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Leading knowledge exchange on home and community care

# *The Balance of Care: Applications to Primary Care in China*

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*Capital Medical University, Beijing*

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*The CRNCC is supported by funding from the Social Sciences and Humanities Research Council of  
Canada and Ryerson University.*

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# 本讲座概要 / *Presentation Outline*

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- Health systems sustainability
    - Top line: people
    - Bottom line: cost-effectiveness
  - Balance of Care
    - Determining optimal mix of community and institutional care at the local level
  - Next steps in China-Canada collaboration
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# *Health Systems Sustainability*

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# International Health Care Trends

## 国际卫生保健的方向

(OECD, 2008) 经济合作与发展组织

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- Spending on health care in 30 OECD countries rising steadily 卫生保健的经费在30个经济合作与发展组织国家稳定增长
  - 1992-1997, cost containment, little change  
92到97年, 稍有变动
  - 1997-2006, annual increases averaging 7.8%  
97到02年, 平均年增幅为7.8%
- U.S. health spending grew fastest  
美国健康支出增长最大

# International Health Care Trends

## 国际卫生保健的方向

(OECD, 2008) 经济合作与发展组织

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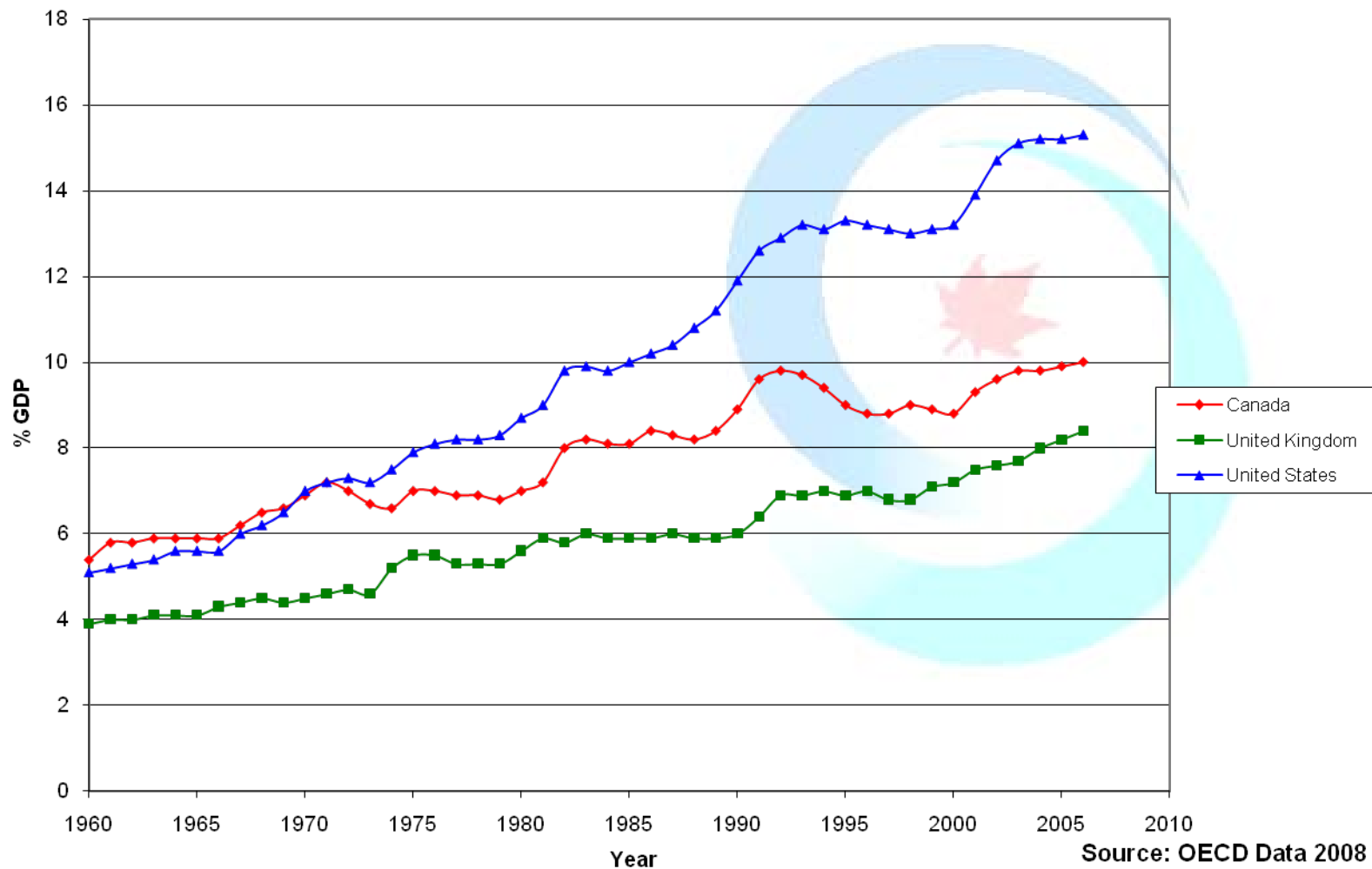
### ■ Factors leading to increased spending

