THIS VACCINATION BUSINESS IS GETTING OUT OF CONTROL! IT'S TIME I DID SOMETHING.

I WANT HIM VACCINATED AGAINST MERCURY.
Vaccine Hesitancy – Why?

- lack of information (science isn’t sexy)
- conflicting information from a variety of sources
- mistrust of the source of information
- perceived risk of serious adverse events
- sociocultural beliefs (e.g. religious beliefs)
- lack of appreciation of the severity and incidence of vaccine-preventable diseases

* (adapted from the Canadian Immunization Guide, 2013)
Vaccine Summit: Vancouver 2013

Sponsored by The New Agora

VACCINE SUMMIT
VANCOUVER 2013

“The only shot you need is the truth!”

Doctors, nurses, researchers and parents reach out to the general public to attend a transparent discussion about vaccines.
Risk Assessment: Shift With Time

- Pre-vaccine
- Increasing coverage
- Loss of confidence
- Resumption of confidence
- Eradication

Incidence

- Vaccine coverage
- Adverse events (number and/or perception)
- Outbreak
- Vaccination stops

Maturity of programme

Adapted from: Chen RT et al, Vaccine 1994;12:542-50
Pertussis Outbreak: 500+ cases
Lower Mainland BC 2012/13

The natural way to help combat

Whooping Cough

With whooping cough (pertussis) reaching a 50-year peak, it's nice to know that vaccines aren't the only choice to combat this highly-contagious bacterial disease. Enerex's Oil of Oregano is wildcrafted from pure chemical-free Mediterranean oregano that has proven antibacterial and antiviral powers — without any side effects. Available in drops or softgels, it's your top-level defense for protecting yourself from whooping cough and a host of other viral and bacterial infections.

We apologize.

Nothing is more important to Enerex Botanicals than the health and safety of all Canadians. Oil of oregano has properties as a natural combatant against colds, flu, and coughs. A recent ad in this newspaper may have inferred oil of oregano to be as effective as vaccination in the management of whooping cough (pertussis). This is not true. Oil of oregano has not been shown to prevent the transmission of pertussis.

Enerex encourages anyone concerned about pertussis to seek the advice of a health care professional. Enerex apologizes to the public for any misunderstanding that may have arisen by our advertisement.

Enerex delivers exceptional nutritional supplements with the highest levels of efficacy. We've been a Canadian business success story since 1997. We are dedicated to delivering safe and effective nutritional supplements to you, your children, and your children's children.

Enerex is federally licensed and registered as a Good Manufacturing Practices company. All products undergo a rigorous Health Canada review for safety, efficacy and quality.
October 23, 2013
Arbitration Award under the BC Labour Relations Code
On October 23, 2013 HEABC received an arbitration award in respect of a policy grievance filed by the Health Science Professionals Bargaining Association about the provincial Influenza Control Program Policy. The arbitrator dismissed the grievance, finding that the policy is a lawful exercise of the employers’ management rights. A complete copy of the award is available by clicking the link below.

Health Sciences Association of BC Influenza Control Program Policy Grievance
Arbitrator: Robert Diebolt, Q.C.

http://www.heabc.bc.ca/Page4304.aspx
“Parents who have limited knowledge are highly influenced by parents who have any information regardless of accuracy”

Karyo Focus Testing Report, April 2005 and October 2004, BC Immunization Promotion Committee
“The risks that scare people and the risks that kill people are very different”

NY Times 2004
Peter Sandman
Centre for Biosecurity
UPMC, USA
THE WORLD IS FULL OF DANGERS — from serial killers to cancer. But why do we worry about the things we do? Why do some tiny statistical risks, such as child abductions, terrify us while other far more common dangers, such as heart attacks, do not?

Today, The Sun's Chad Skelton examines the nature of risk — and gives you the odds on everything from a thief breaking into your car to a meteor striking the planet. NEWS A4-5
Number of affected persons per 100,000 people at risk each year in the U.S.A.

