

## **Automated blood pressure tests more accurate than manual readings**

### **FOR IMMEDIATE RELEASE:**

TORONTO, February 10, 2011– New research shows that when it comes to measuring your blood pressure in the doctor’s office, humans are no match for machines.

“Our findings suggest that health care teams in primary care settings can expect more accurate results from blood pressure devices if they use automated devices in place of the traditional, manual method,” says Dr. Martin Myers, principal investigator of the study and cardiologist at Sunnybrook’s Schulich Heart Centre.

The study, released on February 7 online ahead of publication by the *British Medical Journal*, evaluated the effect of automated versus manual blood pressure measurement on the management of hypertensive patients in community- based, clinical practices over a two year period.

“Previous studies have shown that blood pressure measurements taken manually in an office are often higher than with automated devices, like the ones you can use at home or wear for 24 hours,” says Dr. Myers, also a Professor of Medicine at the University of Toronto. “This is due to something we call the ‘white coat effect’ where we find that the very presence of a health care worker in the room where the reading is being taken seems to elevate a patient’s blood pressure.”

The 555 patients in Eastern Canada involved in the trial were over the age of 45 with no coexisting illnesses. Of the 67 participating primary care practices, 31 continued to use manual office blood pressure tests (control group), while 36 adopted automated office blood pressure measurement (intervention group). Office blood pressure readings were compared before and after enrolment in the intervention and control groups. All readings were also compared with the awake ambulatory blood pressure (average blood pressure during awake hours), which is considered the gold standard in blood pressure measurement.

“What our study found was that, even in the doctor’s office, the use of a fully automated blood pressure test significantly improved the quality and accuracy of blood pressure readings,” says Myers. “By leaving patients alone to rest in a quiet room while multiple readings were taken, we were able to virtually eliminate the white coat effect.”

Accurate monitoring of blood pressure in hypertensive patients is important for several reasons. It allows physicians to make a more accurate prediction of the likelihood of a patient experiencing heart disease or a stroke in the future. It also ensures that patients receive the correct amount of medication for their hypertension.

This study strongly supports the use of automated office blood pressure measurement in routine office practice. The switch to automated devices is also being driven by the rapid disappearance of mercury from the workplace because of environmental concerns, since most manual devices contain mercury.

As of 2010, the Canadian Hypertension Education Program recommends automated measurement of blood pressure in the office as an alternative to conventional manual readings. The key is to use a fully automated device, which takes multiple readings while the patient rests alone in a quiet room.

Access the full study here: <http://www.bmj.com/content/342/bmj.d286.full.html>

Sunnybrook Health Sciences Centre is inventing the future of health care for the one million patients the hospital cares for each year through the dedication of its more than 10,000 staff and volunteers. An internationally recognized leader in research and education and a full affiliation with the University of Toronto distinguishes Sunnybrook as one of Canada's premier academic health sciences centres. Sunnybrook specializes in caring for Canada's war veterans, high-risk pregnancies, critically-ill newborns, adults and the elderly, and treating and preventing cancer, cardiovascular disease, neurological and psychiatric disorders, orthopaedic and arthritic conditions and traumatic injuries. For more information about how Sunnybrook is inventing the future of health care please visit us online at [www.sunnybrook.ca](http://www.sunnybrook.ca)

-30-

**Media Contact:**

Laurie Legere  
416.480.4040

---