



Monitoring of antibiotic resistance pattern in the private sector and Hand Hygiene Initiative

Dr YUNG Wai Hung, Raymond

Co-chairman of Working Group of Collaboration between CHP & Private Hospitals on Safe Use of Antibiotics & Infection Control

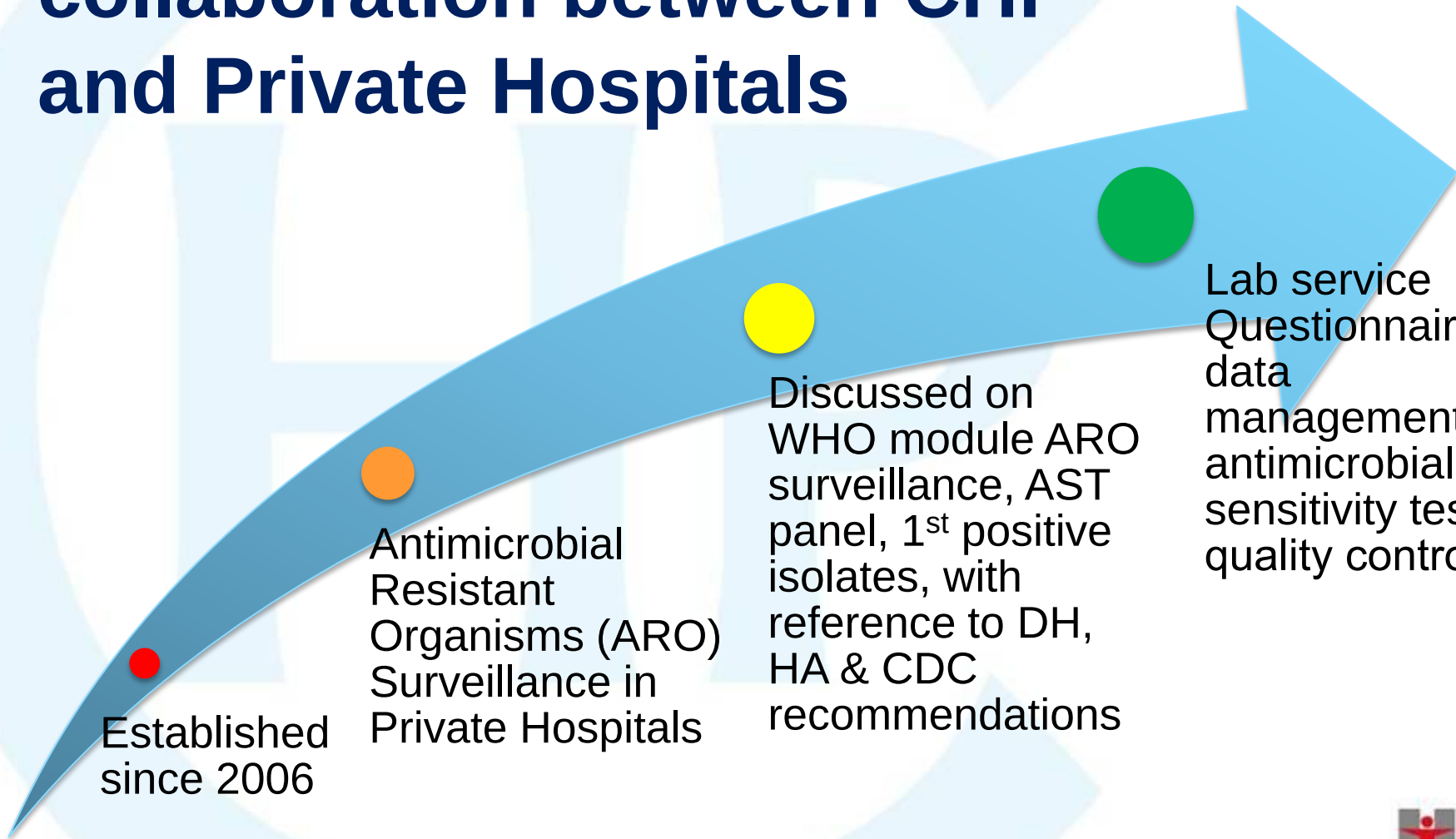


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Department of Health

Working Group of Collaboration between CHP & Private Hospitals on Safe Use of Antibiotics & Infection Control-2006

- Increase collaboration between CHP & Private Hospitals related to infection control
- Enhance communication & experience sharing among members
- Establish a central database related to antibiotics use & resistance, with regular update to members

The establishment of collaboration between CHP and Private Hospitals



Established since 2006

Antimicrobial Resistant Organisms (ARO) Surveillance in Private Hospitals

Discussed on WHO module ARO surveillance, AST panel, 1st positive isolates, with reference to DH, HA & CDC recommendations

Lab service
Questionnaire, data management, antimicrobial sensitivity testing, quality control...

Regular and ad-hoc meetings on safe use of antibiotics and infection control



What have we done?

- Ad hoc subgroup, e.g. Hand Hygiene Campaign 2014 Working Group
- Monitoring of the antibiotic sensitivities of the five selected bacteria
 - ICB collated antibiotic sensitivities data on the five selected bacteria from each private hospital, analyze and tabulate the data
 - The aggregated data was then be shared in the meetings and newsletters among healthcare professionals in private hospitals for internal references
- Surveillance of MDROs
- Experience sharing on infection control against VRE, MRSA etc.

