

APPENDIX 1

Hospital Infection Control Protocol for MRSA

Title: Prevention and Control of Transmission of MRSA

1. Scope: To ensure the application of effective measures to prevent and control the transmission of methicillin resistant staphylococcus aureus

2. References:

- Regulations for hazardous Biological agents (Occupational health and Safety Act)
- Centre for Disease Control Guidelines
- Corporate Procedure on Prevention/Spread of nosocomial MRSA: SHEQ-WP-IC-110
- Corporate Procedure on Standard Precautions: SHEQ-WP-IC-103
- Corporate Procedure on Contact Precautions: SHEQ-WP-IC-105
- Hospital Antiseptic and Disinfectant protocol: WDOC-IC-003
- Hospital Antibiotic Prescribing Guidelines: WDOC-IC-WP-014
- Hospital Microbial Surveillance Records: WDOC-IC-028
- Hospital Hazardous Biological Agents Risk Assessment 2005
- Corporate Policy on Personal; protective Equipment: SHEQ-WP-003
- Standard for the Management of hospital linen: SANS10146
- Hospital Building regulations for Private hospitals: regulation 158

3. Assessing the Risk

3.1 Patients at risk of MRSA carriage

- Medical history e.g. chemotherapy for malignancy, leukaemia, HIV, TB?
- Previous hospitalisation/s?
- Antibiotic use past/present?
- Dialysis, surgery, invasive catheters/monitoring devices?
- Active skin disease, chronic wounds and/or pressure ulcers?
- History of previous MRSA infection/colonization?
- **ALL admissions to ICU, CICU and Cardiac High Care must be screened for MRSA carriage (i.e. high nasal and groin swabs).**
- **ALL transfers into the hospital from another healthcare institution rehabilitation unit, old age/frail care facility must be screened for MRSA (Minimum high nasal and groin swabs as well as wound if applicable)**
- The instruction to the laboratory is "MRSA culture"

- Luminous yellow “screening stickers” to be used to indicate that the patient has been screened, when, which unit and by whom.
- Laboratory confirmation of MRSA screening should be requested if possible, from the transferring hospital/institution, prior to acceptance of the patient. However:
- Transfer of patients with life threatening conditions into the Hospital is at the discretion of the Doctor, subject to a MRSA screen on admission, and isolation of the patient where possible, until results are known.
- Standard, contact and other appropriate precautions are observed by all HCWs until receipt of the laboratory culture results.

3.2 HCWs at risk of MRSA carriage

- All new staff appointments or transfers to intensive/High-Care units from other hospitals must be screened.
- Routine surveillance screening of HCWs is only recommended during an outbreak of MRSA (minimum high nasal and groin swabs), and/or when “clusters” of MRSA are identified.
- Nursing staff, doctors, anaesthetists identified as also working in other institutions, and upon return from locums outside RSA.
- HCWs with acne, chronic skin lesions e.g. dermatitis, eczema, psoriasis.

4. Control Measures

4.1 The Patient: **HAND WASHING and regular use of ANTISEPTIC ALCOHOL BASED HAND RUB (e.g. “D-Germ”) IS THE SINGLE MOST EFFECTIVE METHOD FOR PREVENTING CROSS INFECTION.**

- Signage on the door to the isolation room indicating infection control measures to be taken.
- Visitors should be restricted, and asked to wear masks and wash their hands after patient contact.
- Standard contact barrier precautions (i.e. gloves and aprons/gowns) should be used for contact with patient fluids and when bed making or handling used linen.
- Surgical masks are recommended to prevent nasal colonization of HCWs by airborne route of transmission.
- Isolation of the patient or cohorting of patients (provided the other patients do not have additional infections) may be undertaken where a shortage of side wards exists.
- Daily decontamination of the room surfaces, equipment and furniture must be undertaken last in the ward cleaning routine, using Biocide D (or an equivalent chlorine based biocidal detergent disinfectant). **Equipment furniture etc should be kept to a minimum in the room;** but should include those items of clinical equipment necessary for the patients care (e.g.: thermometer, baumanometer etc.), and remain in the room for the duration of the patients isolation, **and not used for other patients.**
- Patients colonized/infected with MRSA should be treated with mupirocin (e.g. “bactroban”) nasal ointment b.d. for 5-14 days.
- The MRSA treatment regime form and luminous yellow “MRSA” sticker (apply to prescription chart and OT records as applicable) are to be used in all cases.
- ICU and cardiac patients proceeding directly to surgery should commence and continue treatment with mupirocin nasal ointment b.d. until **both** nasal and groin culture results are received.
- Discontinue prophylactic treatment with mupirocin as soon as a normal or “negative” culture is received.
- Treat the patients household contacts, if applicable, to minimise the risk of re-colonization.
Note: the prophylactic use of mupirocin in the absence of nasal and/or groin cultures is not recommended,

since it may contribute to microbial resistance(i.e. by “selective pressure”).

