Innovation| Changing the Paradigm

Chair: Nigel Edwards, Chief Executive, Nuffield Trust

Speakers:

- Dr Matthew Harris, Clinical Senior Lecturer in Public Health, Imperial College London
- Dr Sarah Urasa, Director of Health Services, Kilimanjaro Christian Medical Centre
- Hamdi Issa, PhD Student, Institute of Global Health Innovation, Imperial College London

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Changing the Paradigm

Dr Matthew Harris

DPhil MBBS MSc PGCE FFPH

Clinical Senior Lecturer in Public Health

Imperial College London

Policy developments

- Grand Challenges Canada
- Centre for Health Market Innovations
- Tropical Health Education Trust
- Health Education England
- Globalization and Health series
- DfID Health Partnership Scheme 1 + 2

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So what's the problem?

- Absorptive capacity
- Resources for piloting
- Innovation sourcing
- Regulation – CE marking, FDA approval
- Patenting
- Demand
- 'Community standards'

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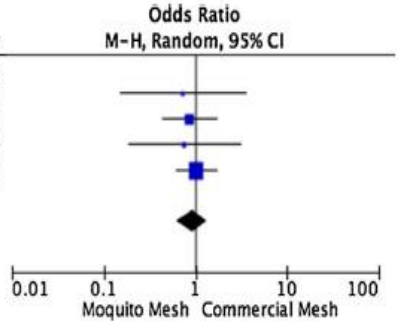
Hernia Surgery: Mosquito Net

Study or Subgroup	Mosquito Mesh Events	Mosquito Mesh Total	Commercial Mesh Events	Commercial Mesh Total	Weight	Odds Ratio M-H, Random, 95% CI	Year
Freudenberg 2006	0	20	0	20		Not estimable	2006
Gundre 2012	3	35	4	35	5.8%	0.73 [0.15, 3.51]	2012
Dubey 2014	26	75	26	68	31.1%	0.86 [0.43, 1.70]	2014
Darokar 2016	4	37	5	36	7.4%	0.75 [0.18, 3.06]	2016
Löfgren 2016	41	146	41	148	55.7%	1.02 [0.61, 1.70]	2016
Total (95% CI)		**313**		**307**	**100.0%**	**0.93 [0.63, 1.35]**	
Total events	74		76				

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 0.36$, df = 3 (P = 0.95); $I^2 = 0\%$
Test for overall effect: Z = 0.40 (P = 0.69)



Patterson et al. Hernia 2017 21: 397-405

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"Mosquito net mesh is more cost-effective than ORT or ART for HIV"

International Hernia Guidelines 2018 p.114

Patterson et al. Hernia 2017 21: 397-405

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ORIGINAL ARTICLE

A Randomized Trial of Low-Cost Mesh in Groin Hernia Repair

N ENGL J MED 374;2 NEJM.ORG JANUARY 14, 2016

Jenny Löfgren, M.D., Ph.D., Pär Nordin, M.D., Ph.D., Charles Ibingira, M.D., Alphonsus Matovu, M.D., Edward Galiwango, M.A., and Andreas Wladis, M.D., Ph.D.

In summary, this study showed that a low-cost mesh can be used in hernia repair with excellent clinical outcomes that do not differ significantly from those achieved with commercial mesh. These results support the use of low-cost mesh for hernia repair in resource-scarce settings, after appropriate training of the staff performing the procedures.

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"In LICs the trend,…is to sterilize materials at lower temperatures which….at 121C means the mosquito net retains its properties. When it is sterilised at the higher temperatures of 134C required by HICs, due to the risk of spongiform encephalopathies, it may cause shrinkage and it may no longer be used.

Although the studies included in this review demonstrate the safety profile of mosquito net sterilised at 121C, it seems unlikely that HICs will change their sterilisation policies. Therefore, for studies to be conducted in HIC the mosquito nets will require Ethylene Oxide sterilisation due to prions."

Patterson et al. Hernia 2017 21: 397-405

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"…I often do try and say we actually learn a huge amount from you [LMIC] as well, like I always say, particularly…how they taught me a lot about leadership and things like that. I think it empowers them…"

27th April 2016, Anaesthetist, African partnership

Kulasabanathan et al. Do International Health Partnerships contribute to Reverse Innovation? a mixed methods study of THET-supported partnerships. Globalization and Health 2017: 13;25

