

Infection Control Guidelines and Programs for Residential Care Homes in Hong Kong

Dr. Chen Hong Associate Consultant Infection Control Branch Centre for Health Protection Jan 28th, 2016





Content

- Setting the standard
 - Code of practice (LORCHE)
 - Guidelines on prevention of communicable disease in RCHEs
- Support to RCHEs
- Infection Control Programs in RCHEs
 - Enhancement of infection control practice in RCHEs (2013-2015)





Aging Population





Sources: Census and Statistics Department Website



RCHE in Hong Kong

- Increasing demand for RCHE service in Hong Kong
- With aging population, more people may require temporary or permanent placement in RCHEs.





Setting the Standard





LORCHE (Licensing Office of Residential Care Homes for the Elderly)

- Residential Care Homes (Elderly Persons) Ordinance (Cap. 459)
 - All residential care homes for the elderly (RCHEs) must be licensed to legitimize their operations
- LORCHE is responsible for enforcing statutory provisions under the Ordinance applicable to subvented, contract, self-financing non-profit-making and private RCHEs



Code of Practice

- Code of Practice for Residential Care Homes (Elderly Persons)
 - Under section 22 of the Residential Care Homes (Elderly Persons) Ordinance
 - Chapter 12 Infection control
 - RCHEs should implement control of infectious diseases in accordance with the Guidelines on Prevention of Communicable Diseases in RCHE









Guidelines on Prevention of Content of Conte

- To provide staff members with practical information on the preventive measures of communicable diseases in RCHE
- Latest revised in 2015
- Based on the previous versions published in 2004, 2007
- The guidelines has been updated with the latest information on multi-drug resistant organisms (MDROs)



Content of the Guidelines Divided into six sections



Concepts on communicable diseases

diseases



Detection of communicable diseases in RCHEs



Infection control measures in RCHEs

General advice on prevention of communicable



Outbreak of communicable disease



Role of RCHE staff





Editorial Board

- Centre for Health Protection, Department of Health
 - Central Health Education Unit
 - Infection Control Branch
 - Surveillance and Epidemiology Branch
- Elderly Health Service, Department of Health
- Community Geriatric Assessment Team, Hospital Authority
- Licensing Office of Residential Care Homes for the Elderly (LORCHE), Social Welfare Department





Dissemination

- Mailing to RCHEs under LORCHE and Nursing homes under Office for Registration of Healthcare Institutions (ORHI) of the Department of Health
- Web version: <u>http://www.chp.gov.hk/files/pdf/guidelines_on_prevention_of_communicable_diseases_in_rche_eng.pdf</u>
- Workshops for staff of Elderly Health Service and Visiting Health Team
- Training sessions for RCHE staff held in annual training 2015





Support to RCHEs

- 1. RCHE Infection Control Officer Training (annually from April July)
 - coordinated by ICB;
 - speakers from ICB, SEB, SWD LORCHE
 - trained more than 1800 RCHE staffs annually from 2010 to 2015
- 2. Ad-hoc trainings for different issues (e.g. infection control and isolation practice of multi-drug resistance organisms) in RCHEs
- 3. Annual Integrated Assessment (annually from July November) by EHS to assess their health care knowledge and practice including infection control
- 4. KwT/TW District RCHE Steering Committee
 - To coordinate services provide to RCHEs from public bodies within district
 - To align healthcare services to meet the needs of RCHEs
 - Members include geriatricians from PMH and YCH, Psychogeriatrics team of KCH, CNS &CGAT of HA; EHS of the DH; ICB and SEB of CHP; and LORCHE of SWD.

衛生**署2** Department of Health

Enhancement of Infection Control Practices in RCHES (2013-2015)







 The program aims to understand and improve the current infection control practices in private RCHEs.





Objectives

- To explore the current infection control practices in private RCHEs in relation to recommendations
- To assist private RCHEs to implement structural infection control program





Target and Coverage

- Focus on the most private (resource limited and needy) homes
- RCHEs were selected by a composite score generated for each RCHE using the annual checklist 2012 by EHS
- 50 private RCHEs were recruited





Distribution of the recruited RCHEs



50 RCHEs were recruited Location:

- 20 RCHEs in New Territories (NT)
- 18 RCHEs in Kowloon (KLN)
- 12 RCHEs in Hong Kong (HK)







Components of the Program

- RCHE staff education and training six core areas in 4 sessions
 - 1. Basic infection control concepts
 - 2. Care of residents with MDROs
 - 3. Environmental hygiene
 - 4. Influenza vaccination promotion
 - 5. Hand hygiene
 - 6. Care of residents with medical devices



