

Natural Health Products and Canadian Pharmacy Students: Core Competencies

Heather Boon (University of Toronto), Della Kwan (University of Toronto), Shade Olatunde (University of Toronto), Narmatha Shanthakumar (University of Toronto), Kristine Hirschhorn (University of Toronto), Tannis Jurgens (Dalhousie University), Sandy Welsh (University of Toronto), Zubin Austin (University of Toronto), Jana Bajcar (University of Toronto), Jillian Cohen-Kholer (University of Toronto), Shirley Heschuk (University of Alberta), Lynda Eccott (University of British Columbia), Glenn Griener (University of Alberta)

Funding:

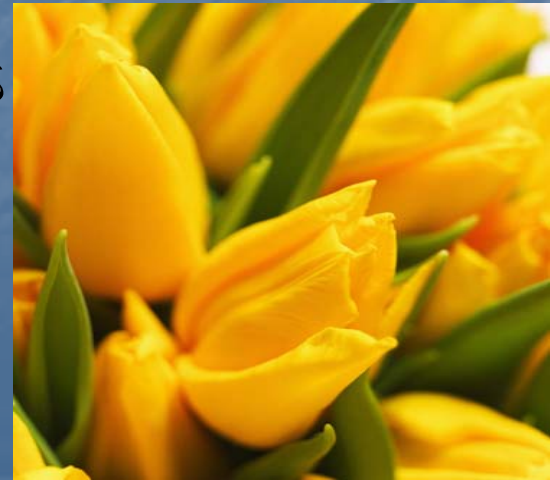
Canadian Institutes of Health Research
Natural Health Products Directorate (Health Canada)