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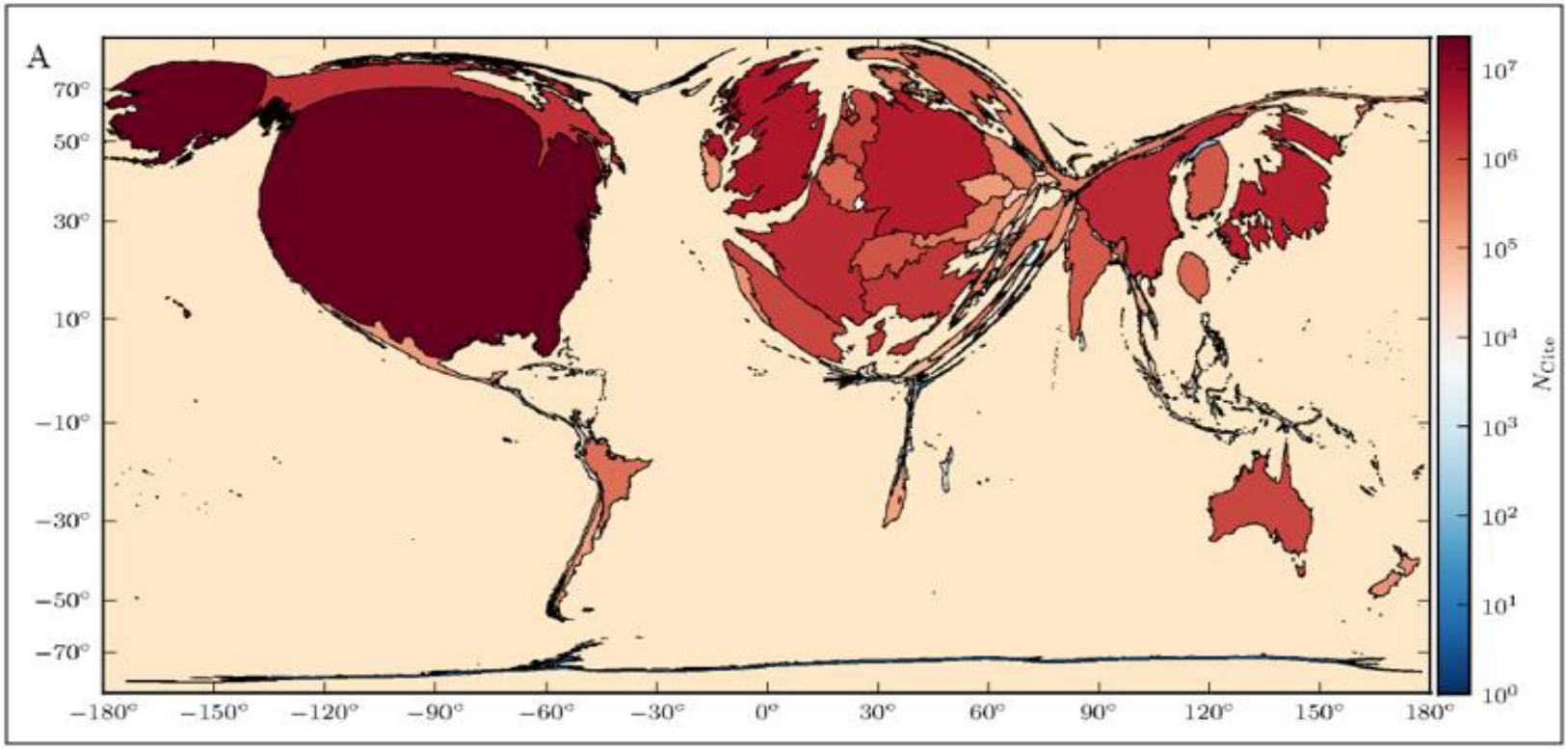

Figure 1. Citation map of the world. The area of each country is scaled and deformed according to the number of citations received. Darker colors also represent more citations. Source: Pan et al, 2012 (7).

Pan RK, Kaski K, Fortunato S. World citation and collaboration networks: uncovering the role of geography in science. Sci Rep [Internet]. 2012