- The routine use of chlorhexidine based antiseptic soap for patient hygiene in the ICU/CICU setting is recommended, to reduce bacterial load and shedding.
- Besides the routine of hand washing and standard precautions, the use of disposable aprons (ideally, colour coded per patient) is required for all HCWs (incl. doctors, physiotherapists, radiographers, phlebotomists) with access to the patient in the ICU/CICU setting.
- Unnecessary traffic must be kept to a minimum (e.g. lower categories of HCW, cleaning and catering personnel etc)
- Vancomycin or Linezolid (“Zyvoxid”) are the drugs of choice for the treatment of confirmed infection with MRSA, **however**,
- Consultation with the clinical microbiologist is recommended,
- The ICN will “flag” the patient’s hospital records electronically for future admissions.

Note: On transfer of a known MRSA patient out of the hospital, the receiving facility must be notified of the patient’s status.

4.2 HCWs

- Agency nursing personnel are required to change into Hospital “scrubs” when working in ICU/CICU.
- Personnel colonized with MRSA (during and outbreak) may be treated with chlorhexidine-neomycin (“naseptin”) ointment
- Carriers of MRSA should be treated in the same manner as patients i.e. mupirocin nasal ointment b.d. and b.d. chlorhexidine showers for 5-14 days.
- Any skin lesions must be treated and covered until healed
- Assessment of clearance should be undertaken approx. 4 weeks after cessation of treatment, since relapse to the carrier state is possible.
- A minimum of 2 nasal swabs at least 7 days apart is recommended.

5. Implementation of Standard, Contact and other appropriate precautions:

- Patients transferred in from Provincial and/or Private Hospitals should be isolated
- Note: Isolation is only necessary if the patient has been hospitalized in the referring hospital for more than 48 hours or until the screening result is known.
- Nasal, groin and/or wound swabs must be taken on admission to the unit and sent to the laboratory of the Doctors choice for “MRSA culture” only. (Miscellaneous susceptibility testing is not required.)
- Contact isolation precautions (i.e. segregation of linen, careful attention to hand washing and adjunctive use of chlorhexidine and alcohol hand rub, wearing of masks, gloves and aprons) must be implemented immediately, as per Infection Control Procedure pending a culture result.
- Notify the Infection Control Nurse (ICN) of patients admission and/or for a positive culture of MRSA
- “Negative” culture for MRSA or “MRSA not cultured” may be moved to a general ward.
- **“Positive” culture for MRSA: doctor and ICN to be notified**
- Liaise with ICN regarding precautions to be taken iro above
- Movement of the patient out of isolation and /or discontinuation of contact barrier precautions will be on the

recommendation of the Microbiologist and/or ICN in consultation with the patients doctor

- At least 2 negative cultures are recommended before the patient is moved back to the general ward.
- A doctor may not override this protocol without consultation with the Microbiologist, ICN and/or Hospital Manager.
- Early discharge of the patient should be considered where possible.
- The indiscriminate and/or “first line” use of broad spectrum ant-microbial agents without laboratory liaison is not encouraged.
- Anti-microbial usage will be monitored. Surveillance of bacterial susceptibility patterns will also be recorded by the ICN as well as by the laboratories.
- Electronic “flagging” of hospital records of patients known to be infected and/or colonised with MRSA will be undertaken by the ICN for future admission and isolation of that patient, pending “negative” nasal and groin cultures.

APPENDIX 2

Survey questionnaire with information and consent for study

Declaration of Informed Consent

I _____ (full names of participant) hereby confirm that I understand the contents of the "Information for participant" advice sheet and the nature of the research project, and I consent to participating in the research project.

I understand that I am under no obligation to participate in the study. I also understand that there will be no negative consequences should I choose not to participate and that I am at liberty to withdraw from the study at any time.

_____(Signature)_____(Date)

Information for participants

Project

To evaluate how effective the Infection Control Policy (ICP) is at reducing hospital acquired MRSA infections.

