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ARC West Midlands News Blog



Reflections of an ARC Director 2: The Role of ARCs in Research and in Implementation

Richard Lilford, ARC WM Director

How Can an ARC Contribute to Service Improvement?

In our previous News Blog[1] I described the essence of an ARC as I see it. I pointed out that close embedding of the ARC in the services, exemplified by co-funding *from* the services, lies at the heart of an ARC. Such a model distinguishes an ARC from the generality of applied research collaborations across the world. In this, the second article in the series, I examine the nature of ARC service collaboration in more depth. To frame this discussion, I start by reflecting on what services Health and Social Care services strive to achieve.

What are Services Trying to Achieve?

The idea is that an ARC should improve the ability of the services to reach their objectives. So, let's start with objectives; adapting the US Institute of Medicine Quality Framework, a service should be:

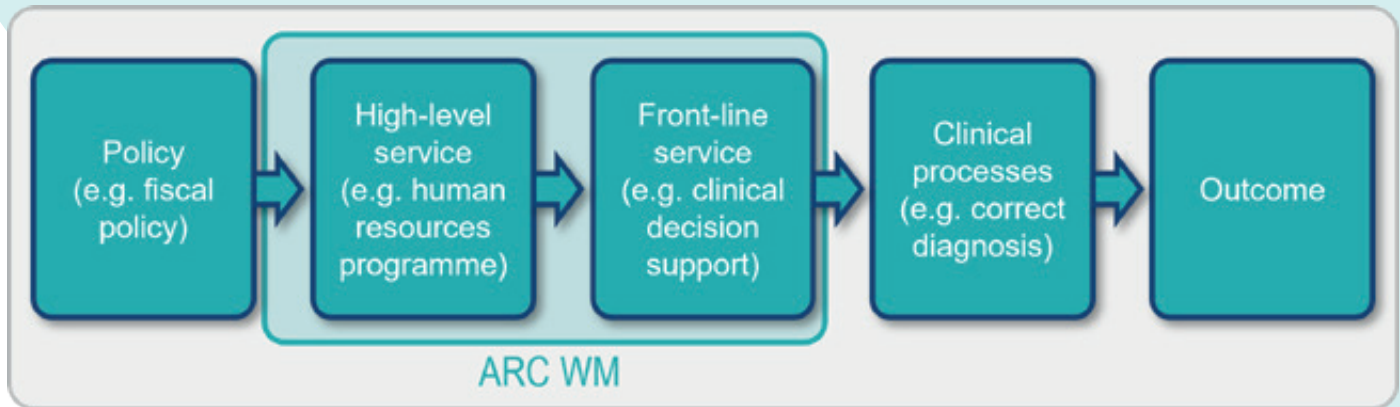
1. Effective.
2. Safe.
3. Empathetic (patient-centred; respectful; compassionate; acceptable).
4. Efficient.
5. Equitable.
6. Accessible.

Much could and has been said about the items on this list. For example, there is no sharp distinction between safe and effective care. [1] And there are two types of efficiency – technical efficiency (doing things right) and allocative efficiency (doing the right things). The important points are that: 1) the services strive to reach multiple objectives; 2) implementing effective clinical care (closing the T2 gap [2]) is but one of those objectives; and 3) ARCs should concern themselves with all service objectives. Service delivery research is frequently described in terms of the above service objectives, for example quality research or safety research or effectiveness research or patient centred research. These descriptions are of limited value for the simple and obvious reason that in pursuing one objective it is possible, indeed likely, that there will be spill over effects on other objectives.

Service Delivery Research and a Causal Chain

Donabedian produced the famous *structure → process → outcome* model, which we have previously extended [3] to the model shown in Figure 1 on the next page.

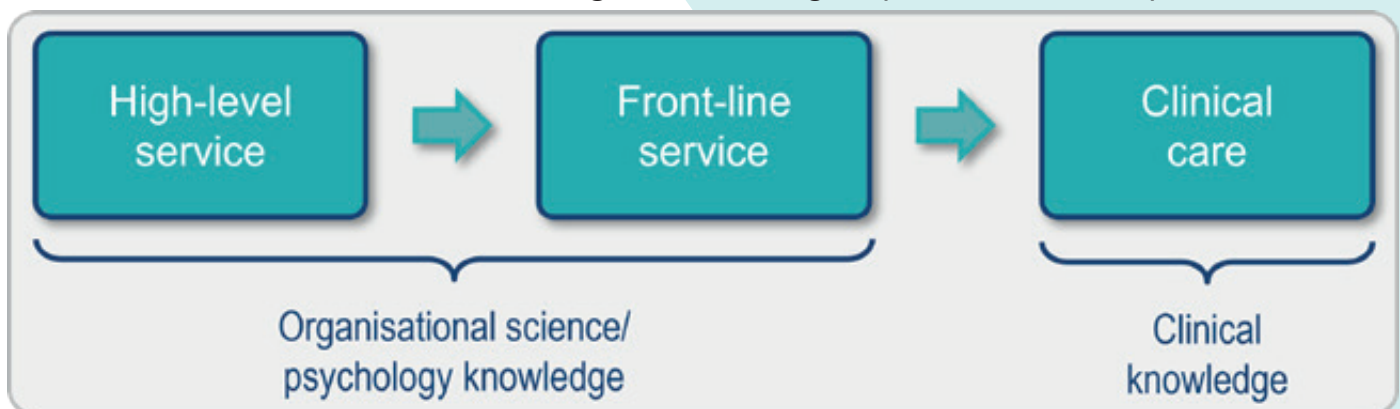
Figure 1: Extended Donabedian Model



In ARC WM we major on high-level service processes and front-line service interventions (the blunt-end and the sharp-end of clinical care) in the rectangle in Figure 1. The high-level service includes the WHO Health System Building Blocks (leadership & governance, human resources, supply chains, information infrastructure, service configuration, and finance). Frontline services include guidelines, decision support, forced-functions, standardised procedures, and so on.

