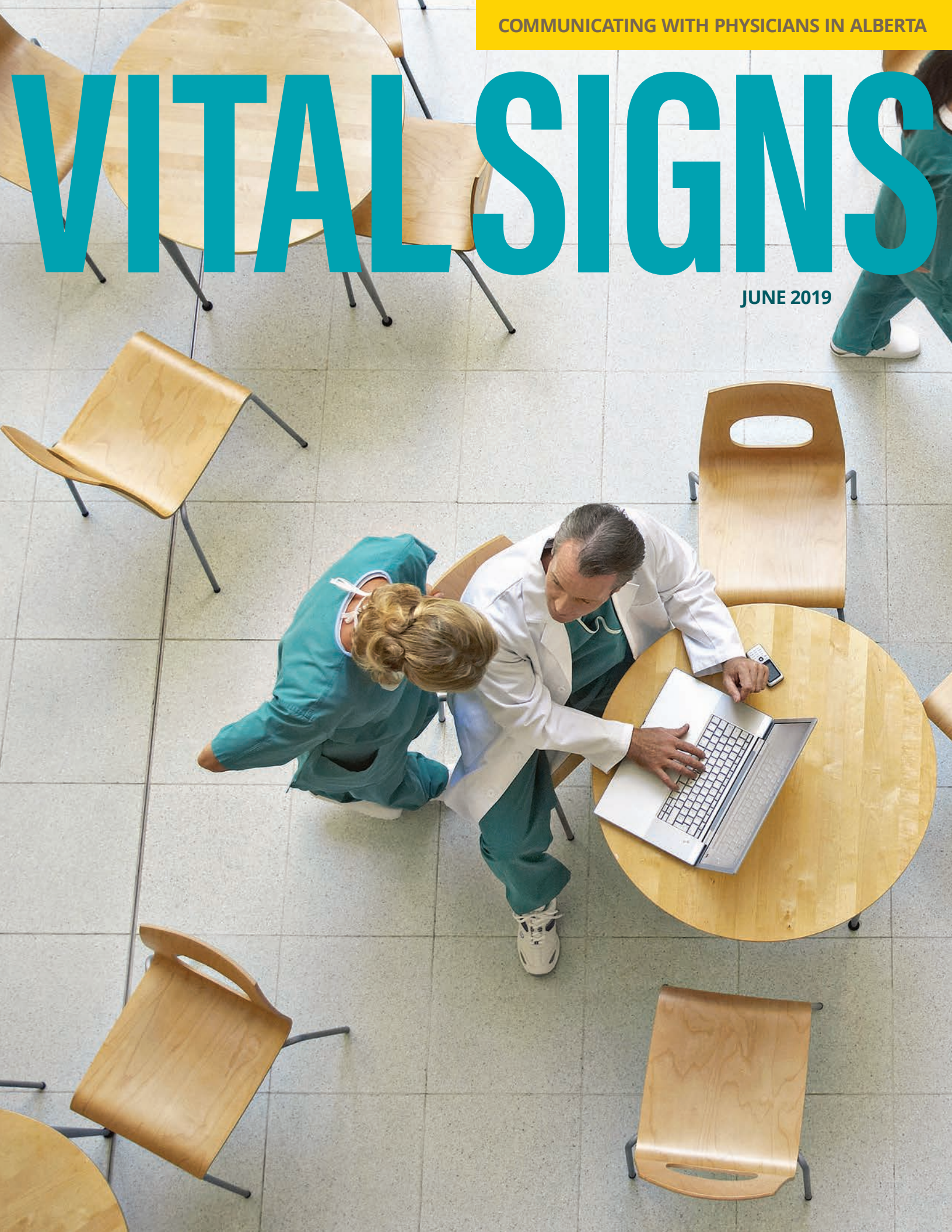
COMMUNICATING WITH PHYSICIANS IN ALBERTA

VITAL SIGNS

JUNE 2019



Retirement Planning: Beyond the Numbers

Words by Adrian George CFP, CLU, TEP
Speaker, Certified Financial Planner, President PlayCheques Financial Solutions
www.playcheques.com

THERE'S MORE TO RETIREMENT THAN NUMBERS. HAVE YOU CONSIDERED THE EMOTIONAL ASPECTS OF RETIREMENT AND HOW TO PLAN WISELY?

EXPLORE YOUR RETIREMENT IDENTITY

According to Nancy Schlossberg, retired counseling psychology professor, there are different ways to approach retirement:

The Searcher
Seeks out different activities, hobbies, projects and volunteer opportunities, much like a college student dabbling in different majors.

The Adventurer
Sees retirement as an opportunity to take an entirely new path in life. For example, a dentist-turned-baker.

The Continuer
Adjusts and manifests his or her work-related identity to continue through retirement. For example, a journalist-turned-author.

The Easy Glider
Doesn't have a set schedule and may do something different each day.

The Retreater
Doesn't have a set schedule and stays at home until deciding what path to take next.

ASK YOURSELF THE BIG QUESTIONS NOW

- How and where do you want to live?
- How is your health and will you require assisted living?
- How much of your money do you plan to spend during your retirement?
- Do you want an allotment of money set aside for your children?
- Are you married or have a significant other that you live with?
- If so, how does your spouse feel about your answers?

