The Principles of Good Geriatric Practice

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Princess Margaret Hospital
An 89-yr-old woman cared by her younger sister (aged 86, with multiple myeloma)

- hypertension
- osteoporosis


- rehabilitated to walk with frame at discharge from hospital
3 years later...... at geriatric clinic (then aged 92 yrs) on wheelchair, brought in by 2 daughters and a relative

- just discharged 2 wk ago after a 2-wk hospitalization with Dx:
  - recurrent stroke (ischaemic),
  - complicated by urinary tract infection
  - new AF, put on digoxin 125mcg daily

- now bed- and chair-bound
- poor feeding
- doubly incontinent, on napkins
- heel sores, superficial perineal sore
- BP 133/63 mmHg, P 91/min AF
- poor sitting posture, lean to her left

Choose one action for this old woman:
A. Admit to hospital for acute care
B. Admit to hospital for rehabilitation
C. Admit to hospital for end-of-life care
D. Refer to community nurse for bed-sore care with tight follow up in geriatric clinic
E. Refer to social worker for care home
just discharged 2 wk ago after a 2-wk hospitalization with Dx:
- recurrent stroke (ischaemic),
- complicated by urinary tract infection
- new AF, put on digoxin 125mcg daily

now bed- and chair-bound
poor feeding
doubly incontinent, on napkins
heel sores, superficial perineal sore
BP 133/63 mmHg, P 91/min AF
poor sitting posture, lean to her left

Actions taken:
- Reduce digoxin to 62.5mcg daily
- Check digoxin level, renal function for suspected digoxin overdose
- Follow up geriatric clinic in 2 wk
- Refer to community nurse for bed-sore care
Outcome......admitted via ED to another hospital the same night, arrest 8 hrs later with no response to resuscitation, referred coroner for unknown cause of death

Discharge diagnoses:
- Atrial fibrillation
- Stroke
- Decreased general condition
- Hypertension

Serum Digoxin Concentration: 2.9 nmol/L (high)
Evolution of Hospitals

From “Poor-houses” to “Power-houses”

Workhouses, Lancashire, UK, 1840

Almshouse, Kowloon Walled City, Hong Kong, 1890

McMaster University Medical Centre, Hamilton, Ontario, 2007
Limitations of Acute Hospital Care

- Excessive interventions: investigations, procedures, tubes, drugs
- Adverse environment:
  - Over-protection, restraints,
  - Food
  - Sleep / rest
  - Adverse effect on cognition: noise, bright lights, stark and unfamiliar environment
- Loss of social contact


The Top Ten Risks: How to Understand and Avoid Them

- Medication Errors
- Side Effects of Drugs
- Infection
- Pressure Sores
- Malnutrition
- Complications of Surgery
- Falls
- Misdiagnosis
- Unnecessary Tests and Procedures
- Going Home
What’s in a name …

The 6 Pillars of Best Practices in Geriatrics

- Compassion
- Comprehensiveness
- Continuity
- Coordination
- Collaboration
- Control
Compassion

“The essence of good medicine is compassion”

Ignatius Nascher (1863 - 1944)
Father of Geriatrics

“Was old age, then, a painful, incurable disease from which those who reached advanced age must suffer and for which nothing could be done?”

Marjory Warren (1897 - 1960)
Mother of Geriatrics

8 June 1946, Pages 841-876
Care of the Chronic Aged Sick
THR UNTREATED CASE

Bernard Isaacs (1925 - 1995)
Giant of Geriatrics

Survival of the Unfitted
(Study of Geriatric Patients in Glasgow)
Isaacs B, Livingstone M, Neville YB 1972

‘Eventide’: a painting of a workhouse in London by Hubert von Herkomer in 1878
Compassion

**Challenges**

- Legal Ethics
  - Confidentiality
  - Competency
  - Consent

**Solutions**

- Social Ethics (CARE model: Compassion and Autonomy is the Right of Elders)
  - Communication, Clarification
  - Sliding scale of capability
  - Consensus building
  - Care
  - Commitment
  - Courage

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Who are the Geriatric Patients?

The ‘Hard Core’
- advanced old age
- more ill
- social deprivation
- prolonged dependency
- poor prospects of hospital discharge
- excluded from mainstream medical care


Bernard Isaacs (1925 - 1995)
How to Save Them?

