Health policies governing the quality and delivery of care to Canadians are doomed to fail if physicians do not become involved in discussions that help shape that care and positively influence outcomes.

Dr. Hugh Scully, Professor of Surgery and Health Policy, University of Toronto, will address the complexities of involving physicians as leaders in the new world of health care during his Wilfred G. Bigelow lecture scheduled for Tuesday morning. Among the many obstacles impeding physician participation in policy decisions is public perception. “In the paternalistic era, physicians were generally regarded as ‘knights’—it was felt they had patients’ best interests in mind; they pursued knowledge to improve patient care and did research with an intent to translate it into practical outcomes,” Dr. Scully explained to INFO-Cardio. That no longer appears to be the case, he added. As is true for judges, lawyers and politicians, the public is now more suspicious of the ‘elite’ classes than ever before—there is a distrust of authority and a sense that things are not being done in their best interest but rather in the best interest of the elite.

Dr. Scully observed. In fact, viewed from this perspective, physicians might be considered as “knaves,” a term used by editorialists Jain and Cassel in their commentary “Societal Perceptions of Physicians: Knights, Knaves, or Pawn?” (JAMA 2010;304:1009-10).

As “knaves,” physicians allegedly put their financial well-being first and patients second; efforts to improve knowledge and skills are largely made for personal gain. A possible third perspective, however, is one in which physicians are merely “pawns” of the health care system—passengers who are essentially carried along and who are obligated to do things imposed by rules and regulations dictated to them by organizations, not the profession. “If we are ordering more things imposed by rules and regulations dictated to them by third parties, and without good reasons, we are essentially complicit in doing things that are not in the best interest of our patients,” Dr. Scully continued. Therefore, the time has come for physicians to become involved in discussions that help shape the direction and quality of health care delivery in Canada.

The CCS 2010 session treated an overflow crowd to highlights of the updated guidelines for the identification and management of atrial fibrillation, heard for the first time here yesterday.

Wilfred G. Bigelow Lecture:

Health policies that shape patient care must include physician involvement

Conférence Wilfred G. Bigelow : Les médecins doivent participer à l’élaboration des politiques qui façonnent notre système de soins de santé

Les politiques qui régissent la prestation et la qualité des soins de santé aux Canadien.s sont soumises à l’échec si les médecins n’expriment pas leur point de vue de manière à bien orienter les décideurs.

Les difficultés inhérentes à ce rôle de leader des médecins sur le nouvel échiquier des soins de santé seront l’objet de la conférence Wilfred G. Bigelow, prononcée mardi matin par le Docteur Hugh Scully, professeur titulaire de chirurgie et de politiques en matière de santé, Université de Toronto. La perception du grand public est l’un des nombreux éléments qui font obstacle à la participation des médecins à l’élaboration des politiques. “En des temps plus paternalistes, les médecins étaient généralement perçus comme des sauveurs qui avaient à cœur le bien-être de leurs patients, approfondissaient leur savoir pour mieux les soigner et faisaient des recherches à des fins strictement pratiques”, explique le Dr Scully.

Or, les choses ont changé, semble-t-il. De nos jours, en effet, le grand public se méfie plus que jamais de l’«élite», qu’il s’agisse de juges, d’avocats ou de politiciens. «Les gens sont sceptiques face à l’autorité et ont l’impression que l’élite veille à ses propres intérêts plutôt qu’aux leurs», fait observer le Dr Scully. En fait, sous cet angle, les médecins pourraient fort bien être assimilés davantage à des voleurs qu’à des sauveurs. Pour décrire cette réalité, les éditorialistes Jain et Cassel ont utilisé le terme knave (fripouille, escroc) dans leur papier intitulé Societal Perceptions of Physicians: Knights, Knaves, or Pawn? (JAMA 2010;304:1009-10).

As “knaves,” physicians allegedly put their financial well-being first and patients second; efforts to improve knowledge and skills are largely made for personal gain. A possible third perspective, however, is one in which physicians are merely “pawns” of the health care system—passengers who are essentially carried along and who are obligated to do things imposed by rules and regulations dictated to them by organizations, not the profession. “If we are ordering more tests, it is because we are following orders to do so—or to do less... and that is, in fact, increasingly what is happening with...” Continued on page 2
In his John Keith Lecture, “From Trainee to Mentor: A Symbiotic Relationship in Echocardiography,” Dr. Jeffrey Smallhorn, Professor of Pediatrics, University of Alberta, will describe how over the past 30 years, he has gone from being a trainee in echocardiography to a mentor who has trained hundreds of individuals including the next generation of pediatric echocardiographers from all over the world. Once they become experts themselves, they frequently start the mentoring process all over again in their own institutions.

“My interest in echocardiography started back in the late 70s,” he tells INFO-Cardio. Although at the time he was not convinced of pursuing an academic life, Dr. Smallhorn ended up at the Great Ormond Street Hospital in the UK where he was destined to meet Professor Fergus Macartney, who established the roadmap for diagnosing congenital cardiac malformations through cross-sectional echocardiography. “He got me started on academic medicine and really challenged me intellectually, although he was also very supportive of me,” Dr. Smallhorn recalls.

