The Cochrane Collaboration and geriatric medicine

This year marks the twentieth Anniversary of the Cochrane Collaboration from its foundation in 1993. This landmark provides an opportunity to consider what Cochrane has done for evidence-based healthcare of older people, and how the collaboration may develop into the future.

The Cochrane Collaboration [1] is an international healthcare charity that was inspired by the Scottish epidemiologist Archie Cochrane. In 1972, he pointed out that the medical profession had failed to organise reliable summaries of randomised trials to inform decisions about healthcare [2]. The Collaboration was subsequently formally established by the obstetrician Iain Chalmers and colleagues to support the production and maintenance of systematic reviews across a range of subjects relevant to healthcare [3]. Right from the beginning healthcare of older people has been recognised as an important element. In 1994, a group dedicated to supporting the needs of older people was established in the form of a Cochrane Field [4]. Currently this group is known as the ‘Healthcare of Older People Field’ (http://www.cochrane.org/field-healthcare-of-older-people). The task of summarising all of the research relevant to older people is so large that it would be unfeasible for a single review group to directly administer and support the conduct of systematic reviews in all health problem areas experienced in older age. The field role provides oversight and allows collaboration and interaction with Cochrane Review Groups, including prioritisation of reviews, identification of authors and providing advice (such as review of protocols and reviews). More recently the field has taken the lead in authoring selected high priority reviews. The field also has a key dissemination function, identifying reviews that are relevant for healthcare of older people and ‘tagging’ them on the Cochrane website to enable more rapid searching and improve access. The work of the field has focused particularly on the ‘geriatric giants’ of dementia and delirium, falls, immobility and incontinence; and on clinical services for frail older people; currently over 260 reviews are ‘tagged’ as relevant for these subject areas.

The Cochrane systematic review process has a number of strengths. It is rigorous methodologically, including identification of all relevant evidence, with robust methods of data synthesis (meta-analysis), and is scrupulously impartial. It covers a wide range of healthcare interventions, both simple (e.g. single drugs) and complex (e.g. systems of care). A strength (and challenge) for Cochrane reviews is that they are updated at regular intervals. Highlights on the Cochrane database of systematic reviews include the review on inpatient comprehensive geriatric assessment showing major benefits from this approach compared with standard medical care [5]; balance and exercise in older people [6]; and substantial portfolios of evidence for management of fractured neck of femur, drugs in dementia and continence care.

The impact of Cochrane systematic reviews now extends throughout the medical literature, and has served to drive up standards of conduct and reporting of both clinical trials and systematic reviews in general, including the ‘non-Cochrane’ reviews published in many medical journals.

However, the Cochrane approach is not without its critics. The review process is often painstakingly slow: Complex outputs are generated that health-care professionals and users of healthcare often struggle to understand. The emphasis on only including the highest quality data (usually randomised controlled trials for interventions) results in reviews which have high internal validity; however, often patients in the studies are highly selected and external validity—applicability to the real work of frail, multi-morbid elderly people—is questionable. Adverse effects of treatment are often not well addressed in such trials. Lastly, the attention given to quality of life issues and impact on care-givers is patchy. However, despite these difficulties the Cochrane database of systematic reviews (http://www.thecochranelibrary.com) contains a body of high-quality relevant evidence that all geriatricians should use as ‘first port of call’ in considering what data exists to support their clinical practice.

So where does Cochrane go from here? Work is ongoing to increase the coverage and number of reviews relevant to health care of older people. This will be enhanced by inclusion of a wider range of study methodologies to evaluate interventions, and revisions to the Cochrane handbook which hopefully will improve reporting within reviews of key characteristics of older people, including age distribution, underlying disability and cognition. The development of plain language summaries and overviews of reviews should increase accessibility and utility for clinicians and providers of healthcare. The brave new world of communication through smart phone technologies is being embraced using social media such as blogs [7], facebook [8] and twitter for dissemination; you can follow The Healthcare of Older People Field @Cochrane_HCOP.

An important new direction for Cochrane is evaluation of diagnostic tests. Guidance has been developed for the conduct
of diagnostic test accuracy (DTA) systematic reviews. This has supported a rapidly growing body of work around dementia diagnosis, including ‘suites’ of systematic reviews on biomarker, imaging and questionnaire assessments.

It is clear that the Cochrane Collaboration has become a major force in promoting evidence-based healthcare. Future developments should ensure it will be used by all clinicians and healthcare providers who strive to provide the best care for older people.

Key points

- Cochrane systematic reviews provide high-quality impartial summaries of all the available evidence for health-care interventions across a wide range of clinical conditions.
- There is a substantial portfolio of Cochrane systematic reviews that address common problems in geriatric medicine.
- Recent developments include development of guidance and methods for systematic reviews of DTA; dementia diagnosis will be one of the early clinical issues to be reported on.
- All clinicians and healthcare providers should use the Cochrane database to inform their decision-making.

Conflicts of interest

All authors have or have held substantial roles within the Cochrane Collaboration; D.J.S. as convener and C.Y. research assistant with the Health Care of Older People Field; T.H. is co-convener with the Health Care of Older People Field and an Editor with the Musculoskeletal review Group; P.L. is Editor with the Cochrane Stroke Group. T.J.Q. is leading author on several protocols and Cochrane Systematic reviews, including diagnostic test accuracy (DTA) reviews. All authors have received funding to support conduct of Cochrane Collaboration work, including conduct and dissemination of systematic reviews and editorial work.

References