Bioethics Conference Contribution of medical education to end of life care: July 15

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What are the challenges?

- End of life: Euthanasia

  Advance Directives
  Quality of dying
- Long term care: issues of autonomy and dignity; elder abuse
- Equitable service?

Euthanasia

- Is this an ultimate act of autonomy, or a reflection of poor care so that the quality of dying is bad?
- Legalized in Netherlands, Belgium and Luxembourg. Variation in acceptance from West to East. [Cohen et al Int J Public Health 2014]
- A HK survey showed that about 60% of people wish to debate this issue [Chong A. City U]

The Need for Better End of Life Care in Hong Kong

Quality of End-Of-Life

- Typical deaths are slow, associated with chronic diseases in persons with multiple problems, marked by increasing dependency and care needs
- Quality of life during the dying process is often poor because of inadequate treatment of distress; fragmented care; strains on the family, support systems
- Difficult decisions about use of life-prolonging treatments are commonly necessary

Barriers towards improvement

- ‘Taboo’ subject
- Represent medical failure; unrealistic expectations of medical technology; lack of understanding of the concept of futility
- Lack of trained personnel
- Lack of research
- Lack of psychological support
- Low priority within healthcare systems

Advance Directives

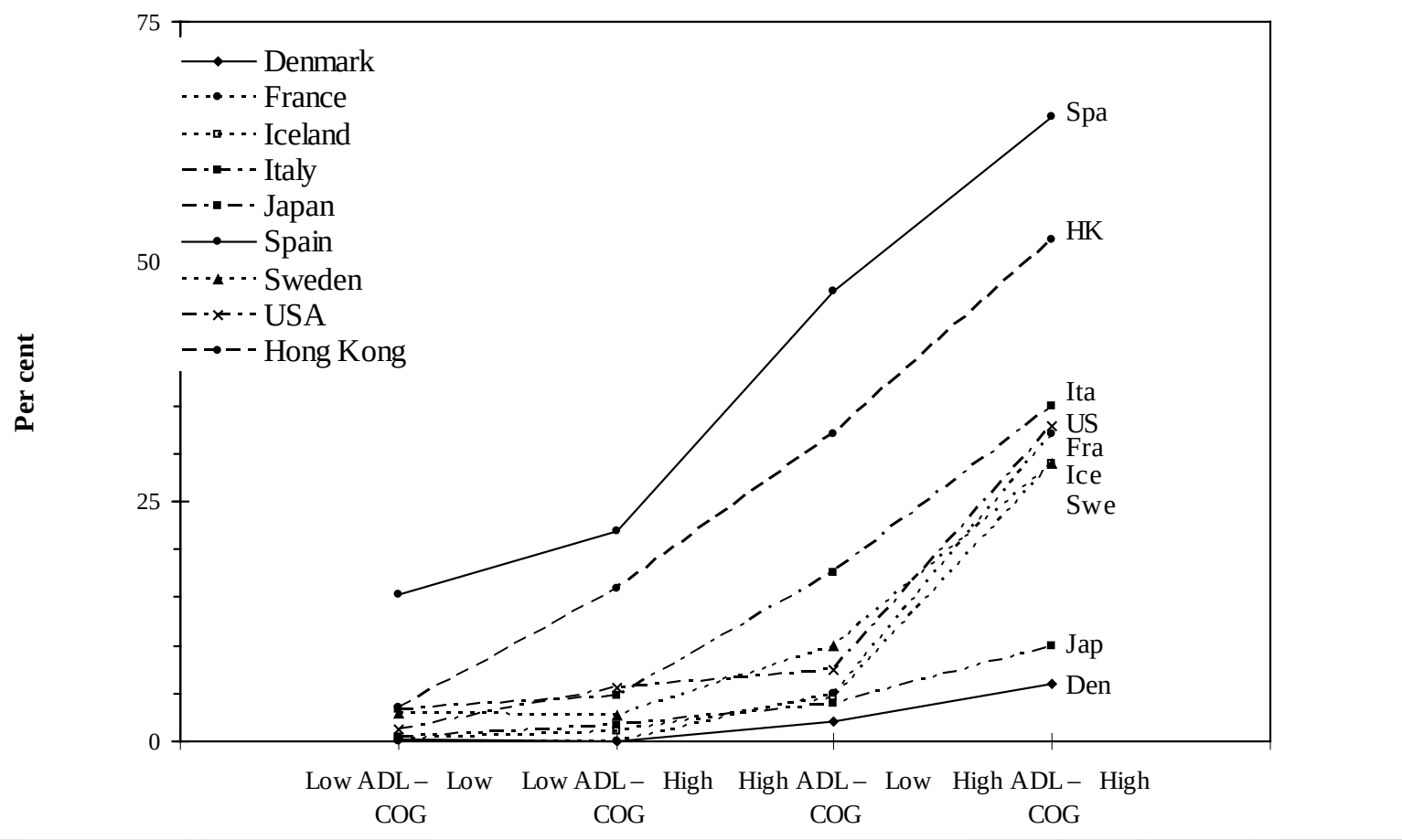
- Survey of 1600 cognitively normal older people in 140 nursing homes in Hong Kong, mean age 82.4 years
- 94% prefer to be informed of terminal disease diagnosis
- 88% prefer to implement advanced directives
- 35% prefer to receive end of life care and die in their nursing homes
  [Chu et al JAMDA 2011;12:143-152]