The types of knowledge needed to strengthen the service at both the sharp and blunt ends includes behavioural psychology and organisational science, including operations research (or flow modelling). This is the sort of knowledge ARCs implement and *one* reason for doing so is to implement clinical knowledge (Figure 2).

Figure 2: Two-stage implementation to improve clinical care

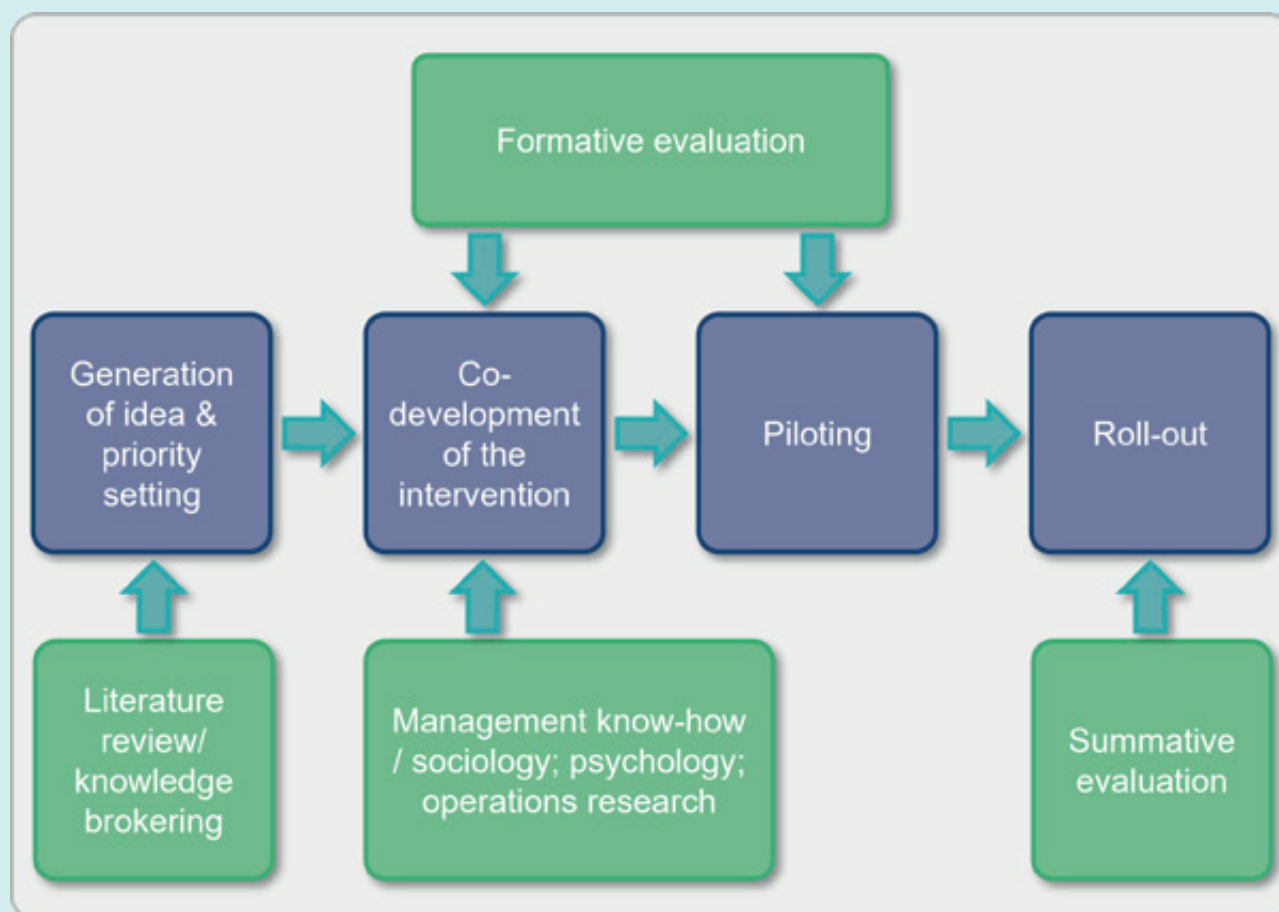


Framing the Development Process for Intervention Development and Implementation

The question for ARCs is: what can they contribute to the implementation of both social science and clinical knowledge. We conceptualise ARC activities according to the MRC [4] or Penarosas [5] implementation frameworks that track an intervention through its archetypal stages:

prioritisation, iterative development and (beta) testing, piloting in the services, and broader roll-out across a system. This development chain, and the points where ARCs can gain purchase, are represented in Figure 3 on the next page.

