Colloquium highlights challenges in accessing data, using technology to speed up reviews and getting the right reviews to the right people

The Cochrane Colloquium held in Seoul, Korea from 23 to 27 October, and attended by 850 delegates from 54 countries, highlighted the current challenges in evidence-based health care and, in particular, focused on different approaches to improve the quality, timeliness and usability of Cochrane reviews. Broad challenges including overdiagnosis, data transparency, and knowledge translation were clearly stressed in plenary and special sessions.

The issue of too much information but not enough access to all the information was highlighted.

As Lesley Stewart said: “We are basing reviews on what might be the tip of the iceberg because not all trial results are published.”

“Now is a good time to take stock of access to open and shared data,” she continued.

“That would be the tip of the iceberg because not all trial results are published.”

“We have to continue to insist on open science,” added Kay Dickersin. “Probably only 60% of data are published in full.”

“More than 100 trials appear each day. Over two million citations are screened each year for Cochrane reviews,” said James Thomas. “Only a fraction of the available studies are included in systematic reviews. Resources are limited and the model is unsustainable which means we have to develop and use technology to automate wherever possible.”

He emphasised the need to identify technologies to enable study identification and get studies done more quickly. “We need people and technologies working together to maximise scarce human efforts,” he said.

But speed can never mean reduced quality. This was stressed by Karla Soares-Weiser who said: “We have to increase efficiency and create a more rapid pipeline while maintaining methodological standards.”

The need to make use of empty reviews to promote primary research was also highlighted. However, Claire Glenton stressed that detailed direction about the kind of research needed is also important. “More research is needed is not a useful message for policy makers,” she said.

Continuing on the theme of more research Davina Ghersi pointed out that: “All research grant applications should include a systematic review of all current evidence to help decide if the research is needed.”

The need to do more reviews incorporating unpublished patient data as well as data from animal studies was discussed. Increased monitoring of trial registries was also proposed as a counter to publication bias in favour of positive trial results.

**Convincing people to use evidence in practice**

Quality knowledge translation was emphasised by John Lavis who pointed to the need for optimal retrieval of high-quality, appropriately packaged materials. “Policy makers should be able to reach into our world and pull out relevant evidence but we have to make it easy for them – we have to know what the message is, to..."
whom it should be directed, and by whom it should be delivered," he said.

Although conceding that decision making is based on many factors of which evidence may only be one, Maureen Dobbins emphasised that: “We must ensure that public health officials know that they are looking at the best-available evidence.”

“We need to present results in multiple formats of varying layers of complexity,” said Glenton. “Information about the effect or result should always be presented alongside information about the certainty of the evidence.”

Speaking from the viewpoint of a health care manager, Marguerite Koster pointed out that some of the issues that are factored into deciding whether review findings will be implemented include the strength of the evidence; stakeholder needs and preferences; whether the intervention can be implemented practically in the system and within current practices; patient values and experiences; and, the cost of implementation.

Knowledge translation was a recurring discussion point at the Colloquium. Cochrane is in the process of developing their Cochrane Knowledge Translation Strategy which will define the role of knowledge translation for Cochrane, provide a framework to coordinate these activities across the organisation, and support those who are well-placed to undertake this role. A consultative knowledge translation symposium was held to engage those present on the findings of a situational analysis to date, and enlist ideas and support to take it forward.

The right test at the right time for the right patient
The plenary on overdiagnosis offered fascinating insights into how increased screening, genomic testing, broadened disease definitions, more sensitive technologies and awareness means that many diseases can be diagnosed and treated much earlier, however, the negative side was also highlighted which includes testing without available treatment, labelling people with illnesses and treating for illnesses which may never fully manifest in disease. Alexander Barratt stressed that diagnosis should always be about improving health.

“Diagnosis shouldn’t just be focused on finding more disease,” she said. “The more we test, the more we find the slowly progressing disease but without treatment there is no improvement in health. Disease incidence and costs increase with no change in disease outcomes.”

“We are facing an epidemic of pre-disease – like pre-diabetes,” added Jenny Doust.

Glenton also pointed out that: “More diagnosis can lead to more labelling but with no improvement in health. Labelling can lead to psychosocial harms.”

This was stressed by Rita Redberg who said that: “Medical care should be about the right test and the right treatment for the right patient at the right time.”

