

# Building a Solid Foundation for Public Health Practice: Skills Enhancement for Public Health

PUBLIC HEALTH AGENCY *of* CANADA  
AGENCE DE LA SANTÉ PUBLIQUE *du* CANADA

*Community Health Nurses of Canada  
5<sup>th</sup> National Conference  
Pre-conference Workshop  
May 16<sup>th</sup>, 2011*

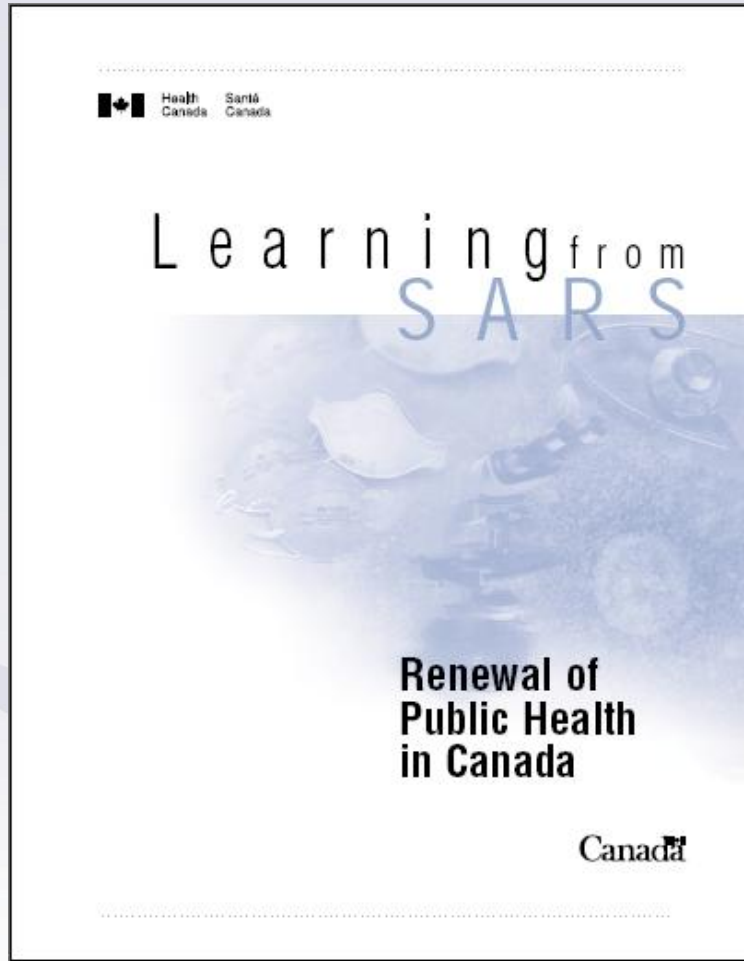


Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

Canada 

# Learning from SARS: Renewal of Public Health in Canada (2003)



“No attempt to improve public health will succeed that does not recognize the fundamental importance of providing and maintaining in every local health agency across Canada an **adequate staff of highly skilled and motivated** public health professionals. Our national aim should be to produce a cadre of outstanding public health professionals who are adequately qualified and compensated, and who have clear roles, responsibilities and career paths.” 2003

# Workforce Challenges

## Lack of:

- qualified public health professionals in Canada, aging workforce & uneven distribution of existing practitioners (especially in rural & remote areas)
- common measure & data to quantify the gap
- public health practitioner ‘surge’ capacity to respond emergencies
- skills development & training opportunities for existing public health practitioners

# National Response to Strengthen the Public Health Workforce

Federal/Provincial/Territorial Advisory Groups

Develop pan-Canadian strategies to strengthen public health capacity

Goals of the Public Health Human Resources Strategy

2 Components:

- ✓ Develop public health core competencies common to all public health professionals
- ✓ Enhance knowledge & skills among the public health workforce

# Building the Public Health Workforce for the 21<sup>st</sup> Century

A Pan-Canadian Framework for Public Health Human Resources Planning

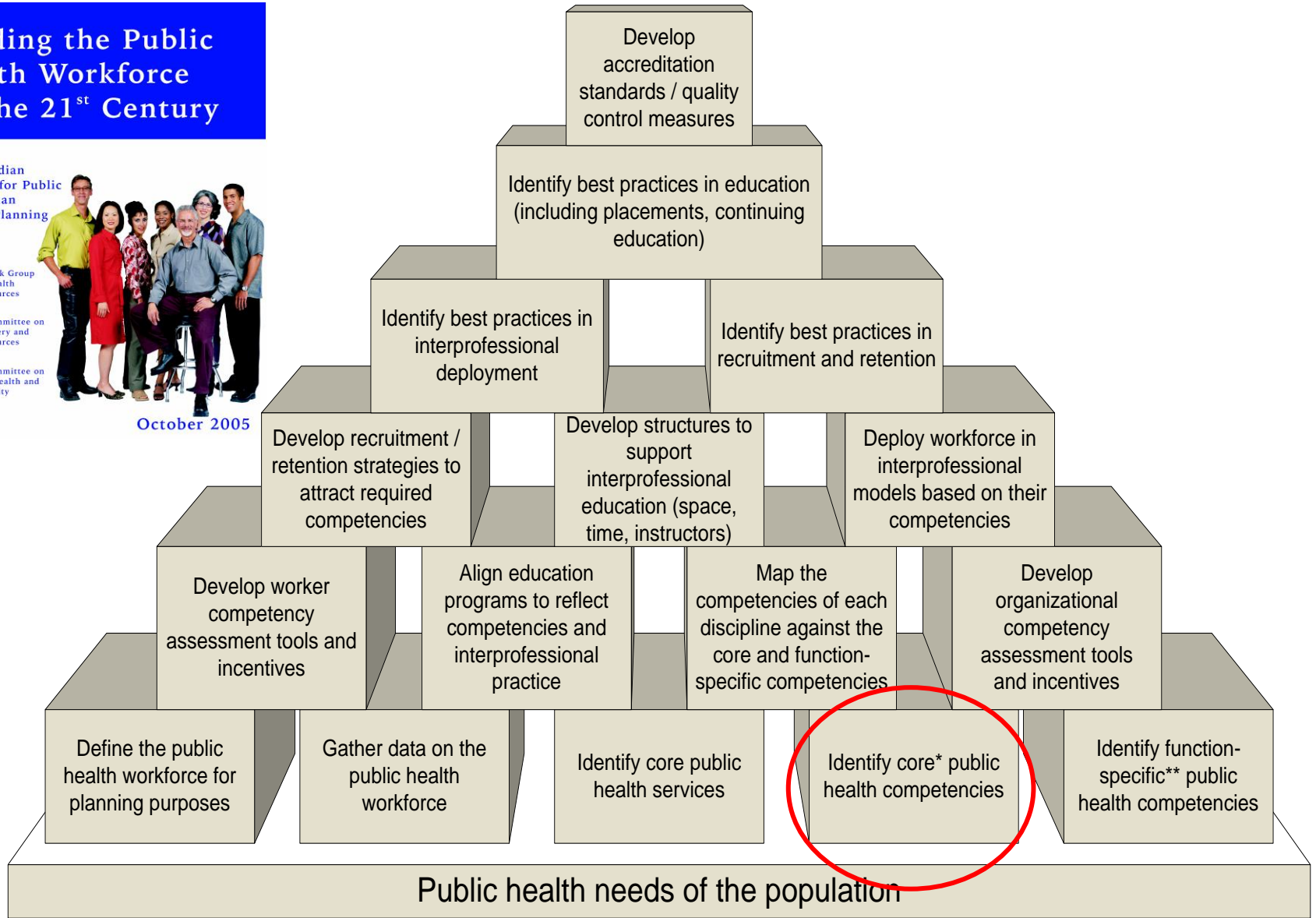
The Joint Task Group on Public Health Human Resources