“Even people who can read and write well may not understand medical information, depending on the context in which it is presented to them and their stress or anxiety levels at the time of receiving it” (Shohet, Jan 2011)
Effective Communication Entails….

- Respecting differences of opinion
- Representing risks and benefits fairly and openly
- Using an evidence-based approach
- Remain respectful
- Know your College’s stance
The ASK© Approach

- **A: Acknowledge and assess concerns**
  - Clarify

- **S: Steer the conversation**
  - Refute the misinformation and open or skillfully close the conversation depending on parent type

- **K: Know your stuff!**
  - Provide more information as needed
  - Provide a clear recommendation
  - Provide further reading materials
  - Provide a recommendation
  - Close with a benefit statement about immunizations
The A·S·K Approach helps to bring attitude, skill and knowledge together as one in the pursuit of communication excellence.

**The A·S·K Approach Quick Reference**

**A** - Acknowledge your client’s concerns
1. Acknowledge
2. Clarify to understand your client’s needs

**S** - Steer your conversation
1. Refute the myth[s]
2. Continue your conversation
   Note: This is the point where you skilfully close your conversation if client is a conscientious objector

**K** - Knowledge – know the facts well!
1. Provide further knowledge, tailored to your client’s needs
2. To close, reinforce discussion with a benefit statement
3. Provide further reading materials
4. Provide your recommendation

**Acknowledgment**
Acknowledge and clarify to understand client’s concerns
- "I hear what you’re saying, that’s a common question I get from clients. Tell me more about what you’ve heard."

**Steer your conversation**
Refute the myth[s] and continue your conversation
- "Actually, that’s a common myth. Unfortunately, the internet can have inaccurate information depending on where you look."

**Knowledge – know the facts well!**
Provide further knowledge tailored to your client’s needs
- [see Immunization Communication Tool]
  - Nurse ↔ client knowledge transfer (give-listen-clarify as needed)

To close, reinforce discussion with a benefit statement and ask if client would like more information
- "Vaccination is the best way to protect your child from serious diseases. Have I answered all your questions? Would you like a list of good immunization websites to read more?"

Provide your recommendation and book an immunization appointment or ask what they plan to do
- "Is your child’s next immunization appointment booked? Let’s book it now."

Available at: http://immunizebc.ca/healthcare-professionals/immunization-communication/the-ask-approach
Quick Reference

Immunization Communication Tool

For Immunizers

In the last 50 years immunization has saved more lives than any other health intervention.
Four Different “Types”

- The **Believer**
  - **Lowest** Information needs
- The **Cautious**
  - Encourage dialogue
- The **Relaxed**
  - **Low to Moderate** Information needs
  - May need to probe for unanswered questions
- The **Conscientious Objector**
  - **Low or NO** information needs
  - Unlikely to change their minds

Let’s start here:

I, Andrea Derban take vaccine safety very seriously
Vaccine Development and Evaluation in Canada

The steps involved:

1. LICENSURE and APPROVAL
2. NACI
3. IMPACT
4. CAEFFIS
Vaccine Development and Approval

It can take up to 10 years or longer to develop and receive approval for a vaccine.

- **Lab Studies (Step 1)**
  - Antigen Research
  - Epidemiology of a Disease
  - Infectious Agent

- **Pre-Clinical (Step 2)**
  - Animal Studies
  - Immunogenicity - immune response needed to prevent disease
  - Challenge studies in animal models
  - Safety studies - no toxicities that would prevent their use in people

- **Clinical Phase I (Step 3)**
  - Human Studies
  - Immunogenicity
  - Local/systemic reactions

- **Clinical Phase II (Step 3)**
  - Human Studies
  - Optimal dose/schedule in target population
  - Safety assessment

- **Clinical Phase III (Step 3)**
  - Human Studies
  - Efficacy in target populations
  - Safety assessment

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**Biologics and Genetic Therapies Directorate (BGTD):**