RETIRE WITH PURPOSE

For an emotionally healthy retirement, acknowledge that you are transitioning into a new lifestyle. When setting retirement goals, don't forget to be:

☑ **Patient** ☑ **Flexible** ☑ **Realistic**

WORK WITH A FINANCIAL ADVISOR

A study by Cirano showed that just four to six years of advice can increase your assets more than one and a half times that of people who received no financial advice.

PlayCheques helps you gain financial confidence and reach your retirement goals.
Get in touch with us for a complimentary consultation at:

info@playcheques.com & (403) 837-9344

Emotional Side Of Retirement Planning, Barbara Shapiro- MSF- CFP- CMC- CDFA | https://www.kiplinger.com/article/retirement/T031-C032-S014-the-emotional-side-of-retirement-planning.html
Preparing Yourself Mentally For Retirement, Nanci Hellmich | https://www.usatoday.com/story/money/personalfinance/2013/10/22/preparing-mentally-retirement/2885187/
*Economic Models on the Value of Advice of a Financial Advisor, Claude Montmarquette, Nathalie Viennot-Briot | https://www.cirano.qc.ca/pdf/publication/2012RP-17.pdf

VITAL SIGNS

JUNE 2019

CAMSS
CALGARY AND AREA MEDICAL STAFF SOCIETY

ADVOCATING FOR PHYSICIANS, CARING FOR PATIENTS

A CALGARY & AREA MEDICAL STAFF SOCIETY PUBLICATION

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SUBMISSIONS:
Vital Signs welcomes submissionsfrom physicians in Alberta. Please limit articles to 1,500 words or less.

Please send any contributions to: Dr. Scott Beach, Medical Editor, zmsaadmin@albertadoctors.org

Vital Signs reserves the right to edit article submissions and letters to the editor.

The deadline for article submissions for the next issue of Vital Signs is Friday, August 23rd.

CONTRIBUTORS:
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SAVE THE DATES!

CAMSS
Council Meeting: September 11, 2019 | FMC Boardroom 152 – 5:30-7:30 pm
ZAF: October 9, 2019 | Meredith Block - Boardroom 347, 5:30 - 7:30 pm

CZMSA
Executive Meeting: September 19, 2019 | WebEx – 7:00-8:30 pm
ZAF/AGM: October 17, 2019 (Tenative) | Details TBD

EZMSA
Executive Meeting: September 19, 2019 | Misericorida IN-106 – 5:00-5:30 pm
Council Meeting: September 19, 2019 | Misericorida IN-106 – 5:30-7:30 pm
ZAF: October 17, 2019 | Misericorida IN-106 – 4:00-7:00 pm

Vital Signs is seeking writers! Our magazine is not so much an academic journal as a way to connect with other physicians about important topics. We publish a magazine for physicians by physicians, as a venue for advocacy and a way to stimulate conversation about health care issues, with a voice independent of AHS and AMA. We ask that articles be 800 to 1,500 words and we welcome accompanying photos.

You'll be compensated for your writing — all authors whose articles of 800 words and over are published will receive a $50 Good Earth or Chapters gift card as a thank you for contributing! The deadline for our June issue Friday, August 23rd. Please visit http://albertazmsa.com/vital-signs/ to view past issues.

View from the Beach

Message from Vital Signs Medical Editor Dr. Scott F. Beach

Dr. Scott F. Beach

Signs that we are approaching the summer season are all around us.

Green as a palate is replacing the browns and greys of winter. Feathered denizens have returned from sunnier climes. Smaller versions of our four-legged neighbors are popping up in fields and plains all around us.

Summer has also been declared in the human arena. Uber hirsute warriors battle on ice that doesn't seem to melt in June. Red-clad gladiators are clashing once again on the grid-iron at McMahon Stadium. And, for the first time ever, dinosaurs are roaming the hardwood as part of the NBA classic.

In the Calgary Zone, another seasonal ritual has recently come to pass. On May 28th, a group of our colleagues-to-be took part in the AHS medical staff orientation held at Foothills Hospital. Hosted by Drs. Laurie-Ann Baker and Sid Viner, the day was filled with informative sessions that gave insight into how to navigate the ins and outs of the medical system while providing care for patients in our locale. Amongst these scintillating interactions, I was humbly privileged to speak to this bright and (sigh) young- looking group of physicians about the exciting opportunities that lay ahead as they were invited to become card-holding members of CAMSS.

As I prepared to speak on our organization's behalf, I was reminded of the value that a Zone Medical Staff Association brings to physicians in Calgary and the surrounding area on a daily basis. Much of the support myself and my colleagues receive goes on behind the scenes, often unsung and without fanfare. Indeed, having the opportunity to review all that which CAMSS provides as an advocate for physicians spoke poignantly to me that many in the Zone, both members and non-members alike, are woefully unaware of these important supports. As this is my last column before embarking on the pending summer liberation, I thought I'd take this opportunity to highlight what CAMSS means to physicians in the Zone, and the ways in which our organization is a key stakeholder in the system.

Unbeknownst to many, CAMSS provides funding and administrative support to the seven (yes, seven) subsidiary medical staff associations here in the Calgary Zone. Five are attached to the larger medical centres. One stands to represent the hard-working souls at Alberta Public Laboratories (or APL as I'm sure we will

all come to call it). The final association is the Community MSA which has been recently resurrected via the efforts of our recent past and current presidents. This association recognizes those physicians who primarily provide care outside the hospital setting. All seven associations contribute to the narrative on how care is provided to patients in their unique settings, which, taken together, combine to enrich wellness in the Zone as a whole.

