

Submission in response to the Consultation Draft of the
Australian Guidelines for the Prevention and Control of
Infection in Healthcare (7 January 2010)

Submitted by the Council of Deans of Nursing and Midwifery
(Australia & New Zealand)

March 2010

Thank you for the opportunity to provide feedback on the Consultation Draft of the Australian Guidelines for the Prevention and Control of Infection in Healthcare. Overall, this is an excellent publication, providing a much-needed revision to the 2004 *Infection control guidelines for the prevention of transmission of infectious diseases in the health care setting*.

There are a number of elements and initiatives that are particularly noteworthy:

- The redefinition of Additional Precautions to Transmission-based Precautions brings Australian infection prevention and control guidelines into line with contemporary international standards.
- The Summary of Recommendations and Directory of Key Information are very useful additions. They provide a handy reference for basic principles and practice recommendations for infection prevention
- The promulgation of guidelines within an evidence-based framework is commendable.
- The use of case studies and a risk management framework to illustrate particular issues and processes is an excellent idea.

When working through the guidelines there are some instances where more detail is needed to clarify what is required; there are some inconsistencies that need to be dealt with; some content could be rearranged to make it more easily accessible; and there are a few typographical and grammatical/punctuation errors that can be corrected. These issues are addressed under 'Specific Comments' and 'Grammar, punctuation and formatting'.

There are also some comments on the education and training of health care students in relation to infection control based on the outcomes of PhD research on this topic.

Specific Comments:

B1 Standard precautions

p29 Should aseptic technique be listed as one of the standard precautions?

B1.1. Hand Hygiene and Cough Etiquette

p31 and 32 Should cough etiquette be renamed respiratory etiquette given that it covers coughing and sneezing?

B1.2.7 Sequence for putting on and removing PPE

Table B1.8: Putting on and removing PPE

p43 Table B1.8 - the statement above the table says hand hygiene (HH) must be performed between EACH step and immediately after removing all PPE. This would mean that health care workers will be asked to perform HH because they are going to come into contact with a patient (according to the HH guidelines), then put on a gown, perform HH, then tie on a mask, perform HH, then put their goggles on, perform HH, then put their gloves on, perform HH (which of course is impossible with gloves on),

then remove gown, perform HH, remove gloves, perform HH, remove goggles, perform HH, remove mask and perform HH. So to complete a task on a patient using PPE, the HCW would have to perform HH 9 times. This is unworkable. If the PPE is being worn to protect the wearer from contact with blood or body fluids then it should be sufficient to perform HH, and then put on the gown, mask and goggles, perform the task, remove the items of PPE in the correct order with care and perform HH afterwards.

p44 The CDC website is very extensive. It would be helpful to cite a specific reference here for the actual section referred to rather than the home page address of the CDC.

Table B1.12 Recommended routine cleaning frequencies for clinical, patient and resident areas

p56 Table B1.12 - where is the evidence to support the highly prescriptive nature of this table? The source quoted covers the idea of risk management based on level of risk of contracting infection, which is fine, but if staff are going to be asked to clean the alcohol hand rub dispenser after each use then it would be good to supply supporting evidence for that requirement. This table is generally quite problematic. There are some poorly defined terms, and the frequencies of cleaning seem inconsistent across the risk groups and different items. The source it is supposedly based on does not prescribe this level of cleaning (some examples below and in the following section of these gaps and inconsistencies).

p56 The proposed 4-point scale could be improved by using terms that reflect a more consistent ordinal scale. There is a lack of clarity around these proposed terms. For example, the difference between 'significant' and 'high' is arbitrary. Using the following reference labels may provide greater clarity:

- Outbreak
- High Risk
- Medium Risk
- Low Risk

In addition, the recommended cleaning schedule in an outbreak should reflect transmission-based precautions relative to the organism of concern.

