Bronchiolitis

Home observation is inadvisable

EDITOR,—David Isaacs's editorial on bronchiolitis contains guidelines that should cause some concern.¹ Bronchiolitis does not always fit into the static categories of mild, moderate, or severe but can carry an infant through to an obtunded state relatively quickly. Thus the suggestion that babies with moderate disease with a respiratory rate of up to 70 can be observed at home is worrying. It is also of concern that pulse oximetry should be considered to be relevant outside hospital. If the problem is indeed in the airways and not an interstitial lung problem then oxygen saturation should remain normal until the point at which respiratory muscle fatigue occurs. Other clinical observations in association with an increasing tachypnoea, such as heart rate and level of responsiveness, should predict this event before decompensation occurs. At this point a child needs not only supplementary oxygen but ventilatory support, and the logistics of providing this outside hospital hardly makes this a safe option.

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1 Isaacs D. Bronchiolitis. *BMJ* 1995;310:4-5. (7 January.)

Tribavirin may be helpful

EDITOR,—David Isaacs makes no mention of tribavirin in the management of bronchiolitis.¹ Despite its limited efficacy, possible toxicity, and expense (three 6g phials cost £585) the synthetic nucleoside tribavirin is the only specific antiviral agent licensed for treatment of respiratory syncytial virus infection (the main cause of bronchiolitis) and merits further discussion.

Double blind trials of aerosolised tribavirin for lower respiratory tract infection with respiratory syncytial virus have shown some clinical benefit in normal and high risk infants but conflicting and disputed results in normal and high risk infants receiving assisted ventilation.²⁻⁴ No important side effects were observed. While no trial has shown that aerosolised tribavirin reduces the likelihood of intubation or death or gives long term benefit, recent American guidelines recommend its use for the following groups in hospital with lower respiratory tract infection with respiratory syncytial virus: infants at high risk because of underlying chronic disease (congenital heart disease, bronchopulmonary dysplasia, or cystic fibrosis), prematurity, or immunodeficiency; transplant recipients and patients receiving chemotherapy; normal infants with severe disease (arterial oxygen pressure <65 mm Hg); and all patients receiving assisted ventilation.⁵ The guidelines also recommend that tribavirin should be considered for infected infants who may be at risk of greater morbidity because of young age (under 6 weeks) or an underlying condition (multiple congenital anomalies, certain neurological or metabolic diseases).

Current practice at the Royal Hospital for Sick Children, Edinburgh, is to follow these guidelines, except that normal infants are treated only if there is evidence of progressive respiratory failure.

When these criteria are used relatively small numbers of patients require treatment.

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- 5 American Academy of Pediatrics. Use of ribavirin in the treatment of respiratory syncytial virus infection. *Pediatrics* 1993;92:501-4.

Isolated pulse oximetry readings are unreliable

EDITOR,—We are concerned at David Isaac's recommendation that general practitioners should routinely carry pulse oximeters to aid their assessment of children with bronchiolitis.¹ In support of this he cites two studies.^{2,3} Both conclude that pulse oximetry gives the best single initial measurement of the severity of illness in bronchiolitis in the emergency department. They do not, however, support the view that general practitioners should assess acute respiratory disease in children in the community by using pulse oximetry.

An isolated measurement of oxygen saturation obtained by the general practitioner in the community is of only limited value. Oxygen saturation must be considered in the context of the child's overall clinical condition and the results of blood gas analysis. We therefore urge caution in the use of pulse oximetry; a normal value may give a false sense of security and might lead to a delay in referral to hospital with potentially fatal results.

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Author's reply

EDITOR,—Roughly two fifths of all children develop disease of the lower respiratory tract with their first infection with respiratory syncytial virus, and almost all children have been infected with this virus by their second winter. Yet only about 1% of children with bronchiolitis are

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admitted to hospital. Clearly, decisions about which babies to admit are already being made in the community.