Contact: heather.boon@utoronto.ca



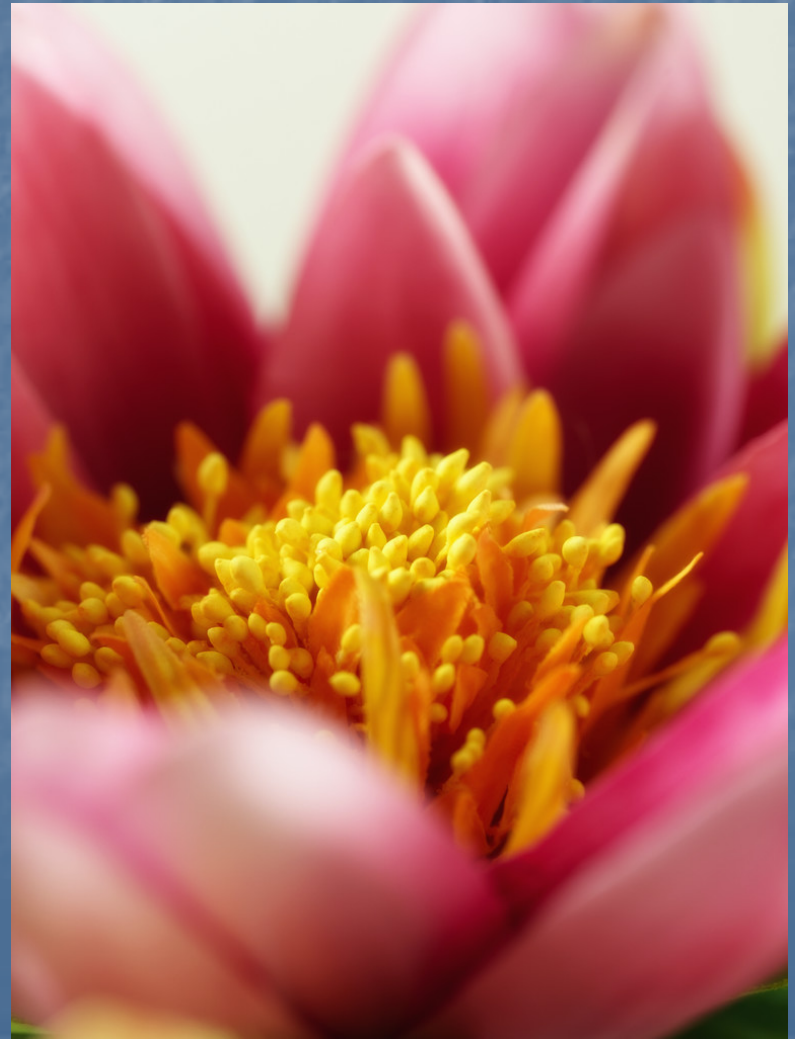
Outline

- Pharmacists and natural products: what is our role?
- Program of Research:
 - Key informant interviews
 - Focus groups
 - Survey of licensed pharmacists
 - Consensus meeting for educators
- Future plans



Program of Research

- **Question:**
What are the legal, ethical and practice responsibilities of pharmacists with respect to natural products?





Methods

- Sixteen **focus groups** with pharmacists (n=47) and consumers (n=50) were held in Vancouver, Edmonton, Toronto, and Halifax (Canada)
- **Key informant interviews** were held with Canadian pharmacy leaders (n=18), as well as leaders of consumer (n=7), complementary medicine (n=4), conventional medicine (n=3) and industry (n=3) groups.
- Mailed **surveys** were sent to a random sample of 3356 pharmacists practicing across Canada
- **Consensus meeting** to identify NHP-related core competencies for graduating pharmacy students



Focus Group Findings

- Both consumers and pharmacists identified two dimensions to pharmacists' role with respect to natural products:
 - (1) ensuring patient safety via the management of drug-NPs interactions (safety role)
 - (2) enabling consumers to make informed decisions by helping them to identify and assess the range of information available (consultant role)
- Pharmacists tended to emphasize the 'safety role' more than the 'consultant role'.
- Consumers tended to emphasize the 'consultant role' more than the 'safety role'.

Safety Role

*My first priority is making sure that whatever they are using is not interacting or we are watching for side effects, it is not going to affect their sugars; it is not going to cause any type of unfortunate effect... **My first priority as a pharmacist is their safety.***

–pharmacist focus group

Consultant Role

I see that one of the roles we have as pharmacists that is very important is to help people to tie in all of their sources of information into something meaningful and useful for themselves. So, we really do need to have some kind of a general education regarding all the different modalities that are available to people so that we can help them make sense of all of the information they are being bombarded with, for their own safety. But also for assisting and directing them to alternative choices that might be appropriate for them to use.

–Pharmacist focus group

Key Informant Interviews

- Pharmacists **do have a role** to play with respect to natural products
- Pharmacy leaders and stakeholder leaders reported pharmacists had an **ethical obligation to be knowledgeable and counsel on NPs sold in their pharmacies**
- Pharmacists should be able to **discuss natural products in a similar manner to other OTCs**
- **Many pharmacists lacked the knowledge and skills** necessary to effectively counsel about natural products

