Disaster risk reduction through community level approaches

A conceptual model based on Kwai Tsing Safe Community and Healthy City

CB Chow; YH Chow
Kwai Tsing Safe Community and Healthy City Association
Summary

• From disaster preparedness to Disaster risk reduction → health/safety risk reduction = infrastructure for information

• From resilience building to safety and health promotion

• From top down directives to bottom up initiatives (community level approaches) → infrastructure for community engagement and participation

• Healthy, resilient and sustainable community after disaster
• Impact of disasters
• Relative uncertainty in the observational data on disaster impacts
• BUT enormous

The global distribution of major geophysical disasters, past and anticipated, against a global map of the rate of crustal deformation.
The risk of losing one's home to disasters is four times more likely since the 1970s.
UN World Conference on Disaster Risk Reduction

For every €1 invested in disaster prevention, €4 to €7 are saved in disaster response.

#Road2Sendai #WCDRR
Future trend

- Broad indication of how eight key drivers could affect the nature of disaster risk over the next 30 years

- Major factors in Hong Kong
  - Aging population – more vulnerable
  - Political and governance issue
  - Economic growth
  - Urbanization – over-crowding
  - .....others
  - Environmental change

**Table 3.2: Expected changes in extreme event occurrence, comparing late 20th century with late 21st century, as set out in the IPCC SREx.**

<table>
<thead>
<tr>
<th>Extreme event</th>
<th>Expected changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy precipitation</td>
<td>The frequency of heavy precipitation events is likely to increase over many areas of the globe, in particular in the high latitudes and tropical regions. A 1-in-20-year annual maximum daily precipitation amount is likely to become a 1-in-5 to 1-in-15-year event by the end of the 21st century in many regions.</td>
</tr>
<tr>
<td>Cyclone</td>
<td>Although it is likely that the global frequency of tropical cyclones will either decrease or remain essentially unchanged, it is more likely than not that the frequency of the most intense storms will increase substantially in some areas. Average tropical cyclone maximum wind speed is likely to increase, although increases may not occur in all tropical regions.</td>
</tr>
<tr>
<td>Flood</td>
<td>There is limited, uneven existence of evidence in the frequency and magnitude of floods at the regional scale. The uncertainty associated with incomplete National records and poor evidence at the regional level means that there is large uncertainty and debate as to whether there is any sign at all of a change in their frequency and magnitude. There is therefore low confidence in predictions of future changes in the frequency and magnitude of floods.</td>
</tr>
<tr>
<td>Drought</td>
<td>There are concerns regarding the accuracy of historical records and therefore large uncertainty regarding global changes in past assessments and future projections of drought. There is, therefore, no scientific consensus on projected worldwide changes in the duration and intensity of drought. However, there is medium confidence that some regions of Europe, Africa and Central and South America will experience longer and more severe drought over the next century relative to current trends.</td>
</tr>
<tr>
<td>Landslide</td>
<td>There is high confidence that changes in heavy precipitation and glacial retreat will make landslide more likely in some regions, such as high mountains. However, there is low confidence in projections of an effect on shallow landslides in temperate and tropical regions.</td>
</tr>
<tr>
<td>Earthquake</td>
<td>Although it is possible that reduced ice mass may increase seismic activity, there is low confidence in projected future seismic responses to climate change, and any changes are likely to occur centuries into the future.</td>
</tr>
</tbody>
</table>
What and types of disasters

• The United Nations defines a disaster as a serious disruption of the functioning of a community or a society. Disasters involve widespread human, material, economic or environmental impacts, which exceed the ability of the affected community or society to cope using its own resources.

• Natural disasters: including floods, hurricanes (typhoons), earthquakes and volcano eruptions that have immediate impacts on human health and secondary impacts causing further death and suffering from (for example) floods, landslides, fires, tsunamis.

• Environmental emergencies: including technological or industrial accidents, usually involving the production, use or transportation of hazardous material, and occur where these materials are produced, used or transported, and forest fires caused by humans.

• Complex emergencies: involving a break-down of authority, looting and attacks on strategic installations, including conflict situations and war or terrorism.