- Approval of Product Monograph
- Health professional information
- Scientific information
- Consumer information

- Inspection of Manufacturing Facilities

- Laboratory Analysis of Vaccine
- Safety
- Purity
- Potency

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**Canadian Approval of Vaccine**
The broad stages in the preparation of a NACI recommendation:

- **Knowledge retrieval** and synthesis (TRANSPARENT process on the methods to SYSTEMATICALLY retrieve, assemble and evaluate evidence)
- **Synthesis** of the body of evidence of benefits and harms, considering the quality of the evidence and magnitude of effects observed
- **Translation** of evidence into a recommendation.
**Immunization Monitoring Program ACTive**

* A paediatric hospital-based national **active surveillance** network for AEFI
* Funded by Health Canada/operated by the CPS
* Involves 12 Canadian centres (representing 90% of all tertiary care paediatric beds)

* **An IMPACT nurse at each hospital:**
  1. Reviews all admissions for certain serious illnesses such as seizures, encephalitis, encephalopathy and acute paralysis
  2. Screen more than 90,000 children admitted annually
  3. Record specifics about the illness and get detailed immunization history to **determine whether the illness happened after vaccination**
  4. Forward reports to the Vaccine Safety Unit at PHAC
Step 4: CAEFISS

- **Canadian Adverse Events Following Immunization Surveillance System**
- A voluntary reporting system in which AEFI reports collected by PTs are forwarded for collation into the national database which is overseen by PHAC’s Vaccine Safety Section
Homeopathy: what does the "best" evidence tell us?

Ernst E.
Complementary Medicine, Peninsula Medical School, University of Exeter, Exeter, United Kingdom. Edzard.Ernst@pms.ac.uk

Abstract

OBJECTIVE: To evaluate the evidence for and against the effectiveness of homeopathy.

DATA SOURCES: The Cochrane Database of Systematic Reviews (generally considered to be the most reliable source of evidence) was searched in January 2010.

STUDY SELECTION: Cochrane reviews with the term "homeopathy" in the title, abstract or keywords were considered. Protocols of reviews were excluded. Six articles met the inclusion criteria.

DATA EXTRACTION: Each of the six reviews was examined for specific subject matter; number of clinical trials reviewed; total number of patients involved; and authors' conclusions. The reviews covered the following conditions: cancer, attention-deficit hyperactivity disorder, asthma, dementia, influenza and induction of labour.

DATA SYNTHESIS: The findings of the reviews were discussed narratively (the reviews' clinical and statistical heterogeneity precluded meta-analysis).

CONCLUSIONS: The findings of currently available Cochrane reviews of studies of homeopathy do not show that homeopathic medicines have effects beyond placebo.
Cochrane Reviews

* Are **systematic reviews** of primary research in human health care and health policy
* Are internationally recognised as the highest standard in **evidence-based health care**
* Investigate the effects of interventions for prevention, treatment and rehabilitation
* Assess the accuracy of a diagnostic test for a given condition in a specific patient group and setting
* Are published online in **The Cochrane Library**
Common Concerns Leading to Vaccine Hesitancy

* Our work in BC:
  * Focus Groups across BC
    * Northern/Interior/Vancouver
    * Rural/Urban
  * 2 CHN surveys
    * All RHAs
Vaccine Preventable Diseases Are Not Serious
Multiple Immunizations Overwhelm a Baby’s Immune System

- Theoretically, babies have the capacity to produce one billion antibodies.
- It is estimated that they could handle up to 10,000 vaccines at any one time.
- Vaccines never use up antibodies because the body constantly replaces them.
The Two-Month Visit

One Vaccine

DPTP

1980

3,017 ANTIGENS

Four Vaccines

DTaP-IPV-HBV-Hib, Meningococcal C, Pneumococcal, Rotavirus

2012

51 ANTIGENS
This timeline chronicles the controversy around a possible link between vaccines and autism, starting with the contentious Wakefield study in 1998.

