



CANADA NORTH
CONCUSSION NETWORK

Googling Concussion Care: a critical appraisal of online concussion healthcare providers and practices in Canada

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2016 UHN TBI Meeting





Background



- The healthcare received by Canadians who suffer moderate and severe traumatic brain injury (TBI) is highly regulated and carried out by nationally and provincially licensed experts in TBI
- However, the healthcare of concussion patients in Canada is presently unregulated



Objective



- Assess the current landscape of concussion healthcare in Canada
 - Google Internet searches to identify advertised concussion healthcare providers throughout Canada
 - Performed a critical appraisal of the personnel and practices of these providers



- Two authors conducted independent, blinded Google searches using the terms “**concussion**” and “**concussion clinic**” and each of the Canadian provinces and territories on the same day.
- The first ten (top 15 for Ontario) concussion healthcare providers were identified for each search.



“concussion clinic” and “your province”

Google Search

I'm Feeling Lucky

Google.ca offered in: [Français](#)



- Initial Internet searches and review of services were completed on May 12th, 2015.
- Follow-up Internet searches to clarify the use of baseline and neurocognitive testing were performed June 6-15th, 2015.



- We identified **58** Canadian concussion healthcare providers.
- **47%** of concussion healthcare providers advertised access to a concussion clinic, program, or center.
- **15.5%** of concussion healthcare providers advertised affiliation with a Canadian university.