• Pandemic emergencies: involving a sudden onset of contagious disease that affects health, disrupts services and businesses, brings economic and social costs.
# Disaster – two sides

1. Vulnerability
   - Deprivation
   - Degree of exposure
   - Capacity gap

2. Resilience – capacity to cope and recover from disaster

<table>
<thead>
<tr>
<th>Type of vulnerability</th>
<th>Method of data collection</th>
<th>Data collected</th>
<th>Example of measure</th>
<th>Implications for modelling vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Vulnerability as deprivation’</td>
<td>Community-based or participatory vulnerability mapping</td>
<td>Village- or community- level maps</td>
<td>Cuban approach to risk reduction(^\text{263})</td>
<td>Good quality (small scale) data</td>
</tr>
<tr>
<td>‘Vulnerability as exposure’</td>
<td>National social statistics, census data</td>
<td>EM-DAT type data e.g. percentage affected; number of fatalities per area or population group.</td>
<td>US vulnerability to sea level rise(^\text{265})</td>
<td>Good cross-national assessment</td>
</tr>
<tr>
<td>‘Vulnerability as capacity gap’</td>
<td>National income statistics, Level of corruption, Organisational crisis contingency planning, Adaptive risk management assessment</td>
<td>Governance and corruption indices, Poverty measures, Organisational form and scope for learning</td>
<td>Afghanistan National Risk and Vulnerability Assessment 2007/8(^\text{268})</td>
<td>Includes scope for modelling adaptive capacity</td>
</tr>
</tbody>
</table>
Disaster planning cycle & prediction

Figure 4.1: Schematic summary of current and possible future ability to anticipate different hazard types.

This representation is based on expert opinion and evidence drawn from the reviews commissioned by Foresight (see Annex 1).

<table>
<thead>
<tr>
<th>Ability to produce reliable forecasts</th>
<th>Spatial</th>
<th>Magnitude</th>
<th>Temporal</th>
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<tr>
<td>Geophysical hazards</td>
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<td></td>
<td></td>
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<tr>
<td>Earthquakes</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Volcanoes</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Landslides</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Tsunamis</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Hydrometeorological hazards</td>
<td>6 days ahead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storms</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Floods</td>
<td>3</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Droughts</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Hydrometeorological hazards</td>
<td>6 months ahead</td>
<td></td>
<td></td>
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<tr>
<td>Storms</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Floods</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Droughts</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Infectious disease epidemics</td>
<td></td>
<td></td>
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<tr>
<td>Known Pathogens</td>
<td>2</td>
<td>5</td>
<td>2</td>
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<tr>
<td>Recently emerged pathogens</td>
<td>1</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Pathogens detected in animal reservoirs</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Foresight.

Possible but still difficult
Definition of Resilience

- **Individual resilience** – a person’s ability to overcome stress and adversity.
- **Community resilience** – how people overcome stress by drawing from cultural networks that constitute communities.
- Resilience is a dynamic interaction of individual and collective processes that contribute to adaptability, strength, the ability to surmount obstacles, meet challenges and recover from setbacks.
- Resilience exists at the level of families, groups, communities and larger social systems.

Traditional disaster planning seldom looks into resilience issue at individual or community level.
What is and types of resilience

Is the ability to positively adapt to stress or adversity

- Individual resilience
- Family resilience
- Community resilience
- City resilience
- National resilience
Resilience is the ability of a property and its surrounding urban area to provide predictable, targeted benefits to tenants, residents and users, and predictable returns to owners and investors, under a wider range of often unpredictable circumstances.
The ecological model and factors affecting resiliency

- How this can be translated to family, community or national levels
- **Coalition** of individual resilience, family resilience, community resilience...
Global Regional

Global review aligned with ECOSOC, High Level Political Forum & Quadrennial Comprehensive Policy Review

Review by regional, sub-regional & Global Platforms

Open-ended intergovernmental working group to develop global indicators

UNISDR to measure baseline of global targets

Public debates on progress of national & local plans

UNISDR to update HFA Monitor

National & local DRR strategies & plans with targets, indicators

Voluntary Commitments

Implementation of commitments to be reviewed nationally & by regional, sub-regional & Global Platforms

Stakeholders submit fulfillment of commitments & implementation

UNISDR to maintain commitments registry

Sendai Framework for Disaster Risk Reduction 2015-2030

**Expected Outcome**

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

**Goal**

Prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience

**Priorities for Action**

Focused action at national and local level and global and regional levels

**Priority 1**

Understanding disaster risk

**Priority 2**

Strengthening disaster risk governance to manage disaster risk

**Priority 3**

Investing in disaster risk reduction for resilience

**Priority 4**

Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction

**Roles of Stakeholders**

Civil society, volunteers, community (women, children and youth, persons with disabilities, etc.)