Components of the Program

- On-site observation and regular feedback on infection control practices
 - Environmental hygiene
 - Hand hygiene facilities and practices
 - Safe care practices
- Hotline & a designated nurse provides support and guidance to empower Infection Control Officer (ICO)
- Training resources (training kits)
- Other conventional educational materials (posters, pamphlets, DVD)



衛生者 Department of Health



Assessment

- 1. Staff knowledge test
- 2. Environmental hygiene
- 3. Hand hygiene facilities and practices auditing
- 4. Safe care monitoring





Staff Knowledge Test (– Pre-and-post questionnaires

香港安老院会	<u> </u>	HP.
如有任何疑問,請致電 29902 完成問卷後,請於講座當日交	896 與衛生防護中心感染控制處和 給衛生防護中心感染控制處到到	成員聯絡・ 5的同事・
安 老院会名称: 日 期://	拿加者疏谈:	為號:

威染控制基本原则及應用──參與教育<u>講座前/後</u> 請選擇(V) 你認為最正確的答案。

問題		是	香
1.	傳染病能傳播開去,駕要有病原體、傳染原、		
	宿主和傳播途徑。		
2.	病原體傳播途徑包括空氣、飛沫及接觸傳播。		
3.	咳嗽摧儀是有效防止呼吸道感染傳播的防護		
	措施。		
4.	5.25%家用澡白水是院舍常用的消毒劑。		
5.	接觸院友的血液、體液、分泌物、排泄物、傷		
	口和黏膜,應採取標準防護措施。		
б.	疥瘡可經由直接接觸意病院友或間接接觸受		
	污染的物品傳播。		
7.	一般廢物和醫療廢物不用分開處理。		
8.	所有利器必须亲掉於利器盒内。		
9.	處理用後儀器或物品的原則,應先清潔後消		
	毒。		
10.	院友的個人物品如指甲剪、鬚刨,可共同使用。		









Staff Knowledge Test Result - by Staff Rank





Staff Knowledge Test Result – by Training Module





Environmental Hygiene

For example:

- Dilution of bleach
- Disinfection of cleansing tools
- Outbreak management
- Kitchen and toilet environment

	院会名称		14112	ea:		HM	
1	保持股合室内空氣	****		1	不識用	#21 / IF#	-
1.1	77禁重戶	an a		0		Q%有行禁食户2.時間有	(HP)
12	财制状态	84		0		(不適用: 不知)	818896
13	開動体制品	104	0	0	100		Carlo Subherse
14	對此小於機	8 14		•		(不識是:冬天)	INTROAS.
15	宏观者先冲其機築業研	2011			0	第13元十年時:回知是期 回知月	1日和美国市地址博输
						PARTINE DUTE DUTE	10 P ROWER
2	保持院会環境建業和要生						C.H.S.G.M.W.
11	每日用 20199 來用單位不达25%)清潔消毒結束排瘍的地力,如背前防品、医原用具。	2675404				(後:)運動各社事事務)	「個人現高王存計劃構力」
	所有地版、徽州和运室、运在持能推用素小素加及林能						1211
2.2	如接续条性可造的地方·用 1264 转程家用课口水(5.25%)漂果清毒教器·符 15.30 分	お打動な		•		(他) 源山(北平・浅嶺時間孝保)	いた有達度計・並且運営論時在介護範疇内
	罐货用资化清莱洗抹影						16的要心開發資源不同的刀和动形構成,以來交叉河流
13	如有血液酸盐、以解热 1354 家用漂白水区1550应铁水力做的物料清理可能注意一件	おります	•			(是) 漂白水比东。洪寨将同李傕;便纳许步	W. W
	10 分離後用進化達單及詳軟					2010/0400	101日至清潔和樂生
2.4	定期课業地址(采少母日一市),並保持地區較奧以預防員工业能力計划	満門		0			1.液 及 較子機 / 抹子紙 / 案紙 供洗子之用
15	地動な天後鏖和北期清洗	治用				日和天伝書 日知万歳先 (不満用: 前地敷)	1中水系统通作正常
2.6	定料检查及清潔院大用環體	消用				D42天 D42条则 D42月	F代協助開告・ 不確応將派告次道
27	目升如第四米高州之間遭量保持调量影響不少於1%	804	•			約5 派位有權立間格(不適用: 50%)	(約每星期一次) 把半边升速水注入每個抽水口,以保持領貨幣
						(REALINE OLD AL OLD AL OLD AL	【逆畅通知Ⅱ: 汴水是連位正常,注有漆溝
1.8	每星期类博兴整度济的健长及贸易兴和内的类长	207				(不適用: 無花動(花動)	主张员工 · 被整理或在港河尚的建築用品、如地版 / 地有等
1.9	城平地台的出版	814L				(不通符: 典包括約9年份)	8水洗果呈達除地用 / 地市等津浦用品上的菜種污糖物
10	如發現蟲菜為患的動象、如毛菜料用物、麵類、软、黃醋等、阿含會採取濃粱的防發	ATE				OB441MARRIE!	20 捕蝉浆用菜白水 (5.25%) 浸用污染物品的分量
	网络九行曲					QX#	E#X推注:#水洗甲
111	过有的兼编和等编的	內的關係					100 月月
						20140729 (1/3)	1業員工 : 在場論供爆發展開,増速消費的方法 100時増定用添加水油最定品,加加下面用,時 15.30 00歳
							INT. NOWMER - BRAILENBERGENEN - PRANTS