Figure 3: Role of ARCs (green) in the conceptualisation, development and implementation phases of a Service Delivery Intervention (blue)



ARC Contributions at Various Points on the Implementation Development Pathway

1. Intervention Selection. Researchers can compile the evidence that the service needs to decide what service interventions to implement and how to implement them. For example, ARC West Midlands carried out an umbrella review of 80 systematic reviews on methods to provide more medical care in the community to inform the development of integrated care models.[6] In our experience it is often sufficient to assemble existing reviews rather than the conduct of systematic reviews *de novo*. Service leads often determine what they want to implement in collaboration with ARCs, but academics in the ARC may prompt service managers to intervene. For example, at ARC WM our Maternity theme lead decided that something should be done in response to national enquiries showing that babies and mothers were dying while pregnant

women waited to be seen in turn when they presented to maternity services with serious symptoms. She therefore worked with local services to develop and implement a system of triage that is now used routinely in the UK and increasingly in Australia.[7] Many ARCs are also expert in database studies, which may also reveal a need for service improvement. For example, a recent ARC WM study showing that NHS-funded elective surgery in independent hospitals is associated with reduced emergency readmission compared to NHS-owned hospitals, suggests that the independent sector has a role in clearing the post-COVID back log.[8] If necessary, ARCs can inform priorities by carrying out a ‘value of investment analysis’ using tools developed by ARC WM researchers.[9, 10]

2. Intervention Development. Since ARCs work with behavioural science and organisational scientists, they can help ensure that interventions are informed by the latest ‘state of the science’. Service interventions to

promote uptake of evidence are most successful when implemented at more than one 'level', as described in a previous news blog.[2, 3] For example, at the organisational level, it could be the absorptive capacity of the organisation,[11] or how leadership is distributed,[12] or how its human resource policies and practices support brokering of knowledge across academic-practice boundaries,[13] which influences prospects for implementation and scale up of evidence-based interventions, or how service development tools such as 'lean' support better clinical outcomes in a value-based manner.[14] ARCs therefore draw on schools of management/business, which have expertise in models of knowledge mobilisation, such as knowledge brokering that emerged as a template that many of the pilot CLAHRCs followed.[15] One should not confuse such input from schools of management/business as replicating management consultancy; we claim that ARC input is more theoretically informed and more methodologically robust. After all, we educate the people who work in management consultancy! Likewise, co-production of services, involving the people who use services, results in better outcomes than interventions developed by service providers alone.[16] As such, ARCs might embed their researchers closer to the frontline of service delivery, and NHS and social care providers reciprocate in supporting frontline practitioners to become embedded in research teams. Such knowledge brokering arrangements are evident in ARC WM, particularly in its organisation science theme, so that evidence is translated at scale into frontline practice. The researchers seek to understand the barriers and facilitators to intervention success and also observe how well the intervention is being implemented. Such observations can be seen as *formative* evaluations, in contrast to *summative* evaluations; a distinction which we have discussed elsewhere,[17] and to which we will return in the next article in this series.

3. Evaluation. Perhaps most obviously, ARC researchers can study the effectiveness of interventions. The nuance here is that the

interventions are complex and hence need to be studied both formatively and in a summative way using flexible tools, as per recently updated MRC guidance.[4] ARC West Midlands has written articles in the NIHR Encyclopaedia about the importance of causal pathway analysis in such evaluations.[9, 18] In following these guidelines and methods, evaluations have salience; not just for evaluation of *particular* problems, such as safer prescribing, but also for generic methods for the introduction of interventions generally, such as understanding the motivations of staff involved and ways incentives can backfire.[19]

The Implementation Lead

The above analysis informs ARC WM's understanding of the role of the Implementation Lead; a post that must be included in any ARC. We conceptualise this post as informing service change with the latest organisational thinking and, in the process, learning more about the psychology and sociology of organisations through formative research.[4] It is no surprise, therefore, that Graeme Currie, our Implementation Lead at ARC WM, is based at the Warwick Business School, one of the leading schools in the UK.

In this article I have discussed the role of an ARC in relation to implementation of interventions to improve the outcomes of the health service. I thank Graeme Currie for his critique of the article. ARCs have a crucial role in informing, supporting and evaluating interventions designed to improve services. In the next article I will discuss in more detail the form that these evaluations may take, drawing on the most recent MRC guidance on Complex Evaluations,[4] guidelines on different types of Implementation Trial,[20] and on our ARC experience.

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Evidence-Based Education: Another Possibly Counter-Intuitive Result

Richard Lilford, ARC WM Director

In this competitive world, it makes some sense to coach very young children on the three Rs, **r**eading, (**w**)**r**iting and (**a**)**r**ithmetic. Poor children receive less such teaching at home than those from richer families. So should we correct this by providing kindergarten teaching on the three Rs?

I thank Laura Kudrna for alerting me to the evidence on this topic. Right back in the 1970s, the German government funded a cluster trial in 100 kindergarten classrooms. The graduates of the intervention clusters performed better on standard tests, in the short-term. But over time, the curves converged and there was evidence of less social adjustment among the intervention group.

Carlsson-Paige, et al. have reviewed controlled studies of early education,[1] confirming the above finding; early academic education increases immediate scores, but the results wash out over three or four years. The studies cover many contexts, including children from very poor families in the United States. One of the studies followed children to the age of 23, and found no difference in academic attainment, and, again, there was some evidence of higher

rates of social maladjustment in the group that received academic training.

A recent study published in pre-print,[2] was based on randomisation of nearly 3,000 low income children who were randomly assigned to a pre-kindergarten programme from a waiting list. Again the intervention children scored worse academically in the long-term and had worse social outcomes.