Long Term care issues

- Tube feeding
- Restraint use
- Toiletting need
- Elder abuse

Hospitals and residential care homes for the elderly: Problems with autonomy; dignity

Restraint rates in nursing homes worldwide



Woo J 2004; J Gerontology

Equity in care

- Accessibility to primary care variations
- ‘Ageism’ in health care resource allocation?
- Regional variations in health outcomes

Special issues: Equity

- Those with equal needs should receive equal care
- The phenomenon of ageism
  - older patients receive lower priority than younger patients with regard to expensive health technology
  - older patients incur more costs in acute health care
- Need to avoid care plans based on age alone

Special issues: quality v. affordability

- Where resources are limited, quality of care may be influenced by its availability.
- Establishment of a gradation of needs, starting from basic needs.
- Difficult to avoid poorer quality of care as a result of limitation of resources, although there is a wide variation in quality of care at any given level of resources.

Scenario 1

- An 80 year old man living alone in a ground floor flat was found to be holding a or knife, fighting off ‘ghosts’. Although he is ethnic Chinese, he has spent a long time in the US and can only speak English. He has refused long term care placement
- What is the optimal possible care plan that can be devised

Scenario 2

- You are in charge of medical services of an acute hospital serving 1 million people. It is winter and there is a queue of people waiting in the corridor in A&E waiting for admission to the medical wards. The average duration of stay in your wards is 4 days. 75% of the patients are >=70 years.
- Your HCE, who reviews your annual performance and determines your pay increment, requests action to deal with the problem. Please formulate a plan.

District variations in self-rated health, frailty & 4 year mortality in HK Chinese aged >=65 years

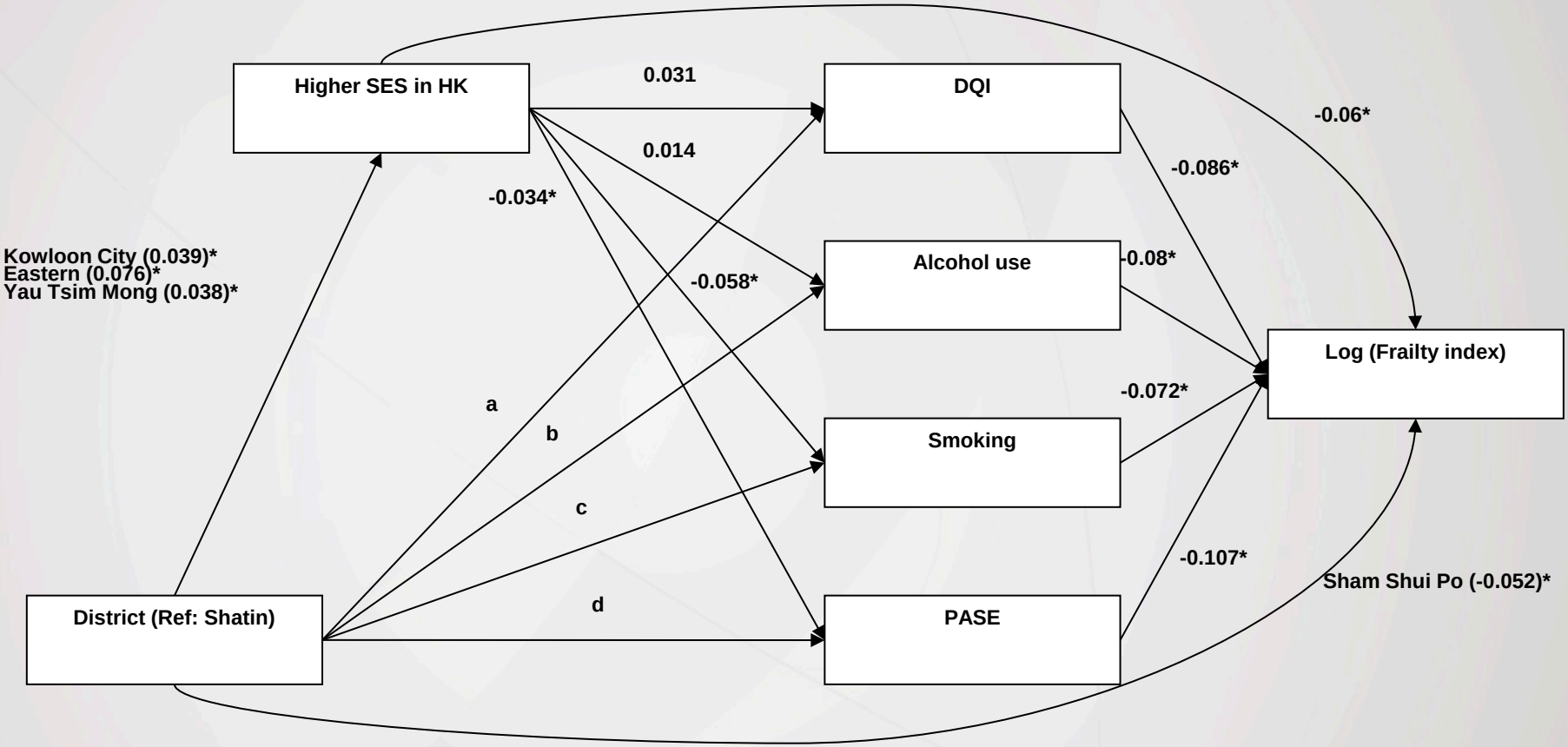
- Lifestyle, SES & regional characteristics directly & indirectly through interactions contribute to these health outcomes