Environmental Hygiene Auditing - by Individual RCHE





Hand Hygiene Facilities and Practice

For example:

- Hand washing facility
- Installation of alcohol based hand rub
- Five moments of hand hygiene
- In-house hand hygiene assessment

夏二浦学校祝酒

2	世 またまま またまま またまま またまま またまま またまま またまま またまま に またまま に またまま に またまま し たまま たまま たまま たまたまま し たまま たまま	22世(現在2十里) 新生評估表					
4	酒精进手液的存储炎*	資料來潮	兼	香	不識用	備証 /	脱盘
4.1	的存於的火金屬的存種。第	数年					
4.2	約存傷/箱點上"易燃"標記 点	製品					
4.3	於存穩/指鎖緊	84		•			
4.4	定期检查使用量及有效日期	10.00	•	0		回每月	日共作
4.5	約存結動量不多約20公升	10 AL				500ml #	100ml #:#:
5	員工手信衛生注意事項						
5.1	員工定期建退手把衛生教材	調問				□#5#3	4 日毎年 日英位
5.2	藏染控制主任定時評估員工業手之依領率	14/50				051	F 日前年 日其他
5.3	戰染控制主任定時邀報員工業手之依留率	24/52				日會議	口午终候告 口其也
-371	素請參考消防條例,勞工法例及職業安全條例						
秤位	戰員:	「獲取分數」			總得5	日敷百分り	R
6	自好手郎衛生習慣及態度 職機加查1/2名員工(注刑或登記攝士/保健員/備現員),作以下觀察//	南 南科家湖	1.職 見	1	2.職	18 17	9822
6.1	員工認同遵従手部憲法、會派任威运的機會	14/55					
6.2	當手部有明顯被沾污時,不可用酒精接手液罩手	肉間					
63	員工沒有配數手部装飾物、或指式假指甲	製店					
6,4	員工指甲醇短及清潔	劉祭					
6.5	員工載上手套才接觸血液、體液、分泌物、排泄物、黏膜、破損皮膚	2676	0				
6.5	完成程序徒,立即取掉手套及清累雙手	24/50	0		1 0		
6.7	取手書時,注有直接接觸手書外部(請員工模擬示範)	観察	0				
6.8	請員工列出業平4時到	NM.	0				 回接構成支付 回執行清末(未前程序前) 目接機構液後 目接機能変後 目接機能支援 日
(#13	的大金屬的存標/確應設置於總職大權、受熱、電源及購天的地方。這種	是手來亦不應與	其他君	燃料品	同款		
評估	·職員: 師評分: 最高	可硬取分數			(總得)	日本百分	R





Auditing - by Individual RCHE





Before intervention After intervention



Safe Care

- Handling and disposal of used / contaminated sharps
- Handling of nasogastric tube / **PEG** tube feeding utensils
- Handling of urethral catheterization drainage system











Safe Care

- Handling and disposal of used/contaminated sharps





- Handling of nasogastric tube/PEG tube feeding utensils



Safe Care



- Handling of urethral catheterization drainage system





Impacts on RCHEs as commented by RCHE staff during the visits

Knowledge

- On-site visit with flexible schedule and time
 - ➔ facilitate staff of different levels to attend
- Interactive educational talks with games
 - → Attractive
 - ➔ Easier to comprehend
- Training kit clear, comprehensive and simple
 - → reference
 - ➔ facilitate continuous staff training
 - → train newly recruited staff (train the trainer)





Impacts on RCHEs as commented by ICB colleagues

Attitude

- Habit to use alcohol handrub
- RCHE staff starts to take the initiative to call for help or ask questions with regards to IC related issues.
- RCHE staff gained confident in performing IC measures.
- ICB has established a good rapport with RCHE staff and thereby they are willing to review their real situation to us and follow the advices on improving their IC measures and practices given by us.





