NIHR | Applied Research Collaboration West Midlands

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ARC West Midlands News Blog

27 March 2020

Organisational Consequences of Coronavirus, COVID-19

Richard Lilford, ARC WM Director;
Frances Griffiths, Professor of Medicine in Society

Health services around the world are scrambling to deal with COVID-19. The virus massively disrupts services. Modelling the spread of the disease is allowing governments to formulate public policy. Modelling patient flows – operations research – is helping health care organisations to manage the surge in demand – for example by releasing spare capacity and redeploying human and physical resources from elective to emergency care. Infectious diseases create a conundrum for the services since sick people need to attend facilities, but congregation of infected cases in health facilitates increases transmission of the infectious agent. So the trick is to visit facilities virtually (mobile [m] consulting) rather than physically. Enter ARC West Midlands.

We have a well-established programme of m-Health including (but not limited to):

1. Our host hospital, University Hospitals Birmingham NHS Foundation Trust (UHBFT), is working with Babylon Health to enhance its virtual clinic capacity.

2. Building on work of Gill Combes, Sarah Damery and James Ferguson, we plan a more extensive evaluation of the UHBFT m-Consulting programme that is expanding rapidly to cope with COVID-19.

3. From her UK work on m-Consulting Frances Griffiths has quick guides freely available for specialist teams maintaining contact with their patients managing long-term health conditions at home.[1] She leads projects on m-Consulting in Africa and South Asia and, with her collaborators, is developing policy briefs underpinned by evidence-based principles to guide application.

4. Melanie Calvert is an international authority on Patient-Reported Outcome Measures, which could help determine who should attend facilities and who should not. Modern aeroplane engines incorporate sensors that send signals to land-based workshops. This real-time monitoring, rather than just the schedule, determines the need for repairs. Likewise, patients in future will be monitored by their symptoms and test results, and these will be used to trigger visits to the clinic.

ARC WM members are planning a suite of studies in this country and abroad. The COVID-19 pandemic has precipitated a sharp shift towards m-Health / m-Consulting that is likely to prove indelible. In UK general practice all patients are now having phone consultations before any necessary face-to-face

contact. Many practices have systems in place for video-conferencing. Last week, author FG took just ten minutes to learn how to use the secure and confidential system via her own phone so she could set eyes on an immune-compromised patient with infection, without asking the patient to leave her place of safety. Patients are learning rapidly too. The same patient could not get their sound to work so they used the landline too – but that patient is now urgently sorting out the sound.

We know that many other centres are also gearing up to study the organisational issues of epidemics generally, and m-Health specifically. M-Consulting warrants study – it is open to abuse/fraud, poor quality control and medical error, and can result in inequalities in care received. Experienced health professionals are good at mitigating these dangers,[2] but we need to understand how to systematise and embed m-Consulting to optimise health gains. We warmly invite other people in the UK and beyond to join our enterprise to share ideas and formulate research plans. In the meantime James Ferguson is leading an initiative to track use of m-Consulting to identify opportunities and barriers, and identify training needs for staff and patients.

References:

1. LYNC study team. LYNC Study Quick Reference e-book and Topic Guides. Warwick: University of Warwick; 2017.

2. Griffiths F, Bryce C, Cave J, et al. Timely digital patient-clinician communication in specialist clinical services for young people: a mixed-methods study (the LYNC study). *J Med Internet Res.* 2017; **19**(4): e102.

ARC WM Quiz

Born 27 March 1845, Wilhelm Röntgen was awarded the first Nobel Prize in Physics in 1901; but what did he discover?

email your answer to: ARCWM@warwick.ac.uk
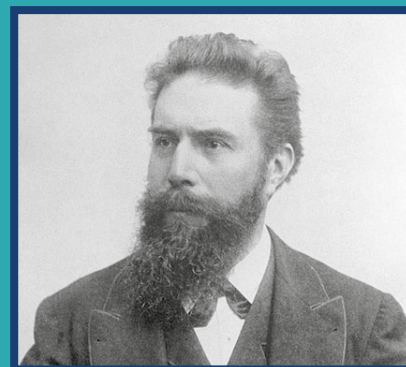
Answer to our previous quiz: As well as being a scientist, Gregor Mendel was also an Augustinian friar and abbot. Congratulations to Andrew Taylor and Richard Grant who were first to answer correctly.

COVID-19: Locking Down Urban Settlements in Sub-Saharan Africa

Akinyinka Omigbodun, Professor of Gynaecology & Obstetrics
*Richard Lilford, ARC WM Director*

Lock-down may be the right solution in Europe and America, but not in crowded urban settlements in Sub-Saharan Africa.