These results are in contrast to studies of general preschool support for poor children. It seems that support for parents and supervised play are beneficial, but a focus on learning is premature in pre-school children.

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How Hospital at Home Can Support Delivery of Hospital-Level Care in the Community



Hong Chen (Research Fellow);

Daniel Lasserson (Acute Care Interfaces Theme Lead)

The **Hospital at Home (H@H) project** is rapid COVID-related research, funded by the *NIHR Policy Research Programme* through its *Recovery, Renewal, Reset* funding call, and runs from April 2021 to June 2022. Within ARC WM, it is led by the University of Warwick, in a collaboration between the University of Warwick and the University of Birmingham. Our main aim is to understand how the current provision of H@H in the UK can support delivery of certain hospital-level care processes in community settings.

What is Hospital at Home?

H@H is a service that provides acute and subacute care by healthcare professionals in private or care homes for a condition that would otherwise require acute hospital inpatient care. It treats people with a wide range of conditions in a variety of contexts, with particular interest in the provision of services for older people living with frailty. The UK Hospital at Home Society's website details the features of H@H and how it differs from other home-based health services: hospitalathome.org.uk/what-is-hospital-at-home.

Why Are We Doing This Research, and How?

H@H provides person-centred, pragmatic care through delivery of multi-disciplinary, coordinated care in homes and care homes, working with patients and carers, and interfacing with existing acute and also community-based health and social care services. It is therefore inherently complex, with multiple, interacting strands of activities/interventions delivered by different professionals, through complex relationships and interactions within and across professional and organisational boundaries.

Flexibility and adaptability to individual needs /circumstances and local contexts are its strength; however, this also entails variations in the service model. Using mixed methods, we intend to examine variations in the organisation and delivery of care, capacity and utilisation, costs, and implementation barriers & facilitators across existing H@H services. Currently we have conducted a literature review and interviewed professionals from 11 services. A comprehensive online survey is still active, and can be completed by UK-based H@H services.

What Are We Learning From This Research?

There are various models of H@H services within the UK and across countries. This largely reflects the different contexts, particularly the existing health and social care service networks, from which the services evolved and within which the services became embedded. In the UK, despite divergent pathways of development, the H@H service models studied share common features/components that make H@H a distinct service adding value for patients, carers, and the NHS.

In the ongoing analysis, by comparing and contrasting across different service models, we will identify the core components of a H@H service, and how these can be adapted to local contexts and population needs; these will be summarised and presented as a H@H programme theory consisting of three parts: operational, utilisation and impact theories. We will also be able to gauge the current availability and capacity of the UK H@H service network.

There will also be important lessons to learn from the data depicting the implementation and scale-up of the current H@H services. For example, the complexity and creativity in the way these services adapted the essential components to their local population needs and service networks and other resources afford us opportunities to learn different approaches to creating capacity to provide realistic and person-centred care within resource constraints. The way these services upskilled their current workforce and creatively used both individual-level and team-level skillsets to meet increasingly complex population needs has implications for the education and training of health and social care professionals and the organization of healthcare delivery in the future.

From a systems-thinking perspective, H@H is not a stand-alone service, it is part of a bigger system wherein all parts are interlinked and interdependent. This warrants further studies to examine systematically its ripple effects (intended and unintended consequences) and

its impact on the other parts of the whole system. This also has implications for approaches to supporting the service development/scale-up, for example, to look beyond the service itself and to use an ecological approach.

During the pandemic, new services have emerged, old ones have adapted, and all continued to evolve and expand, building on their experiences of learning to manage increasingly more complex caseloads outside of the hospital, including patients with COVID. As experiences, skills, confidence, risk tolerance, culture, and system support were building up, we see the potential for more people to be safely and effectively managed outside of hospitals. Moreover, the pandemic has spurred change in the public's risk perception in ways that make H@H services more acceptable and desirable. On the other hand, like any service, H@H is not suitable for everyone. The study will therefore help clarify where boundaries can be drawn and what are the limitations and benefits and to whom, and identify ways to create realistic expectations among professionals, service users, and the public.

What Will Be the Impact of This Research?

This research initiative will be important in helping provide personalised acute care for older people living with frailty, with the findings set within the context of the NHS Long-Term Plan for 'Ageing Well'. The evidence generated in this project will help demonstrate the multifaceted impact of H@H on patients and carers, acute healthcare delivery providers, social care providers and other community services, which is needed to spur changes in health policy. It will also help inform how to implement and scale-up H@H services in the UK, contributing to system recovery and resilience during and post-pandemic.

Some illustrative quotes are provided below to show the perspectives of H@H healthcare professionals towards team working, ensuring timely access to acute care, developing patient-centred, holistic care pathways, and patient benefits:

"They are very frail...usually, practically all would have a frailty score above six. We...our patients are both from community and nursing home... They have a range of acute illnesses like acute chest infections, urinary tract infections, heart failure, acute kidney injury, that, kind of, thing. We also take a smaller number of younger patients for example those with chronic neurological conditions like MS and we also take some patients with learning disabilities. So basically those patients where we think hospital admission would be a disadvantage for the patient... We had big numbers of very ill patients in nursing homes. So we treated them there, we gave them oxygen, antibiotics, whatever fluids... We have treated COVID positive patients in their own homes as well."

