



Editorial

Conclusions

As the account by Temkin makes abundantly clear, epilepsy is not a static entity—time and place matter. If basic science, clinical and social developments occur as rapidly over the next 60 years as over the last, the epilepsy landscape will likely be a very different one by the year 2070. We asked our contributors not only to reflect back over the last 60 years, but also to think forward and speculate on how things might be by the time Epilepsy Action reaches its 120th birthday! How might the ‘gaze’ on epilepsy change? As the articles by John Jeffreys, Mark Rees and Sarah Wilson and Jerome Engel highlight, in 2010 we are able to see the brain as never before, opening up huge possibilities for management of seizures and epilepsy in the future. Yet despite such profoundly important developments, Mark Rees reminds us that research has so far failed to uncover a common epilepsy gene; and Martin Brodie that choice of drug treatment remains largely a matter of guesswork and we still have a long way to go to achieve truly rational management. Financial, as well as scientific, limitations mean, as highlighted by Bert Aldenkamp and Helen Cross, that there is and will likely continue to be a lack of choice for patients over provision of their care and the nature of their treatment options; and as Hanneke de Boer and Philip Lee amply illustrate, misinformation and misrepresentation of what epilepsy is and is not continues to limit the lives and opportunities of people with epilepsy in ways that are both unnecessary and unacceptable. Not surprising, then, that the ‘wish lists’ for the future set out by Madelin Bexon and Steven Schachter are quite lengthy ones!

New knowledge demands new strategies. In a recently published and highly erudite article, Milton¹ observes that there is, currently, a ‘formidable barrier separating clinical epileptologists, on the one side, and computational neuroscientists, on the other’, in which both sides – and, ultimately, people with epilepsy – lose. Milton argues that it is now possible to use mathematical modelling to propose experimentally testable predictions about what is ‘fundamentally a dynamic disease’; and concludes that new and more effective treatment strategies will most likely be realised when clinicians and modellers come together in interdisciplinary teams. Commenting, Osorio² concludes that Milton’s approach offers the possibility of insights into epilepsy that have so far eluded traditional clinical methods. As non-mathematicians and non-epileptologists, we make no claim to fully appreciate or critique the arguments Milton sets out, only to note the exciting possibilities he – like several of our authors – offers for how radically our understanding of epilepsy may change over the next 60 years.

And it is not only over understanding of the ‘epileptic’ state that new possibilities are offered to us. A rapid review of recent publications on epilepsy identified as current developments and likely innovations to treatment and epilepsy care:

- A recently trialled keyhole surgical approach for treatment of medically intractable TLE, with no reduction in rates of seizure freedom and reduced operative time and earlier hospital discharge for those patients in the keyhole treated group, when compared to patients operated on using traditional resection methods³;
- Developments in drugs, devices and delivery systems (the three ‘D’s’) that will allow the tracking of seizure generation in epileptic networks and the triggering of drug delivery at seizure foci to prevent epileptic attacks or clinical events⁴;
- A critical future role for neuropsychology in establishing epilepsy phenotypes, genetic disease risks and possible predictors of treatment outcomes; and in characterising disease severity and functional impairments associated with new and evolving measures of brain structure and function⁵;
- The continuing critical unravelling of the relationship between epilepsy and psychological comorbidities⁶ with clear implications for future provision of comprehensive and effective clinical care to address them⁷;
- New approaches to seizure control, for example, use of slow breathing exercises as a means of increasing parasympathetic tone and so, potentially, altering cortical activity and seizure thresholds in people with refractory epilepsy⁸;
- The potential use of computer-assisted telephone interviewing to diagnose seizures and epilepsy in the large samples of patients required for reproducible clinical and epidemiological studies⁹;
- Methods for ensuring that new research knowledge on epilepsy effectively translates into clinical practice, and into real benefits for patients¹⁰;
- The internet and social networking sites as a powerful means of altering public perceptions of epilepsy for the better and helping to dispel the stigma.¹¹

All these innovations seem to promise a brave new world, indeed, for epilepsy over the next six decades! It has even been suggested that as we acquire greater understanding of the aetiologies of seizures, the nomenclature will shift, so that people who have seizures will no longer be referred to generically as ‘having epilepsy’, but individually as experiencing a specific syndromic disorder or condition. What impact such ‘re-framing’¹² might have for the psychosocial – particularly the stigma – status of those concerned is difficult to know, but surely offers interesting food for thought.

We want to close this piece by, first of all, thanking all our contributors for rising so magnificently to the challenge we set them—our contributors with epilepsy for their honest, sometimes painful and always thoughtful reflections on their own lives with epilepsy; and our academic contributors for making accessible to

non-experts the highly complex topics they have covered and challenging some currently received wisdoms. We are truly appreciative of the time, energy and enthusiasm they have all shown for this project. The result is, we believe, a remarkable tribute to Epilepsy Action.

As noted earlier in this special edition, *Seizure* was originally established as the official academic journal of Epilepsy Action – then The British Epilepsy Association – under the worthy stewardship of Dr. Tim Betts, a name many readers will be familiar with and someone who himself contributed enormously to improving the care of people with epilepsy. *Seizure* remains one of the major journals in the field, its continuing success safeguarded by the current editorship, Professors Bert Aldenkamp and Paul Boon. We also want to thank them for their support of our ideas as to how this special edition should be realised.

Finally, though we almost certainly won't be around in 60 years time, we are fairly confident that Epilepsy Action will be. Over the last 60 years, Epilepsy Action has, amongst many other things, been instrumental in bringing about changes to the UK legal framework relating to epilepsy, led in the creation of an All-Party Parliamentary Group on Epilepsy, launched the Sapphire Nurse scheme, campaigned successfully against generic substitution of branded antiepileptic medications, and contributed to the development of the UK National Institute for Clinical Excellence (NICE) Guidelines for the management of epilepsy. Over the period of its existence, EA's membership has grown almost a hundred-fold and demand for its information and advice service has also increased exponentially. Last year, the EA website received around three-quarters of a million hits. Echoing Jayne Cage's sentiments in the first article in this special edition, it is clear that EA means a great deal to a great many people not just in the UK, but worldwide. Whatever developments take place in the very wide field of epilepsy, we suspect that in 60 years from now there will still be a need for organisations that provide information and support and champion the needs of people with seizure disorders, whatever their origin and cause, and under whatever diagnostic label they find themselves. So we want to end by offering our very best wishes today and for the future to Epilepsy Action and all who are associated with it – A VERY HAPPY 60th BIRTHDAY!

Conflict of interest statement

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