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The Doctor is Out

The mountain towns and other places where Calgarians go to recreate have an abundance of natural beauty, wildlife and outdoor activities. But what they and other rural communities often lack are surgical, trauma and emergency medical services. For those who make these and other non-urban areas their home and those who are there to visit, a scenic setting often comes with a price.

There, in a picture-perfect moment captured on an iPhone, photographic evidence of that ominous adage: life can change in an instant. Lorna White standing in a stream, looking up at her hiking companion, frothy alpine waters gurgling at her feet. "Stay right there," her friend, Krista, had instructed on that sunny Sunday in 2015. "That's a great photo."

White smiled. Krista got the shot. White turned around to resume the hike out of the Purcell Mountains, intending to drive back to Calgary that night.

And that's when she saw it — a massive boulder "the size of a minivan" tumbling down the mountain toward them. White screamed at Krista, who stood in the boulder's path. But before the rock reached her, it bounced and landed near White, breaking on impact. A remnant the size of a piano redirected toward White. She remembers turning and ducking before the rock smashed into her, pinning her to the ground, bent at the waist, her head, her legs and right arm trapped underneath the rock.

The first responders who arrived on scene reported that only her shoulders, back and left arm were visible. "I kept saying to myself, 'stay awake.' I was scared to fall asleep," White recalls.

Her friend ran for help, summoning another group of hikers which, by chance, included trained experts in wilderness first aid. Someone phoned down to Canadian Mountain Holidays' Bugaboos Lodge, which sent a helicopter. Using heavy-duty jacks and pry bars brought by the chopper over repeat trips, rescuers were able to lift the rock just enough to extricate White. She was flown to the lodge, where she was transferred to a STARS (Shock Trauma Air Rescue Service) helicopter and whisked to Calgary's Foothills Medical Centre, all within a few hours of the accident. Miraculously, White's injuries were limited to a broken arm, a broken thumb, fractured sternum, three fingers that required amputation and soft tissue damage, plus emotional trauma (for which she saw a therapist).

"Whenever I think about it, I still cannot believe how I possibly survived," says White.

There's a term used in emergency medicine, "the golden hour" — the first hour after a traumatic injury during which there is the greatest likelihood that medical care will save a person's life. Whether someone is injured in the mountains, in a car crash or at home, their chances of survival are best if they can get treatment quickly. For severe cases, treatment often requires surgical intervention.

In a city such as Calgary, getting an injured or sick person to medical and surgical care can be swiftly accomplished. But in many non-urban areas — including those frequented by Calgarians for recreation — and where 70 per cent of Alberta's fatal car crashes happen, it is more complicated, as rural towns across Canada are losing services such as surgeons and 24-hour medical care and relying instead on medical transport to get sick and seriously injured patients to cities for treatment.

The state of rural health care affects not only the residents of rural communities but, as is the case in recreation destinations, people who live in cities, too. About 12 per cent of patients seen in the emergency department of the Banff Mineral Springs Hospital are from Calgary. In Golden, B.C., 11.9 per cent of patients are from Alberta; at the Queen Victoria Hospital in Revelstoke, 8.5 per cent. And at the Invermere & District Hospital's emergency department, one in four people treated at the emergency department is from Alberta.

As Laurie Norris, a retired emergency nurse in Sylvan Lake, Alta. put it: "Calgarians don't realize that if they need medical attention while they're here, they would need to drive 22 kilometres into Red Deer. Twenty-two km to someone who is injured or has appendicitis is a long drive." Sylvan Lake does have an ambulance, however it may not be in Sylvan Lake at that particular time. "So you can still get an ambulance, however, it may have to come in from Red Deer or another outlying area," Norris says.

In the ski town of Fernie, more than 10,000 patients came through the emergency department of its single-story, brown-and-brick Elk Valley Hospital last year. Of these, nearly 12 per cent were visiting from Alberta. Located approximately a half-hour's drive west of the Alberta border, the picturesque town encircled by the Rockies has a population of 4,850 and approximately 2,700 private dwellings, many of which are second homes owned, most often, by Albertans hooked on the world-class alpine activities in the area.

But while Fernie's population has grown by 16 per cent since 2011, its breadth of health-care services has diminished. The Elk Valley Hospital's only general surgeon retired last spring and although the town had advertised for a new surgeon for more than five years up to that point, the position was left vacant. This isn't a terribly big surprise, as it is difficult to recruit physicians in much of rural Canada — 18 per cent of Canadians live in rural areas but only eight per cent of physicians do, and it's especially difficult to attract general surgeons to work in small towns. The reasons are many: in a small community, a single general surgeon can be on call 24 hours a day, seven days a week without back-up; surgeons often train in large urban centres where most will sub-specialize in certain types of surgery (hernia, breast, trauma, for example) with less focus on procedures such as Caesarean sections that can be the bread and butter of a surgical practice in a rural town. Additionally, it can be difficult for a surgeon's spouse to find employment in their field in a small community.