  Reference:

- *Woo J et al. (2010) Relative Contributions of Geographic, Socioeconomic, and Lifestyle Factors to Quality of Life, Frailty, and Mortality in Elderly. PLoS ONE 5(1): e8775. doi:10.1371/journal.pone.0008775*

Results

Path analysis model of FI(log) (adjusted for age & sex)



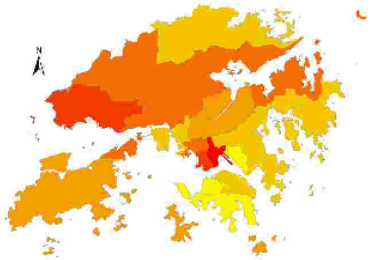
a: Tsuen Wan (-0.04)*, Kowloon City (0.042)*
b: Eastern (0.043)*
c: Kowloon City (-0.058)*, Eastern (-0.082)*
d: Kwai Tsing (-0.046)*, Yuen Long (-0.061)*, Kowloon City (-0.050)*, Kwun Tong (-0.045)*, Eastern (-0.052)*, Yau Tsim Mong (-0.057)*
*p<0.05
Coefficients within path: standardized β from regression

Findings

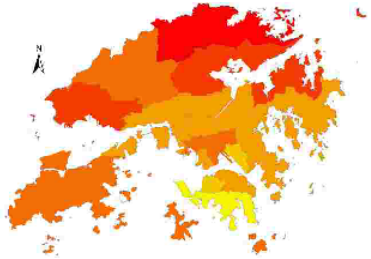
- Our findings
  - District variation in health outcomes among Chinese elderly in HK
  - District of residence, SES & lifestyle factors directly & indirectly affect the studied health outcomes
  - Higher self-rated SES and better lifestyle (e.g. better diet quality, more physically active) contribute to better health outcomes

Age-adjusted hip fracture case fatality rates by DC districts in Hong Kong, by year of occurrence