#### 开支增长的主导因素

- Advances in medical technologies  
医疗技术的发展
- Rising public expectations 公众期待提高
- Population aging 人口老龄化

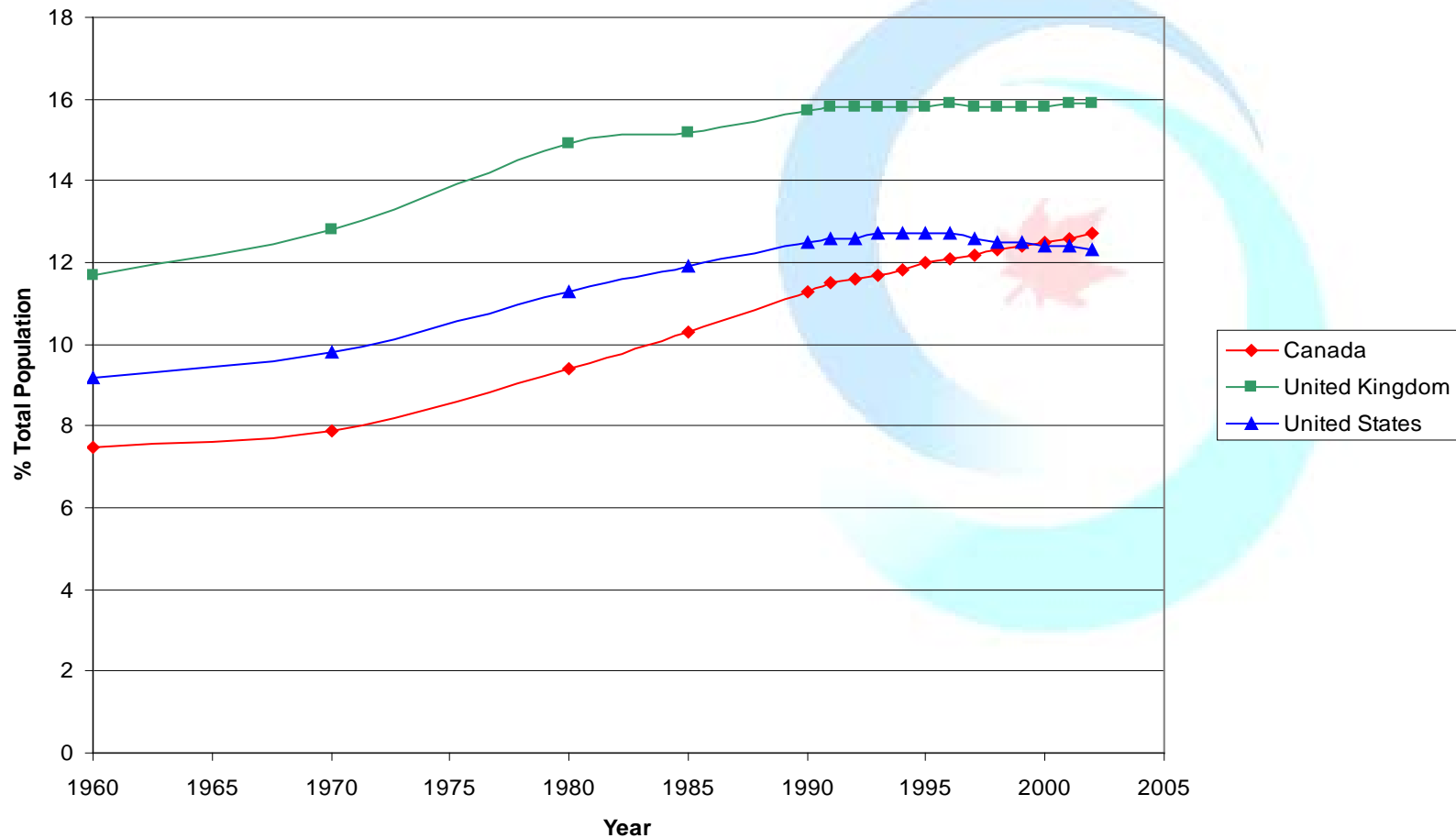
# Total Health Care Spending as %GDP (1960-2006)