Antibiotic Sensitivity data 2012 from Private Hospitals all specimens and top 2 specimens – *S. aureus*

Period	No. of isolates	MRSA	VAN	GEN	ERY	CLD	PPN
2012 Total	3278	641 (19%)	2804/2934 (2365/2666)	2003/2088 (919/1036)	186/111 (87%)		

Specimen Type	No. of isolates	MRSA	VAN	GEN	ERY	CLD	PPN
Urine	827	187 (23%)	698/696 (100%)	628/631 (99%)	116/81 (14%)	193/280 (69%)	43/32 (13%)
Wound swab	801	185 (23%)	616/615 (100%)	428/616 (69%)	428/616 (69%)	251/319 (78%)	23/19 (12%)

*MRSA = *S. aureus* resistant to cloxacillin/oxacillin/methicillin
% of MRSA among all *S. aureus* isolates
VAN: vancomycin GEN: gentamicin ERY: erythromycin CLD: penicillin SXT: co-trimoxazole

Antibiotic Sensitivity data 2012 from Private Hospitals all specimens and top 2 specimens – *Klebsiella spp.*

Period	No. of isolates	ESBL	AMC	LEV	SXT	AMP	Ertapenem	MEM	IMI	NT	NAL
2012 Total	1923	324 (17%)	138/1170 (12%)	75/1707 (4%)	527/689 (76%)	61/113 (53%)	88/893 (99%)	123/1237 (100%)			

Specimen Type	No. of isolates	ESBL	AMC	LEV	SXT	AMP	Ertapenem	MEM	IMI	NT	NAL
Urine	765	150 (19%)	458/631 (73%)	234/279 (84%)	97/285 (34%)	1/61 (2%)	389/392 (99%)	430/430 (100%)			
Wound	521	10 (2%)	450/481 (94%)	237/265 (89%)	102/211 (48%)	2/388 (0%)	253/255 (99%)	359/351 (100%)			

AMC: amoxicillin + clavulanic acid LEV: levofloxacin
AMP: ampicillin MEM: meropenem IMI: imipenem
NT: nitrofurantoin NAL: nalidixic acid

Antibiotic Sensitivity data 2012 from Private Hospitals all specimens and top 2 specimens – *Acinetobacter spp.*

Period	No. of isolates	AMK	GEN	MEM	IMI	CEF	CTZ	CP	LEV	SUL	TAX	TM	PP	UNA
2012 Total	372	222/369 (59%)	219/369 (59%)	181/169 (107%)	219/369 (59%)	219/369 (59%)	141/169 (83%)	141/169 (83%)	141/169 (83%)	181/169 (107%)	181/169 (107%)	181/169 (107%)	181/169 (107%)	181/169 (107%)

Specimen Type	No. of isolates	AMK	GEN	MEM	IMI	CEF	CTZ	CP	LEV	SUL	TAX	TM	PP	UNA
Urine	145	101/145 (69%)	126/147 (86%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)	147/146 (101%)
Wound	41	35/41 (85%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)	32/41 (78%)

AMK: amikacin GEN: gentamicin MEM: meropenem IMI: imipenem
CEF: cefepime CTZ: ceftazidime CP: ciprofloxacin LEV: levofloxacin
SUL: sulfamonomethoxazole TAX: ticarcillin + clavulanic acid (Timentin)
TM: ticarcillin + clavulanic acid (Timentin) PP: piperacillin
UNA: ampicillin + sulbactam (Unasyn)

Working Group 2014



Chairman Dr Dr WONG Tin Yau, Andrew & Co-Chairman Dr YUNG Wai Hung, Raymond

- Infection Control Branch, CHP
- Canossa Hospital (Caritas)
- Evangel Hospital
- Hong Kong Adventist Hospital
- Hong Kong Baptist Hospital
- Hong Kong Sanatorium & Hospital
- Matilda International Hospital
- Precious Blood Hospital
- St. Paul's Hospital
- St. Teresa's Hospital
- Union Hospital
- Tsuen Wan Adventist Hospital



Adventist Health 港安



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Antibiotic sensitivities of the five selected bacteria:

- *Staphylococcus aureus*
- *Escherichia coli*
- *Klebsiella* species
- *Pseudomonas aeruginosa*
- *Acinetobacter* species

Monitor the trend of change regarding:

- ✓ Overall sensitivity pattern from all specimens
- ✓ Sensitivity patterns of the top two specimens for each bacteria
- ✓ Important specimen type e.g. blood



Antibiotic Sensitivity data 2012 from Private Hospitals – all specimens and top 2 specimens – *S. aureus*

Data of isolates from 11 hospitals

Period	No of isolates	MRSA	VAN	GEN	ERY	CLD	PEN	Linezolid	SXT	Fusidic acid	Rifampicin
2012 Total	3576	641 (18%)	2904/2904 (100%)	2365/3066 (77%)	2060/3088 (67%)	910/1304 (70%)	186/1172 (16%)	1596/1596 (100%)	2895/2962 (98%)	1021/1058 (97%)	561/563 (100%)

Top 2 specimens

Specimen Type	No. of Isolates	MRSA	VAN	GEN	ERY	CLD	PEN	Linezolid	SXT	Fusidic acid	Rifampicin
Sputum	927	187 (20%)	696/696 (100%)	658/851 (77%)	516/851 (61%)	155/289 (54%)	43/326 (13%)	384/384 (100%)	679/691 (98%)	232/241 (96%)	123/125 (98%)
Wound swab	801	185 (23%)	615/615 (100%)	423/576 (73%)	429/600 (72%)	251/315 (80%)	23/164 (14%)	437/437 (100%)	670/690 (97%)	246/258 (95%)	69/69 (100%)

*MRSA = *S. aureus* resistant to cloxacillin/ oxacillin/ methicillin/ ceftazidime

