacy support. It can't happen in a vacuum."

STUDY RESULTS

The study produced some interesting results.

The clinical pathway that was developed during the study became an important tool, Hillier says, for nursing staff and physicians to discuss the assessment and management of infection.

"Residents were identified earlier," says Hillier, "so the first line of treatment— oral antibiotics— were effective so they didn't need to move on to something stronger like an IV antibiotic."

Another interesting facet of the study was that everyone became interested in not only preventing people from going to the hospital but getting people who were in the hospital on IV therapy out of the hospital sooner.

"We were able to shorten the length of hospital stay for three residents whose IV therapy was initiated in hospital," Hillier states. "Because the long-term care home had the capacity to manage IV therapy, those three residents were discharged sooner."

Hillier also points out that "The other key finding from the study was that there were no adverse events. Providing IV therapy in long-term care homes did not result in inferior care."

This is an important result because it proves that IV therapy can be done in long-term care with with right training and equipment.

EDUCATION AND PARTNERSHIPS

So how can long-term care homes implement IV therapy?

Hillier notes that "it starts with education and it starts with partnering with the resources in their community to help support this initiative. So that would be partnering with their pharmaceutical company, their medical supply company and other initiatives."

So it's not about starting from scratch on your own. Instead, Hillier says, it's about "looking at what partners, what expertise exists that can support long-term care homes to do this."

GERAS Centre

Ultimately, the study proves that long-term care facilities can embrace IV therapy to aid in their residents' quality of life.

"Long-term care does have the skills and the capacity to offer this kind of service," Hillier says firmly. "They just need the resources to help support it."

Lindsey Patten is the Interim Publisher/Editor for *Senior Care Canada*. She can be contacted at: *Lindsey@SeniorCareCanada.com*.

ALZHEIMER'S MAY BE LINKED TO DEFECTIVE BRAIN CELLS SPREADING DISEASE

In a study published in Nature, Monica Driscoll, distinguished professor of molecular biology and biochemistry, School of Arts and Sciences, and her team, found that while healthy neurons should be able to sort out and rid brain cells of toxic proteins and damaged cell structures without causing problems, laboratory findings indicate that it does not always occur.

These findings, Driscoll said, could have major implications for neurological disease in humans and could possibly be the way that disease can spread in the brain.

"Normally the process of throwing out this trash would be a good thing," said Driscoll. "But we think with neurodegenerative diseases like Alzheimer's and Parkinson's there might be a mismanagement of this very important process that is supposed to protect neurons but, instead, is doing harm to neighbor cells."

Driscoll said scientists have understood how the process of eliminating toxic cellular substances works internally within the cell, comparing it to a garbage disposal getting rid of waste, but they did not know how cells released the garbage externally.

"What we found out could be compared to a person collecting trash and putting it outside for garbage day," said Driscoll. "They actively select and sort the trash from the good stuff, but if it's not picked up, the garbage can cause real problems."

Working with the transparent roundworm, known as the C. elegans, which are similar in molecular form, function and genetics to those of humans, Driscoll and her team discovered that the worms – which have a lifespan of about three weeks — had an external garbage removal mechanism and were disposing these toxic proteins outside the cell as well.

Iliya Melentijevic, a graduate student in Driscoll's laboratory and the lead author of the study, realized what was occurring when he observed a small cloud-like, bright blob forming outside of the cell in some of the worms. Over two years, he counted and monitored their production and degradation in single still images until finally he caught one in mid-formation.

"In most cases, you couldn't see it for long but in a small number of instances, it was like a cloud that accumulated outside the neuron and just stayed there," said Melentijevic, an undergraduate student at the time who spent three nights in the lab taking photos of the process viewed through a microscope every 15 minutes.

Research using roundworms has provided scientists with important information on aging, which would be difficult to conduct in people and other organisms that have long life spans.

In the newly published study, the Rutgers team found that roundworms engineered to produce human disease proteins associated with Huntington's disease and Alzheimer's, threw out more trash consisting of these neurodegenerative toxic materials. While neighboring cells degraded some of the material, more distant cells scavenged other portions of the diseased proteins.

"These findings are significant," said Driscoll. "The work in the little worm may open the door to much needed new approaches to addressing neurodegeneration and diseases like Alzheimer's and Parkinson's."

DAILY HYGIENE ROUTINES IMPROVE FOR RESIDENTS AND CAREGIVERS WITH TENA BATHING GLOVE

TENA Bathing Glove is a soft, disposable glove pre-moistened with a gentle body wash. This innovative, convenient and caring full body cleansing solution has been developed to better care for fragile skin, minimize cross-contamination and provide a more efficient routine for both residents and caregivers.

Visit www.tenaprofessionals.ca
or call 1-800-510- 8023 to learn more.

ADVERTISERS DIRECTORY

For info on these advertisers visit
seniorcarecanada.com/resources/suppliers

LIKE facebook/SeniorCareCanada
TWEET @SeniorCareMag

YOU KNOW THE CHALLENGES AND TRIUMPHS OF THIS INDUSTRY BEST

That's why *Senior Care Canada* wants to hear from you.

Share your story with fellow managers and directors, whether it's a new program or service improving your facility, or a struggle you are working your way through.

We look forward to reading about you!

Submit to lindsey@seniorcarecanada.com

NEW

Caring

Improving daily hygiene routines for residents and caregivers with TENA® Bathing Glove

Imagine everything you need for an effective body cleansing at the bedside – all in one product. Introducing TENA® Bathing Glove – a soft, disposable glove pre-moistened with a gentle body wash formula.

The TENA® Bathing Glove has been developed to better care for fragile skin, minimize cross-contamination and provide a more convenient and efficient routine for both residents and caregivers.

At TENA®, we always look for innovative ways to provide the best resident care while simultaneously improving efficiency in care homes. The TENA® Bathing Glove brings together everything necessary for cleansing the body at the bedside in one product, without the need for soap, water, basins or additional towels. This caring and convenient solution is specifically designed for fragile skin, and can be used as an alternative, or in addition, to regular baths and showers.

TENA

@TENA_Canada
www.tenaprofessionals.ca

TENA® Bathing Glove

Together we make a difference