## 加拿大、美国、英国从1960年到2006年间 卫生保健花费在国内生产总值中的百分比

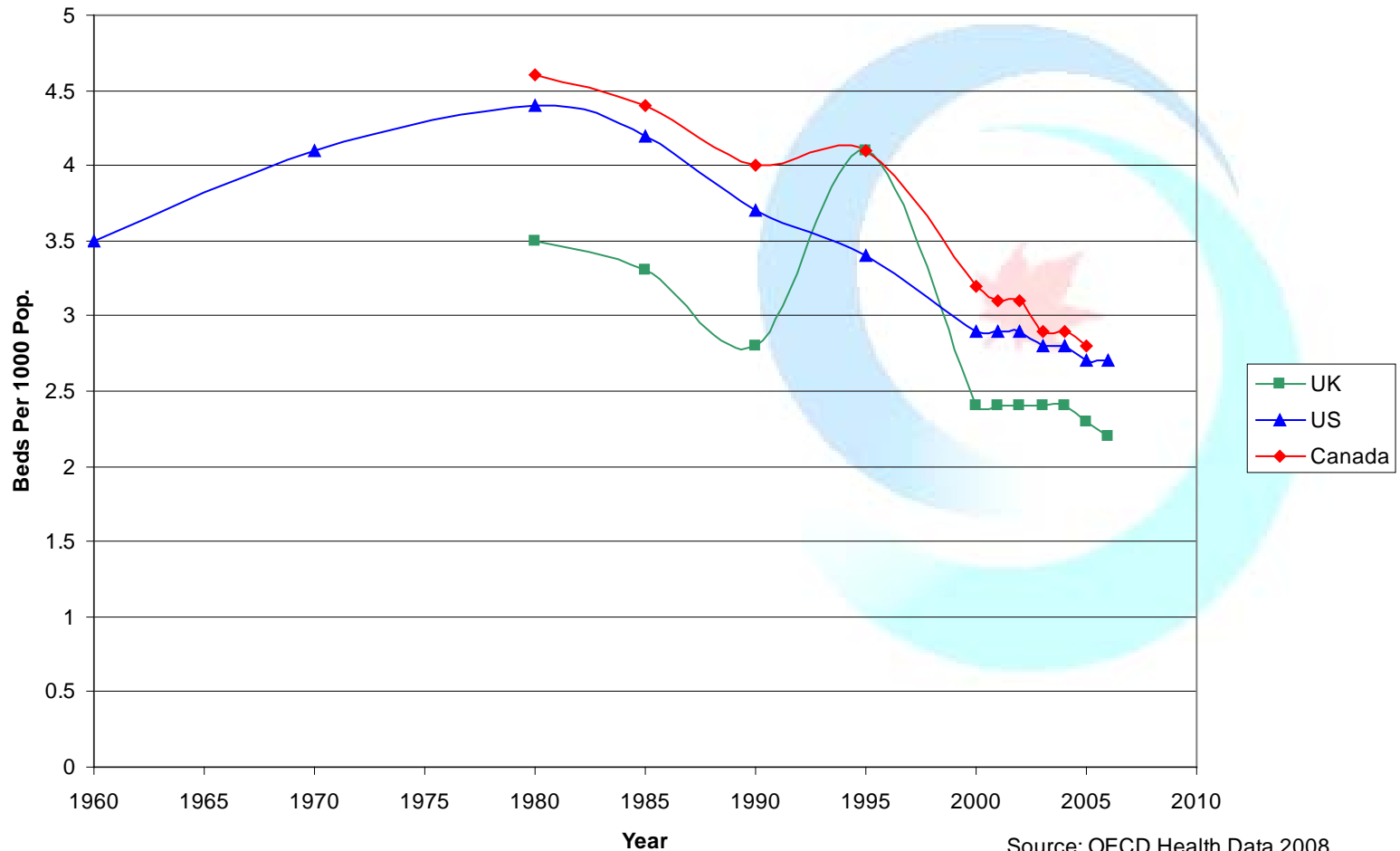


# Population 65+ as % Total Population (1960-2002) / 年间65岁以上人口占总人口数的比例的趋势

Source: OECD Health Data 2004



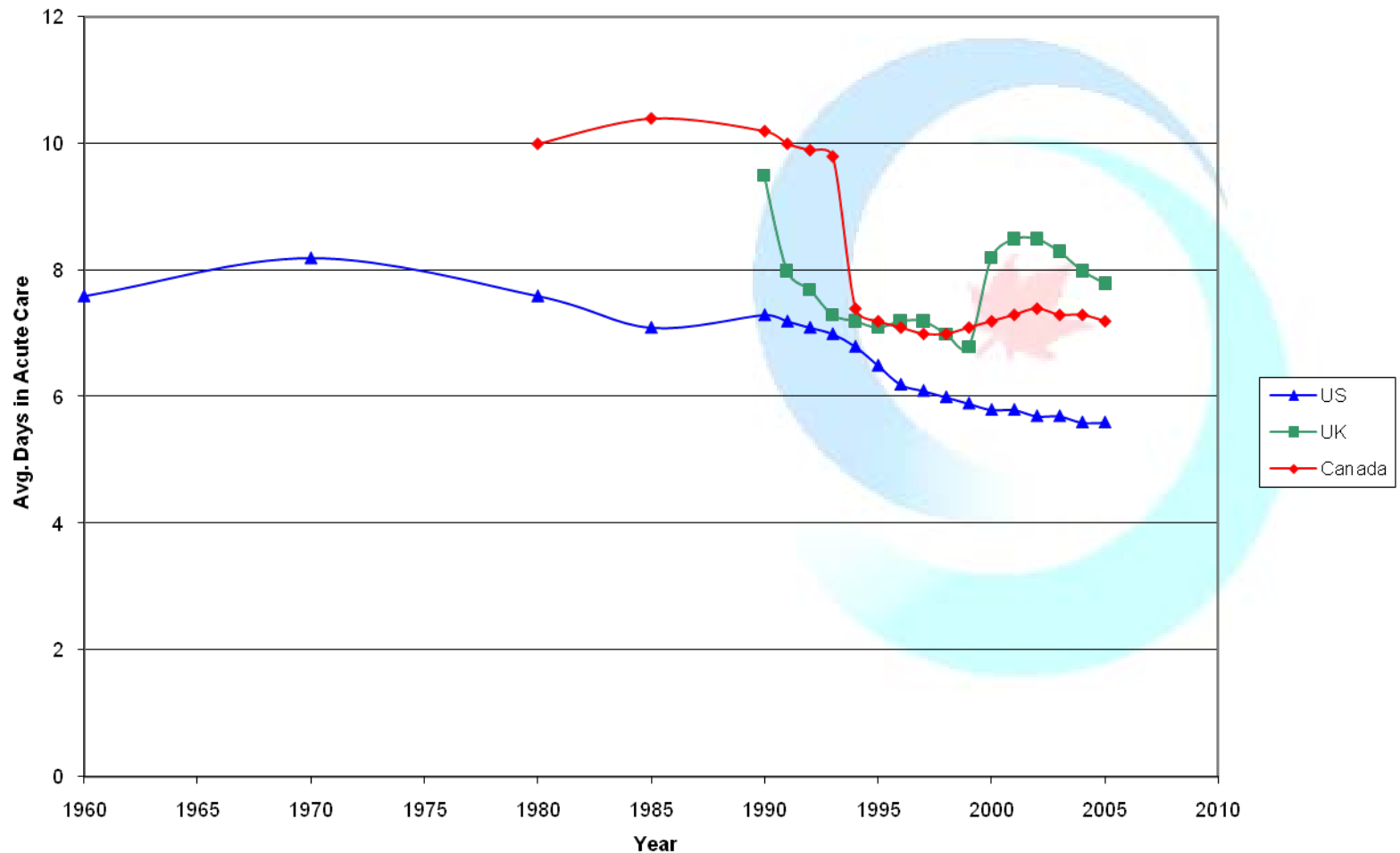
# Acute Care Beds, Per 1000 Population (1960-2006)



Source: OECD Health Data 2008

# Average Length of Stay in Acute Care, Days(1960-2006)

年间重症病患的平均住院天数



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# 保健平衡 / *Balance of Care*

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曼彻斯特大学，个人社会服务研究组(PSSRU)  
Personal Social Services Research Unit (PSSRU),  
University of Manchester

- 保健平衡的目的是确定一个最合适的当地的个人和社区的集合体来满足老龄人口的需求

Balance of Care (BoC) aims to determine most appropriate mix of institutional and community resources at the local level to meet the needs of an aging population

来源/Source: Dr. David Challis -- go to [www.CRNCC.ca](http://www.CRNCC.ca)

## 家庭保健 / Home Care

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- 对经评估合资格的个人提供免费的专业服务  
的诸如护士看护和理疗等

Professional services such as nursing care and physiotherapy for individuals assessed as medically eligible provided at no cost to the client