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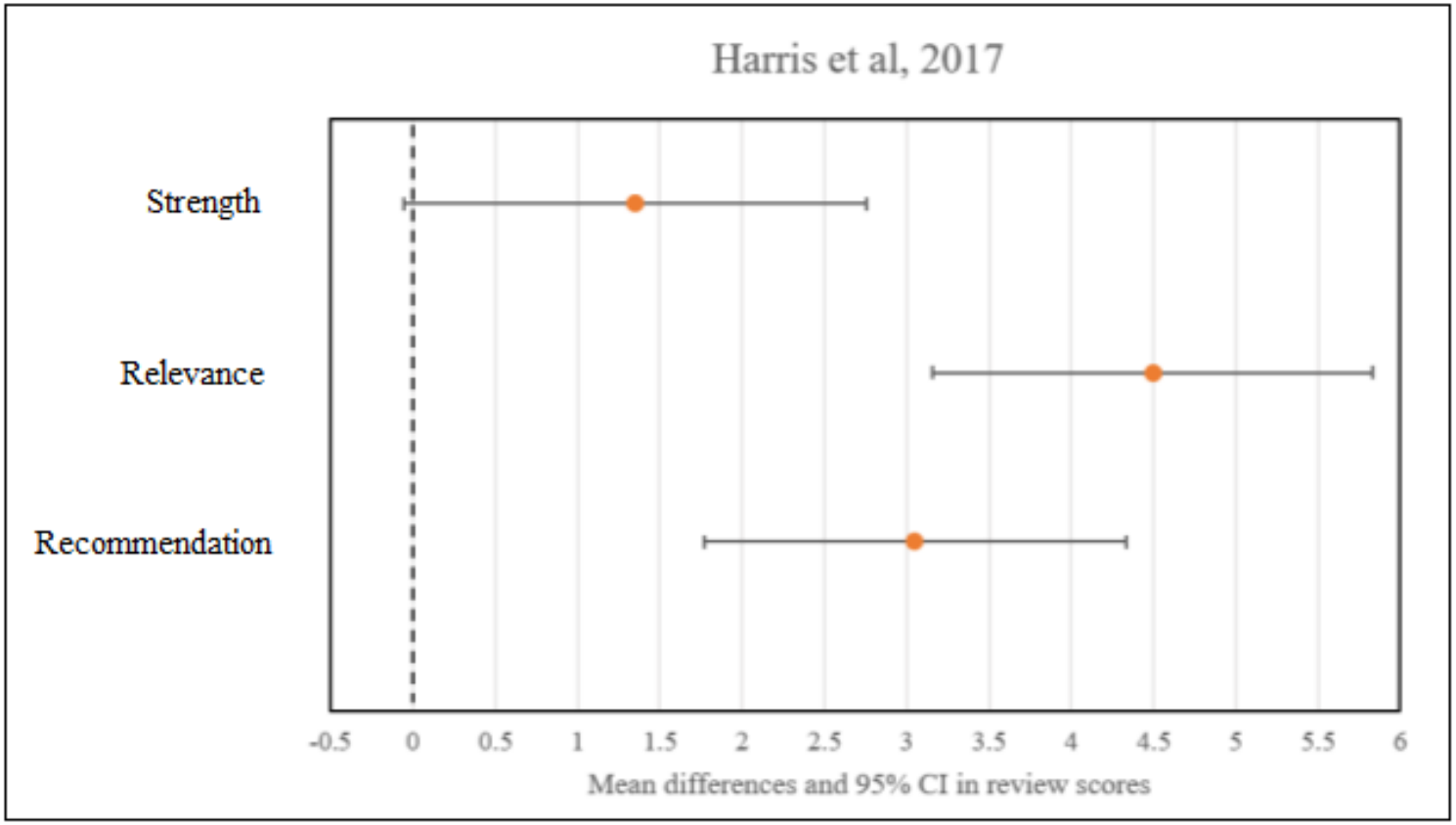

Harris et al. Explicit bias toward high-income-country research: a randomized, blinded, crossover experiment of English clinicians. Health Affairs 2017

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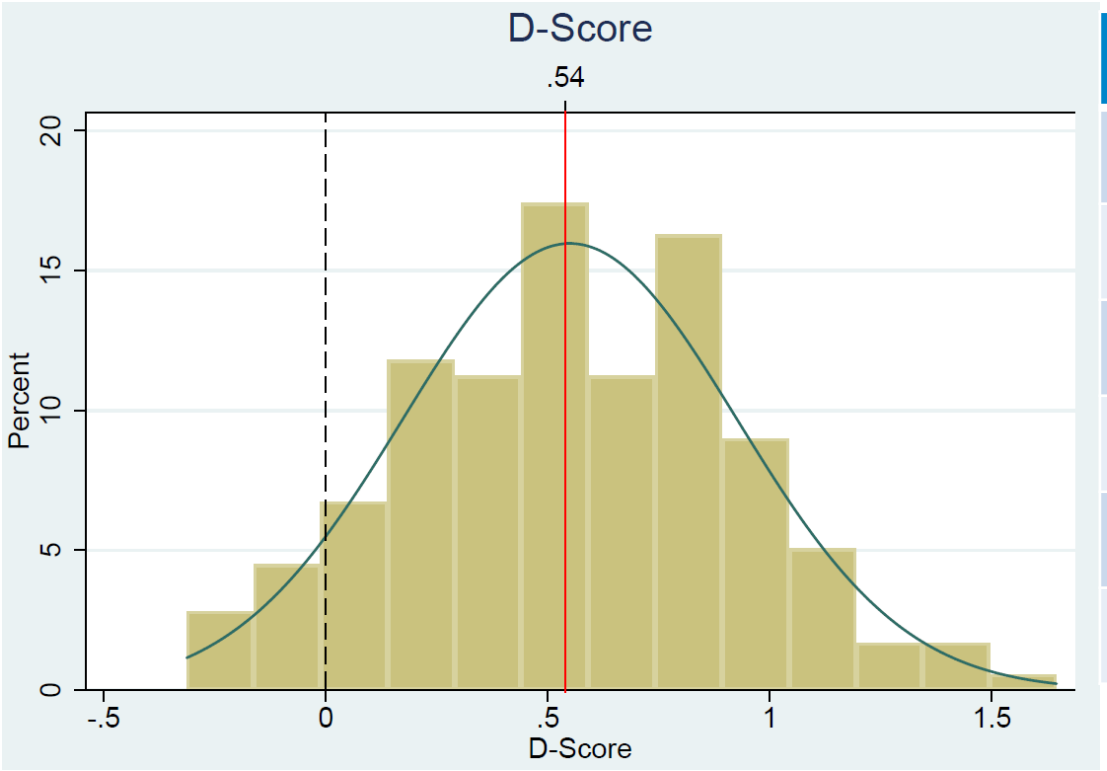
Implicit Association Test