I agree with M D D Bell that babies with bronchiolitis can deteriorate rapidly and that frequent review is necessary. I disagree that the editorial suggested that ill babies should be managed in the community. I attempted to give guidelines for deciding which babies could most safely be managed at home. The assessment should be based on the history (baby feeding well and without risk factors for severe disease) and examination (not toxic looking or appreciably tachypnoeic). I suggested pulse oximetry as a possible adjunct on the basis of scientific studies that have shown it to predict outcome with reasonable accuracy.

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Bullying in schools

A more aggressive preventive strategy is required

EDITOR,—Judith Dawkins's editorial reminds us of the entirely preventable morbidity of bullying.¹ In Britain the National Society for the Prevention of Cruelty to Children got its charter in 1889, 67 years after legislation was enacted to protect animals. It has taken another 100 years to recognise bullying as another form of child abuse. For doctors and others working with children to make an impact on bullying, however, Dawkins's suggestions do not go far enough.

To suggest, for instance, that victims should "be advised of simple measures" such as "ignoring name calling . . . and telling someone" is only a short step away from blaming the victim for his or her predicament. If doctors and nurses are to help the child then they need to address the school environment that tolerates bullying. They should do more than inform parents and advise them to take the matter up with the school directly. The chances are that this has already been done without result. Preventive strategies developed in more readily accepted medical disease models such as infectious diseases suggest a more aggressive

approach. Case finding, notification of cases, enhanced surveillance, and modification of the environment in which the disease exists are strategies that can usefully be applied to bullying. Doctors are perhaps better placed than parents to push this approach.

We need also to recruit the vast majority of children who are neither bullies nor victims. In my survey of a secondary school in Nottingham the response of three quarters of children to the bullying of another child was that of a bystander who does not want to get involved; a fifth said they could be persuaded to join in (unpublished data). Whitney and Smith found that most children did nothing to help victims either because they did not know how to help or because they thought it was not their business.² Perhaps this statistic would make a good indicator of the success of an anti-bullying programme. Children should be taught not only not to bully others but also not to tolerate bullying of others.

Health care staff working with children in the primary care setting have a vested interest in working in concert with school authorities towards this ideal: they will have less morbidity related to bullying to deal with. One approach would be to regard the detection of a case of bullying as an indication of serious problems in the interrelationships of children in the school. As in established child protection procedures, a case conference should be called of all professionals concerned and a strategy agreed for the prevention of future cases.

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1 Dawkins J. Bullying in schools: doctors' responsibilities. *BMJ* 1995;310:274-5. (4 February.)

2 Whitney I, Smith PK. A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research* 1993;35:3-25.

Accident and emergency departments need management guidelines

EDITOR,—Judith Dawkins emphasises the importance of doctors' recognition of bullying.¹ Accident and emergency departments may be one point of contact between health care services and child victims of bullying. We reviewed the case notes of 305 children presenting to an urban accident and emergency department in the west of Scotland because of incidents at school over 56 weeks in 1993 and 1994. Twenty of the children had attended because of injuries deliberately inflicted by others.

Twelve of the children were boys and eight girls; the group was equally divided between primary and secondary schools. The child had been tripped or pushed in 10 cases, punched or kicked in three, and intentionally struck on the head or face by a brick or stone in three. One child attended after taking a drug overdose after an assault at school. Two further episodes resulted in serious injuries, with one child sustaining a facial fracture after being struck by a baseball bat and another receiving multiple injuries after falling 15 m while trying to escape from pursuers. In total, the children sustained six fractures, required 23 inpatient days of treatment, and received two general anaesthetics during their treatment. The group made 18 attendances at the fracture clinic.

These cases were identified during work designed to find the health care needs associated with accidents at school. The project did not attempt to collect information specifically on bullying, and the figures are therefore likely to be underestimates of the true number of children presenting to accident and emergency departments as a result of bullying at school. The review of the

case notes showed that casualty officers recorded the mechanism of injury more often than they noted the cause of the incident.

