# End of Life Care Surveillance and Research Capacity Development to Identify and Address the Needs of Vulnerable Populations

**Grace Johnston, PhD** 

School of Health Administration
Dalhousie University
Halifax, Nova Scotia, Canada

and

F Burge, Y Asada, V Maddalena, G Rocker, E Grunfeld, B Lawson, P McIntyre, G Frager, L Parker, J Lachance

September 24, 2008 17<sup>th</sup> International Congress on Palliative Care Montreal, Quebec, Canada







## Acknowledgement



Funding for this NELS ICE research team capacity development was received from the Canadian Institutes of Health Research (CIHR) strategic grant: "Reducing Health Disparities and Promoting Equity for Vulnerable Populations"

Lead CIHR Institutes for this ICE initiative are: "Institute of Gender and Health" and "Institute of Population and Public Health"

## Outline

NELS ICE
Vulnerable Populations
Surveillance Reporting
Research Capacity Development
Knowledge Exchange
Questions

## **NELS ICE**

### **Network for End of Life Studies (NELS):**

Projects over more than 10 years by Halifax based researchers to investigate end of life care

NELS was successful in obtaining an Interdisciplinary Capacity Enhancement (ICE) grant from CIHR. ICE grants are similar but differ from New Emerging Team (NET) grants, which funded the development of 10 palliative and end of life research teams across Canada starting two years prior to this NELS ICE grant.

NELS Development through ICE, Research Operating and Seed Grants

Johnston G, Burge F, McIntyre P, Maxwell D et al. *Palliative Care Database Development* 

'95-'97

Burge F, Johnston G, Cox J. End of Life with Congestive Heart Failure

'02-'04

Johnston G, Burge F, Asada Y, Rocker G, Grunfeld E, McIntyre P, Frager G, Maddalena V, Lawson B and collaborators. *Vulnerable Populations at End of Life* 

'06-'11: ICE Grant

$\vdash$	$\vdash$	$\vdash$	$\vdash$	1	1	$\vdash$	$\vdash$	$\vdash$	$\vdash$	2	2	2	2	2	2	2	2	2	2	2	2	2
9	9	9	9	9	9	9	9	9	9	0	0	0	0			0	0	0	0	0	0	0
9	9	9	9	9	9	9	9	9	9	0							0		0	$\vdash$	$\vdash$	$\vdash$
Ŏ	$\vdash$	2	$\widetilde{\omega}$	4	Ū	6	7	$\widetilde{\infty}$	9	Ŏ	$\vdash$	N	$\widetilde{\omega}$	4	$\widetilde{\mathbf{U}}$	$\tilde{0}$	7	$\widetilde{\infty}$	9	0	$\vdash$	2

'90-99

Johnston G, Dewar R. Nova Scotia Cancer Registry

Burge F. Palliative Care Services in Nova Scotia

Dept of Health. *Palliative Care Reviews and Primary Care Transitions Project* 

#### '99 onward

Burge F,
Johnston G,
Lawson B. CIHR
and other
Operating
Grants

#### '01-'03

Johnston G, Saint Jacques N et al. Feasibility of Study of Narcotics at End of Life with Cancer

#### '03-'05

Grunfeld et al. Quality Indicators at End of Life with Breast Cancer

Burge et al. Transitions in Location of End of Life Care

#### '05-'12

Dumont S, Burge F, Johnston G, et al. Costs at End of Life

#### '07-'12

Grunfeld G, Urquhart R, Burge F, Johnston G et al.