CAMSS — and other such societies throughout Alberta — also sits at important tables at both the Zonal and provincial levels. Zonally, CAMSS is an important voice for physicians on key committees that regulate the provision of care. Input from CAMSS helps guide the articulation of the bylaws we practice under, takes part in search and selection for energized and highly-skilled colleagues to join us in the Zone, and stands as a member of both the hearing and immediate action committees. The president of CAMSS also provides an important voice at both ZMAC and PPEC. Beyond the somewhat enigmatic acronyms, the Zone Medical Administrative Committee and the Provincial Practitioners Executive Committee are important platforms where CAMSS can connect with senior leaders from AHS, and communicate on behalf of physicians in the Zone on important issues pertaining to medical practice and provision of patient care. At the provincial level, CAMSS is an important contributor to AMA activities. At the Council of Zonal Leaders, the CAMSS president shares insight with the AMA and the presidents of the other four Zones on how to shape a shared vision on care provision across the province. At the AMA Representative Forum, the CAMSS President attends to help bring our voice to granular — and sometimes controversial — issues that impact physicians and their patients throughout Alberta. In all these settings, CAMSS plays a key role in helping shape the environment in which we as physicians can successfully address our patient's needs and provide exemplary care.

Having undertaken this informative review whilst preparing to present at the medical staff orientation, I was once again impressed by the scope of advocacy that CAMSS provides. From this, I was instilled with gratitude as a recipient of this advocacy and felt proud to be a member of this valuable organization. I'm also sure that what I've said applies to the various other medical staff societies throughout our province, all of which are working hard to have physicians' voices heard. After having read this, I hope you feel as I do and resolve to continue as part of your respective Zone Medical Staff Association. I encourage you to go forth as ambassadors for CAMSS to inform our colleagues on the value of membership, so they too may join and become part of the local collegium.

As this is my last column before the blessed break of summer, I would like to offer my thanks to you, dear readers, for supporting both CAMSS and Vital Signs. I wish you and your loved ones the very best for the warm and pleasant days ahead.

Scott F. Beach, MD, CCFP
Medical Editor, Vital Signs

10 Things I learned in my first ten months of practice

Dr. Gregory Sawisky

Dr. Gregory Sawisky

Attention fellow new-in-practice physicians and residents: here are ten pieces of wisdom I'd like to pass on from my first ten months of practice as a family physician.

1 You can never give yourself too much time for paperwork

Any assumption I had that I would only need a few minutes at the end of my day to chart and be done the day's work was demolished by 4 p.m. on my first full day of practice. Learning how to chart as I go has allowed me to be at least somewhat finished by a decent hour each day.

2 No one looks for lost billing, and the government doesn't care

Every physician probably under-bills during their first year of practice, and hopefully it's limited to that. I regularly touched base with my colleagues to see how they structured their billing to ensure I wasn't missing anything major. As a rural family physician, I had to learn in-patient, emergency, clinic, and long-term care billing. Running a billing question by my colleagues was very helpful in discovering what I didn't know.

3 The EMR thinks it is smarter than I am

I came up against numerous glitches in our EMR that had me convinced that I was in the wrong at times — like when the EMR told me that some form of iron replacement therapy available by prescription no longer existed. Fortunately, a prescription pad and a pen with a quick documented note in the chart overcame that.

4 It is important to block off random days and half-days

I discovered how important it is to periodically book a half-day off. Whether it was to be used for wellness (read: taking my wife out for lunch to remind her what I look like) or just paperwork, it was an important part of the week. I found that if I was relatively rested and caught up, I could open it up to patient visits a few days prior, and it inevitably filled up.

5 Come out swinging

I structured my patient meet and greets with a firm but friendly approach. If the patient had a current family doctor, I asked them what exactly they expected me to do differently than their current MD. I also let patients on benzos and opioids know that if they wanted to come and see me, we would be working on tapering strategies. Unsurprisingly, some patients have not returned.

6 Disability

Similar to point #5, some patients arrived for a meet and greet wanting to go on long-term disability, and expected me to fill in the forms for them that same day. I declined, and suggested they return for a head-to-toe exam and an opportunity to look through their health records with me to see if they qualify. This gave me time to check their records and see them again, armed with information to discuss with them.

7 Finances

It felt as though I was barely breaking even financially over the first few months. Loan and interest payments were coming due and registration fees, my split, office furniture, and membership dues were coming off the top. Plus, some days were less busy and weren't fully booked. But as days became busier, major asset purchases were finished, and I found efficiencies in my schedule, the income flow evened out.

8 Staff

There should be more teaching in medical school and residency on the importance of your relationship with your staff. Arriving at an established clinic made the transition relatively seamless, as staff were already familiar with each other – but the importance of fostering good relationships with staff can't be stressed enough. It was easy to forget just how much they would go to town for me on an almost daily basis, from ensuring my schedule was just full enough, to moving patients to give me a half day to catch up, to appealing the many rejected bills I clumsily attempted to submit before I knew what I was doing.

9 Paperwork flow

During my first two months of practice, I only worked in my local emergency department and did a handful of walk-in shifts. I progressed to meet and greets in my third month. These first two months allowed me time to figure out the EMR, establish my paperwork routine, and ask the other doctors all of my inane and simple questions, without the pressure of 20 patients waiting to see me in the waiting room. By the time I was doing 15-minute appointments, my workflow was established.