Interviews

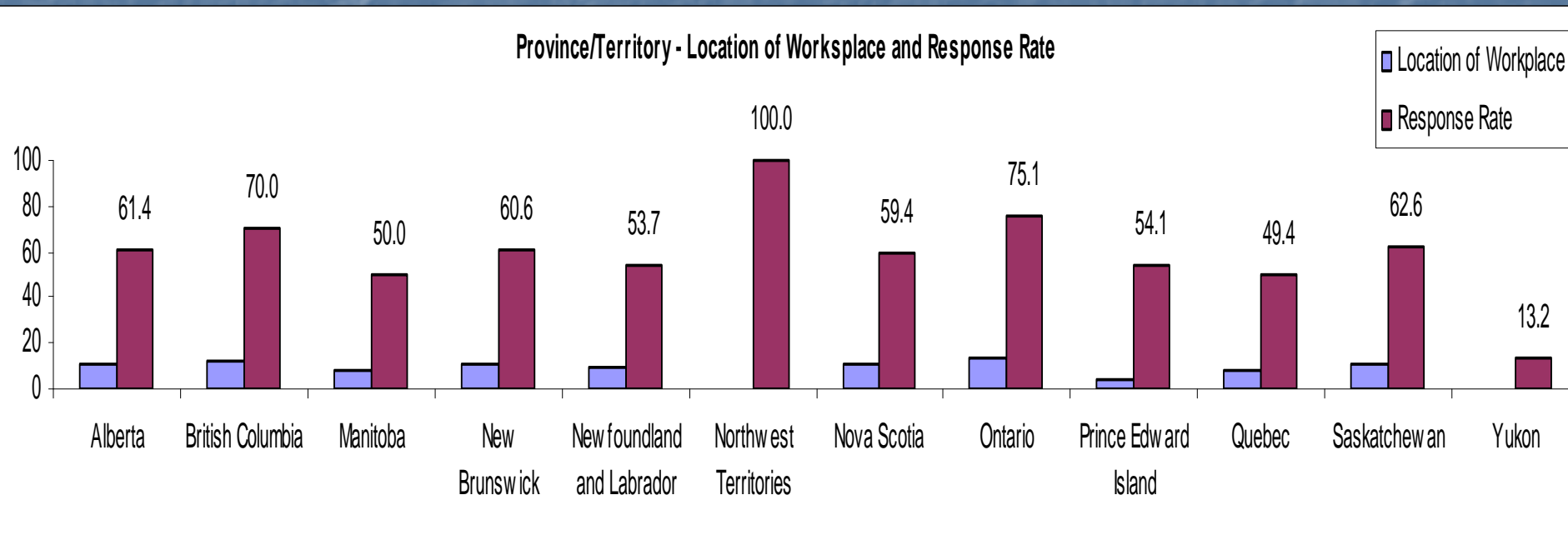
- *They [NPs] are in the majority of local pharmacies and because they are there I think it is their [pharmacists] responsibility to inform the patient. **You can't carry these products and not provide your patient with any kind of advice***
 - Pharmacy Leader 15
- *Generally speaking anything you put in your mouth that you buy in a pharmacy you are going to think it is fair game to go and ask the pharmacist about whether or not he or she knows about it.*
 - Stakeholder Leader (Consumer 2)

Interviews cont.