Colorectal Cancer ACCESS NET includes End of Life

#### '05 onward

Rocker G et al. Breathless at End of Life with COPD

Asada et al . Resource Allocation and Equity

## NELS Development in relation to ICE, Clinical Scholar, NET and STIHR, and Other Research Grants

Johnston G, Burge F, at al **Vulnerable Populations at End of Life** '06-'11: ICE Grant see previous slide for other grants '02-'04 1997 1993 1992 1995 1994 1996 1998 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999 1991 '99-'05 '05-'10 '07-'12 Burge F. Rocker G, Asada Y, Clinical Scholar Clinical Scholar Clinical Scholar '01 -08 '04-'09 **NET Co-investigators:** Burge F, Johnston G, in cross cultural, **TUTOR STIHR** and Rocker G in communication '08 Weersinge, Maddalena Atlantic Metropolis grant

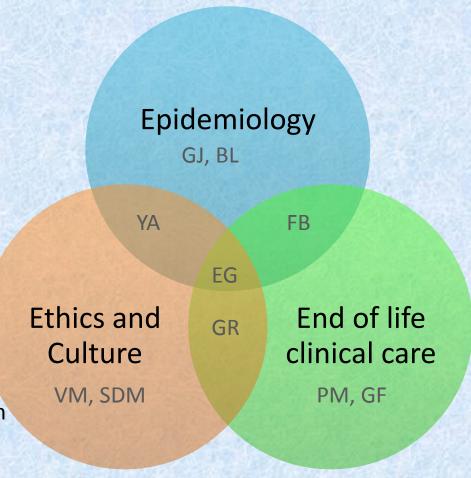
## **Goals of NELS ICE**

- 1) Create an **interdisciplinary team** of researchers, trainees, health professionals, and community partners
- 2) Develop **surveillance system** and reports to identify **vulnerable populations** at end of life
- 3) Design and conduct pilot studies for full research proposals to examine and address vulnerability and inequity in provision of quality end of life care
- 4) Engage in knowledge translation

## **NELS ICE Interdisciplinary Team**

PI: Grace Johnston, MHSA PhD
Co-PI: Frederick Burge, MD FCFP MSc
Yukiko Asada, MSc PhD
Eva Grunfeld, MD DPhil CCFP FCFP
Graeme Rocker, MHSc DM FRCP FRCPC
Beverley Lawson, MSc
Paul McIntyre, MD FCFP
Victor Maddalena, BN MHSA PhD
Gerri Frager, MD FRCPC

Trainees,
Staff, and
Collaborators
Julie Lachance, Health Canada
Gael Page / Ann McKim, Nova Scotia (NS)
Canadian Hospice Palliative Care Association
Sharon Davis Murdoch, NS Dept of Health
and others



## 22 NELS ICE Trainees as of Sept 2008

Victor Maddalena	Post Doctoral Fellow '06-'07, in '08 tenure track Assistant Professor at MUN							
Judith Fisher	Post Doctoral Fellow, '09-'10, in '08 PhD student in Pharmacy at U of Toronto							
Jessica Dooley	Community Health and Epidemiology (CHE) MSc candidate in '07 ICE Project 3							
Ruth Lavergne	CHE MSc candidate, '07 ICE Project 2; '08-09 develop Surveillance measures							
Jennifer Barnes	MN candidate, '08-'09 ICE Project 3 on end of life care in pediatric ICU							
Farhana Kanth	MHSA candidate '07-'08 ICE Project 4 Immigrants; now Policy Analyst, NS DOH							
Suha El Masalmeh	MHSA candidate '08 ICE Project 8 Review of Family Caregiver Policy							
Shauna McVorran	MHSA new graduate '07, develop Surveillance report and Knowledge Exchange							
Patricia Murray	MHSA candidate '08 ICE Project 3 Documentation of End of Life Pediatric care							
Junaid Kapra	MHI (Health Informatics) new graduate '07, palliative program data review							
Alison Zwaagstra	MHI new graduate '07, develop Vulnerable Population Surveillance system							