In 1983, he was invited to head the echocardiography laboratory at Toronto’s Hospital for Sick Children where he remained until 2005. Following his recruitment to Edmonton’s Stollery Children’s Hospital, Dr. Smallhorn has continued his mentoring efforts, following a cyclical process that he likens to “succession planning.” “I’m still doing research into echocardiology and helping to push the field forward,” he explains.

At the same time, trainees help their mentor carry out the actual research on which they attain the mentor’s career forward; in turn, the mentor helps trainees by teaching them the clinical skills they need to become expert echocardiographers and to begin asking important academic questions on their own. Some of Dr. Smallhorn’s trainees have, in fact, gone on to present research they have worked on with Dr. Smallhorn at the CCC itself; Dr. Nee Khoo, for example, won an award at last year’s congress for the best trainee presentation.

Another one of his new trainees has also been selected to present her data for the same award this year. Eventually, the talented recruits go on to produce manuscripts for publications in peer-reviewed journals and of course their work is in turn transmitted to the wider echocardiography world. “Often the trainees go back to their country of origin and then you may continue to do collaborative research with them,” Dr. Smallhorn adds.

Mentors are also frequently invited back to lecture in their former trainee’s institution—“so it’s an ongoing process which is what makes it successful,” he notes.

A fundamental component to the success of this symbiotic model is for both sides to acknowledge the strengths of their counterparts. “The trainees have tremendous strengths and they enhance the symbiotic process, it’s not just the mentor,” Dr. Smallhorn stresses.

Mentors must also recognize that their role is not to protect their own ideas but rather to share them with trainees; by acknowledging the obvious gifts that trainees bring to the table, ideas snowball and the trainees, having learned to think critically, will start to come up with their own, set up their own research projects and bring them to completion. “You have to build trust with them—they have to trust you—and that is one of the elements of being a good mentor,” Dr. Smallhorn reveals. “But I am very passionate about training as many individuals as possible and I want my trainees to be not just good clinical and academic professionals but good all around doctors.”

John Keith Lecture: Building trust key to symbiotic relationship between trainee and mentor

Dr. Jeffrey Smallhorn

Vancouver-based professorship to be announced in honour of CCS outgoing President Dr. Charles Kerr

The St. Paul’s Hospital Foundation, Cardiac Services BC and the University of British Columbia (UBC), Vancouver, are announcing the establishment of a professorship in heart rhythm management named in honour of Dr. Charles Kerr, the CCS outgoing President, in recognition of the many contributions Dr. Kerr has made to cardiovascular medicine.

Dr. Kerr is one of Canada’s most pre-eminent cardiologists, having contributed to the entire spectrum of cardiovascular medicine, and arrhythmia in particular. He both originated and directed the Canadian Registry of Atrial Fibrillation and was co-principal investigator of the Canadian Trial of Physiological Pacing, which laid the foundation for pacing in Canada and around the world. Dr. Kerr was also head of cardiology at UBC for some 16 years as well as longstanding chair of the provincial advisory panel that also head of cardiology at UBC for some 16 years as well.

He remains involved in electrophysiological service delivery in several hospitals in the Lower Mainland. “Dr. Kerr is not only an able administrator and clinician but much of what we have learned about atrial fibrillation came from his research initiatives and participation in the guidelines on atrial fibrillation,” Dr. Andy Ignaszewski, Clinical Professor and Head, Division of Cardiology, St. Paul’s Hospital, UBC, told INFO-Cardio. “So I think it is only appropriate that a young researcher receive a professorship named after Dr. Kerr.”

Watch for job postings in the Canadian Journal of Cardiology, Canadian Medical Association Journal and on the UBC Department of Medicine Web site www.medicine.ubc.ca. The professorship will be located at St. Paul’s Hospital itself, while a second professorship will soon be announced for Vancouver General Hospital as well.

CV nursing awarded three certificates of excellence

The Canadian Council of Cardiovascular Nurses (CCCN)— the voice of CV nursing in the country—was just awarded three certificates of excellence from Hypertension Canada with whom they have been collaborating over the past 10 years. One of the certificates of excellence was awarded to the organization itself, while the other two were given to two CCCN members; Dorothy Morris, CCCN health promotion chair, and Sandra Matheson, the previous CCCN health promotion chair. Hypertension Canada selected the CCCN and its individual members for their contribution to the development and the dissemination of educational materials to increase awareness of hypertension among nurses and other health care professionals (HCP). Each year, Hypertension Canada develops new evidence-based recommendations for the management of hypertension which the nurses then disseminate to others across the country.

The focus often changes from year to year—last year was more on sodium reduction, for example; this year on new ways to translate knowledge and keep HCPs engaged. “We as an organization endorse these tools as well” Morris noted. Hypertension continues to be the leading risk factor for death in the world.