The problem of COVID-19 has the potential to rapidly overwhelm health systems in Africa, and the effect on the population may be similar to that seen during warfare. The measures that are currently advocated to control the infection in Europe, America and even China, are blunt instruments that may do more harm than good in some places, such as urban Sub-Saharan Africa, for a number of reasons:
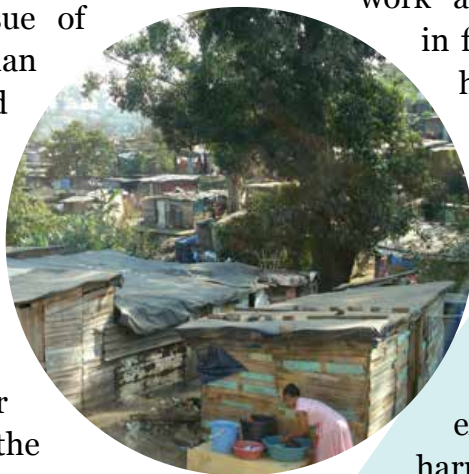
1. The widespread practice of personal hygiene and physical distancing – frequent hand washing, using hand sanitisers, maintaining distance from others – sound simple, but they are very difficult to put into practice in crowded slums, which lack sufficient water for domestic use (running water is a luxury). Improving water supply and sanitation in these settlements will take time. In the meantime hygiene measures may be the best bet.

2. Requiring that the population stay in their homes (lock-downs) may be effective in impeding the spread of the disease, but there are huge practical problems. Income is earned on a daily basis in urban settlements and most workers are in the informal sector. Not going out to work on a single day may translate to the family not having any food for that day. Over time, that has implications for the maintenance of civil order. Lock-downs are just being started in Nigeria and already there is evidence of suffering in large population centres according to newspaper reports. In these lock-down situations, the population has to be supplied with essentials, much in the same way as refugees from conflicts and natural disasters. And they will still need to leave their homes to access food banks, medicines and lavatories.

3. Provision of temporary health facilities (field hospitals) may become necessary as the caseload rises. Admission to facilities should be limited to those people who really can benefit, in order to limit spread of the disease. It will be difficult to provide sufficient ventilators and people to provide intensive care. But some people will need facility care, for example to manage secondary infections. It is therefore essential for facilities to be equipped with personal protective equipment, masks, disinfectants and essential medication. We are deeply sceptical of some medicines, such as hydroxychloroquine, but if other trials currently underway identify effective medicines, then these should be made rapidly available in low- and middle-income countries (LMICs). However, where possible it would be better to distribute the medicines in communities, rather than assemble people in hospital settings where they would pose a danger to others.
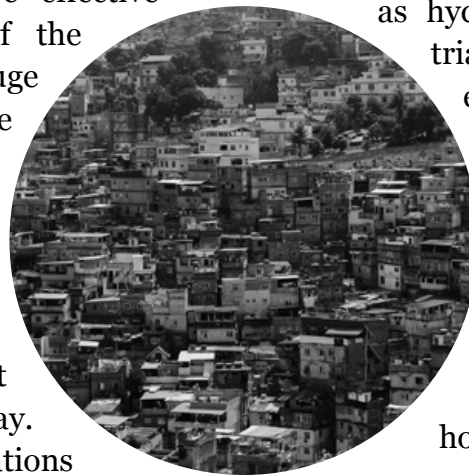
4. Training and retraining of various cadres of health personnel in control of infection methods and treatment of affected patients, is an urgent requirement. Since travelling is impractical, training should be packaged into videos that can be disseminated to different centres. These materials may be used for localised on-site training by local trainers for greater effect.

5. Most important is the issue of testing. Thus far, fewer than 200 people have been tested in Nigeria, with 46 testing positive and 1 death. This is likely to be a huge underestimate. There is a need to roll out testing rapidly. The genomics-based test (at about $120 per test) detects those having the virus and presumably shedding it, while we understand that an antibody-based test (both IgM and IgG) has been developed that can identify those who had already been infected and who are therefore likely to be immune. Whatever can be done to make both types of tests available in LMICs will make the fight against the virus better focused. The antibody-based test will make it easier to identify health workers who have developed an immune response, and these workers will thus be more effective as care givers since their risk from exposure to infected patients is less.

The fight against COVID-19 in countries with well-developed intensive care facilities has been mainly aimed at smoothing the rate of new cases so that the health care system does not get overwhelmed, rather than materially reducing the total number infected. The case for delaying spread is a logistic one, assuming that we are not going to have an effective vaccine any time soon. We very cautiously suggest that this argument loses force in a place that not only has poor intensive care facilities, but that cannot rapidly expand such facilities. In addition, the effect of lock-down, it must be assumed, is likely to be less effective in crowded urban communities, for reasons given above.