Advisory Committee on Health Delivery and Human Resources

Advisory Committee on Population Health and Health Security



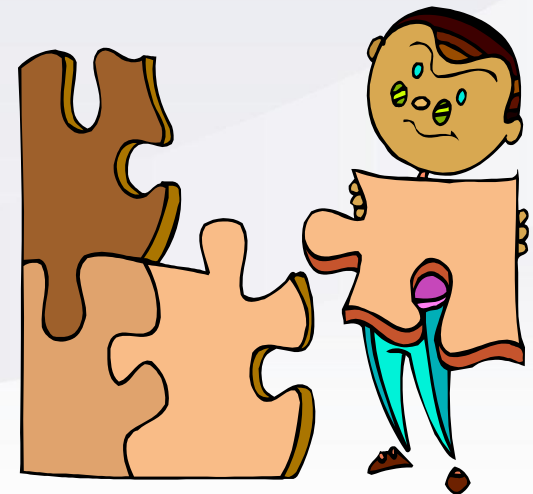
October 2005



# Core Competencies for Public Health in Canada

Set of essential skills, knowledge & attitudes  
necessary for the broad practice of public health

- Basic building block to develop the workforce
- Independent of discipline & program



# Core Competencies for Public Health in Canada: Release 1.0

*36 statements organized under 7 categories:*



1. Public Health Sciences



2. Assessment & Analysis



3. Policy & Program Planning,  
Implementation & Evaluation



4. Partnerships, Collaboration & Advocacy



5. Diversity & Inclusiveness



6. Communication



7. Leadership



# Current Activities

- Build awareness & knowledge
- Develop tools & resources to support use
  - Core Competencies for Public Health in Canada Orientation Module ([www.corecompetencies.ca](http://www.corecompetencies.ca))
  - Tools to demonstrate Core Competencies in practice
  - Performance assessment & management tools for individual practitioners & organizations
  - *Skills Online* continuing education program



# Current Activities (con't)

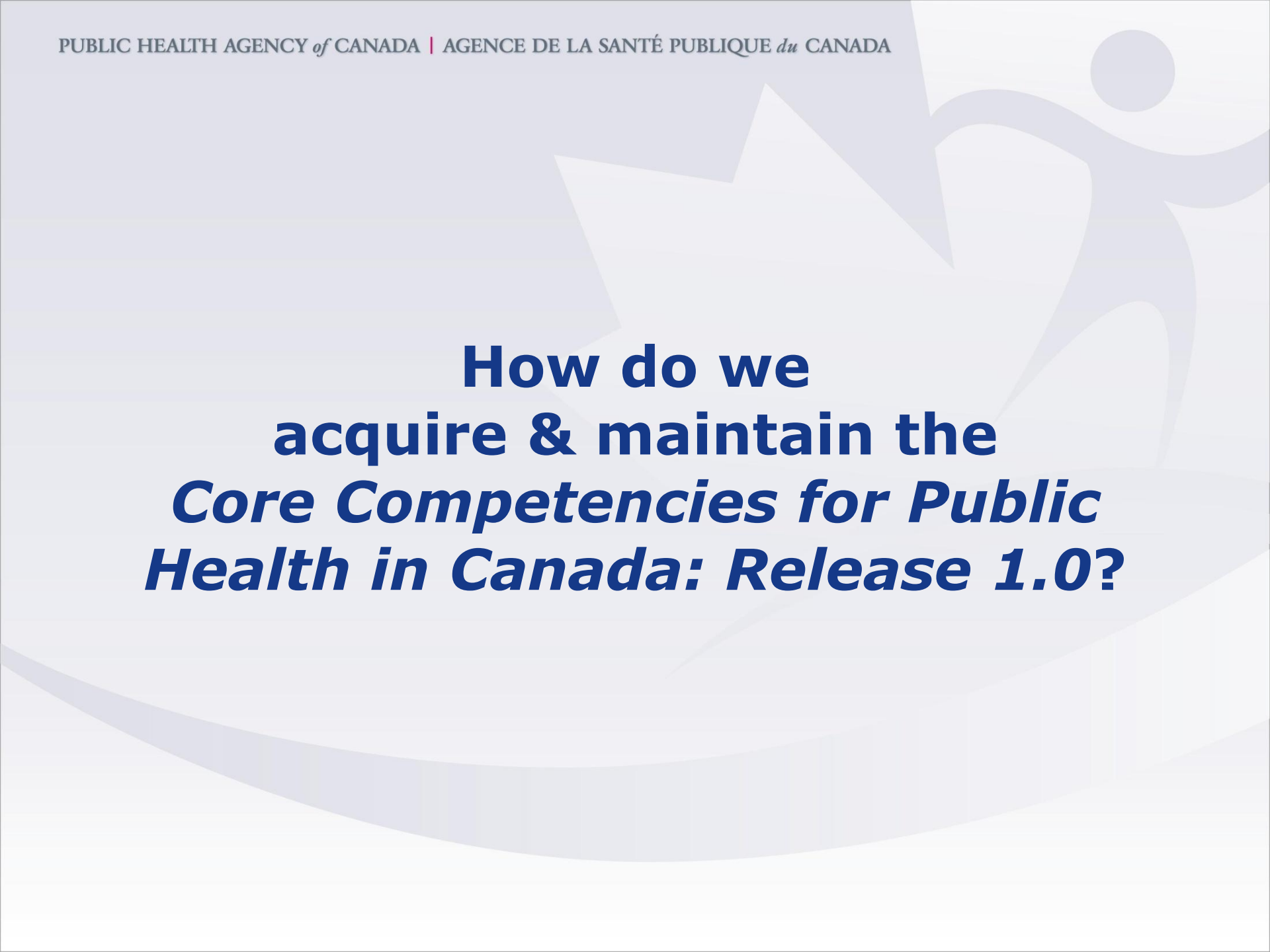
- Exploring use & integration of Core Competencies within Public Health Agency of Canada
- Working with public health disciplines to develop discipline-specific competencies
- Pan-Canadian Environmental Scan to explore ways Core Competencies are being used & integrated
  - Local/regional public health organizations, & provincial/territorial governments and associations (completed scan; Case Study in progress)
  - Master of Public Health programs (completed)
  - Schools of environmental health (completed)
  - Schools of nursing (planned for 2011/12)

# Recommendations from Environmental Scan

- Focus efforts on formal endorsement & adoption of Core Competencies
- Continue to educate about Core Competencies at all levels of public health
- Promote practice-based learning approaches
- Equip organizations with human resources, tools & methods that support integration of competencies into practice

# Recommendations from Environmental Scan (con't)

- Promote & support “workforce driven” competency development activities
- Encourage & support competency-based mentoring & coaching
- Continue integration of core & discipline-specific efforts through collaborative projects and partnerships
- Use networks to create ‘gathering spaces’ for shared learning & collaboration
- Support public health leadership at all levels



**How do we  
acquire & maintain the  
*Core Competencies for Public  
Health in Canada: Release 1.0?***



Do you think you can buy me some competencies too, Dad?