Continued from page 1

Wilfred G. Bigelow Lecture: Health policies that shape patient care must include physician involvement

managed care and insurance care maps in the US,” Dr. Scully remarked.

He believes most physicians do want to make a positive difference for the health of their patients and for society; they simply have to convince the public and the government that the profession does have a positive role to play in setting standards, that they are prepared to be measured against those standards and that they expect to be paid for meeting those standards. To that end, health care professionals must develop the necessary leadership skills that will allow them to participate at a more senior level of engagement, along with the communication skills that are indispensable for policy debate.

“What we need to do is move from a traditional craft-based, individual, personalized model of health care to the professional team-based model which improves access, quality, safety outcomes and effectiveness,” Dr. Scully stated, “and good care costs less.”

These models enhance recruitment and retention and are more satisfying to patients and to providers, he added. “There is a significant responsibility on the part of the public to use the system wisely and we need to be leaders in educating them to do so,” Dr. Scully indicated. He added, however, that that means developing a message to policy planners must be the theme to be developed and implemented and major policy decisions—“otherwise, the policies will not work,” he warned.

The Wilfred G. Bigelow Lecture will be delivered Tuesday, October 26, 9:45-10:30 (Palais des congrès, Rm. 517A).

Conférence Wilfred G. Bigelow : Les médecins doivent participer à l’élaboration des politiques qui façonnent notre système de soins de santé

Devons- nous être à certains égards [...] et je dois dire que c’est de plus en plus vrai aux États-Unis, avec les plans de soins standard des organismes de gestion intégrée des soins de santé et des compagnies d’assurances », concède le Dr Scully.

Selon lui, la plupart des médecins sont animés d’un désir sincère de contribuer au mieux-être de leurs patients et de la société. Reste que la profession manque de professionnalisme. “Tout-le-monde et les pouvoirs publics que la profession a un rôle à jouer dans l’établissement de normes et qu’elle est prête à être évaluée et rétribuée en fonction de ces normes. À cette fin, les professionnels de la santé doivent trouver en eux les qualités de chef nécessaires pour engager plus avant dans l’arène politique et peser pour leurs optimistes en communication, indispensables dans tout débat d’orientation. ”

“Nous devons passer d’un modèle de soins individuel, personnel et personnalisé à un modèle professionnel, axé sur l’équipe, qui conduisent à des soins plus accessibles, de meilleure qualité, plus sûrs et plus efficaces. Et, ajoute le Dr Scully, les bons soins coûtent moins cher.”

En plus de favoriser le recrutement et le maintien de l’effectif, ces modèles apportent une plus grande satisfaction tant aux patients qu’aux prestataires, poursuit-il. «L’utilisation responsable du système de santé incombe en grande partie au public, et nous devons jouer un rôle de premier plan dans sa responsabilisation», affirme le Dr Scully. Bref, ce que soutient essentiellement le corps médical, c’est qu’il doit participer, avec d’autres intervenants, à l’élaboration et à la mise en œuvre des principales politiques en matière de santé, «sinon, prévient le Dr Scully, ces politiques sont vouées à l’échec.»

La conférence Wilfred G. Bigelow aura lieu le mardi 26 octobre 2010, de 9 h 45 à 10 h 30, au Palais des congrès de Montréal, salle 517A.

Suite de la page 1
Efficacy and Safety of Clopidogrel Compared with Placebo According to CYP2C19 Genotype in over 6000 Patients with Non-ST Elevation Acute Coronary Syndromes (CURE trial) and Atrial Fibrillation (ACTIVE) Trial: On March 12, 2010, the Food and Drug Administration (FDA) approved a new label for clopidogrel with a “boxed warning” regarding its diminished effectiveness in patients with impaired ability to convert the drug to its active form. The FDA was based on their concern that the antiplatelet effect of the agent depends primarily on activation by the cytochrome P450 (CYP) system. The genes encoding the CYP enzymes are polymorphic and data have shown that certain alleles confer reduced enzymatic function, such that patients with decreased CYP2C19 function because of genetic polymorphisms metabolize clopidogrel poorly and are at greater risk for CV events than patients with normal CYP2C19 function. Pâtre et al. subsequently genotyped patients from two large randomized trials, CURE (n=9095 ACS patients) and ACTIVE (n=1156 AF patients) for three single nucleotide polymorphisms that define the major CYP2C19 allelic. They compared the efficacy and safety of clopidogrel vs. placebo in subgroups defined by genetically determined CYP2C19 metabolizer status. Investigators determined that in ACS, clopidogrel consistently reduced the primary efficacy outcome (a composite of MI, stroke or CV death) compared with placebo irrespective of genetically determined metabolizer phenotype. Whether they were heterozygous or homozygous for loss-of-function CYP2C19 alleles, patients derived similar protection against CV events from clopidogrel vs. placebo at 8% vs. 11.6%, respectively. This is very similar to protection rates seen in noncarriers of the loss-of-function alleles at 9.5% for clopidogrel vs. 13% for placebo. On the other hand, gain-of-function carriers benefited more from clopidogrel with CV protection rates at 7.7% vs. 13% for placebo compared with noncarriers at 10% vs. 12.2%, respectively. The effects of bleeding did not vary by genotypic subgroups.