“If a test has no known benefit it shouldn’t be done,” she continued. “The assumption is that if some medical care is good then more care is better. New technologies may not always be better. Prevention shouldn’t be just about more screening, it should also be focused on lifestyle choices and public health measures.”

The speakers agreed that Cochrane should undertake reviews addressing overdiagnosis, that overdiagnosis and overtreatment should be routine outcomes in all systematic reviews – and that there is a need to develop methods to do this.

Keeping the dream alive
At the Cochrane AGM, data were provided on progress in the organisation. This included a 45% increase year-on-year in use of the Cochrane library; increased access to the Cochrane website in particular from non-English speakers, and the fact that 90% of WHO Guidelines now reference Cochrane.

“Cochrane has produced an enormous body of work of which we can be proud;” said CEO Mark Wilson.

Continuing on this theme in the Annual Cochrane lecture Paul Glasziou said: “Without the enormous methodological leadership of Cochrane, much progress would not have happened.”

“Now we need to speed up the process despite the huge challenges,” he continued.

He pointed to areas that need ongoing attention including improved dialogue with clinicians, shared decision making with patients, taking non-drug interventions as seriously as pharmaceuticals, and investment in automating evidence synthesis.

He also pointed to the work of reviewers saying: “Volunteer reviewers are Cochrane’s greatest strength – we have to try their skills not their patience.”

“It is a great dream,” he concluded. “Don’t give up on it.”

Michelle Galloway and Tamara Kredo
Cochrane SA
Charles Shey Wiysonge was appointed Director of Cochrane South Africa from December 2016. We found out more about him in the following Q&A.

What is your personal background?
I was born of two amazing parents in a village called Nseh in the Kingdom of Nso in North West Cameroon. I have a brother and two sisters. Values were very important to my parents. They never went to school but taught us to excel in everything, to make collaboration a central theme in our lives, and to care for self and others. These are the same values that my wife and I try to pass on to our four children: Kathleen Bime-Fomonyuy, Charles Berinyuy, Leinyuy Ashley and Fonyuy Sandra.

I completed my schooling and medical school in Cameroon. I did postgraduate training in both the UK (University of Cambridge, University of Oxford and Cochrane UK) and South Africa (University of Cape Town).”

Could you give some brief highlights of your career path?
My career has been nothing short of amazing. I became a full professor at Stellenbosch University in 2013. My previous work experience includes Deputy Director of the Centre for Evidence-based Health Care at Stellenbosch University; Manager of the Vaccines for Africa Initiative and Chief Research Officer at the University of Cape Town; Senior Scientist at Cochrane South Africa; Chief Research Officer at UNAIDS, Geneva; and Deputy Director, National Expanded Programme on Immunisation, Cameroon. I’ve published more than 100 research articles and serve on many international scientific and advisory committees.

Finally, the President of the Republic of Cameroon decorated me with the National Order of Valour, the highest honour in Cameroon, in the category ‘Chevalier’.

You have already had a long involvement in evidence-based health care (EBHC) – what attracted you and how has that interest led to you taking a leadership role in Cochrane in the African region?
When I completed my postgraduate training in epidemiology in 2000 my dream was to be a policymaker, who would make a difference in poor and vulnerable communities. And I made a very good start at that. However, in 2000 Prof. Bongani Mayosi sent me an advert for a new Cochrane fellowship. The Aubrey Sheiham fellowship aimed to develop EBHC leaders from low and middle-income countries. I applied for it but never took my application seriously. Sometime later I received an email from Jimmy Volmink, Director of Cochrane SA. His first sentence was something like this “Dear Charles, Thank you for your application. We received many excellent applications for this fellowship”. I stopped reading and deleted the email because I expected that the next sentence would be something like “We are sorry you were not selected”. At the time, accessing internet at a cyber café in Cameroon was expensive and we did not have internet access in the office. A few days later I went back to my trash folder and recovered Jimmy’s email. Jimmy’s next sentence congratulated me for earning the award. The rest is history. I was the first Aubrey Sheiham fellow and in 2001 – 2002 received advanced training and mentorship from EBHC leaders such as Ian Chalmers, Phil Alderson, and Peter Brocklehurst amongst others. I also published my first paper in a scientific journal (The Lancet), with Jimmy Volmink as senior author.