But the shift of physicians from rural areas goes beyond individual surgeons' preferences for where they'd like to live. Regional health-care systems across Canada tend to funnel surgical and very sick patients to larger centres, both to reduce costs and improve patient outcomes. And there's evidence that surgeons and hospitals

performing higher volumes of specific surgical procedures produce better results for patients (however, this finding is not without debate).

For the Elk Valley Hospital, with a catchment area of nearly 15,000 people, the loss of the general surgeon has left gaps in care, says Fernie-based gastroenterologist Dr. Tara Chalmers-Nixon. Basic surgeries such as appendectomies, removals of minor lumps and bumps, gall bladder removals, hernia repairs and carpal tunnel and trigger-finger surgeries (not uncommon in Fernie with its high proportion of manual labourers) can no longer be done locally. Most surgical patients are now sent to Cranbrook, B.C.; the more complex cases to Calgary or Kelowna.

When a hospital loses its surgical service the domino effect can be "devastating," says Chalmers-Nixon. "With loss of regular elective surgeries, we lose the skills of our operating nurses and our anesthetists, then we lose the ability to perform emergency C-sections, then we lose our maternity program, then we stand to lose it all.

"Maybe I'm being dramatic but evidence has shown that the gradual loss of surgical programs adversely affects rural health and access to medical care," she says.

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–Dr. Douglas L. Myhre, Cumming School of Medicine, University of Calgary

In 2013, Drs. Mike Stuckey and Deena Case, a husband-and-wife duo, arrived in Fernie from Australia. Stuckey and Case are family physicians with additional training in obstetrics and, for Stuckey, anesthesia. Their presence in town means women can still have Caesarean sections in Fernie — albeit only at certain times. The hospital's operating room closes every second weekend and for five weeks during the summer to accommodate a shortage of nurses. The rest of the time, Drs. Case and Stuckey alternate nights on call — meaning someone in their family is on call every night. When the operating room is closed, all maternity patients in labour, with the exception of very low-risk patients, are transferred to Cranbrook. "That's not ideal by any means but that's what happens when there's inadequate staffing," says Case.

Twice last winter, the highways going north and south out of Fernie toward hospitals in Calgary and Cranbrook, respectively, were closed simultaneously due to ice and snow. And last August, one labouring mother en route to Cranbrook by car was involved in a motor-vehicle accident. Fernie's physicians hope the town's surgical access will be more consistent next year when a family doctor with surgical skills is due to begin work in the summer of 2018. This will lighten the call load on the Case-Stuckey household and allow for some minor surgical procedures to be done in town.

The problems that Fernie faces are not unique, however. Dr. Douglas L. Myhre, a family physician who practiced in Lethbridge for more than two decades before joining the faculty at the University of Calgary, works with physicians, medical trainees and policymakers across the province to remedy health-care inequities in rural and remote areas. Myhre says that many small towns throughout Alberta and British Columbia experience closures of hospitals and urgent-care clinics as a cost-saving measure or are unable to recruit physicians.

"[Mountain towns such as] Fernie, Revelstoke and Kimberley have an issue; but, it's no worse or better than places like Pincher Creek, Taber or Crowsnest Pass," he says. "No surgeon means no obstetrics and that means less use of the hospital and then it gets downgraded. Fewer services, means less teaching, means less ability to recruit. You have a spiraling and dwindling of resources that becomes almost inevitable. It's a cascading event, which is all defended by talking about economics and cost and centralization."

Myhre emphasizes that the quality of health care in rural areas remains high, however, the availability of services is concerning. In 2016, the College of Family Physicians of Canada, in collaboration with the Society of Rural Physicians of Canada, released a background paper on the challenges for medicine in rural communities. It stated that Canadians who live in rural communities tend to have poorer health than their urban counterparts — a disparity "directly related to their distance from urban cities." This trend, they found, is particularly severe among Indigenous populations, which often live in rural and remote communities.

The increasing shift of health services to urban centres means small communities are experiencing the loss of more than surgeons. Sylvan Lake draws more than 750,000 visitors a year to its kid-friendly waters but currently lacks medical services at night and on Sundays. Residents and physicians have been lobbying for an urgent-care facility since the winter of 2012, when more than 500 people attended a town hall meeting on the issue.

In the summer of 2013, on a Saturday afternoon, Brent Boychuk, a 49-year-old Sylvan Lake resident, became ill from carbon monoxide exposure while working on his house. In a video created by the Sylvan Lake Urgent Care committee, Boychuk's widow tearfully recounts how their daughter drove him to two different clinics, finding both closed. Boychuk collapsed in front of the second clinic. His daughter performed CPR until paramedics arrived but he died before he could get to hospital in Red Deer.

An advanced ambulatory care service is anticipated to open in Sylvan Lake in May 2018.

Key to Canada's rural-and-urban health-care structure is the transport system that connects the two. In places without 24-hour medical care or a surgical service, transport is critical to getting patients timely and reliable access to health care. This is true not just in instances where the clock is ticking during the "golden hour" of trauma. Residents of smaller communities, when questioned for a provincial government study of rural health care, said they were frustrated by frequent and long-distance travel for treatments such as dialysis and chemotherapy.

