Letters to the editor

What big data could achieve in Scotland

We read with interest the editorial by Walesby et al[1] on the potential of big data in Scotland. We welcome the beginning of such conversations with the clinical community in Scotland.

We echo that the key Community Health Index (CHI) number has been Scotland's unique capability to link multiple datasets from cradle to grave. The original idea of the unique identifier was adopted from Scandinavia in 1970s. It has secured for Scotland some of the best health data linkage and intelligence services worldwide. One example of dataset drawn from CHI usage is the Prescribing Information System through the central processing of prescriptions for pharmacy payments.[2] The ability to link each prescription to specific patient journeys has served as a major primary care data source on disease trends.

Besides its highlighted role in research, Information Services Division (ISD) Scotland is developing closer working relationships with clinicians and realising the opportunity for routinely collected data to support frontline clinical quality improvement and service innovation. One example of the data tools that put data back in the hands of those who generate them is NSS Discovery (http://www.nssdiscovery.scot.nhs.uk). Every clinician in NHS Scotland can access Discovery by applying for different levels of security access from their Caldecott guardians following strict information governance and confidentiality rules.[3] The tool can demonstrate trends in the treatment outcomes for individual health board and benchmark against peers to identify and track areas for improvement and innovation.

Recognition of the Scottish Morbidity Record data quality challenges mentioned in the editorial has led to early work to engage clinicians around the clinical coding process. This involves understanding how the main condition primarily responsible for the need for treatment is recorded at the end of each care episode, with up to five additional diagnoses (relevant past diagnoses/complications/comorbidities).[4] Diagnoses need to be documented without ambiguity to avoid symptom codes being assigned.[5]

We celebrate the positive strides in big data research discussed in the editorial. We are keen to deepen the discussion and discover how clinicians across Scotland can use ISD data tools as a datascope, along with their stethoscope, in their clinical practice.

Joy Ngai[1], Mahmood Adil[2]
[1]Scottish Clinical Leadership Fellow 2016–7; [2]Medical Director, Information Services Scotland, NHS National Services Scotland
Email: j.ngai@nhs.net or mahmood.adil@nhs.net

References

1 Walesby KE, Harrison JK, Russ TC. What big data could achieve in Scotland. *J R Coll Physicians Edinb* 2017; 47: 114–9.
2 ISD Scotland. *Prescribing Datamarts*. 2013. http://www.isdscotland.org/Health-Topics/Prescribing-and-Medicines/Prescribing-Datamarts/#pis (accessed 1/8/17).
3 NSS Discovery. *Security & Navigation*. 2015. http://www.nssdiscovery.scot.nhs.uk/security-navigation (accessed 1/8/17).
4 ISD Scotland. *Secondary Care – Information Collection*. 2010. http://www.isdscotland.org/Products-and-Services/Terminology-Services/Information-for-Clinicians/Secondary-Care-Information (accessed 1/8/17).
5 ISD Scotland. *Secondary Care – The Clinician's Role*. 2010. http://www.isdscotland.org/Products-and-Services/Terminology-Services/Information-for-Clinicians/Secondary-Care-Clinicians (accessed 1/8/17).

Restarting oral anticoagulant therapy after acute upper gastrointestinal bleeding

The association of increased cardiovascular mortality and discontinuation of any antithrombotic therapy following acute upper gastrointestinal bleeding (AUGIB)[1] has been confirmed by other studies.[2,3] In a retrospective study of 1329 subjects (mean age 76) with non-valvular atrial fibrillation and AUGIB, restarting warfarin was associated with significantly ($p < 0.0001$) reduced mortality and significantly ($p = 0.01$) reduced thromboembolism.[2] Reassuringly, patients who restarted warfarin experienced a significant ($p = 0.0002$) increase in risk of recurrent AUGIB only if they resumed treatment less than 7 days after the bleeding episode.[2] A prospective study of 3409 subjects (men age 77.9) confirmed the survival benefit by showing that, over a period of 2 years following AUGIB, restarting dual therapy with oral anticoagulants and antiplatelet therapy resulted in decreased mortality (hazard ratio 0.41, 95% CI 0.32–0.52) and thromboembolism (hazard ratio 0.54, 95% CI 0.36–0.82)(3). Timing of resumption of antithrombotics was, however, not evaluated.[3]

The optimum choice of anticoagulant therapy in a nonvalvular atrial fibrillation patient who wishes to resume anticoagulant therapy is debatable.[4,5] Outside the context of AUGIB a comparison between warfarin and direct oral anticoagulants (DOACs) showed that edoxaban 30 mg/d was associated with significantly ($p < 0.001$) lower risk of gastrointestinal bleeding,[4] notwithstanding the recommendation that, when restarting oral anticoagulants after AUGIB 'if DOAC therapy is preferred apixaban is the preferred agent based on the most favourable rate of GIB (gastrointestinal bleeding) from clinical trials'.[5]

The caveat is the lack of a reversal agent either for edoxaban or apixaban.