Within two years, I metamorphosed from a health manager/policy maker to a researcher. Since then I have been involved in the activities of 13 Cochrane entities, including Cochrane SA.

What is your vision for Cochrane SA going forward?
Cochrane SA already has a very beautiful vision that “Health care decision making within Africa will be informed by high-quality, timely and relevant research evidence.” Living this vision, Cochrane SA has become a recognised giant in EBHC in Africa and beyond. This is evidenced by the recent Special South African Medical Research Council (SAMRC) Award given to Prof. Volmink, founding Director of Cochrane SA and the Father of EBHC in Africa.

We will do this by employing strategic thinking to move forward, identifying and developing talent, inspiring a shared purpose and values, and building and maintaining sound relationships.

How do you see the EBHC field developing in this region?
EBHC has grown exponentially on our continent in the last two decades becoming an everyday word. The best is yet to come. EBHC will grow even more on this continent, and our role will come from focusing on two of the SAMRC’s strategic goals, i.e. leading the generation of new knowledge and facilitating its translation into policies and practices to improve health (Goal 2) and building capacity for the long-term sustainability of health research (Goal 4).

A focus of EBHC in Africa should be implementation science, i.e. understanding not only what is and isn’t working, but how and why implementation is going right or wrong, and testing approaches to improve it. Health systems often fail to optimally use evidence in decision making, resulting in increased mortality, reduced quality of life and lost productivity. This gap between evidence and practice combined with declining resources creates an ethical urgency for implementation science, to enhance returns on research investments.

What are your personal interests/hobbies/activities beyond Cochrane and EBHC?
I enjoy spending time with and having conversations with my family. I also enjoy having a drink with friends, and going for a walk with a friend.
Consumer summaries of evidence

Kangaroo mother care to reduce morbidity and mortality in low birthweight infants

Review question
Does kangaroo mother care (KMC) reduce morbidity and mortality in low birthweight (LBW) infants?

Background
Conventional neonatal care of LBW infants (< 2500 g) is expensive and requires both highly skilled personnel and permanent logistical support. KMC has been proposed as an alternative to conventional neonatal care of LBW infants. The major component of KMC is skin-to-skin contact between mother and newborn. The other two components of KMC are frequent and exclusive or nearly exclusive breastfeeding and attempted early discharge from hospital.

Study characteristics
The authors identified 21 randomised controlled trials (3042 infants) for inclusion in this review by searching medical databases in June 2016.

Key results
Compared with conventional neonatal care, KMC was found to reduce mortality at discharge or at 40 to 41 weeks’ postmenstrual age and at latest follow-up, severe infection/sepsis, nosocomial infection/sepsis, hypothermia, severe illness, and lower respiratory tract disease. Moreover, KMC increased weight, length, and head circumference gain, breastfeeding at discharge or at 40 to 41 weeks’ postmenstrual age and at one to three months’ follow-up, mother satisfaction with method of infant care, some measures of maternal-infant attachment, and home environment.

The researchers noted no differences in neurodevelopmental and neurosensory outcomes at 12 months’ corrected age.

Quality of evidence
The most critical and important outcomes had moderate-quality evidence.

Conclusions
KMC is an effective and safe alternative to conventional neonatal care for LBW infants, mainly in resource-limited countries.

School-based interventions for preventing HIV, sexually transmitted infections, and pregnancy in adolescents

Cochrane researchers conducted a review of the effects of school-based interventions for reducing HIV, sexually transmitted infections (STIs), and pregnancy in adolescents. After searching for relevant trials up to 7 April 2016, they included eight trials that had enrolled 55 157 adolescents.

Why is this important and how might school-based programmes work?
Sexually active adolescents, particularly young women, are at high risk in many countries of contracting HIV and other STIs. Early unintended pregnancy can also have a detrimental impact on young people’s lives.

The school environment plays an important role in the development of children and young people, and curriculum-based sexuality education programmes have become popular in many regions of the world. While there is some evidence that these programmes improve knowledge and reduce self-reported risk taking, this review evaluated whether they have any impact on the number of young people who contracted STIs or on the number of adolescent pregnancies.