None of this should be taken to mean that people living in cities should not be empowered to defend themselves and their families. Our survey work across seven urban settlements in four countries of Asia and Africa has shown that the settlements are served by an extensive network of medicine sellers and pharmacists. In many countries, they are poorly stocked but our household surveys show that they are widely used. We think that this existing infrastructure could be harnessed to disseminate materials and good hygiene practice. People have to leave their homes to access lavatories where they are exposed to the virus, which remains infective for about 24 hours on surfaces. Worse still, reports from S Korea show that people may shed the virus in stool for up to five weeks after infection. People should be supplied with plenty of soap and be instructed on using facilities without touching surfaces. It is perhaps fortunate that, as shown by our surveys, only a limited number of old people remain in slums. Those who remain would be well advised to return to their villages where this is possible.

However, drastic lock-downs are likely to do great harm among poor people in crowded settlements; they may well be self-defeating and may become fertile ground for fomenting civil disorder.

What Have We Learned About Doing Research in Care Homes?

Theme 1: Long-term Conditions

Sarah Damery, Research Fellow

Researchers in the long-term conditions theme of our previous CLAHRC West Midlands carried out a two-year evaluation of a care home quality improvement programme in Walsall and Wolverhampton, supported by the West Midlands Academic Health Sciences Network (WMAHSN). This work is set to continue under ARC West Midlands as we evaluate the wider rollout and implementation of the programme, called SPACE, 'Safer Provision and Caring Excellence', in other areas and into the residential care setting. For us, care homes were unfamiliar and initially daunting research environments. Now that the SPACE evaluation has concluded and we are preparing for the next stage of our care home work, it is timely to consider what we learned from our first foray into the world of care home research.

First, care homes are used to being visited by 'outsiders'. Unfortunately, many of these visits are associated with assessments and inspections of various kinds. Consequently, we encountered some hostility at the start of the project from managers and staff who believed our presence would place them under unwelcome scrutiny and judgement about the quality of their care. We worked hard to establish positive relationships, helped both by the overriding ethos of SPACE, which focused on co-creation of quality improvement (QI) interventions rather than imposing them upon the care homes in the programme, and by the programme facilitators, who – like us – were finding their feet in a new working environment.

Second, there is typically little culture of research participation or data collection in care homes. Our expectation that we would find an untapped treasure trove of process and outcome data ready to be mined for its riches was quickly scuppered by a reality check and the realisation that care homes are busy places where, quite rightly, the main business revolves around providing resident care. This is frequently done by over-burdened staff in difficult circumstances, and research is not a priority. This reality check extended to our planned data collection from managers and staff, and we soon learned that flexibility was the order of the day. For example, it was imperative to accommodate the care home schedule. Mealtimes and early mornings are extremely busy and turning up on the doorstep with hundreds of survey packs to be handed out to staff was (understandably) not met with enthusiasm. Gradually, we came to understand the ebb and flow of the care home working day,
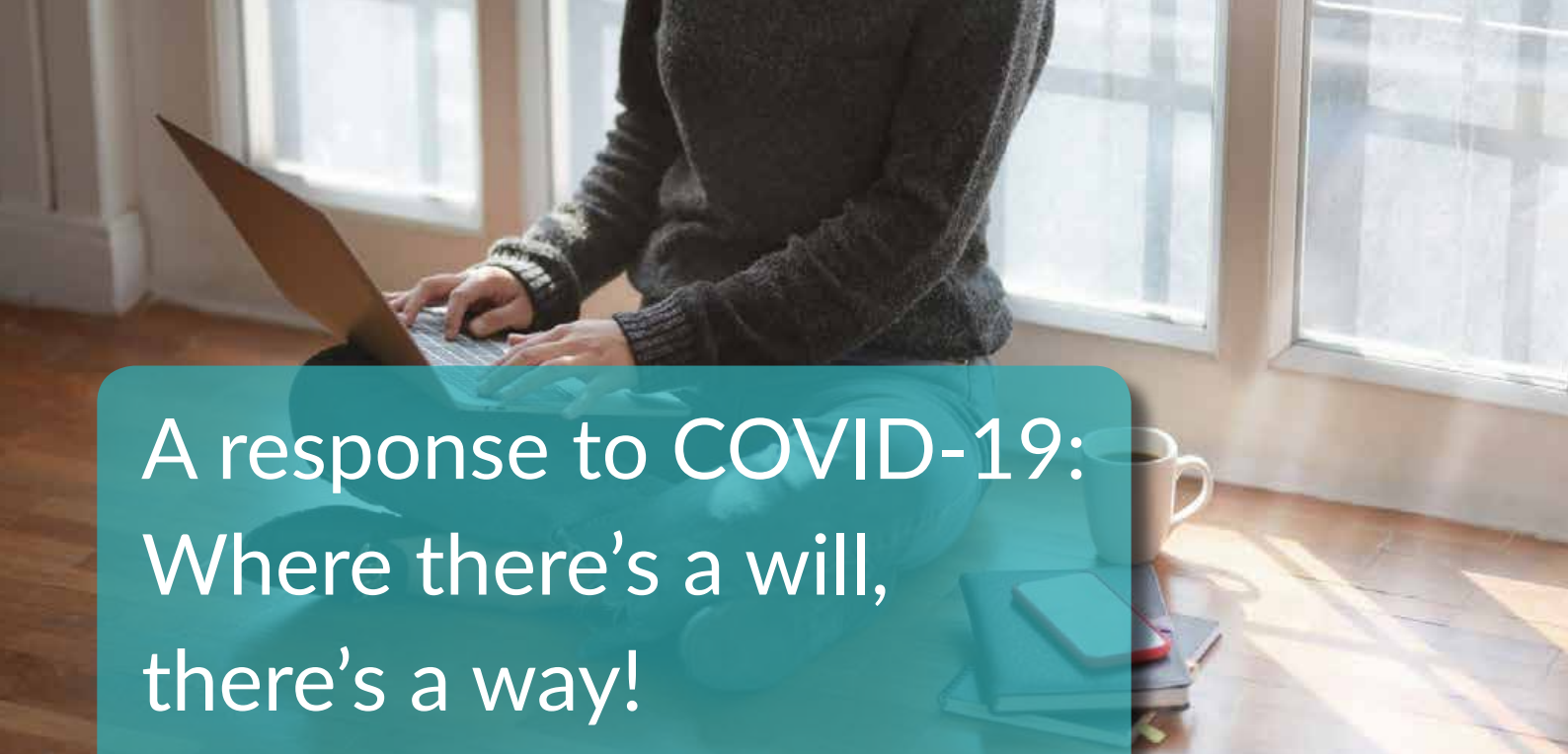
and became more attuned to the times that it would be most appropriate for us to visit. Once we did this, our presence was welcomed and we felt less as if we were imposing.