-- *Clinical lead, consultant geriatrician*

"I think there's a general view or general agreement, older people are sometimes reluctant to access health care for their own part, but also that maybe because older people are old and frail. And maybe sometimes potentially get, I don't know, consciously or unconsciously, some people may discriminate against older people based on the fact that they're old and maybe they don't think they've long left to live. And they're also just so complex sometimes that no matter what you do, you can't really help them is what some people think. So maybe they don't get the care and attention they need. But I suppose what our team is doing is making it easier for them to access urgent health care. And yeah, and we also provide a sort of holistic service."

-- *Specialty Doctor*

"When you see these frail elderly patients that are taking in from nursing homes that we could potentially treat her at home and how confused they get and how it predisposes them to you know, chest infections or blood clots, you know, from being in hospital and other infections. You know, it's just a win-win to try and keep them at home and treat them at home... So all the advantages at home of having you know, your own cooked meal, and being with your pet dog and having your neighbour pop in, and your daughter, you know, it just really does show, you know, the benefits of being treated at home."

-- *Nurse lead*

"We're fortunate that from a hierarchical point of view, messages are clear, objectives are clear. We all work together as a cohesive team and like I said before, we don't have anybody that is kind of striving to be that best advanced clinical practitioner and having a negative effect on everybody else. It's the teamwork...[what is rewarding] from my perspective is the wealth of experience that the clinicians have got. So every day is a learning day. You learn something whether it's from your own experience or a lot of clinical discussions go on within our team kind of informally. And it's picking up those... those nuggets of information that you can then store away for future assessments for yourself."

-- *Advanced clinical practitioner-physiotherapist*

"It's such a... a great opportunity to be part of a Hospital at Home service and to have that opportunity that you can develop, and you can change, and we can adapt to the needs of our patient group, and just that... just trying to be patient centred as completely achievable when you're in somebody's house and you're working... you're working with them, and you're a partner, and the care, you know, it just feels... it just feels really... really rewarding to be able to do that."

-- *Advanced Nurse Practitioner*

Case Study

One of the Hospital at Home services studied in this research project takes referrals from paramedic crews in the ambulance service, GPs and acute medical 'on take' teams in hospitals as well as from the new Urgent Community Response service. A multidisciplinary team of nurses, paramedics (trained within the ambulance service, now working for the H@H team), clinical pharmacists, healthcare support workers and physicians deliver the clinical service, utilising more specialist support from other hospital based teams as required (e.g. expert cardiology support for complex patients with heart failure).

The service uses point-of-care (POC) diagnostic tests, undertaking blood analyses in the home and care home, electrocardiograms and also uses handheld ultrasound scans to diagnose certain respiratory, cardiac and renal conditions, evidencing a broad approach to diagnosis and risk stratification in the home setting. Alongside diagnostic tests, the H@H team takes a range of acute therapies (intravenous treatment) with them to cover the common clinical conditions seen in the service, just in case they are needed. They can also deliver oxygen in the home and care home.

Our research findings will support the rapid scaling up of Acute Hospital at Home services, linking to the latest NHS England and Improvement guidance on delivery of acute medical care outside hospital settings using technological enablers.

For more information about the H@H project, then please contact either Prof Daniel Lasserson (Daniel.Lasserson@warwick.ac.uk) or Dr Hong Chen (Hong.Chen.2@warwick.ac.uk).





Male Subfertility Revisited

Richard Lilford, ARC WM Director

Over three decades ago, the ARC WM Director carried out a genetic segregation analysis, which showed a genetic component to male subfertility.[1] I thank Gus Hamilton, for drawing my attention to a recent article on genetic associations with human fertility published recently in Nature. [2] The study is based on the UK bio bank. It confirms that certain genes are associated with male, but not female, sub-fertility. However, it's not what you would predict from the ARC WM Director's previous study. The genes concerned are associated with neurological and hence behavioural factors, not the genesis of male gametes. These behavioural and cognitive traits are of a type that might reduce the likelihood of finding a sexual partner. While very interesting, the associations are weak, explaining less than

1% of the difference in reproductive outcomes between individual men. As to the genetic cause of male sub-fertility, it has subsequently been shown that the responsible genes are mostly located on the long arm of the Y chromosome.

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ARC WM Quiz

What is the Sorites Paradox?

email your answer to: ARCWM@warwick.ac.uk

Answer to previous quiz: The four nucleotide bases of DNA are Adenine, Cytosine, Guanine and Thymine. Congratulations to those who answered correctly.





Genetics of Endometriosis and Ovarian Cancer

Peter Chilton, Research Fellow

Around one in ten women of reproductive age in the UK are thought to have endometriosis, where tissue that is similar to the uterine lining grows outside the uterus, leading to a chronic, inflammatory reaction. Diagnosis is often a long process, taking an average of 8 years.[1] Although some women are asymptomatic, in many others it can lead to painful, debilitating symptoms and infertility. A further cause for concern is that previous research has suggested a link between suffering from endometriosis and an increased risk of ovarian cancer.

A recent paper in *Cell Reports Medicine* has now demonstrated a genetic link; individuals who carry certain genetic markers are predisposed to suffering endometriosis and also have a significantly higher risk of developing certain types of ovarian cancer. By using data from recent meta-analyses of genome-wide association studies the authors looked at the genomes of almost 15,000 patients with endometriosis (with 190,000 controls) and around 25,000 with

ovarian cancer (with 41,000 controls) in order to evaluate any genetic relationship, finding 28 loci associated with both endometriosis and ovarian cancer. Mendelian randomisation also showed the directionality of the relationship, with genetic predisposition to endometriosis conferring higher risk of ovarian cancer.

