

Hypertension Screening Diagnosis and Monitoring During Covid-19

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Introduction

Globally, high blood pressure (BP) is the leading global risk factor for death and disability, contributing to 9.4 million deaths and 162 million years of life lost in 2010.¹ High blood pressure is the leading modifiable risk factor for cardiovascular disease and is the leading risk factor for death worldwide. In Canada, 7.5 million people are living with hypertension². Nearly one-quarter of Canadian men (24%) and women (23%) have hypertension, and 84% of people with hypertension are aware of it. (Health Reports, Vol. 30, no. 2 (Catalogue number82-003-X).

Hypertension is typically diagnosed and managed in the primary care setting and it is one of the most common reasons for visits to family physicians in Canada³. Accurate BP measurement is the foundation of optimal screening, diagnosis, and treatment of hypertension. The development of accurate electronic sphygmomanometers during the past few decades has dramatically improved our ability to diagnose and manage patients with hypertension. In 2016 a survey was conducted to assess Family Physicians techniques for assessing blood pressure for screening and diagnosis of hypertension⁴. This was completed by 774 physicians and established a baseline of techniques used to diagnose and monitor hypertension. The method most frequently used to make a diagnosis of hypertension was Automated Office BP (AOBP) measurement, followed by home BP measurement and manual office BP measurement.

In a time of Covid-19 with restricted physical access to patients in primary care there is a significant increase in the use of video and phone to assess patients. There is uncertainty about how doctors are measuring blood pressure and assessing cardiovascular risk. Home BP devices are one potential solution. Sharing of home BP readings with the physicians is problematic, as is

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assessment of biophysical measures normally assessed to evaluate cardiovascular risk, and hypertension. It is possible that some solutions have been tested and found to be effective by patients and physicians.

This survey seeks to assess changes to BP measurement during the Covid-19 pandemic and identify solutions to barriers of assessment of patients with restricted access to face to face care.

Methodology

An on-line survey has been developed using the version developed in 2016 as the template. This contained 8 questions, 3 of which were demographic. The authors of that paper have expertise in questionnaire design as well as the topic. For this survey we have 11 questions with new ones related to Covid-19 and restricted access to patients.

The survey will use the UBC Qualtrix system to enable family doctors to go on-line and anonymously complete the survey.

Invitations to take part in the survey will be by e-mail. The email will contain the information from the consent document. Clicking the link to the survey will imply consent. The e-mail invitation will be sent out twice.

Inclusion criteria:

Family doctors seeing patients in a family practice in British Columbia.

Exclusion criteria:

None

Sample size

N=100

Sampling process

The questionnaire will be sent out to the physicians using the Guidelines and Protocols Advisory Committee (GPAC) e-mail contact list.

Analysis

The survey results will be extracted from the survey and entered into STATA. Data will be tabulated. Percentages will be calculated and 95% confidence intervals for the percentages calculated. Narrative answers will be collated and assessed by the research team. Common themes will be identified but no formal qualitative analysis will be undertaken.

Publication

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Results will be submitted for pre-print dissemination on one of the preprint Covid-19 sites such as <https://connect.medrxiv.org/relate/content/181>. Formal peer reviewed publication and sharing at conferences will be undertaken.

1. Lim, S. S. *et al.* A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet Lond Engl* **380**, 2224–60 (2012).
2. Robitaille, C. *et al.* Diagnosed hypertension in Canada: incidence, prevalence and associated mortality. *Cmaj Can Medical Assoc J J De L'association Medicale Can* **184**, E49-56 (2011).
3. Finley, C. R. *et al.* What are the most common conditions in primary care? Systematic review. *Can Fam Physician Med De Fam Can* **64**, 832–840 (2018).
4. Kaczorowski, J. *et al.* How do family physicians measure blood pressure in routine clinical practice?: National survey of Canadian family physicians. *Canadian Family Physician* **63**, 193 199 (2017).