

# Dangerous technology -- Mobiles should be kept away from hospital beds

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Mobile phones should come no closer than one meter to hospital beds and equipment, according Dutch research published in the online open access journal, *Critical Care*. Scientists demonstrated that incidents of electromagnetic interference (EMI) from second and third generation mobile phones occurred at a mere three-centimeter distance.

In this particular study, the research team examined the effects of General Packet Radio Service (GPRS) and Universal Mobile Telecommunications System (UMTS) signals on critical care equipment such as ventilators and pacemakers. Almost 50 EMI incidents were recorded; 75% were significant or hazardous. Hazardous incidents varied from a total switch off and restart of mechanical ventilator and complete stops without alarms in syringe pumps to incorrect pulsing by an external pacemaker.

The second generation (2.5G) GPRS signal caused the highest number of EMI incidents at over 60% whereas the third generation (3G) UMTS signal was responsible for just 13%. EMI incidents also occurred a greater distance with GPRS with a hazardous incident even at three meters.

While first generation mobile phones are used mainly for voice transmission, 2.5G and 3G phones enable internet access, sending and receiving data. They entered the market, however, with little proof regarding their safe use in the medical environment.

Dr Erik van Lieshout, lead researcher from the Academic Medical Center, University of Amsterdam, said; “Our work has real implications for present hospital restrictions of mobile phone use in patient areas.”

“It is unlikely that mobile phone induced EMI in hospitals will be eradicated in the near future so the one meter rule currently in place should continue, as it is relatively safe,” commented Dr van Lieshout.

Source: BioMed Central

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