"Sadly, the committee heard about cases where patients had chosen to discontinue treatments because of the hardships introduced — a choice that had, in some cases, resulted in premature death,"

states the Rural Health Services Review Final Report, which was published in 2015.

Rural transport is more intricate than one might think, consisting of land and air ambulances, as well as private vehicles, working across provincial borders and paid by different provinces, and constrained by factors such as weather, regulations and staff shortages. Newborn babies from Fernie are unable to be transported to Alberta due to provincial rules. As a result, the nearest places these babies can go are Kelowna, 625 km away, or Vancouver, 939 km away. When a premature infant requires transport, a member of the care team travels from one of those cities to Cranbrook by plane. There, they switch to a road ambulance to drive the 96 km to Fernie to pick up the child, returning by the same long route. "As you can imagine, the babies don't always have the best possible outcome," says Case.

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–Bob Odney,
STARS Operations Manager

From its bases in Calgary, Edmonton and Grande Prairie, STARS flew 1,529 missions in the 2016-2017 fiscal year. About three-quarters were transfers from rural hospitals to metropolitan centres; the remainder were calls to scenes such as car wrecks or farm-related accidents. STARS' efforts are often about getting someone to a place with surgical services, says operations manager and paramedic Bob Odney. "If you need a surgeon, you need to get back to the city quickly, so that's what we do," he says. "Studies have shown that the quicker you can get somebody back to a surgeon, the better outcomes they have. If you're bouncing around on a country road for two-plus hours in the back of an ambulance, it doesn't give you as good a chance of survival if you need a surgeon as if we fly you in 30 minutes back to a surgeon. That's where we make the biggest difference."

Head west from Calgary along the Trans-Canada highway to the mountain towns of Canmore and Banff and you'll find a relative abundance of healthcare services for places of their size. The region, which draws more than 4 million tourists a year, breaks with the pattern of rural medicine throughout much of the province. Both towns have hospitals with acute care and surgical services (though surgical services are not available 24 hours and urgent surgical patients are sent to Calgary overnight and on weekends). Canmore doubled its maternity delivery rooms this year from two to four.

In fact, some Calgarians choose to be treated in these towns where wait lists for some treatments are known to be shorter, especially in the cases of minor emergency care and some non-urgent surgical procedures. Banff, with its three orthopaedic surgeons and a plastic surgeon, has developed a reputation for excellence in all sports-related orthopaedic surgery — especially knee surgery. A search on Instagram pulls up photos of Calgarians grinning as they lean on crutches outside the Banff Mineral Springs Hospital.

"I feel we are lucky in Canmore to have resources like a CT scanner, surgical specialists, ALS [advanced life support] paramedics and many family MDs, which many mountain towns like Fernie, Revelstoke and Golden do not," says Dr. Kyle McLaughlin, an emergency physician in Canmore. Banff and Canmore also don't have difficulty recruiting physicians. Quite the opposite: physicians who want to work in these communities full-time may have to wait for a position to open. McLaughlin worked part-time in Banff for six years and in Canmore for approximately two years before a full-time job in Canmore became available.

But it just goes to show that the health-care services in every town are a reflection of that town's unique characteristics: its proximity to a city, its economy, its ability to attract tourists and physicians alike and other factors. What works for Canmore and Banff won't work for Fernie, Sylvan Lake or other communities throughout Alberta and British Columbia, as there is no one-size-fits-all solution for medical care in rural areas.

Nearly four years ago, several national physicians' groups — representing family doctors, obstetricians and gynecologists, general surgeons and rural physicians — met in Banff to discuss the challenges of rural surgical care. They agreed the answer lies in some kind of a networked system of care, linking urban specialists with rural generalists. But the ideal formula remains unclear.

Different approaches are currently being used across Canada. In Ontario, general surgeons provide most surgical care in remote areas, while towns across western Canada rely on about 150 family physicians who have undergone some surgical skills training. Some of these family physicians are international medical graduates who trained as surgeons abroad but work as family doctors in Canada. There is currently only one program in Canada, located in Prince Albert, Sask., that teaches surgical skills to family doctors. Fifteen family physicians have graduated from the program since its inception in 2007 — a number that falls far short in matching the number of retiring rural general surgeons.

Dr. Stephen Hiscock, a general surgeon in Salmon Arm, B.C., points out that Canada has an excess of general surgeons but they are poorly distributed across the country, disproportionally based in cities that have surgeons who are currently underemployed or unemployed. Jurisdictions across Canada are exploring different options to address this imbalance, looking at ideas such as rotating general surgeons into smaller communities for short periods, attracting more rural students to medical schools and developing surgical residency programs that prepare surgeons for rural practice. "Our job is to look after people in this country," Hiscock says. "When you look at people in some isolated areas [their access to health care services] approach that of a developing nation. We can do a better job."