

of active disease, and treatment regimens really will be shorter and less potentially toxic. I'm less optimistic about stigma. Twenty years ago, HIV/AIDS could reasonably be regarded as "the new leprosy" in terms of the public reaction to those with the condition. TB has now moved into that role and, unlike HIV/AIDS, it has too few articulate, high profile and powerful sufferers to alter public perceptions. If we are to do better in the next 25 years than we have done in the last 25, there must be social and political changes, not just scientific ones.¹⁷

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Lung disease in children

The future for lung disease in children

Warren Lenney

Chest physicians and respiratory paediatricians must work closely together to prioritise areas of respiratory research

The textbook space dedicated to specific diseases usually reflects the importance of the disease at the time of publication. In Sir Wilfred Sheldon's "Diseases of Infancy and Childhood" published in 1951, the top five respiratory disorders were tuberculosis (36), suppurative lung disease (22), pneumonia (20), croup, diphtheria and bronchitis (12) and asthma (10), where the figures in parentheses reflect the relative percentage page space of the five disorders. In 1990 in "Respiratory Illness in Children" by Phelan, Landau and Olinsky the top five were acute respiratory infection (30), asthma (27), cystic fibrosis (19), congenital abnormalities (16) and tuberculosis (8). By the time textbooks are published they are already out of date because of the rapidly changing clinical picture, but what is clear over the past half century is that paediatric respiratory disease has remained common and is a significant burden in childhood for families and for the health economy. In the UK, approximately 25% of all paediatric outpatient attendances, 30% of paediatric inpatient events and 35% of paediatric primary care

consultations are because of significant respiratory morbidity. Much adult respiratory disease has its origins in childhood (or even at conception in diseases with strong genetic influences). Sixty percent of asthma in adults today originates in early childhood, and it is interesting to speculate what the broad respiratory picture will look like in children in 20 years' time.

With regard to acute respiratory infections, it is highly probable that viruses will remain the principal culprits and, in the winter months, acute viral bronchiolitis will continue to dominate our hospital wards and be the cause of recurrent cough and wheeze.¹ Respiratory syncytial viral (RSV) bronchiolitis is characterised by Th2 cytokine release² and, through the upregulation of neutrophil growth factor, causes persisting increased vascular permeability and airway hyperresponsiveness.³ Despite understanding the underlying mechanisms of the acute infection and the subsequent respiratory symptoms, prevention and treatment remain elusive. The monoclonal antibody palivizumab

has become the preventive treatment of choice in a very small number of high-risk infants, but its high cost and the local variability in the virulence of RSV has led to much debate about when to use it.^{4–5} Despite much research, the complex immunopathology of RSV has prevented the development of a safe and effective vaccine,⁶ although current studies are evaluating subunit vaccines⁷ and medicines which can block its replication.⁸ Treatment for severe acute viral bronchiolitis has advanced little over the last 30 years, and there is no medicine on the horizon that is likely to be of significant benefit other than additional oxygen for hypoxaemia.

It seems that the rhinovirus (RV) is more likely to induce allergic sensitisation than RSV, but strategies to prevent RV infections are not close at hand. Although the prevalence of childhood asthma in the UK is now lower than previously, recurrent wheeze and allergic asthma in childhood will continue to be major health issues. It seems most unlikely that any new pharmacological agents will become available in the next 20 years, so improvement in management needs to be directed at environmental issues which influence wheezing and better delivery of care in the community, targeting those individuals who need it most. At present the "inverse care law" applies in that, despite guidelines, care pathways, effective medication and improved understanding of the pathophysiology of the disease, control of asthma symptoms remains poor with patients failing to get access to the level of care they need.

There have been major advances in the understanding and management of cystic fibrosis over the last 20 years, enabling the outlook to improve significantly. The median life expectancy for cystic fibrosis in 1970 was 20 years, in 2005 it was 36 years, and data now suggest that a child born with cystic fibrosis today has a predicted median survival into his/her sixth decade.⁹ This increased survival, however, is at a cost, with the need for multiple and frequent courses of intravenous antibiotics and other potent medications leading to side effects and the emergence of resistant strains of bacteria. The UK CF gene consortium is commencing a large gene therapy trial in 2009 and other treatment trials are progressing which attempt to correct abnormal ion transport in cystic fibrosis. The prospect for prevention of disease progression is greater than it has ever been and, together with newborn screening throughout the UK, it is likely that, in 20 years' time, cystic fibrosis will be a much more controllable disease than it is today.

Tuberculosis in the UK has not disappeared as we had hoped and is still causing concerns in areas of high Asian, Afro-Caribbean and Eastern European immigration in the HIV population and in socially deprived areas of our inner cities. Non-tuberculous mycobacterial infections are also emerging as difficult organisms to treat in diseases such as cystic fibrosis. It will be important to monitor all these infections to measure their impact and better evaluate their response to treatment.

One of the new diseases affecting children worldwide that is likely to have

a huge impact in the future is obesity. In the USA obesity in children doubled between 1980 and 2000. There are clear associations between obesity and reduced lung function, increased airways responsiveness, increased asthma prevalence and severity, and increased obstructive sleep apnoea.¹⁰ Adipose tissue can modify inflammatory processes through adipokines such as leptin,¹¹ and much more research is urgently needed to prevent the obesity epidemic from inflicting major health problems in both children and adults in the very near future.

One recent positive health measure is the smoking ban in public places in the UK which we expect will have a major beneficial impact. Similar bans in countries such as Australia have reduced the percentage of smoking adults to 17%. How we tackle the teenage smoking epidemic is a different issue which needs addressing. The National Service Framework (NSF) for chronic obstructive pulmonary disease (COPD) will help reduce the impact of many factors associated with the development of COPD—not just smoking in children and adults. It will highlight problems resulting from extreme premature birth, damage to the developing lung by pollutants in the atmosphere and aid better understanding of respiratory infections in infancy, all of which contribute to disease progression in adult life.

Chest physicians and respiratory paediatricians must work closely together to prioritise areas of respiratory research. This will ensure better understanding and management of respiratory diseases resulting in healthier children and adults

with reduced risks and improved outcomes. We owe this to the future generations and we have the ability and the opportunities to make it happen.

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milestone it is appropriate to look forward and consider how our high standards should be maintained. There is insufficient space here for a technically complete presentation on guideline methodology (and I doubt that most readers would want that), so I will simply highlight a few key issues.

TOPIC SELECTION

Keeping guidelines up to date while maintaining high quality is a major task, and any organisation like the BTS with an interest in this area needs to decide how to prioritise and to work on topics which will provide maximum benefit to patients. Guidelines can serve useful secondary purposes, such as demonstrating gaps in clinical evidence and encouraging research to address these, but primarily they should address a defined clinical need.

Developing clinical guidelines

The modern way of developing clinical guidelines

Bernard G Higgins

Challenges for the next 25 years

The Society can congratulate itself on many things as it celebrates its 25th anniversary, but unquestionably one of the ways in which it has made an impact is as a producer of clinical guidelines. Guidelines are the most frequently visited section of our own website, and the BTS/SIGN asthma guideline¹ has had more hits than any other on the SIGN site.

Some clinicians do not like guidelines, feeling that they are somehow restrictive or that they promote medical laziness. Some feel that they do not need them. What most people would probably agree is that, if we are going to have guidelines, they should be good ones. The criteria for best practice in guideline production have changed considerably since the Society's earliest work, and at our current