10 Being a doctor

It was easy to forget amidst everything that I was officially a family doctor for many people, and that the relationship building when patients began coming back to see me was everything I had hoped for in medicine. Sure, some patients are needy, some ignore my medical advice, and others refuse to help themselves. But I discovered that for the most part, they are all grateful to have a doctor and a familiar face to return to.

And I am grateful to be their doctor. Just so long as I don't forget all the things I've learned in my first ten months.

Gregory Sawisky, MD, CCFP
Family Medicine
Ponoka, Alberta

Dr. Gregory Sawisky completed medical school at the University of Alberta in 2016. He completed his rural family medicine residency through the University of Alberta's Red Deer Regional Hospital location in 2018. He now practices full-scope rural family medicine in Ponoka, Alberta.

The myth of 'breast implant illness'

When misinformation amongst physicians causes harm

Dr. Elizabeth J Hall-Findlay

Dr. Elizabeth J Hall-Findlay

I have been practising plastic surgery in Banff for 35 years. Recently, about two weeks after my patient underwent a breast augmentation procedure, she developed an itchy rash all over her back. When I learned that an ER physician told her that she could be allergic to her breast implants, I was shocked. That is akin to telling the parent of an autistic child that it was probably the measles vaccine that caused the autism. The ER doc didn't ask her about her medications or even discuss their potential role (she was on Flagyl). He did not comment on the fact that she had a similar rash on her flank several months ago, and he didn't know that her son recently had a similar rash.

This is extremely frustrating, because there is now a list of 60 "symptoms" circulating the Internet and the media called "breast implant illness." The internet can be helpful, but in this situation, it is frightening patients unnecessarily — just like the anti-vaxxers. We went through this in 1992 when the FDA (and Health Canada) put a moratorium on silicone gel breast implants. In Canada, we were

— *continued on page 6*

— continued from page 5

I try to be empathetic and I will remove implants if patients request. Of course, some of them will get better because of the placebo effect. In my experience, however, very few patients get better.

restricted to using saline implants for 10 years, and for 15 years in the U.S. Finally, after the Institute of Medicine concluded that there was no relationship between silicone implants and any disease — specifically autoimmune diseases — silicone gel implants were again allowed.[1]

It's important to note that we do now know there is a disease associated with breast implants. Breast Implant Associated Anaplastic Large Cell Lymphoma (BIA-ALCL) is associated almost exclusively with aggressively textured surface breast implants (silicone or saline). This is a new disease, but now that we understand it better, it appears to be completely treated with surgery, which entails removal of the implants and the capsules and then replacement with smooth walled implants. There is no case so far where only a smooth implant was used. At first we thought this was an extremely rare disease, but it seems to occur in about one in 3,000 patients with implants. It is not a breast cancer; it is a lymphoma in the capsular tissue around the implant.

Usually, BIA-ALCL presents with a late seroma around the implant; rarely, it presents as a mass. This means that physicians should be alert to the fact that late breast swelling should be investigated with an ultrasound to check for fluid. Breast augmentation patients are notorious for failing to keep follow-up appointments, so their family physician may be the first to see this problem.

I stopped using the textured implants 10 years ago — they had other mechanical problems. The aggressively textured implants were commonly used outside North America but here in Canada and the U.S., they were mainly used for breast reconstruction. Canada has now banned their use, but the FDA just stated at the beginning of May 2019 that they are not taking that step.[2] They have reviewed the science to date and are establishing registries that will help give us answers. We need a similar registry in Canada.

But does "breast implant illness" actually exist? Sadly, the two are being confused in the media, and maybe also in the minds of physicians. Studies have shown that the same number and types of illness develop when women with implants are matched with women without implants. Breast implants are often placed in young to middle-aged women so, over time, some of those patients will become ill. It is of course normal for patients to wonder whether it is their implants that are causing the disease. They wonder if it is pesticides or transformers — but they rarely consider that all the heavy metals in their tattoos could be a problem, for example.

These patients can be quite sick and disabled physically, and of course they get angry if we ask if their symptoms might be related to life events. But we all know — especially as physicians — that the mind and the body are completely interconnected. I try to explain to patients that we are not "calling them crazy," but I remind them of the simple fact that being in a difficult situation can give them "butterflies." I try to be empathetic and I will remove implants if patients request. Of course, some of them will get better because of the placebo effect. In my experience, however, very few patients get better.

These patients are normal — they are searching for answers and a solution. They do not like the answer "I don't know" when they have a rash, for example. That is partly why alternative health practitioners are so successful — they usually give an answer.

It is sad to see a physician giving an "answer" that will unnecessarily increase a patient's anxiety. Breast implants do have mechanical issues and definitely have problems associated with them. And there are many misleading "studies" that further confuse the situation, but the science is clear: breast implants are rarely — if ever — the culprit in that list of 60 symptoms.

We need to take these patients seriously, but we, as physicians, should not be misleading patients. My patient couldn't help but wonder if her breast implants caused her rash or not. This patient actually works with me and is well aware of all the science. We seem to lose the battle of convincing our own colleagues that getting the flu shot is a good idea — so why would we be surprised that well educated patients blame their symptoms on "breast implant illness"?

A week ago, a patient called my office because her physician told her that she needed to have her breast implants removed because they might make her sick. I suspect that there are physicians who are also paying too much attention to misleading media. The bottom line is, when it comes to addressing this problem, we need to be more scientific.