# 社区保健 / *Community Care*

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- 提供非专业性质的支援服务，如在洗澡、吃饭、穿衣、交通等方面的协助服务  
Non-professional supportive services such as assistance with bathing, eating, dressing, transportation



# Primary Care

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- First Ministers 2004 Agreement  
2004年第一部长协议
  - 50% of Canadians with 24 hour/7day a week access to primary care teams by 2011  
到2011之前确保50%的加拿大人能够获得全天候 的医疗服务

# 保健平衡 / *Balance of Care*

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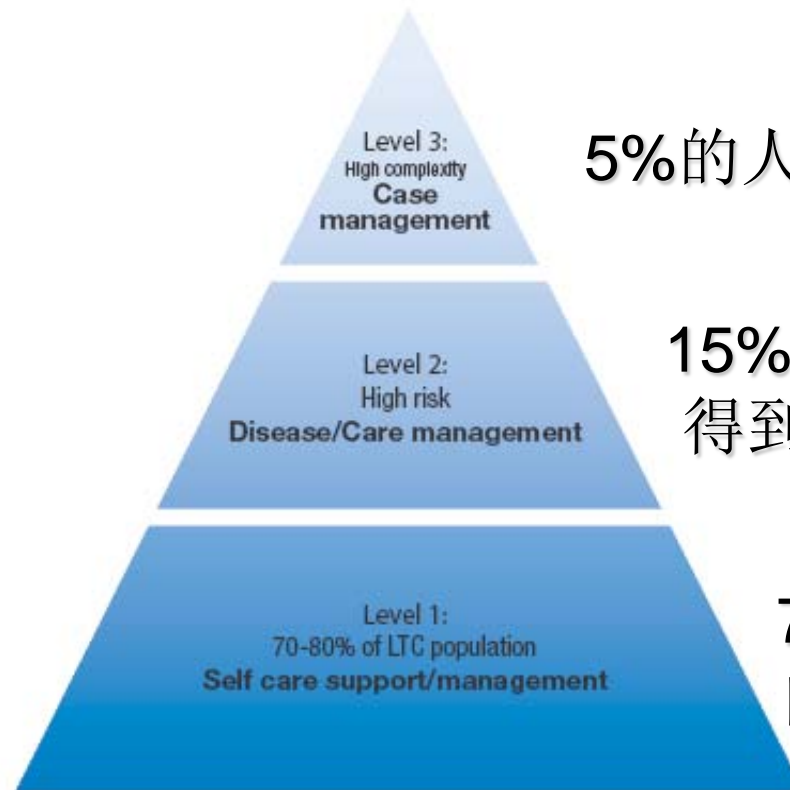
- 一个正在壮大的国际研究组织建议，家庭与社区保健在维持个人和家庭的保健、康乐及自立中可以发挥很重要的作用，同时在下述几个方面可以降低对较贵的急诊、医院就医和长期护理病床的需求：

A growing body of international research suggests that Home & Community Care can play an important role in maintaining the health, well-being and autonomy of individuals and families, while moderating demand for more costly emergency, hospital and long-term care beds when:

- 针对性 Targeted
- 病例的管理 Case managed
- 利于更宽范围的医疗整合

Integrated into broader continuum

# 针对性、整合性、有管理的保健 *Targeted, Integrated, Managed Care*



5%的人口需要特别管理

15%~20%的人口需要  
得到病症高危管理

70%~80%的人口需要  
自我保健管理

## **Kaiser Permanente Triangle**

Source: UK Department of Health (2005)

# 保健平衡 / *Balance of Care*

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- **Demand side:** individual characteristics
  - Physical, psychological and social needs  
需求方在体质、心理及社会方面的需要等个体特性所决定
- **Supply side:** system characteristics
  - Access to safe, appropriate, cost-effective H&CC  
服务方在提供安全、合宜、高成本效益的家庭与社区护理等体系特性所决定

# 长期护理中心的等待队伍

## LTC Wait Lists

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排队等候进入长期护理中心的人数 / LTC wait lists

- Waterloo 1100
- Toronto Central 1700
- Central 2600
- North West 600 (urban/rural/remote)
- North East 1460 (supportive housing)
- South West 2300 (mental health)
- Central West 725 (diversity)
- North Simcoe Muskoka 1758 (ER/ALC)
- Champlain

