Measuring and Evaluating Social Outcomes of Access Initiatives

Novartis Materiality Assessment Webinar Series

October 28, 2020
# Agenda

**Why we did it:** Background, motivation and objectives

End line results from Kenya and critical methodological review

Perceptions of NCD medicines availability, affordability & coping mechanisms

The path forward: integrating learnings to further expand access

Open Q&A
Welcome

Duration: 1 hour

At any time, we invite you to **type your questions** in the Q&A box

If you are **struggling to connect**:  
- Audio is typically more reliable over a telephone/mobile line than computer audio  
- Close other applications not in use, especially those that take bandwidth (e.g. email and additional internet browser tabs)  
- Connect to the internet via cable rather than wireless, if possible
2017 Results at a glance show each topic's relative importance

How to read the chart

Outer circle
- Priority topics

Middle circle
- External stakeholders perceive as more important
- Internal stakeholders perceive as more important
- No significant difference in perception

Inner circle
- Material issue clusters
<table>
<thead>
<tr>
<th>Agenda</th>
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<tbody>
<tr>
<td>Dr. Michael Fürst</td>
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Welcome

**Why we did it: Background, motivation and objectives**

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Open Q&A
## Agenda

<table>
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<th>Topic</th>
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<tbody>
<tr>
<td>Welcome</td>
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<tr>
<td>Why we did it: Background, motivation and objectives</td>
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<td>The path forward: integrating learnings to further expand access</td>
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<tr>
<td>Open Q&amp;A</td>
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</table>
Background to Novartis Access evaluation

After Novartis had launched their Novartis Access Global Initiative at UN SDG conference and in Kenya they approached BUSPH to evaluate

Field work occurred 2016 to 2020
- Baseline
- Midline (delayed by election confusion)
- Endline
- Reporting back

We agreed requiring
- Full transparency (agreements, protocols, data and design, web page)
- Independence (Design, publications and reporting of results)
- Rigor (Mixed Methods, RCT, Serial interviews, telephone surveillance)
- Regular consultations

Key Results Baseline

1. Variation in prevalence of diagnosed and treated NCDs in counties from 1.8% to 33%
2. Availability of NCD medicines varied Public & Private non profit 17%, private for profit 26%, households asthma 55%, Hypertension 78% & Diabetes 84%
3. Diagnosis in public sector, treatment in private sector
4. Poorest paid the most for their medicines

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**HCTZ (Hypertension)**

<table>
<thead>
<tr>
<th>Wealth quintile</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price paid per monthly dose ($US)</td>
<td>1.20</td>
<td>0.80</td>
<td>0.40</td>
<td>0.60</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Metformin (Diabetes)**

<table>
<thead>
<tr>
<th>Wealth quintile</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price paid per monthly dose ($US)</td>
<td>3.00</td>
<td>2.50</td>
<td>2.00</td>
<td>1.50</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Key Results
Midline RCT Summary conclusion

Abstract

Novartis Access had little effect in its first year in Kenya. Access programmes operate within complex health systems and reducing the wholesale price of medicines might not always or immediately translate to improved patient access.

The evidence generated by this study will inform Novartis’s efforts to improve their programme going forward.

The study also contributes to the public evidence base on strategies for improving access to medicines globally.
The findings might not be positive, but Rockers’ study is an important and overdue addition to the literature on industry-led efforts to improve access to medicines—an area that has been understudied so far. By scrutinising their access programme in an RCT, subjecting it to the rigors of peer review and publishing in an open-access journal, Novartis is setting the standard for how the industry should transparently report on its social programmes.

…it is our hope that this detailed investigation will trigger greater interest in researching the unique dynamics of chronic disease care delivery in low-income and middle-income countries rather than diminishing enthusiasm in this understudied field.
## Endline Results
### Availability of Medicines at Health Facilities