Third, recruitment and data collection plans required pragmatism, both to allow an effective response to unanticipated changes, and to ensure that robust data could still be collected. One component of the evaluation was to interview managers and staff in multiple roles (clinical, domestic, maintenance, care assistants) in four care homes selected as in-depth case study sites. We meticulously planned how we would identify and recruit participants using a pre-defined sampling frame and giving potential interviewees time to read and digest our lengthy and exhaustive participant information sheets. Very quickly, we abandoned this approach, honed through years of research in primary and secondary care, and embraced opportunism, interviewing whomever we could temporarily tear away from their duties at short notice. This meant that we often spent as little as ten minutes with our interviewees, but found our data to be no less interesting or meaningful than that collected through more formal approaches.

Finally, each care home was different, and our approach to the evaluation was progressively tailored accordingly once we were familiar with what was effective (or not) in each of the 26 care homes that we worked with. By the time our evaluation drew to a close, we were genuinely saddened, having built up strong relationships with managers and staff in the majority of the care homes, and becoming familiar faces at SPACE meetings and events. Indeed, our primary issue then became one of ensuring we maintained our independence as evaluators when we had developed a strong desire to see the programme succeed and for everything to go well for the managers and staff we had come to know. After all, how often do researchers get to work in an environment with biscuits on tap, the chance to meet and stroke numerous therapy animals, and the tantalising possibility of being able to polish off a leftover slice of afternoon cake!

In the end, two years after our initial terror at the prospect of working in care homes, the SPACE evaluation had become the most rewarding piece of research that we carried out during CLAHRC WM and we are delighted to have the opportunity to continue our work as part of our incipient ARC WM programme. Hopefully, as researchers, we are now a little less naïve and the lessons we have learned to date will stand us in good stead.

A response to COVID-19: Where there's a will, there's a way!

Magdalena Skrybant, PPIE Lead

We are all living and working in extraordinary times. Everyone is having to adapt and respond very quickly to changing circumstances: this includes self-isolating and working from home.

For academic and clinical colleagues, adapting to the new working environment is made easier by the fact that most people already have experience of remote working. Discussions within project teams frequently take place over email, and video conferencing tools have been invaluable in connecting experts from different sites working on the same project.

How does this changing situation affect public involvement activities though?

As Community and Public Involvement Lead for NIHR ARC WM, I have seen how restrictions from COVID-19 have had an immediate impact on our activities. The changes I have seen include:

1. Postponing/cancelling face-to-face meetings with public contributors, many of which take place on university campuses or venues, such as community centres, that have now closed.

2. Suspending engagement events, many of which have been cancelled.

3. Change to clinician/researcher working arrangements, which may restrict their capacity for research activities.

How can we overcome the challenges?