Elizabeth J Hall-Findlay, MD, FRCSC
Banff Plastic Surgery

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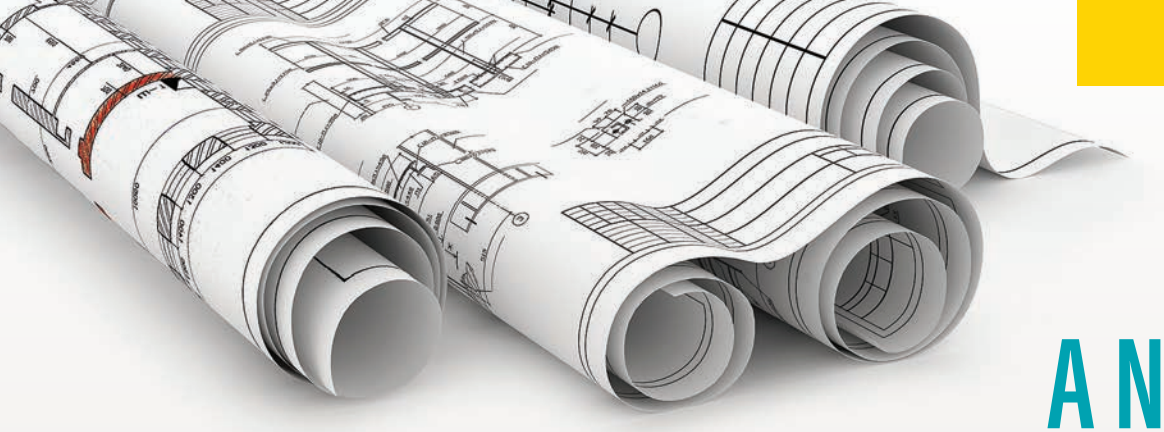

A NEW CODE:

Making doctor's offices across Alberta more accessible

Dr. John Latter and Patrick Sweet

Dr. John Latter

Patrick Sweet

As of April 1st, a change in the building code for Alberta will affect any physicians constructing new buildings to house their offices and examining rooms. Substantial renovations that affect a building's structure or footprint will also be within the scope of these new requirements.

These new requirements are meant to make doctors' offices more accessible for people with physical and auditory disabilities. This involves not only the ability to easily enter doctor's areas, but also to make examining a patient, especially a person with a physical disability, more appropriate for both patient and doctor.

Up until now, there has been no direction in the building code to specifically cover the accessibility of physicians' offices. A six-month transition period is now underway to allow building designers the opportunity to familiarize themselves with the new requirements. For example, permits that are granted prior to April 1st, but for which construction doesn't commence until June, are not affected.

Details of the new changes are in subsection 3.8.5. of the provincial building code, and more information can be found on the Alberta Government website (www.municipalaffairs.gov.ab.ca) and on the website of both the College of Physicians and Surgeons of Alberta, and the Alberta Medical Association.

Examples of the changes within 3.8.5. include increased width for entrance doors to accommodate mobility devices such as electric wheelchairs and electric scooters, and assistive listening devices are needed for people with auditory impairments.

At least one examining room must be large enough to accommodate the turning radius required by a person seated in a wheelchair and allow for transfer to an examining table. Furniture is generally not required by the building code, but the appendix note for this new subsection recommends a hydraulic plinth be provided in the accessible examining room. Hydraulic plinths are of ergonomic benefit to the physician in conducting an examination in that they can be adjusted to the optimal height.

Such a change as this does not come about without the support of many people. In this regard, we would especially like to acknowledge Linnie Tse, Barrier-Free Administrator and Paul Chang Provincial Building Administrator, both with Community and Technical support at Alberta Municipal Affairs. Dr. Karen Mazurek of the College of Physicians and Surgeons of Alberta and Dr. Lyle Mittelsteadt of the Alberta Medical Association both provided invaluable support and perspective. Leanne Squair Issue Strategist for Accessibility at the City of Calgary provided the support to Patrick Sweet to take part in this endeavor, and the section of Physical Medicine and Rehabilitation of the Alberta Medical Association in supporting Dr. John Latter.

In this age of inclusiveness, it's important that Alberta physicians see the benefit of this change, which allows all patients to see and be examined by a physician despite their personal circumstances.

Dr. John Latter
Professor Emeritus, Department of Clinical Neuroscience and Paediatrics, Cumming School of Medicine, University of Calgary

Patrick Sweet, Safety Codes Officer – Building
Calgary Building Services, City of Calgary

Why argument and discrimination are lovely words

Dr. Richard Bergstrom

Dr. Richard Bergstrom

I'm sure many are horrified after reading the title of this article. However, I love these words, and I think you should open your mind to them, too — I believe that they can help us find understanding, and learn to be more human in our actions.

To many people, argument is understood as something used to objectify a person or idea they don't like. Discrimination is often thought of as judging another's culture and background as inferior. I think the general perception is wrong on both accounts.

Argument is often thought of as the dramatized fighting or bickering we see on television. But to me, argument is the considered discussion about the merits and flaws of some particular "thing:" usually an idea, statement or belief. I see argument as debate. Consider, for example, medically assisted death. There is a spectrum of beliefs and feelings regarding this subject. There are those who embrace this idea and support it, and those that strongly believe it is tantamount to murder. It is not a mandated that we, as physicians, must provide this (as opposed to providing healing, caring, instruction, and support to our patients). It is a topic that has caused some advocates to shout about the need for it, and the injustice of not being able to receive it.