## 22 NELS ICE Trainees (continued)

Yukiko Asada	New Investigator, '05-'08 learn research team development/management						
Yoko Yoshida	PhD candidate and new graduate, '08-'10, develop equity measurement						
Dorianne Rheaume	Radiation Oncologist, '08 sabbatical, improve equity in palliative radiotherapy						
Christine Beck	Family Medicine Resident, '08-'09 ICE Project 6 qualitative, nursing home						
Elsie Rolls	CHSRF EXTRA Fellow, '08-'10 ICE Project 6 nursing home intervention						
Joanne Young	Respiratory Therapist, '07-'10 ICE develop/manage ICE Project 7 home COPD						
Jun Gao	Statistical Analyst, '06-'11, develop NELS ICE surveillance, reporting, measures						
Monique Lanoix	PhD graduate, '08 develop ICE literature data base; now tenure track Asst Prof						
Dorothy Barnard	PhD candidate, '06-'07 knowledge translation literature review for ICE						
Robin Urquhart	NET Coordinator, PhD candidate, '07-'09 ICE knowledge exchange (KE) project						
Nicole McQuinn	ICE Research Coordinator, BA graduate, '09-'11 management/KE trainee						

#### Researchers and Collaborators are Learners too

## **NELS ICE Staff**

Alison Zwaagstra:

**Health Information Analyst** 



azwaagst@dal.ca
Room 568, Bethune Building

Nicole McQuinn: Research Coordinator

nels@dal.ca
School of Health Administration
Fenwick Place

## Inequity Analysis to identify vulnerabilities and thereby vulnerable populations

End of life care is inequitable, when access, utilization, or quality of end of life care is inadequate as a result of lack of resources to persons, given societal and clinical norms.

Combines epidemiology (measures of disparity, difference) with ethical analysis of what is just (fair) in the context of needs for end of life and palliative care.

## **Identifying Vulnerable Populations**

#### Ethically significant vulnerability

#### Risk

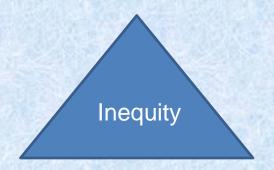
Factors that increase likelihood of undesirable outcome

