



BIOMEDICAL ENGINEERING - POLICY/PROCEDURE

MSH Policies & Procedures Template PP-08-1

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Issued By : Biomedical Engineering

Approved by: MAC

REPLACES: VI-i-5 and VI-i-6

Title : CELLULAR TELEPHONES AND OTHER WIRELESS COMMUNICATION DEVICES

Scope

This policy applies to the use of cell phones and wireless communication devices by all patients, visitors, staff and contractors at all Mount Sinai Hospital Facilities.

Purpose

To manage the risk of cell phone and wireless communication device interference with medical equipment, while encouraging the use of communication tools by staff and providing a welcome environment for patients and visitors.

Rationale

Wireless communication devices create electromagnetic fields which have been shown to interfere with the operation of electronic equipment at close range. Although the likelihood of interference leading to an adverse patient outcome is small, MSH wishes to take all reasonable measures to ensure a safe environment for patients.

Definitions

"Wireless Communication Device (WCD)" - a device which transmits data using radio-frequency waves. Examples include cellular telephones, two-way radios, wireless handheld devices (eg. RIM Blackberry, Palm Treo and HP iPAQ devices) and pagers.

"Zone 1" - Critical Clinical Area - this is a location which includes a significant amount of complex electronic medical devices and instrumentation whose correct operation is important to the safety of patients. WCD use in these areas has restrictions.

"Zone 2" - General Clinical Area - while patient diagnosis and treatment does take place in these areas, the amount of instrumentation is limited. There are few restrictions for WCD use in these areas.

"Zone 3" - Public Areas or Non-Clinical Care Areas - these are areas with no patient diagnosis or treatment, including lobbies, waiting rooms, lounges and offices. There are no WCD restrictions in these areas.

"Zone 4" - Exceptions - for reasons other than electromagnetic interference, most WCD use is prohibited in these areas.

Policy: Main Building - 600 University Avenue

	zone 1	zone 2	zone 3	zone 4
	Critical Clinical Areas	General Clinical Areas	Public Areas, Non-Clinical Care Areas	Exceptions
18	Intensive Care Unit		Offices, Lounges, Lobby, Auditorium, Simulation Lab	Library
17	Medical Step-Down Unit	Inpatient 17 N & 17S	Offices, Lounges, Classroom	
16	ECG, Echocardiography, Coronary Care Unit, Heart Catheterization Lab		Waiting Room, Offices	
15	Cardiac Function Unit		Pharmacy, Offices, Classroom	
14	EEG, Surgical Step-Down Unit, Microbiology Laboratory	Inpatient 14 N & 14S	Infection Control, Engineering, Offices, Lounges, Classroom	
12	Mammography	Inpatient Medical 11S, Outpatient Oncology	Mechanical, Classroom	
11	EMG, Pain Management Centre	Inpatient 11 N & 11S, Rehabilitation Medicine	Offices, Lounges, Classroom	
10		Mother & Baby Unit	Research, Physician and Administrative Offices	
9		Psychiatry Inpatient & Outpatient	Research	
8			Research, Mechanical	
7	NICU, Level II Nursery, L&D Operating Rooms, Obstetrical Day Unit	Inpatient 7N & S, Labour & Delivery	Patient Lounge, Classroom, Administrative and Physician Offices	
6	Endoscopy, Nuclear Medicine, Pathology & Laboratory Medicine	Respiratory Medicine	Lab Offices	
5	Operating Rooms, Medical Imaging, Cystoscopy, PACU		Imaging Waiting Room, Imaging Office Area	
4	Pre-Admission Unit	Ambulatory Care Clinics and Offices (Medical, Surgical, ENT, Dental, Ophthalmology, Audiology, Blood Lab)	Waiting Area, Medical Records	Oasis
3	Emergency, EOPS		Entrance Lobby, Café, Executive Offices, Finance, Payroll, Admitting, Human Resources, Drugstore, Bookstore, Security	Synagogue
2		Otologic Function Unit	Cafeteria, Surgical Skills Lab, PREPS Lab, Nutrition & Food Services, Volunteer Services, Locker Room	
1			Biomedical Engineering, Respiratory Therapy, Dispatch, SPD, Housekeeping, Graphics and New Media, Locating, Animal Research	