p56 Table B1.12 needs some work. Some of the terms used are ambiguous. For example, p56 alcohol hand rub dispenser, bedside, the minimum cleaning frequency is listed as 'Clean daily & between patient use'. It is unclear if this means it must be cleaned between different patients (ie. after one patient is discharged and another is admitted) or if it means after each time the dispenser is used for one particular patient. If the latter is meant it seems like overkill given the dispenser is already being cleaned daily, and staff would be sanitising their hands with hand rub after touching the dispenser handle anyway. For other items the terms 'after use', or 'after discharge' are used. 'After use' is clear ie. Clean it following use. 'After discharge' is clear, ie. A patient is discharged from a bed and the item is cleaned before the next patient is admitted, but 'between patient use' is unclear. Perhaps there needs to be a key that explains what some of these terms refer to, or perhaps there needs to be more consistent use of terms?

p57 It is unclear what is meant by 'one check clean' as opposed to a full clean. Does that mean that the object is cleaned again after its daily full clean only if there are signs of obvious soil, and if so, would that mean that only the obviously soiled area is wiped as opposed to the whole object? Perhaps there needs to be a small key that explains some terms.

p57 Cleaning of BP cuffs - Why do BP cuffs used on **very** high risk, and significant and low risk patients get cleaned after use only, when BP cuffs used on patient who are high

risk get cleaned daily and after use? It seems illogical to clean the high risk ones more frequently than the very high risk ones. The Guidelines recommend the cleaning of BP cuffs, a non-critical item, 'After Use'. It could be argued that this practice is overstated, particularly in instances where the BP cuffs are in situ and frequent blood pressure measurement is undertaken. A recommendation of 'Daily and on discharge' for this device might be a more suitable recommendation.

p58 Clipboards - very high risk patients get a clean daily and between patient use, while high risk get one full clean daily and between patient use. Consistency?

p58 Curtains and blinds - some columns state patient bed curtains and others bed curtains. The very high risk column has curtains only being changed weekly after discharge (when there is no patient in the bed), whereas the high risk ones get cleaned monthly regardless of whether there is a patient in the bed or not. Presumably the former is meant to read weekly and on discharge. It is also unclear why there are three rows for this item. The first one is for non-MRO patients and the second one refers to patients with MROs. However, what is the third row referring to ie. What is being cleaned yearly? It can't be the bed curtains because these are being done more frequently. If this last row refers to blinds then maybe the item blinds should be next to it rather than next to bed curtain changes and cleans?

p57 and p61 Ceilings and walls - Not sure why ceilings (which are never going to be handled or come into contact with anyone) need a yearly full wash, and spot cleaning as required, when walls, which one would imagine would be more likely to get touched/leant on and splashed etc, only require spot cleaning?

p58 Computer and keyboard - It is recommended that keyboard and computer be separated in the cleaning recommendations. During outbreaks, high and medium risk situations, the surfaces of keyboards (and other electronic equipment that requires frequent hand use in clinical settings, such as ICUs) should be cleaned daily or at discharge and in accordance with organism-specific transmission-based precautions.

p58 Door knobs: Clean once daily is a tautology. Clean daily is sufficient.

p59 Fridges - Why two rows for cleaning fridges? Does one refer to the outside and one to the inside? If so, it might be helpful to state that.

p59 Light switches - During an outbreak or high risk situation, daily cleaning of light switches is recommended. Recommendations should be in accordance with organism-specific transmission-based precautions, such as those described in Cleaning of Surfaces (General) on page 60.

p60 The use of the prefix 'bi' as in 'bimonthly' and 'biannually' is used inconsistently in this table and prone to cause confusion. For example, bimonthly can be interpreted as twice per month or once every two months depending on which dictionary is referred to. In the table on p60 it is used to indicate twice per month as it goes weekly, bimonthly, monthly across the columns from left to right. On page 58, for the row Curtains and blinds, it goes weekly, monthly, biannually (in this instance meaning twice per year), annually in the first row, and yearly, yearly, yearly, biannually (in this instance meaning every two years) on the last row of that item. To prevent confusion it would be better to state specifically whether it was twice per month or twice per year or every two years.

p60 The row underneath Patient slide/board has no item heading. What is it that needs a full clean monthly?

p60 Sinks: why do the high risk patients get two full cleans and one check clean when the very high risk only get two full cleans?

p60 Surfaces (general) should have the word 'after' before the word discharge.

p60 Toilet: would be better worded 'one full clean & one check clean daily'.

Also wondering why windows for low risk patient are cleaned weekly, while bedside lockers, which would undoubtedly get more contact, are not required to be cleaned at all?