# *North Simcoe Muskoka Steering Committee*

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- **Doriano Calvano**, County of Simcoe Social Services Department
- **Jean Drumm**, Royal Victoria Hospital
- **Sandra Easson-Bruno**, Royal Victoria Hospital
- **Marliese Gause**, The Friends
- **Carrie Harrison**, Canadian Red Cross Society
- **Norah Holder**, Orillia Soldiers' Memorial Hospital
- **Lynn Huizer**, North Simcoe Muskoka LHIN
- **Brenda MacPherson**, North Simcoe Muskoka Community Care Access Centre
- **Julie Matuszek**, Canadian Red Cross
- **Janice McCuaig**, Corporation of the County of Simcoe
- **Dr. Andrea Moser**, Algonquin Family Health Team
- **Cate Root**, North Simcoe Muskoka Palliative Care Network
- **Ulla Rose**, Victorian Order of Nurses
- **Doreen Saunders**, IOOF Seniors Homes Inc.
- **Karen Taillefer**, North Simcoe Muskoka Community Care Access Centre
- **Lorna Tomlinson**, Wendat Mental Health & Addictions



# *North Simcoe Muskoka Expert Panel*

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- **Kelly Brownbill** - Aboriginal Health Circle North Simcoe Muskoka
- **Doriano Calvano** - Country of Simcoe, social Services Division
- **Shelley Clarke** - Royal Victoria Hospital
- **Tanya deVries** Porter - Trillium Manor
- **Bonnie Euler** - Addiction Outreach Muskoka Parry Sound
- **Patrice Fillion** - CCAC
- **Michelle Foster** - Georgian Bay Metis Council
- **Louis Gagne** - Deaf Access Simcoe Muskoka Inc.
- **Yvonne Green** - Regional Services Coordinator
- **Alison Hamilton** - Royal Victoria Hospital
- **Barb Henderson** - CCAC
- **Miriam Luddington** - Muskoka Algonquin Health Centre
- **Belinda Robitaille** - IOOF Seniors Homes Inc.
- **Ulla Rose** - VON
- **Kelly Sawyer** - The Friends
- **Terry Smith** - CCAC
- **Gary Staines** - Helping Hands (Orillia)
- **Emily Turner** - North Simcoe Hospital Alliance
- **Kristy Webber** - Wendat Community Psychiatric Support Programs



# 迷惑 / *Confusion*

认知表现的度量：短期记忆，作决定、有表情的交流、吃食物等自我表现的认知技能

Cognitive Performance Scale: short term memory, cognitive skills for decision-making, expressive communication, eating self-performance

	<i>Toronto</i>	<i>Central</i>	<i>Central West</i>
<b>Intact</b>	48%	38%	33%
<b>Not Intact</b>	52%	62%	67%
<b>Total</b>	1684	2631	725

# 日常生活活动功能量表

## Activities of Daily Living (ADLs)

个人表现阶层表 - 食饭, 个人卫生, 运动, 使用厕所

Self-Performance Hierarchy Scale – eating, personal hygiene, locomotion, toilet use

	<i>Toronto</i>	<i>Central</i>	<i>Central West</i>
<b>Low Difficulty</b>	43%	41%	34%
<b>Medium Difficulty</b>	28%	29%	25%
<b>High Difficulty</b>	29%	30%	41%

# 日常生活活动功能量表 / *Instrumental Activities of Daily Living (IADLs)*

难度表 - 做饭，做家务，用电话，及用药管理  
IADL Difficulty Scale - meal preparation, housekeeping, phone use and medication management / IADL

	<i>Toronto</i>	<i>Central</i>	<i>Central West</i>
<b>Low Difficulty</b>	3%	1%	1%
<b>Medium Difficulty</b>	32%	25%	26%
<b>High Difficulty</b>	65%	74%	73%

# 护理者与受护理者同住? / Caregiver Living with Client?

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	<i>Toronto</i>	<i>Central</i>	<i>Central West</i>
<b>Yes</b>	35%	55%	56%
<b>No</b>	65%	45%	44%