What the research says:
Sexual and reproductive health education programmes
As they are currently configured, educational programmes alone probably have no effect on the number of young people infected with HIV during adolescence (low-certainty evidence). They also probably have no effect on the number of young people infected with other STIs (herpes simplex virus: moderate-certainty evidence; syphilis: low-certainty evidence), or the number of adolescent pregnancies (moderate-certainty evidence).
Material or monetary incentive-based programmes to promote school attendance

Giving monthly cash, or free school uniforms, to encourage students to stay in school may have effect on the number of young people infected with HIV during adolescence (low-certainty evidence). We do not currently know whether monthly cash or free school uniforms will reduce the number of young people infected with other STIs (very low-certainty evidence). However, incentives to promote school attendance may reduce the number of adolescent pregnancies (low-certainty evidence).

Combined educational and incentive-based programmes

Based on a single included trial, giving an incentive such as a free school uniform combined with a programme of sexual and reproductive health education may reduce STIs (herpes simplex virus; low-certainty evidence) in young women, but no effect was detected for HIV or pregnancy (low-certainty evidence).

Authors’ conclusions

The authors concluded that there is currently little evidence that educational programmes alone are effective at reducing STIs or adolescent pregnancy. Incentive-based interventions that focus on keeping young people, especially girls, in secondary school may reduce adolescent pregnancy but further high-quality trials are needed to confirm this.


Technical Summary

Still a need to identify successful interventions for improving childhood immunisation in low and middle-income countries

Background

Immunisation is one of the most powerful public health strategies for improving child survival, not only by directly combatting diseases that kill children but also by providing a platform for other health services to reach children. However, each year millions of children worldwide, mostly from low- and middle-income countries (LMICs), do not receive the full series of vaccines on their national routine immunisation schedule.

The concentrated global effort to use immunisation as a public health strategy started in 1974 when the World Health Organisation (WHO) launched the Expanded Programme on Immunisation. The proportion of children who receive three doses of diphtheria-tetanus-pertussis vaccines (DTP3) by one year of age is an indicator of the programme’s ability to reach its target population. National DTP3 coverage is also a general indicator of the performance of national health systems.

The goal of the global immunisation community has been to reach at least 90% DTP3 coverage in every country by 2015. However, in 2015 only 126 (65%) countries worldwide had achieved this. All of the 68 countries that have not yet achieved national DTP3 of at least 90% are LMICs. Only 16 of these (8%) had improved DTP3 while 25 (13%) reported a net decline in DTP3 coverage since 2010. Another 26 countries (13%) have seen no net change in DTP3 coverage since 2010. This poor performance in LMICs was the main reason why the overall average increase in global DTP3 coverage was only 1% (from 85% to 86%) between 2010 and 2015. Persuasive efforts are urgently required in LMICs to catch up and achieve global immunisation goals by 2020.

This was an update of a Cochrane review published in 2011 and focuses on interventions for improving childhood immunisation coverage in LMICs. The objective was to evaluate the effectiveness of intervention strategies to boost and sustain high childhood immunisation coverage in LMICs.

Methods

The authors used standard Cochrane methods to conduct comprehensive searches for both published and ongoing studies; selected eligible studies; and, extracted and analysed the data.

Results

Fourteen studies met the inclusion criteria. These were conducted in Georgia (one study), Ghana (one study), Honduras (one study), India (two studies), Mali (one study), Mexico (one study), Nicaragua (one study), Nepal (one study), Pakistan (four studies), and Zimbabwe (one study). One study had an unclear risk of bias, and 13 had high risk of bias.

The types of interventions evaluated in the studies included community-based health education (three studies), facility-based health education (three studies), household incentives (three studies), regular immunisation outreach sessions (one study), home visits (one study), supportive supervision (one study), information campaigns (one study), and integration of immunisation services with intermittent preventive treatment of malaria (one study).

The authors found moderate-certainty evidence that health education at village meetings or at home probably improves DTP3 coverage (risk ratio (RR) 1.68, 95% confidence interval (CI) 1.09 to 2.59). They also found low-certainty evidence that facility-based health education plus redesigned vaccination reminder cards may improve DTP3 coverage (RR 1.50, 95% CI 1.21 to 1.87).