% of MRSA = % of MRSA among all *S. aureus* isolates

VAN: vancomycin GEN: gentamicin ERY: erythromycin CLD: clindamycin

PEN: penicillin SXT: co-trimoxazole

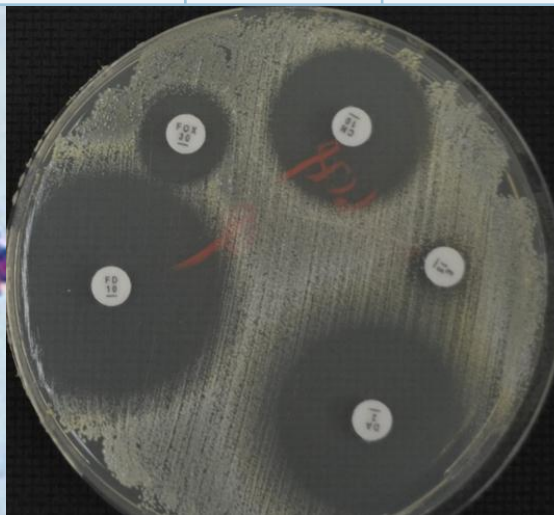
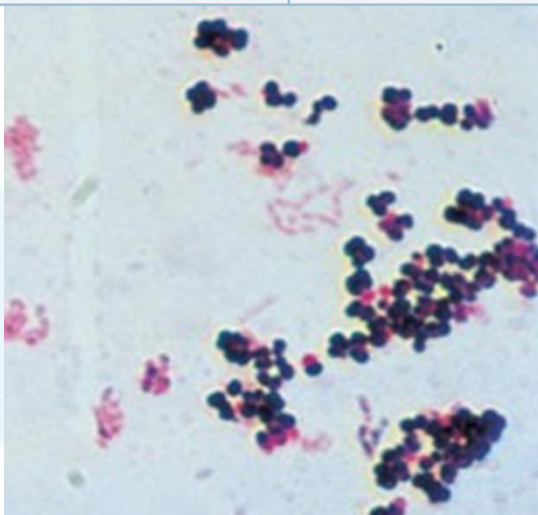
% of MRSA +ve in specimen cultured with *S. aureus*

	2011	2012	P value
Total no. of isolate	3457	3576	
MRSA +ve	464 (13%)	641 (18%)	<0.0001
Blood	9% (3/35)	15% (5/34)	0.4262
sputum	17% (152/887)	20% (187/927)	0.0973
Throat swab	9% (71/754)	8% (30/388)	0.3423
Wound swab	16% (103/636)	23% (185/801)	0.0012
Pus aspirate	18% (54/297)	26% (111/429)	0.0150
Nasal Swab	13% (30/236)	14% (39/281)	0.6975



MRSA in HA hospitals

MRSA		2009	2010	2011	2012	2013 (up to June)
MRSA / total SA		-	-	42.83% (10870/ 25382)	43.60% (11725/ 26891)	46.13% (10900/ 23629)
No of cases		6735	7227	7551	8315	7944
No of infection		3702	3794	4152	4664	3997
MRSA Bacteremia in Acute Beds/ 1,000 Acute patient days	Number	676	599	611	591	549
	Overall	0.17%	0.15%	0.15%	0.14%	0.15%
	≥ 2 days of admission	0.07%	0.060%	0.06%	0.06%	0.06%



Courtesy : CICOHA

Antibiotic Sensitivity data 2012 from Private Hospitals – all specimens and top 2 specimens – *E. coli*

Data of isolates from 11 hospitals

Period	No of isolates	ESBL	AMC	LEV	SXT	AMP	Ertapenem	MEM	IMI	NIT	NAL
2012 Total	6552	1644 (25%)	4069/5860 (69%)	1886/2736 (69%)	1273/2951 (43%)	1782/6082 (29%)	3176/3180 (100%)	3906/3907 (100%)	4553/4553 (100%)	1150/1197 (96%)	3/4 (75%)

Top 2 specimens

Specimen Type	No. of Isolates	ESBL +ve	AMC	LEV	SXT	AMP	Ertapenem	MEM	IMI	NIT	NAL
Urine	4639	1070 (23%)	2871/4105 (70%)	1367/1936 (71%)	957/2216 (43%)	1310/4311 (30%)	2255/2259 (100%)	2621/2622 (100%)	3103/3103 (100%)	1134/1180 (96%)	3/4 (75%)
Pus aspirate	391	122 (31%)	235/360 (65%)	120/173 (69%)	97/208 (47%)	111/375 (30%)	119/119 (100%)	238/238 (100%)	272/272 (100%)	4/4 (100%)	

AMC: amoxicillin + clavulanic acid LEV: levofloxacin SXT: co-trimoxazole

AMP: ampicillin MEM: meropenem IMI: imipenem

NIT: nitrofurantoin NAL: nalidixic acid

% of ESBL+ve in specimen cultured with *Escherichia coli*

	2011	2012	P value
Total no. of isolates	6251	6552	
Overall % of ESBL +ve	1487 (24%)	1644 (25%)	0.0863
Blood	27% (48/176)	24% (46/191)	0.4844
Urine	22% (955/4438)	23% (1070/4639)	0.0769

Antibiotic Sensitivity data 2012 from Private Hospitals – all specimens and top 2 specimens – *Klebsiella spp.*

Data of isolates from 11 hospitals

Period	No of isolates	ESBL +ve	AMC	LEV	SXT	AMP	Ertapenem	MEM	IMI	NIT	NAL
2012 Total	1923	326 (17%)	1381/1763 (78%)	701/797 (88%)	537/809 (66%)	6/1183 (1%)	885/893 (99%)	1231/1237 (100%)	1298/1306 (99%)	81/130 (62%)	

