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Letters of less than 300 words are welcomed; they may be edited for clarity and length. Letters may be e-mailed (journal@doctorsofbc.ca), faxed (604 638-2917), or sent through the post.

Re: Rise in injury rates for older male motorcyclists

The article "Rise in injury rates for older male motorcyclists: An emerging medical and public health concern" in the October issue (*BCMJ* 2014;56:386-390) raises many interesting points, and I applaud [the editor] and the authors for drawing attention to some of the issues involved.

However, although I am neither a mathematician nor statistician, I believe that the title is fundamentally misleading. In order to calculate a rate, two items must be compared. In this case, one is the number of motorcyclists on the road and the other is the number of these motorcyclists who are involved in accidents. The article deals with the second of these numbers, but does not address the first. To illustrate my point, consider the following hypothetical example. If, between 2001 and 2010, the number of motorcyclists on the road between the ages of 45 and 74 had doubled, the 2013 motorcycle-related injuries mentioned in the article would in fact represent a decrease in the rate at which those riders were involved in injuries, not an increase, as the article claims.

Without data referring to the actual number of riders between the ages of 45 and 74 (demographic data which, perhaps, is readily available from ICBC files, as all of us have to buy licence plates at some time), I do not understand how the authors can conclude that there has been a rise in injury rates. Raw numbers, yes, but rates, no.

In addition, while the hospitalization cost of these accidents is said to have increased by 61% in the same period, the figure is meaningless unless compared with increased hospitalization costs in general.

Much still needs to be done to educate riders about motorcycle safety and, incidentally, to educate car drivers about turning left in the path of an oncoming motorcycle, which is where a large proportion of motorcyclists come to grief. But before we decide where to invest our efforts in this direction, we need a more careful look at the data.

—Barry Munn, MD
Nanoose Bay

Rise in injury rates for older male motorcyclists: Authors reply

Thank you, Dr Munn, for your letter and the opportunity to further discuss the important issue of injuries among older male motorcyclists. We agree that a limitation of our study was our inability to include data on the number of motorcyclists on the road. We would also venture to say that the more useful figure would

indicate not only the number and age of motorcyclists on the road, but also the time spent or distance traveled on the motorbikes, in order to indicate with greater accuracy whether injury rates are rising for older riders when controlling for exposure. This would require a different kind of study.

Regardless of these measurement issues, the fact remains that motorcycle-related injury hospitalization rates and associated costs are rising significantly among older males, while rates among younger males are dropping. It behooves the health community to do what we can to prevent these injuries. You point to the importance of education strategies for automobile and motorcycle drivers. We further recommend developing evidence-based injury prevention initiatives targeted at and sensitive to the needs of older male riders.

—Mariana Brussoni, PhD
—Kendra Wong, BA
—Genevieve Creighton, PhD
—Lise Olsen, RN, PhD

Forms: The noose around our necks

I have been moved to write in response to the very interesting and engaging editorial by Dr David Richardson titled "Lacking special authority" (*BCMJ* 2014;56:313). He is surely not alone in the continued travesty that front-line primary physicians have to endure in filling out the profusion of forms required for patients. His good-natured perspective on his frustrations in filling out, or being responsible for, Special Authority forms was well written, and I have to applaud how well he couched the negatives among his jesting. The increasing complexity with the proliferation of different medications to be considered and advocated for is an increasing headache for many of us. But underlying the jesting is undeniably a painful truth: we are caught in a bind at great expense and exasperation as often we are placed in that adversarial situation when the patient before us does not qualify for the medication for which he or she feels perhaps entitled, being first propositioned by drug companies in the media or on the Internet. The time and expense involved in navigating the convolutions is not insignificant for the many patients often caught in the dilemma. The hoops and hurdles expected before certain medications are covered by Pharmacare are multiplying, and the variations of said forms keep getting updated, which to me is the ruse to obfuscate the process and to wear us down and give up the effort. If the latest updated form is not completed with all the proper ticks and boxes, it is returned and we start the process again. It reminds me also of the efforts required to get patients into special programs like multidisciplinary chronic pain clinics, where, once more, if the latest updated forms, yes, with even more categories and preliminary tests, are not completed, the referral is not even considered and more delays of the usual 2-year process follow. Insurance forms for patients, or those for disability benefits, are another example of chronic headaches for the practitioner.

If the word gets out loudly enough, you can readily see how newer graduates, who wise up to the nuclear explosion ready to take place, are not at all interested in pursuing the mundane world of the fading GP ranks. This is the Trojan horse in our midst; the insidious virus that is yet invisible to the general population blissfully unaware of the impossibilities. Can others see what I see? Are there really only a few sheep among the wolves?

—John de Couto, MD
New Westminster

Re: Doctors' attitudes shifting on physician-assisted suicide

Dr Bill Cavers, our president this year, describes the large CMA General Council "overwhelming majority" who voted for our right to follow our consciences in the matter of "medical aid in dying" (*BCMJ* 2014;56:381).