# The role of continuing education....

## ***Skills Online***



# ***Skills Online*** **Life-Long Learning**

- Like other health-related fields, public health knowledge & practices continually evolve
- Continuing education is required to maintain high levels of relevant knowledge & skills to practice effective public health

## Continuing education opportunities for public health practitioners across Canada not readily available





# What is *Skills Online*?

- Internet-based continuing professional development program for front line public health practitioners
- Facilitated modules in English & French
- Offered to public health professionals since 2002
- Just over 6000 individuals have completed one or more modules
- Over 10,000 modules have been completed

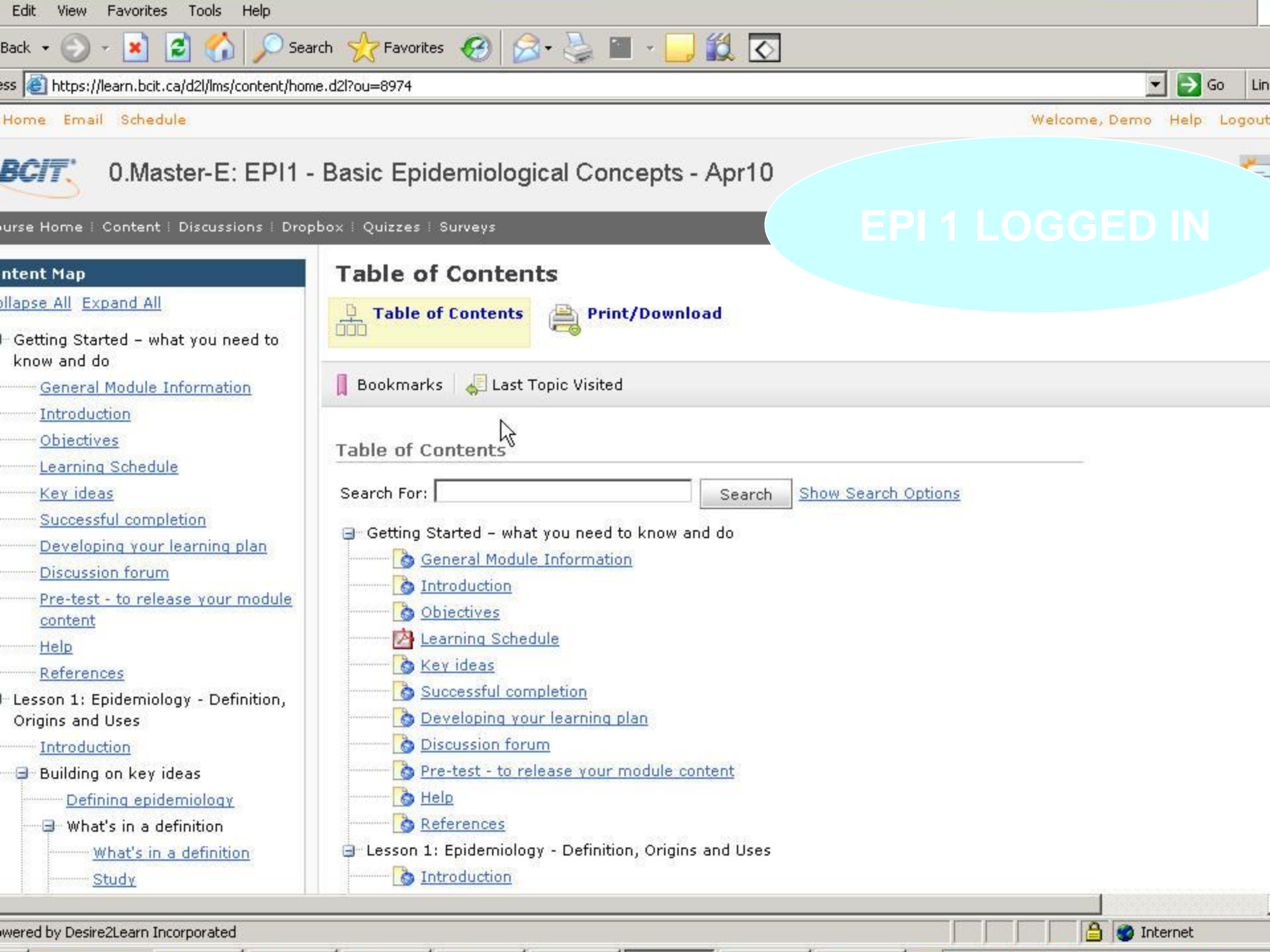


# Module Delivery Format

- National teams
  - 8 – 18 interprofessional learners from across Canada
- Facilitated modules - learners have access to an experienced, trained online facilitator
  - answer content-related questions
  - encourage discussion
  - provide feedback on learning exercises
  - guide learners through the material

## ***Skills Online: Key Features***

- Relevant, timely, practical Canadian content
- Easily accessible through web browser
- All content available on line
- Low cost
- Help Desk for technical support
- 8 weeks to complete a module
- Modules range from ~ 25-35 hours in length
- Offered 3 times per year – Fall, Winter & Spring
- Based on principles of adult learning



# 0.Master-E: EPI1 - Basic Epidemiological Concepts - Apr10

Course Home | Content | Discussions | Dropbox | Quizzes | Surveys



## Content Map

- [Collapse All](#) [Expand All](#)
- [-] Getting Started - what you need to know and do
  - [General Module Information](#)
  - [Introduction](#)
  - [Objectives](#)
  - [Learning Schedule](#)
  - [Key ideas](#)
  - [Successful completion](#)
  - [Developing your learning plan](#)
  - [Discussion forum](#)
  - [Pre-test - to release your module content](#)
  - [Help](#)
  - [References](#)
- [-] Lesson 1: Epidemiology - Definition, Origins and Uses
  - [Introduction](#)
- [+] Building on key ideas
  - [Defining epidemiology](#)
  - [+] What's in a definition
    - [What's in a definition](#)
    - [Study](#)