# Central Vignettes / 多伦多中部的老人类型

Type/典型	Confusion / 迷惑	ADL Difficulty / ADL 难度	IADL Difficulty / IADL 难度	Live with Caregiver? / 于照顾者住?	Frequency (Percent) / 频率 (%)
1-Appleton	Intact / 未退化的	Low / 低	Low / 低	Yes / 是	7 (0.3)
2-Bruni	Intact / 未退化的	Low / 低	Low / 低	No / 否	23 (0.9)
3-Copper	Intact / 未退化的	Low / 低	Medium / 中等	Yes / 是	155 (5.9)
4-Davis	Intact / 未退化的	Low / 低	Medium / 中等	No / 否	257 (9.8)
5-Eggerton	Intact / 未退化的	Low / 低	High / 高	Yes / 是	92 (3.5)
6-Fanshaw	Intact / 未退化的	Low / 低	High / 高	No / 否	82 (3.1)
7-Grimsby	Intact / 未退化的	Medium / 中等	Low / 低	Yes / 是	1 (0.0)
8-Hamilton	Intact / 未退化的	Medium / 中等	Low / 低	No / 否	1 (0.0)
9-Islington	Intact / 未退化的	Medium / 中等	Medium / 中等	Yes / 是	34 (1.3)
10-Jones	Intact / 未退化的	Medium / 中等	Medium / 中等	No / 否	27 (1.0)
11-Kringle	Intact / 未退化的	Medium / 中等	High / 高	Yes / 是	77 (2.9)
12-Lambert	Intact / 未退化的	Medium / 中等	High / 高	No / 否	50 (1.9)
13-Moore	Intact / 未退化的	High / 高	Low / 低	Yes / 是	0
14-Nickerson	Intact / 未退化的	High / 高	Low / 低	No / 否	0

# Central Vignettes / 多伦多中部的老人典型

Type/典型	Confusion / 迷惑	ADL Difficulty / ADL 难度	IADL Difficulty / IADL 难度	Live with Caregiver? / 于照顾者住?	Frequency (Percent) / 频率 (%)
29- C. Cameron	NI / 退化了的	Medium / 中等	High / 高	Yes / 是	331 (12.6)
30-D. Daniels	NI / 退化了的	Medium / 中等	High / 高	No / 否	210 (8.0)
31-E. Edwards	NI / 退化了的	High / 高	Low / 低	Yes / 是	0
32-F. Fish	NI / 退化了的	High / 高	Low / 低	No / 否	0
33-G. Gallo	NI / 退化了的	High / 高	Medium / 中等	Yes / 是	1 (0.0)
34-H. Hogan	NI / 退化了的	High / 高	Medium / 中等	No / 否	3 (0.0)
35-I. Innis	NI / 退化了的	High / 高	High / 高	Yes / 是	378 (14.4)
36-J. Johns	NI / 退化了的	High / 高	High / 高	No / 否	225 (8.6)

Total Sample / 总共样品数 = 2631

Included in analysis / 上面分析中包含的样品数 = 2374

# 多伦多老人的典型描述列子

## *Toronto Vignette Example*

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Copper is cognitively intact.

Copper is functionally independent in all ADLs except bathing (limited assistance is required).

Copper has no difficulty using the phone, some difficulty with transportation & managing medications, great difficulty with meal preparation, housekeeping.

Copper has a live-in caregiver who provides advice/emotional support and assistance with IADLs.

# 为Cooper所准备的多伦多护理计划 Toronto Care Package for Copper

<b>Service 服务</b>	<b>Frequency 频率</b>
<b>Meals on Wheels</b>	3 times per week
<b>Congregate Dining</b>	Once per month
<b>Transportation</b>	1 two-way trip per week
<b>Home Maintenance</b>	Once per month
<b>Caregiver Support Group</b>	One hour every other week
<b>Home Help/Homemaking</b>	2 hours every other week
<b>In-Home Support PSW (CCAC)</b>	2 hours per week
<b>Occupational Therapist (CCAC)</b>	Assessment once a week (total 2 visits)
<b><i>Care Monitoring once every six months</i></b>	

# 为Copper所准备的多伦多护理计划/ Toronto Care Package for Copper

服务

SERVICE	MINISTRY CODE	UNIT =	COST/UNIT OF SERVICE TO MINISTRY	UNITS OF SERVICE FOR 13 WEEKS	TOTAL MINISTRY COST
Meals on Wheels	02A	Meal	\$11.00	39	\$429.00
Congregate Dining	03A	Attendance	\$12.43	3.25	\$40.40
Transportation	04A	1-Way Trip	\$17.26	26	\$448.76
Home Maintenance	05C	1 Job	\$15.11	3.25	\$49.11
Home Help/Homemaking	09B	Hour	\$28.63	13	\$372.19
Caregiver Support Group	08A	Hour	\$72.30	6.5	\$469.95
In-Home Support PSW (CCAC)	10A	Hour	\$26.29	26	\$683.54
Occupational Therapy Case Management	17A	Visit	\$94.85	2	\$189.70
Community Care Package					\$2,682.65
Supportive Housing*					\$1,795.30
Supportive Housing					\$2,835.95
Supportive Housing					\$3,498.43
Long-Term Care Home @ \$80.00/day					\$7,259.07