Impacts on RCHEs as commented by RCHE staff and ICB colleagues

Practice

- Posters and gimmicks have served as a reminder and increased alertness among the RCHE staff, so that they are able to apply the knowledge into daily routine practices.
- Interactive games provided opportunities for RCHE staff to practice their IC procedures (e.g. donning and doffing of PPE). Their misconceptions/lapse in IC practices/mistakes made can be pointed out and corrected by our nurses.
- Provision of ABHR built up the habit of using ABHR
 → increase HH compliance
- Self assessments ICO started to assess RCHE's environmental hygiene and staffs' HH techniques regularly



Conclusion



- All of the RCHEs welcomed the program
- The tailor-made training and recommendations are useful on the promotion of infection control
- Overall improvement documented in various assessments including Hand Hygiene and Environmental Hygiene



Prevalence Survey of MDROs in RCHEs in KCC

Conducted in Oct to Dec 2015 Surveyed 1099 Residents from 20 RCHEs



Prevalence Survey of Common Communicable

- Point prevalence survey from Feb to May 2014
- Surveyed 3857 residents from 46 RCHEs
- The overall prevalence of infections was 2.7% (95% CI 2.1%- 3.4%)
- The most common infections:
 - Respiratory Tract Infection 1.33% (95%CI 0.93-1.89)
 - Skin and soft tissue infection 0.70% (95% CI 0.47-1.04)
 - Urinary tract infection 0.53% (95% CI 0.32-0.86)

	All RCHE	Private RCHE	Non-private RCHE	P-value
Any antimicrobials	81 (2.12%)	53 (2.02%)	28 (2.35%)	1.000
Augmentin	30 (0.78%)	18 (0.69%)	12 (1.01%)	1.000
Levofloxacin	14 (0.38%)	11 (0.43%)	3 (0.26%)	1.000
Cefuroxime	7 (0.20%)	7 (0.28%)	0 (0.00%)	0.444
Other antimicrobials	34 (0.86%)	20 (0.74%)	14 (1.15%)	1.000

1和 工 百 Department of Health

Discharge of Carriers with Emergin (如本語名) MDROs to RHCEs

- "Find and confine" strategy adopted by HA since end of 2010 for emerging MDRO (VRE, CRE (PCR +ve), VISA/VRSA and MDPA)
- Direct discharge of VRE from hospital to trained RCHE starting Nov 2013
- Surging number of CRE carriers to be discharged to RCHEs in 2015



MDROs situation in Hong Kong Healthcare setting



Laboratory surveillance on multi-antimicrobial resistant bacteria(2009 - Nov2015)

Vancomycin-resistant enterococcus

Year	2009	2010	2011	2012	2013	2014	2015 Jan - Nov
Resistant	1	30	122	258	2387	1665	426

Enterobacteriaceae with reduced susceptibility to carbapenems mediated by various molecular classes of carbapenemases

		Class													
Voar	Α			В	_	D			Total						
Tear	KPC	іМІ	NDM	IMP	VIM	ΟΧΑ	NDM+IMP	KPC+VIM	NDM+OXA	rotai					
2011	11	1	3	12	2	0	1	1	0	31					
2012	11	1	34	22	1	2	0	0	2	73					
2013	9	1	32	10	0	0	1	0	0	53					
2014	38	1	50	29	0	5	1	0	7	131					
2015 Jan - Nov	16	0	83	13	2	4	0	NA	0	118					

Source: CHP/Statistics on laboratory surveillance

Number of Carriers Discharged to RCHE (2014)

Cluster			VRI	Ξ				CR	E							
Year 2014	Q1	Q2	Q3	Q4	Sum	Q1	Q2	Q3	Q4	Sum	Q1	Q2	Q3	Q4	Sum	Total
ксс	74	28	23	8	133		2		1	3					0	136
кwс	43	49	18	13	123				1	1			1		1	125
KEC	13	6	6	2	27					0					0	27
NTEC	17	1	2	3	23					0					0	23
NTWC	29	26	16	10	81					0					0	81
HKEC	9	3	6	2	20	1				1					0	21
нкwс	2	1	1	0	4					0					0	4
Subtotal	187	114	72	38	411	1	2	0	2	5			1		1	417

One MRPA case of HKWC discharged to HKWC in 2014 Q4



Number of Carriers Discharged to RCHE (2015)



Cluster			VRE					CRE			CRE & VRE					Total
Year 2015	Q1	Q2	Q3	Q4	Sum	Q1	Q2	Q3	Q4	Sum	Q1	Q2	Q3	Q4	sum	TOtal
ксс	18	8	5	3	34				1	1						35
кwс	5	2	3	5	15			1		1				1	1	17
KEC	1	3			4											4
NTEC			1		1	1			1	2						3
NTWC	8	11	14	4	37											37
НКЕС		5	2		7											7
нкwс	1	1			2	2	2	1	4	9						11
Subtotal	33	30	25	12	100	3	2	2	6	13				1	1	114





Acknowledgment