The changing circumstances do not mean that we have to cease all public involvement activities. Although we should limit social contact, which rules out face-to-face meetings, there is a wealth of technologies available to us that can help sustain involvement activities with our public contributors. Of course, we can still use email and telephone as reliable methods of communication, but for group discussions and dialogue we should not be afraid to explore alternative methods of involving public contributors, such as video conferencing. In this time, which offers so many challenges, we should all be prepared to step out of our comfort zone and try something different.

I'm by no means an expert in this area, but over the last week I've had to adapt quickly to new circumstances. Here's my top tips so far:

Top tips for adapting public involvement activities

❶ **Keep everyone in the loop**. Things are changing rapidly and we are all having to adapt to changing circumstances. Communicate with public contributors involved on projects as soon as possible, just to let them know what's going on – even if it's just to say that you don't know!

❷ Explore **alternative methods of communication**. If you're used to meeting with public contributors face-to-face, think about alternative ways you can communicate. Can some activities take place over email/post or perhaps could you arrange telephone calls? Just because we're familiar with a particular way of working doesn't mean it's the only way of working.

❸ Be prepared to **step outside your own comfort zone**. I'm not that confident at using digital platforms (confession - I spent 15 minutes yesterday trying to figure out my Skype ID), and I really don't like videoing myself, but I'm just going to have to deal with it.

❹ Consider arranging a **video conference**. If you are used to meeting a group face-to-face there are various platforms available that support video conferencing (some allow up to 200 participants). Explore with your public contributors whether this would be an option and what support they would need (e.g. what instructions/guidance they might need; are there any ground rules you need to set).

❺ **Consider inequalities**. Not everyone has internet access/a smart phone/confidence using digital technologies and some people might not want to do this. Consider whether using digital technologies is appropriate for involving people in your research and potential issues of involving some people using digital technologies and not others.

❻ **Plan, plan, plan!** Whatever method you choose (email, telephone, video conference), approach involvement with the same effort as you would normally.

❼ **Be respectful**. Although the methods of communication might be different, remember that you are taking up contributors' time. If you usually offer honoraria payments, these should still be offered.

❽ **Get feedback**. If you're changing your ways of working, make sure you get feedback from public contributors and reflect yourself on how things went. What worked well? What didn't work? How can you improve for next time?

❾ **Report what you've done**. We're navigating unchartered territories here, so capturing any learning is really valuable. It might be that some approaches are really successful; all the more reason to share the experiences with others.

Team work makes the dream work!

The good news is that the Public Involvement and Engagement Community is coming together to share resources/information to help ensure that we maintain public involvement activities through this period. Over the past few days, there have been some useful resources provided - see the box below.

Let us know what you're doing.

Steven Blackburn, Research Fellow, Patient and Public Involvement and Engagement Regional Lead for Public Involvement in Research, NIHR Research Design Service is curating a spreadsheet on alternative approaches to PPIE activities where you can record your experiences of virtual public involvement activities. Contributions are most welcome!

And finally...

I love the Benjamin Franklin quote: '*Out of adversity comes opportunity*'. Let's hope that through these challenges we find alternative, different and maybe even better ways of working with public contributors.

1. NIHR INVOLVE has produced this useful 'Guidance on the use of social media to actively involve people in research'

2. NSUN (National Survivor User Network) has produced this document on 'Keeping in touch when we can't meet each other face-to-face'. This resource includes some guides to setting up small group discussions virtually and organising video conferencing.

3. Sarah Knowles (Senior Research Fellow, University of York) is curating a useful document on Digital and Remote Co-Design. In addition to sharing resources, this document has some reflections from contributors on different platforms and methods.

4. NCCPE (National Cooridinating Centre for Public Engagement) is curating an online document for 'Meaningful Engagement for Online Events'. This includes some 'top tips for organisers and participants of online events' and a document for people to share experiences of using software when engaging the public.

Vegetarian Diet Increases Stroke Risk but the Effect is Not Mediated by Blood Pressure

Richard Lilford, ARC WM Director

High blood pressure is an important cause of haemorrhagic stroke. A recent cohort study of over 48,000 previously healthy participants compared outcomes in meat eaters, eaters of fish but not meat, and vegetarians.[1] The study reported in BMJ replicates a high incidence of heart disease in the meat eaters amounting to about an extra 10 cases per 1000 people per 10 years. But the risk of stroke was higher in the vegetarians, particularly haemorrhagic stroke. This replicated findings from Japan. The risk of haemorrhagic stroke increased after adjusting for blood pressure so the mechanism likely resides elsewhere. A number of nutrients are consistently lower in vegetarians than those who eat meat. The authors think this may give a clue.

Reference:

1. Tong TYN, Appleby PN, Bradbury KE, et al. Risks of ischaemic heart disease and stroke in meat eaters, fish eaters, and vegetarians over 18 years of follow-up: results from the prospective EPIC-Oxford study. *BMJ*. 2019; **366**: I4897.