a. 30-day case fatality, 2000 – 2004



b. 30-day case fatality, 2005 –2009

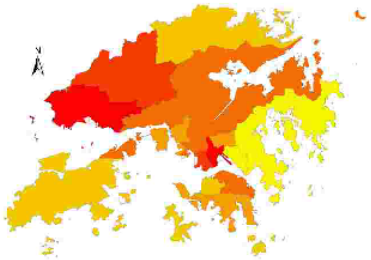


Legend

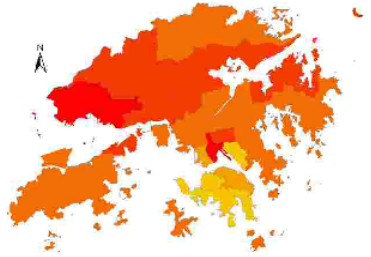
Age-adjusted 30-day case fatality rate

- =< 2.3
- 2.4 - 2.9
- 3.0 - 3.5
- 3.6 - 4.1
- 4.2 - 4.7
- >= 4.8

a. 180-day case fatality, 2000 – 2004



b. 180-day case fatality, 2005 – 2009

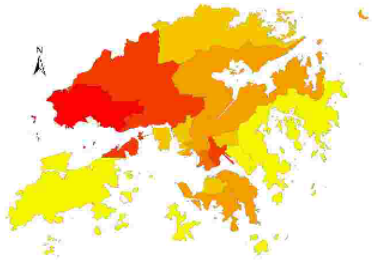


Legend

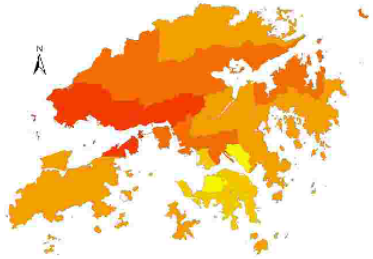
Age-adjusted 180-day case fatality rate

- =< 9.9
- 10.0 - 10.9
- 11.0 - 11.9
- 12.0 - 12.9
- 13.0 - 13.9
- >= 14.0

a. 360-day case fatality, 2000 – 2004



b. 360-day case fatality, 2005 – 2009

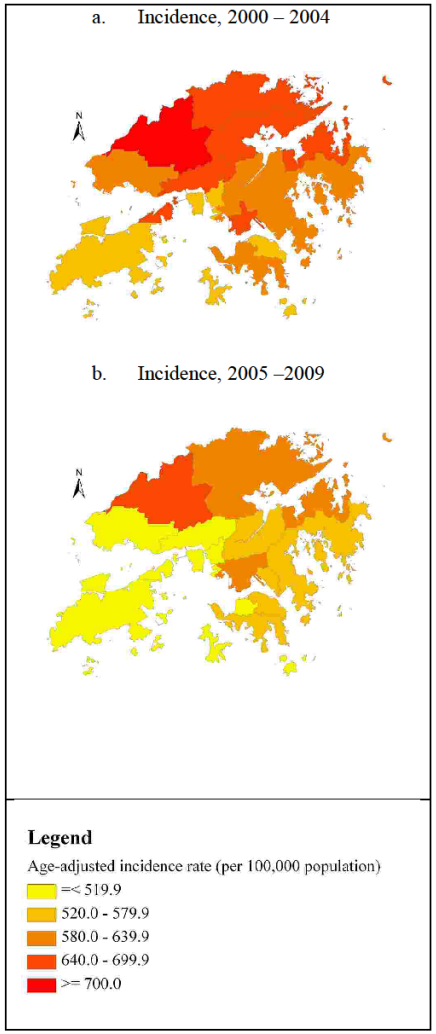


Legend

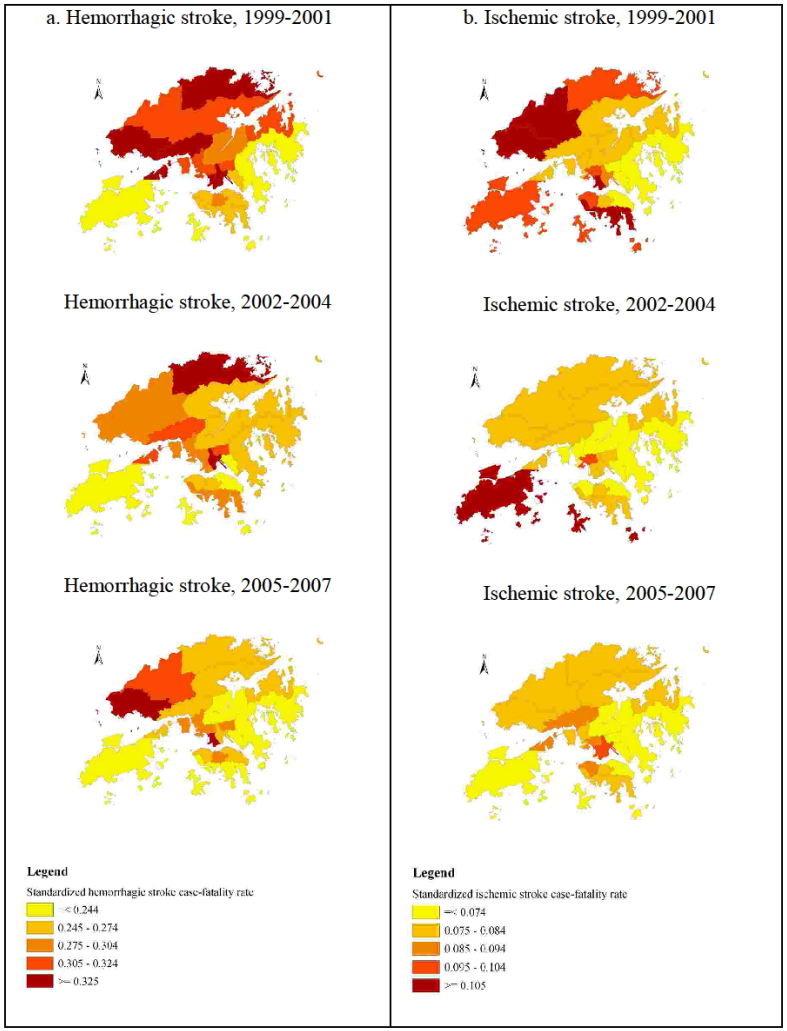
Age-adjusted 360-day case fatality rate

- –< 15.5
- 15.6 - 17.0
- 17.1 - 18.5
- 18.6 - 20.0
- 20.1 - 21.9
- >= 22.0

Age-adjusted hip fracture incidence rates by DC districts in Hong Kong, by year of occurrence

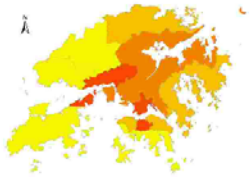


Age-standardized stroke case-fatality rates by DC districts in Hong Kong, by stroke subtypes and periods