#### Risk response

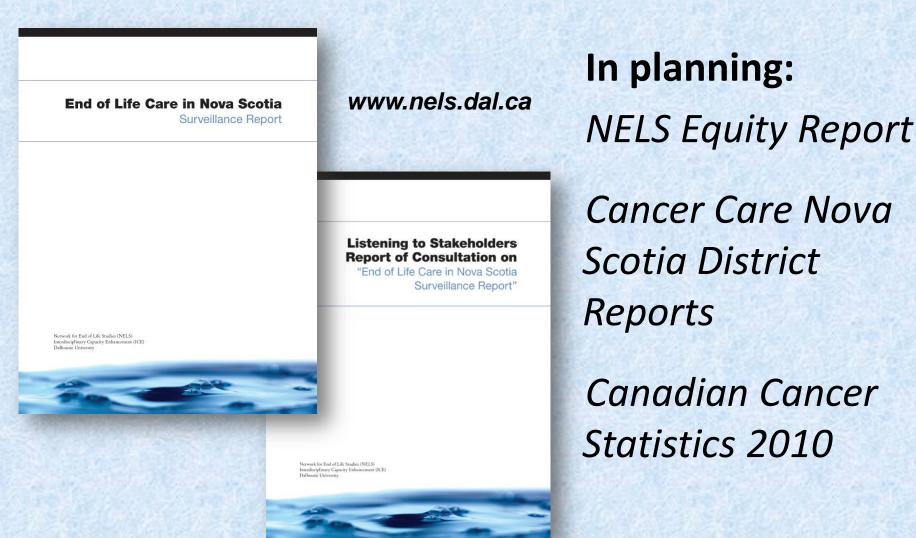
Options to manage the risk

Outcome

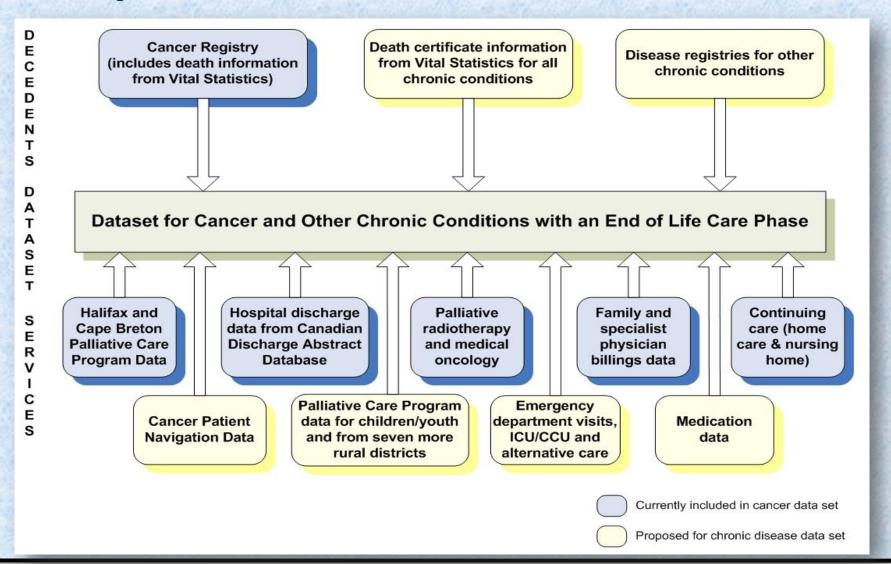
From Yukiko Asada - Inequity and Vulnerability in end of life care: Ethical Analysis Full audio/PPT presentation is available at: www.nels.dal.ca



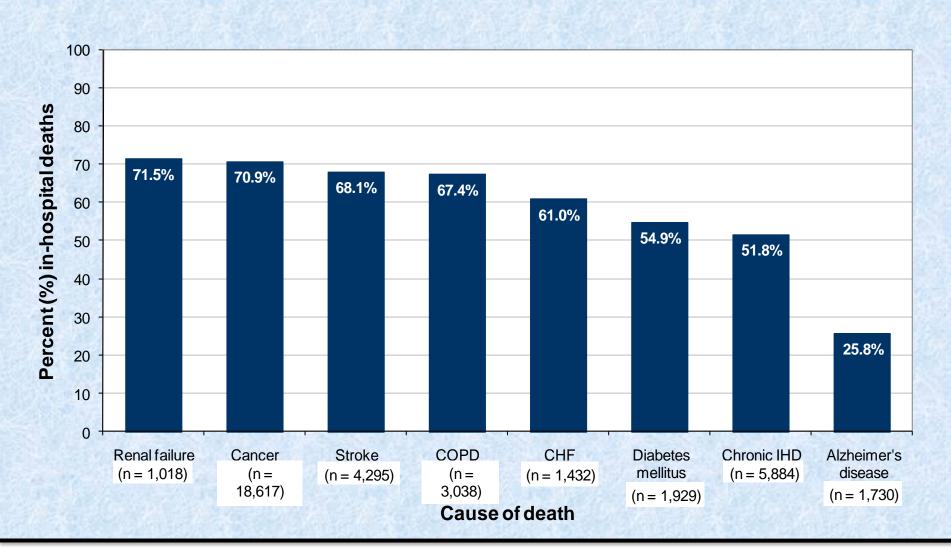
## **Population-Based Surveillance Reporting**



## **Population Surveillance Dataset**



## In-hospital deaths by major underlying chronic disease causes of death, Nova Scotia, 1998-2005



## Nursing Home Residents versus Others ≥65 years Dying of Cancer, 2000-2003

Quality Indicators	Nurs n	sing Home Statistic	Non Nursing Home n Statistic		
HOSPITAL DAYS IN LAST MONTH OF LIFE					
> 1 admission, # (%)	893	46 ( <b>5%</b> )	6237	898 ( <b>14%</b> )	
> 14 days, # (%)	893	118 ( <u><b>3%</b></u> )	6237	2220 ( <b>36%)</b>	
Mean days	893	5	6237	12	
≥ 1 ICU admission	893	25 ( <b>3%</b> )	6237	318 ( <b>5%</b> )	
Died in hospital # (%)	893	177 ( <b>20</b> %)	6237	3697 ( <b>59</b> %)	
PALLIATIVE CARE PROGRAM					
Enrolled in CH/CB, # (%)	354	131 ( <b>37</b> %)	2965	2040 ( <mark>69%</mark> )	

