Stakeholder Engagement and Implementation Research: An Example from Kenya

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<th>Type(s) of relationship(s)</th>
<th>Product name(s)</th>
<th>Relevant disease(s) or condition(s)</th>
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K01TW009218  
R01HL125487  
U01HL114200  
U01HL138636  
U01HL142099  
R01MH118075  
R21HL140474  
14SFRN20490315
CVD is a Global Problem

IHME/Global Burden of Disease
CVD is a Concern for LMICs
The care gap

People with previous CVD taking priority medications

STROKE 8%

MYOCARDIAL INFARCTION 14%
• Lead with care
  – Follow quickly with education, research
• Established HIV care program (2001)
• Catchment 4 Million
• 200,000 HIV-positive patients
• HIV as a chronic disease
• Leveraging HIV infrastructure for chronic disease care
• Population-based approach to care
• Implementation research
Entire Care Cascade for Chronic Disease Management

- Level 6: COEs for care of complicated cases, advanced procedures, advanced diagnostics, development updating and roll out of care guidelines, mentorship and research generation/coordination.
- Level 4 & 3: Mini COE's for care procedures, diagnostics, development updating and roll out of care guidelines.
- Level 3: CO's/Nurses/Nutritionists/Pharm Techs
- Level 2: Nurses
- Level 1: Grass-root workers/CHW/PHCT Counselor

- Health Information System and Provider Training
- Monitoring & Evaluation
Engaging the Entire Care Cascade in Western Kenya
A Model to Achieve the Cardiovascular Disease Secondary Prevention Roadmap Goals

Rajesh Vedanthan*, Jemima H. Kamano†,‡, Gerald S. Bloomfield§, Imran Manji†, Sonak Pastakia†,‡,‖, Sylvester N. Kimaiyo†,‡

New York, NY, USA; Eldoret, Kenya; Durham, NC, USA; and Indianapolis, IN, USA
Challenges → Opportunities

- Low awareness
- Challenging geographic access
- Availability of medications
- Burden of medical records
- Insufficient human resources
- Affordability
- Community-based testing
- Decentralization of services
- Revolving fund pharmacy
- Health IT/EMR
- Task redistribution
- Innovative care delivery models
- Universal health coverage

Vedanthan et al. (2015) Global Heart
Geographic Decentralization

Previous Paradigm

HOSPITAL

COMMUNITY

New Paradigm

HOSPITAL

Health Center

Dispensary

COMMUNITY

Vedanthan et al. (2015) Global Heart
Revolving Fund Pharmacy

Basic Mode of Operation for RFPs

- Seed Funding
- Initial Medicine Supply
- Set up of the pharmacy

Revolving Fund Pharmacy

- Replenish inventory
- New pharmacies
- Improve facilities
- Sustain auditing

Medicines sold (Access ensured)

Funds generated

Revolving Fund Pharmacy

Patient Visit

Prescription

MOH Pharmacy

If medicines are not available

Revolving Fund Pharmacy

Percent Availability

DESIRE Development

STEP 1
Data Validation

STEP 2
Complex Logic

STEP 3
Integration with AMRS

AMPATH mHealth 2.0: mUzima

Were et al. (2016) Global Heart
Nurse Mgmt of HTN in Kenya: Impact

Kumar et al (2016) ACC Scientific Sessions; Vedanthan et al. Forthcoming
LARK: CHWs to improve linkage and SBP

Vedanthan et al. (2019) JACC
## Economic Reality

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total (n=1460)</th>
<th>Usual Care (n=491)</th>
<th>Paper Based (n=500)</th>
<th>Smart Phone (n=469)</th>
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<td>Age (years)</td>
<td>54.2</td>
<td>54.6</td>
<td>53.7</td>
<td>54.3</td>
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<tr>
<td>Female Gender (%)</td>
<td>58</td>
<td>63</td>
<td>56</td>
<td>56</td>
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<tr>
<td>Unemployed (%)</td>
<td>21</td>
<td>17</td>
<td>16</td>
<td>31</td>
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<tr>
<td>Monthly Earnings &lt; US$50 per month (%)</td>
<td>49</td>
<td>54</td>
<td>52</td>
<td>42</td>
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<td>National Health Insurance Coverage (%)</td>
<td>15</td>
<td>11</td>
<td>14</td>
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Innovative Care Delivery

Referral Networks

Mercer et al. (2019) Trials
Strengthening Referral Networks for Management of Hypertension Across the Health System

PIs (Kenya): Constantine Akwanalo, MMed; Jemima Kamano, MMed
Co-I (Kenya): Violet Naanyu, PhD; Ann Mwangi, PhD
Co-I (USA): Rajesh Vedanthan, MD MPH; Tim Mercer, MD MPH; Sonak Pastakia, PhD; Gerald Bloomfield, MD MPH; Jonathan Dick, MD
Stakeholder Engagement—IAP2 Model

Inform
Empower
Consult
Collaborate
Involve

IAP2 framework

Akwanalo, et al. (2019) Global Heart
Stakeholder Engagement—Our Approach

Ministry of health
- National office
- County level
- Sub-county level

AMPATH
- Research office
- NCD office

STRENGTH study stakeholders

Communities and their leadership

Healthcare professionals

Patients
Stakeholders—Engagement “Dose” Variation
Stakeholder Engagement—Government & Communities

MEMORANDUM OF UNDERSTANDING

Primary Health Care (PHC) and Chronic Disease Management (CDM) Project in Nyanza, Western and North Rift Valley Provinces

Between

Ministry of Public Health and Sanitation (MOPHS);
Ministry of Medical Services (MOMS)

And

USAID-AMPATH Partnership
Where does HCD fit in?

New Referral Guidelines (Pre-Designed)

AMRS-Compatible Referral Module (Pre-Designed)

Retrospective Data Entry (Pre-Designed)

Meeting Structure? (HCD Process)

Communication Platform? (HCD Process)

Info Available to PNs? (HCD Process)

Navigation & Adherence (HCD Process)

AMRS-Compatible Referral Record (Pre-Designed)
Stakeholder Engagement: Creation

Components of the STRENGTHS Intervention:

1. Facility-based Peer Support

2. Central referral resource in each county

3. Structured sensitization, feedback, and mentoring for providers
Peer Navigation Responsibilities:

**Receiving Facility**
- Liaise with peer at referring facility
- Orient patient to new facility
- Use tablet to access electronic health record
- Confirm follow-up plan with patient after visit
- Notification of referral completion

**Referring Facility**
- Ensure referral completion
  - Provide information about referral process
  - Patient education
  - Psychosocial support & adherence counseling
  - Patient follow-up
  - Complete referral documentation

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**Ensures referral completion**
- Provide information about referral process
- Patient education
- Psychosocial support & adherence counseling
- Patient follow-up
- Complete referral documentation

**Receives and navigates patient**
- Liaise with peer at referring facility
- Orient patient to new facility
- Use tablet to access electronic health record
- Confirm follow-up plan with patient after visit
- Notification of referral completion
Stakeholder Engagement—Throughout
Conclusions

• CVD is a global problem

• Treatment and prevention gaps

• Translate challenges into opportunities

• Stakeholder engagement critical—dose variation expected

• Embed stakeholder engagement throughout implementation research process
## Acknowledgements

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