Academia, scientific and research entities and network

Business, professional associations and financial institutions

Media

**International Cooperation and Global Partnership**

General considerations

Means of implementation

Support from international organization

Follow-up actions

**Global Targets**

1. Mortality
2. Affected people
3. Direct economic loss
4. Damage to medical and educational facilities
5. DRR strategies
6. Support to developing countries
7. Access to early warning
Clear reduction in disaster losses in all countries (social, economic, environmental) 
Strengthened disaster resilience of people, communities and countries
R
duced relative impact on vulnerable people and lesser developed countries

<table>
<thead>
<tr>
<th>OUTCOMES</th>
<th>MEANS</th>
<th>OBJECTIVES</th>
<th>ENABLERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantial reduction in disaster losses in all countries (social, economic, environmental)</td>
<td>Increased multi-stakeholder collaboration</td>
<td>Broader, more people-centred preventative approach to prevent new and reduce existing risks, thus protecting the lives, livelihoods and assets of people, communities &amp; countries</td>
<td>Enabling institutional environment</td>
</tr>
<tr>
<td>Reduced relative impact on vulnerable people and lesser developed countries</td>
<td>Increased means of implementation</td>
<td>1/ Increased disaster risk knowledge</td>
<td>Engagement of Political leadership</td>
</tr>
<tr>
<td></td>
<td>Greater coherence across policy frameworks</td>
<td>2/ Strengthened disaster risk governance</td>
<td>Strong Political commitment</td>
</tr>
<tr>
<td></td>
<td>Greater inclusion of vulnerable groups</td>
<td>3/ Investment in resilience: people, community, country</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/ Enhanced preparedness, response, recovery capacities</td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

HOW?

Strengthen accountability for disaster risk creation
Enhanced technology & research
Enhanced international cooperation
Increased means of implementation
Greater coherence across policy frameworks
Greater inclusion of vulnerable groups
Engagement of Political leadership
Strong Political commitment
Enabling institutional environment
What is a safe and healthy community

• A safe and healthy community is one in which a diverse group of stakeholders collaborate to use their expertise and local knowledge to create a community that is socially and physically conducive to safety and health.

• Community members are empowered and civically engaged, assuring that all local policies consider safety and health.

• The community has the capacity to identify, address, and evaluate their own safety and health concerns on an ongoing basis, using data to guide and benchmark efforts. As a result, a healthy community is safe, economically secure, and environmentally sound, as all residents have equal access to high quality educational and employment opportunities, transportation and housing options, prevention and healthcare services, and healthy food and physical activity opportunities.
A healthy city is a disaster resilient city

Healthy people are more resilient

Health workers are local DRM partners

Health systems deliver preventive and responsive services to people at risk

Disaster resilient city is a healthy city

Land-use planning avoids risk

Safe infrastructure = safe hospitals

Early warning systems save lives

Logistics supports health services

Multi-sectoral planning builds teams

DRM protects health investment
Community resilience requires building neighbor to neighbor reliance and organizational connection.
promoting resilience in the health promoting school

A person who is resilient is likely to:
- Recognise and manage their own feelings and understand the feelings of others
- Have a sense of independence and self-worth
- Form and maintain positive, mutually respectful relationships with others
- Be able to solve problems and make informed decisions
- Have a sense of purpose and goals for the future

A caring and supportive school environment can promote a sense of connection and belonging and help children, young people, and staff become more resilient and confident to learn.