<table>
<thead>
<tr>
<th>Proportion of NCD medicines available Mean (standard deviation)</th>
<th>Control</th>
<th>Novartis Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (N=63)</td>
<td>0.14 (0.13)</td>
<td>0.27 (0.15)</td>
</tr>
<tr>
<td>Midline (N=58)</td>
<td>0.20 (0.12)</td>
<td>0.20 (0.11)</td>
</tr>
<tr>
<td>Endline (N=57)</td>
<td><strong>0.21 (0.17)</strong></td>
<td><strong>0.27 (0.11)</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency for specific medicines N (%)</th>
<th>Control</th>
<th>Novartis Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amlodipine</td>
<td>16 (25%)</td>
<td>21 (37%)</td>
</tr>
<tr>
<td></td>
<td>15 (26%)</td>
<td>22 (30%)</td>
</tr>
<tr>
<td></td>
<td><strong>21 (37%)</strong></td>
<td><strong>22 (30%)</strong></td>
</tr>
<tr>
<td></td>
<td>19 (28%)</td>
<td>19 (28%)</td>
</tr>
<tr>
<td></td>
<td><strong>36 (51%)</strong></td>
<td><strong>56 (76%)</strong></td>
</tr>
<tr>
<td>Furosemide</td>
<td>34 (54%)</td>
<td>62 (84%)</td>
</tr>
<tr>
<td></td>
<td>33 (57%)</td>
<td>58 (84%)</td>
</tr>
<tr>
<td></td>
<td><strong>37 (65%)</strong></td>
<td><strong>62 (84%)</strong></td>
</tr>
<tr>
<td></td>
<td>57 (81%)</td>
<td>57 (81%)</td>
</tr>
<tr>
<td>Hydrochlorothiazide</td>
<td>12 (19%)</td>
<td>16 (22%)</td>
</tr>
<tr>
<td></td>
<td>11 (19%)</td>
<td>13 (19%)</td>
</tr>
<tr>
<td></td>
<td><strong>38 (67%)</strong></td>
<td><strong>16 (22%)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>53 (76%)</strong></td>
<td><strong>13 (19%)</strong></td>
</tr>
<tr>
<td>Metformin</td>
<td>30 (48%)</td>
<td>56 (76%)</td>
</tr>
<tr>
<td></td>
<td>29 (50%)</td>
<td>52 (75%)</td>
</tr>
<tr>
<td></td>
<td><strong>30 (53%)</strong></td>
<td><strong>56 (76%)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>53 (76%)</strong></td>
<td><strong>52 (75%)</strong></td>
</tr>
<tr>
<td>Salbutamol</td>
<td>24 (38%)</td>
<td>35 (47%)</td>
</tr>
<tr>
<td></td>
<td>23 (40%)</td>
<td>32 (46%)</td>
</tr>
<tr>
<td></td>
<td><strong>27 (47%)</strong></td>
<td><strong>35 (47%)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>44 (63%)</strong></td>
<td><strong>32 (46%)</strong></td>
</tr>
</tbody>
</table>
**Surveillance Data:**

**Availability of 14 Medicines in Health Facilities over time**

![Graph showing the availability of 14 medicines over time for Control and Intervention groups.](image)
Availability of NCD Medicines in Households

Availability is defined as having at least one medicine for each of their NCD diagnoses in the household at time of evaluation.

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline</strong></td>
<td>66%</td>
<td>65%</td>
</tr>
<tr>
<td><strong>Midline</strong></td>
<td>68%</td>
<td>65%</td>
</tr>
<tr>
<td><strong>Endline</strong></td>
<td>57%</td>
<td>57%</td>
</tr>
</tbody>
</table>
Surveillance Data:
Availability of Medicines in Households over Time

Proportion of NCD Medicines Available (%)

- Control %
- Intervention %

Other Results available

- Equity in Access to NCD Medicines in Kenya
- Impact of Health Insurance
- Risk factors for Mortality
- Willingness to Pay for Novartis Access medicines by household wealth
- and others...
Agenda

Welcome

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The path forward: integrating learnings to further expand access

Open Q&A
Patients NCD Journey

Majority had no prior screening for NCDs

- Majority of respondents went for checkup late
- Diagnosed by accident either when they are very sick or have had something bothering them
- Once diagnosed, they seek care and medicines immediately
Availability and Affordability

Most participants understood their NCD status, took it seriously

Did whatever it takes to make NCD medicines a priority

“I simply want health. Even if you go buy drugs from such outlets, all I desire is good health for me.”
(HH Kwale 7)
Availability