# A Thoughtful Article on the Radical Changes Pending in Medical Education

Richard Lilford, ARC WM Director

Writing in JAMA, Ezekiel Emanuel outlines some of the radical changes that are imminent in medical education.[1] While medical practice is a craft that has to be taught in the context of clinical care, this is not the case for pre-clinical education. It is here that the most radical change will be felt. Forget problem-based learning, peer education, interactive classrooms, and the like. Academic staff are simply not needed to teach physiology, anatomy and pathology. So long academic staff! Forget the notion of a classroom, group tutorials, or anything of the sort. Students will learn from massive open online courses (MOOCs). And there is no reason that these courses should come from any particular medical college or university; simply download the online courses from the world's greatest teachers. Students will be autodidacts. If some are temperamentally unsuited for self-education? Well then, they are probably not the right people for a medical career, given that being a doctor entails a lifetime of learning.

By and large, I agree with this analysis. But my worry is this – learning material is one thing, but acquiring the skills to organise complex information and present it in a coherent way, is another. While simply understanding and knowing the physiology is quite didactic, medical ethics is a different matter altogether. It is more a way of thinking and applying basic and often conflicting principles to complex decisions. Let me take another academic subject, history. Why study history at university? If you want to know about the Tudors, then look it up. But an employer hiring a history graduate will not be interested in a potential employee's knowledge of the Tudors. Wise employers hire history graduates, not because of their knowledge of history, but because they are good at organising complex and contradictory information and producing a coherent and readable account of the material. This is the skill that a good history graduate acquires. And this skill comes not from reading, but from writing,
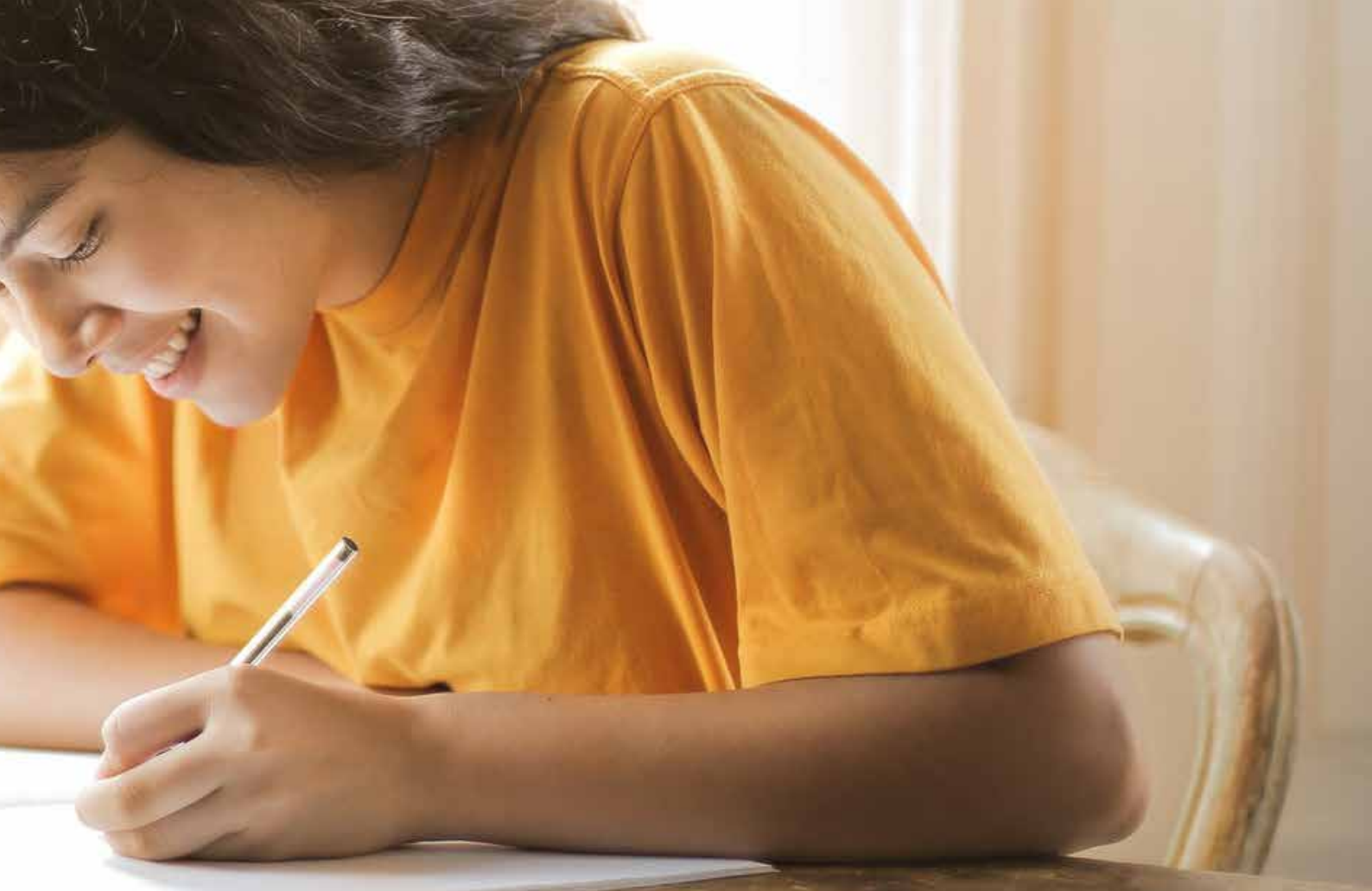
coupled with critical appraisal of what has been written. It is through this process of writing and feedback that students will acquire valuable skills for the knowledge economy.

