MRSA Decolonisation in Elderly Homes in Hong Kong – Experience on a Pilot

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Background

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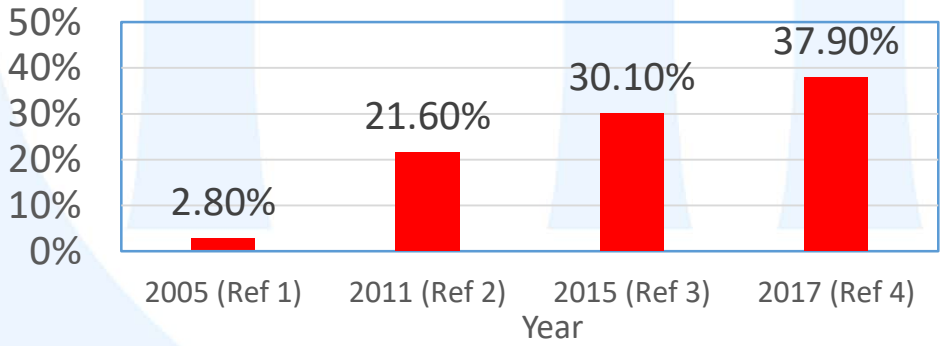
- Prevalence of MRSA colonization in RCHEs increased sharply in Hong Kong, from 2.8% in 2005[1] to 37.9% in 2017[4]
- Use of topic bathing/ antiseptic agents to elderly homes
  - Proposed by the Expert Committee (EC) on Antimicrobial Resistance
  - To break the vicious cycle of MDROs transmission between public hospitals and RCHEs
  - Endorsed by the High Level Steering Committee on AMR in May 2021



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Residential care home for elderly

- RCHEs are a heterogeneous group of institutions
- Types of Residential Care Homes
  - Varying types of residential care homes are set up to meet different care needs of elders

- Nature of RCHE – private (profit making) and non-private (subvented/ contract / self-financing)
- About 760 RCHE providing 74000 places for elderly in HK

Topic bathing/ antiseptic agents for MRSA decolonisation

- Topical antiseptic agents (e.g. Chlorhexidine gluconate (CHG), povidone iodine) have shown effectiveness in decreasing MRSA colonisation or clinical infection in long term care setting[1,2,3,4]

- Universal decolonisation for MRSA is more effective than targeted decolonisation in ICU setting[5]

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Universal decolonisation in RCHE

- Recommendation of a special working group under the EC: Pilot in RCHEs under the catchment areas of Queen Mary Hospital (QMH) and Queen Elizabeth Hospital (QEH)

- Decolonisation intervention lasting for 26 consecutive weeks

10% povidone iodine ointment to nostrils, once daily on two days per week

4% CHG solution for shower and hair washing every other day

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Instruction for decolonisation

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Infection control advice to RCHE

Hand hygiene

e.g. Clean hands with liquid soap and water when visibly soiled

Changing diapers

e.g. Perform hand hygiene before putting on clean diaper for resident

Laundry

e.g. use hot water cyclin in washing machine if available (at least 60°C)

Maintain environmental hygiene

e.g. Disinfect all accessible surface with 1:99 diluted household bleach at least once daily

Eating utensils

e.g. after thorough cleansing, disinfect by immersion in near-boiling water for at least 1 min prior to air drying and storage

Universal decolonisation in RCHE (Pilot Phase)

Visit to RCHE before decolonisation

- Since late Sep 2021, visit team comprises of doctors and nurses visits RCHE and provides training on steps of decolonisation
- CHG and Betadine ointment were ***freely*** supplied to RCHEs
- Regular communication between designated nurses and RCHE to ensure compliance of decolonisation, and to offer infection control advice

First Visits

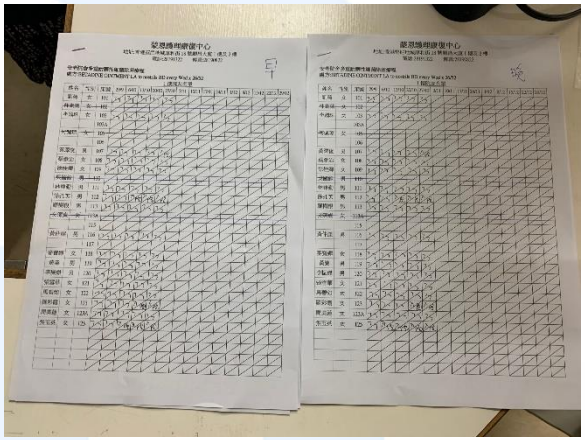
- Brief to RCHE staff
- Use of Betadine and 4% CHG
- Agree on commencement dates