Type of WCD	Cell Phones, Wireless handheld devices	Staff only 1 metre rule in effect	OK (all users)	OK (all users)	prohibited
	Two Way Radios	Security and Building Services staff only 3 metre rule in effect	Security and Building Services staff only 3 metre rule in effect	OK (all users)	prohibited
	Pagers Wireless LAN	OK (all users)	OK (all users)	OK (all users)	OK (all users)

Policy: Lebovic Building - 60 Murray Street
Ontario Power Generation Building - 700 University Avenue

		zone 1	zone 2	zone 3	zone 4
		Critical Clinical Areas	General Clinical Areas	Public Areas, Non-Clinical Care Areas	Exceptions
60 Murray	6		Murray Koffler Urologic Wellness Centre	Research	
	5		Leadership Sinai Centre for Diabetes	Prosserman Centre for Health, Research	
	4		Family Medicine	Temmy Latner Centre for Palliative Care, Emergency Research Offices	
	3			Medical Education, Research	
	2		Rebecca MacDonald Centre for Arthritis and Autoimmune Disease, Ambulatory Lab		
	1	MRI/CT Scanner	Ophthalmology	Occupational Health Offices, Research Offices, Ophthalmology Offices	

OPG	8			Informatics, Human Resources, Quality and Performance Management	
	3		Ambulatory Obstetrics and Gynaecology includes: Urogynaecology, Reproductive Biology, Genetics, Special Pregnancy Program, Maternal and Fetal Medicine, Multidisciplinary Team Offices, Women's Unit		

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	Pagers Wireless LAN	OK (all users)	OK (all users)	OK (all users)	OK (all users)

Procedure

Signs shall be placed at MSH entrances notifying patients and visitors that there are areas where WCDs are restricted. Specific areas where WCDs are not permitted for patients and visitors shall be marked with signage instructing users to turn off their devices. Staff in those areas shall take steps to prevent use of WCDs in prohibited areas.

When using cell phones and wireless handheld devices in critical clinical areas (Zone 1), staff shall stay at least 1 metre from electronic medical equipment such as ventilators and patient monitors.

Two-way radios may be used only by Security and Building Services staff members that have been appropriately trained regarding the potential for WCD interference with medical equipment. When using two-way radios, staff shall stay at least 3 metres from electronic medical equipment such as ventilators and patient monitors (Zone 1 and 2).

WCD use is impacted by factors other than electromagnetic compatibility with medical equipment. There are some exceptions to this policy, where WCD are banned due to the disruption caused by their use (Zone 4). Taking pictures with a digital still or video camera integrated into some WCDs is prohibited. See the MSH policy regarding [Video and Photographic Images](#).

In areas where WCDs are permitted, the use of vibration alert mode is encouraged.

In any suspected occurrences of WCD interference with medical equipment, staff shall complete an incident report and notify Biomedical Engineering.

References

1. Cell Phones and Electromagnetic Interference Revisited, ECRI Health Devices Journal 35(12): 449-456, December 2006.
2. Health Informatics - Use of mobile wireless communication and computing technology in healthcare facilities - Recommendations for electromagnetic compatibility (management of unintentional electromagnetic interference) with medical devices, ISO/TR 21730, 2nd ed. 2007-Feb-15.
3. Electrical Safety in Patient Care Areas, CSA Standard Z32.2-M89.
4. Guidance on Electromagnetic Compatibility of Medical Devices for Clinical/Biomedical Engineers - Part I: Radiated Radio-Frequency Electromagnetic Energy. AAMI TIR No 18, 1997.