

***Partenariat Santé*: Students in Health Care Programs Join Their Efforts to Fight Cardiovascular Disease in a New and Innovative Way in Québec City**

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Introduction

Cardiovascular disease (CVD) is a major public health concern, responsible for 30% of all deaths world-wide and is on the rise through all over the world.¹ The term ‘CVD’ refers to a spectrum of disease, including myocardial infarction and cerebrovascular events, among others. Canada has not been spared from this health problem. According to the Canadian Institute of Health Information and Statistics Canada, 1.3 million Canadians suffer from heart disease (2007), 315 000 have experienced stroke (2009), and over 6 million aged 20 years and older have hypertension (2007-2009).²

CVD represents a major financial burden to society. In 2000, CVD was estimated to be the second most costly health-related problem in Canada, with an estimated cost of 22.2 billion dollars/year.⁴ Since hypertension is a major risk factor for the development of heart disease, the World Health Organization has insisted on the development of health programs aimed at controlling hypertension (2012).³ The idea of these programs is that by targeting hypertension, the ever-increasing human and financial cost of CVD could be curbed.

Fortunately, the rise in CVD incidence may be mitigated through early detection, public awareness, and control of preventable risk factors (e.g., adopting a healthier lifestyle). To set-up an efficient community-based program targeting the detection, awareness and control of modifiable CVD risk factors, we considered the methodology and operational-framework of the CHAP study (Cardiovascular Health Awareness Program).^{5,6} CHAP is a community based program that “brings together local family physicians, pharmacists, other health professionals, public health representatives, volunteers, and health and social service organizations to work together to promote and actively participate in the prevention and management of heart disease and stroke.”⁷ Participants of the CHAP study (mean age = 67 years), who were followed

for 18 months, showed a reduction in systolic blood pressure (from 142 to 123 mmHg on average) and in diastolic blood pressure (from 78 to 60 mmHg on average). Participants ≥ 65 years of age also showed a 9% reduction in hospitalization rates for cardiovascular-related causes for one year following the study end. These promising results inspired our team to start a similar community-based program in Québec City, albeit with less financial and technical capacities than CHAP. This program was established in January 2016 and is named ‘*Partenariat Santé*’.

How *Partenariat Santé* Works

The philosophy behind *Partenariat Santé*

Partenariat Santé offers free services via a volunteer-based model; volunteers are students in various health sciences programs, such as occupational and physical therapy, kinesiology, medicine, nutrition, pharmacy, biomedical sciences, and nursing. *Partenariat Santé*’s proposed solution to the detection, awareness and control of modifiable CVD risk factors centres on an interdisciplinary approach. This approach facilitates the sharing of knowledge and skills and the development of targeted solutions.

Multidisciplinary work offers two distinct advantages. First, it provides participants with a more comprehensive service, and second, it allows student volunteers to develop the collaborative skills that they will inevitably need for their professional careers. As such, *Partenariat Santé* benefits both participants and student-volunteers.

Partenariat Santé has four main goals and involves multiple steps:

1. Measuring blood pressure and waist size.
2. Assessing the modifiable risk factors of CVD (as described in Hypertension Canada’s guidelines.⁸)
3. Establishing a targeted action plan based on the participant’s desired lifestyle change(s).
4. Suggesting various locally available community resources that could help in achieving the established goal.

In order to achieve the best outcome for participants, *Partenariat Santé* used motivational interviewing, a process initially developed by Stephen Rollnick to help health care

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professionals encourage change in their patients' behaviours and/or habits.⁹

Target Population

Partenariat Santé offers its services across the greater Québec City area, with community meetings held within businesses, sport complexes, shopping centers, and aboriginal reserves. The inclusion of these diverse locations enabled the targeting of a population of participants who span multiple cultural and socioeconomic classes. We believe this diversity is a key strength of *Partenariat Santé*'s.

Volunteer Training

In order to ensure the provision of a high quality standardized service, all volunteers were trained by the administrative council of *Partenariat Santé* and by a professor of the Faculty of Pharmacy at Laval University.

During this training, the philosophy, mission and values of *Partenariat Santé* were presented, along with various tools available to volunteers.

Sequence of Events

The sequence of events is presented in figure 1.