As doctors, I think we would all agree that a fractured arm deserves fixing. But the best "how" is not always known. We know we can "fix" the break, but does fixing the break lead to a better outcome? Every action has consequences, and we need to look ahead in order to really see the ramifications of our work.

I used to know "for certain" that any and all patients coming for cardiac surgery must — absolutely must — have a Pulmonary Artery Catheter (Swan Ganz). No argument, period. To not use one was to put your patient in peril. With the advent of transesophageal echocardiography, I took the plunge and started to decrease the number of these catheters I placed. Now, I can't recall having used one in over ten years. My outcomes are better, and not because I've stopped using a PA catheter, but because of my experience with the replacement (TEE) and with looking after numerous cardiac cases. I also listened to the arguments about both the usefulness and uselessness of these catheters. For doctors, listening is something we often need to work on — at least I did. Listening allowed me to learn, grow, and, most importantly, provide better care.

Argument should not be used as a personal vendetta. Argument should be about addressing the idea or concept

at hand, and about why I think the way I do, in addition to my own thoughts on the flaws of the counter argument. Still, I must listen to the other individual, for they have the same rights as I, to get a sense of the potential issues with my thought process. Argument is probably not the best word for what we often do; I would suggest debate as a better word. Debate conjures the idea of "back and forth" and trying to win the argument, not to just demean someone or their ideas.

When I tell the residents I supervise that I embrace "discrimination," they look at me funny. Yes, as an old white male, no hair, no longer a six pack, gravity pulling all my skin down, that comment can be misconstrued. After they give me a skeptical sideways look, I then comment that when I go to Safeway, I purchase the red meat not the green meat. I discriminate. I choose the firm apples, not the soft ones. I discriminate. When I look after a patient, I also discriminate. I assess their needs and decide what my plan will be. I discriminate with respect to drugs, IV fluids, the need for blood or blood products. I weigh the benefits and risks via discriminating.

I discriminate, and this does not mean that I treat people as children of a lesser God. It means that given my knowledge and experience, I can offer a bit of wisdom regarding their situation. They accept the risk, and I describe it so they understand.

Ultimately, I think we can argue more, discriminate more — the right way — and become wiser. Both of these words mean we need to look more, listen more, learn more and, in the end, serve better. As physicians, we are not much different from many other professions: we serve our patients. We serve with knowledge, care, compassion and support.

Richard Bergstrom, MD
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Edmonton, Alberta

What should we know about "Keto"?

An in-depth look at carbohydrate restricted diets

By Miriam Berchuk

Dr. Miriam Berchuk

It seems you can't open a magazine, turn on the TV, or even sit down to a holiday family dinner these days without hearing the word "keto." What exactly is keto, and why should we as healthcare providers be paying attention?

Ketogenic diets fall under the broader umbrella of LCHF diets: Low Carb High Fat. Some call it Low Carb Healthy Fat to emphasize that a LCHF diet is based on healthy whole foods such as dairy, nuts, seeds, avocados, olive oil, meat, and fish. In fact, this is likely where a lot of the benefits are derived: shifting people to whole foods. LCHF diets cover a wide spectrum of carbohydrate intake, but in general, a daily carbohydrate intake of less than 130g per day is considered LCHF, and is described as low carbohydrate. A ketogenic diet is a diet in which carbohydrate intake is restricted to the point that the primary fuel source for much of the body and brain becomes fatty acids and/or ketones. Intake in the < 50g range is considered ketogenic. For context, the average Canadian eats 250-350g of carbohydrates per day, often from sources such as added sugars, refined grains, and ultra-processed foods like baked goods or prepared meals.

Historically, the first time carbohydrate restricted diets were described in the medical literature was in William Banting's 1864 "Letter on Corpulence," where he described his own weight loss and improved health using this approach. In the early 20th century, LCHF was the mainstay for treatment of diabetes, and endorsed by medical luminaries such as William Osler and Elliott Joslin, but interest waned once exogenous insulin became widely available. In 1921, the ketogenic diet was introduced at the Mayo Clinic for the treatment of epilepsy, and for the majority of the last century, that has been the only medical condition for which it's been prescribed. Low carbohydrate diets gained popularity for weight loss in the 1970s through to the 1990s, the most well-known being the Atkins diet. At that time, dietary recommendations such as those published by the American Heart Association recommended keeping fat intake to a minimum as it was felt to be a major contributor to heart disease, and so LCHF diets were dismissed as dangerous.

There has recently been a resurgence of interest in low carbohydrate diets as clinical interventions for a variety of conditions. This has been fueled to some degree by patient experiences with these diets, which are then amplified through social media. The body of evidence for its safety and efficacy has also grown substantially. In April 2019, the American Diabetes Association released a Consensus Statement, which reads: "Reducing overall carbohydrate intake for individuals with (Type 2) Diabetes has demonstrated the most evidence for improving glycemia." Several other worldwide Diabetes organizations, such as those in Europe, Australia, and the U.K., have released similar statements. Low carbohydrate/ketogenic diets, along with very low energy diets and bariatric surgery, have been shown to substantially increase rates of diabetes remission compared to standard management. A recent Western Australian government report stated that remission, rather than just management, should be the goal of interventions for Type 2 Diabetes. Given the growing prevalence of Type 2 Diabetes — currently 11 million Canadians are living with prediabetes or Type 2 Diabetes — it behooves us as health professionals to understand what constitutes a low carbohydrate/ketogenic diet, the specific considerations for patients following them, and that remission of Type 2 Diabetes is possible through the use of carbohydrate restriction.