Encourage the development of a positive attitude, self-belief and communication:
- Physical positive feedback, encouragement and reassurance
- Help pupils learn to understand and express their feelings
- Communicate openly with all pupils

Increase support networks for pupils:
- Someone to talk to
- One to one support
- Peer support/buddy support
- Foster a culture of learning

Encourage the building of trusting and co-operative relationships between pupils and adults:
- Foster mutual respect between everyone in school
- Recognise subtle pressures/influences on pupils
- Activity days/residential trips

Increase pupils' engagement with learning:
- Promote use of teaching methods and styles
- Opportunities for performance
- Provide additional support for learning
- Promotes assessment to plan learning experiences

for resources and further information
www.healthpromotingchools.co.uk

Resilience
An active virtue integrated into all operations and systems

Infrastructure Protection → National Preparedness → Functional Continuity

Land Maritime Air Space Cyber

Figure 2.1 Resilience Continuum Model
Safe and healthy community, resilience and sustainability

• Creating healthy communities usually is not high on the list of disaster planning or recovery efforts

• HOWEVER

• Building safe and healthy communities will build resilience of the people and environment and eventually smartness and sustainability

• Building Healthier Communities Should Be a Priority When Preparing for and Recovering From Disasters (IOM 2015)
What is a safe and resilience community

- **A safe and resilient community**...
- 1. ...is **knowledgeable and healthy**. It has the ability to assess, manage and monitor its risks. It can learn new skills and build on past experiences.
- 2. ...is **organised**. It has the capacity to identify problems, establish priorities and act.
- 3. ...is **connected**. It has relationships with external actors who provide a wider supportive environment, and supply goods and services when needed.
- 4. ...has **infrastructure and services**. It has strong housing, transport, power, water and sanitation systems. It has the ability to maintain, repair and renovate them.
- 5. ...has economic opportunities. It has a diverse range of employment opportunities, income and financial services. It is flexible, resourceful and has the capacity to accept uncertainty and respond (proactively) to change.
- 6. ...**can manage its natural assets**. It recognises their value and has the ability to protect, enhance and maintain them.

Community Based Disaster Risk Reduction Study Characteristics of a Safe and Resilient Community. International Federation of Red Cross and Red Crescent Societies, Geneva, 2012

Information on
- Environment
- People
- Services
FACT: EVERY COMMUNITY CAN INVEST IN DISASTER PREPAREDNESS

- GOVERNMENT CENTERS
- DWELLINGS
- SCHOOLS
- HEALTH CARE FACILITIES
- BUSINESSES
- INFRA-STRUCTURE
- PEOPLE
Leveraging the products of pre-disaster planning process to support a healthy community approach to disaster recovery

1. Develop a Healthy Community Vision for Disaster Recovery.
2. Integrate Health Considerations into Recovery Decision Making Through the National Disaster Recovery Framework.
3. Facilitate the Engagement of the Whole Community in Disaster Recovery Through Simplified and Accessible Information and Training.
4. Enhance and Leverage Social Networks in Community Health Improvement and Recovery Planning
5. Enhance and Leverage Social Networks in Community Health Improvement and Recovery Planning
6. Leverage Recovery Resources in a Coordinated Manner to Achieve Healthier Post-Disaster Communities.
7. Ensure a Ready Health Information Technology Infrastructure.
8. Develop a National Disaster Behavioral Health Policy.
10. Design for Healthy Post-Disaster Communities
11. Mitigate Against Future Health Hazards.
12. Ensure Healthy and Affordable Post-Disaster Housing
Experience of Kwai Tsing
Recommendations from IOM on disaster planning

- Establishment of Kwai Tsing Safe Community & Healthy City Association in 2000
- Public health education and CPR training and health promoting schools
- Community health Centres & signatory projects
- Development of GIS injury surveillance and health information system
- Social networking – linking Govt Departments, NGOs, Schools, Hospitals & community services