## Table of Contents

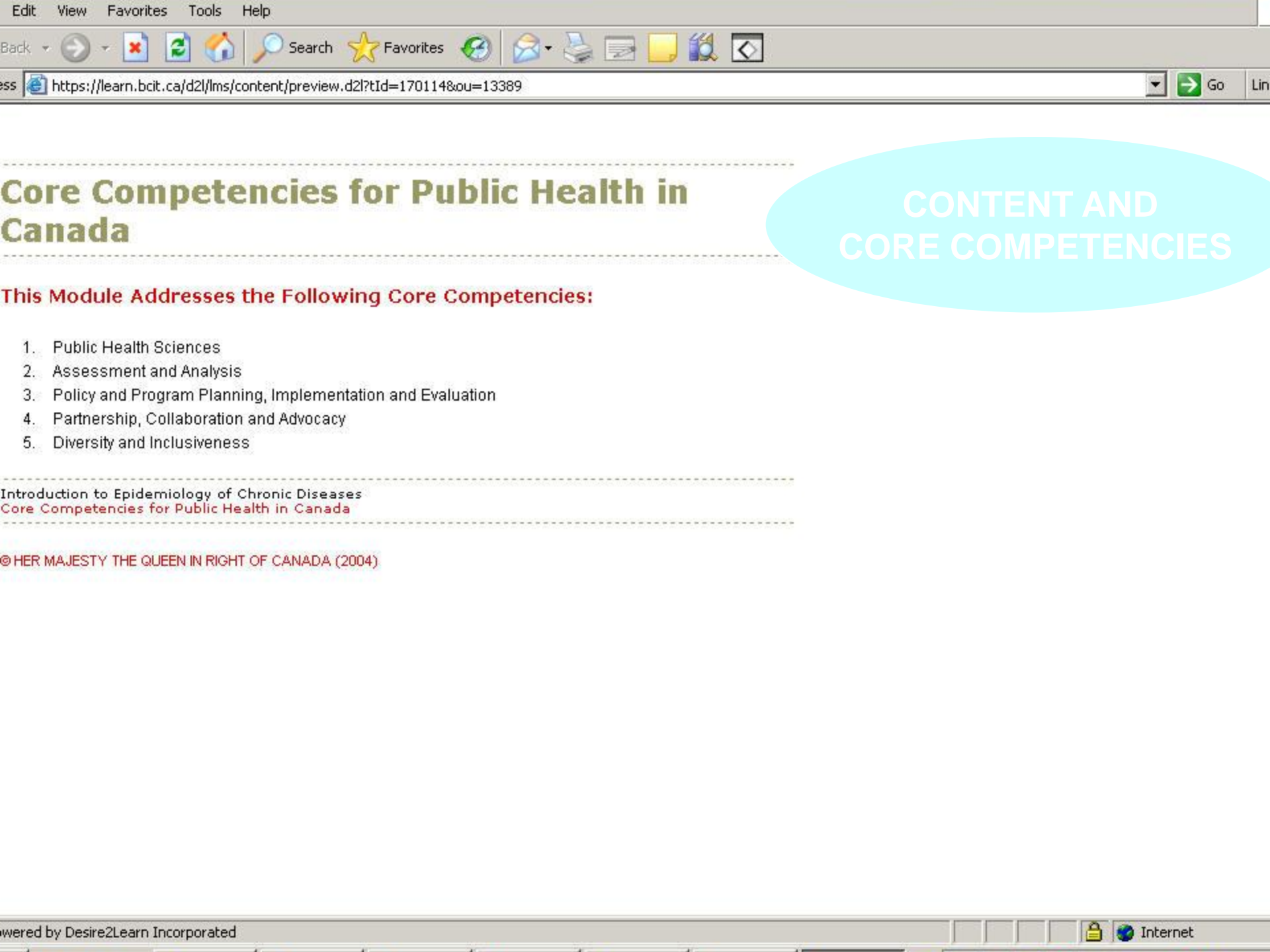
 [Table of Contents](#)
 [Print/Download](#)

Bookmarks | Last Topic Visited

## Table of Contents

Search For:   [Show Search Options](#)

- [-] Getting Started - what you need to know and do
  -  [General Module Information](#)
  -  [Introduction](#)
  -  [Objectives](#)
  -  [Learning Schedule](#)
  -  [Key ideas](#)
  -  [Successful completion](#)
  -  [Developing your learning plan](#)
  -  [Discussion forum](#)
  -  [Pre-test - to release your module content](#)
  -  [Help](#)
  -  [References](#)
- [-] Lesson 1: Epidemiology - Definition, Origins and Uses
  -  [Introduction](#)



# Core Competencies for Public Health in Canada

CONTENT AND  
CORE COMPETENCIES

## This Module Addresses the Following Core Competencies:

1. Public Health Sciences
2. Assessment and Analysis
3. Policy and Program Planning, Implementation and Evaluation
4. Partnership, Collaboration and Advocacy
5. Diversity and Inclusiveness

Introduction to Epidemiology of Chronic Diseases  
Core Competencies for Public Health in Canada

© HER MAJESTY THE QUEEN IN RIGHT OF CANADA (2004)

- Help
- Pre-Test - to release your module content
- Lesson 1: Health Status Assessment
  - Introduction
  - Building on key ideas
    - Defining Health Status
    - Demography
      - Demography
      - Population pyramid
    - Disease frequency
      - Disease frequency
      - Presenting and reading disease frequency data
    - Ratios
      - Ratios
      - Proportions
      - Rates
      - Summary - ratios, proportions and rates
      - Assignment 1: Demographics in your region
    - Morbidity
      - Morbidity
      - Incidence rates
      - Calculating the incidence rate
      - Another example of an incidence rate
      - Prevalence
      - Calculating prevalence
      - Prevalence, incidence and duration
      - Assignment 2: Breast cancer rates
  - Bringing it all together ...
    - To summarize ..
    - So what have we learned so far...

## Introduction

measures and data sources, you will be able to use them to evaluate aspects of health in your community.

In this lesson, we will explore the following:

- Definitions of health and health status
- Demography and the population pyramid
- Disease frequency
- Ratios, proportions and rates
- Morbidity

Throughout this module you will be asked to apply particular health status measures in evaluating aspects of the health status of your health region. In order to do this you will need to access [Statistics Canada's Statistical Profile of Canadian Communities](http://ceps.statcan.ca/english/profil/PlaceSearchForm1.cfm) (<http://ceps.statcan.ca/english/profil/PlaceSearchForm1.cfm>). This site contains information from the Census of Population conducted by Statistics Canada and also includes population estimates, vital statistics data (births and deaths), and additional health information. Statistical profiles are presented for all Canadian communities (cities, towns, villages, First Nations Communities and Settlements, etc.) for metropolitan areas and for health regions, for 1996 and 2001. These profiles differ in the available data - birth and death information is not available in the 2001 profile. Information is provided on education, income and work, families and dwellings, births and deaths, general population information, and health information. A mapping feature is also available for viewing the location of any community within Canada.