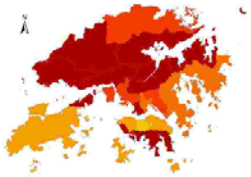


Age-standardized stroke incidence rates by DC districts in Hong Kong, by stroke subtypes and periods

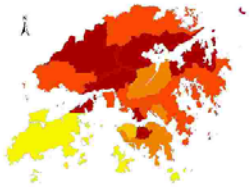
a. Hemorrhagic stroke, 1999-2001



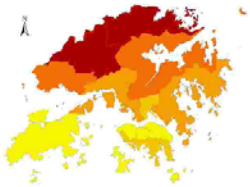
b. Ischemic stroke, 1999-2001



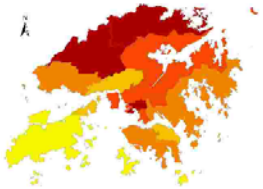
Hemorrhagic stroke, 2002-2004



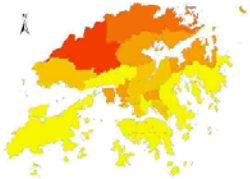
Ischemic stroke, 2002-2004

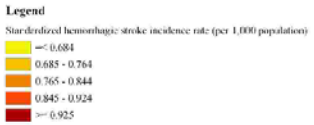


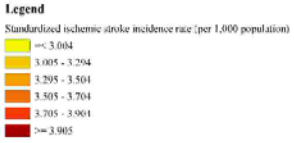
Hemorrhagic stroke, 2005-2007



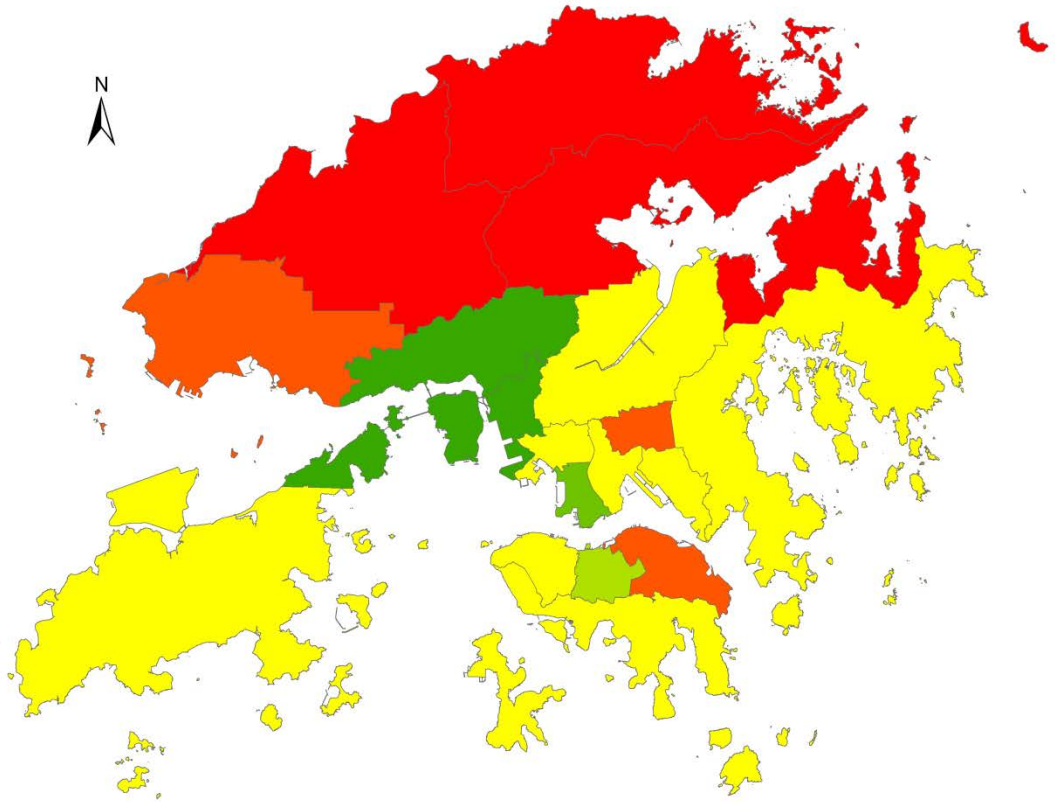
Ischemic stroke, 2005-2007







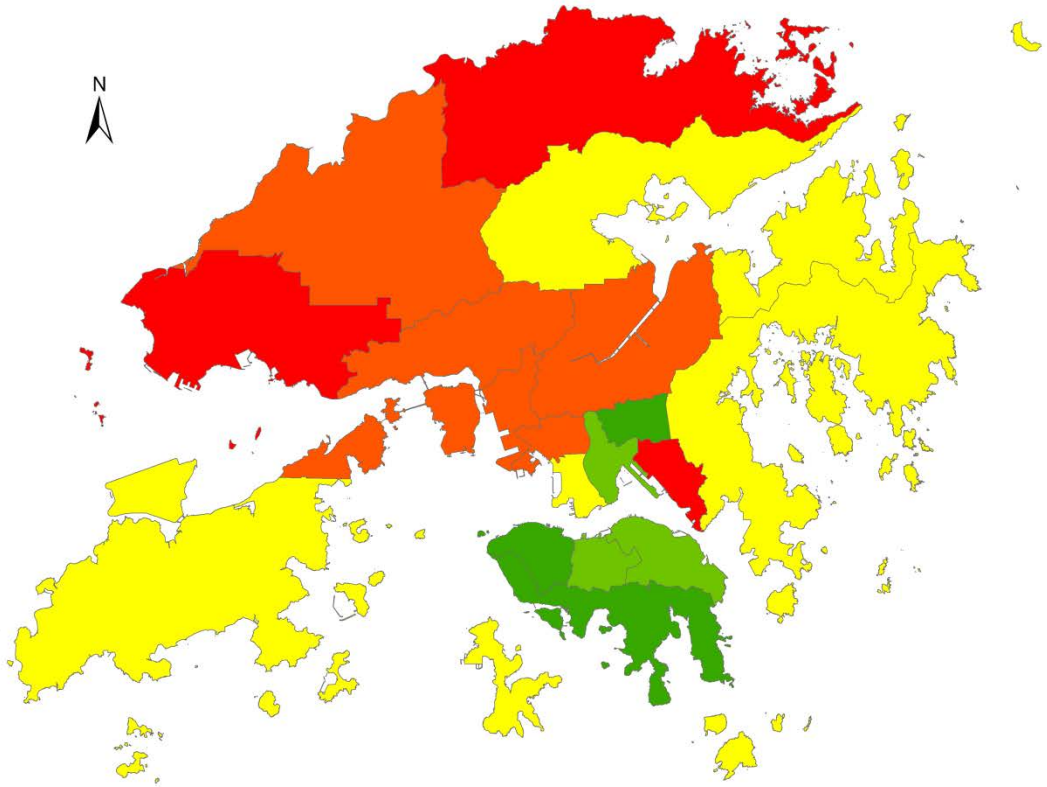
Bed adequacy in public hospitals



Categories of bed adequacy ratio

- Adequacy ratio significantly high, in top one-sixth
- Adequacy ratio significantly high, not in top one-sixth
- Adequacy ratio not significantly high, in top one-sixth
- Other communities
- Adequacy ratio not significantly low, in bottom one-sixth
- Adequacy ratio significantly low, not in bottom one-sixth
- Adequacy ratio significantly low, in bottom one-sixth

Primary care adequacy in community



Categories of primary care adequacy ratio

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- Adequacy ratio significantly high, not in top one-sixth
- Adequacy ratio not significantly high, in top one-sixth
- Other communities
- Adequacy ratio not significantly low, in bottom one-sixth
- Adequacy ratio significantly low, not in bottom one-sixth
- Adequacy ratio significantly low, in bottom one-sixth

Needs for Prioritization

- HK government healthcare budget is unable to keep up with the demand.
- Some form of rationing in health services seems to be inevitable.
- However, there has been
  - No official acknowledgement of the needs for prioritization
  - Little discussion of this issue among policy makers, professionals and the general public

Results (i)

- Priority Ranking of the 12 Health Services:
  1. Treatment for children
  2. High technology surgery
  3. Preventive screening services
  4. Surgery to help people carry out everyday tasks