The ‘Hard Core’ can be prevented by:

• Re-organizing methods of medical care
• Screening, early diagnosis & treatment
• Clinical practice by specialists who are conversant with the problem of the hard core

Ill people

The hard core

Medical Unit

Geriatric Unit

Psychiatry

Orthopaedics

Surgical

Community

Ill old people

Reasons for Admitting Elderly Patients into Geriatric Unit

- Therapeutic optimism (37%)
  - the belief that hospital treatment would lead to clinical amelioration and early discharge
- Medical urgency (7%)
  - the need for immediate hospitalization despite a poor prognosis
- Insufficient basic care (24%)
  - the lack of food, warmth, cleanliness, or safety in the patient's home
- Relief of carer strain (32%)
  - to relieve intolerable strain on relatives

A Dynamic Model of Frailty


Comprehensiveness
Comprehensive Geriatric Assessment: Knowing The Frail Elderly Person

Mental health

Physical health

Social support

Ageing

Pathologies (multiple)

Drugs (multiple)
Operationalizing Comprehensive Geriatric Assessment

<table>
<thead>
<tr>
<th>Date</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>Activities of Daily Living (Katz)</td>
</tr>
<tr>
<td>1965</td>
<td>Barthel Index (BI)</td>
</tr>
<tr>
<td>1969</td>
<td>Instrumental Activities of Daily Living (Lawton)</td>
</tr>
<tr>
<td>1975</td>
<td>Mini-Mental Status Examination (MMSE)</td>
</tr>
<tr>
<td>1983</td>
<td>Geriatric Depression Scale (GDS)</td>
</tr>
<tr>
<td>1984</td>
<td>Functional Independence Measurement (FIM)</td>
</tr>
<tr>
<td>1986</td>
<td>Get Up and Go</td>
</tr>
<tr>
<td>1986</td>
<td>Performance Orientated Assessment of Mobility</td>
</tr>
<tr>
<td>1990</td>
<td>Confusion Assessment Method (CAM)</td>
</tr>
<tr>
<td>1994</td>
<td>Mini Nutritional Assessment</td>
</tr>
<tr>
<td>1995</td>
<td>Hierarchical Assessment of Balance &amp; Mobility</td>
</tr>
<tr>
<td>1998</td>
<td>Executive clock-drawing task (CLOX)</td>
</tr>
<tr>
<td>2000</td>
<td>Androgen Deficiency in Aging Males (ADAM)</td>
</tr>
<tr>
<td>2005</td>
<td>Clinical Frailty Scale</td>
</tr>
</tbody>
</table>

The Evidence for Benefit of Comprehensive Geriatric Assessment

THE LANCET

Volume 342, Number 8878, Saturday 23 October 1993

CLINICAL PRACTICE

1032 Comprehensive geriatric assessment: a meta-analysis of controlled trials  A L Stuck, A L Siu, G D Wieland, J Adams, L Z Rubenstein

Summary

There is disagreement on the usefulness of comprehensive geriatric assessment (CGA) due to conflicting results from individual trials. We did a meta-analysis on 28 controlled trials comprising 4959 subjects allocated to one of five CGA types and 4912 controls.

- Reduced risk of mortality
- Improved likelihood of living at home
- Reduced hospital readmissions
- Greater chance of cognitive improvement
- Greater chance of physical function improvement

Figure: End-of-study mortality odds ratios of individual and combined CGA trials
Geriatric Conditions are Prevalent in Common Diseases in Old Age

Health and Retirement Study, National Institute on Aging, US, 2004

<table>
<thead>
<tr>
<th>% of Respondents Aged ≥ 65 Yrs with Index Disease/Condition Who Have Other Diseases/Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index Disease or conditions (% of total sample)</td>
</tr>
<tr>
<td>Coronary Disease (8.7%)</td>
</tr>
<tr>
<td>Heart Failure (4.8%)</td>
</tr>
<tr>
<td>Diabetes (19.4%)</td>
</tr>
<tr>
<td>Incontinence (25.0%)</td>
</tr>
<tr>
<td>Falls (23.2%)</td>
</tr>
</tbody>
</table>

Clinical relevance: these geriatric conditions often contribute to their need for acute admission, influence hospital course & discharge plans; but ..... 