Why does manual handling equipment never need a full clean, whereas the undersides of beds must be cleaned regularly?

Given there is not a lot of information out there on changes to infection rates in relation to minutely controlled environmental cleaning, the whole table seems unreasonably prescriptive.

Recommend moving Table B1.12 *Recommended routine cleaning frequencies for clinical, patient and residential areas* to after B1.5.4 *Disinfection*. These recommendations would be best placed after discussion of the Spaulding Classification, which is presented in B1.5.2

B2 Transmission-based precautions

B2.2 Contact Precautions

p71 B2.2.2 and B2.2.3 - This section specifically describes a risk of transmission of organisms spread via the patient's environment or when there is 'an increased risk of environmental contamination and risk of transmission'. B2.2.2 states that the requirements for contact precautions are summarised on page 81, however there is no mention on page 81 regarding environmental cleaning. Also in B2.2.3 there is no mention of environmental cleaning in the section on 'key aspects of applying contact precautions'.

The paragraph that starts 'The requirements for contact precautions are' should be made to stand out against the other text on the page so the information leaps off the page at health care workers (HCWs) in a hurry, perhaps bold font? This comment applies to the same paragraph in other sections that cover transmission-based precautions.

p72 Environmental cleaning??

p71, p74, p75, p77, p104 The document refers the reader to B1.1.7 on Hand Hygiene. There is no section B1.1.7, it finishes at B1.1.6. The five moments are covered in B1.1.2

Table B2.2: Infections warranting transmission-based precautions before laboratory confirmation of infection

Table B2.3: Type and duration of precautions for specific infections and conditions

Table B2.2 and Table B2.3 are inconsistent in terms of the mode of transmission for particular pathogens. For example, measles is listed as airborne and contact in Table B2.2 and as contact and droplet in B2.3. Viral gastroenteritis is listed in Table B2.2 as requiring transmission-based precautions prior to lab confirmation. However, it is not listed in Table B2.3 so the reader would not be able to see the required transmission-

based precautions. Also, this table lists the transmission of viral gastroenteritis as “Airborne”. Classic infections of this nature, such as RSV and Norovirus, are contact or droplet transmitted, and ordinarily requires transmission-based precautions at that level as outlined in the preceding table. In this way, listing the transmission of this infection as airborne appears inconsistent with the proposed recommendations.

In table B2.3, herpes simplex is listed as spread by contact and droplet modes but in the column on type of precautions it is listed as S for standard precautions. Influenza and meningococcal infection are a couple of other examples of other diseases that have the mode of transmission listed inconsistently across the two tables. There are others. Both tables need to be overhauled to make them consistent.

There are a number of things referred to in Table B2.3 that are not explained. For example what special precautions are required for pregnant or infected HCWs, and where does the reader find the blood incident protocol? It might pay to use footnotes to refer readers to the relevant section of the guidelines or to other resources where required. Shouldn't S for standard precautions apply to all the infectious diseases listed in Table 2.3 in addition to transmission-based precautions where applicable?

B2.5 Putting it into Practice

p80 B2.5 point 7 ‘surgical’ mask?

B4 Applying standard and transmission-based precautions during procedures

B4.3.5 Considerations post-procedure

p124 B4.14 Cleansing: Does this apply to wounds healing by secondary intention?

Table B4.15: Checklist of standard precautions for procedures

p125 B4.15; Inconsistent use of terms ‘splash risk likely’ and ‘exposure risk likely’. Also, suggest replacing “Gloves” with “Non-sterile Gloves” in the header of the table. Would Table B4.15 be better placed in the section on standard precautions rather than after the section on transmission based precautions? Some of these key summary tables should probably be placed as foldouts at the start of the guidelines for easy access.

C2 Staff Health and Safety

Table C2 Staff exclusion periods for infectious illnesses

- Herpes Zoster (Shingles) Infection - While it might be technically possible for staff to provide direct patient care with active lesions that are covered, in the interests of both patient and staff safety that the individual be restricted from direct patient care duties until the lesions are no longer active.
- Influenza - Recommend addition of “when medically cleared and/or no longer symptomatic”.