## Nursing Home Residents versus Others ≥65 years Dying of Cancer, 2000-2003

Quality Indicators	Nurs	ing Home	Non Nursing Home		
Quality illuicators	n	Statistic	n	Statistic	
CHEMOTHERAPY					
In last 6 months, # (%)	893	7 (0.8%)	6237	350 ( <b>6%</b> )	
Mean days from last chemo to death	7	112	350	74	
EMERGENCY ROOM VISITS					
> 1 visit in last month, # (%)	893	25 ( <b>3%)</b>	6237	399 ( <b>6%</b> )	
Mean visits in last month	893	0.2 visits	6237	0.4 visits	
FAMILY PHYSICIAN VISITS					
Mean visits (for those with > 2 visits)  Home/office visits in last two weeks, # (%)	293 870	<b>6.2</b> 139( <b>16</b> %)	4867 6015	<b>8.0</b> 487( <b>8</b> %)	

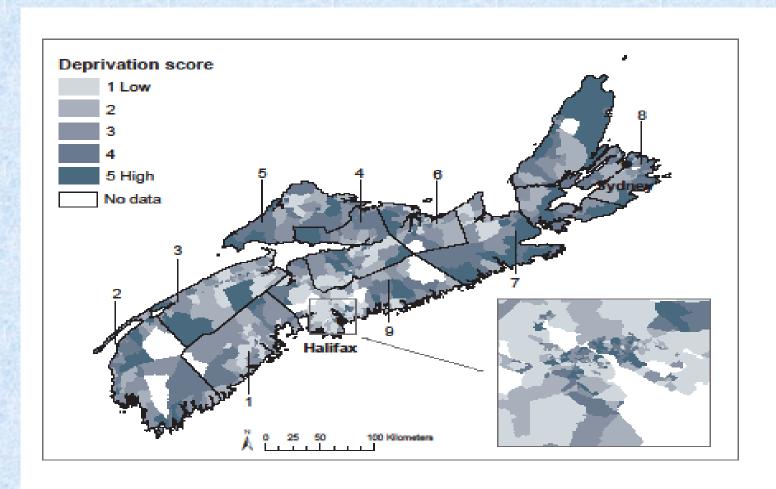
## **Gender and Sex Studies at End of Life**

**Sex:** Biological basis of being male, female, or less commonly, hermaphrodite or neuter. Population census and administrative health services data include sex but not gender. Sex is correlated with nursing home residency, age, and disease for example breast versus prostate cancer.

**Gender:** Social role or personal identity distinct from biological sex; used in social and cultural contexts e.g., qualitative research on family caregiver policies.

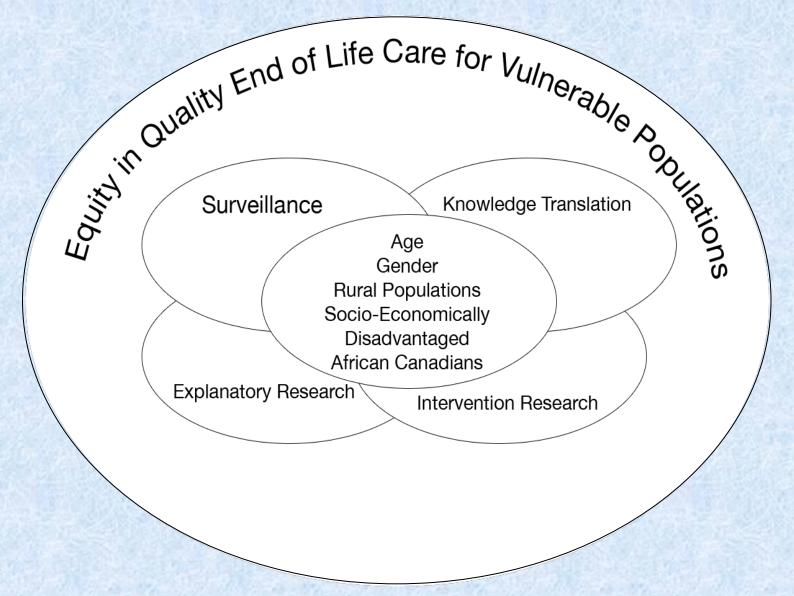
Both sex and gender are associated with vulnerability and influence access to end-of-life care