Organ failure (e.g. heart failure, respiratory failure) are more readily diagnosed compared with high order system failure (e.g. balance failure (falls), acute brain failure (delirium))
Comprehensive Geriatric Assessment as Cornerstone of Geriatric Medicine

- Beyond patient ... to person (holistic approach)
- Beyond disease ... to illness (physical, mental & social well being)
- Beyond treatment ... to management (functional approach: defining needs, goal-setting, intervention, teamwork, care planning)

Limitation of Single Organ Specialist Approach to a Frail Elderly Patient

- Geriatric syndromes ignored
- Present to many specialties or to the “wrong” specialty
- Prescription disease-driven rather than patient-driven

Comprehensiveness

Traditional Health Care Model:
Linear Model (Single Disease, Single Organ)

A Different Health Care Model for Geriatric Patients:
Interactive Concentric Model (Multi-etiology Geriatric Syndromes)

Comprehensiveness: our example

Interactive Concentric Model
(Multi-etiology Geriatric Syndromes)

dehydration
recurrent strokes
carer stress/breakdown

immobility, incontinence, pressure sores, poor feeding

digoxin overdose (iatrogenesis)

Risk Factor Synergism
Targeted Interventions

# hips
1. Within hospital
Progressive Geriatric Care: Acute → Rehabilitation → Long-term

<table>
<thead>
<tr>
<th>Acute</th>
<th>Rehabilitation</th>
<th>Long-term care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment/ Diagnosis (save life)</td>
<td>Restore function</td>
<td>Good living</td>
</tr>
<tr>
<td>Short stay</td>
<td>Medium stay</td>
<td>Long stay</td>
</tr>
</tbody>
</table>


2. Hospital to Community
★
Transitional care = “a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or different levels of care within the same location.”


Continuity

Challenges

- High volume of hospitalized elders
- GOMER
- Frequent flyers
- Ultra-short stay

Solutions

- Appropriate patient flow A → R → L matching goal with skill/ environment


- Separate acute & rehab wards (A/ R)
  - Geriatric rehab/ GEM unit,
  - subacute care/ intermediate care
- Acute ward combined with rehab (AR)
  - Acute geriatric unit (ACE),
  - stroke unit, delirium unit
- Geriatric day hospital
- Hospital discharge support/ domiciliary rehab
### Discharge planning from hospital to home

**Cochrane Database of Systematic Reviews 2010, Issue 1.**


21 RCTs (10 USA, 5 UK, 3 Canada, 1 Australia, 1 Denmark, 1 France; 16 studied elderly patients)

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#### Review: Discharge planning from hospital to home

**Comparison:** 1 Hospital length of stay  
**Outcome:** 1 Hospital length of stay - older patients with a medical condition

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Discharge planning</th>
<th>Mean(SD)</th>
<th>N</th>
<th>Control</th>
<th>Mean(SD)</th>
<th>N</th>
<th>Mean Difference IV,Fixed,95% CI</th>
<th>Mean Difference IV,Fixed,95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kennedy 1987</td>
<td></td>
<td>7.8 (0)</td>
<td>39</td>
<td>9.7 (0)</td>
<td>41</td>
<td></td>
<td>0.0 [ 0.0, 0.0]</td>
<td></td>
</tr>
<tr>
<td>Moher 1992</td>
<td></td>
<td>7.43 (6.33)</td>
<td>136</td>
<td>9.4 (6.97)</td>
<td>131</td>
<td></td>
<td>-1.97 [-3.84, -0.10]</td>
<td></td>
</tr>
<tr>
<td>Naughton 1994</td>
<td></td>
<td>5.4 (5.5)</td>
<td>51</td>
<td>7 (7)</td>
<td>60</td>
<td></td>
<td>-1.60 [-3.93, 0.73]</td>
<td></td>
</tr>
<tr>
<td>Naylor 1994</td>
<td></td>
<td>7.4 (3.8)</td>
<td>72</td>
<td>7.5 (5.2)</td>
<td>66</td>
<td></td>
<td>-0.10 [-1.63, 1.43]</td>
<td></td>
</tr>
<tr>
<td>Harrison 2002</td>
<td></td>
<td>7.59 (8.36)</td>
<td>92</td>
<td>7.67 (7.99)</td>
<td>100</td>
<td></td>
<td>-0.08 [-2.40, 2.24]</td>
<td></td>
</tr>
<tr>
<td>Rich 1993</td>
<td></td>
<td>4.3 (8.8)</td>
<td>63</td>
<td>5.7 (12)</td>
<td>35</td>
<td></td>
<td>-1.40 [-5.93, 3.13]</td>
<td></td>
</tr>
<tr>
<td>Rich 1995</td>
<td></td>
<td>3.9 (10)</td>
<td>142</td>
<td>6.2 (11.4)</td>
<td>140</td>
<td></td>
<td>-2.30 [-4.80, 0.20]</td>
<td></td>
</tr>
<tr>
<td>Preen 2005</td>
<td></td>
<td>11.6 (5.7)</td>
<td>91</td>
<td>12.4 (7.4)</td>
<td>98</td>
<td></td>
<td>-0.80 [-2.68, 1.08]</td>
<td></td>
</tr>
<tr>
<td>Sulch 2000</td>
<td></td>
<td>50 (19)</td>
<td>76</td>
<td>45 (23)</td>
<td>76</td>
<td></td>
<td>5.00 [-1.71, 11.71]</td>
<td></td>
</tr>
<tr>
<td>Laramee 2003</td>
<td></td>
<td>5.5 (3.5)</td>
<td>131</td>
<td>6.4 (5.2)</td>
<td>125</td>
<td></td>
<td>-0.90 [-1.99, 0.19]</td>
<td></td>
</tr>
</tbody>
</table>