C2.5 Exposure Prone Procedures

The system of classification of procedures and associated risk of exposure (Table C3) is focussed on the surgical context, and on the transmission of infection from health professional to the patient. While there is no disputing that this context carries significant risk of harm to both patients and health professionals, a classification system that adopts a more inclusive position may provide a much needed emphasis on non-surgical exposures, such as needle stick injuries.

Exposure Prone Procedures

p190 Biting - This sentence could be further clarified to improve meaning. Suggest: "Staff working in areas where there is a significant risk of being bitten should not be considered to be performing EPPs"

Abbreviations and Acronyms

p200 A number of abbreviations/acronyms missing, for eg. OMT, ZIG, nCJD, etc.

Grammar, punctuation and formatting

p2, Contents page: B4 Applying needs a capital A

p11,12 Table 1: This would be easier to follow if the headings were made a larger font and/or wider borders were used to delineate sections.

p39 Under the heading *Use of hand cream*, there should be a comma after hygiene in the first line of that paragraph;after performing hand hygiene,...

p47 Insert the year of the CDC reference under the B1.3.2 heading paragraph 2

p64 First paragraph under the heading 'Cleaning agents': a comma needed after the words 'good soil removal,'

p69 For consistency the year of the CDC isolation guidelines should be placed directly after (CDC) rather than at the end of the reference

p112 Table B4.4 Maintenance dot point 6: should read '...recommendations **or** the patient's clinical needs'

p121 B4.3.1 The microorganisms that cause surgical site infections are usually derived from the patient (endogenous), ie. they are present on the skin or transferred from an opened viscus.

B4.3.2 Consistent use of semi-colons.

p140 TB; Any personnel with pulmonary TB **are** to be excluded...

Viral rashes; rubella; space prior to 'Personnel'

p143 Paragraph 3; second sentence 'Despite difficulties...' doesn't make sense

p154 C4.3 dot point 8; should read '...that may indicate...'

p154 dot point 3 in the summary, last sentence, meaning unclear

p159 Case study; paragraph 3, second line should be 'intensive care **unit**'

p165 first dot point; space after occur

p166 C6.3 last dot point; sentence doesn't make sense

p169 heading Legislation and codes of practice; dot point 2; should read '...aim to **provide..**'

Education and training of health care students

The following statement is made in relation to the education of health care students:

All healthcare workers need to understand the basis and importance of infection control. Up-to-date information on infection control basics, policy, procedures, quality assurance and incident monitoring should be included in the curriculum of all undergraduate and postgraduate courses in health-related areas.

The following PhD project on health care students' HH knowledge, beliefs, and practices¹, and the influence of education and assessment on HH, might be of interest. This was a large study involving over 1400 students across four countries. The frequency of assessment on HH knowledge and skills influenced students' HH knowledge and practices (among other things). Students are often quite driven by assessment in terms of the importance they attach to learning particular content. Perceptions of importance given to HH in the curriculum, and by clinical supervisors and clinical facilities influenced HH beliefs, highlighting the important role of workplace socialisation in influencing students. The overall recommendations on improving HH outcomes in relation to health care students were:

- Utilising teaching methods that involved personal interaction (these were rated as more effective than methods that did not involve personal interaction with a teacher)
- Providing repeated episodes of education and assessment (the literature indicated that content that was taught and assessed once was quickly forgotten)
- A greater emphasis on educating students on the indications for, and use of alcohol-based hand rubs (as students tended to have poorer knowledge on the indications for and benefits of hand rubs)
- Contextualising the teaching of HH by explaining and providing examples of the consequences of poor practice (supported by the literature)
- Improving students' abilities to self-assess, as it is difficult to address poor practice when students are unable to accurately assess their own knowledge and practices (this study demonstrated some students who had a very poor ability to self assess, evidenced by perfect scores on the Marlowe-Crowne Social Desirability Scale, and self-reported 100% HH compliance)
- Providing students with more education on ethical practice (as students were more likely to report performing HH in situations where they themselves were at risk and less likely to perform HH in situations where patients were at greater risk)
- Using role-plays to build students' patient advocacy skills as students often reported difficulty with reminding other health care workers to perform HH.

These recommendations while made in relation to HH, would also apply to infection control practices generally.

¹ van de Mortel, T.F. (2010) A cross-cultural comparison of health care students' hand hygiene knowledge, beliefs and practices. PhD thesis: Southern Cross University.