		Mean IAT
High Income, Good Research	Low Income, Bad Research	0.54
Black name, Negative	White name, Positive	0.71
Male, Science	Female, Liberal arts	0.72
Male, Career	Female, Family	0.72
Black faces, Negative	White faces, Positive	0.88
Young faces, Positive	Old faces, Negative	0.99

Harris et al Measuring the bias against research from low-income countries. Globalization and Health 2017

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White fragility – Robin DiAngelo (2011)

- Why is it so hard for White People to talk about Racism?
- Isolation from racial discomfort
- Effortful reinstatement of white equilibrium
- Argumentation, silence and withdrawal

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MPH Reading List audit

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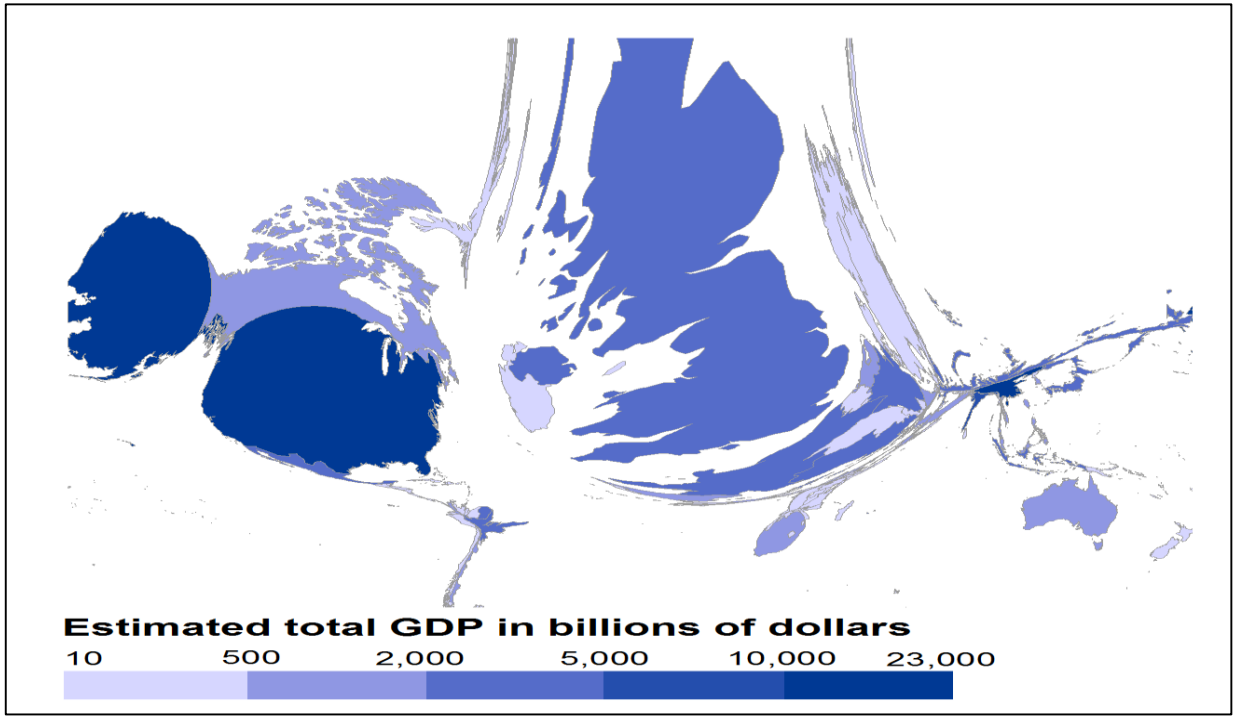
MPH Reading List audit



Acknowledgements – Daniela Fecht and Diego Malacarne

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Epistemic fragility?

