Ethical attitudes of non–intensive care unit clinicians upon end-of-life issue: more training is necessary

To the Editor—We read with interest the article by Yap et al,[1] comparing the ethical attitudes of intensive care physicians in Hong Kong with that of European countries. We have also conducted a questionnaire survey in January 2004 on the ethical attitudes on 'do-not-resuscitate' (DNR) orders of clinicians outside intensive care unit (ICU), including both physicians and surgeons, in our hospital. That was carried out to examine their views and existing practice, particularly on their willingness in using a DNR form developed in accordance with the guidelines of the Hospital Authority.[2] Totally, 86 completed questionnaires were received, with an overall response rate of slightly above 50%.

One of the major findings from our survey is that more clinicians from medical specialties than surgical specialties have ever used the form and issued DNR orders (surgical 58.3% vs medical 90.2%, $\chi^2(3)=16$, $P<0.001$). Compared with the finding of Yap et al,[1] where 95% of ICU physicians gave verbal or written DNR orders, it seems that the practice of DNR for medical non-ICU clinicians is similar to that for ICU physicians. Another interesting finding is that clinicians of Department of Medicine with experience of 8 years or more are more successful in convincing the relatives to accept DNR ($\chi^2(3)=7.93$, $P<0.05$), though that was unrelated to their ranks. The respondents widely accepted that when managing patients decided for DNR, morphine can be administered for the relief of respiratory distress (82%), with no further invasive procedures (78%) or intubation (100%). However, the degrees of acceptance for administering broad-spectrum antibiotics (21%) and blood product transfusion (32%) are more divided in these scenarios. Clinicians with less than 8 years' experience had less agreement with regard to the giving of antibiotics to patients decided for DNR ($\chi^2(4)=17.8$, $P<0.001$), while more medical clinicians agreed with regard to blood transfusion ($\chi^2(4)=11.9$, $P<0.05$).

In our survey, 34% of respondents had experienced unhappy encounters during their discussion with relatives of patients over the DNR issue, the percentage was not associated with clinical experience and specialty. Fifty percent of respondents would refrain from using the form if relatives were demanding. The difficulty has also been discussed by Yap et al[1] and our findings have echoed their identified importance of family involvement in such decision-making in Hong Kong. That also highlighted the importance of communication skills in this area, and it was found that 73% of respondents suggested that more training was necessary for junior staff and 38.5% would actually prefer to have more training themselves.

'Do-not-resuscitate' orders are not just a clinical decision for intensivists. Our study has also illustrated the views and practice of a group of non-intensivists working in general wards. Another study on internists showed that clinicians were more likely to give order on withdrawal of support if they had more time in clinical practice, more contact with ICU patients, or were specialists.[3] As a result, we totally agree with Yap et al[1] that more ethical training in end-of-life issues is necessary.

KW Lam, FRCP, FHKAM (Medicine)
(e-mail: lamkw1@ha.org.hk)
F Cheng, FRCP, FHKAM (Medicine)
Intensive Care Unit
JWM Chan, FRCP, FHKAM (Medicine)
Department of Medicine
GSY Cheung, BSc, MHA
Continuous Quality Improvement Unit
MWM Lee, M Soc Sci, M Org Psy
Department of Clinical Psychology
CT Hung, FHKCA, FHKAM (Anaesthesiology)
Department of Anaesthesiology
Queen Elizabeth Hospital
30 Gascoigne Road
Kowloon, Hong Kong

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Prescribing information for medicines containing codeine for use in infants

To the Editor—This letter is in response to a case report published in the *Hong Kong Medical Journal* titled "A case of probable codeine poisoning in a young infant after the use of a proprietary cough and cold medicine".[1] The infant in this case was 3 months old.