Top 2 specimens

Specimen Type	No. of Isolates	ESBL +ve	AMC	LEV	SXT	AMP	Ertapenem	MEM	IMI	NIT	NAL
Urine	706	150 (21%)	455/631 (72%)	234/279 (84%)	167/305 (55%)	1/411 (0%)	359/362 (99%)	430/433 (99%)	487/490 (99%)	80/127 (63%)	
Sputum	521	69 (13%)	405/481 (84%)	237/255 (93%)	162/221 (73%)	2/366 (1%)	203/205 (99%)	350/351 (100%)	341/341 (100%)		

AMC: amoxicillin + clavulanic acid LEV: levofloxacin SXT: co-trimoxazole

AMP: ampicillin MEM: meropenem IMI: imipenem

NIT: nitrofurantoin NAL: nalidixic acid

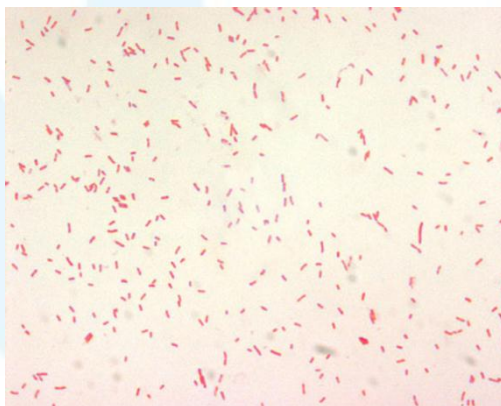
% of ESBL+ve in specimen cultured with *Klebsiella spp.*

	2011	2012	P value
Total no. of isolate	1850	1923	
Overall % of ESBL +ve	285 (15%)	326 (17%)	0.1972
Blood	15% (7/48)	8% (4/52)	0.2712
Sputum	9% (45/482)	13% (69/521)	0.0514
Urine	23% (163/722)	21% (150/706)	0.5437



ESBL in HA hospitals

ESBL		2009	2010	2011	2012	2013 (up to June)
ESBL +ve / All E coli and K spp.		-	25%	25.37%	25.76%	23.77%
Total no of cases		-	-	13070	14224	12081
ESBL BSI per 1,000 patient bed days	Number	-	-	1564	1722	1569
	Overall	-	-	0.22%	0.23%	0.25%
	≥ 2 days of admission	-	-	0.06%	0.06%	0.06%



Antibiotic Sensitivity data 2012 from Private Hospitals – all specimens and top 2 specimens – *P. aeruginosa*

Data of isolates from 11 hospitals

Period	No of isolates	AMK	GEN	MEM	IMI	CEF	CTZ	CIP	LEV	SUL	TAZ	TIM	PIP
2012 Total	1140	1063/1132 (94%)	976/1124 (87%)	571/664 (86%)	984/1130 (87%)	721/813 (89%)	1062/1120 (95%)	976/1116 (87%)	590/731 (81%)	517/590 (88%)	939/1091 (86%)	241/438 (55%)	101/117 (86%)

Top 2 specimens

Specimen Type	No. of Isolates	AMK	GEN	MEM	IMI	CEF	CTZ	CIP	LEV	SUL	TAZ	TIM	PIP
Sputum	494	458/492 (93%)	424/490 (87%)	232/270 (86%)	427/490 (87%)	295/335 (88%)	460/488 (94%)	426/486 (88%)	237/293 (81%)	201/226 (89%)	411/479 (86%)	101/162 (62%)	55/59 (93%)
Urine	156	149/154 (97%)	135/154 (88%)	88/97 (91%)	143/153 (93%)	112/121 (93%)	143/153 (93%)	136/152 (89%)	100/111 (90%)	82/90 (91%)	130/148 (88%)	38/69 (55%)	12/16 (75%)

AMK: amikacin GEN: gentamicin MEM: meropenem IMI: imipenem
 CEF: cefepime CTZ: ceftazidime CIP: ciprofloxacin LEV: levofloxacin
 SUL: cefoperazone + sulbactam (Sulperazon) TAZ: piperacillin + tazobactam (Tazocin)
 TIM: ticarcillin + clavulanic acid (Timentin) PIP: piperacillin

Antibiotic Sensitivity data 2012 from Private Hospitals all specimens and top 2 specimens – *Acinetobacter spp.*

Data of isolates from 11 hospitals

Period	No of isolates	AMK	GEN	MEM	IMI	CEF	CTZ	CIP	LEV	SUL	TAZ	TIM	PIP	UNA
2012 Total	272	232/260 (89%)	219/266 (82%)	145/169 (86%)	219/265 (83%)	172/206 (83%)	218/263 (83%)	141/198 (71%)	136/169 (80%)	141/149 (95%)	185/254 (73%)	58/82 (71%)	1/34 (3%)	

Top 2 specimens

Specimen Type	No. of Isolates	AMK	GEN	MEM	IMI	CEF	CTZ	CIP	LEV	SUL	TAZ	TIM	PIP	UNA
Sputum	148	131/143 (92%)	126/147 (86%)	84/97 (87%)	121/146 (83%)	95/110 (86%)	118/145 (81%)	90/122 (74%)	77/92 (84%)	82/86 (95%)	100/138 (72%)	24/34 (71%)	1/15 (7%)	
Urine	41	35/38 (92%)	32/39 (82%)	13/15 (87%)	33/39 (85%)	28/33 (85%)	32/38 (84%)	24/31 (77%)	15/17 (88%)	13/14 (93%)	24/39 (62%)	7/9 (78%)		