1998

Dr. A. Wakefield's study involves only 12 children who had inflammatory bowel disease, 8 with autism.

2001
The American Academy of Pediatrics convenes a committee to examine a possible link between thimerosal content in vaccines and autism.

9 study researchers and dozens of reviewers conclude there is no autism-vaccine link.

2002
Danish researchers publish a study in the New England Journal of Medicine.

They study 537,303 children over 7 years.

The researchers conclude there is no autism-vaccine link.

2004
It is discovered that a law firm looking to sue a vaccine manufacturer paid Wakefield.

10 of the 13 co-authors withdraw their names from the Wakefield study.

U.S. Institute of Medicine Immunization Safety Committee conducts a review and finds no evidence of an autism-vaccine link.

2006
The U.S. Food and Drug Administration releases a statement saying there is no evidence to link vaccines with autism.

2007
CDC researchers publish a study on thimerosal content in vaccines in the New England Journal of Medicine.

They study 1,046 children ages 7 to 10.

They find no autism-vaccine link.

2009
Italian researchers publish a 10-year study in the journal Pediatrics.

They find no developmental delays in children given a thimerosal-containing pertussis vaccine as infants.

2010
In the Lancet, researchers state Wakefield's 1998 work is "an elaborate fraud."

They conclude that Wakefield changed the medical histories of the 12 patients in the original study.

FEB
The Lancet retracts Wakefield's 1998 article, saying elements of the article were incorrect.

MAY
The British Medical General Council, which is in charge of medical licensing in the United Kingdom, strips Wakefield of his license.

OCT
Researchers publish a thimerosal study in the journal Pediatrics. They find no autism-vaccine link when comparing 256 children with autism to 752 children without autism.
Adjuvants

Better immune response!
Aluminum – the “new Thimerosal”

* A systematic review of studies of aluminum containing vaccines against DTP found no evidence that aluminum salts caused any serious or long-lasting adverse events (The Lancet Infectious Diseases 4:4-90)
* Other reviews have also shown no evidence of long term effects (Journal of Viral Hepatitis 10:343-4, Vaccine 21:2003-14)
* The most abundant element in the earth’s crust
* Found in air, food and water
Inactivating Agents

* Eliminate the harmful effects of bacterial toxins or ablate the capacity of infectious viruses to replicate
  i.e. Formaldehyde, glutaraldehyde, B-propiolactone
* Concerns about the safety of formaldehyde have centered on the observation that high concentrations can damage DNA and cause cancerous changes in cells in vitro.
* Although formaldehyde is diluted during the manufacturing process, residual quantities may be found
* The residual quantity is considered safe – all of us have detectable quantities in our circulation (approximately 2.5 µg/mL of blood)
Preservatives: Thimerosal

- 65.73 mcg Methylmercury
- 25 mcg Ethylmercury
Danish Population-Based Study

Autism incidence per 10,000

Year

1992 Thimerosal-containing vaccines removed

Madsen, Pediatrics 2003:112:605
“Vaccine-preventable diseases in Canada decreased before the introduction of immunizations”
Incidence Rates per 100,000 Population of Invasive Pneumococcal Disease in BC by Age Group, 2002 and 2010

Year of Report
- 2002
- 2010

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2002</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Immunization Programs & Vaccine Preventable Diseases Service, BCCDC, Oct 2013. Case counts of Invasive Pneumococcal Disease (IPD) determined from confirmed cases reported to BCCDC through enhanced surveillance for cases ≤16 years of age under Schedule A, Reportable Diseases, BC Public Health Act. Incidence rates calculated using population estimates by age group and census year.