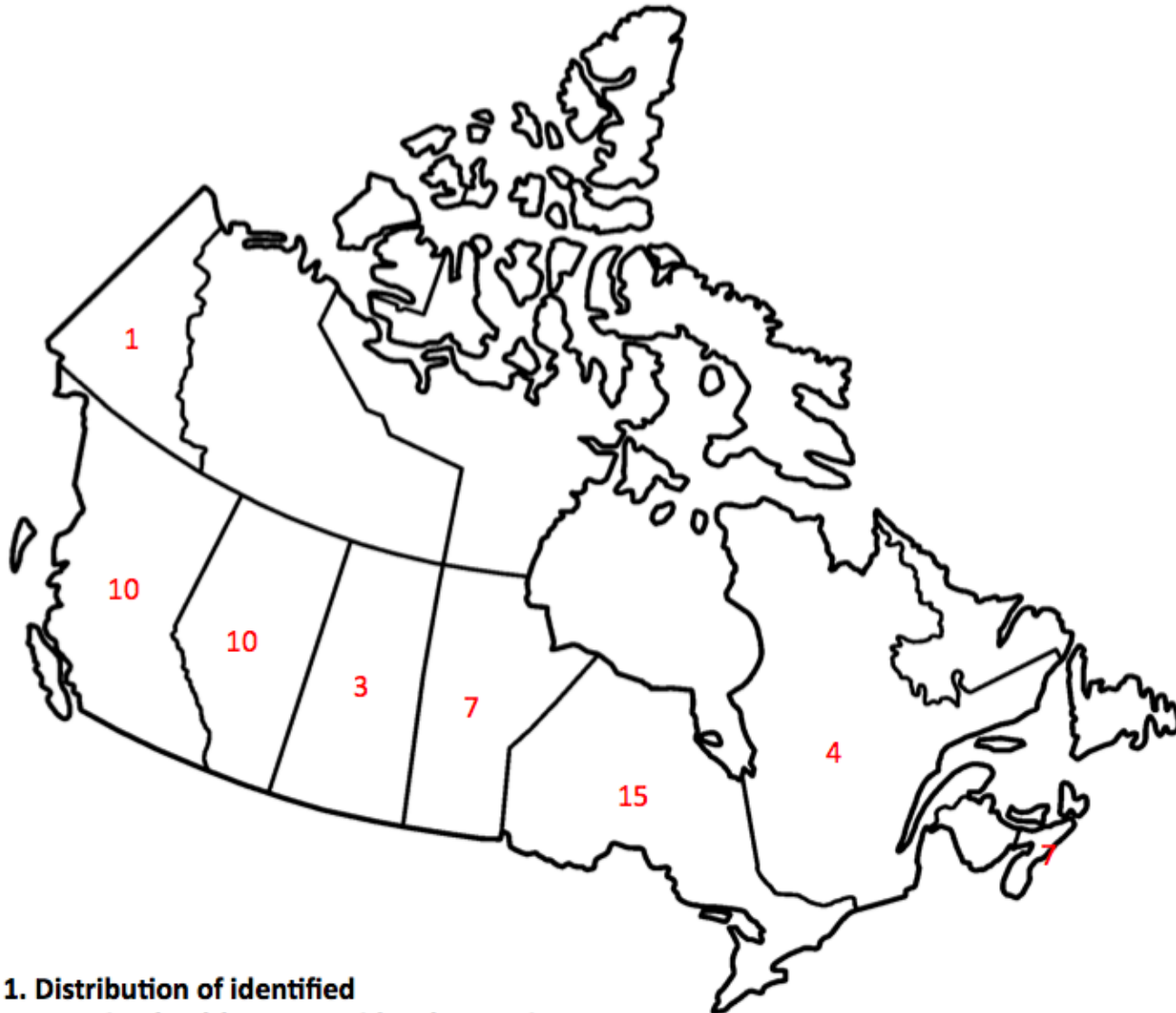


Figure 1. Distribution of identified online concussion healthcare providers by province



Personnel



- All patients with a suspected concussion should undergo medical evaluation including a comprehensive clinical history, neurological examination, and determination of the need for neuroimaging to rule out more serious TBI (McCrorry et al., 2013).
- **60%** of concussion healthcare providers do not have access to an on-site medical doctor (M.D.) to carry out this role.



- Access to national and provincially-licensed TBI experts is low among online concussion healthcare providers.
 - Neurosurgeon (5%)
 - Neurologist (7%)
 - Neuropsychologist (28%)

 - Physiotherapist (59%)
 - Athletic therapist (26%)
 - Massage therapist (33%)
 - Chiropractors (22%)



- **50%** of concussion healthcare providers advertised access to physiotherapy services related to concussion.
- **One** centre advertised access to hyperbaric oxygen therapy, despite insufficient empirical evidence to support the use of this intervention in this clinical population.



- Neuropsychology experts agree that there is presently **insufficient** evidence to support the **widespread** use of baseline neurocognitive testing and that **neuropsychologists** are the only professionals with advanced neuropsychological expertise to conduct and interpret neuropsychological assessments (Echemendia et al., 2013).



Services



- **67%** of concussion healthcare providers advertised baseline testing on their website.
- **50%** utilized ImPACT computerized neurocognitive testing.
 - only **21%** identified a registered neuropsychologist as a member of the clinical team.



Training Programs



- Our searches identified **two** companies that advertised training and **certification** programs for other concussion healthcare providers.
 - No specific on-site individual with nationally licensed training in a TBI-related sub-discipline (neuropsychologist, neurologist, neurosurgeon) listed on either of these two websites.
- Certified over **100** concussion healthcare providers.



- This study is limited by the fact that the searches and critical appraisal of concussion healthcare providers were performed on one day and according to information posted on the provider's website.



- No national or international guidelines addressing the requisite training needed to participate in the multi-disciplinary care of concussion patients.
- Our study confirms that concussion clinics are currently operating throughout Canada and are led by a wide range of healthcare professionals with varying (and often limited) levels of training in TBI.



Conclusions



- Urgent need for guidelines and standards that address which designated healthcare professionals should be permitted to evaluate patients with concussion and TBI.
- Identify the roles and responsibilities of professionals who participate in the care of these patients within the setting of specialized clinics and programs.



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A photograph of a modern reception area for the Panam Concussion Program. The background wall is a dark blue-grey color with the program's logo and name in gold, illuminated lettering. The logo features a stylized human figure with arms raised above the word 'panam'. Below it, the words 'CONCUSSION PROGRAM' are written in a clean, sans-serif font. In the foreground, there are several reception desks with light-colored wood paneling and dark grey-blue countertops. Each desk is equipped with a computer monitor and a grey office chair. The room is lit with recessed ceiling lights, and a doorway is visible in the background to the right.

panam
CONCUSSION PROGRAM

Thank-you