

Editorial - Knowledge versus Practice

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Welcome to our third issue of the International Journal of Infection Control (IJIC) for 2012. It consists of seven original articles, two practice forum and a book review. A common theme in most of the original articles is the knowledge of different healthcare workers (HCWs) about infection control procedures and if this relates to practice. Patients are becoming more aware of these procedures and are demanding that these are followed. However, in developing countries it is difficult to follow such policies if there are no supplies of the basic material needed.

Okechukwu and Modteshi report on a study performed in Nigeria, where they questioned 277 HCWs (doctors and nurses) of public healthcare facilities about their knowledge and practice of standard precautions. Data was collected via anonymous self administered structured questionnaires. They found that basic knowledge of standard precautions was very low among the health care workers studied, since (17%) answered correctly all questions on the components of the concept of standard precautions. Hand washing

and the use of personal protective equipment (PPE), apart from gloves, was low. The reason that was reported for this was that there were irregular supplies of PPE and of soap and water to wash their hands.

The next paper in this issue is presented by McGaw and colleagues from West Indies, Jamaica. They performed their study on a more specific population – the HCWs of the operating department. Even in this study self administered questionnaires were used and filled in by 90 doctors and 42 nurses. About half (52%) knew about the infection control manual for their department and only 18% had read it. One of the areas that the authors wanted to explore was the disposal of sharps objects and recapping of needles. The results show that although 86% agreed that needles should never be recapped, only 12% follow the guidelines and never recap. Moreover, in these types of studies, where compliance is measured by the replies given by the HCWs themselves and not by independent observations, over-reporting of compliance is expected. The authors give a very

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interesting discussion about human behaviours and how this should be taken into consideration when one is trying to improve on compliance with guidelines.

Yenesew and co-authors investigated the risk perceptions of HCWs when managing healthcare waste. In Ethiopia they report that all healthcare waste generated is treated like other ordinary wastes. Of the 260 respondents, 30% had good knowledge on the diseases transmission possibility of healthcare waste. Knowledge on the existence of manuals on healthcare waste, the different types of healthcare waste, colour coding containers where to deposit healthcare waste and on segregation of healthcare waste was minimal. This could be attributed to the fact that 53.1% of HCWs did not take any training about healthcare waste management. The authors conclude that training on risk associated with healthcare waste should be given to HCWs to raise awareness and that healthcare facilities should organise themselves and produce healthcare waste management plans and guidelines.

Mphahlele and co-workers conducted an audit of infection control practices in 10 primary healthcare facilities in the Western Cape Province, South Africa. They were mainly interested in infection control practices related to patients with tuberculosis. This study collected data by two ways. First senior administrative and clinical personnel were interviewed using a standardized questionnaire that determined the implementation and availability of administrative, environmental and personal protection policies as well as necessary infrastructure and supplies. After this, observation of infection control practices and infrastructure were completed during ward rounds. Here as well training was lacking and the infrastructure present left a lot to be desired and needed improvement and better ventilation systems.

The patient perspective about infection control practices is given by Shyagali and Bhayya, who examined the situation in an orthodontic setting in India. The patients were asked to fill in a questionnaire in the dental department. Nearly all respondents wanted their orthodontist to wear gloves and a mouth mask because they believed that these will protect both the orthodontist and themselves from infection.

Most of them (88%) reported that they would refuse to go to an orthodontist who doesn't wear gloves.

Another paper related to the dental department is that of Bhat *et al.* They evaluated the efficacy of using household type microwave oven irradiation for the disinfection of dental gypsum casts. The authors report that three minutes microwave irradiation at 650 W is effective to reduce the microbial load and should be used in between procedures to prevent cross contamination in the dental clinics since it can be performed quickly and repeatedly, without the use of toxic, pungent, or allergenic chemicals.

On a different note, Indumathi and colleagues give an outbreak report of cases of septic arthritis in an Indian neonatal intensive care unit due to Extended Spectrum β -Lactamase producing *Klebsiella pneumoniae*. They include both the outbreak analysis of when it happened and complications following a long term follow-up of these patients. The outbreak occurred in May-June 2002 and six neonates were confirmed to have septic arthritis. Cultures of synovial fluid grew *K. pneumoniae* and all isolates had similar biochemical and antibiotic resistance pattern. After nine years follow up period, one child developed dislocation. The authors report that few days before the onset of the first case of this outbreak, there was a breakdown in the water supply. In this situation water was stored in an open bucket that was used by everyone. They used to dip a mug into the bucket and use that for hand washing. *K. pneumoniae* was also cultivated from water samples. The authors mention the implications of water shortage, such as noncompliance or inadequate hand hygiene and that this is a serious problem faced by many intensive care units in countries without adequate clean tap water supply.

The next two papers are in the 'Practice Forum' section, that is the authors report on 'how they did it'. Both relate to dialysis patients. Bajwa and co-authors examines the feasibility of establishing and maintaining the National Healthcare Safety Network (NSHN) dialysis event protocol in their hospital in Ireland. Prospective surveillance was conducted in two chronic haemodialysis wards for six weeks. A dialysis event was defined as any patient who required hospitalisation,

is started on an intravenous antimicrobial or has a positive blood culture. The results obtained have highlighted the importance for them to optimise vascular access, appropriate care of IV catheters and the necessity to improve antimicrobial stewardship. In the other paper, Zimbudzi tested if there were any significant benefits of using commercially available chlorhexidine impregnated patches to dress permacath exit sites in an acute dialysis setting of a metropolitan teaching hospital in Australia. He concluded that in his settings these patches may not produce the anticipated positive results and the economic benefit to the health service may be minimal.

The last paper of this issue is a book review done by the IJIC editor Smilja Kalenic of the book 'Manual of infection prevention and control' of Nizam Damani. The review given here is very informative, with a summary on each chapter. This book covers all aspects of infection control, is easy to use and is useful in every setting.

The editorial team would like to thank all the contributing authors and we hope you find this issue worth reading. Should you want to send us your comments about any of these papers, or any other topic, you can do so as letters to the Editor. You are also invited to submit your work to be published as 'original articles' or in the other sections of IJIC. Kindly follow the guidelines to authors on the website (www.ijic.info) for more information.