More information is still required regarding associated risk factors, shared pathways, etc, but it is hoped that by identifying the genes in reproductive tissue responsible, they could be targets for future drug therapies.

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Early Detection of Pancreatic, Ovarian and Bladder Cancers

Peter Chilton, Research Fellow

Being able to detect and treat cancer early, before it metastasises and spreads around the body, significantly improves survival rates for patients. For cancers such as pancreatic ductal adenocarcinoma (PDAC), ovarian cancer and bladder cancer, 5-year survival rates are significantly improved when they are detected at Stage I. However, there are few general screening strategies for detecting these cancers in asymptomatic people, so early detection is difficult.

A new strategy has been developed based on detecting cancer-related biomarkers in the blood. Previous research has shown that tumours release extracellular vesicles (EVs) into the bloodstream, which contain unique protein biomarkers. These can be isolated via ultracentrifugation, but this is inefficient and current tests have high rates of false-positive results. Researchers of a recent study in *Nature* [1] used a novel system to purify EVs from patient samples, before measuring the concentrations of biomarkers present. From this information they were able to develop a machine-learning algorithm that could identify small sets of EV

biomarkers and detect early-stage I-II pancreatic, ovarian and bladder cancers with a sensitivity of 71.2% (95% confidence intervals 63.2-78.1) and at 99.5% (95%CI 97.0-99.9) specificity. They subsequently conducted a pilot study comparing samples from 139 patients with pathologically-confirmed early-stage cancer, with 184 control subjects and were able to accurately detect 95.5% of stage I pancreatic cancers, 74.4% of stage I ovarian cancers, and 43.8% of stage I bladder cancers. If further studies show similar results, this method could provide a valuable screening tool to improve patients' odds of survival. We have to be cautious though - simplistic extrapolation leads to overestimated benefits as a result of rate and lead-time biases - see our previous News Blog. [2]

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Is the Grant Peer-Review Process Completely Random?

Laura Kudrna, Research Fellow

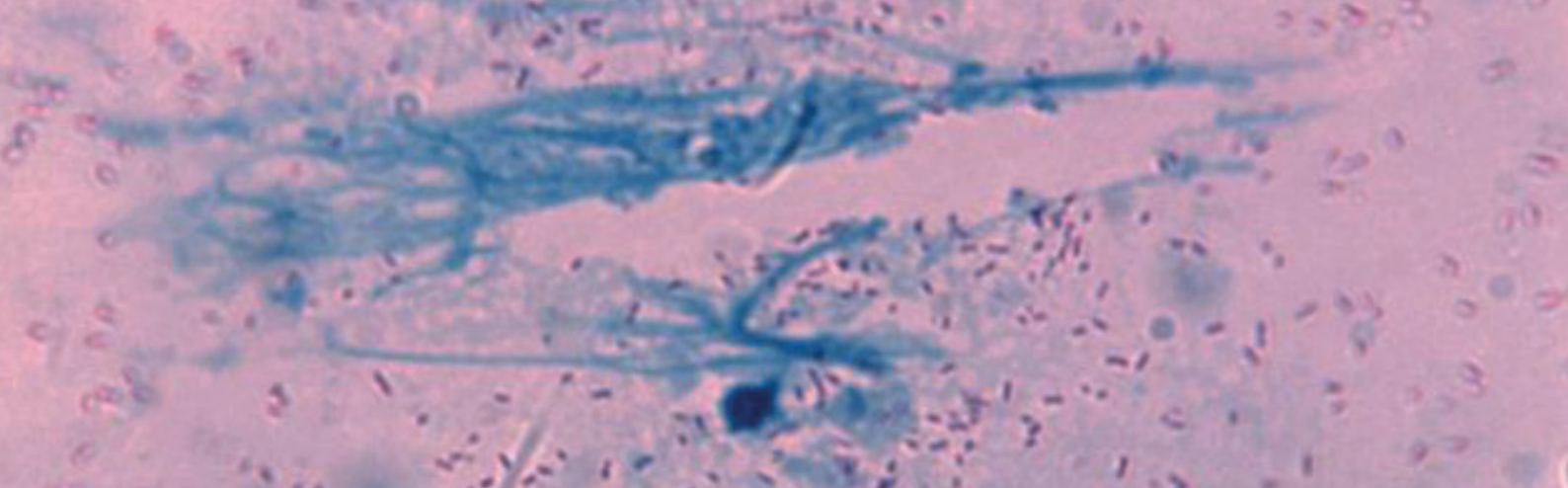
We work very hard on our grant applications and hope that their content will be evaluated fairly and consistently. But research suggests considerable heterogeneity in expert judgement of the same grant application. In a study from 2018, the grant peer-review process of the National Institutes of Health was replicated with 43 investigators of awards from the National Cancer Institute who reviewed 25 anonymised applications.[1] Some of the applications were previously funded, and others had been rejected for funding. The results showed that the intraclass correlation coefficient (ICC) was 0, indicating no agreement about the extent to which different reviewers agreed in their evaluations of a single grant application ($P = 1.0$, 95% CI [0, 0.14]). Other means of assessing agreement showed similar results. The reviewers also rated previously unfunded applications just as positively as funded applications ($P = 0.58$).