[Statistics Canada](http://www.statcan.ca/start.html) (<http://www.statcan.ca/start.html>) is the country's national statistics agency, with programs organized into demographic, social, health and economic areas. The Statistics Canada Website will provide you with the data you need to compute the various measures presented.

With the Assignments, you will be asked to calculate and comment on various measures. This will enable you to become familiar with the various health status measures and the features of the Statistics Canada Website. It is important to note that not all products on the site are free – some data tables cost money to retrieve, and you should look carefully before submitting search requests.

Throughout this lesson, you will be prompted to reflect on the concepts and principles as they pertain to your work as a public health practitioner. You will be invited to think of examples from your work, that of your colleagues and the material you read.

The assignment at the end of the lesson will build on your notes and examples.

As well, remember to check the Discussions forum regularly for new postings on existing discussion threads and for new discussion threads.



- Dr. Frederick Montizambert and The Cholera and Quarantine at Grosse Ile (1832)
- Framingham Study (1948-present)
- Polio Vaccine Field Trials (1954)
- Richard Doll and Austin Bradford Hill (1950s and 60s)
- North Karelia (1972-present)
- John Last (Present)
- Using Epidemiology in Public Health Practice
  - Using Epidemiology in Public Health Practice
  - Historical Study
  - Community Diagnosis
  - Working of Health Services
  - Individual Risks and Chances
- Completing the Clinical Picture
  - Completing the Clinical Picture
  - What led to the development of the concept of the iceberg phenomena?
  - Identification of Syndromes
  - Search for Causes
- Bringing it all together
  - To summarize ...
  - Self-Assessment - Lesson #1
  - Discussion forum
  - Assignment #1 - The meaning of epidemiology
  - Resources
- Lesson 2: Cause and effect in epidemiology

## John Last (Present)

[Back to Table of Contents](#)

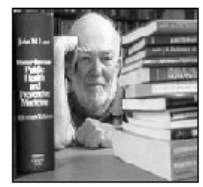






### John Last (Present)

Dr. John Last is a physician and internationally renowned Canadian epidemiologist. On the encouragement of Dr. Robbie Fox, editor of the Lancet, Dr. Last completed a paper for publication in the Lancet entitled "The Iceberg: Completing the Clinical Picture in General Practice" (The Lancet 1963: 6 July; 28-31). Dr. Last saw the iceberg phenomenon (10% visible, 90% submerged) as a good metaphor for describing illness and disease in a population. Last suggested that like an iceberg, only a small portion of a condition in a population is visible. Much larger portions are invisible for various reasons. In order to complete the clinical picture, both the visible and the invisible aspects of the iceberg must be defined. This concept will be further defined later in this module.



John Last

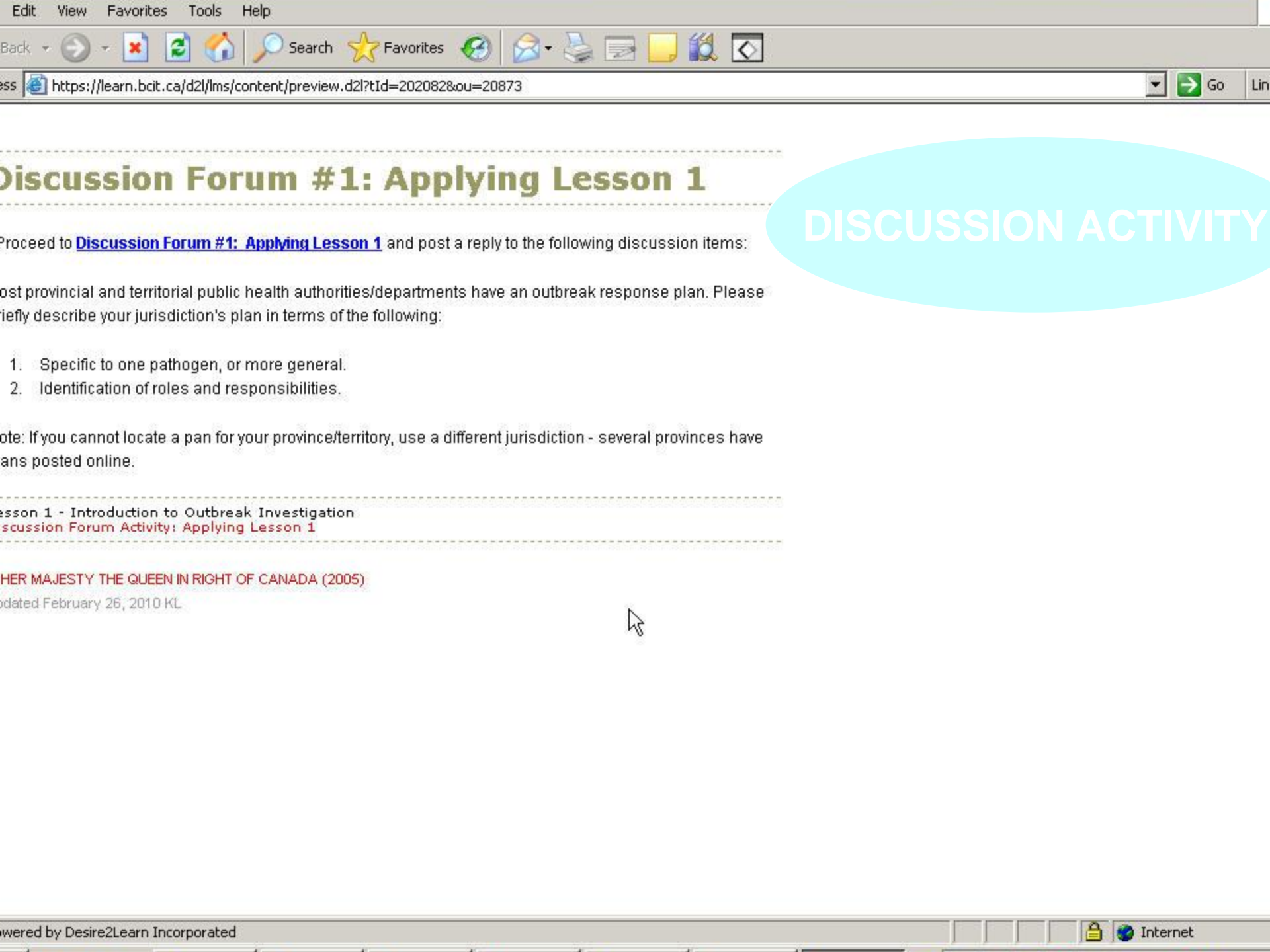


#### Links

For more information:

- <http://www.medicine.uottawa.ca/epid/eng/lastbio.html>

Lesson 1 - Epidemiology - Definition, Origins and Uses  
 Learning from the past - John Last



## Discussion Forum #1: Applying Lesson 1

# DISCUSSION ACTIVITY

Proceed to [Discussion Forum #1: Applying Lesson 1](#) and post a reply to the following discussion items:

Most provincial and territorial public health authorities/departments have an outbreak response plan. Please briefly describe your jurisdiction's plan in terms of the following:

1. Specific to one pathogen, or more general.
2. Identification of roles and responsibilities.

Note: If you cannot locate a plan for your province/territory, use a different jurisdiction - several provinces have plans posted online.