Aims

To evaluate change in MRSA infection rates by comparing the infection rate before use of the current ICP with the infection rate after implementation of the current ICP. To evaluate how well staff understand the ICP and how well they follow the ICP.

Researchers

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Reason for project

The surgical patients on this unit are at high risk for hospital acquired infection due to their risk factors for cardiac disease, the nature of their surgery and the supportive measures required (diabetes, induced hypothermia, invasive monitoring/central line, frequent accessing of central line for treatment with fluids and medication). The current infection control policy was commenced nearly 3 years ago, but, as yet, no formal evaluation of how effective it is has been done. Current nursing and organisational guidelines recommend review and revision of protocols at yearly intervals to ensure that the care rendered is effective and evidence-based. Hence there is a need to evaluate this aspect of patient care on the cardiac unit.

What is expected of participants?

The nursing participants will be requested to carry out their normal duties and complete a short questionnaire. The researchers will collect information on how well the recommendations in the ICP are adhered to both by reviewing records and direct observation of patient care. The observation and records review sessions on the unit will be 3-4hours long per shift, for about 3 shifts per week, and spread over 10days to 2 weeks. The rest of the records review will not take place in the unit. While there is no direct benefit to participating staff, it is hoped that the results from the study will enable improved patient care and further reduction of infection risk for patients on the unit. You are free not to participate. You are free to withdraw from the study at any time if you change your mind about participating. You do not need to give a reason.

Will the information collected be anonymous?

The information collected on the unit will only have patient case numbers and procedures recorded. This information will be compiled into a summarised report for the unit and a research dissertation for UKZN. The information obtained from patient records and observation of patient care is confidential and will not leave the hospital until it has been changed to a coded form that protects that confidentiality. No individual patients or nurses will be identified either by name or otherwise in any of the reports. Only grouped scores or performance will be reported.

What happens to the information when the study is complete?

The original data sheets will remain with the Infection Control Nurse for a period of 5 years and then be destroyed by shredding.

Survey of nursing staff about the hospital infection control policy

Thank you for agreeing to help with my project by answering the following survey questions. The questionnaire is anonymous. You do not need to write your name on the form. No attempt will be made to identify who completes a questionnaire.

Please read the following instructions for completion of the questionnaire:

- If you are a member of hospital staff please answer as such even if you are working "AGENCY" today.
- If it is a yes or no question please circle the YES, NO or DON'T KNOW response.
- If there is any question you don't understand please circle the DON'T UNDERSTAND response – it will help me to improve the form.

Code

1	<p>To which group of staff do you belong?</p> <p>a) EMPLOYED BY THIS UNIT PERMANENT / PART-TIME</p> <p>b) REGULAR AGENCY (more than 4 times a month)</p> <p>c) OCCASIONAL AGENCY (less than 4 times a month)</p> <p>d) NEW AGENCY (never worked on this unit before)</p>	
2	<p>Is there an infection control policy in this unit for dealing with MRSA?</p> <p>a)YES b)NO c)DON'T KNOW d)DON'T UNDERSTAND</p>	
3	<p>Do you take any routine swabs from patients on admission to this unit?</p> <p>a) NO b) DON'T KNOW c) DON'T UNDERSTAND</p> <p>d) YES, I take swabs for _____</p>	
4	<p>If you are nursing a patient who has MRSA will you take any routine precautions?</p> <p>a) NO b) DON'T KNOW c) DON'T UNDERSTAND</p> <p>d) YES (please explain) _____</p> <p>_____</p> <p>_____</p>	
5	<p>Do you ever use chlorhexidine soap (bioscrub/hibiscrub) to bathe patients?</p> <p>a) NO b) YES (please explain when/which patients) _____</p> <p>_____</p>	
6	<p>If you have any comments or suggestions about infection control practices on this unit please add them here (continue on the back of this sheet if necessary).</p> <p>_____</p> <p>_____</p> <p>—</p>	

APPENDIX 3

Observational data collection instrument

Patient contact / Hand & Equipment Hygiene data sheet									
coding: 1=yes 0=no(unit nurse) 2=no (agency nurse) 3=no(Dr.) 4=no(physisio) 5=no(lab staff) 6=no(other - specify)									
Hand Hygiene/PPE/IV access per protocol per contact									
B=barrier	Dx:	from:	to:					Chlorflex?	Barrier?
cubicle									
date:									
Bed1									
Bed2									
Bed3									
Bed4									
bed5									
Bed6									
Bed7									
Staff on duty (code):									
Notes:									
date:	Dx:	from:	to:						
Bed1									
Bed2									
Bed3									
Bed4									
bed5									
Bed6									
Bed7									
Staff on duty (code):									
Notes:									
date:	Dx:	from:	to:						
Bed1									
Bed2									
Bed3									
Bed4									
bed5									
Bed6									
Bed7									
Staff on duty (code):									
Notes:									
date:	Dx:	from:	to:						
Bed1									
Bed2									
Bed3									
Bed4									
bed5									
Bed6									
Bed7									
Staff on duty (code):									
Notes:									