AMK: amikacin GEN: gentamicin MEM: meropenem IMI: imipenem
 CEF: cefepime CTZ: ceftazidime CIP: ciprofloxacin LEV: levofloxacin
 SUL: cefoperazone + sulbactam (Sulperazon) TAZ: piperacillin + tazobactam (Tazocin)
 TIM: ticarcillin + clavulanic acid (Timentin) PIP: piperacillin
 UNA: ampicillin + sulbactam (Unasyn)

Dissemination of data – way forward

- Add tables of aggregated data to the IMPACT mobile apps
- Further publicize the 3-year data from 2011 to 2013 when available



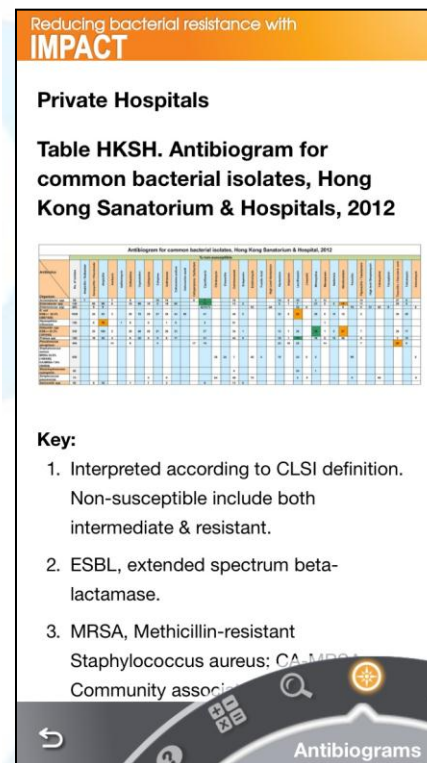
iPhone & iPod



iPad



Android version:



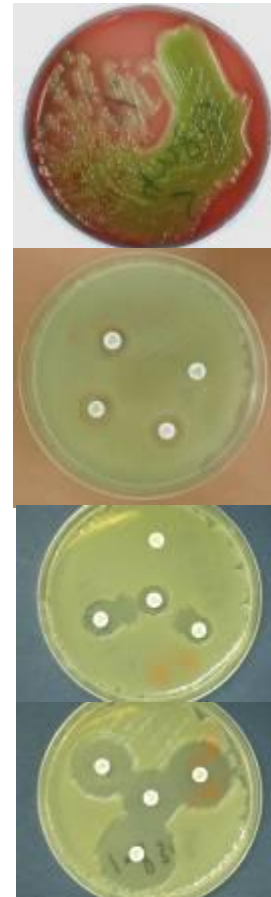
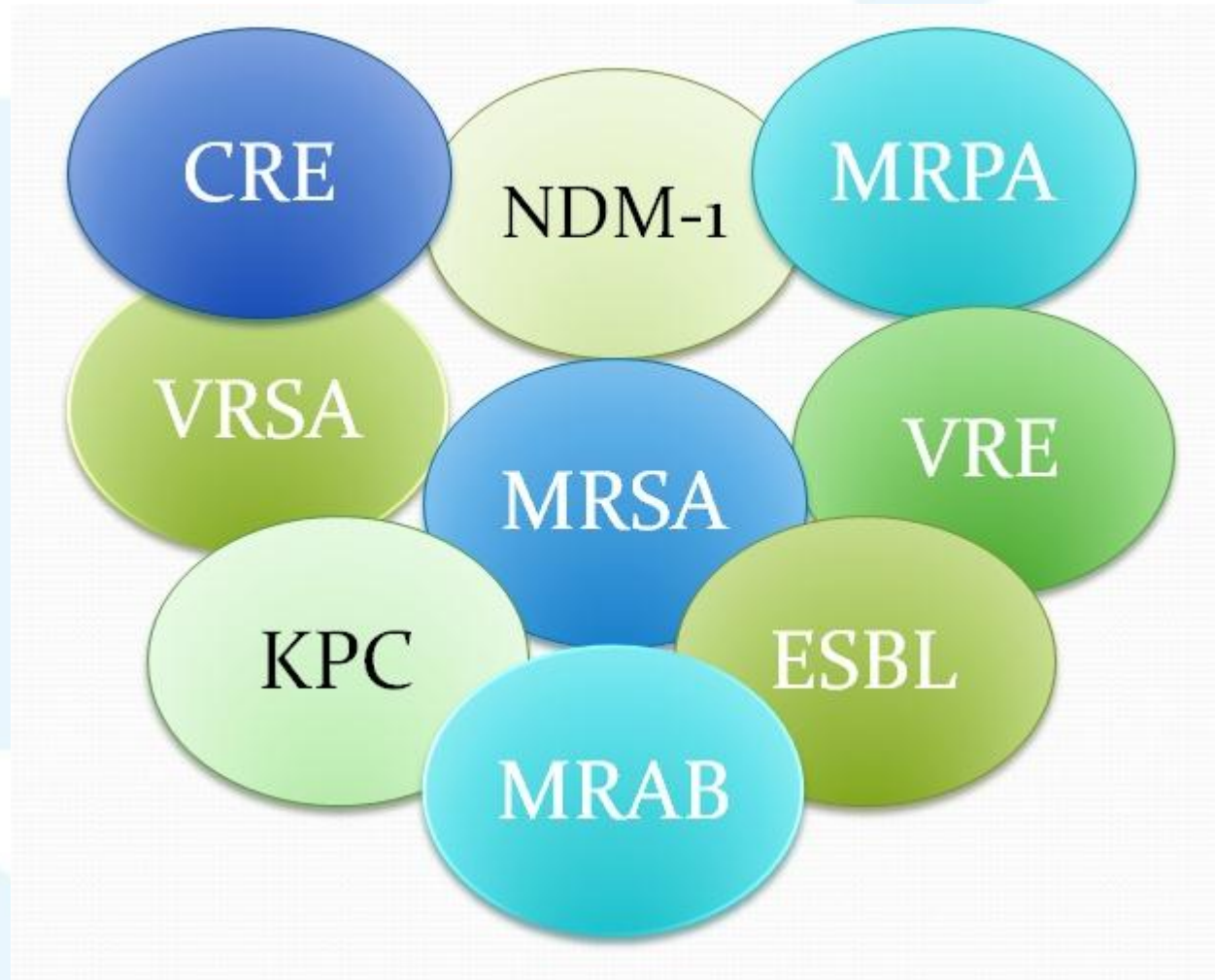
The 4th edition of “Reducing bacterial resistance with IMPACT” guidelines (Search “IMPACT” in Apps Store)