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‘As explained in the reports, this is explicitly a descriptive audit and doesn’t take into account global research production or broader publication biases as that would be impossible to do. Therefore it is quite possible that the skew in reading lists distribution is due to much broader issues beyond our control. However, equally, we don’t know that for sure so we are looking to you as content experts to consider whether there are opportunities to increase the diversity of your reading lists…’

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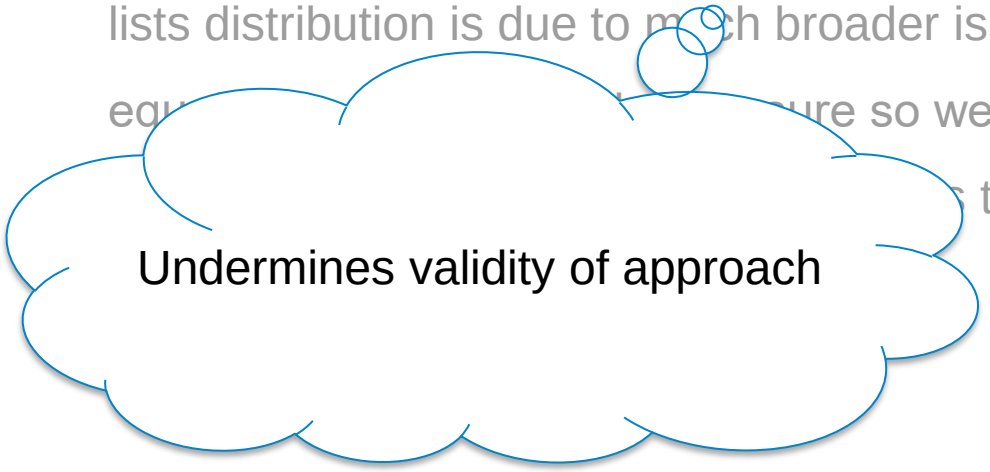

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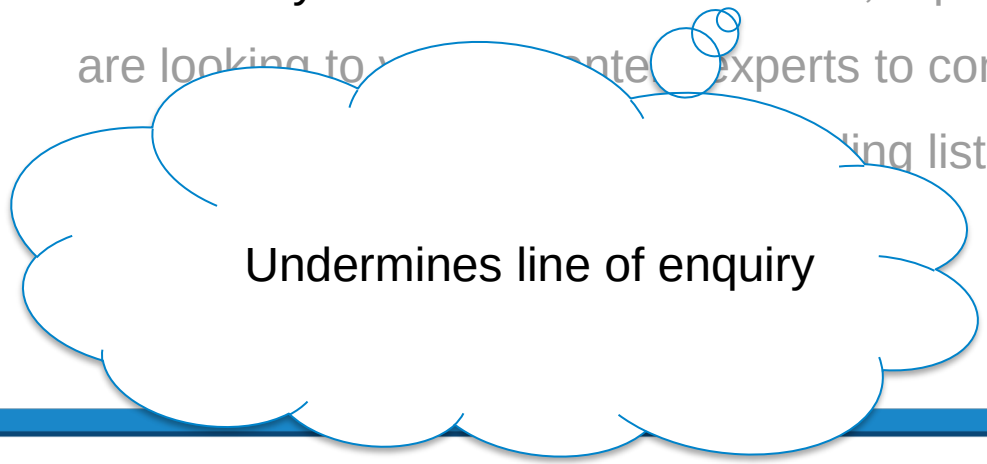

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Epistemic fragility?

- ‘It’s very crude, it doesn’t make any sense to have first and last authors….it doesn’t tell you anything substantial.’

- ‘We’re scientists, we deal in objective facts, we’re not biased, we deal in merit.’

- ‘…if you start putting in this research from a low-income-country, or whatever, they are slightly different sources, you are overshadowing the stuff we really need to know, like, the absolute basics.’

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Changing the paradigm

- Can we do more measuring of this challenge?
  - Value of IATs
- Can we make the implicit explicit?
  - Us/Them is not ok
- Can we build demand for LMIC innovation in the UK?
  - UK demand/LMICs supply

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Henock Tadesse
Kate Ippolito
Mark Anderson
Daniela Fecht
Diego Malacarne
Simone Buitendijk

INNOVATIONS IN HEALTH – IN AFRICA FOR AFRICA

Sarah J Urasa

Kilimanjaro Christian Medical Centre

Tanzania

- Necessity is the mother of invention……innovation
- Innovations in health technologies have led to vast healthcare improvements in the developed world (World Bank report ,1983)
- However, they command sizeable investment every year (funding, time, personnel) therefore
- Innovation in healthcare involving diseases affecting the developing world has historically been low particularly in sub-Saharan Africa, developed world companies have not generally ventured to address them

- It is important to understand what capabilities African countries themselves have
  - in developing & implementing local ideas
  - in internalizing foreign health innovations
  - intranslating these into products and services

- The contribution of African countries to health innovation for their own needs is not well-documented or understood