Readers who were not there may wonder who would vote against conscience protection, something we must all want for ourselves. Those who were there have told me that another motion, on revisiting the CMA euthanasia policy, was passed partly by the votes of those who wanted the euphemism "medical aid in dying" removed from CMA policy and returned to the euthanasia partisans who invented it.

The result of these two strategic motions was that an appearance of newfound approval for euthanasia and assisted suicide could be plausibly awarded to the CMA by an eager media. If CMA members wonder when we specifically voted on this tectonic shift in position, the answer is we didn't.

Our patients speak up on both sides of this and many other issues. We could adopt a corresponding ambivalence about whether doctors should kill or facilitate suicide, or we could heed the warning signs from places like Belgium where these practices have become entrenched. The real risks of wrongful death could be glossed over, or we could do our job as doctors and warn the public accordingly.

Palliative sedation is the currently legal answer to almost all of the publicly admitted agenda of the right-to-die movement. We should be putting all our indignation into implementing great palliative care, a goal shared by everyone at General Council.

—Will Johnston, MD
Vancouver

Reply from Dr Cavers

Dr Johnston's letter is another testimony to the fact that we, as physicians, have principled and strongly felt views on all sides of this issue. He concludes with a call to implement

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great palliative care, and on that I feel we are all united.

—Bill Cavers, MD
Doctors of BC President

Canadian, eh?

I read with interest your article, "Proust questionnaire: Kendall Ho, MD" [*BCMJ* 2013;55:354]. I was amazed to see the questions asked of the esteemed Dr Ho—in bold type—yet spelled with the American spelling of *favorite*. In the *BC Medical Journal* I would like to have seen the Canadian spelling of *favourite*. Just a comment from a proud Canadian.

—Maureen Shobe
Abbotsford

The *BC Medical Journal* follows a style that is a combination of the styles described in the *AMA Manual of Style*, the *Chicago Manual of Style*, *Editing Canadian English*, the *Merriam-Webster's Collegiate Dictionary*, *Stedman's Medical Dictionary*, and *Citing Medicine*, along with exceptions that are specific to the journal. For example, *re* words (centre, litre, etc.) follow the British spelling pattern. The journal's style has developed over time and includes conventions followed by many medical publications in North America. Thank you for your interest in this proudly Canadian publication and for accepting our un-Canadian contrarian streak when it comes to spelling choices. —Ed

Pull the plug on NOACs? Not so fast

We were disappointed to read Dr Trusler's article regarding novel oral anticoagulants (NOACs) for prevention of stroke in nonvalvular atrial fibrillation.[1]

We absolutely acknowledge some nonvalvular atrial fibrillation patients are well served by warfarin: their INRs remain stable, thus risk of stroke is reduced by two-thirds. However, for many, monitoring is poorly tolerated, or INRs are labile. The risks of even small INR deviations are profound: compared with an INR of 2-2.5, risk of embolism increases nearly fourfold at an INR of 1.4-1.7; risk of intracerebral hemorrhage (ICH) increases similarly at 3.6-4.5.[2]

Even in the controlled environment of clinical trials, where INR is regularly monitored, time in therapeutic range rarely broaches 70%. Times in therapeutic range for RE-LY and ENGAGE are representative of large clinical trials of warfarin for stroke prevention, not merely NOAC trials (**Table**). Incidentally, that time in therapeutic range was 71% in Canadian RE-LY data as compared to 64% overall is not a point of pride or evidence that the system "works": Even though INR is optimized in this context, nearly one-third of patient-time remained outside therapeutic range.

In addition to their ease of use as compared with warfarin, with lack of monitoring or constant dose adjustments and fewer drug interactions, the chief appeal of the NOACs is their decreased risk of anticoagulant-associated ICH (risk reduction of 49% in a recent meta-analysis),[3] a devastating potential complication. Even despite reversal of laboratory coagulation parameters, patients with warfarin-associated ICH experience higher rates of morbidity and mortality than patients with spontaneous ICH.[4] The "prolonged and expensive resuscitations for bleeding complications" invoked by Dr Trusler apply to all anticoagulant-associated hemorrhages, not just those from NOACs.

Though Dr Trusler quotes one observational study using retrospective administrative data to show that rates of intracranial hemorrhage in the NOAC trials do not reflect the Canadian experience, this is a spurious comparison.[5] The accuracy of that

method of data collection is inferior to that of clinical trials and one cannot meaningfully compare these different populations.

NOACs have provided clinicians and patients with a new armament against the ever-increasing burden of nonvalvular atrial fibrillation and its risk of stroke.

—Thalia S. Field, MD
—Samuel Yip, MD
On behalf of the Vancouver Stroke Program, Vancouver General Hospital

Competing interests

Drs Field and Yip have an unrestricted research grant from Boehringer Ingelheim. This letter was submitted to the *BC Medical Journal* prior to receiving the grant. Dr Yip receives speaker honoraria from Boehringer Ingleheim, Pfizer, BMS, Servier, and Bayer.