Stem cell mobilization by granulocyte-colony stimulating factor post-myocardial infarction to promote myocyte repair: In the recent past, the ability to recruit autologous bone marrow stem cells (BMSCs) following an acute MI (AMI) has been explored as a potentially lifesaving option for post-MI cardiac repair. Patients also should receive treatment within two weeks of their AMI prior to scar formation, and autologous cells are clearly desirable as they obviate the need for immunosuppression. Interventions have largely been carried out by recruited endogenously-mobilized bone marrow cells using granulocyte-colony stimulating factor (G-CSF) although more frequently, bone marrow cells have been either directly injected into the myocardium or delivered via intracoronary infusion. Current trials to date have typically led to ambivalent outcomes with largely marginal and sometimes transient benefits with relatively insignificant clinical benefits. Several factors might account for these results, including the fact that fewer cells than needed actually reach the infarcted zone, poor cell survival, poor engraftment and poor integration of the implanted cells. Within this setting, Glover et al. hypothesized that G-CSF therapy would promote mobilization of BMSCs that will assist in myocardial repair and improve left ventricular ejection fraction (LVEF) in patients with recent STEMI. A total of 86 patients have now been randomized to G-CSF or placebo one week post-MI and data on LVEF at six months will be completed shortly.

A Phase II Study of the Novel Oral and Intravenous P2Y12 Inhibitor Elinogrel: Results of the INNOVATE-PCI randomized trial: INNOVATE-PCI was a randomized, double-blind, clopidogrel-controlled trial of intravenous (i.v.) and oral elinogrel in patients undergoing non-urgent PCI. Following diagnostic angiography, patients scheduled for non-urgent PCI were randomized to clopidogrel or one of three doses of the P2Y12 inhibitor as follows: the comparator group received a 300- or 600 mg loading dose of clopidogrel, followed by 75 mg q.d. for 60 days; the experimental arms received elinogrel 80 mg given as an i.v. bolus followed by 50 mg, 100 mg or 150 mg of oral elinogrel b.i.d. Patients were initially followed for 60 days but the protocol was amended to allow for assessment at 120 days' post-PCI. The 50 mg oral dose was also discontinued after enrolment of 116 patients and the i.v. dose increased to 120 mg after 177 patients had been enrolled. A total of 590 patients were followed for 60 days and 328 patients were followed for 120 days. The study was not powered to examine a pre-specified end point; rather, it was designed to explore a number of analyses to understand the clinical efficacy, biological activity, tolerability and safety of elinogrel in patients undergoing non-urgent PCI. Bhatt et al. will discuss the results.

Bypass Angioplasty Revascularization Investigation on angina and coronary revascularization outcomes: The BARI 2D study included 2364 patients with type 2 diabetes and stable CAD. Patients were asymptomatic, had CCS grade I or II angina or had angina equivalents, including dyspnea on exertion or at enrollment. A total of 1191 patients were randomized to optimal medical management (OMM) and 1173 were randomized to OMM and prompt coronary revascularization at study entry (REV), preselected as either PCI or CABG. As Dagenais et al. report, at three years of follow-up, patients assigned to the REV strategy had lower rates of worsening angina at 8% vs. 13% for the OMM group, new angina at 37% vs. 51% and subsequent need for coronary revascularization at 18% vs. 33%. More patients in the REV group at 66% were also free of angina at three years compared with 58% of the OMM group. As investigators point out, there were significant decreases in both angina and subsequent need for revascularization among patients in the CABG arm who received the REV strategy but the strategy still did not reduce mortality in this patient group. The REV strategy was also associated with limited benefit among patients selected for the PCI stratum. Investigators therefore concluded that OMM is a reasonable initial strategy for patients similar to those enrolled in BARI 2D, followed by revascularization if OMM does not relieve symptoms.

Minimizing ventricular pacing in a large population of patients: One-year interim analysis of the Canadian Spontaneous Atrial Ventricular Conduction Preservation study (CAN-SAVER): This study by Thibault et al. was designed to assess the clinical benefits resulting from SafeR mode in a large unselected population of patients with an indication for DDD pacemaker. Objectives of the CAN-SAVER were threefold: to compare the per cent of ventricular pacing at one year; AF burden at one and three years; and the impact on left ventricular and left atrial remodelling at three years, as determined by echocardiography. A total of 375 patients have now been randomized and data for the one-year interim analysis will be available at the time of presentation.