<table>
<thead>
<tr>
<th>Committee Recommendation</th>
<th>Federal Gov.</th>
<th>State Gov.</th>
<th>Local Gov.</th>
<th>Nonprofit/Faith-based</th>
<th>Private Sector</th>
<th>Community Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Develop a Healthy Community Vision for Disaster Recovery</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>2 Integrate Health Considerations into Recovery Decision Making Through the National Disaster Recovery Framework</td>
<td>✔ (DHS/FEMA)/HHS</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>3 Facilitate the Engagement of the Whole Community in Disaster Recovery Through Simplified and Accessible Information and Training</td>
<td>✔ (DHS/FEMA)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>4 Enhance and Leverage Social Networks in Community Health Improvement and Recovery Planning</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>5 Establish Pathways by Which Health Information Can Inform Recovery Decision Making</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>6 Leverage Recovery Resources in a Coordinated Manner to Achieve Healthier Post-Disaster Communities</td>
<td>✔ MULT</td>
<td>✔</td>
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<td>7 Ensure a Ready Health Information Technology Infrastructure</td>
<td>✔ (HHS)</td>
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<td>✔</td>
<td>✔</td>
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<tr>
<td>8 Develop a National Disaster Behavioral Health Policy</td>
<td>✔ (DHS/FEMA)/HHS</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>9 Develop an Integrated Social Services Recovery Framework</td>
<td>✔ HHS</td>
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<tr>
<td>10 Design for Healthy Post-Disaster Communities</td>
<td>✔ MULT</td>
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<td>✔</td>
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<tr>
<td>11 Mitigate Against Future Health Hazards</td>
<td>✔ (DHS/FEMA)</td>
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<tr>
<td>12 Ensure Healthy and Affordable Post-Disaster Housing</td>
<td>✔ (HUD)</td>
<td>✔</td>
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</table>
Tsing Yi is an island
Many estates situated along hill side
Aging and poor
Highly densely populated – public housing
Container terminal
Petrol and dangerous good
Old industrial area in Kwai Chung

2 hospitals and 6 clinics
31 primary and secondary schools
101 community based organizations
Kwai Tsing Safe Community and Healthy City launched in 2000
Hazard specific maps

- **Land slides**
- **Floods**
- **Fire**
- **Typhoon**
- **Infections**

Possible Disaster for Oil Tank Fire

Container terminal – outdated
- Massive explosion
- Spilt of dangerous chemicals
- Typhoon, fog...

Traffic hot zones

High risk playgrounds

High risk elderly homes

Deliberate self harm maps

Maltreatment maps
Vulnerability mapping
- Demographics
- Health profiles
- Need for services
- Mobility
- Vulnerability to disasters

Statewide effort to eliminate disparities in 8 areas:
- Infant Mortality
- Childhood/Adult Immunization
- Cardiovascular Disease
- Violence/Unintentional Injury
- Diabetes
- HIV/AIDS and STIs
- Breast/Cervical Cancer
- Healthy Youth Development

FIGURE 2-4 Neighborhoods in Alameda County with the shortest average life expectancy.

FIGURE 2-3 Neighborhoods in Alameda County with intermediate to long average life expectancy.

FIGURE 2-2 Neighborhoods in Alameda County with the longest average life expectancy.

FIGURE 2-5 Two Steps Back framework.
### Study period 1 Jan 2010 to 31 Dec 2010

<table>
<thead>
<tr>
<th>Demographics</th>
<th>PMH GOPC</th>
<th>%</th>
<th>PMH SOPC</th>
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<td>Mean</td>
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<td>Male</td>
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<table>
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<th>%</th>
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<th>%</th>
<th>PMH EADM</th>
<th>%</th>
<th>PMH LOS</th>
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<td>7.73</td>
<td>95</td>
<td>6.4</td>
<td>24</td>
<td>6.06</td>
<td>150</td>
<td>6.48</td>
<td>53</td>
<td>7.01</td>
<td>540</td>
</tr>
<tr>
<td>仰景樓</td>
<td>106</td>
<td>7.38</td>
<td>116</td>
<td>7.81</td>
<td>30</td>
<td>7.58</td>
<td>166</td>
<td>7.17</td>
<td>53</td>
<td>7.01</td>
<td>480</td>
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<tr>
<td>安景樓</td>
<td>96</td>
<td>6.69</td>
<td>108</td>
<td>7.27</td>
<td>30</td>
<td>7.58</td>
<td>152</td>
<td>6.57</td>
<td>65</td>
<td>8.6</td>
<td>599</td>
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<tr>
<td>樂景樓</td>
<td>396</td>
<td>27.58</td>
<td>451</td>
<td>30.37</td>
<td>125</td>
<td>31.57</td>
<td>752</td>
<td>32.5</td>
<td>240</td>
<td>31.75</td>
<td>2226</td>
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</tbody>
</table>

| Total Patients | 1436 | 100 | 1485 | 100 | 396 | 100 | 2314 | 100 | 756 | 100 | 6778 |
Belfast - A World Health Organisation Healthy City Phase V (2009 - 2013)