Household monetary incentives may have little or no effect on full immunisation coverage (RR 1.05, 95% CI 0.90 to 1.23, low-certainty evidence). Regular immunisation outreach may improve full immunisation coverage (RR 3.09, 95% CI 1.69 to 5.67, low-certainty evidence) which may substantially improve if combined with household incentives (RR 6.66, 95% CI 3.93 to 11.28, low-certainty evidence).

Home visits to identify non-vaccinated children and then referring them to health clinics may improve uptake of three doses of oral polio vaccine (RR 1.22, 95% CI 1.07 to 1.39, low-certainty evidence). There was low-certainty evidence that integration of immunisation with other services may improve DTP3 coverage (RR 1.92, 95% CI 1.42 to 2.59).

Implications

Providing parents and other community members with information on immunisation, health education at facilities in...
combination with redesigned immunisation reminder cards, regular immunisation outreach with and without household incentives, home visits, and integration of immunisation with other services may improve childhood immunisation coverage in LMICs.

Most of the evidence was of low certainty, which implies a high likelihood that the true effect of the interventions will be substantially different. There is therefore a definite need for further well-conducted randomised trials to assess the effects of interventions for improving childhood immunisation coverage in LMICs.

Immunisation protects people from an increasing collection of incapacitating diseases and gives individuals and their communities a healthier start in life. It is therefore critical for LMICs to make concerted efforts to use evidence-informed strategies to improve immunisation coverage. If and when that happens, immunisation programmes in these countries can lead the way by increasing access to other public health interventions and providing a platform for the delivery of preventive health services all through the life course. Immunisation research and development is rolling fast, and a growing pipeline of new vaccines underlines the need to shape health systems that can consistently reach new target age groups.

Charles Shey Wiysonge
Cochrane SA

2016 winner of the prestigious Aubrey Sheiham Leadership Award for Evidence-Based Healthcare in Africa announced

Dr Mbah Patrick Okwen has been announced as the 2016 winner of the prestigious Aubrey Sheiham Leadership Award by Cochrane. The award is named after the dental epidemiologist who was inspired and encouraged by Archie Cochrane to question many of the practices in medicine and dentistry. The award is managed by Cochrane South Africa (SA) and presented annually to an African researcher to support the conduct of a Cochrane Review focusing on a priority topic with impact on the health of people living in lower- and middle-income countries.

Dr Okwen is based at the District Hospital Bali and the Centre for Development of Best Practices in Health Yaoundé, Cameroon. He is a Cameroonian medical doctor who also holds a Masters in Health Economics. He is currently a member of the Cochrane African Network (CAN), a Learning Initiative for Experienced Authors (LIXA) member, guest author with the Cochrane iPad edition and lead of the Guidelines International Network (G-I-N) African Community. Dr Okwen has been involved with Cochrane Systematic Reviews since 2007. He will use the award to complete his Cochrane Review entitled ‘Artesunate Plus Mefloquine for the treatment of uncomplicated P. falciparum Malaria’ with the Cochrane Infectious Disease Group; an efficacy and safety review which has been commissioned for an update of current malaria treatment guidelines by the World Health Organization.

As part of the award, Dr Okwen will mentor Dr Aseh Promise (PhD Health Economics).

Founding Director of Cochrane South Africa honoured - Jimmy Volmink recognised for his contribution to evidence-based healthcare

The South African Medical Research Council (SAMRC) called Prof. Jimmy Volmink, Africa’s ‘father of evidence-based healthcare’. Volmink, also the Dean of the Faculty of Medicine and Health Sciences at Stellenbosch University was presented with the SAMRC Recognition Award for ‘Outstanding Achievements in Contributions to Evidence-based Healthcare in Africa’.

Volmink is the founding Director of the first Cochrane Centre on the African continent, Cochrane South Africa, and an internationally acclaimed researcher in health sciences. "His work was underscored by the mission of Cochrane South Africa which stated that health care decision-making on the African continent should be informed by best-available evidence. He has supported many researchers to conduct high-quality research and assisted policymakers in South Africa and the region to build the necessary skills to use research evidence effectively," said SAMRC in their commendation statement.
Learning Initiative for eXperienced Authors (LIXA): editorial skills workshop

How do you develop a diagram to show how HIV testing could reduce HIV transmission? Or how providing communities with latrines could reduce the number of children with diarrhoea? If you want to know, then you should have come to the recent advanced Learning Initiative for eXperienced Authors (LIXA) workshop, hosted in Cape Town in October 2016, where the participants did just this, and more.