OMP Jolobe
Manchester Medical Society, Manchester, UK
Email: oscarjolobe@yahoo.co.uk

References

1 Siau K, Chapman W, Sharma N et al. Management of acute upper gastrointestinal bleeding: an update for the general physician. *J R Coll Physicians* Edinb 2017; 47: 218–30.
2 Qureshi W, Mittal C, Patsias I et al. Restarting anticoagulation and outcomes after major gastrointestinal bleeding in atrial fibrillation. *Am J Cardiol* 2014; 113: 662–8.
3 Qureshi WT, Nasir U. Restarting oral anticoagulation among patients with gastrointestinal bleeding was associated with lower risk of all-cause mortality and thromboembolism. *Evid Based Med* 2016; 21: 152
4 Eikelboom J, Merli G. Bleeding with direct anticoagulants vs warfarin: Clinical Experience. *Am J Med* 2016; 129: S33–S40
5 Kido K., Scalese MJ. Management of oral anticoagulation therapy after gastrointestinal bleeding: Whether to, When to, and How to restart an anticoagulation therapy. *Ann Pharmacother* 2017; 51: 1000-7.

Antithrombotic resumption after acute upper gastrointestinal bleeding – authors' reply

We wish to thank Dr Jolobe for responding to our review paper,[1] which raises the important issue of antithrombotic resumption after acute upper gastrointestinal bleeding (AUGIB), particularly with respect to novel oral anticoagulants (NOACs).

NOAC-associated AUGIB is likely to be an increasing problem, spurred by increasing usage dictated by clinician and patient preference. Evidenced-based drivers are also contributing to this, as the 2014 NICE guidance recommended against using aspirin monotherapy in atrial fibrillation. Moreover, the recently published COMPASS trial,[2] which randomised 27,395 patients with coronary or peripheral artery disease to rivaroxaban, aspirin, or both, was prematurely terminated due to the efficacy of combination therapy in reducing mortality (hazard ratio [HR] 0.82 vs. aspirin, $p = 0.01$) and composite cardiovascular outcomes (HR 0.76, $p < 0.001$) over 23 months. However, as one of the safety outcomes, GI bleeding occurred in 1.5% receiving combination therapy, 1.0% of the rivaroxaban group, and 0.7% of patients allocated to aspirin.

Our review highlights the significant rates of post-AUGIB mortality.[1] There is a growing body of evidence, including our own,[3] which supports the resumption of various classes of antithrombotics after AUGIB.[4] It should be emphasised that post-AUGIB mortality from uncontrolled exsanguination is rare, whereas mortality from major vascular events is common.[3,4] We believe that the vascular risks are amplified after AUGIB due to a combination of factors including: i) induction of a prothrombotic state due to systemic stress, hospitalisation and transfusion, ii) cardiac strain associated with anaemia, which is prevalent after AUGIB,[1] and iii) the common practice of antithrombotic withdrawal.[3,4] Thus, the benefit of resumption may be applicable for all antithrombotics, although more evidence is required to refine this paradigm.

So how should clinicians approach the dilemma of antithrombotic-associated AUGIB? Resumption of antithrombotic therapy post-AUGIB requires an evidence-based, patient-centred approach that balances the risk factors for bleeding, the nature of the bleeding source, patient preference, and the immediacy of vascular risks. The decision for resumption should be made at or after endoscopy and ideally prior to discharge,[1] on the proviso that haemostasis has been achieved. Timing for resumption is controversial. As bleeding is often self-limiting, the rebleeding risk outside the 72 h post-endoscopy window appears low.[4] Hence, it is reasonable to defer antithrombotic resumption up till 3–7 days post-endoscopy for lower risk indications such as atrial fibrillation.[5,6] In high risk cases, or those associated with NOAC use, bridging with low molecular weight heparin, or as Dr Jolobe points out, switching to an alternate NOAC with a favourable bleeding profile, e.g. apixaban or edoxaban, could be considered. For recurrent occult GI bleeding, investigations should follow the occult pathway, involving colonoscopy and capsule endoscopy. However, as consensus regarding antithrombotic resumption in this setting is lacking, it should be considered on a case-by-case basis.

The NICE AUGIB guidelines recommend clinicians provide information and support for patients. This is especially relevant following antithrombotic-associated AUGIB, where a tactful approach is required to convince patients regarding the state of the evidence base of benefits vs. risks of resumption, in order to overcome rebleeding concerns and non-compliance: this message should be conveyed to clinicians and patients alike as part of implementation in real-life practice.