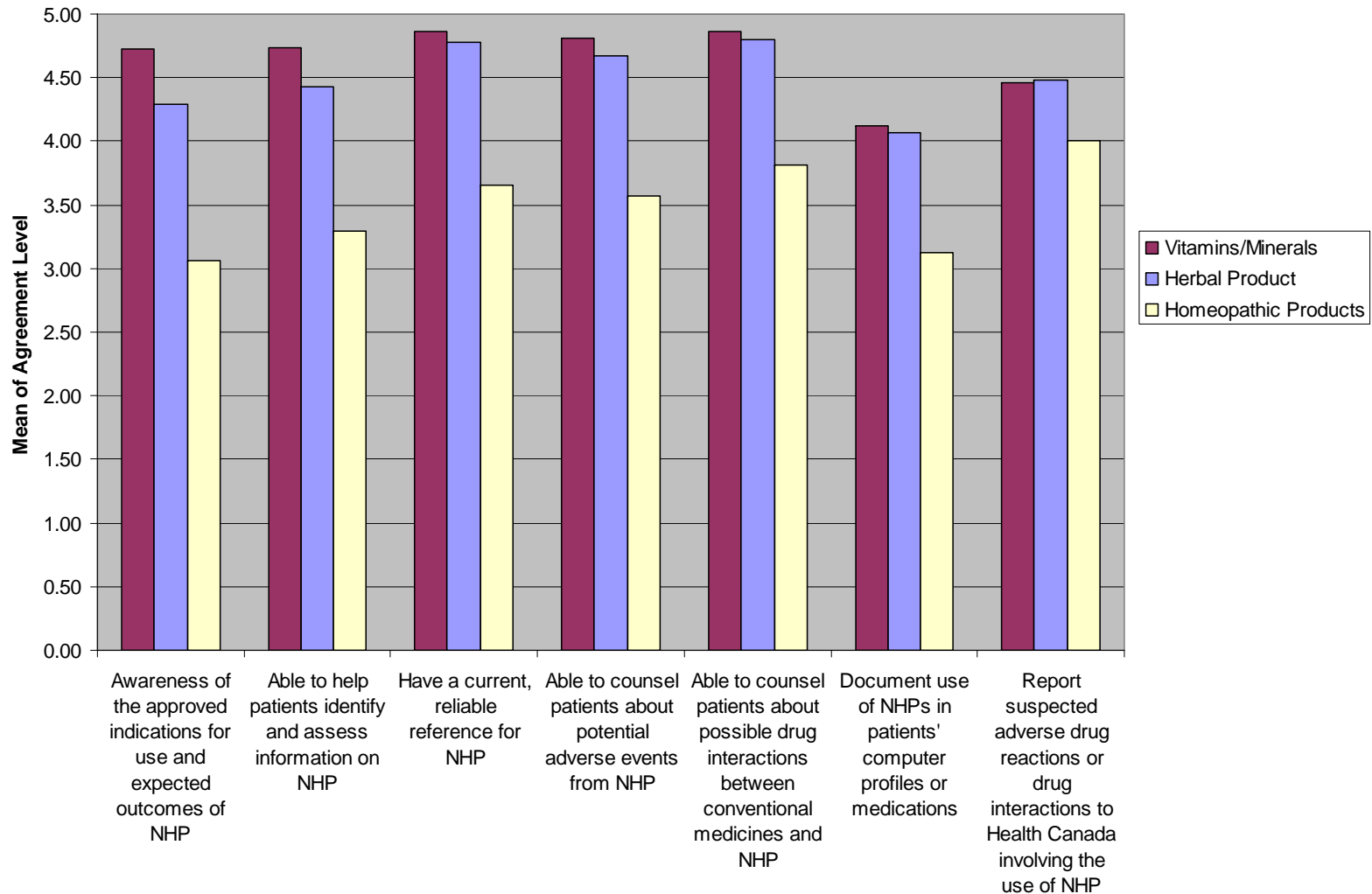
- *I don't see natural health products being any different than any other products they recommend on.*
- Pharmacy Leader 2
- *The pharmacist's role is first and foremost that they should ensure that these products do not cause any harm; so making sure that there are no adverse events or interactions with ... conventional medicines, and that there are no contraindications for taking the natural health product.*
- Pharmacy Leader 13

Survey Findings

- overall response rate: 61% (2019 useable returns)