Lesson 1 - Introduction to Outbreak Investigation  
Discussion Forum Activity: Applying Lesson 1

HER MAJESTY THE QUEEN IN RIGHT OF CANADA (2005)

Updated February 26, 2010 KL



ASSIGNMENT –  
FOR SUBMISSION

## Assignment 2 Public Health Interventions for a Community Chronic Condition

### Purpose

Determine appropriate public health interventions to address identified risk factors to a specific chronic condition.

### Instructions

Review your work in Assignment 1. For your chosen chronic condition and the identified risk factors, describe a prevention strategy that you think would work for your community. Explain your reasoning for the strategy.

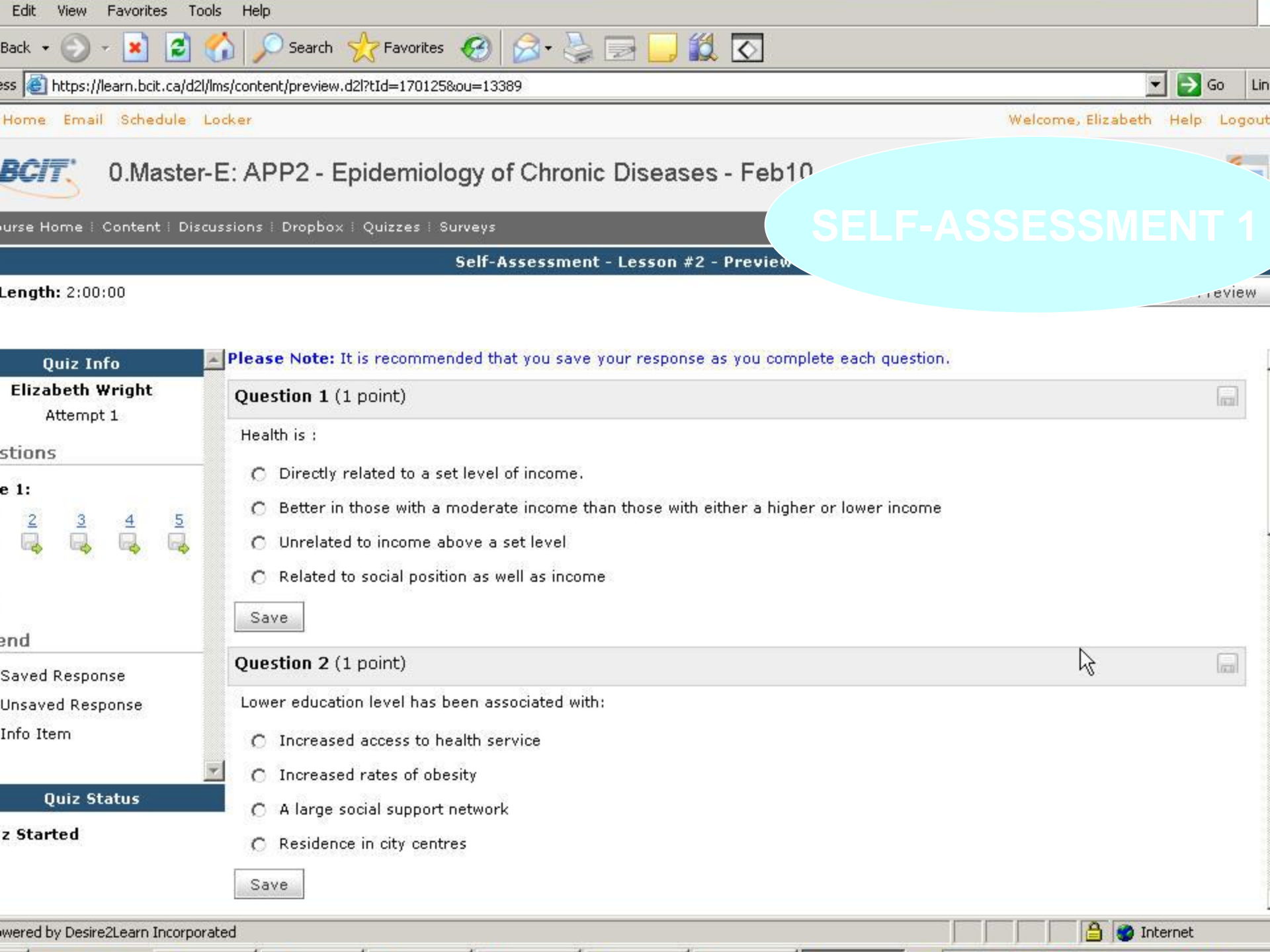
### Requirements

You can use a presentation format (maximum of 10 slides) or a one page report format. Be sure to reference any data that you use.

### Expectations

In the development of prevention strategies, budget is always a consideration. For the purposes of this exercise, assume you have a large, stable budget. Since this assignment builds on what was presented in the first assignment, be sure to incorporate what you have already learned. Finally, since prevention strategies will be customized to the community, include enough referenced material about your community to provide an understanding as to why you have chosen the prevention strategy.

### Submit



# 0.Master-E: APP2 - Epidemiology of Chronic Diseases - Feb10

SELF-ASSESSMENT 1

Course Home | Content | Discussions | Dropbox | Quizzes | Surveys

## Self-Assessment - Lesson #2 - Preview

Length: 2:00:00

**Quiz Info**

Elizabeth Wright  
Attempt 1

Questions

Question 1: [2] [3] [4] [5]

End

Saved Response  
Unsaved Response  
Info Item

**Quiz Status**

Quiz Started

**Please Note:** It is recommended that you save your response as you complete each question.

**Question 1** (1 point)

Health is :

- Directly related to a set level of income.
- Better in those with a moderate income than those with either a higher or lower income
- Unrelated to income above a set level
- Related to social position as well as income

Save




**Question 2** (1 point)

Lower education level has been associated with:

- Increased access to health service
- Increased rates of obesity
- A large social support network
- Residence in city centres

Save

## A public health practitioner is able to...

Core competency components	Module content examples
<p>Identify relevant &amp; appropriate data &amp; sources of information</p>  <p><b>Category 2: Assessment &amp; Analysis</b></p>	<p>vital statistics, census, administrative, Internet sites, notifiable diseases, registries</p>
<p>Collect accurate quantitative primary &amp;/or secondary data</p>  <p><b>Category 2: Assessment &amp; Analysis</b></p>	<p>examples of methods, tools being used in the field</p>
<p>Provide health status, demographic, statistical, programmatic &amp; scientific information to professional &amp; lay audiences</p>  <p><b>Category 6: Communication</b></p>	<p>organizing &amp; displaying data, e.g., selecting &amp; constructing tables, charts, graphs, maps</p>