Policies and actions are consciously developed from the start in a way that contributes to health and health equity.

Equity from the Start: Health and Health Equity in all Local Policies

Healthy Urban Environment & Design
- Integrating Health into Urban Environment & Design
- Climate Change Public Health Emergencies

Healthy Living
- Active Living

Caring & Supportive Environments
- Resilience / Happiness & Wellbeing

Sustainable Development

Participation & Empowerment

Better Outcomes for Children

Solidarity & Friendship

Working in Partnership

Evidence Base / Effective Interventions
Data / Health Risks / Distribution of Health
Capacity Building / Skills / Knowledge / Tools
Action plans / Innovations / Risk Taking
Leadership / Stewardship / Collaboration / Monitoring
Political Engagement & Civic Society
Lai King Estate, Kwai Tsing

- **Type of Estate**: Public Rental Housing
- **Year of Intake**: 1975
- **Type(s) of Block(s)**: Old Slab
- **No. of Blocks**: 8
- **No. of Rental Flats**: 4200 as at end December 2009
- **Flat Size (m²)**: 22.7 - 50.3
- **No. of Households**: 4100 as at end December 2009

---

**Any chronic diseases?**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>56</td>
<td>46%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td>Heart disease</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>Stroke</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>36</td>
<td>30%</td>
</tr>
</tbody>
</table>

---

**Capacity Building – Ageing in Place**

- **Social & Service Networks**
  - NGO
  - District Councilor
- **Community Resource Bank**
  - Social Centres
  - Schools
  - Neighbors
  - Shops
  - Utilities
- **Mutual Help Groups**
  - CIIF

---

**Estate-Based Community Health Centre**

- **Hospital**: Healthcare Professional, Hospital Services, Primary Health Care
- **Nurse**: Nurse Clinic, Care Management, Rapid response
- **Social Worker**: Case Management, Social Resources, Volunteer Training
- **Mission**, **Funding**, **Platform**
Community engagement and networking

Has the networking → Increase in resilience ????
# Kwai Tsing experience

**Partnership**
- Safe and Health Estate
- Partnership for learning – Safe and Health Schools
- Partnership for RCHE – Safe and Health Elderly Homes
- Partnership for patient care – Safe and Healthy Hospital
- Safety & healthy charter
- 3 high & DM retinopathy screening

**Community engagement**
- Road safety
- Fire safety
- Food safety & environmental hygiene
- Home safety
- Violence – deliberate self harm and IPV
- Clean Hong Kong
- Universal CPR training
- QK Blog – comprehensive student health programme
5 Community Health Centres

+ 132 Community based organizations
Collaboration model of Targeted Injury Prevention & Control