LIXA takes what’s in the editorial in-tray — the challenges, the dilemmas, the statistical or editorial problems — and reflects on them with participants. The three-day workshop aimed to build Cochrane editorial skills. The face-to-face sessions built on the previous 18 months of webinars between senior African Cochrane authors and editors.

Within Cochrane, there is lots of discussion about GRADE. The workshop illustrated how this could influence systematic review structure and was a theme throughout the three days. Participants dissected ‘Summary of findings’ tables, and reassembled them during group work sessions.

The course was delivered by David Sinclair, who has 10 years of experience with the Cochrane Infectious Diseases Group (CIDG), and Paul Garner, as part of the Effective Health Care Research Programme Consortium (EHCRC) (www.evidence4health.org). There were over 20 participants from Cameroon, Malawi, Kenya, Nigeria, South Africa, Tanzania, and The Gambia.

Feedback was good — participants particularly liked that the workshop was interactive and the skills they developed could be applied to their reviews and editing the next day. One participant remarked that all senior Cochrane authors and editors would benefit from this type of capacity development.

Taryn Young
Centre for Evidence-Based Health Care, University of Stellenbosch and Cochrane SA

The Pan African Clinical Trials Registry - over 800 trials registered

The Pan African Clinical Trials Registry (PACTR; at www.pactr.org), continues to grow. Of the total applications received, 54% were received in 2015 – 2016 (see Figure 1). On 22 November the number of registered trials reached 851. Six hundred and fifty-two of the registered trials are single-centered with sites in 31 countries. The 199 multi-centre trials have sites in 33 countries. Five of the multi-national studies have sites in India, France, Belgium and Switzerland and the USA. Of the 863 principal investigators (PIs) listed, 16 trials list multiple PIs and 671 PIs are from African countries (see Figure 2).

Elizabeth Pienaar
Project Manager
www.pactr.org

Figure 1: Registered Trials on www.pactr.org

Figure 2: African principal investigators by country
New Staff

Lindi Mathebula
Lindi Mathebula is a scientist at Cochrane SA working as a registry administrator for the Pan African Clinical Trials Registry (PACTR). She previously worked for Litha Healthcare as a Trainee Pharmaceutical Representative. Lindi completed a BTech Pharmaceutical Science at Tswane University of Technology and a BSc Honours in Physiology at the University of Limpopo.

Ameer Hohlfeld
Ameer Hohlfeld is a scientist at Cochrane SA. He recently obtained a Master’s degree in Public Health specialising in epidemiology at the University of Cape Town, whilst also working as a physiotherapist in the public service in the Western Cape Metro TB services from 2010 to 2016. His experience working in the public health sector has given him the chance to work as a street-level bureaucrat with marginalised communities, giving him a basic understanding of the need to enhance the development of health systems in South Africa. Ameer is currently working on three systematic reviews, one of which is a Cochrane review.

Nosicelo Mchiza
Nosicelo Mchiza is a senior officer responsible for Admin at Cochrane SA. She has a B Comm (Honours) degree in Industrial and Organisational Psychology from UNISA. Nosí was previously employed by the Department of Defence at 2 Military Hospital as a senior administration clerk. She has also worked as an HIV/AIDS Counsellor for the KwaZulu-Natal Department of Health and Lifeline Pietermaritzburg.

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Conferences

24th National Evidence-Based Practice Conference, Personalized Health Care: Shades of Gray in Evidence-Based Care
27 – 28 April 2017
Coralville USA
http://10times.com/evidence-iowacity

13 – 16 September 2017
Cape Town, South Africa
http://www.globalevidencesummit.org/

Key dates and contacts for GES

5 January
Call for abstracts, workshops and other sessions
Early registration opens
Call for stipends opens

1 Jul
Standard registration opens
Pre-Summit events

12 Sep
Global Evidence Summit

13 – 16 Sep
Website: globalevidencesummit.org
Email: contact@globalevidencesummit.org
Twitter: @GESummit | #GESummit17
Facebook: facebook.com/globalevidencesummit