- Governments , industries & individuals need to accept that local health product development is not solely a health issue – it stimulates an entrepreneurial culture responsive to local needs & eventually broader global needs

- As LMICs continue on their paths of development, it is important that innovation is encouraged, nurtured & sustained
- Health systems, methods, equipment, consumables, drugs, vaccines etc
- The best positioned are the health workers themselves

Challenges vs innovation in Africa

- Education system
- Overstretched healthcare workforce
- Lack of encouragement & support
- Financing
- Comparison against *"the ideal"* which leads to:
- Donor-dependence mentality
- Lack of involvement (when the innovation is 'imported' from HICs)
- Innovations perceived outside the reality of the settings of African/LMICs

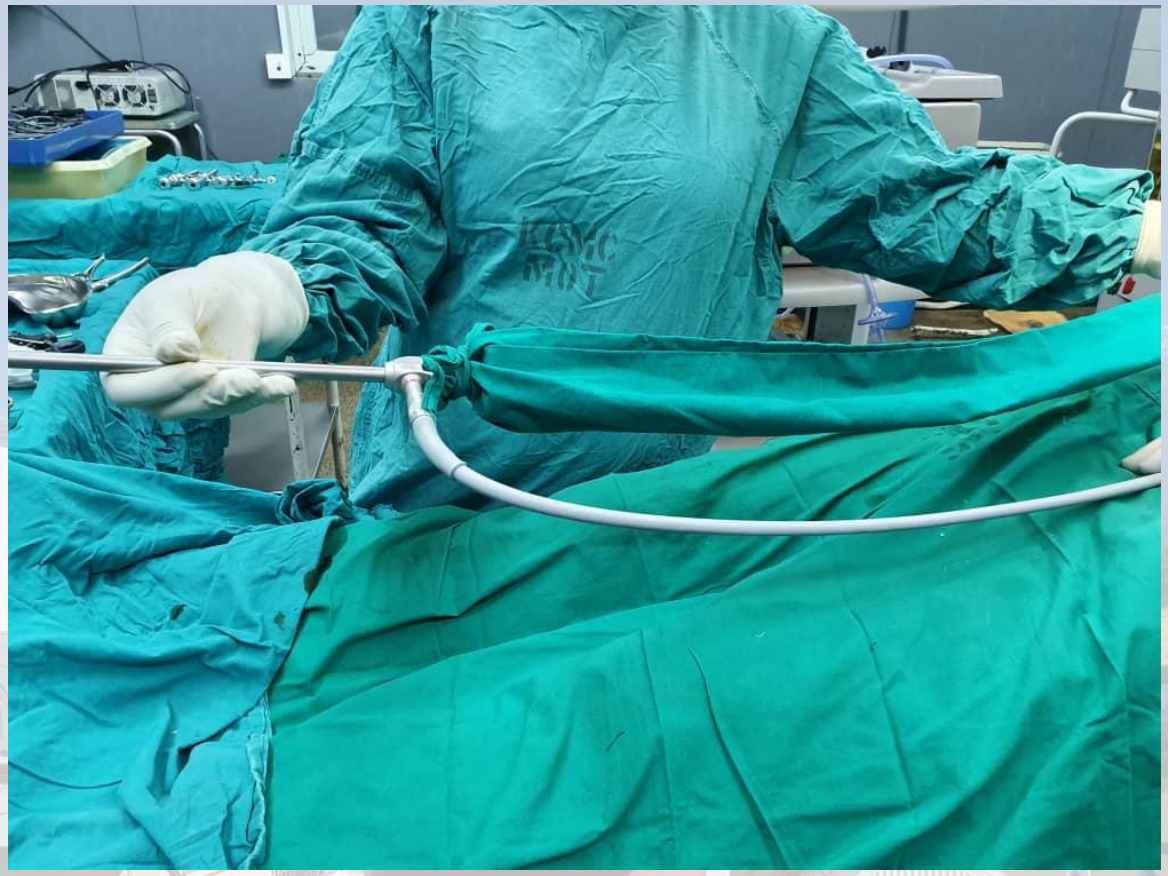
- Without indigenous capacity in innovation—be it R&D infrastructure, trained personnel, funding for the development and translation of new ideas, or the presence of firms that can participate in product development and delivery—it is hard to imagine that foreign technologies, however much needed, can be sustainably or affordably absorbed or utilized, or that indigenous technologies can be fostered for local use.