Fondaparinux with Unfractionated Heparin During Revascularization in Acute Coronary Syndromes (FUTURA/OASIS 8): A randomized trial evaluating the safety of two regimens of adjunctive IV unfractionated heparin during PCI in high-risk patients with non-ST segment elevation ACS initially treated with subQ fondaparinux: In OASIS 5, fondaparinux reduced the risk of major bleeding and mortality overall and in subsets indicated that for patients undergoing PCI, the net clinical benefit favours fondaparinux over enoxaparin, although patients undergoing PCI on fondaparinux require additional unfractionated heparin (UFH) at a dose of 50 to 60 U/kg. The FUTURA/OASIS 8 study was designed to determine the optimal dose of heparin used during PCI in UA/ NSTEMI patients initially treated with fondaparinux. In FUTURA/OASIS 8, 2000 patients going on to PCI will be randomized into standard activated clotting time (ACT)-guided doses of intravenous UFH vs. a non-ACT-guided, weight-adjusted low dose of the same compound. The standard regimen uses an 85 U/kg bolus of UFH if no GP IIb/IIIa inhibitor use is planned or 60 U/kg if GP IIb/IIIa inhibitor use is planned, with an additional bolus guided by blinded ACT measurements; the low-dose regimen uses a 50 U/kg UFH bolus irrespective of panned GP IIb/ IIIa use. The primary outcome consists of a composite of peri-PCI major bleeding, minor bleeding or major vascular access-site complications; net clinical benefit is a key secondary outcome and consists of peri-PCI major bleeding with death, MI or target vessel revascularization at day 30.
**Patients’ Simple Questions Spurred a Lifetime of Research for CIHR Lecturer**

Dr. John Floras, a distinguished lecturer at the Canadian Institutes for Health Research (CIHR), has spent many years researching the variability of blood pressure (BP) and its ability to confound decisions. Another key question that Dr. Floras has explored is the relationship between hypertension and heart failure (HF). According to Dr. Floras, understanding the temporal aspect of BP and HF can help improve clinical practice and guide treatment decisions.

Dr. Floras recounted a significant event in his career when he realized the importance of considering the temporal dimension of patients’ responses. He described a scenario where a patient developed symptoms of HF, which led to the development of a method to directly record the beat-by-beat impulses into the fibular nerve. This opened the door to the first randomized controlled trial evaluating the effect of treating obstructive SA in HF, and researchers were able to demonstrate an increase in ejection fraction by about 9%—better than any drug at the time.

Over the next 20 years, Dr. Floras and colleagues have characterized the reflex control of the sympathetic nervous system (SNS) in HF, identifying both central and obstructive SA. They have also shown that SA patients are at risk for early mortality because their sympathetic nervous system (SNS) is turned on less in the daytime, and patients with HF sleep less as their SNS is turned off more in the daytime. These findings have led to the development of a comprehensive program looking at the interaction between the SNS, HF, SA, and disease progression which eventually led to the broader exploration of SA in HF.

Dr. Floras emphasized that while patients with SA are at risk for HF, SA patients who have SA are at risk for HF mortality. “Patients with HF sleep less so their sympathetic nervous system (SNS) is turned on more in the daytime,” Dr. Floras explained. He also came to appreciate that BP rises at night in patients with SA instead of falling—“so their circulation is not repairing itself at night.” Together with colleagues, Dr. Floras developed a comprehensive program looking at the interaction between the SNS, HF, SA and disease progression which eventually led to the broader issue, again prompted by a patient, regarding the prognosis of HF patients.

To that end, the team developed a method of directly recording the beat-by-beat impulses into the fibular nerve. They also set up a tracer isotopic technique so they could measure the amount of noradrenaline (at the time, the only biomarker of a poor prognosis in HF) released by the heart, the kidney, and the total body over a particular course. They also started to look at various stimuli that turn on—or turn off—the SNS in HF.

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### DELEGATES’ CORNER

**Q: What do you like best about your job and about this meeting?**

**Bobbe Wood, CEO HSFC:** Working for the HSFC is an absolutely fabulous opportunity. The best thing is the ability to make a difference in Canadians’ lives and to work with the hundreds and thousands of volunteers across the country who are all working to make that same difference. It’s fabulous to be a part of such an incredible team. It’s almost the same thing that makes the job special. This is an incredible job for highly dedicated people who are all working on the same thing. We all want to eradicate heart disease and in our various roles and responsibilities, we are all on the same team trying to make that happen and it’s really exciting to talk to people as committed as you are.

**Patrick Ryan Lawler, McGill University Medical Centre:** I’m a trainee in cardiology and I’m going into cardiology next. I attended the trainees day yesterday and it was super. I think one of the nice things about the CCC this time around is that they have really done a good job extending mentorship opportunities to young people both with the trainees day and now with the poster-mentor program. This has given many young people a chance to interact with some of the great minds across Canada. I’m an American and I think one of the nicest things about being in Canada is the collegiality and the cooperation among various people. As for cardiology, I also like the fact that it involves all aspects of the patient—it is very holistic—and involves many different aspects of patient care. It allows you to be an internist in that you have to manage a lot of different organ systems but at the same time, it allows you to focus on one organ, the heart.