First Visits

- Tour round the RCHE

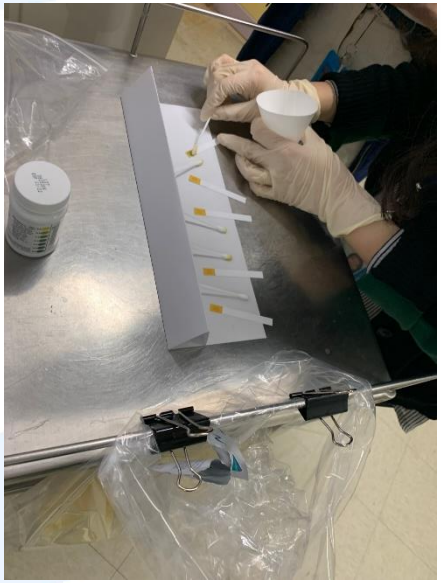
- Infection control advice
  - Cleaning and disinfection of clothes and bed linen
  - Cleaning and disinfection of eating utensils
  - Changing napkin

Audit Visits



- Checking record for application of Betadine

- Check for use of Betadine using iodine test papers
  - Preferably on the same day / the next day of applying Betadine
  - 10% of residents using Betadine / up to 10 residents
  - In different zones of the RCHE

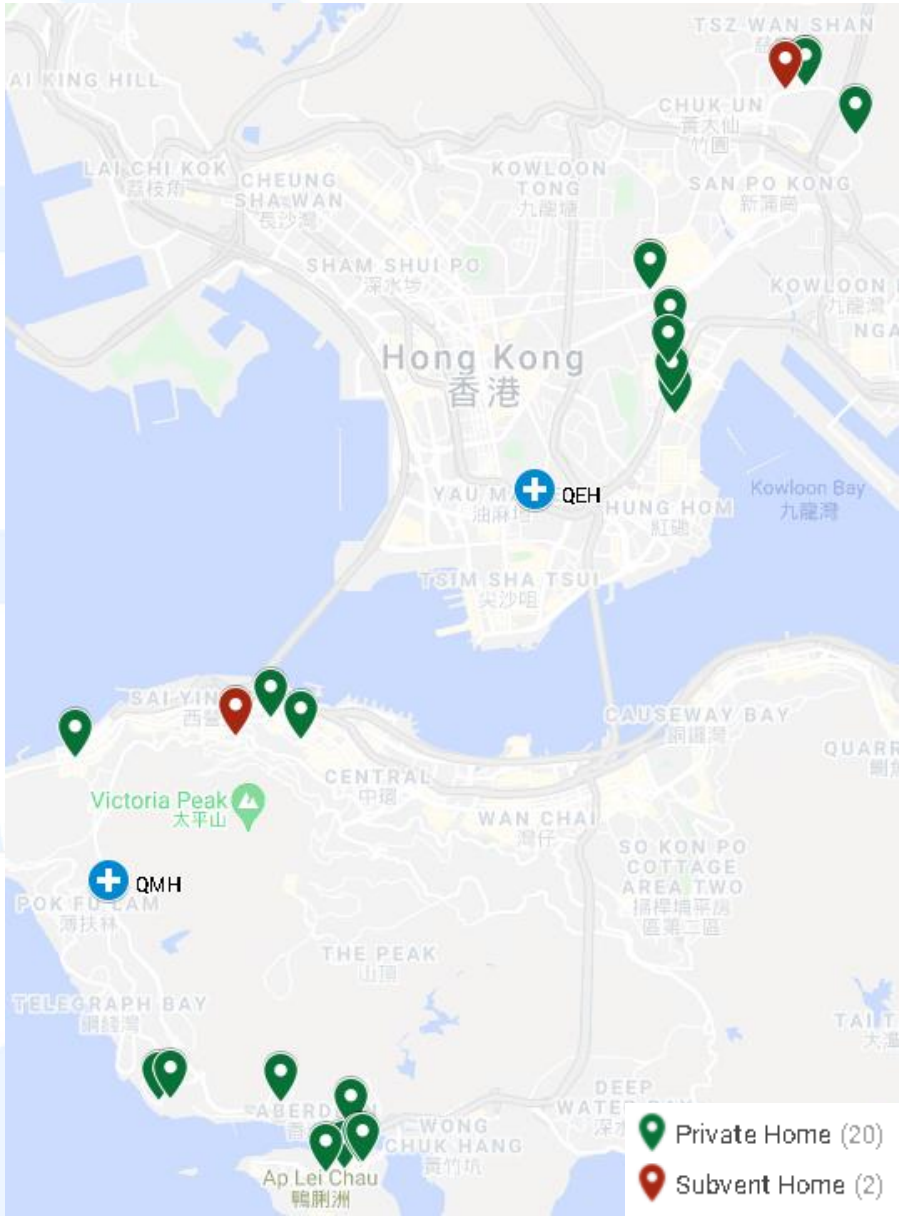


Audit Visits

- Check empty bottles of 4% CHG
- Obtain feedback from residents
- Obtain feedback from staff