The rationale for diets that restrict carbohydrate is the following: the pancreas secretes insulin in response to ingested carbohydrates, and to a lesser degree, to protein. Many factors affect insulin secretion, but certainly the degree of refining or processing of the carbohydrate affects the rapidity of the insulin rise, the peak insulin level, and how quickly insulin returns to normal. This is reflected in postprandial blood glucose levels. In those who are insulin resistant, we often see higher blood glucose levels, and longer times to return to baseline. We now understand that insulin resistance is present in many chronic diseases beyond Type 2 Diabetes. Among these, the most common are Hypertension, Cardiovascular Disease, Osteoarthritis, and Alzheimer's disease. It remains unclear how large a role chronically elevated insulin levels (hyperinsulinemia) plays in the development of these diseases, but it is clear that decreasing carbohydrate intake reduces insulin secretion and decreases hyperinsulinemia. In the setting of low

insulin, glucagon stimulates ketone body production in the liver. Ketone bodies, along with free fatty acids, serve as a fuel source for tissues, but ketogenesis isn't the goal of these diets, other than in specific therapeutic circumstances.

Historically, resistance to ketogenic diets are based upon some of the following concerns:

1. "The brain needs glucose." Traditionally, the minimum Dietary Recommended Intake for carbohydrates has been 130g. The brain's glucose requirements can be adequately met through gluconeogenesis, glucose generated from fat and protein. Ingesting carbohydrates is not a requirement to meet the brain's glucose needs. In the setting of carbohydrate restriction, ketone bodies also provide energy for the brain and other tissues.
2. "Ketogenic diets lead to ketoacidosis." A ketogenic diet, and the state referred to as "nutritional ketosis," is not ketoacidosis. Serum levels of ketones are in the range of 1-4 mmol/L, are accompanied by adequate basal insulin levels, and low blood glucose. Ketoacidosis occurs most often in people with Type 1 Diabetes, very rarely in people with Type 2 Diabetes, and results from a lack of insulin and markedly elevated blood glucose levels.
3. "A ketogenic diet lacks essential nutrients." The nutrient cited most often is fibre, as cereals and whole grains are eliminated on these diets. Adequate fibre can be obtained through above ground vegetables, seeds and nuts, as well as other sources. A more liberal approach permits small amounts of beans, legumes, and fruit, which also provide fibre.
4. "A ketogenic diet is high protein/high in meat." Ketogenic diets are by definition not high in protein and LCHF diets are moderate protein, in the range of 0.8-2g/kg per day, depending on the nutritional needs of the individual.
5. Finally, those most opposed to ketogenic diets will state, "These diets are unsustainable, highly restrictive, and/or dangerous." The large body of evidence for the safety and efficacy of carbohydrate restriction shows the opposite, so these views should be reconsidered.

From a practical standpoint, what constitutes a LCHF/ketogenic diet? Contrary to popular myths, people eating LCHF diets are not living off of buttered coffee and bacon. Their diets include: above ground vegetables, meat, fish, dairy, seeds and nuts, avocados, and olive oil. For those adopting a more liberal approach, fruit, beans and legumes can be eaten in small quantities. Sugar and refined grains are eliminated, as are ultra-processed foods. Those in the healthcare community who promote LCHF diets promote a diet that, ideally, is based entirely on whole foods, but there is also recognition that this can be challenging for those living in poverty, or lacking food and health literacy.

Taking all of this into consideration, there are several reasons why we as healthcare providers must increase our understanding of these diets. First, the public is looking for alternatives to medications and surgery. Dietary choices are one of many factors contributing to chronic disease, and supporting patients in making healthier dietary choices can prevent and even reverse some diseases. Second, ketogenic diets have profound, often rapid, physiologic effects, especially with regards to blood pressure and glycemia. Patients adopting these diets who are on medications for Hypertension, Type 1 Diabetes, or Type 2 Diabetes must be counselled to be vigilant, as well as on how to reduce their anti-hypertensives, hypoglycemics, and insulin. It's important to note that SGLT2is are of particular concern, as they have been associated with Diabetic Ketoacidosis, and little is known about causal pathways. Those on ketogenic diets should be counseled on the risks, and prescribers should consider discontinuing SGLT2is in patients who are on or considering low carbohydrate or ketogenic diets.

The question of what happens to cardiovascular risk and lipids is the one raised most often by health professionals when this dietary approach is presented. With adoption of LCHF diets, biomarkers usually change as follows: TGs decrease, HDL increases, glycemic control/HbA1C improves, HTN improves, hsCRP improves, LDL atherogenicity improves (moves from pattern B to pattern A). In a minority of people, LDL does increase, and in a very small minority of people, it increases dramatically. These individuals and their physicians are then faced with the dilemma of having to address a high LDL when the diet that caused it has improved other markers. In these cases, replacing saturated fat in the diet with unsaturated fat often improves LDL. If it doesn't, statins may be discussed in the context of other risk factors. Prior to starting a low carbohydrate diet, baseline lipid testing is very useful to enable tracking of the impact of nutritional changes.