  5. Health promotion / education services
  6. Psychiatric services
  7. District nursing & community services / care at home
  8. Long stay hospital care for elderly people
  9. Treatment for people aged >75
  10. Special care & pain relief for people who are dying
  11. Intensive care for premature babies
  12. Treatment for infertility

Healthcare professionals vs. General public

Results (ii)

- “If resources are to be rationed, higher priority should be given to treating the young rather than the elderly.”
  - 44% agreed (vs. 34% disagreed)
- “Surveys of the general public’s opinions, like this one, should be used in the planning of health services.”
  - 77% agreed

Results (iii)

- Respondents were asked to rank who should set priorities:
  - Doctors at local level (43%)
  - The public (21%)
  - Hospital Authority (19%)
  - Hospital mangers (11%)
  - Politicians and the government (6%)
- “The responsibility for rationing health care should rest with doctors.”
  - 48% agreed (vs. 34% disagreed)

UK Results (iii)

- "The responsibility for rationing health care should rest with doctors."
  - 75% agreed (vs. 15% disagreed)
- "Surveys of the general public's opinions, like this one, should be used in the planning of health services."
  - 91% agreed
- "If resources are to be rationed, higher priority should be given to treating the young rather than the elderly."
  - 50% agreed (vs. 29% disagreed)

International Comparison

	HK	UK
Treatment for children	1	1
High technology surgery	2	7
Preventive screening services	3	3
Surgery to help people carry out everyday tasks	4	4
Health promotion / education services	5	8
Psychiatric services	6	6
District nursing and community services	7	5
Long stay hospital care for elderly people	8	10
Treatment for people aged >75	9	12
Special care & pain relief for people who are dying	10	2
Intensive care for premature babies	11	9
Treatment for infertility	12	11

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Treatment for infertility	12	11

Bibliography

- Aging in Hong Kong: a comparative perspective.
  Jean Woo Ed.

