Empowering TB-Affected People to Support Their Treatment & Care During COVID-19

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PROBLEM STATEMENT

TB is curable, however...

Lack of support for TB-affected people to adhere to a burdensome medication regime with personalized counseling can lead to increased costs, mortality, and emergence of drug resistance.

Challenges to supporting adherence
  • Side-effects, ADR
  • Dosage timing and amount
  • Travel burden/ costs
  • Timely refills
  • Counseling and support
  • Differentiated care
## Importances of Adhering to TB Medications

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of unfavorable outcomes/number of study participants (%)</th>
<th>HR (95% CI)</th>
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</thead>
<tbody>
<tr>
<td>Adherence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>238/1,348 (18)</td>
<td>Reference</td>
</tr>
<tr>
<td>&gt;90 and &lt;100%</td>
<td>64/268 (22)</td>
<td>1.4 (1.0–1.9)</td>
</tr>
<tr>
<td>≤90%</td>
<td>15/32 (47)</td>
<td>5.7 (3.3–9.9)</td>
</tr>
<tr>
<td>Month 2 culture status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>212/1,357 (16)</td>
<td>Reference</td>
</tr>
<tr>
<td>Positive</td>
<td>105/311 (34)</td>
<td>2.2 (1.7–2.9)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>64/492 (13)</td>
<td>Reference</td>
</tr>
<tr>
<td>Male</td>
<td>253/1,176 (22)</td>
<td>1.6 (1.2–2.1)</td>
</tr>
<tr>
<td>Smear grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smear negative or 1+</td>
<td>53/388 (14)</td>
<td>Reference</td>
</tr>
<tr>
<td>Smear 2+</td>
<td>72/430 (17)</td>
<td>1.2 (0.8–1.7)</td>
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<tr>
<td>Smear 3+</td>
<td>192/850 (23)</td>
<td>1.6 (1.2–2.3)</td>
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<tr>
<td>HIV status</td>
<td></td>
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<tr>
<td>Negative</td>
<td>270/1,463 (18)</td>
<td>Reference</td>
</tr>
<tr>
<td>Positive</td>
<td>47/205 (23)</td>
<td>1.5 (1.1–2.0)</td>
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<td>BMI (per 5 kg m⁻² decrease)</td>
<td></td>
<td></td>
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<td>Age (per 10-year increase)</td>
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Rada Savic et al, Nature 2018
EMPOWERING TB-AFFECTED PEOPLE, PROMOTING CHOICE AND ABOVE ALL ENGAGEMENT AND SUPPORT DURING TREATMENT

DOTS
Family/Community DOTS

COVID environment makes it even more challenging to engage, and travel or physically meeting between people and providers a barrier.
VIDEO OBSERVED THERAPY (VOT)
evriMED ELECTRONIC PILLBOXES
Unified platform with many options for treatment support

Support for Tuberculosis, HIV, COVID, and mental health in various settings
PLATFORM EXPERIENCE FOR PROVIDERS
PLATFORM EXPERIENCE FOR PROVIDERS
PLATFORM EXPERIENCE FOR PROVIDERS

TB information page

Adherence Calendar

Home Page
October 30:
Patient registered on DAT and given counseling on proper use

For 13 days, the patient receives automated SMS reminders and they have perfect DAT adherence.

Starting on November 13, the patient stops engaging despite the automated reminders. Their local healthcare staff are alerted by SMS and their adherence is reflected in the dashboard as missed doses as a high priority case for follow up.

The health care staff reaches out to the patient and found out the patient had some adverse reactions to the medication, and therefore had stopped taking medication. The staff encouraged the patient on the importance of adherence and made a note in the dashboard.

After the counseling, the patient starts engaging again daily and successfully completed treatment and was cured. Their overall adherence was 94%.

DAT-SUPPORTED ENGAGEMENT IN PROGRAMMATIC SETTINGS
HOW DATs CAN SUPPORT TB-AFFECTED PEOPLE

• **Autonomy**: Person can decide where/when to take their medications

• **Differentiated Care**: Person may receive individualized information, prompted to take action pertaining to their treatment, and/or access treatment information via patient app or SMS.

• **Real-time connection with provider**: Person can communicate directly with health care worker using SMS or mobile application
BENEFITS OF DATs TO PROVIDERS

Clinic / Provider Level

- Automated alerts and reporting prompts fast action
- Individual and clinic adherence data helps structure treatment decisions and counseling in real-time
- Aggregate data allows for rapid triage of people under their care, helping providers to quickly determine those who need more support

National / Sub-National Levels

- National TB Program coordinators can identify trends and/or compare treatment outcomes between districts or health facilities and rapidly to identify disparities in health outcomes
WHO SUPPORT FOR DATs

"The evidence also showed that when patients receiving treatment adherence interventions (e.g. different combinations of patient education, staff education, material support, psychological support, tracer and use of medication monitor) in conjunction with DOT or SAT, the treatment outcomes were significantly improved compared to DOT or SAT alone."

WHO DS-TB Guidelines, 2017

"As treatment supervision alone is not likely to be sufficient to ensure good TB treatment outcomes, additional treatment adherence interventions need to be provided."

WHO DS-TB Guidelines, 2017
SCALE UP OF DATs IN TB CARE
6 COUNTRIES ACROSS THE GLOBE
ONGOING DAT EVALUATIONS

20 PROJECTS IN 16 COUNTRIES. APPROXIMATELY 13,000 TB-AFFECTED PEOPLE – DS, DR
TB-Affected People
- Access
- Burden vs. perceived benefits
- Appropriateness

Clinic / Provider
- Capacity building, supplement workflows
- Access to devices, connectivity, power
- Ability to act based on information obtained

Program/NTP
- Capacity building and programmatic support
- Data Hosting (in-country vs. cloud)
- Integration with legacy systems
PARTNERS AND COLLABORATORS – THANK YOU!

Contact us for more information, evidence, or experiences with DATs in various settings!

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<tr>
<th>Andrew Cross</th>
<th>Kelly Collins</th>
<th>Lloyd Marshal</th>
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<td><a href="mailto:andrew@everwell.org">andrew@everwell.org</a></td>
<td><a href="mailto:kelly.collins@sureadhere.com">kelly.collins@sureadhere.com</a></td>
<td><a href="mailto:lloyd@wisepill.com">lloyd@wisepill.com</a></td>
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<td>99DOTS and Hub</td>
<td>VOT and deployment experience</td>
<td>evriMED device procurement</td>
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