Surveillance- Way Forward

- ***Staphylococcus aureus*** isolates:
 - % of methicillin-resistant *S. aureus* (MRSA)
 - Sensitivity to vancomycin
- ***Escherichia coli*** & ***Klebsiella species*** isolates:
 - % of being extended spectrum beta-lactamase (ESBL)-positive
 - Sensitivities to the carbapenems
- **Other MDROs:**
 - Carbapenem-resistant Enterobacteriaceae (CRE)
 - Multiple-drugs Resistant ***Pseudomonas aeruginosa*** (MRPA)
 - Multiple-drug Resistant ***Acinetobacter*** (MDRA)



Multidrug Resistant Organisms (MDROs)



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Department of Health

Courtesy : ICB, CHP

To Combat Multi-Drug Resistant Organisms (MDROs)

- Surveillance of Antimicrobial Resistance
- Safe Use of Antibiotics & Antimicrobial Stewardship Program
- Infection prevention and control

Hand hygiene remains one of the most effective, yet simple and cost-effective means for reducing the transmission of infections.



停一停!
STOP!



想一想...
Think...



立即潔手
Hand Hygiene

潔手7步驟 搓手20秒
Hand Hygiene 7 steps Rub hands for 20 seconds
www.chp.gov.hk

潔手大行動2014
Hand Hygiene Campaign 2014



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Department of Health

Hand Hygiene Initiative in a Private Hospital

Hand Hygiene

- Handrub dispensers are installed in most public areas of the Hospital
- Proper hand hygiene information sheet & pocket-sized handrub are given to inpatients upon admission
- Pocket-sized handrub is provided to all HCWs



香港醫院 感染控制組 www.hkhk.com

正確潔手方法

這多端由新嘉坡感染控制組編寫，其目的是提供有關如何正確使用洗手液及肥皂的資訊，使您能了解如何正確使用，以及如何選擇。請參閱及多量有關洗手的資訊，保持手部衛生是預防傳染病的最重要的一環。用肥皂或洗手液清洗雙手，可達到此目的。

甚麼時候要洗手？

1. 在接觸眼、鼻及口之前
2. 進食及處理食物之前
3. 如廁後
4. 當手接觸過分泌物或排泄物，如打噴嚏及咳嗽後
5. 接觸過公共物體，例如電梯扶手、公共電話及門柄後
6. 為嬰孩或病人更換尿布後，以及處理被污染的物件後
7. 與寵物接觸後
8. 接觸過任何動物後

一般情況下，當雙手有明顯的污穢或接觸過上述任何（例如如廁後或更換尿布後），打噴嚏及咳嗽後）應用肥皂及清水徹底清洗雙手。如雙手沒有明顯污穢，可用含75-80%酒精的洗手液清洗雙手。

用酒精洗手液消毒雙手方法

把足夠份量的酒精塗抹於手掌及手腕，然後搓揉手掌、手背、指縫、指尖、大拇指、腕部及手腕處至少20秒，直至雙手乾燥。請參閱下列圖解瞭解正確洗手技巧。

齊潔手，細菌走，體健優，樂悠悠！

1a. 掌心對掌心，手指交叉，互相搓揉。
1b. 右手握左手大拇指，左右旋轉，互相搓揉。
2. 掌心對掌心，手指交叉，互相搓揉。
3. 右手握左手大拇指，左右旋轉，互相搓揉。
4. 掌心對掌心，手指交叉，互相搓揉。
5. 右手握左手大拇指，左右旋轉，互相搓揉。
6. 掌心對掌心，手指交叉，互相搓揉。
7. 右手握左手大拇指，左右旋轉，互相搓揉。
8. 掌心對掌心，手指交叉，互相搓揉。

如有任何查詢，請致電本院總機：(852) 2572 0211 感染控制組：(852) 2835 8718

總機：2572 0211 傳真：2572 7931
電郵：info@hkhk.com
網址：www.hkhk.com

總機：2835 8718 傳真：2835 8719
電郵：infection@hkhk.com
網址：www.hkhk.com

香港醫院有限公司 敬啟者

Hand Hygiene

- Handrub is available in every blood taking trolley, blood pressure monitor & medication trolley
- Hand washing facilities are available in all cubicles and nurse stations



Hand Hygiene Posters

齊潔手，細菌走，體健優，樂悠悠！



日常洗手的正確程序



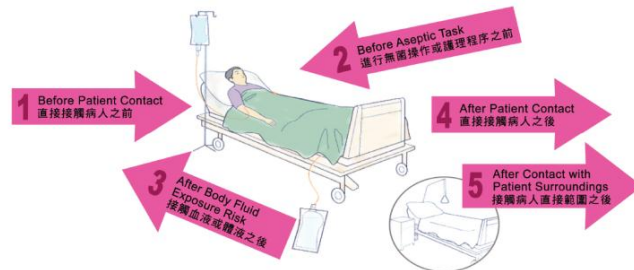
- 整個洗手程序最理想為30秒，最少亦需20秒
- 清潔雙手後，可用潔手液擦乾雙手，避免過度乾燥
- 若雙手有任何損傷，應貼上防水膠布