总共费用

社区护理计划

支援住房

长期护理中心

\*3 local scenarios

# 多伦多市的护理转换效果 (加元)

## Toronto Divert Rate

Group / 小组	Confusion / 迷惑	ADL Difficulty / ADL 难度	IADL Difficulty / IADL 难度	Live with Caregiver? / 于照顾者住?	Frequency (Adjusted Percent) / 调整频率 (%)	Long-Term Care (13 weeks) 长期护理 (13 星期)	Line by Line (13 weeks) 每个特征 (13 星期)	Supportive Housing (13 weeks) 转换: 支援住房 (13 星期)
3-Copper	Intact / 未退化的	Low / 低	Medium / 中等	Yes / 是	75 (5.1%)	<b>\$7259.07</b>	\$2,682	\$1,795. to \$3,498
4-Davis	Intact / 未退化的	Low / 低	Medium / 中等	No / 否	281 (19%)	<b>\$7259.07</b>	\$3,743	\$3,896 to \$5,603
6-Fanshaw	Intact / 未退化的	Low / 低	High / 高	No / 否	84 (5.6%)	<b>\$7259.07</b>	\$3,985	\$4,138 to \$10,468
10-Jones	Intact / 未退化的	Medium / 中等	Medium / 中等	No / 否	43 (2.9%)	<b>\$7259.07</b>	\$12,469.	\$5,537 to \$8525
12-Lambert	Intact / 未退化的	Medium / 中等	High / 高	No / 否	63 (4.3%)	<b>\$7259.07</b>	\$15,431.	\$7,726 to \$22,366

# 多伦多市的护理转换效果 (加元)

## Toronto Divert Rate

Group / 小组	Confusion / 精神混乱	ADL Difficulty / ADL 难度	IADL Difficulty / IADL 难度	Live with Caregiver? / 于照顾者住?	Frequency (Adjusted Percent) / 调整频率 (%)	Long-Term Care (13 weeks) 长期护理 (13 星期)	Line by Line (13 weeks) 每个特征 (13 星期)	Supportive Housing (13 weeks) 转换: 支援住房 (13 星期)
30-D. Daniels	NI / 退化了的	Medium	High / 高	No / 否	176 (11.9%)	<b>\$7259.07</b>	N/A	<b>N/A</b>
35-I. Innis	NI / 退化了的	High / 高	High / 高	Yes / 是	175 (11.8%)	<b>\$7259.07</b>	\$23,322.88	\$5,981.11 to \$8,208.75
36-J. Johns	NI / 退化了的	High / 高	High / 高	No / 否	161 (10.9%)	<b>\$7259.07</b>	N/A	<b>N/A</b>
<b>Line by Line Divert Rate</b>							<b>37%</b>	
<b>Housing Divert Rate</b>								<b>49.9% to 52.7%</b>

# 安大略省滑铁卢市和多伦多市的护理转换效果总结 / *Divert Rates*

	Divert: Line by Line / 转换: 每个特征	Divert: Supportive Housing / 转换: 支援住房	LTC Required / 需要长期护理 的老人
Waterloo/ 滑铁卢	49%	N/A	25%
Toronto/ 多伦多	37%	50-53%	20%

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# *Applications to China*

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## *Outcomes in Ontario*

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- Ontario regions now using Balance of Care findings to plan and implement community-based services for older people (Aging at Home)
  - Targeted at “high risk” (high cost) older people family caregivers
  - Case managed
  - Include home care, community care, primary care

# Targeting Ambulatory Care Sensitive Conditions (ACSC)

## 针对日常照护能改善的各种状况 (ACSC)

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- Clinical conditions for which hospitalizations may be avoidable through appropriate ambulatory care

有些疾病可以经由适当的日常照护就控制稳定进而减少住院的机会

- Asthma, Angina, Congestive Heart Failure, Hypertension, Epilepsy, Diabetes, Chronic Obstructive Pulmonary Disease  
气喘 狭心症 心脏衰竭 高血压 癫痫症 糖尿病 慢性阻塞性肺病

- What could be done better outside the hospital (e.g., primary care, home care)?

哪些照护工作在医院外可以做得更好？ 如基层照护 居家照护

# *Next Steps in China-Canada Collaboration*

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- Identify target population in local area
  - E.g., seniors, ACSC patients in hospital
- Access best available demographic/epidemiological data
- “Map” current balance of care (community-based and institutional resources) at the local level

# *Next Steps in China-Canada Collaboration*

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- Convene panels of local experts
- Conduct Balance of Care simulation
- Assess how shifts in balance of institutional and community-based care could impact on individuals (health outcomes) and system (cost-effectiveness)

# *Next Steps in China-Canada Collaboration*

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- Compare to Canadian findings and identify transferable “innovations” and “lessons learned”



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