**Content mapped to Core Competencies.**

OUR APPROACH  
**LEARNING MODULES**

**INTRODUCTION TO:**

**ONLINE LEARNING  
EPIDEMIOLOGY**

- Basic Epidemiological Concepts
- Measurement of Health Status
- Descriptive Epidemiological Methods

**SURVEILLANCE**

**INFORMATION MANAGEMENT**



**METHOD**

- Basic Biostatistics
- Principles & Practices of Public Health
- Survey Methods

**MOVING DATA TO ACTION**

- Communicating Data Effectively
- Evidence-Based Planning

**APPLIED PUBLIC HEALTH**

- Outbreak Investigation & Management
- Applied Epidemiology : Injuries
- Epidemiology of Chronic Diseases

# *Skills Online* Modules

## **MODULES AVAILABLE**

- EPI1: Basic Epidemiological Concepts
- EPI2: Measurement of Health Status  
Introduction to Surveillance
- EPI3: Epidemiologic Methods
- APP1: Outbreak Investigation & Management
- APP2: Epidemiology of Chronic Diseases
- APP3: Applied Epidemiology: Injuries
- SUR1: Intro to Surveillance
- SUR2: Communicating Data Effectively
- STA1: Introduction to Biostatistics
- PHP1: Intro to Public Health
- PHP4: Intro to Literature Searching

## **NEW MODULES FOR RELEASE 2011-12**

- PHP2: Evidence-based Public Health
- PHP3: Planning for Public Health
- PHP5: Privacy & Confidentiality for Public Health

## **MODULES IN DEVELOPMENT**

- STA2: Survey Methods

# Skills Online Module Development

## Year 1

- Process overview
- Develop project plan
- Conduct needs assessment
- Conduct environmental scan
- Form advisory group
- Develop module framework
- **Develop module content**

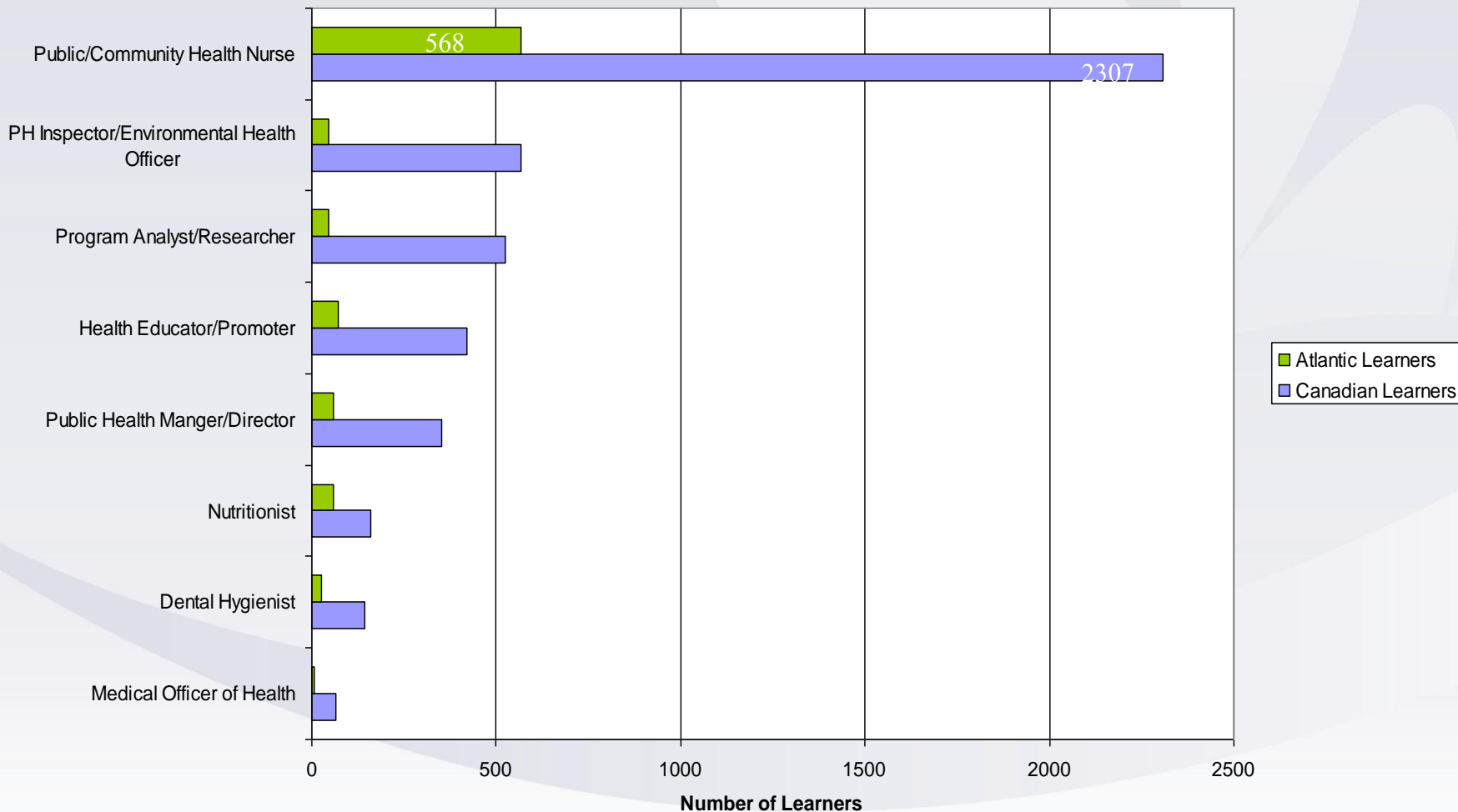
## Year 2

- Storyboard
- Develop prototype Learning Mgt. System
- Pilot

## Ongoing Maintenance

- Evaluate
- Content Review
- Test

### Number of Skills Learners by Professional Designation: Atlantic vs Canada Spring 2002 - Winter 2011



# Success How? Top 5

- Support from your org
- Buddying up
- Keep the tech number handy
- Stick to the suggested schedule & timelines
- Balance your time –  
work/pleasure/study



# The Importance of the Learning Schedule

The background features a light blue and white color scheme. On the left, there is a faint, stylized crown. On the right, there is a faint, stylized figure of a person holding a shield. The overall design is clean and professional.