APPENDIX 5

Coded questionnaire response data

QUESTIONS	Q1				Q2				Q3				Q4				Q5				Q6
RESPONDENT	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	a	b	c	d	
1	a				a							d				d		b			y
2	a				a							d				d		b			y
3	a				a							d				d		b			y
4	a				a							d				d		b			y
5	a				a							d				d		b			y
6	a				a							d				d		b			
7	a				a							d				d		b			y
8	a				a							d				d		b			y
9	a						c					d				d		b			y
10	a				a							d				d		b			y
11	a				a							d				d		b			
12	a				a							d				d		b			
13	a				a							d				d		b			
14	a				a							d				d		b			
15	a				a							d				d		b			
16	a				a							d				d		b			
17	a				a							d				d		b			y
18	a				a							d				d		b			
19	a				a							d				d		b			
20	a				a							d		b				b			
21	a				a							d				d		b			y
22		b			a							d				d		b			
23	a						c		a						c			b			
24	a						c					d		b				b			
25	a				a							d				d		b			y
26	a				a							d				d		b			
TOTALS	25	1	0	0	23	0	3	0	1	0	0	25	0	2	1	23	0	26	0	0	10
	26				26				26				26				26				26
PERCENT	96%	4%			88%		12%		4%			96%		8%	4%	88%		100%			38%
NB TOTAL QUESTIONNAIRES HANDED OUT:																					
NB TOTAL QUESTIONNAIRES RETURNED:																					
Return Rate																					

APPENDIX 6

Coded and categorised observational data

date	times	duration	diagnosis (b = barrier pt.)	correct contact all staff	unit nurse error (0)	agency nurse error (2)	doctor error (3)	physio error (4)	lab error (5)	paramedic error (6)	types of error	contact - not observed	closed curtains	chlorhexidine per protocol?	barrier nursing per	TOTAL CONTACTS	TOTAL ERRORS
Aug 5th	09:10 - 12:30	2hr 20m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	5	4		1			1	Typical errors, other than failure to wash hands or use alcohol rub were: failure to use appropriate PPE e.g. gloves for drawing ABG; failure to swab iv ports prior to accessing them, failure to clean a stethoscope prior to use on a new patient, failure to remove apron prior to leaving barrier nursed patient.	3	suctioning			13	5
Aug 5th	13:50 - 20:30	1hr 40m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	4	1							2	bed bath	1		7	1
Aug 11th	11:00 - 13:00	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	3	4											12	4
Aug 13th	13:30 - 17:00	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	5	2		1		1			1	bed bath	1		10	4
Aug 11th	20:30 - 10:00		CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	3	1											4	1
Aug 12th	12:00 - 15:00	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	4	4											3	4
Aug 12th	12:00 - 15:00	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	6	3											9	3
Aug 20th	16:45 - 19:00	2hr 15m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	11	4											15	4
Aug 21st	13:15 - 16:00	2hr 45m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	13	7											20	7
Aug 22nd	16:50 - 18:15	1hr 25m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	10	3											13	3
Aug 26th	17:30 - 18:15	0hr 45m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	3	1											4	1
Aug 26th	18:15 - 19:00	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	1	7											8	0
Sep 1st	15:40 - 18:00	2hr 20m	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	3	3							1	suction			12	3
Sep 2nd	12:00 - 14:00	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	11								1	bed bath			12	0
Sep 07:30	07:30 - 09:30	2hr	CARDIAC SURGERY OTHER SURGICAL MEDICAL (SCCU)	5	2										NO	7	2
Sep 11th	09:30 - 13th	3hr	CABG (HiCare) OTHER SURGICAL MEDICAL (CCU)	3												3	0
Sep 20:00	20:00 - 22:00	2hr	CABG (HiCare) OTHER SURGICAL MEDICAL (CCU)	13	9							2	suction/bbb	1	MED=NO	23	9
Sep 13th	13th - 15th	2hr	CABG (HiCare) OTHER SURGICAL MEDICAL (CCU)	16	6							6	suction/bbb	2		23	6