  International Perspectives on Aging 5
  Series Editors : Jason L Powell, Sheying Chen. Springer , 2013

How should medical education address these challenges?

- Train the teachers/service providers
- Include these as core part of training of all health and social care professionals, anchored in real life cases, discussion forum
- Tackling challenges in service settings: incorporating these areas as continuous quality improvement initiatives in hospitals and residential care homes for the elderly

Improving end-of-life care for non-cancer patients in hospitals: a continuous quality improvement initiative

- Plan-Do-Check-Act cycle
- Data gathering to identify areas of improvement
- Formulate plan
- Implementation
- Evaluation
- Dissemination

  [Woo et al J Clin Nursing 2011;20:1834-1841; Woo et al Journal of Nursing and healthcare of chronic illness 2009;1:237-244; Woo et al J Am Dir Assoc 2011;12:105-113]

Restraint reduction: common reasons

- Fall prevention
- To secure tube feeding and other medical devices
- To prevent aggressive behaviour
- To secure nappies
- To stop scratching itchy skin
- Fear of falls
- Manpower
- Lack of alternative measures

Restrainer reduction in Shatin Hospital

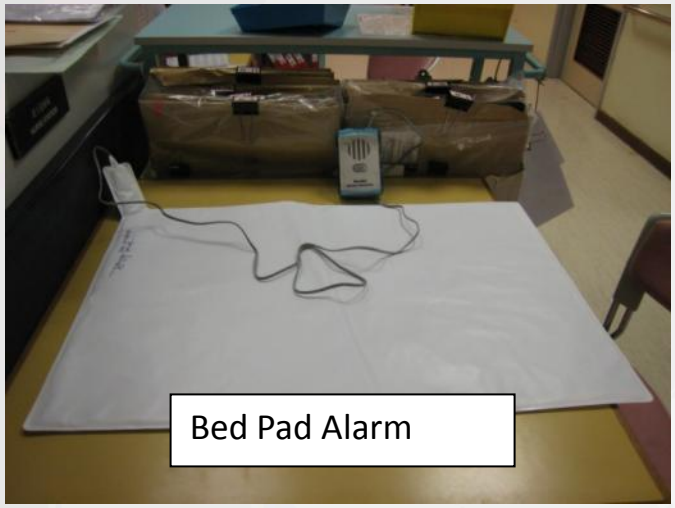
- Initiated by the head nurse in Medicine & Geriatrics
- Education
- Training
- Supervision
- Monitoring
- Location of nursing station
- Low beds
- Pressure sensors

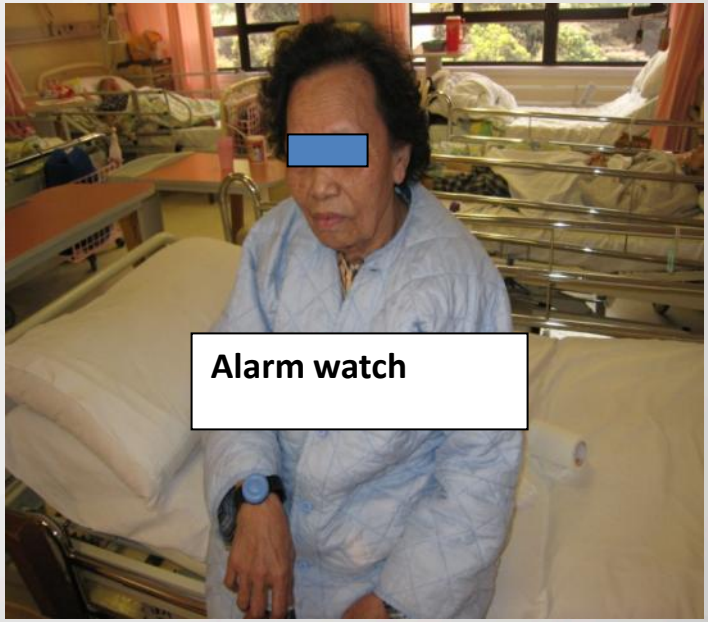
Environment modification

Original Nurses' Station

Nurses' Station in Enhanced Safety Observation (ESO)