# The Learning Schedule

- 8 weeks to complete module – 4- 6 hours per week
- Learning Schedule
  - content
  - assignments
  - discussions
- Fitting the LS to your schedule will help you stay on track

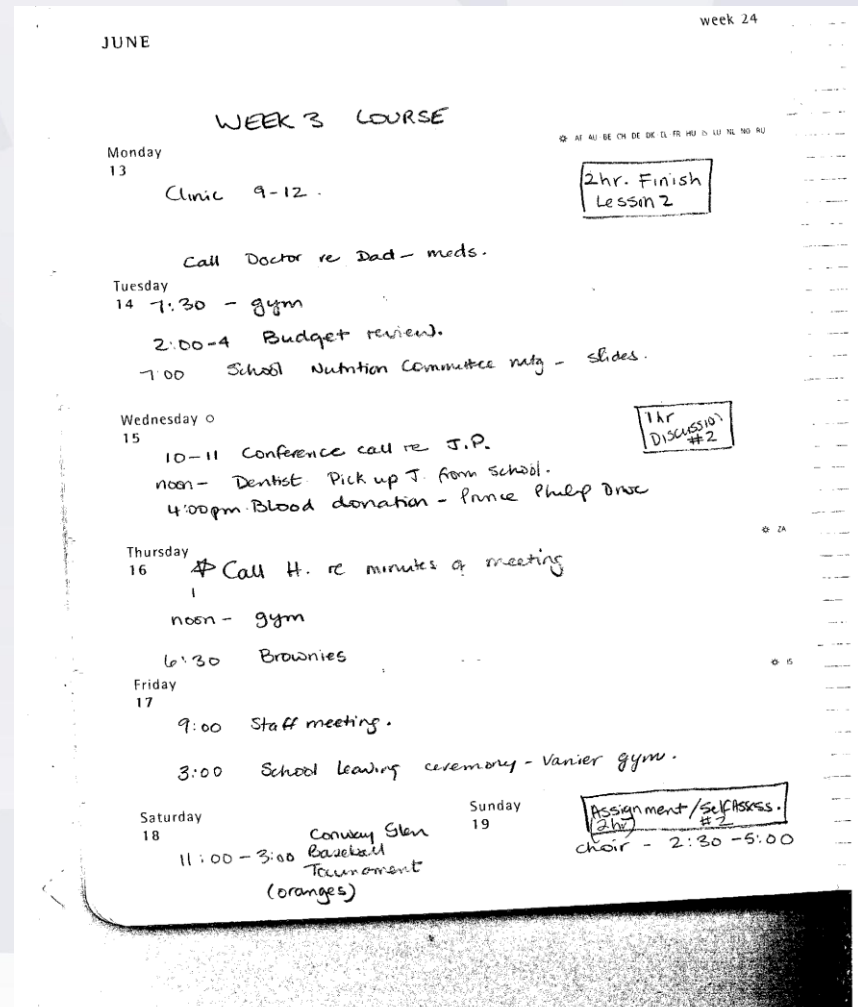
## BASIC EPIDEMIOLOGICAL CONCEPTS (EPI 1)

### LEARNING SCHEDULE

Week	Material/tasks	Estimated time required <sup>†</sup>	Staying on track
<b>1-2 weeks before</b>	Complete the <b>Skills for Public Health Online Module Guided Tour</b> before you begin the Module. <b>Note:</b> You will have access to the EPI 1 Module on the start date of the session.	1-2 hours	
<b>In week 1</b>	Check for access to the EPI 1 website - make sure you can access all parts of the site. Read Getting Started section Complete pre-test Begin Lesson 1: Epidemiology – Definitions, Origins and Uses Introduce yourself on the Discussion Forum – Learner's café.	2-3 hours	If you have technology problems call the help desk (1-866-432-8545) or send an e-mail to studenthelp@bct.ca
<b>In week 2</b>	Complete Lesson 1: Epidemiology – Definitions, Origins and Uses. Complete Discussion Forum #1: Is studying the history of epidemiology a useful exercise? Complete Assignment #1: The meaning of epidemiology Complete self assessment.	5-6 hours	Post your response to the topic on the Discussion Forum and respond to at least one of the postings made by fellow learners in each forum.
<b>In week 3</b>	Complete Lesson 2: Cause and Effect in Epidemiology Complete Discussion Forum #2: The cause-effect relationship Complete Assignment #2: Outbreaks of waterborne disease Complete self assessment.	5-6 hours	
<b>In week 4</b>	Complete Lesson 3: The Natural History of Disease Complete Discussion Forum #3: Primary prevention Complete Assignment #3: The natural history of disease Complete self assessment.	3-4 hours	Don't forget to post and respond on the Discussion Forum.

# Incorporating learning schedule into work and life schedule:

- Calendar with all appointments noted
- Learning Schedule added
  - Specific tasks noted
  - Work distributed over week
  - Extra time available between tasks



# How well did that work?

- Calendar completely blown apart
- Learning Schedule added
  - Specific tasks noted
  - kept me aware of what had to be done
  - Work distributed over week - but only got in half the time
  - Extra time available between tasks - got used up on other tasks!

week 24

Return Hockey jerseys this week

JK 3 COURSE

Umic 9-12

1 hr. Prep. Slides re program.

2 hr. Finish Lesson 2

Call Doctor re Dad - meds.

uesday 4 7:30 - 8:15 course

Dad apt 4:30

2:00-4 Budget review.

7:00 School Nutrition Committee mtg - slides.

Wednesday 15

2:30 meet at ante. Bay files

10-11 Conference call re J.P.

noon - Dentist Pick up J. from school.

4:00pm Blood donation - Prince Ph

Principal called re J. Plse call back.

Thursday 16

Pick up dogfood.

Call H. re minutes of meeting

Discussion pink

6:30 Brownies

Make 36 cupcakes for School leaving tomorrow.

Friday 17

Call M.V. registration today!!

9:00 Staff meeting.

Pick up Aunt J for ceremony.

3:00 School leaving ceremony - Vanier gym.

Saturday 18

Hi Liz -

Your son called.

Assignment/self assess. (2 hr)

11:00 Plumber Conway

Forgot his gym clothes.

11 Assignment.

5:30-7:30 (oranges)

Birthday party.

# Benefits

## Individual

- Acquired knowledge/developed CC → shared & applied  
Increased...
  - perspective/enhanced appreciation – breadth, roles & work
  - understanding/appreciation – surveillance  
(data collection & use)
  - understanding of terminology & concepts
  - critical thinking, problem solving, creativity...
  - willingness to collaborate
  - practitioners' desire for & confidence in pursuing further education

# Benefits

## Organizational

- Skilled practitioners
- Consistent, common baseline understanding of PH principles
- Improved decision making/planning abilities
- Improved communication within & across teams
- Increased levels of confidence of staff translating into increased contributions at team meetings
- HR policies/practices

# Recognition, Endorsement & Support

- Certificate from Public Health Agency of Canada & the Institut national de santé publique du Québec after successful completion of each module
- Endorsed by professional organizations & associations
- Support from provinces/territories & local organizations
- University recognition, e.g. Master of Public Health programs



# **For More Information**

## **Core Competencies for Public Health in Canada**

[www.phac-aspc.gc.ca/core\\_competencies](http://www.phac-aspc.gc.ca/core_competencies)

## **Skills Online**

[www.phac-aspc.gc.ca/skills](http://www.phac-aspc.gc.ca/skills)