APPENDIX 7

Coded Excel records data from transition period

Month	case no:	Procedure	sex	age	diabetes	smoker	MRSA	MRSA screen	result	Other HAI	data source
Oct 2005	108476		2	2	16		0		PRE MRSAP		2
	108639		1	1	52	0	0				1
	108377		1	1	58						2
	108662		1	1	78						2
	108718		1	1	62						2
	108644		1	1	57						2
	108970		1	1	62						2
	109313		1	2	72	1	0				1
	109007		1	1	77						2
	109704		1	1	78						2
	109125		1	1	76	0	0		TRANSITION		1
	110451		1	1	58						2
	110509		2	1	44						2
	110376		1	2	62	0	1	0			1
	110854		1	1	58						2
	110858		2	2	50						2
	111006		2	2	51						2
	110658		1	2	66						2
	110568		2	1	55						2
	111066		1	1	66	1					2
Nov 2005	111758		2	1	55						2
	111797		1	2	67						2
	111887		1	2	54						2
	112198		2	2	53						2
	112493		2	2	44						2
	112549		2	1	0.6						2
	112563		1	1	69						2
	112778		1	1	51						2
	112673		1	1	65						2
	112856		1	2	73						2
	112759		1	2	74						2
	112802		1	1	46						2
	112631		1	1	33						2
	112975		1	1	60						2
	112925		1	1	68						2
	113280		1	2	69						2
	113499		1	1	45						2
	113084		1	1	57	0	0	1	1		1
	113579		2	1	27						2
	113134		1	1	66						2
	113728		1	1	71				MRSAP		2
	113976		1	1	69						2
	114213		1	1	85						2
	114251		1	2	21						2
	114253		1	1	50						2
	113972		1	2	53						2
	114810		1	1	81	0	3	0	0		1
	114870		2	2	25						2
	114856		1	1	50						2
	115254		2	1	47						2
Dec 2005	115223		1	1	39						2
	115301		2	1	19						2
	114359		1	2	42						2
	114985		1	1	64						2
	115448		1	2	65						2
	115335		1	1	76						2
	115815		1	2	55						2
	116225		1	1	66						2
	116146		1	2	86	0	0	0	0		1
	116309		2	1	80						2
	116079		1	1							2

APPENDIX 8

Analysis of survey questionnaire

RESPONDENT	Question 3d - Responses to: routine swabs taken on the unit				Assessor 1	Assessor 2	Assessor 3	TOTAL
	NB: WORDS TRANSCRIBED AS USED BY RESPONDENTS							
1	mrsa nasal & groin				3	3	3	9
2	MRSA i.e. nasal / groin				3	3	3	9
3	mrsa				3	3	2	8
4	nasal & groin for MRSA				3	3	3	9
5	mrsa - nasal + groin				3	3	3	9
6	mrsa				3	3	2	8
7	mrsa screening				3	3	3	9
8	mrsa screening				3	3	3	9
9	mrsa				3	3	2	8
10	mrsa				3	3	2	8
11	nasal & groin from MRSA				3	3	3	9
12	for mrsa				3	3	2	8
13	mrsa				3	3	2	8
14	nasal & groin mrsa				3	3	3	9
15	MRSA				3	3	2	8
16	nose & groin swabs for MRSA				3	3	3	9
17	nasal & groin				3	2	2	7
18	mrsa from nose & groin				3	3	3	9
19	mrsa groin & nostril on every patient admitted				3	3	3	9
20	groin & nose				3	2	2	7
21	nasal & groin for MRSA				3	3	3	9
22	new admissions				3	0	1	4
23					0	0	0	0
24	groin & nasal				3	2	2	7
25	MRSA on admission				3	3	2	8
26	MRSA - nasal & groin				3	3	3	9
TOTALS	25				75	69	62	206
					78	78	78	234
PERCENT	96%				96%	88%	79%	88%
Return Rate 81%	Each assessor gave 3 marks for a full correct response, 2 for a partially correct response, 1 for a response with some element from the correct response, 0 for no answer or a completely incorrect response.							