The report presented findings that the prescribing information of eight proprietary medicines containing codeine or other opioid-like compounds as published in *Master Index of Medical Specialties* (MIMS),[2] a popular prescribing handbook in Hong Kong, did not include age-adjusted dosages for children and did not warn against their use in young children. As such, the authors warned medical practitioners and pharmacists of this 'prescribing pitfall' and recommended improvements to the prescribing information of cough and cold medicines.

On behalf of the publisher and editors of MIMS (Hong Kong edition), I should like to clarify the concept of MIMS, as an abbreviated drug directory of locally approved medicines. Our guiding principle is to present the information succinctly without compromising the content of the original prescribing information approved by the local health authority. Thus, common practical considerations, such as dosage adjustments based on age-group, size or pathophysiological condition (eg renal impairment), are not included in each abbreviated monograph.

Taber's Cyclopedic Medical Dictionary[3] defines paediatric age-groups as follows: neonate or newborn—up to 1 month of age; infant—from 1 month up to 12 months of age; children—after infancy to puberty (ie from 1 year to 12 years of age). Where 'Childn' (abbreviation for children) is specified under 'Dosage Information' in MIMS, the medicine is intended for use in children (1 year or older), not infants. This applies to cough and cold medicines: Bromhexine Compound Vida, Cosyr (reformulated), DEC, Ephedryl, and Uni-Pholco. If no age-group is specified, then the medicine is intended for adult use only. This applies to DM-Cordyl, Marsedyl, and Vida Brown Mixture.

While MIMS does not explicitly caution about the use of codeine or opioid-like cough preparations in children or infants, this is a widely published and recognised medical axiom. The authoritative United Kingdom drug reference, *British National Formulary*, recommends that codeine preparations may be used only in children of 1 year or older, while the *American Hospital Formulary System* and *Lexi-comp's Pediatric Dosage Handbook*, both well-known United States drug references, advise its use only in children of two years or older.

The MIMS Editorial team will, however, undertake to further clarify special precautions on the use of medicines in infants, to promote awareness among medical practitioners and pharmacists, and facilitate the use of professional and clinical judgement in this regard.

I am pleased to address any further queries or issues that may pertain to our MIMS publications.

WF Leong, BSc (Pharm), DipSA
(e-mail: waifun.leong@asia.cmpmedica.com)
Chief Editor
MIMS
Unit 901-3, 9/F, AXA Centre
151 Gloucester Road, Wanchai, Hong Kong

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Prescription of codeine in young infants

To the Editor—We read with great concern the case report "A case of probable codeine poisoning in a young infant after the use of a proprietary cough and cold medicine" by Lee et al.[1] As quoted by the authors without elaboration, we reported a similar case in 2001. It involved a 17-day-old Chinese baby girl. She was given phensedyl linctus 2.5 mL 3 times daily and chlorpheniramine 0.5 mg 4 times a day by a private doctor to treat a mild cough and nasal blockage. The daily dosage of codeine was 6.6 mg/kg. She developed three episodes of cyanosis secondary to central hypopnoea. Cardiopulmonary resuscitation was performed by the mother, a registered nurse, for the first episode. The next two episodes responded to oxygen. Investigation revealed a codeine level of 0.24 μg/mL in the blood sample taken 9 hours after the last dose of codeine. The estimated peak level was about 1 μg/mL, which is lower than the reported range of concentration of codeine that causes intoxication and death in adults (1.4-5.6 μg/mL).[2] As far as we know, the mother of our reported patient did not launch a formal complaint against the prescribing doctor.

The half-life of codeine in young infants is much longer than that in older children because of immaturity of the hepatic glucuronidation system and they are also more sensitive to the respiratory suppression effect of codeine as illustrated by our reported case. Even if one adjusts the codeine dosage according to body weight as recommended for older children, the risk is still high because the recommendation is based on older children who metabolise codeine quicker.

As Lee et al[1] stated in his case report that paediatric prescribing information were not available in most proprietary products, prescription of such products by paediatricians should be extremely precautious. For dispensing of paediatric medication, we personally recommend the