Knowledge Translation in the Post Market Evaluation of Drug Safety and Effectiveness Data

Summary report from a workshop held Nov. 25 & 26 2007 at the University of Ottawa, hosted by the McLaughlin Centre for Population Health Risk Assessment

Agenda: Workshop participants considered Knowledge Translation processes that could be used to improve drug safety and effectiveness for Canadians, and the challenges involved. The workshop consisted of a series of expert presentations, a panel discussion and a breakout session (see attached list of presenters and panellists).

Key challenge: To find ways to ensure that useful evidence/information about patients' 'real world' experiences with drugs is communicated effectively to the appropriate parties in ways that benefit patients and improve the safe and efficient use of drugs. Current evidence indicates that, for some widely-used drugs, there are large deviations from optimal use. At the same time there is, on the part of some, an "extraordinary resilience to beat back change" in how drugs are prescribed.

Background: Currently, no single organization or group has the mandate, responsibility or capacity to systematically track the safety and effectiveness of prescription drugs after they are approved for market and used by large numbers of patients. Post-market evidence about the impact of drugs that *does* exist, such as from observational studies and adverse drug reports, is not effectively communicated. As a result of these gaps, Canadians are sometimes 1) subject to unexpected harm (for example, the high profile cases of Vioxx and hormone replacement therapy), 2) taking drugs that are not effective and/or not necessary or 3) not taking drugs which would be effective. Consensus has been mounting about the need for a comprehensive system of post market surveillance. The National Pharmaceutical Strategy has been working with several groups (representing patients, researchers, policy makers and health professionals) that seek to establish a network of independent research centres. Meanwhile, Health Canada's plans to establish a progressive licensing scheme for prescription drugs is expected to increase demand for post-market surveillance impact evidence and communication.

What is meant by KT: In the context of this workshop, Knowledge Translation was understood to mean finding ways to 1) communicate post-market evidence about prescription drug use in a way that is easily understood by those who "need to know", and 2) to ensure that the evidence is considered in policy and practice decisions so that patients benefit from improved drug safety and effectiveness. (Speakers acknowledged that terminology in this area is very confusing: Knowledge Transfer, Knowledge Implementation and Knowledge Exchange are also widely-used terms, and there are multiple working definitions.)

Presenters stressed that there is no "magic bullet", but some examples of KT strategies/resources to improve prescribing that were cited include:

- Pharmacists embedded in primary care settings to consult with doctors, meet with patients and review charts to ensure optimal use of medication
- Pharmacists trained in academic detailing who visit physicians and provide unbiased information about drugs using materials and approaches similar to those used by the pharmaceutical industry.
- Computerized decision support such as E-Therapeutics, the subscription-based service developed by the Canadian Pharmacists Association
- Producing practice profiles for health professionals, so they can see how they prescribe compared to their peers
- Effecting changes in policy, especially reimbursement policy
- The KT processes and intervention tools designed by Canadian Optimal Medication Prescribing and Utilization Service, for example, to improve the use of proton pump inhibitors. COMPUS, which is part of the Canadian Agency for Drugs and Technologies in Health also sponsors Rx for Change, a KT intervention database.

Challenges associated with post-market surveillance of drugs

The *research challenges* include:

- How to identify the true risk/benefits of new drugs, especially when adverse side effects may be relatively common (such as cardiovascular problems) rather than rare
- How to test claims that a new drug is better/more efficient than the standard treatment and that the use of a new drug leads to savings in other parts of the health care system
- The need to ensure there is enough accumulated evidence to feel confident before acting, since the findings of initial trials and studies are often contradicted by newer evidence.
- Understanding what constitutes 'enough' evidence; knowing when the evidence base is actionable.
- Notwithstanding the above, how to collect evidence in a timely fashion
- The potential tension between the benefits to the public of acquiring new evidence about risks and benefits as soon as possible and demands on the researcher to publish in a peer reviewed journal, which has a lengthy review process etc.

The *KT Challenges* include the need to:

- Make a meaningful difference in patients' lives
- Ensure that the "communicator" is considered to be credible to the audience
- Identify barriers to uptake and adapt strategies to overcome them to local circumstances.
- Tailor relevant information (for example clinical or health services) for different audiences (policy makers, health professionals, the public, administrators)
- Keep information simple (and therefore useful)
- Bring the public into decisions about how to allocate resources
- Learn from social marketing & adult education strategies

- Ensure that KT is evidence based
- Be realistic about the scope for changing behaviour and practice.

Point of care/ prescribing challenges:
Health professionals:

- Do not all have the technical/electronic capacity to use advanced treatment decision-making tools
- Have problems explaining risks to patients in ways that patients understand
- Lack incentives to act on evidence
- Are uncomfortable acknowledging the futility of treatment, hence sometimes over-prescribe and use drugs off label (for example, the use of anti-psychotics for dementia in the elderly).
- May be unduly influenced by drug manufacturers, who work very hard to promote their drugs

Regulator (Health Canada) KT challenges:

- Health Canada does not have the authority to require manufacturers to issue risk communication or to update labelling with new risk information. The regulator's only recourse, if it believes there is a serious risk of harm to the public, is to withdraw market authorization for a drug
- There are no regulatory requirements governing the responsibilities for development and dissemination of new risk information about marketed prescription drugs
- Health Canada has multiple audiences for information about risk and a challenge is to target risk information so recipients are not overwhelmed with communications that are not relevant to them
- Drug manufacturers have, in the past, challenged the validity of evidence that Health Canada considered when developing risk communications
- Health Canada is not perceived to be a credible or useful source of information about risk, according to survey results

Finally, workshop participants were asked what KT strategies a Drug Effectiveness and Safety Network might use. They suggested the network could:

- Consider KT needs before conducting research; embed KT in the research process
- Foster methods development and KT activities with groups such as the Institute for Clinical Evaluative Sciences
- Collaborate with existing KT ventures (such as COMPUS, etc.) and with the Public Health Agency of Canada
- Establish citizen juries to help with KT and with resource allocation decisions with respect to prescription drugs
- Develop media strategies, since the media are the main source of drug information for 60 per cent of Canadians
- Encourage the creation of an information resource which patients would trust and seek out re drug safety and effectiveness issues