If results like these generalise, they have important implications for how we think about the success of one particular grant application, as well as the grant capture rates of ourselves, colleagues, and departments. Daniel Kahneman, winner of the Nobel Prize in Economics, is well-known for the formula *success = talent + luck*. [2]

Perhaps in the case of grants, it is more about luck than talent, and we should be playing a numbers game - less detached from each application, though still ensuring our talent shows through, and hoping that one application gets lucky during review. Perhaps we can lean into luck by design - a lottery among those applications deemed fundable or sufficiently meritorious, as appears to have already happened in New Zealand.[3-5]

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A microscopic image showing various bacteria, including some with flagella, against a pinkish background.

History Snippets: How a Fake Typhus Epidemic Saved Hundreds of Lives

Phil Simmons, ARC WM Project Administrator

Dr Eugene Lazowski finished training in Medicine at Józef Pilsudski University in Warsaw, Poland just before the outbreak of the Second World War. Throughout much of the war he worked for the Polish Red Cross in the town of Rozwadów.

Living under the Nazi occupation he was forbidden from treating Jewish patients, but in brave defiance of these orders and at risk of death, he would often sneak out of his house at night and enter the local Jewish Ghetto in order to give the inhabitants much needed medical treatment.

One day a Polish soldier unwilling to return to the front asked Dr Lazowski to help him find a way to be medically discharged from his duties. Turning to his fellow medical professional Stanisław Matulewicz, the pair began a series of experiments with bacterial injections. The answer when found was a dead strain of the [*Proteus OX19*](#) bacteria, which once injected into the patient would lead to tests falsely reading as positive for typhus. Typhus at this point was running rampant throughout Europe with a mortality rate of between 10% and 40% of all infected, causing hundreds of deaths a day.

Dr Lazowski started producing injections for the fake typhus and distributing these widely within

the local area, although only to Polish residents as infected Jewish residents were immediately killed. This was so effective that within two months his Nazi supervisors were convinced that a typhus epidemic was underway. Their response was to quarantine not only Rozwadów, but also an additional 12 villages within the local area.

The Germans did get suspicious and sent a medical delegation to investigate, however Dr Lazowski met them with a reception, at which he contrived to get the Chief Investigating Officer so intoxicated that he instead sent junior doctors to run the investigation. They were terrified of contracting the illness, so they sufficed with blood tests from a small selection of patients. Seeing the results, they declared the “*epidemic*” to be legitimate.

This “*epidemic*” continued until 1942, when someone informed on Dr Lazowski and the Gestapo put out an arrest warrant. Luckily, a German soldier informed him of the impending arrest warrant, and he was able to flee with his family. He passed away peacefully in Oregon, USA in 2006.

It is estimated that this act saved anywhere from hundreds to over 8,000 people from deportation to the Nazi extermination camps.

Latest News and Events

Your Thoughts on the H-Index

I wanted to write a small note to say I found these reflections fascinating: in particular, the [piece on the H-index](#). As an aspiring early career clinical academic I often saw senior people's H-index, and their publications, and I was bemused as to why most often the several top papers were mostly clinical guideline or Global Burden of Disease collaborative (for example) publications with several, sometimes a hundred or more authors, on the publication. However, I am no longer confused. I've learnt that one would be a fool to turn down the opportunity to contribute to such a type of publication and so inevitably they may accumulate: they are often topical, and thus well cited.

-- Dr Faraz Mughal, General Practitioner & NIHR Doctoral Fellow



I read your piece on the H-index with interest and was surprised that my colleague George Davey Smith did not appear so I checked him out myself. In fact whilst he does not appear on the list you examined he is actually 11th equal with Salim Yusuf, with a H index of 260. In truth he is

higher as quite a few of his citations are wrongly listed as GD Smith which is another person according to Google. I have a similar spelling problem with my name.

My own H-index is 125 but I doubt that my collective efforts are more worthy or impactful than yours with a lower h-index. My index is artefactually elevated by being on some important genetic epidemiology papers (FTO gene), for which I do not deserve much intellectual credit. I suspect you are pivotal in the vast number of your papers. A clear flaw in the H-index. They could produce a revised index which excluded all papers with >10 authors or where you are not in major authorship position roles e.g. 1,2, penultimate, last, etc. I have no doubt my score would fall dramatically.

But as you say good fun.

NB positions 2 and 3 with Graham Colditz and JoAnn Manson are both epidemiologists from the US Health Professionals cohort.

-- Prof Yoav Ben-Shlomo, Professor of Clinical Epidemiology

National NIHR ARC Newsletters - March 2022



The March issue of the national NIHR ARC newsletter is [now available online](#), featuring news on the #ARCImpacts campaign to celebrate the halfway point of ARCs; trauma-focused mental health care for children in care; an online, parent-led intervention for young children at risk of anxiety disorders; and the feasibility of self-monitoring for people managing pre-hypertension.

To subscribe to future issues, please visit: <https://tinyurl.com/ARCsnewsletter>.

Dr Skrybant Appointed Picker Institute Trustee

Dr Magdalena Skrybant, ARC WM Patient & Public Involvement and Engagement Lead, has recently been appointed as one of four new trustees to the board of the international healthcare charity *Picker*. As part of the board, she will help steer the charity's strategy and governance across health and social care.