Participating RCHEs (Pilot Phase)

- 22 RCHEs were recruited as pilot
  - 12 RCHEs under catchment areas of QMH
  - 10 RCHEs under catchment areas of QEH
- Home Type
  - 2 subvent homes
  - 20 private homes
- 1611 residents resided in these RCHEs



Participating RCHEs (Pilot Phase) – Home characteristics

	Private Home	Subvent Home
Hong Kong West Cluster (QMH)	Total: 11	Total: 1
Capacity <50	2	0
Capacity 50-100	6	0
Capacity >100	3	1
Kowloon Central Cluster (QEH)	Total: 9	Total: 1
Capacity <50	4	0
Capacity 50-100	3	0
Capacity >100	2	1
Median Statistics (Range)		
Capacity	67 (40-296)	184 (150-217)
Resident count	48 (26-203)	176 (145-206)
Occupancy	80% (37%-100%)	96% (95%-97%)
No. of staff	12 (6-12)	111 (88-134)
Staff : Resident ratio	1 : 4	1 : 1.6

Participating RCHEs (Pilot Phase) - Environment

- There is a wide spectrum in terms of resources, facilities and staffing among participating RCHEs

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Participating RCHEs (Pilot Phase) - Environment

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Kitchen

Laundry room

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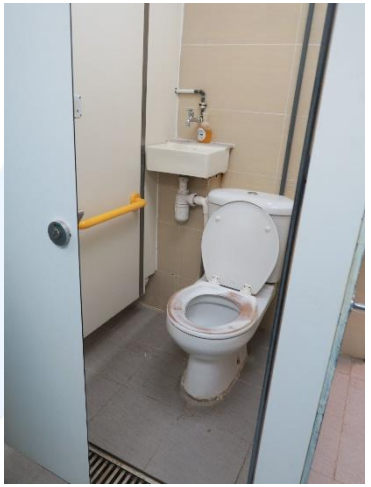
Participating RCHEs (Pilot Phase) - Environment