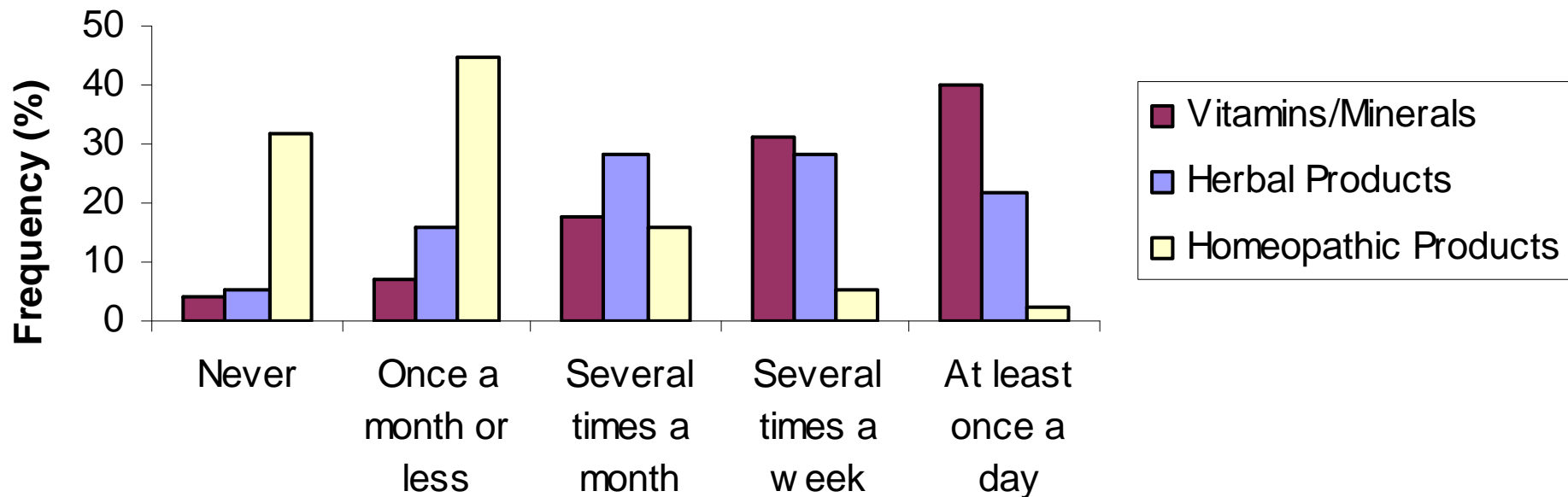


- Significant differences in participants' ratings of the importance of responsibilities for Vitamin/Mineral Products compared to Herbal Products and Homeopathic Products



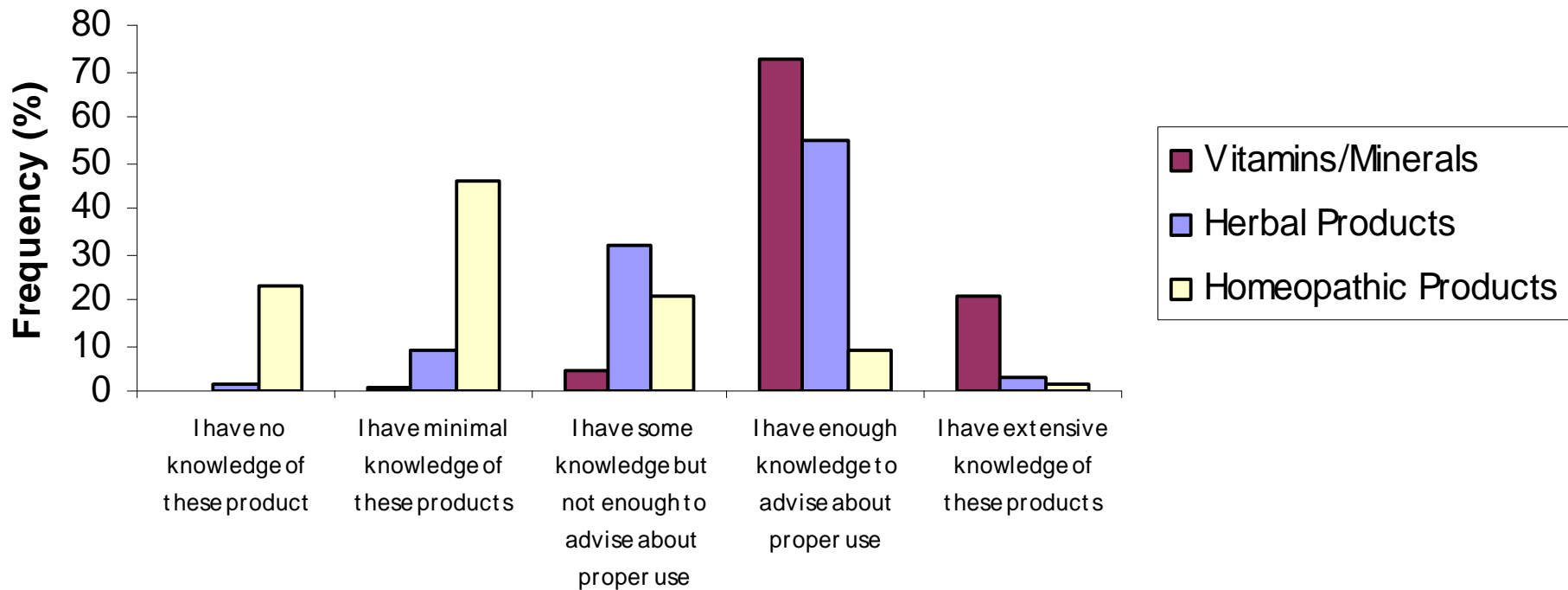
Pharmacists reported receiving more questions about vitamins/minerals and herbal products than about homeopathic products