Respondent	Question 4d - Responses given for routine precautions for patient with MRSA				Assessor 1	Assessor 2	Assessor 3	TOTAL	
	NB: WORDS TRANSCRIBED AS USED BY RESPONDENTS								
1	isolation, washing hands between patients, use of gloves for body fluids					1	2	2	5
2	aprons, where necessary gloves, isolation					1	2	2	5
3	wash your hands, aprons & gloves, hibiscrub bath, minimise visitors & staff, isolation					3	3	3	9
4	washing hands before & after handling pts, hibiscrub wash for pt, & bactroban nasal for 7 days					2	3	2	7
5	isolation of patient, facemask, gloves, apron, good handwashing, disinfection of any equipment used on the patient					3	3	3	9
6	vigilant handwashing, isolation, apron & gloves					3	3	3	9
7	aprons, hibiscrub baths/handwash of staff & patients, isolating patients either by cubicle or spacing of patients, D-germ / follow the policy					3	3	3	9
8	barrier nursing					3	2	2	7
9	apron & gloves					2	1	1	4
10	nasobactrin nasal ung bd & hibiscrub baths bd					1	1	1	3
11	barrier nursing					2	2	2	6
12	barrier nurse, hand washing, correct disposal of linen, wore protective clothing e.g. gloves apron etc.					2	3	2	7
13	washing hands scrupulously, spraying hands with alcohol hand spray & digerm, not to nurse a patient with an open wound together with an MRSA pt.					1	3	2	6
14	by use of personal protective equipment, the use of aprons and gloves when nursing the patient, strict handwashing with hibiscrub and biotaine spray					3	3	3	9
15	use of hand spray in between procedures, isolate patient, use of gloves & aprons and mask, barrier nurse patient to prevent cross infection					3	3	3	9
16	I'll wear protective garments whenever I am working with a patient with MRSA					1	1	1	3
17	isolation, gloves, apron					3	2	2	7
18	prevention of cross infection, washing of hands between patients					2	2	2	6
19	barrier nursing with ppe					2	2	2	6
20						0	0	0	0
21	limit n/staff to that patient, gloves & aprons, and red bins for waste disposal, separate linen bins/strict hand washing					3	3	3	9
22	barrier nursing, strict infection control					2	2	2	6
23						0	0	0	0
24						0	0	0	0
25	patient should be barrier nurse and swabs should be redone to see progress					2	2	2	6
26	washing hands. Aprons & correct disposal of linen.					3	3	2	8
TOTALS	23					51	54	50	155
						78	78	78	234
PERCENT	88%					65%	69%	64%	66%
NB TOTAL QUESTIONNAIRES HANDED OUT:	32								
NB TOTAL QUESTIONNAIRES RETURNED:	26								
Return Rate	81%	Each assessor gave 3 marks for a full correct response, 2 for a partially correct response, 1 for a response with some element from the correct response, 0 for no answer or a completely incorrect response.							

Question 5b - Responses to use of chlorhexidine soap (bioscrub/hibiscrub) to bathe patients										Assessor 1	Assessor 2	Assessor 3	TOTAL
RESPONDENT	NB: WORDS TRANSCRIBED AS USED BY RESPONDENTS												
1	all my patients in the unit									1	1	1	3
2	all patients									1	1	1	3
3	all patients									1	1	1	3
4	All surgical patients and some bedbound medical patients									0	0	0	0
5	all patients being bathed by staff									1	1	0	2
6	all									1	1	1	3
7	long term ill, ventilated, mrsa +ve patients									1	0	0	1
8	all surgical, ventilated, infected patients twice daily									1	1	1	3
9	all patients									1	1	1	3
10	routine post surgical patients									0	0	0	0
11	can be used has prophylactic treatment for patient in the prevention and spread of infection									0	0	0	0
12	all patients, especially surgical, bypass patients									1	1	1	3
13	all icu patients providing they have no allergies to the scrub									1	1	1	3
14	pre-surgery patients are given hibiscrub or bioscrub bath and hairwash especially pacemaker and heart bypass surgery									0	0	0	0
15	routinely used for all patients in the unit especially post-operative patients									1	1	1	3
16	in cardiothoracic we always wash patients skin with hibiscrub to prevent infection									1	1	1	3
17	patients that are going for surgery									0	0	0	0
18	all patients who are bed bathed are bathed with hibiscrub									1	1	1	3
19	On all theatre cases twice a day, and all patients that need bed baths									1	1	1	3
20	during bath in the morning for every patient in the ward									1	1	1	3
21	post surgical patients									0	0	0	0
22	patients undergoing cabg, long term patients									0	0	0	0
23	Everyday Miss Phillips									0	0	0	0
24	With Infection									0	0	0	0
25	protocol of unit, used on all patients for prevention of spread of microbes									1	1	1	3
26										0	0	0	0
TOTALS	25									16	15	14	45
									Total possible score	26	26	26	78
PERCENT	96%									62%	58%	54%	58%
NB QUESTIONNAIRE RETURN RATE: 81%										Assessors gave a 1 if the response was deemed safe i.e. their answer indicated that no patient strictly requiring a wash would be missed. They gave a 0 if the answer suggested patients requiring a chlorhexidine wash would be missed.			