This takes me back to medical education. There is something wrong with the idea that it should consist of only two of Ezekiel's phases: self-learning of the pre-clinical syllabus, followed by craft training at the 'bedside'. I suggest that there is something that should come in between; where the student learns how to organise material and write well. Granted, they should have picked something of this up at school. However, they need to go beyond this. Thus, there should be modules somewhere in the course where they learn these analytical and writing skills. I think this could be taught in the contexts of clinical epidemiology, ethics, and of psychology and communication. And it should be taught by doctors not statisticians, philosophers and psychologists; their job is to mentor the doctors who educate the students, as I have argued before in this News Blog.[2, 3]

A rounded doctor needs three competency areas: a good understanding of pre-clinical subjects, good clinical analytical skills, and general skills in analysis of complex information.

References:

1. Emanuel EJ. The Inevitable Reimagining of Medical Education. *JAMA*. 2020.

2. Lilford RJ. The Future of Medicine. NIHR CLAHRC West Midlands News Blog. 23 October 2015.

3. Lilford RJ. Two Ideas of What it is to be a Doctor. NIHR CLAHRC West Midlands News Blog. 14 August 2015.

Ancestor Testing: is it Any Use?

Richard Lilford, ARC WM Director

Many millions of people have now had commercial testing for their ancestral lineage. Such testing can be of varying complexity. The less complex varieties simply use mitochondrial DNA and the Y chromosome to track the maternal and paternal ancestral lines respectively. The more complex form uses variations across the entire DNA spectrum.

A recent JAMA paper argues that there is some medical value in such testing.[1] For example, it may indicate that an Indian person living in America is at risk of cystic fibrosis because of maternal and paternal European ancestry. That sounds like a weak argument. More important, ancestral testing can improve the specificity of genome wide association studies and improve the prognostic value of genes that predispose to disease. That is to say, that the same genetic signature may have a different prognostic implication according to its ancestry. This will be important scientifically and even medically if genetic testing for polygenic disease becomes more widespread.

Not mentioned in the article is another value of testing, genetic or otherwise. This value lies in the news worthiness of the information. It is simply interesting to have an insight into one's geographic origins. The ARC WM director is contemplating such testing

Reference:

1. Jorde LB & Bamshad MJ. Genetic Ancestry Testing: What Is It and Why Is It Important? *JAMA*. 2020; **323**(11): 1089-90.

A New Way to Measure National Happiness

Richard Lilford, ARC WM Director

Studies on well-being, happiness and satisfaction are based on direct questioning, which is subject to differences in the way words are interpreted in different languages. An alternative method has been developed by two economists, one from the University of Warwick. [1] This method is based on machine reading of books to pick up the prevailing sentiment in newspapers and other media. The results have face validity because they change according to national conditions. For example, there was a very sharp fall in happiness during the First World War. In the USA there was a sharp decline during the American Civil War in the 1860s. This research does show that happiness varies with per capita GDP. There was, for example, a gradual but persistent increase in happiness over the Victorian era. The method is not, however, perfect. It shows a rise in happiness in both Italy and Germany as the Second World War came towards a close. Likely, this was because the media was tightly controlled by the ruling party and falsely reflected the mood of the population through propaganda. In Britain, there was a marked decline in happiness over the years 1960 to 1980, which then rose rapidly to the point where the data ends in 2008. Neither effect is registered in Germany and the reunification of that country had no effect either way.

Machine learning reading of text, is a powerful method to track changes in attitude over time, and we are currently using this to examine the way slums or informal settlements have been portrayed in the news media over the last 120 years or so.

Reference:

1. Hills TT, Proto E, Sgroi D, Seresinhe CI. Historical analysis of national subjective wellbeing using millions of digitized books. *Nature Human Behav.* 2019; **3**: 1271-5.