## **Census-based Deprivation Scores**



## **NELS ICE Project Streams**

- 1. Surveillance of Inequity in Quality End of Life Care
- 2. Vulnerable Populations at End of Life: An Ethical Analysis
- 3. End of Life Care for Children and Youth
- Palliative Care for African Nova Scotians and other Populations: Deaf, SE Asian Immigrants, Aboriginal; qualitative, participatory
- 5. Mortality Follow-Back Study from Death Certificates
- 6. Elderly in Nursing Homes
- 7. Community Care for Chronic Obstructive Pulmonary Disease
- 8. Policies to Support Family Caregivers



## **NELS ICE Research Framework**

## **Knowledge Exchange:**

**2007 Visiting Scholars** 

Dan Hausman, Philosopher: *Equity and Justice*, University of Wisconsin-Madison, USA

Craig Earle, Clinical Research: *Quality Indicators*Previously at Dana Farber, Boston, USA

Harvey Chochinov, Palliative Medicine: *Dignity,* University of Manitoba, Winnipeg, Canada

## **Knowledge Exchange:**

## **2008 Visiting Scholars**

Serge Dumont, Social Work: *Costing Palliative Care* University of Laval, Quebec City, Canada

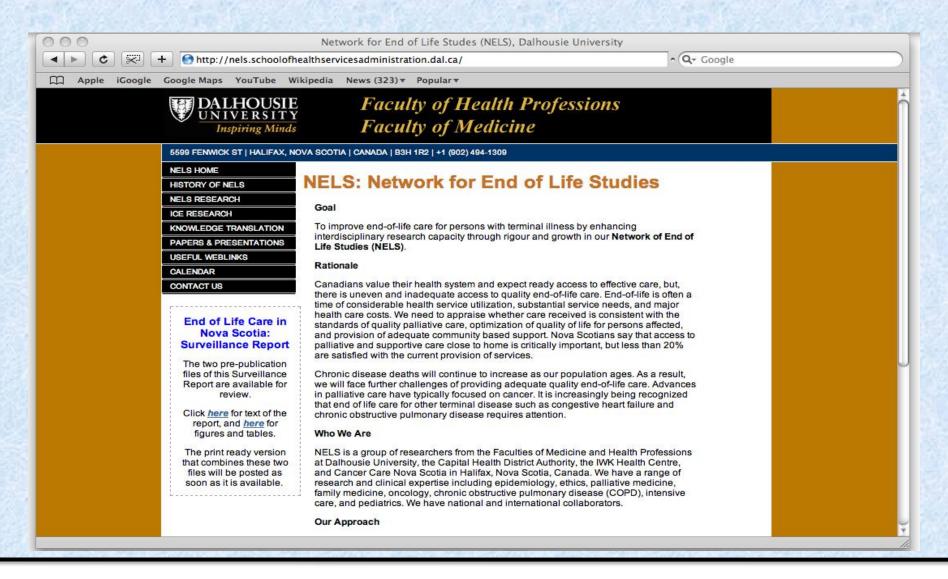
Scott Murray, Family Medicine: *UK Gold Standards*, University of Edinburgh, Scotland

Konrad Fassbender – Economist: *Economic Analyses,* University of Alberta, Edmonton, Canada

### plus

work-in-progress sessions, conferences, website, ....

### **NELS ICE Website: www.nels.dal.ca**



## **Questions after Presentation on:**

Consumer Representation
Vulnerable Populations and Equity
UK Gold Standards
Research Team Development