Injury surveillance

Data analysis

Fall injury
Child injury
Elderly injury
Other injury

Safe Community Coalition

Government Agencies/Agency

Prevention program
Prevention program
Prevention program
Prevention program

Applications of Injury Surveillance System

Collaborative partnership for decision making

- Collaborative multiplier
Three-prong approach to safety promotion

Table 5.3. A three-pronged approach

<table>
<thead>
<tr>
<th>Three-pronged approach</th>
<th>Activities to identify high-risk groups and high-risk areas, and benchmark and monitor child injury and intervention actions</th>
<th>Activities to support the uptake and implementation of evidence-based child injury prevention practices</th>
<th>Activities to promote universal and targeted multi-sectoral actions on injury intervention using PRECEDE-PROCEED and collaboration multiplier methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy level: Lead Agency and HKSAR Child Safety Action Plans for 2015-2020</td>
<td>Development of Geo-spatial Injury Surveillance system –</td>
<td>Child Safety and Injury Research Centre – in collaboration with a group of academic institutions, NGOs and participation of partners in all districts</td>
<td>Establishment of Safe Community in 18 districts with formal structure and funding support</td>
</tr>
<tr>
<td></td>
<td>Child Safety Report Card: with ranking and potentially avoidable injuries</td>
<td>Household Injury Survey every 5 years</td>
<td>Safety Coordinator</td>
</tr>
<tr>
<td></td>
<td>Responsibility Mapping – organigrams; methods to collect and measure perceived and actual exposure to hazards and protective interventions</td>
<td>Child Safety Centre – for promotion of good practices, education and training:</td>
<td>Collaboration multiplier</td>
</tr>
<tr>
<td></td>
<td>Information for planning and action</td>
<td>Informatin dissemination mechanism – web-based and other means</td>
<td>Coordinated planning and intervention:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Injury statistics</td>
<td>- Coalition formation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Practical tools and resources for 3 stages of child development and on specific safety areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Case studies, news</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Support and social networking group using new mobile/IT technology</td>
<td></td>
</tr>
</tbody>
</table>

District level

- Child Safety Index and Tool Kit for District/Sub-district – to assess performance and prioritize actions
- Development of District Child Safety Action Plan

Child Safety Weeks reporting on injury status and action planning

Child Safe Community Initiative – 6 indicators


Local level

- Increased uptake of evidence-based actions at HKSAR and district/sub-district levels
- Enhanced community coalition and sense of security/well-being
- Reduction in injuries
Recovery – experience of SARS

Re-definition of SARS in early May 2003:

Sustainable Action for the Rejuvenation of Society

- Influenza vaccination programme
- Education talks on infections
- CPR....

From students...
What do you get out of the SARS Experience?

Growth, resilience, critical analysis, understanding of policy, meaning in life...

Re-definition of SARS

Sacrifice
Appreciation
Reflection
Support
We suffered, but we survived...
We experienced loss, but we are transformed...
1. Surveillance
2. Outbreak investigation & control
3. Decanting and mobilisation of patients
4. Human resources management
5. Supplies of drugs, consumables and equipment
6. Clinical management
7. Communication
8. Arrangement for stand down
Infectious disease model for disaster

Strategy for Effective ID&IC Workforce

- Effective leadership for implementation and spread
- Proactive Occupational Health & Safety
- Proficient infection control
- Effective infectious disease Management
- Rapid ID/IC Response - early identification & prompt control & management
- Competency & Evidence-based
- DIM

- Organizational leadership and top priority
- Robust IT/technology and Clinical Management Support
- Efficient environmental design and management

Effective surveillance system – whole system measures
Conclusion

• 安全社區及健康城市模式是可促進社區參與→促進安全及健康
• Community Engagement for Health – can be achieved through Safe Community & Healthy City
• Basis for Disaster Risk Reduction, mitigation and Disaster Recovery
• 成功因素 Key to Success
  – Commitment and leadership 政策及領導
  – Innovation for all new ideas 創新
  – Collaboration with all partners 地區協作
  – Participation at all levels 全面參與
  – Networking with all organizations 建立資源及專業網絡
• Bottom Up Approach 由下而上
• Actionable Data and Measurement 可支援行動的數據
• BUT will need formal legitimatization 合法化 and funding 經費 for organizational development 發展
Way forward

• Further strengthen Kwai Tsing Safe Community and Healthy City – legitimatization, ongoing funding, formal structure

• Further build on Kwai Tsing Safe Community and Healthy City
  – Development of hazards and vulnerability maps
  – Development of community asset maps
  – Raise awareness
  – Engagement of community on disaster risk reduction planning and implementation
  – Resilience capacity building
  – Development of infrastructure and strategy based on Sendai Framework for Disaster Risk Reduction 2015-2030
Building of a Safe & Healthy City

Building a Prepared & Resilient City
References


• Building resilient cities – from risk assessment to redevelopment. A joint publication of Ceres, the Next Practice and the University of Cambridge Programme for Sustainable Leadership November 2013