**Total (95% CI):**

- **893** vs **872**
- **Mean Difference:** -0.91 [-1.55, -0.27]

**Heterogeneity:** Chi² = 7.37, df = 8 (P = 0.50); I² = 0.0%

**Test for overall effect:** Z = 2.79 (P = 0.0052)

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**Small reduction in hospital length of stay**
Discharge planning from hospital to home

Cochrane Database of Systematic Reviews 2010, Issue 1.

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment n/N</th>
<th>Control n/N</th>
<th>Risk Ratio M-H,Fixed,95% CI</th>
<th>Weight</th>
<th>Risk Ratio M-H,Fixed,95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Unscheduled readmission for those with a medical condition</td>
<td>Balaban 2008 4/47</td>
<td>4/49</td>
<td>1.1 %</td>
<td>1.04 [0.28, 3.93]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harrison 2002 23/80</td>
<td>31/77</td>
<td>9.1 %</td>
<td>0.71 [0.46, 1.11]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jack 2009 47/370</td>
<td>59/368</td>
<td>17.0 %</td>
<td>0.79 [0.56, 1.13]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kennedy 1987 11/39</td>
<td>14/40</td>
<td>4.0 %</td>
<td>0.81 [0.42, 1.55]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laramee 2003 49/131</td>
<td>46/125</td>
<td>13.6 %</td>
<td>1.02 [0.74, 1.40]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moher 1992 22/136</td>
<td>18/131</td>
<td>5.3 %</td>
<td>1.18 [0.66, 2.09]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Naylor 1994 11/72</td>
<td>11/70</td>
<td>3.2 %</td>
<td>0.97 [0.45, 2.10]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nazareth 2001 64/164</td>
<td>69/176</td>
<td>19.2 %</td>
<td>1.00 [0.76, 1.30]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rich 1993 21/63</td>
<td>16/35</td>
<td>5.9 %</td>
<td>0.73 [0.44, 1.20]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rich 1995 41/142</td>
<td>59/140</td>
<td>17.1 %</td>
<td>0.69 [0.50, 0.95]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shaw 2000 5/51</td>
<td>12/46</td>
<td>3.6 %</td>
<td>0.38 [0.14, 0.99]</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td>1295</td>
<td>1257</td>
<td>99.1 %</td>
<td>0.85 [0.74, 0.97]</td>
<td></td>
</tr>
</tbody>
</table>

Total events: 258 (Treatment), 339 (Control)
Heterogeneity: Chisq = 9.62, df = 10 (P = 0.47); I² = 0.0%
Test for overall effect: Z = 2.49 (P = 0.013)