How to overcome the challenges

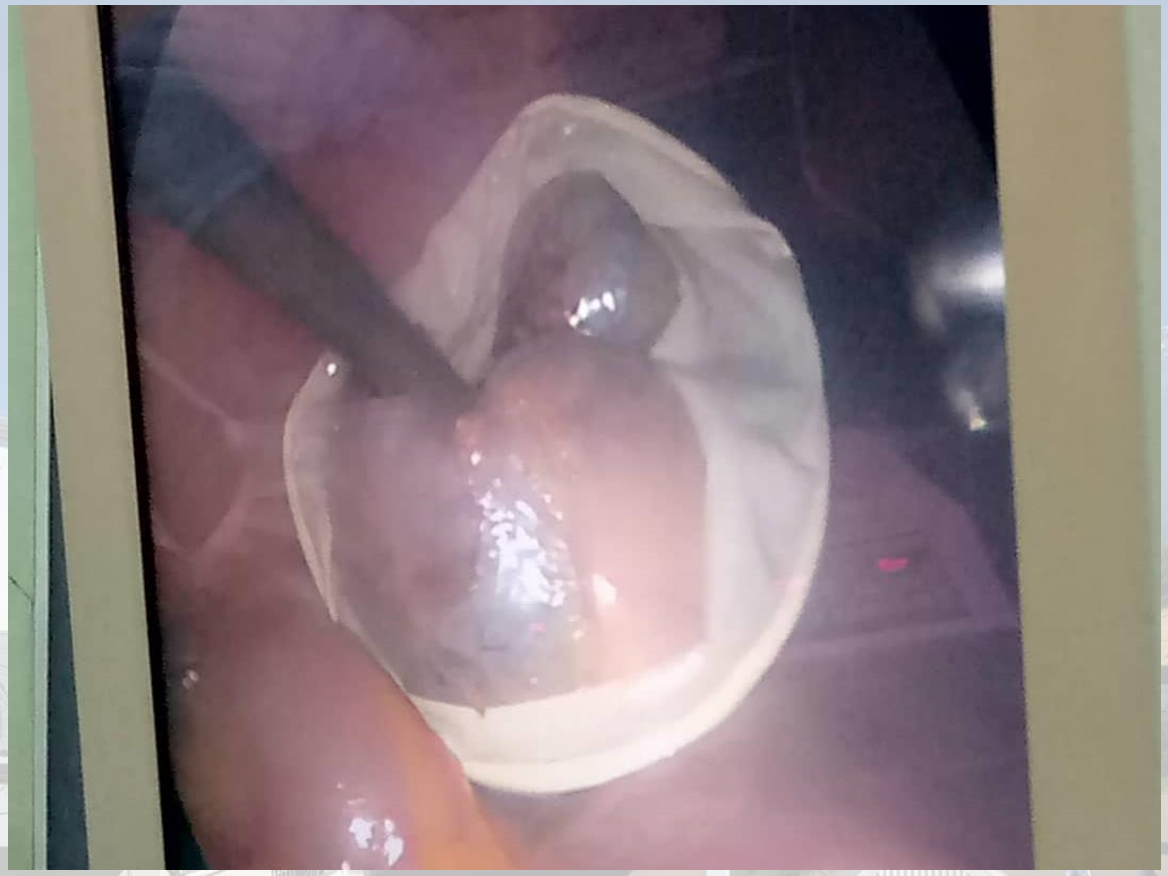
- Change in the focus & delivery of education
- Encouragement from management/ authorities - catalyze
  - Protected time
  - Innovation platforms
- Government commitment
- Incentivizing innovation *Bull World Health Organ 2017;95:246–24*
- THET, WHO & other health organizations – 'WHO Africa Innovation challenge'
- International & regional collaborations – the case of KCMC