Bathroom

Toilet



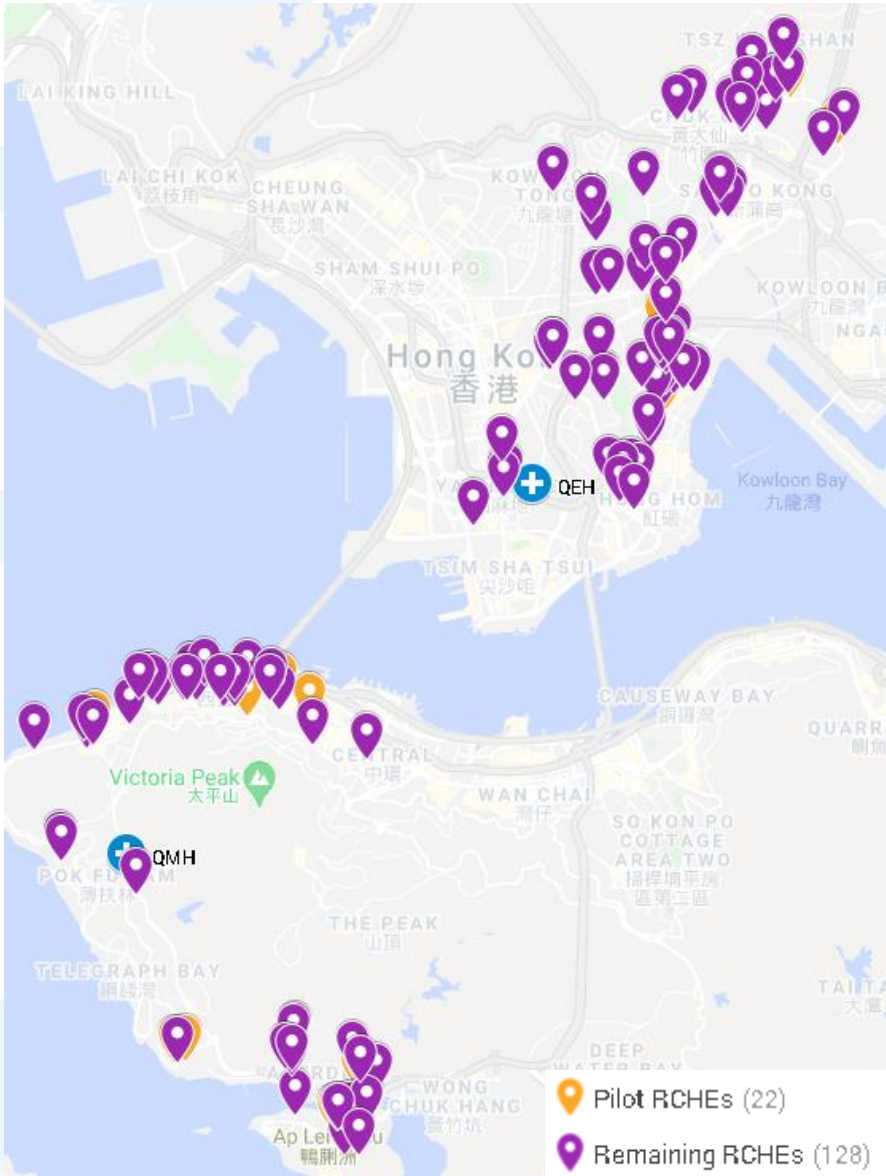
Feedback from RCHE staff and residents

- From audit visits and phone follow-up
  - CHG bathing
    - Good acceptability
      - RCHE could comply with regimen
      - Usually having assisted bathing on alternate days
      - 4% CHG well tolerated by residents
    - Reinforce on volume of CHG used for bathing
  - Betadine application
    - Good acceptability and record keeping
    - Strip testing confirmed usage of the nasal ointment in most cases if checked on the same day of application
  - Two adverse events reported (one has bilateral eye swelling and the other has fascial swelling and rash on both legs. VMO advised withholding CHG bathing with prescription of piriton / hydrocortisone)

		Date of first audit visit (Days after Betadine is applied)	No. of residents currently on betadine	No. of residents screened for iodine in nostrils	
HKWC	A	26/10/2021 (0)	26	3	3
HKWC	B	27/10/2021 (0)	43	5	5
KCC	C	27/10/2021 (0)	29	3	3
HKWC	D	3/11/2021 (0)	51	6	6
HKWC	E	4/11/2021 (7)	44	5	0
HKWC	F	4/11/2021 (5)	23	2	0
HKWC	G	5/11/2021 (1)	60	7	5
HKWC	H	5/11/2021 (1)	190	10	6
HKWC	I	5/11/2021 (0)	46	5	3
HKWC	J	5/11/2021 (5)	37	4	0
HKWC	K	5/11/2021 (3)	38	4	0

Roll out decolonisation to other RCHEs

- Roll out to 128 RCHEs under the catchment areas of QEH and QMH
- Briefing sessions on 2 and 8 Dec
- CHG and Betadine would be sent to RCHEs in mid-Dec
- Audit visits will be regularly arranged to provide onsite support and monitor progress



Reflections in planning the decolonisation in RCHE

Evidence-based practice vs expert opinion

- Evidence-based public health is the "conscientious, explicit, and judicious use of **current best evidence** in making decisions about the care of communities and population in the domain of health protection…"

  Jenicek M. 1997. Epidemiology, evidence-based medicine, and evidence-based public health.

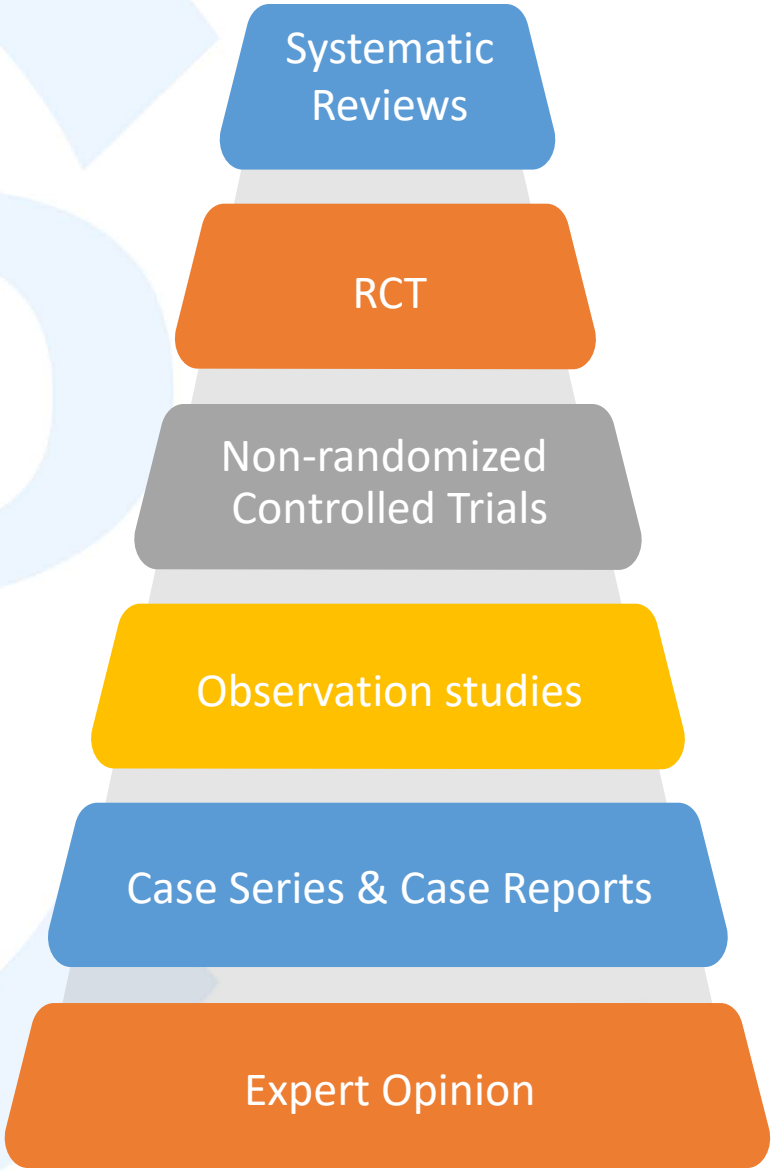
- Lacking of highest quality evidence should not be an excuse to abandon public health measures altogether