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Dr Trusler replies

Thank you Dr Field and Dr Yip for your interest. We are on the same page in our desire to further reduce strokes and hemorrhages in patients with atrial fibrillation, and that standard-care warfarin management in Canada is inadequate and, therefore, achieving a time in therapeutic range of greater than 70% is difficult. The NOACs were trialed against standard-care warfarin and found to be non-inferior or even superior in some instances to standard-care warfarin at mean times in therapeutic range of less than 70% (e.g., RE-LY[1] 64%, Rocket-AF[2] 55%, Aristotle[3] 62%, etc.). The NOACs offer the advantages of convenience and the disadvantages of higher cost, no monitoring test for compliance, and no reversal agent in case of hemorrhage.

However, there is a much better alternative to standard-care warfarin management. There are well-managed warfarin systems in use in other countries yielding time in therapeutic range greater than 70%. The NOACs were never trialed against these systems. Why? Would NOAC industry sponsorship be a possible reason? More importantly, why are these proven well-managed warfarin systems not government funded in Canada? Without funding, well-managed warfarin systems remain inaccessible to Canadian physicians, health professionals, and patients. This is unacceptable.

The key features of well-managed warfarin management systems are:

- Computer decision support software: The evidence to support the

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Table. Recent major trials in secondary stroke prevention or prevention of stroke and systemic embolism including warfarin anticoagulation.

Trial	Year	N	Intervention	Discontinuation rate (%)	TTR for warfarin (%)
SPIRIT	1997	1316	Warfarin INR 3.0-4.5 ASA 30 od	22 7	Not available
WARSS	2001	2206	Warfarin INR 1.4-2.8 ASA 325	Not available	71 (within designated study target)
WASID	2005	569	Warfarin INR 2.0-3.0 ASA 1300 od	28 16	63
ESPRIT	2007	1068	Warfarin INR 2.0-3.0 ASA 30-325 od	39 16	70
RE-LY	2009	18 113	Dabigatran 150 bid Dabigatran 110 bid Warfarin INR 2.0-3.0	21 21 17	64
ACTIVE-W	2006	6706	Warfarin INR 2.0-3.0 ASA 75-100 od + Clopidogrel 75 od	8 (at 18 months) 14	64
ROCKET-AF	2011	14 264	Rivaroxaban 20 od Warfarin INR 2.0-3.0	24 22	55
ARISTOTLE	2011	18 201	Apixaban 5 bid Warfarin INR 2.0-3.0	25 28	62
J-ROCKET-AF	2012	1280	Rivaroxaban 15 od Warfarin INR 2.0-3.0 (age < 70) Warfarin INR 1.6-2.6 (age ≥ 70)	Not available	65 52 (age < 70) 73 (age ≥ 70)
WARCEF	2012	2305	Warfarin INR 2.0-3.5 ASA 325 od	Not available	63
ENGAGE AF-TIMI 48	2013	21 105	Edoxaban 30 od Edoxaban 60 od Warfarin INR 2.0-3.0	34 34 33	68
ARCH	2014	349	ASA 75-150 od +Clopidogrel 75 od Warfarin INR 2.0-3.0	15 21	67

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use of computer-assisted warfarin dosing over manual dosing is Grade 1A (British Committee for Standards in Haematology).[4] These systems mathematically calculate the dose of warfarin based on serial INR values. They calculate the patient's time in therapeutic range using the Rosendaal method.[5] They track adverse events and provide warfarin management registry data for non-industry–based real-world research. Sweden uses a national web-based computer decision support software program, Auricul A,[6] and in 2008 achieved a time in therapeutic range of 76.2% in 18 391 patients. Primary care providers in the report achieved a time in therapeutic range of 80.3%.

- Point-of-care INR testing: In the Community Pharmacist-led Anticoagulation Management Service[7] study in New Zealand, community pharmacists and pharmacy technicians using INR online computer decision support software and Coagu-Chek XS POC INR testing achieved a mean time in therapeutic range of 78.6%, which rose to 80.3% at 6 months. The study was so successful that it is being rolled out in over 100 pharmacies in New Zealand under a government-funded program.
- Weekly INR testing: Horstkotte and colleagues[8] demonstrated that increasing the frequency of INR testing improves time in therapeutic range. Testing every 4 days achieved a time in therapeutic range of 90%, weekly testing 76%, and 24-day testing 48%.
- Patient self-management: Germany has been running patient self-management programs for 25 years. Dr Stephan Kress, of Landau, Germany, spent an afternoon with me last month explaining how their system works. German patient self-management times in therapeutic range are consistently over 80%. They INR test weekly, and 200 000 patients in Germany use patient self-management. Mary Bauman and colleagues[9] published their patient self-management results. Time in therapeutic range: 87%. Average age: 12 years. No thromboembolic or hemorrhagic events. Patient self-management is the cheapest system of warfarin management because it substitutes free patient labor for expensive health-professional labor. In terms of ease of use, prick your finger once a week, place the drop of blood on the test strip, receive your warfarin dose, enter the dose into a software program (on a smartphone, tablet, or computer), and receive immediate dosing instructions. The whole process takes 5 minutes. It is convenient and provides patients with freedom to travel.

The main barrier to well-managed warfarin in Canada is the lack of government funding for the necessary clinical tools. Why not make BC the first province in Canada to change this?

—Murray Trusler, MD
Fairmont Hot Springs

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