**Dr. Todd Anderson, University of Calgary:** My job is multi-faceted. As an administrator, I’m the director of the Lubin Cardiovascular Institute in Calgary. So I have some leadership opportunities and in my job in the department and the Institute, and that’s fun. I’m also an interventional cardiologist so I get to care for patients in CAD. I also do a lot of teaching, from medical students to cardiology trainees to research students, and then I get to do research. The CCC is a great place to come because I get to meet people that I see once a year, that I collaborate with on a regular basis on a research side and also on the education and the administration side. So for me, it’s a must-do meeting that I do on a yearly basis.

**Dr. Jean-Pierre Després, Université Laval:** I like to ask questions—to students, to colleagues—that is why the research part is certainly the most interesting aspect of my work. You have all these questions being generated from clinical practice colleagues and then you try to get answers, and it’s a lot of fun. And it’s very gratifying if you can come up with concepts or notions that are useful to clinical practice and help physicians and health care professionals. As for this meeting, I think it’s a fantastic platform for discussion around anything that relates to CV health. This is a Canadian forum—this is where the action is—so it’s a great place to be.
In discussing highlights from the anti-arrhythmic management of atrial fibrillation (AF), on Monday, October 25th, Dr. Atul Verma noted that panel members felt that improvement in functional capacity and quality of life were the most important elements to consider in deciding both which strategy—rate or rhythm control—to use as well as whether or not treatment has been a success. In deciding whether to pursue rate or rhythm control, “there is no right or wrong answer”, he told delegates, “as often, the two are simultaneous.”

Agents for rate control include the beta-blockers (BBs) and the calcium channel blockers (CCBs) diltiazem and verapamil as first-line therapy, digoxin and digitalis being reserved for second-line therapy. “With the introduction of dronedarone as a very effective rate control agent, the committee acknowledged that dronedarone could be used as second-line therapy following failure of the BBs or the CCBs,” Dr. Verma said. Amiodarone, in contrast, should be avoided unless circumstances are exceptional.

The CCS AF panel also proposed that patients be stratified into those with normal ventricular function and those with abnormal ventricular function when deciding on treatment options. For patients with normal ventricular function, dronedarone, flecainide, propafenone or sotalol may all be considered as first line agents, although class 1 agents should be avoided in patients with CAD.

Amiodarone may be considered when patients fail on first-line agents and catheter ablation on amiodarone failure. Patients with abnormal left ventricular function should be further categorized into those with an ejection fraction >35% and those with an EF of ≤35%. For those with better preserved EF, amiodarone, dronedarone and sotalol may be all equally considered; for those with poorer LVF, amiodarone should be used followed by catheter ablation if treatment fails.

In a workshop session on Tuesday morning, Dr. Brent Mitchell, Professor of Cardiac Sciences, Libin Cardiovascular Institute of Alberta, Edmonton, also presented highlights from the freshly minted 2010 CCS guidelines to be published in the Canadian Journal of Cardiology early next year. Since the last CCS guidelines on AF were published, focus on several aspects of AF investigation and management has shifted and the new guidelines will incorporate new data and drugs now approved for the treatment of AF.

“I think the ‘new’ news in AF is that we understand more that AF is an expression of underlying cardiovascular disease (CVD) rather than ‘just an arrhythmia,’” remarked 2004 AF guidelines panel member Dr. Paul Dorian, Professor of Medicine, University of Toronto, in an interview. In fact, probably 80% of patients with AF have one or more co-existing CVD conditions—hypertension, obesity, diabetes, coronary artery disease (CAD), peripheral arterial disease (PAD), valvular disease and sleep apnea key among them. Knowing this, physicians have a golden opportunity to thoroughly investigate patients who present with AF; if they do identify an underlying disorder, they need to treat it independently of the AF, he added.

Since the last guidelines were published in 2004, specialists have started to place less emphasis on rate vs. rhythm control. “We used to be very focused on slowing the heart rate to 80 bpm at rest,” Dr. Dorian related. New data, however, suggest that physicians do not have to be as concerned about getting
the heart rate down to 80 bpm as they once were, as prognosis for patients whose heart rate at rest remains at, for example, 95 bpm, can be as good as a patient’s whose heart rate is strictly controlled.

Physicians are also recognizing that there are many patients with AF whose ECG may be abnormal but the patient feels fine. In such a patient, the goal may still be to reduce the number of symptomatic episodes of AF and slow the heart rate somewhat; again, though, “the focus here is not on looking at the ECG, it’s on looking at how the patient feels or whether they are in the hospital because of AF,” he stressed.

Dr. Dorian continued, “On top of that,” there is a new antiarrhythmic called dronedarone which has been approved since the last guidelines and which has to be incorporated into the new guidelines as well.” As the only new antiarrhythmic to have been approved since the last guidelines, a discussion of the new agent’s risks and benefits and its use relative to the older antiarrhythmics will be included.