- Examples:

  -Betadine nasal ointment

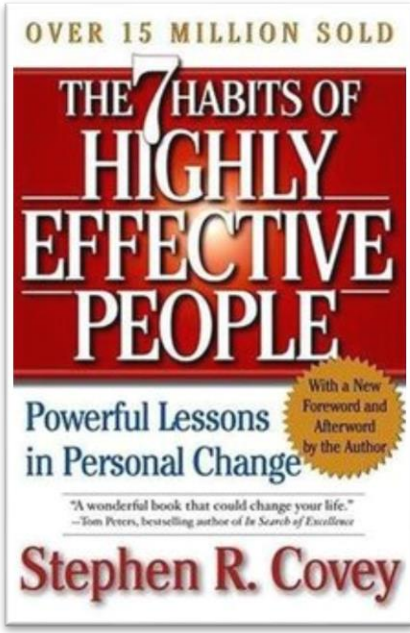
  "Twice daily, once a week" vs "Once daily, twice a week"

  - Evidence in community-settings is lacking, should intervention be abandoned?



Make perfect plan or Act now

- *Be proactive.*
  Stephen R. Covey. 1989. The 7 Habits of Highly Effective People
- Focus and act on what one can control and influence, instead of what one cannot.
- Example:
  - COVID-19 pandemic offers an unique opportunity to tackle the high MRSA prevalence in RCHE:
    - People are more conscientious to hand hygiene, cleaning and disinfection, putting on PPE
  - There are always challenges when launching public health programme in RCHE:
    - Acceptance of RCHE staff and residents
    - Lacking of resources
  - Should we
    - focus on what we can control, or what we cannot?
    - take action until the perfect plan is crafted, or seize the opportunity and act now?



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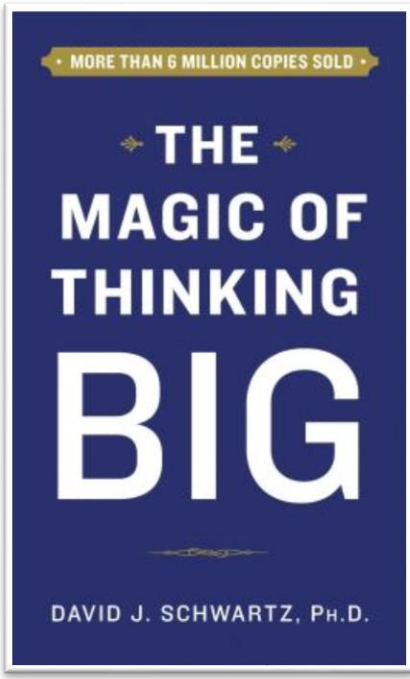
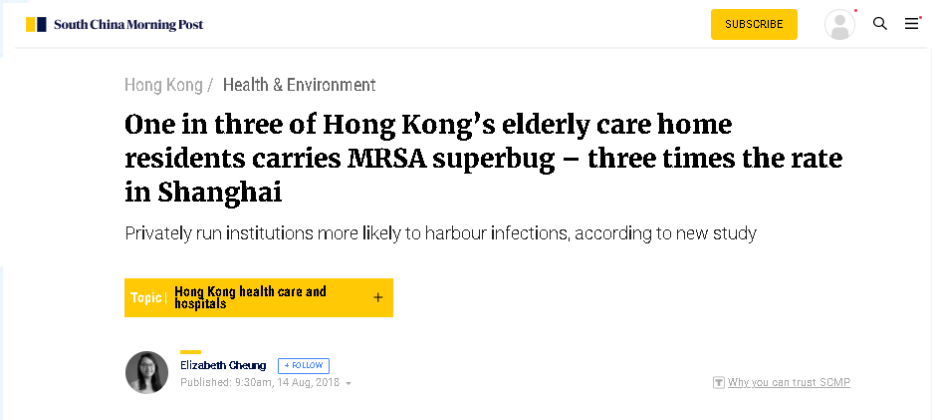
Believe it can be done!