**NCD medicines not available at government health facilities**

- Majority of patients were diagnosed at government health facilities
  - Medicines for acute conditions more available (e.g. painkillers)
- Patients have to buy NCD meds at private facilities/chemists/drug stores

*The drugs that we can’t get from our hospital... are [those for] asthma, high blood pressure, diabetes... And maybe the other ones for these “big” diseases. Like cancer. You can’t get [those medicines]. Maybe you’ll find pain killers. (HH Makueni 3)*
Affordability

NCD medicines not affordable for average patients (high prices, and/or low income)

- NCD meds are an extra financial burden on households
- Medication prices vary from place to place (prices not constant & keep going up)

“The problem I have as a patient, the big challenge in paying for everything, it’s not that I pay today, and not tomorrow, I pay daily. I’ll be sick today and tomorrow. And there is no money. That’s where my problem is.”

– (HH Makueni 3)
Coping with Barriers to NCD Medicines
(Urgent /Non-urgent disease symptoms: Asthma)

<table>
<thead>
<tr>
<th>Urgent Symptoms</th>
<th>Non-urgent Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Lack of medicines led to severe symptoms:</td>
<td></td>
</tr>
<tr>
<td>&quot;I feel very bad because I can't even breathe, I can't sit, I can't even walk or to stand alone I can't. I must feel bad, at that time I feel bad, I wish to get the medicine take it quickly then I feel better.&quot; – Kakamega, Asthma</td>
<td></td>
</tr>
<tr>
<td>▪ Withhold purchasing medicines</td>
<td></td>
</tr>
<tr>
<td>▪ Can miss work so as not to trigger symptoms</td>
<td></td>
</tr>
<tr>
<td>▪ Use of traditional herbs to delay symptoms</td>
<td></td>
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</table>

How they Cope:
▪ Use emergency room services or low cost injections for immediate access to medicines and relief

"I started using traditional remedies but that didn't help me because asthma is something that comes suddenly and attacks you when you are seated and makes you fall … you need something quick like an inhaler to inhale or injection." – Kwale, Asthma
Coping with Barriers to NCD Medicines (Wealth and Tradeoffs)

Respondents of all wealth levels forego essential items

Buying medicines has implications for household livelihoods

“Sometimes even when I don’t have bathing soap and I don’t have money I forego buying soap so that I can buy medicine.” – Embu, Wealth Group 1

“That whole year, we have had to stay without using the basics, you are forced to forego one thing to be able to get the drugs. Like if you were to buy beans, you are forced to cook food without beans.” – Nyeri, Wealth Group 2

“Before, we used to use things like ice cream but right now, we cannot…We used to eat chicken, now we do not,…What really affected us most is movement by use of a vehicle…Petrol is expensive therefore, we decided instead of moving, let us set aside the money. So we took our money to buy drugs.” – Embu, Wealth Group 3
Coping with Barriers to NCD Medicines (Reduction in Wealth and Assets)

Respondents at all wealth levels sell a range of assets overtime to cover the cost of NCD Medicines

“I have to sell the chicken cheaply so that I can get medicines, rearing chicken you can only do that if you are not sick and are focused, if you have the chicken you will sell it so you can buy a goat but if I am sick I am not able to buy the goat but buy the medicines.” – Embu, Wealth Group 1

“Wealth has decreased, truly wealth has decreased because of the way the illness affects mother, we need to sell our wealth, to use a lot of money and even go into debts because of her condition.” – Samburu, Wealth Group 2

Yes, I had a car and I sold. I had a cow and I sold. So I have got just one cow and two calves.” – Nyeri, Wealth Group 3
## Coping with Barriers to NCD Medicines
*(Social Capital for Financial and Social Support)*

<table>
<thead>
<tr>
<th>Reliance on connections with friends, relatives and co-workers to access NCD medicines:</th>
</tr>
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<tbody>
<tr>
<td><strong>Borrowing money and assets</strong></td>
</tr>
<tr>
<td>“I usually feel bad because…I usually don’t have money, so when they tell me to go buy I… I have to start thinking of going to [mentions a name] so that I can borrow money to buy this drug so that I don’t go disturb people at home, so I just go somewhere and borrow so that even if I get one packet so that I can go back with it at home.” – Embu, Wealth Group 1</td>
</tr>
<tr>
<td><strong>Depletion of Household wealth</strong></td>
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<tr>
<td>“…If my brother doesn’t have money here we are forced to send a goat to be sold to reduce the bill, sometimes mother has money in her account we go into the mothers account and withdraw some money just for the illness. This disease has made mother to spend her more than usual.” – Samburu, Wealth Group 2</td>
</tr>
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Coping with Barriers to NCD Medicines
(Social Capital for Financial and Social Support)

