A need of new care model: Integrating services between emergency and geriatric medicine

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Global health system challenges

• Challenges
• Demographic transitions
  – Chronic disease burden requiring multiple complex interventions
  – Behavioral and societal causes of disease and illness
  – Fragmented health systems designed on the basis of disease-curative models centered around hospitals
Healthcare delivery system

Organisation of healthcare
- Public and private provision
- Financing

Healthcare delivery
- Types of care
- Public and private

Availability
Accessibility

Needs and demand for care

Robust – Frail -- Disabled – Dependent – End of Life
Multiple Chronic Diseases and Multiple Morbidity
Social Needs

Affordability
Acceptability

Life Course

Health promotion
Disease prevention
Chronic disease management
Palliative care
Episodic illness
Responses to challenges

- Empower and engage people
- Strengthen governance and accountability
- Reorient the model of healthcare
- Coordinating health services
- Creating the enabling environment

Re-orienting the model of healthcare

- Refocusing on preventive and health maintenance services in community and primary based care
- Comprehensive integration of curative, rehabilitative and palliative care which incorporates patients' physical, mental, social and spiritual needs, and preferences
- Coordination of services within and between levels of service
- Continuity of care in transitions and over a life course.
Health system towards people-centered and integrated health services

- Health transition towards chronic
- Holistic approach
- Community-based
- Needs-based
- Preventive care

- Curative care models
- Health care coverage
- Hospital-based
- Multi-morbidities
- Fragmented services and care
- Social needs in ill-health
- Diseased-oriented
Commissioned by Health and Medical Research Fund

Quality of healthcare for the ageing – Health system and service models to better cater for an ageing population
Objectives

1) To review the healthcare services supporting elderly with chronic diseases to identify key pressure points in the present public hospital and healthcare system.

2) To identify enabling factors and barriers and recommend service models to integrate healthcare services for elderly people which should include integration between:
   - health and social care;
   - primary and specialist care;
   - acute, sub-acute and chronic care; and
   - the different specialties within acute care.

3) To identify enabling factors and barriers and recommend service models to enable elderly people with stable long-term conditions to receive healthcare in their own environment.
Objectives

4) To identify enabling factors and barriers and recommend service models to enable elderly people with more complex health needs to live and/or die in place, including the implementation of Advance Care Planning and Advance Directives.

5) To recommend changes including legislation if required and measures to foster a community culture to facilitate the implementation of the above recommended elderly healthcare service models and initiatives, including patient self-management capabilities, public education and support for family and other social institutions.

6) To pilot the service model(s) as developed above to test its applicability and impact.

7) To conduct a systematic evaluation of implementation fidelity, i.e. the degree to which an intervention was implemented as was intended, and outcome/impact evaluation.
To achieve the project aim of providing quality healthcare system and service model redesign, we...

1. Used **guidelines and frameworks** to inform our methods for developing and evaluating complex interventions

2. Collated **local and international data** on service barriers and facilitators
   - Literature reviews
   - Qualitative studies: Key informant interviews, focus groups, case studies
   - Quantitative studies: Secondary data analyses, surveys
   - Local service knowledge

3. **Triangulated data** to develop new **models and recommendations** for service delivery/ health system

4. Planned **pilot studies** to test parts of the recommended models
   - A&E setting
   - Inpatient setting

5. **Evaluate pilots outcomes**
   - intervention outcomes (service use/ clinical outcomes)
   - implementation outcomes
Study Findings
Components of integrated care for vulnerable, frail or high-needs

International evidence

1. person-centered care
2. care continuity/ transitions
3. needs assessments for care and discharge planning
4. multi-/inter-disciplinary services
5. case management
6. effective communication
7. shared values/goals
8. enabling policies/ governance

Structure, Procedures, Processes
“Due to our limited capacity, we are not able to provide health care and supporting services (meal delivery services, escort & transportation) to the elderly after their discharge from the hospital”

“Most elderly stay longer in the hospital due to social problems rather health problems”
Admission/A&E: Identified issues

- Many needless admissions
- HARRPE score not sensitive for frail patients
- Immediate discharge limited by community service availability
- Few geriatric nurses/geriatricians available
24.9% of participants indicated that it was difficult or very difficult to access medical care in the evening, on weekends or holidays.

Even a larger percentage of participants (39.1%) indicated that they would go to A&E only.

Among the caregivers, a majority of them (89.4%) had to take care of their family members.

More than half of them (58.8%) spent at least 20 hours per week for providing care.
Among all hospital admissions for HK elderly 65+

- 15% RCHE vs 85% home
- 46.8% due to ambulatory care sensitive conditions (ACSC)
- 4% result in death in hosp.

About 20% avoidable readmission in 30days

Local pressure points and international practice:

→ Inpatient discharge planning is key
→ Growing demand for sub-acute care/ hospital@home
→ Many inpatients can be classed as ‘alternative level of care’ (ALC)
→ Prevent avoidable admissions with improved community support

ALC: do not require acute medical services in hospital, but are prevented from onward referral by inadequate or poorly coordinated community medical and social services
Summary of integration problems

• **Horizontal gaps** exist between different services offering similar ‘intensity’ of care
  – Between specialist and geriatric wards in the hospital
  – Between different organisations in the community offering nursing services.