Patient monitoring system





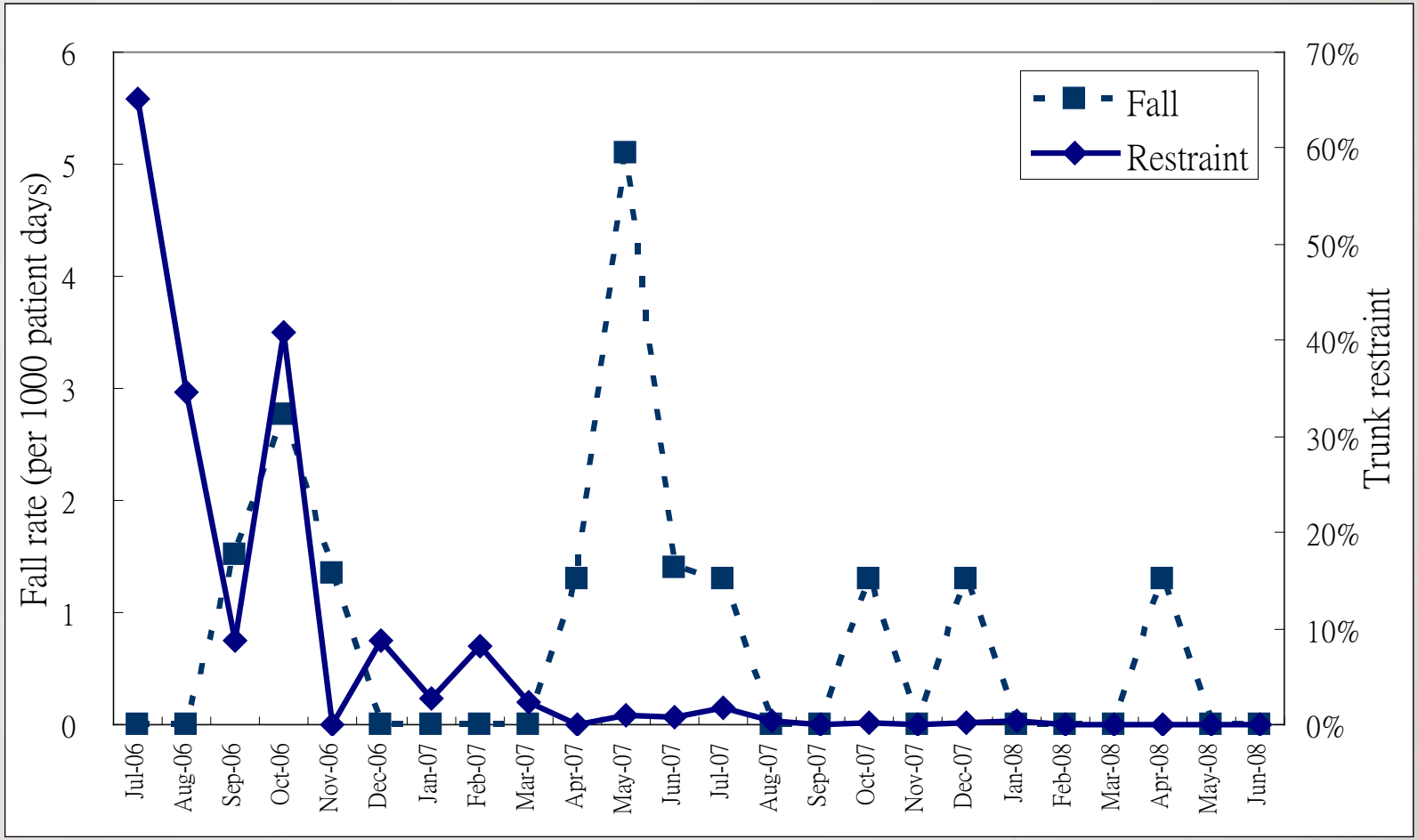
Electric low bed

Hip protectors

A safe environment

Creativity from nursing students - Rearrangement of furniture

Trunk restraint and fall rates in two pilot wards Jul 06 to Jun 08



The effect of restraint reduction on LOS of older patients with confusion

- Retrospective design
- Collected medical records of older patients (aged 60 years and above) who were admitted to SH in either 2007 and 2009, i.e. before and after the restraint reduction scheme

Results

- The rate of physical restraint use declined significantly between 2007 and 2009

  Confused patients

  from 24.5% to 9.0%

  Non-confused patients

  from 4.8% to 0.5%

  Overall

  from 13.3% to 4.1%

Results

- The average LOS of patient was reduced significantly from 19.5 days in 2007 to 16.76 days in 2009 (approx. 3 days less).
- For confused patients, average LOS shortened from 23.03 to 17.78 days (approx. 5 days less).
- Reduction in LOS of non-confused patients was not statistically significant
- No significant difference in mobility or ADL function on discharge

Kwok et al., Journal of the american medical director association (In Press)

Conclusion

- There are many practical examples relating to ethical issues among older populations, showing apparent lack of awareness and/or disregard.
- Bioethics education should be a core component in the training of undergraduate health and social care professionals, managers, and applied in practice.