Invest in Children; Invest in the Future

Peter Chilton, Research Fellow

When a government looks to improve social well-being, what type of policy change should they implement in order to get the best value for their expenditure? Over the years many different policy changes have been made, but analyses have been conducted using various methods, meaning direct comparisons are not simple. The authors of a recent paper looked at 133 policy changes (in government-provided social insurance, education and job training, taxes and case transfers, and in-kind transfers) made in the USA over the past fifty years.[1]

Using existing causal estimates the authors were able to calculate benefits (as recipients' willingness-to-pay) and net cost of each policy, including any long-term impact on governmental budget. From this they calculated a Marginal Value of Public Funds (MVPF) score for each policy. When the MVPFs were compared, the authors found that, historically, the highest MVPFs were for policies that provided direct investments in the health and education of low-income children, with an average score greater than 5. A large number of these policies end up paying for themselves through additional taxes and reduced transfers. Similarly large MVPFs were seen in many policies that targeted change in education and health of children of any age. However, policies that targeted adults had smaller MVPFs, ranging from 0.5 to 2; they only scored higher when the policy also spilt over to affect children.

Reference:

1. Hendren N & Sprung-Keyser B. A Unified Welfare Analysis of Government Policies. *Quart J Econ.* 2020.

The Pervasive Harmful Effects of Cannabis

Richard Lilford, ARC WM Director

News blog readers know that the ARC WM Director is not at all convinced about the innocent nature claimed for cannabis. [1] In a previous article I have argued that its use is strongly associated with severe mental illness, and that this is likely to be a causal effect, at least in part.[2] New information supports my concerns. Giving equivalent doses to pregnant rats affects the neurobiology and the behaviour of their offspring.[3] The drug acts on the dopamine system and does so especially when the brain is undergoing rapid development. Adolescence is just such a period.

References:

1. Lilford RJ. Legislation of Marijuana. NIHR CLAHRC WM News Blog. 10 February 2017.

2. Lilford RJ. Cannabis and Schizophrenia: Which Way Around Does Causality Run? NIHR CLAHRC WM News Blog. 5 October 2018.

3. Frau R, Miczán V, Traccis F, et al. Prenatal THC exposure produces a hyperdopaminergic phenotype rescued by pregnenolone. *Nature Neurosci.* 2019; **22**: 1975-85.

Latest News

ARC WM Themes Update

At ARC WM we strive to ensure that Public Health and Social Care are a core part of our strategy. We are fortunate to have the leadership of Prof Aileen Clarke (University of Warwick) for Public Health and Prof Robin Miller (University of Birmingham) for Social Care, both of whom have undertaken additional work to strengthen our ARC in these areas. During our last Programme Management Committee we agreed that Public Health and Social Care should become separate, cross-cutting themes in their own right, and we put this suggestion to the NIHR.

We are delighted to report that NIHR have agreed to our proposal and asked for this to be formalised through a variation to contract in due course. Thus we now welcome our two new themes:

Public Health will become Theme 7 and Social Care will become Theme 8.

Colleagues Returning to NHS

We would like to extend our thanks and best wishes to all of our colleagues who have moved back into NHS care work, to provide support during the COVID-19 crisis.

Latest Funding Opportunities

The NIHR have **extended the deadlines** of a number of Fellowship programmes:

9 April 2020

- NIHR In-Practice Fellowship 2020
- ICA Pre-doctoral Clinical Academic Fellowship
- Pre-doctoral Fellowship round

NIHR PHR Programme:

20/14 Studying mental health and wellbeing in HS2 (*deadline 22 May 2020*)

14 April 2020

- Development and Skills Enhancement award

6 May 2020

- ICA Clinical Doctoral Research Fellowship
- ICA Clinical Lectureship
- ICA Senior Clinical Lectureship

NIHR PDG Competition 27

Deadline 13 May 2020. More information available at: nihr.ac.uk/funding/programme-development-grants-competition-27/24475.

Recent Publications

Briggs ADM, Göpfert A, Thorlby R, Allwood D, Alderwick H. Integrated health and care systems in England: can they help prevent disease? *Int Healthcare J*. 2020;**2**:e000013.

Clarson LE, Bajpai R, Whittle R, Belcher J, Abdul Sultan A, Kwok CS, Welsh V, Mamas M, Mallen CD. Interstitial lung disease is a risk factor for ischaemic heart disease and myocardial infarction. *Heart*. 2020.

Jolly K, Griffin T, Sidhu M, Adab P, Burgess A, Collins C, Daley A, Entwistle A, Frew E, Hardy P, Hurley K, Jones L, McGee E, Pallan M, Sun Y, Young M, Morgan P. A weight management programme for fathers of children aged 4–11 years: cultural adaptation and the Healthy Dads, Healthy Kids UK feasibility RCT. *NIHR Journals Library. Public Health Research, No 8.2*; 2020.

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