The KCMC Experience

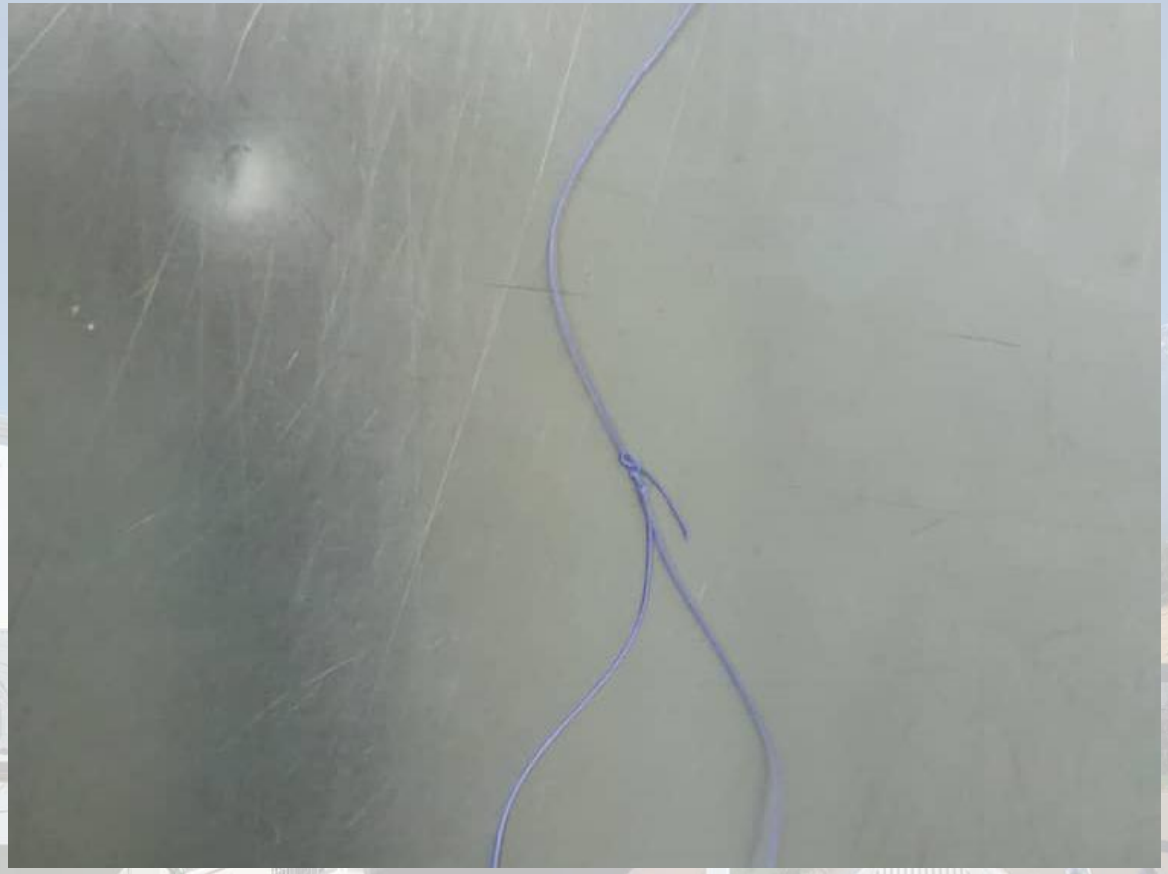
- Banana leaf burn wound dressing
- Honey dressing
- Laparascopic cholecystectomy
- Hernia mesh repair
- SIDO items
- eHMS
- Neonatal cots



Washable cloth camera sleeve instead of disposable plastic sleeve



Gall bladder removal using sterile glove instead of factory-made endopouch



Extracorporeal loop - knotted suture instead of endoloop

Soap dispenser holder

Distribution trolley

- Local
- Sustainable
- Affordable
- Simple
- Proven effective – they should work!!
- Should be shared across healthcare facilities
- Culturally acceptable

ASANTE SANA!

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Sept 2019

Reciprocity in International Health Partnerships – lessons from fk Norway

Hamdi Issa

PhD Student

Imperial College London

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Evolution of fk Norway model

- **1963 – modeled on peace corps**

  - *Grassroots movements – 'Norway has much to teach but also much to learn' – fk Norway senior advisor*
  - *Political buy-in*

- **2001 – Launch of bidirectional exchange model**

Based on three key principles: *solidarity, equality* and *reciprocity*

- **2018 – Administrative changes – (renamed Norec)**

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Paradoxes in roles & responsibilities

Coordinating partner

I am not trying to suggest we are more important, but yes everything runs through us - **HIC Project Lead, Sept 2017**

..technically as the coordinating partner, we are the main partner - **HIC Doctor, April 2018**

Resource management

we just decided that we have everything under control if we [the HIC] know participants are getting their salary and on time…its less risky.. so we just keep control of it and this way we can know that the participants are getting everything.' **– HIC programme coordinator, April 2018**

In our partnership the HIC partner also manages all the resources. They always have. It makes sense - **LMIC Nurse, Sept 2017**

- Differences in the 'social' power can go on to influence the difference in knowledge flow

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Paradoxes in learning

- **Cultural knowledge** (i.e. knowledge about the country, how to care more 'appropriately' for patients from different backgrounds etc.)

What can we learn from them? Well we have a lot more refugees and immigrants coming to Norway so I guess it is helpful having someone who has been to Africa with us because then they become like a resource person. They can teach us to care for the refugee and immigrant population in Norway. **- HIC Allied Health Professional, April 2018**

- **Technical knowledge** (i.e. 'hard skills', technical expertise: innovations, care practices, routines)

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Epistemic fragility

- DiAngelo (2011, 2019) – ‘White Fragility’
- Discomfort and defensiveness noted in conversations of knowledge, whose epistemology is favoured in partnerships
- Lack of examples - where HIC knowledge domination and the certain privilege HIC knowledge may hold in partnerships
- Examples of structured responses – ‘equal’ / ‘same’ partners

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Final thoughts

- To materialise the ambition for reciprocity – need MORE intentional, clear and measurable visions.

<u>Questions to consider:</u>

- What do we mean by reciprocity?
- How does it look in each stage of the partnership?
- What are the needs of the HIC partner?