Question 6: Comments (verbatim transcription)										NO COMMENT	SATISFIED	CONSTRUCTIVE CRITICISM
gloves to be re-inforced on taking bedpans and handing out. Gloves when emptying the urine, gloves for blood gas taking												1
"look and see" we the best - then dare u question our standards										1		
no - we have a good practice here. All pts admission, T/F in have swabs done											1	
										1		
staff must be more vigilant re: gloves iv insertion, appropriate apron usage												1
decent pedal bins for infectious waste												1
infection control very good in our unit											1	
good standards are adhered to (universal / standard precautions) careful monitoring & stats are maintained. Patient & staff in-service education is priority.											1	
10.contd: Literature is updated & available at all times.										1		
no										1		
										1		
no										1		
no comments										1		
										1		
It's good and at present I don't have any additional ideas											1	
										1		
										1		
										1		
increase awareness and educate among all staff, especially new staff on orientation-programme + to familiarise themselves with the infection control policy												1
nil										1		
										1		
										1		
infection control well handled by staff of unit, protocols easily available											1	
										1		
14										16	6	4
											10	
53.8%										61.5%	23.1%	15.4%
QUESTIONNAIRES HANDED OUT: 32												
QUESTIONNAIRES RETURNED: 26												
81%												

APPENDIX 9

Analysis of observational data

date	times	duration	diagnosis (b = barrier pt.)	correct contact all staff	unit nurse error (0)	agency nurse error (2)	doctor error (3)	physio error (4)	lab error (5)	paramedic error (6)	types of error	contact - not observed	closed curtains	chlorhexid line per protocol?	barrier nursing per	TOTAL CONTACTS	TOTAL ERRORS	PERCENT					
Aug 5th	09:10	2hr 20m	CARDIAC SURGERY	5	4		1					3	3 suctioning			13	5						
	-		OTHER SURGICAL	2												2	0						
	12:30		MEDICAL (SCCU)	1						1						2	1						
Aug 5th	18:50	1hr 40m	CARDIAC SURGERY	4	1							2	2 bed bath	1		7	1						
	-		OTHER SURGICAL	1										1		1	0						
	20:30		MEDICAL (SCCU)													0	0						
Aug	11:00	2hr	CARDIAC SURGERY	8	4											12	4						
	-		OTHER SURGICAL													0	0						
	13:00		MEDICAL (SCCU)													0	0						
Aug	18:30	2hr	CARDIAC SURGERY	6	2		1		1			1	1 bed bath	1		10	4						
	-		OTHER SURGICAL													0	0						
	20:30		MEDICAL (SCCU)													0	0						
Aug	10:00	2hr	CARDIAC SURGERY	3	1											4	1						
	-		OTHER SURGICAL	4	4											8	4						
	12:00		MEDICAL (SCCU)	1												1	0						
Aug	15:00	2hr	CARDIAC SURGERY	6	3											9	3						
	-		OTHER SURGICAL	3	1											4	1						
	17:00		MEDICAL (SCCU)	1												1	0						
Aug 21st	16:45	2hr 15m	CARDIAC SURGERY	11	4											15	4						
	-		OTHER SURGICAL													0	0						
	19:00		MEDICAL (SCCU)	1	2											3	2						
Aug	13:15	2hr 45m	CARDIAC SURGERY	13	7											20	7						
	-		OTHER SURGICAL													0	0						
	16:00		MEDICAL (SCCU)													0	0						
Aug	16:50	1hr 25m	CARDIAC SURGERY	10	8											18	8						
	-		OTHER SURGICAL													0	0						
	18:15		MEDICAL (SCCU)													0	0						
Aug	17:30	0hr 45m	CARDIAC SURGERY	3												3	0						
	-		OTHER SURGICAL	1												1	0						
	18:15		MEDICAL (SCCU)													0	0						
Sep 1st	15:40	2hr 20m	CARDIAC SURGERY	8	3							1	1 suction			12	3						
	-		OTHER SURGICAL													0	0						
	18:00		MEDICAL (SCCU)													0	0						
Sep 1st	12:00	2hr	CARDIAC SURGERY	11												12	0						
	-		OTHER SURGICAL													0	0						
	14:00		MEDICAL (SCCU)													0	0						
Sep 2nd	07:30	2hr	CARDIAC SURGERY	5	2										NO	7	2						
	-		OTHER SURGICAL													0	0						
	09:30		MEDICAL (SCCU)	3												3	0						
Sep	04:00	3hr	CABG (HiCare)													0	0						
	-		OTHER SURGICAL													0	0						
	07:00		MEDICAL (CCU)	18	9							2	2 suction/bbb	1	MED=NO	29	9						
Sep	20:00	2hr	CABG (HiCare)													0	0						
	-		OTHER SURGICAL													0	0						
	22:00		MEDICAL (CCU)	16	6											22	6						
TOTALS	15 Observation periods (30hrs 30mins)															144	61	16	6	5	225	65	29%
Percentage																64%	8%	50%	6	100%	142	42	30%
																28%	28%	0%	2	100%	16	5	31%
																28%	28%	50%	60%	100%	67	18	27%

