The Stem Cell Club: Modelling Stem Cell Donor Recruitment on Campus

**Introduction**

- Stem Cell Club is a student-run non-profit organization (founded in 2011) that works to recruit Canadians as unrelated stem cell donors.
- We are a community partner with OneMatch Stem Cell and Marrow Network of the Canadian Blood Services, and we have a Service-Level Agreement to run our own stem cell drives.
- At these drives, we guide registrants to provide informed consent and a tissue sample (buccal swab) for HLA typing.
- We have 10 active chapters at campuses across Canada (affiliated with five Canadian medical schools).
- Through targeted recruitment of the most needed donors, we aim to improve the quality of membership on Canada’s donor database and improve the chances that patients in need of an unrelated donor will find a match for transplant.

**Recruiting the Ideal Donors**

**Stem Cell Club targets recruitment of potential donors who are:**

- Young: younger donor age improves outcomes and survival of transplant recipients.
- Male: male donors decrease the risk of recipients developing the post-transplant complication chronic graft-versus-host disease.
- Younger and male and are both less likely to be deferred for medical reasons or to experience complications with donation.

- Ethnically Diverse: patients are more likely to find a genetic match from within their own ethnic community; also, certain ethnic groups are more genetically heterogeneous with respect to HLA.

**Methods**

- Teams of medical students were recruited to launch stem cell clubs at four University of British Columbia medical school affiliated campuses in 2011.
- In 2015, chapters were launched at University of Toronto, University of Ottawa, McMaster University (London, Niagara, and Waterloo campuses), and Western University.
- Club leaders underwent Stem Cell Club’s online training program, which covers how to volunteer at, lead, and organize a stem cell drive. This was followed up with in-person workshops.
- Teams were connected with Canadian Blood Services territory managers, and equipped with supplies. They applied for local funding and club status.
- Our stem cell drives feature five stations, each with its own locally developed checklist.

**Conclusions**

- The Stem Cell Club recruits students as well as the general public in Canada to become stem cell donors.
- We report the successful launch of Stem Cell Clubs at four Ontario medical schools.
- Based on our results in 2015-2016, we estimate that we have established a capacity to sustainably recruit over 1750 stem cell donors per year (~5% of annually recruited donors in Canada), of which the majority are ethnically-diverse males.
- Our results support Stem Cell Club as a model for stem cell donor recruitment that can be applied to university campuses across Canada.

**Ethnic Composition of OneMatch Database, December 2015**

- Data provided by OneMatch Stem Cell and Marrow Network.
- Males under 35 only represent 17% of the current Canadian donor database; only 7% is ethnic males.
- Non-Caucasian registrants are underrepresented on Canada’s current donor database.

**Results**

- Conclusions: report the successful launch of Stem Cell Clubs.
- Ethnic data supports Stem Cell Club as a model for stem cell donor recruitment that can be applied to university campuses across Canada.

**References**


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