以下情況請切記洗手：

1. 探訪或護理病人前後
2. 進食或處理食物前
3. 如廁後
4. 觸摸眼睛、鼻子或嘴巴前
5. 打噴嚏或咳嗽後
6. 處理垃圾或清理受污染物品後，如厚片、嘔吐物
7. 觸摸公共物品後，如升降機按鈕或門柄後

如雙手有明顯污垢或沾有體液，請用洗手液及清水清潔雙手。如雙手沒有明顯污垢，則可用含70-80%酒精搓手液潔手。

五個必須潔手的時刻 Your 5 moments for hand hygiene



感染控制組
Infection Control Committee



CC-001916-01-0001



感染控制組
Infection Control Committee



ICC-001916-01-0001



感染控制組
Infection Control Committee



ICC-001916-01-0001

Kick-off Ceremony 2013

- Members of Hospital Management Committee & Hand Hygiene Ambassadors attended
- Staff signed on the puzzle & promised to perform proper hand hygiene
- Demonstrated the proper way to perform hand hygiene

齊齊潔手20秒
趕走惡菌永無憂



Objectives

- To raise hand hygiene awareness among staff, patients & visitors
- To strengthen the concept of WHO's "5 moments" for hand hygiene & enhance the hand hygiene compliance among HCWs

Period: October to December 2013



Prevent HAIs & minimize the risk of MDROs transmission

Hand Hygiene Ambassadors

- All clinical & non-clinical departments nominated a staff as the Hand Hygiene Ambassador
- Responsibility:
 - Act as a role model
 - Encourage & monitor colleagues to perform hand hygiene at the right moments



Badge for ambassadors



Education Booth for Patients & Visitors

- Conducted at main entrance of the Hospital
- ICNs & ICLPs educated the patients & visitors when & how to perform hand hygiene
- Proper hand hygiene information sheet & pocket-sized alcohol-based handrub were given



Education Activity for Staff

For non-clinical staff

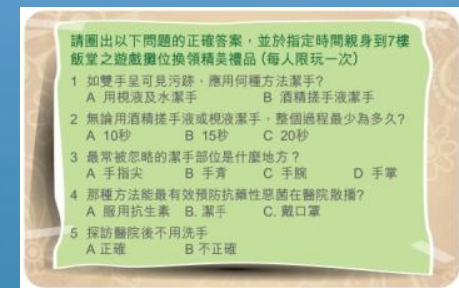
- Answered 5 questions related to hand hygiene & performed proper hand hygiene by using handrub



For clinical staff

- Performed proper hand hygiene in 5 moments & collected stickers from ICLPs

Hand hygiene rewards cards



Souvenirs

- The following souvenirs were given to the staff who had participated in the education activity

Torch



Recycle Bag



Hand Hygiene Poster Design Competition



Paper Placemat

- Promote hand hygiene paper placemat attach to patient's food tray
- Chinese / English version



Hand Hygiene Audit

- Open and direct observational audit is conducted by ICNs & ICLPs annually
- Mainly focus on “5 moments of hand hygiene”
- All HCWs, including private nurses & amahs, are observed during the delivery of health care activities to patients

**Hong Kong Sanatorium & Hospital
Infection Control Committee**

**Hand Hygiene Audit 2013
(4 November 2013 - 8 November 2013)**

Hand Hygiene Observation Form

Location: _____ Start/End time: (hh:mm) ____ / ____ / ____ Date: (dd/mm/yy) ____ / ____ / ____

Name of observer: _____ Session duration: (mm) _____ Total numbers of opportunity observed: _____

Opp	Prof cat	Indication	HH Action	Remarks	Opp	Prof cat	Indication	HH Action	Remarks	Opp	Prof cat	Indication	HH Action	Remarks
1	Nurse	Ref-pat	HR		9	Nurse	Ref-pat	HR		17	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
2	Nurse	Ref-pat	HR		10	Nurse	Ref-pat	HR		18	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
3	Nurse	Ref-pat	HR		11	Nurse	Ref-pat	HR		19	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
4	Nurse	Ref-pat	HR		12	Nurse	Ref-pat	HR		20	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
5	Nurse	Ref-pat	HR		13	Nurse	Ref-pat	HR		21	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
6	Nurse	Ref-pat	HR		14	Nurse	Ref-pat	HR		22	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
7	Nurse	Ref-pat	HR		15	Nurse	Ref-pat	HR		23	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		
8	Nurse	Ref-pat	HR		16	Nurse	Ref-pat	HR		24	Nurse	Ref-pat	HR	
	Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW			Auxiliary	Ref-napt	HW	
	Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed			Doctor	Ab-h.f	Missed	
	Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves			Allied HCW	Ab-pat	gloves	
	Other HCW	Ab-p. surr				Other HCW	Ab-p. surr				Other HCW	Ab-p. surr		

Prof cat: Nurse - nurse, midwife, nursing student
Auxiliary - aide, general worker
Doctor - in-house doctor, visiting doctor, medical professor, medical student
Allied HCW - physiotherapist, speech therapist, phlebologist, dietitian, dentist, radiographer
Other HCW - any other health related professional, private nurse/amah

Indication: Ref-pat - Before patient contact
Ref-napt - Before aseptic technique
Ab-h.f - After body fluid exposure risk
Ab-pat - After patient contact
Ab-care - After contact with patient surroundings