NHPs Questions Received by Pharmacist



Pharmacists reported having more knowledge of vitamins/minerals than about herbal products and very little knowledge of homeopathic products

Self-Reported NHP Knowledge of Pharmacist



Consensus Meeting

- 17 participants representing 7 of 10 Canadian schools of pharmacy and all national Canadian pharmacy organizations (plus 2 NHP-expert US pharmacy educators)
- After 4 Delphi rounds, consensus reached on 3 NHP-related competency statements

Professional NHP-related Competency

#1 – Practice Pharmaceutical Care

Pharmacy graduates demonstrate the ability to incorporate NHP knowledge when providing pharmaceutical care, including the ability to:

- a) create the opportunity for open dialogue with patients about NHPs,
- b) inquire about patient NHP usage,
- c) consider patient NHP usage when identifying potential and/or actual drug therapy problems,
- d) integrate knowledge of NHPs into patients' individualized care plans, and
- e) document patients' NHP usage when appropriate,

Professional NHP-related Competency

#2 – Provide NHP Information

Pharmacy graduates demonstrate the ability to access and critically appraise sources of information related to NHPs, including the ability to:

- a) find and access credible NHP references,
- b) identify evidence-based indications for use and expected outcomes for NHPs and,
- c) identify clinically relevant potential and/or actual interactions with drugs or disease states, as well as adverse effects and precautions associated with NHPs.

Professional NHP-related Competency

#3 –Educate

Pharmacy graduates demonstrate the ability to provide appropriate education to patients and other health care providers on the effectiveness, potential adverse effects and drug interactions of NHPs. To accomplish this, they must have the ability to:

- a) integrate knowledge of NHPs into routine education when appropriate and,
- b) educate patients and other health care providers about appropriate NHP information sources.

Additional Professional NHP-related Competency #4 – Understand NHP Regulations

Pharmacy graduates demonstrate the ability to describe the Canadian NHP Regulations, including the ability to:

- a) explain the significance of a NPN or DIN-HM on a product and,
- b) explain the difference between a traditional use claim label and a label claim based on scientific evidence.

Additional Professional NHP-related Competency #5 – Report Suspected NHP Adverse Events

Pharmacy graduates demonstrate the ability to report adverse events suspected to be related to the use of NHPs to Health Canada. This includes the ability to:

- a) integrate knowledge of NHPs when investigating suspected adverse events and,
- b) report suspected NHP-related adverse events to Health Canada.