<table>
<thead>
<tr>
<th>Professional / Personal Relationships with Chemist/Facility Staff</th>
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<tbody>
<tr>
<td>Facilitated ability to access NCD medicines at reduced or free prices</td>
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</table>

“...there is a drug for her for asthma that she normally has, now if you go, there is a chemist around here and she and my mother know each other so she will just give you, she will sell it to you cheaply and not expensive.”
- Samburu, Wealth Group 3

| Got alternative payment structures |

“when we go there and we don’t have money, we tell them we will pay later they trust us we will pay when we get money.”
- Samburu, Wealth Group 2
Health insurance does not guarantee access to NCD medicines

National Hospital Insurance Fund (NHIF) not useful without medicines

“[Y]ou are disappointed, you just see how you have wasted money and then there is no drug, you will be forced again to buy it which is a double cost.” – Kakamega, Cardiovascular Disease
Additional Findings

1. Monitoring:
   – Once diagnosed, routine monitoring of Blood Pressure/Weight/Glucose not done, only when feeling sick & have money

2. Availability:
   – No demand for accountability by patients even if medicines were not available

3. Emotions and stress:
   – Among patients in lower wealth level, higher levels of stress in managing NCDs
Feedback from County Representatives, March 2020

1. Expressed surprise at the medicines in the Novartis Access basket
   - Some do not align with the essential medicines list or standard treatment guidelines
   - Some more expensive than generic competitors

2. They lamented the lack of broad consultations with county reps prior to project implementation
   - Where consultations done, feedback from county reps was not considered

3. Appreciated baseline data on
   - NCD prevalence (usually hard to collect, data to always be shared with counties in a useful way)
   - Health insurance data – landscape changing rapidly in the country

4. Suggested an understanding of the health systems landscape in each county and consultation with technical experts on the ground
Summary Comments on Evaluation of Novartis Access in Kenya

1. Novartis made a committed and conscientious intervention to improve public sector access to NCD medicines in Kenya. They are to be commended for investing in a “gold standard” evaluation.

2. The key results of the evaluation demonstrates that the intervention did not have a major impact on NCD medicine access.

3. An on-the-ground situation analysis and needs assessment involving end users at county level and at households prior to finalizing the intervention would have informed refinements that may have increased impact.

4. Learning from this transparent evaluation, Novartis and other companies can design access interventions that are more likely to be successful.

5. Lower cost evaluations involving mixed methods and telephone surveillance are possible and are recommended.
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The path forward: integrating learnings to further expand access

Open Q&A
The path forward: integrating learnings to further expand access

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Rabin Martin

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Co-Principal Investigator
Boston University
School of Public Health

Prof. Monica A. Onyango
Co-Investigator
Boston University
School of Public Health

Dr. Michael Fürst
Head Social Innovation
GH&CR

Kileken ole-MoiYoi
Global Head Strategy & CR Initiatives, GH&CR

Novartis

Novartis
Thank you for your attention!

For more information...
1. Our Website: www.Novartis.com
2. CR Materiality Assessment Results Report 2017
3. Novartis In Society Report 2019
4. BUSPH Evaluation of Novartis
   http://sites.bu.edu/evaluatingaccess-novartisaccess/

Any feedback...
cr.materiality@novartis.com
Thank you
Backup
Old slides already published
Price of Medicines at Health Facilities

Median Monthly Price of Amlodipine 5mg at Health Facilities

- $1.45 Novartis target

Median Monthly Price of Salbutamol at Health Facilities

- $1.45 Novartis target

Median Monthly Price of Metformin 500mg at Health Facilities

- $1.45 Novartis target

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School of Public Health Evaluation of Novartis Access
Across all diseases, males have a higher risk of death