• **Vertical gaps** include inadequate mechanisms and procedures to refer patients at different levels of dependency, depending on the changing needs of patients
  – Transition between primary and hospital care
  – Transition between home and convalescent beds.

• **Temporal barriers** include weak ‘loops’ in the system, whereby patients are ineffectively referred/transferred to other services within a sequence of care, so they do not experience seamless transition
  – no onward referral to other services when the duration of one service ends

• **Fragmented public-private system**
Five key models are needed in elderly care in HK:
These span the spectrum of patient needs and address major barriers across the system.

- **System-wide** Medical/Social service integration

- **A&E department**
  Address needless hospital admissions and refer to appropriate level of care

- **Hospital inpatient**
  Patient assessments and referral to appropriate level of care (post-discharge sub-acute services)

- **Community services**
  Primary Care-led Hub & Network of community services

- **End of life care**
  Frameworks and recommendations for quality care across the spectrum of patient needs and along the patient journey
Five key models are needed in elderly care in HK:
These span the spectrum of patient needs and address major barriers across the system

1. A&E department

2. Hospital inpatient

3. Community services

4. Med-social integration

5. End of life care model

Short-term goals are possible:
- Many important systems/components already in place
- Relatively small system changes can bring improvements
  → Pilot studies can identify best way to implement changes

These represent longer-term goals because:
- Systems are complex and services deeply fragmented
- Major current gap in manpower and skills

Complex/ lengthy changes are required:
- Reforms in inter-sectorial policy, including funding
- Horizontal/vertical integration within and across services/sectors
  → Further groundwork is required to fully evaluate issues, engage all sectors/providers in proactive collaboration and plan stages for service improvement
An integrated medical-social service network for providing needs-matched care and support

Intensity of care needs

Post-hospital discharge/high intensity needs

Occasional acute illness, otherwise stable

Requires regular additional support

Stable chronic disease/Generally ‘well elderly’

‘Medical’ services

Sub-acute care
- Rehab hospital
- Integrated Care Discharge Support

Clinic/ nursing care
- Specialist Out Patient Clinic
- Community Nursing Service

Primary care
- General Out Patient Clinic
- Private Doctors

Community care
- Department of Health Elderly Health Centres (health promotion, disease prevention & screening)

‘Social’ services

Long-term care
- Community Geriatric Assessment Service (CGAS) in Residential Care Homes for the Elderly (RCHE)
- Community Nursing Service

Community services
- Meal delivery
- Home care visits
- Non-government organisations

Social service centres
- Neighbourhood/district elderly centres

Enabling policies
- Commitment to change

Information sharing/communication
- Common goals & values

Improved training/education
- Linked budgets

Harness volunteer potential
- Public-private partnership

EOL policy and programmes

Note: services listed are illustrative rather than definitive
Integrated model

Hospital & inpatient network

Primary care hub & community care network
Multidisciplinary Community Referral
- Geri. Nurse/ Geriatrician/ A&E staff
- Team consider if community referral is appropriate/acceptable for all ≥65y
- Screen/ identify ‘high risk/frail’
- Flag for CGA + care planning

Model 2: Inpatient setting

Assessment/Discharge Team
- Link nurse-led team + Geri. support
- Collaborate across hospital and with community services
- Screen/ identify ‘high risk/frail’
- Assess needs + care planning

In hospital

Community care services
- RCHE: Early CGAT follow-up
- Home: Community nurses + social support, 2 nurse visits/wk for 4 wks
- Access to fast-track clinic/ day hosp.

Intensive community care
- CGAT/ IDSP/ CNS/ rehab
- Community nurses + social support
- Nurse care for approx. 8 weeks
- Access to fast-track clinic/ day hosp.

Post-discharge support

Community services
Onward referral to other existing community services to support needs and prevent relapse

Ongoing community support
Conceptual integrated system model: Hospital-Community Network

Note: (1) Hubs and networks are intended as ‘virtual connections’, (2) Service lists are for illustrative purposes, and (3) many connections between services are encouraged, in addition to the close working connection between hospital and community hubs.
Components of community model

- **The hospital Hub** will comprise teams and individuals involved with coordinating patient discharge to community care and will work closely with community sub-acute care services.

- **The wider hospital network** comprises all other inpatient/hospital teams or services. High-risk patients can be referred/identified for comprehensive assessment and discharge support.

- **Primary care-led hubs** will be a focal point for coordinating the diverse range of community services and work towards a *community-based care model*. The following services may be provided, among others:
  - Multidisciplinary case management clinics
  - Drop-in and preventive services
  - Assessments for cognitive impairment
  - Expanded day care
  - Caregiver support
  - Support of functional impairment
  - Volunteer training and coordination

- **The wider community network** comprises all other medical and social services in the community, including private primary care.

- **Community service coordinators** are proposed to facilitate integration between community service providers and coordinate care for vulnerable/frail community-based patients.
Proposed system model:
simple patient flow/service connections for A&E and inpatient model

A&E assessment
Community referral OK? (Frail → refer for CGA)

Inpatient
Multi-domain assessment ± Geriatrician input

Discharge planning
Link nurse ± Geriatrician input
Discharge support/rehab needed?