We suggest that accident and emergency departments are an important point of contact with children who are victims of bullying. Training for staff should include information on recognising bullying and advice on what steps to take when it is identified. Assessment of children with injuries related to school should include direct questioning about the cause as well as the mechanism of injury. Closer liaison among education departments, hospitals, parents, and police when appropriate may offer great benefits to child victims of bullying.

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Assessing the consequences of changing childbirth

General practitioners collect valuable data

EDITOR,—James Owen Drife's editorial on assessing the consequences of changing childbirth contains several valid points.¹ The historical basis of the collection of data by hospital units may well have resulted in high quality clinical audit. Regrettably, such data collection has invariably missed a major source of clinical data—namely, the data recorded by the general practitioner throughout the woman's antenatal and postnatal care. General practitioners have rarely been encouraged to share such data with other carers in the NHS. Maternity care is but one example of this. Diabetes, asthma, and rheumatoid arthritis are three major diseases in which most care is given in the primary care sector and yet decisions and national comparative analyses are based mainly on hospital records.

Changing Childbirth has highlighted the role of the primary care team in providing continuity of care.² It also recommends that mechanisms should be developed to ensure that data are made available for national analysis. Now, with the development of the Read code as a national standard for recording and sharing data within the NHS and the development of electronic links between practitioners and the family health services authorities and health boards, true national statistics should be possible. A further step, however, is required. General practitioners must be encouraged to understand the implications of recording data. All too often inadequate or inappropriate Read codes are used for morbidity data, with the result that data analysis becomes too generalised for appropriate conclusions to be reached.

The important issues raised in Drife's editorial should encourage family health services authorities or health boards to implement standards for the recording of morbidity in primary care. These organisations should also develop appropriate training in data analysis for primary care teams so that they can experience the benefits of the mass of data at their fingertips.

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2 Department of Health. *Changing childbirth*. London: HMSO, 1993.

Time is ripe for a "pregnancy based system" of data collection

EDITOR,—James Owen Drife echoes the widespread anxiety regarding the inadequacy of present maternity data and emphasises the importance of satisfactory information for assessment of the consequences of changing practices of pregnancy care in Britain.¹ His proposal for an improvement in the collection of data is feasible, and the necessary building blocks for achieving this are already being put in place through the initiatives of the Information Management Group of the NHS Executive.

The NHS Executive launched the NHS information management and technology strategy in December 1992. One of the principal initiatives of the strategy is "a common [information management and technology] infrastructure for secure sharing of information."² Included in this initiative are the replacement of the NHS number, the development of NHS administrative registers, NHS-wide networking,³ a thesaurus of clinical terms, technical standards, and ensuring confidentiality and security. These projects are well under way, and some are nearing completion. An NHS number with a new format will be introduced this year to replace the diverse formats (more than 20) that exist now. NHS-wide networking will allow family health services authorities, regional health authorities, district health authorities, general practitioners, community carers, hospitals, and others to communicate with each other and share information subject to security and confidentiality safeguards. The aim of the "terms project" is to produce Read terms version 3, which will be a national thesaurus of agreed clinical terms. The medical component of the thesaurus has already been launched after the participation of over 1000 clinicians from 43 medical specialty groups. The full version 3, with contributions from professions allied to medicine (chiropody and podiatry, dietetics, occupational therapy, physiotherapy, and speech and language therapy) and the nursing professions (health visitors, midwives, and nurses), is scheduled to be ready by July.

Hence the infrastructure needed for the adequate collection of nationwide maternity data will soon be in place. The time is now ripe for the development of a standard "pregnancy based system,"¹ which will enable records not only of antenatal and intranatal care but also of postnatal care to be kept. The system will need the endorsement of all professional bodies involved with the care of pregnant women before its implementation can be planned.

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Smart cards are expensive and easily damaged

EDITOR,—James Owen Drife suggests that the pregnancy health record "Combined with a 'smart card'...could provide good pregnancy based data."¹ Those who have suffered in the struggle to domesticate the awesome power of the computer chip eventually learn, too often the hard way, three important things. (1) Always keep the master version in the safest place and ensure that it is frequently and regularly backed up. (2) Too often