HH action: HR - hand hygiene action by handrubbing with an alcohol based formula
HW - hand hygiene action by handwashing with soap and water
Missed - no hand hygiene action performed
gloves - no hand hygiene action when using gloves

KCT_HH audit in general ward_19 March to 15 April 2012

Hand Hygiene Promotion Campaign 2014



Working Group 2014



Chairman Dr Dr WONG Tin Yau, Andrew & Co-Chairman Dr YUNG Wai Hung, Raymond

- Infection Control Branch, CHP
- Canossa Hospital (Caritas)
- Evangel Hospital
- Hong Kong Adventist Hospital
- Hong Kong Baptist Hospital
- Hong Kong Sanatorium & Hospital
- Matilda International Hospital
- Precious Blood Hospital
- St. Paul's Hospital
- St. Teresa's Hospital
- Union Hospital
- Tsuen Wan Adventist Hospital



Adventist Health 港安





Thank You



CUT SLIDES



E. Coli isolates 2011 vs 2012

<i>Escherichia coli</i>	2011 (Data from 10 hospitals)	2012 (Data from 11 hospitals)
Total no. of isolates	6251	6552
Overall % of ESBL +ve	1487 (24%)	1644 (25%)
No. of isolates	Urine (4438) Blood (176)	Urine (4639) Blood (191)
ESBL-positive	Blood (27%) Urine (22%)	Blood (24%) Urine (23%)
Carbapenems sensitivity	100% sensitive to meropenem, imipenem and etrapenem	100% sensitive to meropenem, imipenem and etrapenem
Urine isolates sensitivity	nitrofurantoin (98%) amoxicillin+clavulanic acid (72%)	nitrofurantoin (96%) amoxicillin+clavulanic acid (70%)

Klebsiella spp. isolates 2011 vs 2012

Klebsiella spp.	2011 (Data from 10 hospitals)	2012 (Data from 11 hospitals)
Total no. of isolates	1850	1923
Overall % of ESBL +ve	285 (15%)	326 (17%)
No. of isolates	Urine (722) Sputum (482) Blood (48)	Urine (706) Sputum (521) Blood (52)
ESBL-positive	Urine (23%) Sputum (9%) Blood (15%)	Urine (21%) Sputum (13%) Blood (8%)
Carbapenems[^] sensitivity	Blood (100%) Sputum and urine (99-100%)	Blood (100%) Sputum and urine (99-100%)
Sensitivities	amoxicillin+clavulanic acid (73-83%) levofloxacin (82-91%)	amoxicillin+clavulanic acid (72-92%) levofloxacin (84-93%)
Urine isolates sensitivity	nitrofurantoin (98%) amoxicillin+clavulanic acid (72%)	nitrofurantoin (96%) amoxicillin+clavulanic acid (70%)

([^]meropenem, imipenem and etrapenem)

P. aeruginosa isolates 2011 vs 2012

<i>P.aeruginosa</i>	2011 (Data from 10 hospitals)	2012 (Data from 11 hospitals)
Total no. of isolates	982	1140
No. of isolates	Sputum (437) Other respiratory specimens (122) Urine (136) Wound swab (120) Pus aspirate (37) Blood (12)	Sputum (494) Other respiratory specimens (129) Urine (156) Wound swab (132) Pus aspirate (41) Blood (8)
Isolates from blood	100% sensitive to amikacin, gentamicin, cefepime, ceftazidime, ciprofloxacin and levofloxacin	100% sensitive to amikacin, gentamicin, meropenem, cefepime, ceftazidime, ciprofloxacin, levofloxacin and cefoperazone+sulbactam
Sputum isolates sensitivities	amikacin (95%), cefepime (93%), ceftazidime (93%), piperacillin+tazobactam (93%)	ceftazidime (94%), piperacillin (93%) and amikacin (93%)
Other respiratory specimens isolates sensitivities	cefazidime (93%), piperacillin+tazobactam (92%), cefepime (91%)	cefepime (90%), ceftazidime (88%), piperacillin+tazobactam (85%)
Urine isolates sensitivities	meropenem (99%), cefepime (97%), imipenem (97%), ceftazidime (95%), amikacin (91%)	amikacin (97%), imipenem (93%), cefepime (93%), ceftazidime (93%)
Wound swab isolates sensitivities	amikacin (96%), cefepime (93%), imipenem (91%), cefazidime (91%)	amikacin (98%), ceftazidime (98%), meropenem (95%)
Pus aspirate isolates sensitivities	amikacin (97%), imipenem (97%), meropenem (95%), gentamicin (95%), ceftazidime (95%)	piperacillin (100%), ceftazidime (98%), amikacin (95%), imipenem (95%)

Acinetobacter spp. isolates 2011 vs 2012

<i>Acinetobacter</i> species	2011 (Data from 10 hospitals)	2012 (Data from 11 hospitals)
Total no. of isolates	292	272
No. of isolates	Sputum (146) Other respiratory specimens (31) Blood (2)	Sputum (148) Other respiratory specimens (23)
Sputum isolates sensitivities	cefoperazone+sulbactam (98%), amikacin (91%), meropenem (89%), ceftazidime (89%)	cefoperazone+sulbactam (95%), amikacin (92%), meropenem (87%)
Other respiratory isolates sensitivities	cefoperazone+sulbactam (89%), amikacin (74%)	cefoperazone+sulbactam (89%), meropenem (75%)
Blood isolates sensitivities	100% sensitive to amikacin, gentamicin, meropenem, imipenem, ceftazidime, levofloxacin and piperacillin+tazobactam	