Although social media platforms have allowed for the success of online "gurus" who perceive LCHF diets as a "cure all," it is not an appropriate intervention for all people, and should be tailored to the individual patient's needs and health goals. Its use in seizure disorders is well-established. With the recent ADA Consensus Statement, low carbohydrate/ketogenic diets will become a dietary pattern offered as Nutrition Therapy to patients with Type 2 Diabetes. The use of low carbohydrate/ketogenic diets in Type 1 Diabetes is growing, but robust long-term data are lacking. A very active community of people with Type 1 Diabetes have adopted these diets, and some early research has been published. The groups studied showed significantly better glycemic control with greatly reduced variability in glucose levels — fewer highs and perhaps more surprisingly, fewer lows.

These diets are also being studied in neurologic disease, including dementia, as there is interest in whether ketone bodies are an effective alternative fuel source for the brain.

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There are many studies looking at the anti-inflammatory properties of ketone bodies and whether they might prevent or alleviate symptoms of chronic inflammatory diseases.

Additionally, there is very early research looking at ketogenic diets as an adjunct to traditional treatment for specific cancers, either to increase the efficacy of the treatment regimen, or to reduce side effects related to treatment regimens.

The literature has shown LCHF diets to be as effective as low-fat diets with regards to weight loss. There may be some evidence that ketone bodies reduce hunger, which may improve adherence to the diet. As is true for all weight loss diets, some people respond particularly well to one approach, while others do not. Obesity is a chronic disease, with patients often requiring lifelong support in order to adhere to their diet and avoid weight regain. Unfortunately, these types of long-term support programs are virtually non-existent in Canada.

If you're wondering where to start in supporting patients who may be interested in or require a LCHF diet, there are an increasing number of resources available for healthcare providers to learn more about the use of carbohydrate restriction as part of a "food-first" approach to chronic disease management. Clinical Guidelines for its use were recently published and are available at http://www.lowcarbusa.org/wp-content/uploads/2019/05/Clinical-Guidelines-Carbohydrate-Reduction-General-Intervention-v1.1-1.pdf

Several Canadian organizations are preparing health professionals to safely provide guidance to patients wishing to pursue these diets. More information on these organizations can be found at www.therapeuticnutrition.org (Institute for Personalized Therapeutic Nutrition) and www.ccfortn.ca (Canadian Clinicians for Therapeutic Nutrition).

Miriam Berchuk, MD, FRCPC
Diplomate of the American Board of Obesity Medicine Department of Anesthesia, Rockyview General Hospital, Calgary

From left to right they are: Jessica Simon, Sara Pawlik, Misty Watson, Han Friesen, Chris Sims, Anna Purdy, Michelle Grinman, Jaelene Mannerfeldt and Charlene Lyndon (RGH MSA President)

The RGH Physician Recognition Awards

The RGH Physician Recognition Awards were presented on Thursday, May 28, 2019 at the RGH MSA Annual Dinner & Awards held at Heritage Park.

Please join us in congratulating the recipients of the 2019 awards!

Outstanding Leadership – Dr. Chris Sims, Anesthesia
Outstanding Commitment to Patient Care – Dr. Sara Pawlik, Palliative Care
Outstanding Longevity and Contribution – Dr. Han Friesen, Hospitalist
Outstanding Leadership – Dr. Tahara Bhate, Critical Care Medicine
Outstanding Team Building – Dr. Michelle Grinman, Internal Medicine
Outstanding Department Contribution – Dr. Jaelene Mannerfeldt, Obstetrics & Gynecology

This event was hosted by the RGH Medical Staff Association. Photos from the event can be found on our website: http://albertazmsa.com/rgh-msa

2018 FMC Physician of the Year Award Winner

Congratulations Dr. James Andruchow!

The FMC Physician of the Year Award (previously Clinician of the Year) is presented annually by the FMC Medical Staff Association to recognize a physician for their outstanding commitment to the patients, staff and students of Foothills Hospital and to the community they serve.

Dr. Rachel Grimminck, FMC MSA VP, presenting the FMC Physician of the Year Award to Dr. James Andruchow at the May 2 Award Event, as well as the plaque that hangs in the entrance of the FMC Doc's Lounge.

2018 ACH Physician of the Year Award

Congratulations Dr. Michelle Bailey!

The ACH Physician of the Year Award was presented at the Department of Pediatrics Annual Spring Celebration on April 27, 2019.

For more information visit our website:
www.albertazmsa.com/ach-physician-of-the-year-award

Dr. Michelle Bailey (left) holding the ACH Physician of the Year Award alongside Dr. Catherine Macneil, President of the ACH MSA

PLC Medical Staff Celebration of Excellence

The PLC Medical Staff Celebration of Excellence was held on Thursday, May 23rd at The Big Rock Grill

Please join us in congratulating the recipients of the 2018 awards!

Physician of Merit Awards – Dr. Greg Samis and Dr. Elisabeth M. Wagner *(posthumous)*
Clinical Teaching Award – Dr. Julie Jarand
Resident of Merit Awards – Dr. Angela Deane and Dr. Rachel Lim

This event was hosted by the PLC Medical Staff Association. More photos from the event can be found on our website: http://albertazmsa.com/plc-msa

Dr. Greg Samis accepting award from Dr. Jeff Clark

Rob Corson and daughter Emma accepting award on behalf of wife Dr. Elisabeth Wagner from Dr. Claudia Naber

Dr. Julie Jarand accepting award from Dr. Andrea Loewen

Dr. Angela Deane accepting award from Dr. Pauline Ekwalanga

Dr. Rachel Lim accepting award from Dr. Andrea Loewen

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ALBERTA MEDICAL ASSOCIATION