Ongoing Work

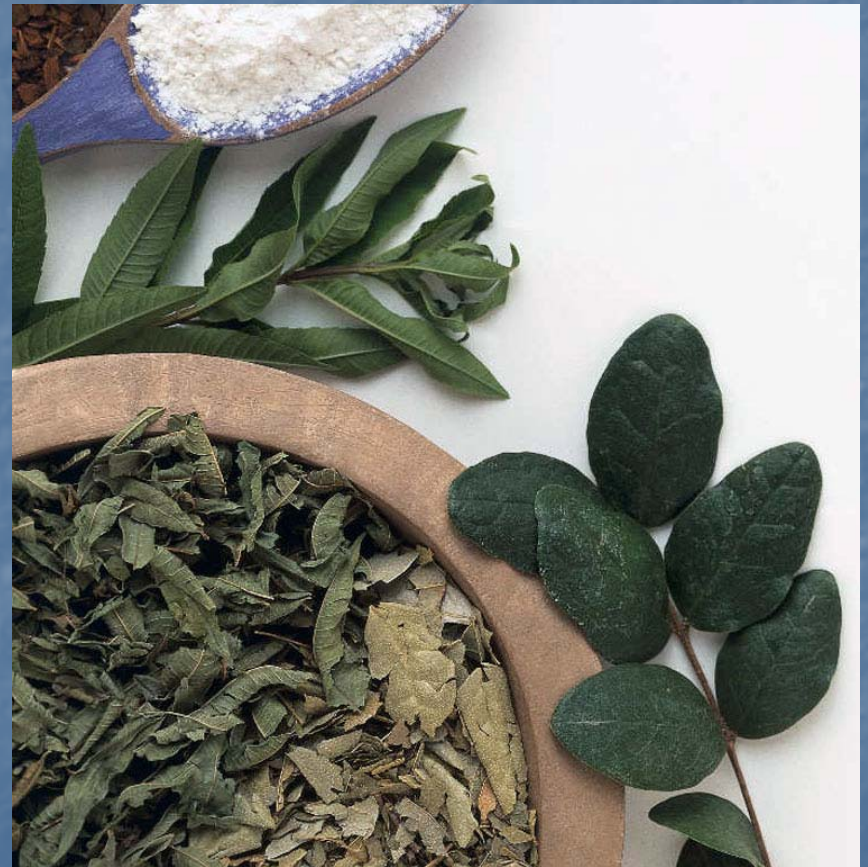
- Wide dissemination of NHP-related core competency statements
- Implementation of competencies into undergraduate curricula
- Integration of competencies into accreditation standards and licensing exams
- Coordination of standards of pharmacy practice with core competencies

Conclusions

- All stakeholder groups agree that **pharmacists have a significant role to play** in counseling patients about natural products (NPs), especially about the potential for drug-NP interactions.
- In order for pharmacists to fulfill a professional role with respect to NPs, **additional education** about NPs is needed both in undergraduate and continuing education programs.
- Adoption of **NHP-related core competencies** will help to ensure practicing pharmacists are able to provide appropriate advice to patients

Collaborators

- Dalhousie University
- National Association of Pharmacy Regulatory Authorities (NAPRA)
- Natural Health Products Directorate (NHPD), Health Canada
- Ontario College of Pharmacists
- Ontario Ministry of Health and Long-Term Care (OMHLTC)
- University of Alberta
- University of British Columbia
- University of Toronto



Selected References

- Boon H, Hirschhorn K, Griener G, Cali M "The ethics of dietary supplements and natural health products in pharmacy practice: A systematic documentary analysis" International Journal of Pharmacy Practice. 2009; 17:31-38
- Kwan, D, H Boon, K Hirschhorn, S Welsh, T Jurgens. "Consumers' influence on pharmacists' professional responsibilities with respect to natural health products" BMC Complementary and Alternative Medicine.2008; 8:40.
- Farrell J, NM Reis and H Boon. "Pharmacists and natural health products: a systematic analysis of legal responsibilities in Canada" Pharmacy Practice 2008; 6(1):33-42.
- Johnson T, Boon H, "Where does homeopathy fit in pharmacy practice?" American Journal of Pharmacy Education 2007; 71(1) article 07.
- Johnson T, H Boon, T Jurgens, Z Austin, R Moineddin, L Eccott, S Heschuk. "Canadian pharmacy students' knowledge of herbal medicine" American Journal of Pharmacy Education 2008; 72(4) article 75.
- Olatunde S, H Boon, K Hirschhorn, S Welsh, J Bajcar. "Roles and responsibilities of pharmacists with respect to natural health products: Key informant interviews" Research in Social and Administrative Pharmacy. Accepted February 19 2009.