Read more at: charitytoday.co.uk/picker-welcomes-four-new-trustees-to-its-board/

On her appointment Dr Skrybant said: *"Capturing patient and practitioner experiences and using the information to improve our understanding of healthcare and health outcomes is an increasingly valuable tool. I'm looking forward to working with Picker to help deliver more vital insights for the healthcare profession."*

SPC Work Highlighted at APS Conference

Dr Laura Kudrna recently took part in a virtual conference for the Association for Psychological Science, on the topic of *Evaluation of an Intervention Based on Training Sessions to Increase the Use of Control Charts in Hospitals*.

This has now been featured as part of an up-and-coming voices on behavioural sciences.

You can view it at: psychologicalscience.org/observer/behavior-change-talks

Pulse Oximetry in Care Homes During COVID-19

Findings from two independent separate evaluations of the use of pulse oximetry in care homes have recently been published as part of the COVID Oximetry @home (CO@h) programme.

Prof Robin Miller (*Social Care theme lead*) is involved with one of the studies, which explored the views of care home staff, and NHS staff they

interact with, about the use of pulse oximetry with residents when managing COVID-19 in the care home environment.

Read more at: birmingham.ac.uk/news/2022/pulse-oximetry-in-care-homes-during-the-covid-19-pandemic.

NIHR Senior Investigators

Congratulations to ARC WM theme leads Prof Sara Kenyon ([Maternity Services](#)), Prof Swaran Singh ([Integrated Care in Youth Mental Health](#)) and Prof Christian Mallen ([Long-Term Conditions](#)), who have recently been appointed as NIHR Senior Investigators. NIHR Senior

Investigators are among the most prominent and prestigious researchers funded by the NIHR.

Read more at: nihr.ac.uk/news/nihr-appoints-new-senior-investigators-distributed-across-england/30032.

Jack Dangermond Award

The NIHR Global Health Research Unit on Improving Health in Slums, directed by Prof Richard Lilford, has recently won the prestigious "Jack Dangermond Award" for best paper published in the *ISPRS International Journal of Geo-Information*:

Yeboah G, et al. [Analysis of OpenStreetMap Data Quality at Different Stages of a Participatory Mapping Process: Evidence from Slums in Africa and Asia](#). *ISPRS International Journal of Geo-Information*. 2021; **10**(4):265.

This award is for outstanding contribution to research and development in geospatial sciences.

Recent Publications

Eli K, Hawkes C, Perkins GD, Slowther AM, Griffiths F. [Caring in the silences: why physicians and surgeons do not discuss emergency care and treatment planning with their patients - an analysis of hospital-based ethnographic case studies in England](#). *BMJ Open*. 2022; **12**(3): e046189.

Fabritz L, Connolly D, Czarnecki E, Dudek D, Zlahoda-Huzior A, Guasch E, Haase D, Huebner T, Jolly K, Kirchhof P, Schotten U, Zapf A, Schnabel RB; on behalf of the Smart in OAC-AFNET 9 Investigators. [Remote Design of a Smartphone and Wearable Detected Atrial Arrhythmia in Older Adults Case Finding Study: Smart in OAC-AFNET 9](#). *Front Cardiovasc Med*. 2022.

Hay CA, Packham J, Ryan S, Mallen CD, Chatzixenitidis A, Prior JA. [Diagnostic delay in axial spondyloarthritis: a systematic review](#). *Clin Rheumatol*. 2022.

Mughal F, Atherton H, Awan H, Kingstone T, Poppleton A, Silverwood V, Chew-Graham CA. [The impact of remote consultations on brief conversations in general practice](#). *BJGP Open*. 2022.

Patel K, Schmidtke KA, Taj U, Dangazele, Read D, Vlaev I. [Co-designing theoretically informed, conceptual prototypes for interventions to increase hand hygiene in hospital settings: a case study](#). *Design for Health*. 2022: 1-17.

Rego R, Watson S, Gill P, Lilford R. [The Impact of Diarrhoea Measurement Methods for Under-Fives in Low and Middle Income Countries on Estimated Diarrhoea Incidence Rates at the Population Level: A Systematic Review and Meta-Analysis of Methodological and Primary Empirical Studies](#). *Trop Med Int Health*. 2022.

Russet F, Humbertclaude V, Davidovic Vrljicak N, Dieleman GC, Dodig-Ćurković K, Franic T, Gerritsen SE, de Girolamo G, Hendrickx G, Kerbage H, McNicholas F, Maras A, Paramala S, Paul M, Schandrin A, Schulze UME, Street C, Tuomainen H, Wolke D, Singh SP, Tremmery S, Purper-Ouakil D. [Are Psychiatrists Trained to Address the Mental Health Needs of Young People Transitioning From Child to Adult Services? Insights From a European Survey](#). *Front Psychiatry*. 2022; **12**: 768206.

Turner GM, Aquino MRJV, Atkins L, Foy R, Mant J, Calvert M. [Factors influencing follow-up care post-TIA and minor stroke: a qualitative study using the theoretical domains framework](#). *BMC Health Serv Res*. 2022; **22**(1): 235.

Wu P, Sharma GV, Mehta LS, Chew-Graham CA, Lundberg GP, Nerenberg KA, Graham MM, Chappell LC, Kadam UT, Jordan KP, Mamas MA. [In-Hospital Complications in Pregnancies Conceived by Assisted Reproductive Technology](#). *J Am Heart Assoc*. 2022: e022658.