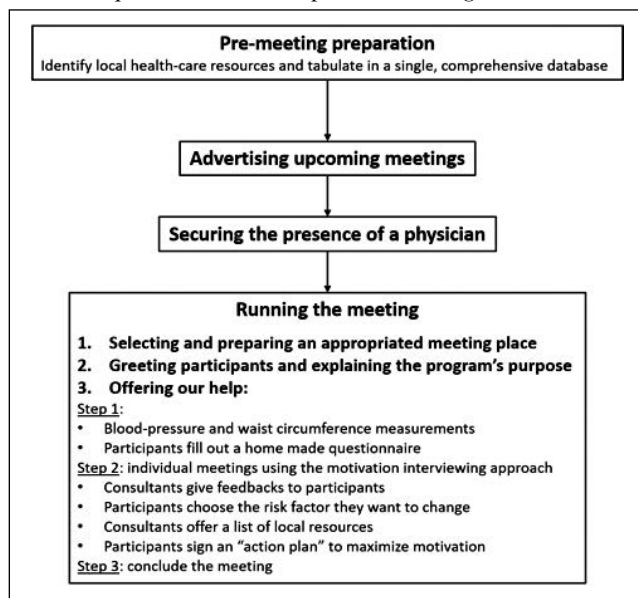


Figure 1. Flowchart presenting the major steps of *Partenariat Santé* meetings

Pre-Meeting Preparation

- 1) Local community resources (e.g. walking clubs, health clubs, nutritionists, and smoking cessation programs) are identified and contacted; a list of contacts for volunteers is generated.
- 2) Events are publicized a few days before the meeting is held through various mediums, including the broadcast media (local newspaper, radio and television), Facebook, and on our website.
- 3) A physician is contacted so that he/she will be present at the meeting.

Proceedings during a Session

- 1) The location of the event is setup.
- 2) Participants are welcomed and the goals of the proceedings are explained (in two steps):
- 3) STEP 1 is performed by a team of 'on-site assistants':
 - Blood pressure (using an automated Blood Pressure monitor) and waist size are measured.
 - A survey designed to identify relevant lifestyle habits and modifiable risk factors is distributed.
- 4) STEP 2 is performed by a 'consulting team':
 - Increasing participant awareness: participants are informed of their cardiovascular risk and provided with a pamphlet on the Canadian recommendations regarding cardiovascular health.
 - Controlling Risk Factors ('closing the loop'): participants undergo one-on-one motivational interviewing. Risk factors and willingness to change are discussed and participants are directed towards the appropriate resources.
 - Pamphlets containing information on useful community resources are distributed.
 - Finally, participants are invited to sign an action plan as a way to symbolically 'finalize' their commitment to change. This action plan specifies what habit they wish to change, how they intend to achieve this goal, a time-frame for completion, what their motivations are and what challenges they expect to face.
 - Conclusion of session: participants are thanked for their time and referred to the local resources that can best help them.

Organizing Conferences on CVD Prevention

Partenariat Santé is committed to promoting healthy lifestyle habits within the population by inviting renowned speakers to talk about nutrition/dietetics, physical exercise, biomedical promoters and the lifestyle changes associated with reducing cardiovascular events.

Annual Report and Results

In the span of one year of community engagement, more than 120 student volunteers became involved in *Partenariat Santé*. The program has had more than 500 participants, of which 15% had blood pressure values well over the Canadian standards. This finding is consistent with the statistics reported by the Canadian Institute of Health Information and Statistics Canada,² and highlights the ecological validity of our initial sampling.

Future Developments

In order to pursue its mission as a promoter of strong cardiovascular health, *Partenariat Santé* will be expanding along four major axes:

- 1) Engaging new community partners (e.g., local pharmacies and nursing homes) and promoting *Partenariat Santé* by continuing to contact local social service and medical health providers and by maintaining an informative and up-to-date web page will also be maintained (<https://www.partenariat-sante.com>).

- 2) Initiating a comprehensive and longitudinal research program to assess the impact and added clinical value of *Partenariat Santé*'s services for the health of Québec city residents. By focusing on the development of a data-driven community program, we will be able to measure the impact of our efforts. Running analyses will also have the added benefit of allowing us to adjust and improve our program. It is our hope that a data-driven program will ultimately lead to concrete benefits for the population of at-risk individuals.
- 3) Develop an efficient bi-directional referencing-system between *Partenariat Santé* and local health clinics to ensure that patients get quick and optimal health care.
- 4) Measure additional cardiovascular risk factors (hyperglycemia and hypertriglycemia). This will require the purchase of new automated cholesterol and glycated hemoglobin monitors.

Recognition of Excellence

Partenariat Santé's commitment to the promotion of cardiovascular health in Québec City has been awarded multiple honours and distinctions by various Faculty bodies at Laval University (Faculty of Medicine 2016, RAESSUL 2016 and 2017). In 2016, *Partenariat Santé* won the Faculty of Medicine's 'Dean's Prize,' a prestigious award given in recognition for our contribution to faculty life. The success of the program is also demonstrated by the awarding of the Edward-Assh and Alain-Cloutier scholarships to the founder of *Partenariat Santé*.

The extent of *Partenariat Santé*'s influence extends beyond the academic sphere, as can be appreciated by its numerous clinical partnerships. These include, but are not limited to, partnerships with the Fédération des Médecins Omnipraticiens du Québec (FMOQ; union of Québec general practitioners), Fédération of Kinesiologists of Québec, Alliance Santé Québec, l'Association des Diabétiques de Québec, as well as with numerous physicians across Québec City.

Conclusion

The purpose of the *Partenariat Santé* program is to promote cardiovascular health in the Québec City area and to help bridge the gap between individuals, community organizations, and healthcare professionals. CVD is a major cause of morbidity and mortality for Canadians and this evidenced-based community program aims to address this key health-care issue. Most importantly, *Partenariat Santé* offers a concrete approach to the prevention of CVD.

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