- *Believe it can be done. When you believe something can be done, your mind will find the ways to do it. Believing a solution pays the way to solution.*

  David J. Schwartz. 1959. The Magic of Thinking Big.



- Despite the fact that prevalence of MRSA colonization in RCHEs increased sharply in Hong Kong
- It *<u>can</u>* be controlled.


South China Morning Post

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One in three of Hong Kong's elderly care home residents carries MRSA superbug – three times the rate in Shanghai

Privately run institutions more likely to harbour infections, according to new study

Topic | Hong Kong health care and hospitals +

Elizabeth Cheung + FOLLOW

Published: 9:30am, 14 Aug, 2018

Why you can trust SCMP

Your attitude, not your aptitude, will determine your altitude – Zig Ziglar

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"MRSA is already everywhere, it can't be tackled"

"We lack the resources to tackle MRSA"

"RCHE is not cooperative"

"We are busy with other issues"

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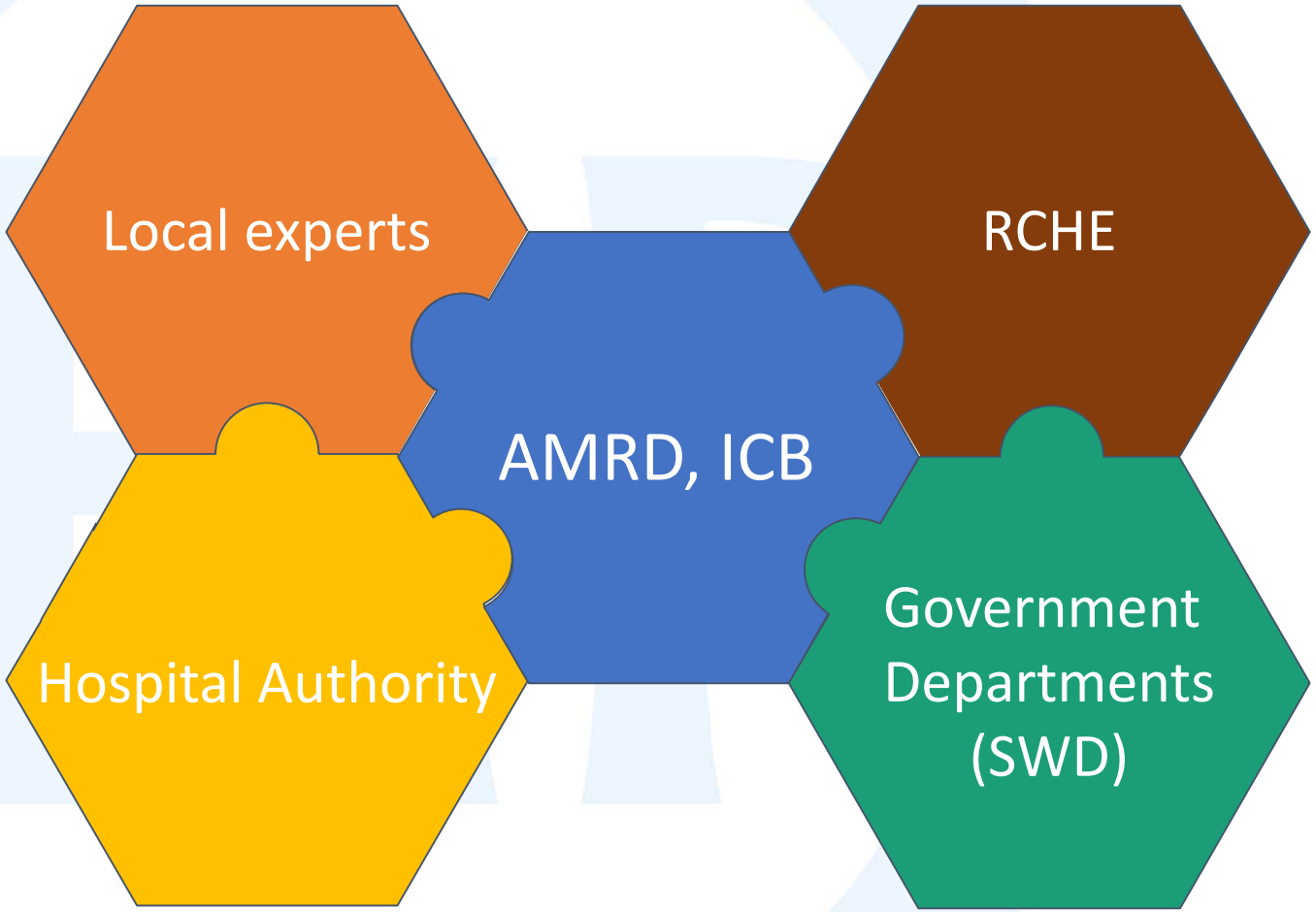
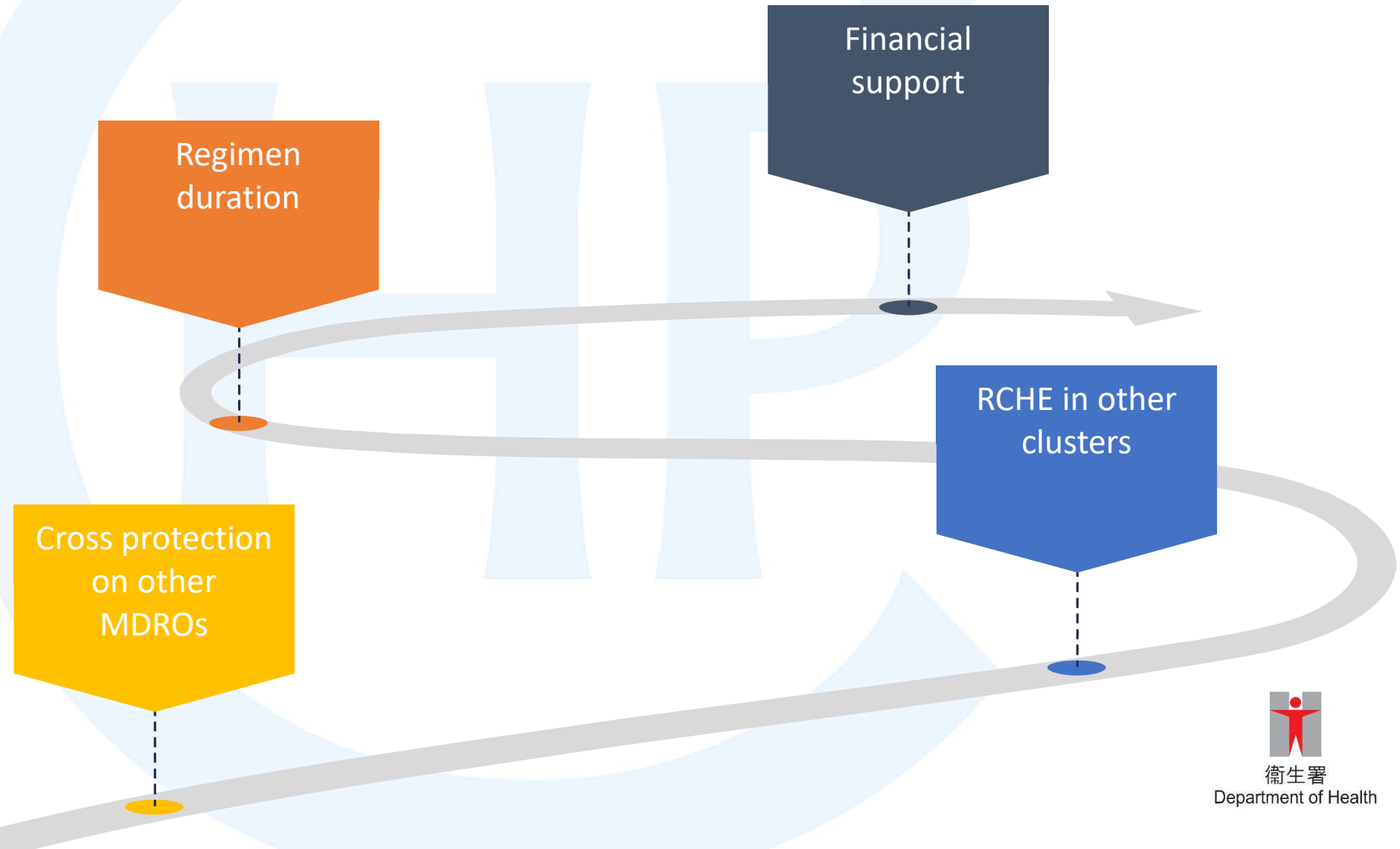
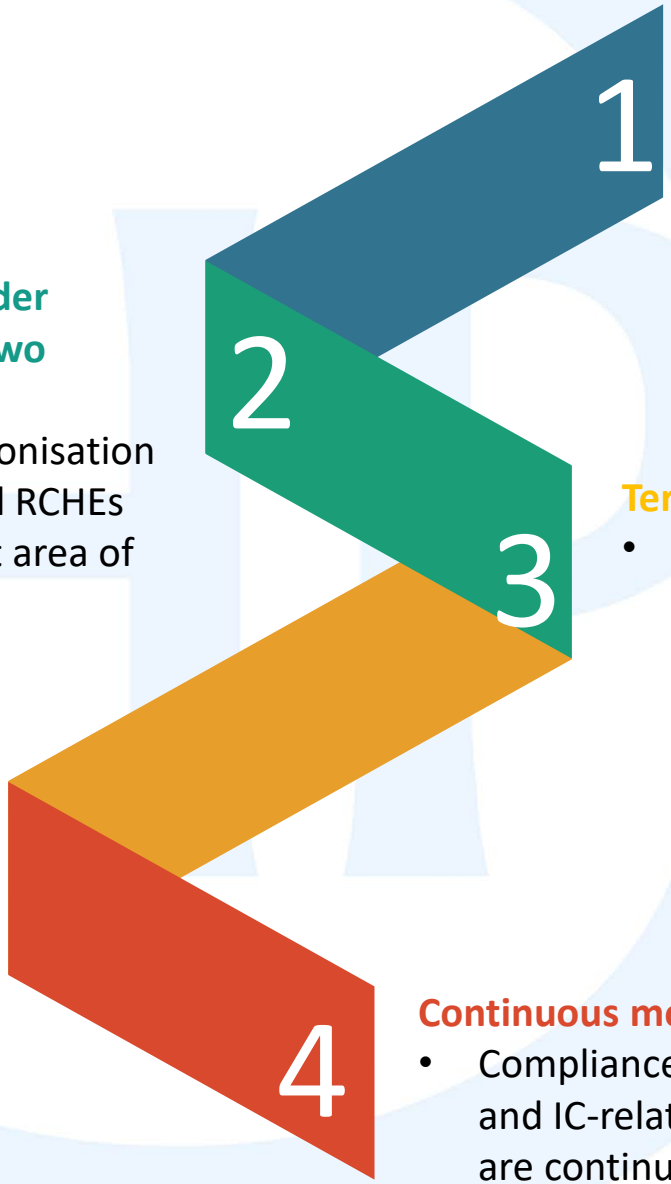
Teamwork