Figure 3. *Haemophilus influenzae* type b (Hib) Disease — Reported Cases, Canada, 1979–2004*

- **Year Vaccine Introduced**
  - 1986: PRP
  - 1988: PRP-D
  - 1991: HbOC/PRP-OMP
  - 1992: PRP-T

* 1979–1985: reported Hib meningitis only
  1986–2004: all invasive forms (meningitis and septicemia)
A Canadian study by Tan et al (2012) concluded up to an 86% decline in admissions to Canadian Immunization Monitoring Program Active (IMPACT) hospitals since the introduction of the chickenpox vaccine.⁵⁴
<table>
<thead>
<tr>
<th>Disease</th>
<th>Peak Year</th>
<th>Cases</th>
<th>Vaccine Introduced</th>
<th>2011 Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td>1941</td>
<td>15562</td>
<td>1969</td>
<td>10</td>
</tr>
<tr>
<td>Mumps</td>
<td>1942</td>
<td>112267</td>
<td>1981</td>
<td>132</td>
</tr>
<tr>
<td>Rubella (German Measles)</td>
<td>1936</td>
<td>10973</td>
<td>1970</td>
<td>1</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>1928</td>
<td>906</td>
<td>1929</td>
<td>0</td>
</tr>
<tr>
<td>Pertussis (whooping cough)</td>
<td>1930</td>
<td>2516</td>
<td>1948</td>
<td>58</td>
</tr>
<tr>
<td>Polio</td>
<td>1953</td>
<td>407</td>
<td>1957</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: BC Ministry of Health
A healthy lifestyle protects against vaccine-preventable diseases

* Previously healthy people die of VPDs
* **Example:** Malnutrition was not a contributing factor in the deaths of any of the children who died of pertussis in the United States in the 1990s.

* Gold R. *Your Child’s Best Shot*. 2006
Breastfeeding as Enough Protection

- Protects against many illnesses Eg. SIDS, ear infections, diabetes

**BUT...**
- IgA antibodies break down
- Protection is temporary (passive immunity)
- Depends on what the mother is immune to
Partners in Health
POSITION STATEMENT ON VACCINATION

Midwives and public health practitioners should not be engaging in any discussion of vaccination. As a part of the informed choice process, midwives should inform clients that childhood vaccinations, most of which occur after six weeks postpartum, are currently outside the scope of midwifery practice. The discussion should include a recommendation to discuss vaccination with her family doctor, a public health nurse or another caregiver who will be providing newborn care after six weeks postpartum.

As a member of the health care team, midwives should consider their role in supporting the efforts of public health agencies locally and globally with regard to disease prevention in the wider community, as well their role in individual client care.
Quality Assurance Committee has a Checklist:

When the patient or guardian opts NOT to immunize:
Recommendations
1. Have Patient, Parent or Guardian sign INFORMED CONSENT if they decide not to immunize.

http://www.cnpbc.bc.ca/Policies-and-Procedures.html?reload
BC College of Chiropractors referred me to:

Canadian Chiropractic Association

VACCINATION AND IMMUNIZATION

Vaccination is a well-established and widely mandated public health policy and the Canadian Chiropractic Association supports public health promotion and prevention strategies that encourage physical and mental health and well-being.

The CCA accepts vaccination as a cost-effective and clinically efficient public health preventative procedure for certain viral and microbial diseases, as demonstrated by the scientific community.

The public responsibility for vaccination and immunization is neither within the chiropractic scope of practice, nor a chiropractic specific issue. Public health programming and literature provide appropriate sources of information for patient education regarding vaccination and immunization.
Thank You!
Questions?
Selected Resources

* BC Immunization Manual

* Canadian Immunization Guide

* ImmunizeBC
  * [http://www.immunizebc.ca/](http://www.immunizebc.ca/)


Selected Resources Continued


* Immunization Action Coalition
  * [http://www.immunize.org/](http://www.immunize.org/)


* Canadian Paediatric Society. *IMPACT – Surveillance for adverse events following immunization and vaccine-preventable diseases*

* Public Health Agency of Canada. National Advisory Committee on Immunization. About NACI.


Selected Resources Continued


* [https://www.llli.org/faq/prevention.html](https://www.llli.org/faq/prevention.html)