Keith Siau[1], Tariq Iqbal[2], Neeraj Bhala[3]
[1]Department of Gastroenterology, Russell's Hall Hospital, Dudley; [2,3]Department of Gastroenterology, University Hospital Birmingham, Birmingham, UK
Email: keithsiau@nhs.net

References

1 Siau K, Chapman W, Sharma N et al. Management of acute upper gastrointestinal bleeding: an update for the general physician. *J R Coll Physicians Edinb* 2017; 47: 218–30.
2 Eikelboom JW, Connolly SJ, Bosch J et al. Rivaroxaban with or without aspirin in stable cardiovascular disease. *N Engl J Med* 2017; 377: 1319–30.
3 Siau K, Hannah JL, Hodson J et al. Stopping antithrombotic therapy after acute upper gastrointestinal bleeding is associated with reduced survival. *Postgrad Med J* 2017. Epub ahead of print 3 November.
4 Staerk L, Lip GYH, Olesen JB et al. Stroke and recurrent haemorrhage associated with antithrombotic treatment after gastrointestinal bleeding in patients with atrial fibrillation: nationwide cohort study. *BMJ* 2015; 351.
5 Maggio D, Barkun AN, Martel M et al. Predictors of early rebleeding after endoscopic therapy in patients with nonvariceal upper gastrointestinal bleeding secondary to high-risk lesions. *Can J Gastroenterol* 2013; 27: 454–8.
6 Qureshi W, Mittal C, Patsias I et al. Restarting anticoagulation and outcomes after major gastrointestinal bleeding in atrial fibrillation. *Am J Cardiol* 2014; 113: 662–8.

The teaching/learning of empathy

The debate published in the Journal last year[1] demonstrated the absence of a universally agreed definition of the term 'empathy'. Definitions aside, a more relevant question might well be 'Can empathy be learned?'

What is generally agreed is that empathy occupies a segment of behaviour along a continuous spectrum of affective behaviours from almost psychopathic callous indifference through detached concern to sympathetic indulgent sharing in whatever emotions the patient is feeling.

One of the protagonists in that debate[2] has subsequently reviewed recent literature on the topic of empathic communication in medical practice, and proposed a model of behaviour which doctors generally should strive to emulate. Following this model the doctor should not just recognise, remain aware of and understand the feelings that the patient is or is likely to be feeling (which is discredited as mere labelling – 'cognitive' empathy) but should strive to bridge an 'empathy gap', to engage with and share deeply all that the patient is experiencing.

I believe that the model proposed by Jeffrey, to endeavour to counter the detached professional manner that is often criticised by patients or their representatives, overstates the degree of emotional involvement which should be the goal during medical consultations, and therefore it might actually deter students and young trainees from any involvement with the emotional dimensions of their patients' experiences. From the other perspective, some patients are inhibited from voicing or in other ways revealing their feelings because of their wish 'not to upset the doctor'.

If students and young doctors are to engage empathically with their patients and recognise this as an essential part of their communication skills, then a realistic approach is needed, capable of implementation in the circumstances of contemporary practice, and avoiding the risk of 'burn-out' or compromise.

Clearly the same degree of engagement cannot be the goal, appropriate in every case. Constraints of time in both primary and secondary care; divergences of age; differences of gender and culture; these factors will commonly present insurmountable barriers to the sharing of feelings. Should I, an ageing male, feel inadequate if I do not share deeply the emotions of a female teenager, recently jilted and in the grip of an eating disorder? Should a young female graduate be expected to participate in depth in the feelings of a diabetic with troubling erectile problems?

I fully agree that the learning of empathetic communication should be an important goal of medical education, but that objective needs to be shaped in the context of the real world.

Philip Myerscough
Retired Senior Lecturer in Obstetrics and Gynaecology, Royal Infirmary of Edinburgh, UK
Email: p.myerscough657@btinternet.com

References

1 Jeffrey D, Downie R. Empathy – can it be taught? *J R Coll Physicians Edinb* 2016; 46: 107–12
2 Jeffrey D. Communicating with a human voice: developing a relational model of empathy. *J R Coll Physicians Edinb* 2017; 47: 266–70.

Reply from Professor Downie

Empathy was first introduced and later rejected by philosophical aesthetics around 1900. In its new home in medical education it can mean whatever its supporters want it to mean. Dr Myerscough's take on it is that empathy requires a doctor not just to recognise and understand a patient's feelings but 'to engage with and share deeply all that the patient is experiencing', although he admits that 'the same degree of engagement cannot be the goal appropriate in every case'. I suggest that it is not appropriate in any case. The idea that in consultations, one after the other on a busy morning, doctors can 'share deeply' all that different patients are experiencing is delusional and patronising, and attempts to try for this 'deep sharing' are likely to get in the way of balanced clinical judgment. Medicine is essentially a practical activity; what matters to patients is not what you are feeling, but what you are proposing to do. This requires the sensitive communication of information on diagnosis and treatment, delivered in an open and respectful manner. Communicating sensitive information is a practical skill which may be partly teachable, but it is a distortion of human relationships to think of the manner as likewise a skill which can be taught. A humane manner is not any kind of 'skill' but comes from being a certain kind of person, one who has concern for the problems and sufferings of others.

Dr Myerscough rightly recommends an approach to medical education shaped in the real world. Realism suggests that educators cannot 'teach' everything; rather they should allow students to be themselves. Like their patients, students have varied and interesting personalities and cultural backgrounds, but their normal human concern for the suffering of others will take a professional form in the realities of medical practice without 'teaching'.

R Downie
Emeritus Professor of Moral Philosophy, University of Glasgow, Glasgow, UK
Email: robert.downie@glasgow.ac.uk