2 Older people admitted to hospital following a fall
<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment n/N</th>
<th>Control n/N</th>
<th>Risk Ratio M-H,Fixed,95% CI</th>
<th>Weight</th>
<th>Risk Ratio M-H,Fixed,95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pardessus 2002 5/30</td>
<td>3/30</td>
<td>0.9 %</td>
<td>1.67 [0.44, 6.36]</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td>30</td>
<td>30</td>
<td>0.9 %</td>
<td>1.67 [0.44, 6.36]</td>
<td></td>
</tr>
</tbody>
</table>

Total events: 5 (Treatment), 3 (Control)
Heterogeneity: not applicable
Test for overall effect: Z = 0.75 (P = 0.45)

**Total (95% CI)**

<table>
<thead>
<tr>
<th>Study or subgroup</th>
<th>Treatment n/N</th>
<th>Control n/N</th>
<th>Risk Ratio M-H,Fixed,95% CI</th>
<th>Weight</th>
<th>Risk Ratio M-H,Fixed,95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1325</td>
<td>1287</td>
<td>100.0 %</td>
<td>0.85 [0.75, 0.97]</td>
<td></td>
</tr>
</tbody>
</table>

Total events: 303 (Treatment), 342 (Control)
Heterogeneity: Chisq = 10.57, df = 11 (P = 0.48); I² = 0.0%
Test for overall effect: Z = 2.38 (P = 0.017)

Small reduction in readmission rates
Integrated Discharge Support Program (IDSP) Pilot in Princess Margaret Hospital
Emphasis on Inter-disciplinary Interactions & Patient-centred Care

- Pleuridisciplinary
  - Fragmented/uncoordinated care
  - Polypharmacy
  - Revolving door

- Multidisciplinary

- Interdisciplinary
  - Assess patients’ needs
  - Goal setting
  - Information sharing
  - Case conferences
  - Discharge planning
  - Transitional rehab
  - Geriatric consultation

- Transdisciplinary
  - Carers’ training & support
  - Home-based community care services
| Instructions: | □ Please choose one option only □ Can be more than one option Please for the completion of data entry |
| Referral Categories: | □ Stroke □ Fall □ Hip □ Hi □ Other injuries □ Syncope □ HARRPE □ Others |
| Principal Admission Diagnosis: | □ CHF □ COAD □ Hip fracture □ Stroke □ Others |
| Co-morbidities: | □ CHF □ COAD □ DM □ Dementia □ HT □ IHD □ Malignancy □ OA □ Old stroke □ Old fractures □ Parkinsonism □ Others |
| HARRPE Score |
| Social Assessment: | □ Poor Social Support |
| Education: | □ Single □ Divorced □ Widowed □ Married |
| Marital Status: | □ Community □ Lives with Others □ No (alone) □ Yes |
| Residential Status: | □ Spouse □ Child □ Grandchildren □ Maid |
| □ Others □ Day time alone □ Night time alone |
| □ Poor Care Support |
| Safety Alarm: | □ Yes □ No |
| Stairs / Steps: | □ Yes □ No |
| Institution / Residential Care Home for Elders |
| Fall Risk Screening (AGS, BGS, AAOS 2001; NICE 2004 Guidelines): | □ Fall Risk |
| Gait: | □ Recurrent falls □ Present to medical attention for fall □ ≥ one item ticked identifies fall risk |
| Mental Status: | □ No □ Yes |
| Communicable? | □ No □ Yes |
| Cognition (BGS 2005): | □ Abnormal □ Normal |
| Mobility (Modified Functional Ambulation Classification MFAC, Tsang CC 2007, Holden MK 1984): | □ Mobility decline |
| Mobility (Modified Barthel Index BI-20, Collin C 1988, Mahoney FJ 1985): | □ ADL decline |
| ADL’s (Modified Barthel Index BI-20, Collin C 1988, Mahoney FJ 1985): | □ Clinical Frailty Scale (Rockwood 2001) |
| Bathing: | □ 1 □ 2 □ 3 |
| Toilet use: | □ 4 □ 5 □ 6 |
| Dressing: | □ 4 □ 5 □ 6 |
| Feeding: | □ 4 □ 5 □ 6 |
| Grooming: | □ 4 □ 5 □ 6 |
| Stairs: | □ 4 □ 5 □ 6 |
| Transfer: | □ 4 □ 5 □ 6 |
| Bladder status: | □ 4 □ 5 □ 6 |
| Bowel status: | □ 4 □ 5 □ 6 |
| Total: | □ / 20 |
| Assessed by: | □ No □ Yes |
| Recruit to IDSP II? | □ No □ Yes |
| Geriatrician: | □ Date: |