Convalescent bed/rehabilitation
Discharge support?

Needs-matched community care
(at home/RCHE)
- Case management
- Rapid response (e.g. clinic access)
- Enlist other community services

Needs lessen

Needs increase

Medical support
- Geriatrician
- Visiting Medical Officer
- Link nurse

Medical support + formal connections
(enable ‘care in place’ + avoid unnecessary admissions)

Elderly care/nursing homes

Planned admission

No: High needs

Yes: Can be supported in community

Yes

No

Community services
- Social services/ NGOs
- Community nursing
- Family medicine clinics

- Private primary care
- Day care/ clinics
- Volunteer groups
- Many other services

Planned admission

Refer to community services if necessary
Planned pilot interventions - outline

**Pilot model 1: A&E setting**

Multidisciplinary Community Referral
- Geri. Nurse/ Geriatrician/ A&E staff
- Team consider if community referral is appropriate/acceptable for all ≥65y
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**Pilot model 2: Inpatient setting**

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**Community services**
Onward referral to other existing community services to support needs and prevent relapse
Multidisciplinary Community Referral (MCR) for A&E attendance

Staff involvement
- A&E Doctors/ nurses
- Geriatric specialists (Geri Dr/ APN/ Geri.-trained nurse)
- Admin support

Patients Cat. 3/4 patients ≥65 years
1. Screen all in A&E (when resources permit), or
2. Referred from A&E Doctors
3. In Emergency Medical Ward
4. Awaiting bed allocation

Trained nurse screening/ assessment
- Rapid screening to help identify high-needs/frailty
- If yes, focused assessment to determine issues/needs
- If yes, flag for later CGA (inpatient or community)

Geriatric input into A&E decision on admission
- For all elderly (frail/ non-frail), decide (± Geri. Dr input) can be supported in community?
- Discuss with A&E Doctor
- A&E Doctor make final decision on admission/deferral

Community care services

Staff involvement
- Geriatric Nurse and admin support in A&E
- Community nurse team
- Geriatrician back-up for nurses (phone)
- Other social services to support patient

Care process
- Early CGAT follow-up (RCHE)
- Community nurse team provide initial home visit (in-depth assessment) and 7 further visits over 4 weeks.
- Nurses arrange any other social/ NGO services that are necessary during and at end of 4 weeks of home visits.

Access to support
- Fast-track clinic with Geriatrician/SOPC
- Day-hospital
- Patient call centre

Note: Geriatric input/ referrals to community may be limited by community service capacity and Geriatrician availability. The A&E and geriatric staff should then collaborate to identify patients most likely to benefit from supportive community care rather than admission
Pilot study in A&E: Detailed patient flow

ARRIVE AT A&E ≥65y

Triage (A&E nurse) + standard A&E workflow (A&E Dr) [Patients await investigations/admission]
- Cat 1/2 (needs cannot be met in community) → standard admission
- Cat 3/4 ± frail, community care may be suitable → Geri. team

Usual care/ discharge (A&E team)

Cat 1/2

A&E Dr decide:
1. Admit
2. Hold in EMW (await Geriatrician input/status unclear/await tests)
3. Frail, but admission not necessary, Geri. team can arrange to send home

EM Ward

Hold. Multidiscipline reassessment (Geriatician + A&E Dr)

2

A&E

1

Geriatric specialists (Nurse/ Geriatrician)

Geriatrician assess (if needed/ if available). Geri. Team
Communicate with A&E Dr on suitability for community referral

Geri. nurse assess (± Geriatrician) Frailty screen ± other assessment: Frail/ high needs EFS ≥10*?

Cat 3/4

Plan + coordinate care with Community Care Team/ other services/ sub-acute

Inpatient

Convalescent bed

Community Care (sub-acute care)

- RCHE: Early CGAT follow-up
- Home: nursing care (4 wks)
- CGA + multidisciplinary care planning for frail/ high-needs patients
- Rapid-access to services (Geriatrician/ clinic/ day hospital/ call centre)
- Link to any other necessary community/ NGO services during + after 4wk support

Accessible Services

Clinician/ Geriatrician

Fast-access to clinic/day hosp.

Patient call centre

Community services

- Patient Support Call Centre
- Enhanced home + community care service
- Geri Day Hosp.
- Family medicine GOPC
- Other ongoing care and support from community and social services/NGOs

Other ongoing care

Abbreviations: CGA comprehensive geriatric assessment; EFS Edmonton Frail Scale score
Assessment: Frailty scale

- International evidence: No standardized tools
- Complete in several minutes
- Cover several domains, instead of one score:
  - General health status
  - Functional independence
  - Social support
  - Medication use
  - Nutrition
  - Mood
  - Continence
  - Self-reported performance
  - Cognition
Emergency Medicine + Geriatrics

- International evidence: Geriatrician at A&E
- Local evidence: PWH, QEH
- Integration with better coordination and collaboration
Case management – Community support

• Early follow-up
• Integration between medical and support interface
Thank you!