**Stroke Prevention and Risk Management**

At the same time, the 2010 guidelines may place a renewed emphasis on stroke prevention. It was understood in the past that stroke was a major problem in AF; even so, “it’s probably even worse than we thought,” Dr. Dorian noted, “and we as a medical community have not done as good a job as we could in stroke prevention.” Part of this may be the result of the shortcomings of warfarin, the only currently available systemic anticoagulant which has been approved for stroke prevention. More than ever, physicians are now “very invested” in calculating the estimated risk of stroke in an individual patient. Dr. Dorian explained, “Once we estimate the risk of stroke, we use that risk estimate to help guide our decisions about anticoagulation therapy in the same way we use the estimated risk of myocardial infarction to help guide our treatment for cholesterol-lowering.”

On the horizon is dabigatran, a direct thrombin inhibitor (DTI). Unlike warfarin, which inhibits 4 different clotting factors, dabigatran only inhibits factor Xa and it has the potential to cause fewer drug-drug interactions than warfarin. Most importantly, it does not require regular INR monitoring. Other emerging strategies include the factor Xa inhibitors, for example, that are being tested in large phase III trials. The final dataset for the ROCKET study on the novel agent rivaroxaban will be presented at the American Heart Association meeting in November, and results from several other large anticoagulant trials are expected next year.

Dr. Dorian predicted, “These new drugs will probably change the landscape of stroke prevention and the guidelines will have to take this into account.” Of course, antiocoagulants are not the only agents used for stroke prevention and the guidelines will discuss other strategies, including good blood pressure control and the use of ASA for stroke prevention.

**Emphasis on Outcomes in AF Management**

The emphasis on outcomes in the management of AF has also shifted over the past 5 years. “In no particular order,” Dr. Dorian indicated, “the important outcomes in AF in my view are patient well-being; freedom from serious morbidity which includes stroke, hospitalization, heart failure and myocardial ischemia; and freedom from serious adverse events from any drugs that we use.”

In the previous guidelines, it was implicit that the eradication of AF was a desirable outcome. Now, as Dr. Dorian explained, physicians are again recognizing that this approach has limitations, in that many patients may appear as if they are not experiencing AF but in fact are simply just asymptomatic. “In 2004, we may have said, that is not a good outcome,” Dr. Dorian noted. Today, that same outcome might be considered desirable provided that patients are not experiencing side effects and they do not feel unwell, even if they are not having AF. (This scenario can be reversed: patients may no longer have AF but if they are experiencing many side effects and their quality of life is poor, this could still be considered a bad outcome.)

If physicians decide to use an antiarrhythmic for rhythm control, treatment choice should remain patient-focused. “We are not only looking at the ECG to see if the drug is working,” he stressed, “we are also looking at the patient and asking: Is this drug likely to keep patients out of the hospital or to keep them alive?” Dr. Dorian also noted that physicians should ask themselves a number of questions prior to initiation of treatment, including the purpose of using a particular antiarrhythmic drug in a particular patient, i.e. should one eliminate all episodes of AF or reduce or eliminate symptoms? And what is the expected effect that the drug will have on morbidity, adverse effects and mortality risk?

Dr. Dorian stated, “Before we use any antiarrhythmic drug, we have to understand what our expectations are from an antiarrhythmic, as well as from the particular one we are going to use. We now have a new one that is added to the mix, so we always have to weigh the whole range of risks and benefits as with any drug.”

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**Based on:**

**MONDAY, October 25**

**CCS Atrial Fibrillation Guidelines.** 12:30-14:00, Session Theatre (Room 220 B-E), Community Forum, Palais des congrès.

**TUESDAY, October 26**

**“Managing Atrial Fibrillation in 2010: An Interactive Case-Based Symposium.”** 7:00-9:00, Room 517B, Palais des congrès.
Update on Hypertension Canada: Fast-forward Prevention, Treatment and Control of High Blood Pressure

Vancouver - Three separate groups dedicated to the prevention, treatment and control of hypertension in Canada have now merged into a single organization, Hypertension Canada. Health care professionals are invited to visit their Web site and avail themselves of educational materials for their own use and patient education. There is also a patient-friendly site where individuals may access visual and written material to learn more about blood pressure (BP). In the meantime, a policy committee has been formed within Hypertension Canada to drive the development of healthier public policies as they pertain to hypertension. The Sodium Working Group’s “Sodium Reduction Strategy for Canada,” recently endorsed by provincial health ministers, is one such policy initiative, calling for significant reductions in dietary sodium intake by the year 2016. Despite certain calls for less aggressive treatment of high BP in diabetes, Hypertension Canada still recommends targets of <130/80 mm Hg in patients with type 2 diabetes.

The need to prevent, treat and control hypertension in Canada has been given a large push forward with the merging of 3 separate groups into Hypertension Canada. Their main purpose is to interact more effectively with all stakeholders involved in the health of the nation.

The Canadian Hypertension Education Program (CHEP), Blood Pressure Canada and the Canadian Hypertension Society have now amalgamated in their attempt to make prevention and control of high blood pressure (BP) more efficient and effective across the country. “The organization is going to try to increase and improve awareness of hypertension among both health care professionals and their patients,” Dr. Norm Campbell, Professor of Medicine, Libin Cardiovascular Institute of Alberta, University of Calgary, told INFO-Cardio.