OBSERVATIONAL DATA - STAFF CONTACTS BY GRADE											
Code	Grade	periods observed								TOTALS	PERCENT
D	R/N	1	1							2	
E	R/N	1	1	1						3	
F	R/N	1	1							2	
I	R/N									0	
K	R/N									0	
N	R/N									0	
O	R/N	1	1	1						3	
Q	R/N	1	1	1						3	
R	R/N	1								1	
T	R/N	1	1							2	
U	R/N	1	1	1	1	1	1			6	
W	R/N	1								1	
X	R/N									0	
Y	R/N	1								1	
Z	R/N									0	
α	R/N	1	1	1						3	
β	R/N	1	1							2	
θ	R/N	1								1	
Ω	R/N	1	1	1	1	1	1	1	1	8	
RN Subtotal		19	14							38	73%
B	EN									0	
C	EN									0	
G	EN	1	1							2	
J	EN	1								1	
M	EN	1								1	
V	EN	1								1	
EN Subtotal		6	4							5	10%
A	U/A	1	1							2	
H	U/A	1	1	1						3	
L	U/A									0	
S	U/A	1	1	1	1					4	
UA Subtotal		4	3							9	17%
TOTALS		29	21							52	100%

APPENDIX 10

Ethical clearance and hospital permissions



RESEARCH OFFICE (GOBAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 – 2603587
EMAIL: ximbap@ukzn.ac.za

20 AUGUST 2008

MRS. K KINDNESS (207502034)
NURSING

Dear Mrs. Kindness

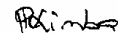
ETHICAL CLEARANCE APPROVAL NUMBER: HSS/0164/08M

I wish to confirm that ethical clearance has been approved for the following project:

"Evaluation of a protocol to control *Methicillin Resistant Staphylococcus Aureus (MRSA)* in cardiac intensive unit"

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Yours faithfully



MS. PHUMELELE XIMBA

cc. Supervisor (Dr. P Brysiewicz)
cc. Mr. S Reddy

RESEARCH OFFICE (GOVAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 – 2603587
EMAIL: ximbap@ukzn.ac.za

21 JULY 2008

MRS. K KINDNESS (207502034)
SCHOOL OF NURSING

Dear. Mrs. Kindness

ETHICAL CLEARANCE: "EVALUATION OF A PROTOCOL TO CONTROL METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) IN A CARDIAC INTENSIVE CARE UNIT"

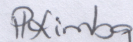
I wish to confirm that ethical clearance has been granted for the above project, subject to:

1. Gatekeepers permission being submitted
2. Informed consent document explicitly stating that participation is voluntary with no negative consequences for non participants

This approval is granted provisionally and the final clearance for this project will be given once the above conditions have been met. Your Ethical Clearance Number is HSS/0164/08

Kindly forward your response to the undersigned as soon as possible

Yours faithfully



MS. PHUMELELE XIMBA

cc. Supervisor (Dr. P Brysiewics)
cc. Mr. S Reddy



Our ref: nm:kindness
Date: 10th July 2008

Sr K Kindness
SCCU

Dear Sr Kindness

Permission for access to hospital and patient records and Cardiac ICU for observation of infection control practice.

With reference to your letter dated 8th July 2008, permission is given for you to access the necessary data and facilities to enable you to undertake your study.

Yours sincerely

A handwritten signature in black ink, appearing to read "Amanda van Rensburg".

Mrs Amanda van Rensburg
Nursing Manager