Local experts
RCHE
AMRD, ICB
Hospital Authority
Government Departments (SWD)

Unresolved issues



Way forward



Pilot in small no. of RCHE

- Implemented decolonisation in 22 RCHEs as pilot
- Streamline logistic and operational flow

Roll out to RCHE under catchment area of two major hospitals

- Rolling out decolonisation programme to all RCHEs under catchment area of QEH and QMH

Territory-wide programme

- Head toward territory-wide launch of decolonisation to all RCHEs in long run

Continuous monitoring

- Compliance to decolonisation and IC-related practice in RCHEs are continuously monitored

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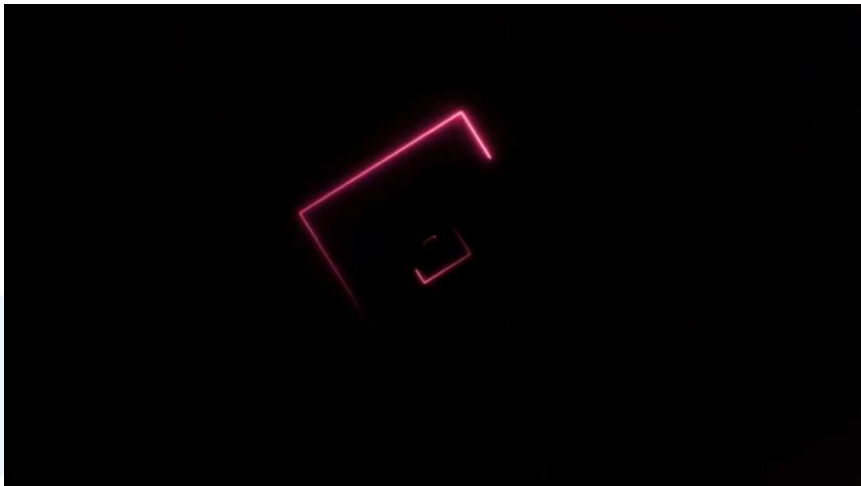
Thank you



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150 RCHEs in two HA clusters

Location and Type of RCHE	Number of RCHEs			
	<50	50-100	>100	Column Total
Hong Kong West Cluster (QMH)	11	17	32	60
Private	10	14	23	47
Self-finance	0	0	0	0
Subvent	0	3	9	12
Others	1*	0	0	1
Kowloon Central Cluster (QEH)	21	30	39	90
Private	21	25	26	72
Self-finance	0	3	1	4
Subvent	0	2	12	14
Others	0	0	0	0
Row total	32	47	71	150

* Registered as a residential care home for the disabled

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