Indeed, all health care professionals are invited to sign up at htnupdate.ca where they will be able to download educational materials for themselves and their patients. “We also have electronic notification system regarding updates or new resources for them or their patients as they become available,” he added. The organization also has set up a separate site for patients—mybpsite.ca—where patient-related material in both video and written format is available for individuals seeking more information about BP.

Hypertension Canada is now also holding “train-the-trainer” sessions, Dr. Campbell noted. These sessions last about 3 to 4 hours, during which the trainer trains individuals in the community to be more aware of and have more ready access to resources in the area. The same format can also be used to educate patients about the resources available to them in their own community as well as health care professionals, he added.

“The other major initiative of Hypertension Canada is a public policy committee,” Dr. Campbell continued. This committee was established to work with governments. The main goals are the development of healthier public policies for the prevention and control of hypertension; an improvement in health services for the better management of hypertension; and an increase in a community’s capacity to prevent and control hypertension. “Of course, health is a provincial mandate,” as Dr. Campbell noted. Here, the same committee will attempt to help provinces establish policies to detect, treat and control hypertension, among which would include policies dictating how much salt is put into food and how commercially available foods are labelled.

“These types of policy changes require both the public and health care professionals to get behind them and

By Pam Harrison
hence, the theme for our education program this year is a ‘call to action’ for Canadians and health care professionals alike to push governments to become more active in the development of policies that impact on the health of Canadians,” Dr. Campbell stated.

**Sodium Working Group**

Investigators reported that as of July 2010, the Sodium Working Group has developed a “Sodium Reduction Strategy for Canada” which calls on multi-levels of government, industry and non-government organizations to take action on reducing the sodium content in our food. As the Sodium Working Group write in their document, the mean intake of sodium among Canadians is now about 3400 mg/day, at least 75% of it through commercially available foods. The majority of adults and children consume sodium in amounts that exceed upper recommended limits.

A decrease in the average sodium intake of approximately 1800 mg/day would have an enormous public health impact, preventing an estimated 23,500 cardiovascular disease (CVD) events a year and a direct savings in health care. A recent US study cited by the Sodium Working Group also showed that even a modest 400 mg reduction in sodium a day would, over a 10-year period, decrease the number of coronary artery disease (CAD) cases by 20,000 to 40,000; stroke by 11,000 to 23,000; myocardial infarction by 18,000 to 35,000 and all-cause mortality by 15,000 to 32,000 a year. In fact, as the Working Group point out, a 1200-mg reduction in daily salt intake would have about the same effect on CAD rates as a 50% reduction in tobacco use and it would be more cost-effective than using medication to treat hypertension.

Hence, one of the key recommendations from the Sodium Working Group is to establish an interim sodium intake goal of 2300 mg of sodium/day by 2016. Their ultimate goal is to get over 95% of Canadian citizens to a mean intake below tolerable upper intake levels which is age-dependent. “In September, the provincial ministers of health endorsed the policy and indicated they were very interested in lowering dietary sodium,” Dr. Campbell announced, “so we have a strategy; different levels of government are engaged, and we have to implement it.”

**Clinical Trials – ACCORD**

Also presented during the scientific sessions and of interest to the new organization is the ACCORD (Action to Control Cardiovascular Risk in Diabetes) trial published this year (N Engl J Med 2010;362:1575-85). ACCORD randomized over 10,000 high-risk patients with type 2 diabetes to either intensive or standard glycemic control; in addition, 4733 participants were assigned to either intensive or standard BP control. Target systolic BP in the intensive group was <120 mm Hg, while target systolic BP in the standard group was <140 mm Hg.

After one year, the mean BP in the intensive therapy group was 119/64 mm Hg vs. 134/71 mm Hg in the standard therapy group. The primary composite outcome—time to first occurrence of a major CV event—occurred at a rate of 1.87% per year in the intensive-therapy group compared with 2.09% in the standard-therapy group, with no significant between-group differences. Nor was any risk reduction in stroke observed in favour of the intensive-therapy group. However, having scrutinized the design and findings of ACCORD, Hypertension Canada experts felt that a call for less aggressive BP targets for patients with diabetes could not be condoned for a number of reasons; consequently, they still recommend patients with diabetes be treated to targets of <130/80 mm Hg.

Dr. Campbell noted that results from the recent Canadian Health Measures survey showed that about 1 in 5 adult Canadians has hypertension and that has not really changed over time. On the other hand, Canada can now boast the highest rate of awareness, treatment and control of hypertension in the world, with approximately 80% of the 4.6 million Canadian adults with hypertension being treated with antihypertensive drugs—BP being well controlled in two-thirds of them—a good-news story, Dr. Campbell suggested, and largely the result of better education of health care professionals and a greater awareness of hypertension among the public.