**Screening Assessment Form (IDSP I)**
Service Flow for Integrated Discharge Support Program (IDSP)

Hospital: acute (PMH) → subacute/rehab (LKB/CMC)

At-Risk elders (HARRPE > 0.2, strokes, falls & fractures, referrals)

Comprehensive Needs Assessment & discharge planning (by assessor/ coordinator)

Discharge → Residential Care Homes

Home

Individualized Case Management for complex elders (key worker/ case manager/ gerontologist)

Home care support → Home visits → Rehab at GDH (NEATS)

Rapid access geriatric clinic → Clinical geriatric admission

Geriatrician

Case conference: review/ discharge from scheme (Av duration of stay ~ 12 wks)
Effectiveness of Integrated Discharge Support Program  
(n = 2123 for 8/2008 - 7/2009)

- Functional Outcome & Quality of Life Measures
  - Significant (p < 0.0001) improvement in:
    - ADL (BI-20) Mobility (MFAC) Health-related QoL (SF12)
      - ADL (BI-20)
        - on hosp adm (recruit into IDSP): 13.65
        - at hosp disch: 15.89
        - at disch from IDSP: 17.07
        - Improvement: 25%
      - Mobility (MFAC)
        - on hosp adm (recruit into IDSP): 4.33
        - at hosp disch: 5.35
        - at disch from IDSP: 5.95
        - Improvement: 37%
      - Health-related QoL (SF12)
        - on hosp adm (recruit into IDSP): 39.87
        - at hosp disch: 43.94
        - at disch from IDSP: 43.17
        - Improvement: 10%
Effectiveness of Integrated Discharge Support Program
(n = 2123 for 8/2008 - 7/2009)

- Carers’ Stress and Satisfaction
  - Significant (p < 0.0001) improvement in stress level during the post-discharge period
  - Carers responded with 100% satisfaction of service
Effectiveness of Integrated Discharge Support Program
(n = 2123 for 8/2008 - 7/2009)

• Hospital Services Utilisation (c.f. case-matched control group)
  - Significant reduction in incidence rate of:
    - A&E attendance
    - A&E admission
  - Reduction in use of acute patient days with higher use of non-acute patient days

Incremental cost-effective ratio (ICER: the incremental cost incurred due to the intervention of a healthcare programme per incremental change of a benefit measure)

- HK$6,447 per acute patient day saved per year (overall)
- HK$2,706 per acute patient day saved per year (for medium readmission risk)
“Observing old people in hospital is like teaching zoology in a zoo.

Observing old people in their homes is like teaching zoology in the woods and fields.”

Challenges

- Multiple settings within an episode of illness/ patient journey
- Multiple clinicians/ specialists
- Multiple disciplines
- Multiple programs of care
- Multiple agencies/ service providers
  - Hospital-based & Community-based
  - (Health/ Social Divide)

Solutions

- Reducing relocations
- Geriatrician as key clinician for medical care of a frail elder
- Gerontologist (nurse/ allied health) as key worker for care co-ordination
- “All-embracing” service
  - Regional geriatric program

Collaboration

- Allied health & nurses (Interdisciplinary collaboration)
- Emergency physicians
- Psychogeriatricians
- Family physicians

- Surgeons/ Orthopaedic surgeons:
  - Pre-operative assessment
  - Post-operative rehabilitation
    - Reduce post-op delirium
    - Enhance functional recovery (pain control, early mobilization)


Control

• Control of care process
  ▪ Assessment +
  ▪ follow-up intervention
    ▪ Manage common geriatric syndromes (delirium, falls, immobility, subnutrition)
    ▪ Identify & prevent iatrogenesis
    ▪ Maximize function
    ▪ Reduce discomfort & distress

• Control of resources (facilities, manpower):
  ▪ Hospital base (unit/ ward) + infiltrate/outreach

Geriatric consult team (virtual, no fixed abode)
Geriatric unit (dedicated ward, settlement)
Geriatric unit infiltrating into other hospital wards/ specialties & outreaching to community
Embracing Complexity with 6Cs

- Compassion;
- Comprehensiveness;
- Continuity;
- Coordination;
- Collaboration; and
- Control