Reimagining real-world clinical trials to increase participation of African Americans for patients, sponsors, and regulators

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Real-world clinical trials (RWT)

Real-world data (RWD)

Data relating to patient health status and/or the delivery of health care routinely collected from a variety of sources

Real-world evidence (RWE)

Sources: billing claims, EHRs, registries, device-generated data, **patient-generated health data**, diagnostic imaging

Clinical evidence regarding the usage and potential benefits or risks of a medical product derived from analysis of RWD

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21st Century Cures Act, passed in 2016

**Publications and Guidance**
- Guidance: Submitting Documents Utilizing Real-World Data and Real-World Evidence to FDA for Drugs and Biologics
- Guidance: Use of Real-World Evidence to Support Regulatory Decision-Making for Medical Devices
- Guidance: Use of Electronic Health Records in Clinical Investigations
- Framework for FDA’s Real-World Evidence Program
- Accelerating development of scientific evidence for medical products within the existing US regulatory framework (PDF - 180KB)
Traditional clinical trial schema

- African Americans usually represent <5% of trial participants
- 80-90% of nearly all clinical trial enrollees are white, further perpetuating health disparities in underserved communities.
RWT schema: patient-generated health data

PGHD are health-related data created, recorded, or gathered by or from patients (or family members or other caregivers) to help address a health concern.

Examples: health history, treatment history, biometric data, symptoms, lifestyle choices

RWD usage across total-product-life-cycle:

1. Hypothesis generation
2. Inform prospective trial design
3. RWE as a control arm for a clinical trial
4. RWD as source as a platform to support a clinical trial (data collection/randomization)
5. Data collection framework for post market evidence generation
6. Public health surveillance
7. Generate evidence to support indication expansions and future innovation
CERSI case study: Post-market PGHD via Health 360x

Health 360x is a mobile app created by Drs. Priscilla Pemu and Elizabeth Ofili at Morehouse School of Medicine.

Health coach app designed with African American input/perspective that records BP, glucose levels, medication management, doctor appointments for chronic conditions.

- Self-reported data from African-Americans living with chronic health conditions
- App usage showed better health management
- Study comparing medical coaches vs familial coaches showed parity in achieving increased health outcomes

Research questions:

- What best practices can we extract from Health 360x?
- Per the Agency documents, what barriers/hurdles exist to include AA PGHD?
- How can sponsors be intentional on including AA data?
Regulators

CBER, CDER, **CDRH** primary centers developing guidances, rules, and requirements on RWD/RWE

CDRH published 90 examples of RWE usage (March 16, 2021)
  - Digital Health Center of Excellence
  - Office of Clinical Evidence and Analysis
  - Follow on indications seem to be the most successful.

National Evaluation System for Health Technologies (NEST)

2021 RWE Draft Guidance

RWT Current Landscape Snapshot

RWT Barriers

Although commissioned through 2016 CARES act, RWE is still evolving and its full application is still being realized

Inconsistent data classification, collection and curation methods

Implementation of RWE across CBER & CDER appear to be more challenging than CDER
RWT current Landscape Snapshot

- NEST test case with JJ using RWE from Mercy, Mayo, and Yale health centers - set to become the first sponsor to gain indication expansion via solely on RWE to CDRH
- PMA panel track supplements - 37
- Premarket approval (PMA) original submissions - 20
- 510(k) clearances - 18
- De Novo classification requests - 14

RWT Barriers

- Drug and biologic sponsors appear to have taller hurdles to clear to include RWE for RCT augmentation
- Patient recruitment occurs at poor site selection
RWT current Landscape Snapshot

- Diversity in trials is poor
- Patient advocacy groups
- Patient registries
- RWD at health centers
- Registries primarily African American - 1 (ABC CVIS)

RWT Barriers

- RWD health systems may not have diverse populations (especially for indication expansion)
- Fear of data misuse
- Reduced agency and knowledge of clinical trial process
- Community trust issues
Health Equity (HEq) approach to increase participation of African Americans in RWT
Cross River Strategies

We are a minority-owned boutique consulting firm that specializes in advancing health equity for underrepresented minorities and vulnerable populations across the life science landscape.

Christopher Cross, PhD
Founder & Managing Director

Diana Lu, PhD
Managing Partner
**CRS health equity impact highlights**

**2019 – present**

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<tr>
<th><strong>Diversified clinical trials</strong></th>
<th>by establishing sites in the South and Deep South, including premiere historically black colleges and universities (HBCUs)</th>
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<td><strong>Bridged partnerships</strong></td>
<td>between internal (clients) and external KOLs (providers, scientists, administrators) by identifying synergies, developing materials, and collectively creating impact.</td>
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<td><strong>Developed Precision Messaging™</strong></td>
<td>through infographics, strategic communication, information channel creation, and data analytics/visualization through established networks.</td>
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<td><strong>Trained community ambassadors</strong></td>
<td>to liaise between cancer experts and their communities.</td>
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<td><strong>Reimagining real world clinical trials</strong></td>
<td>to increase participation of underserved minorities for patients, sponsors, and regulators (<em>On-going research</em>)</td>
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NEST appears to be well on its way to becoming the gold standard for how RWD should be collected and analyzed to become RWE. That said,

1. Health centers included should intentionally recruit health systems that primarily serve uninsured and underserved populations.
   a. Mandate quotas and provide incentives e.g. breakthrough designation for inclusion of diverse and vulnerable populations RWE

FDA seems inaccessible to the general public (excluding patient advocacy groups/patient advisory committees)

1. Increase public interaction with underserved communities to show trustworthiness to the public.
Recommendations

RWT is a new opportunity for Sponsors to include data of diverse populations,

1. Establish sites for subject recruitment where diverse populations reside/community/academic centers
2. Limited benefits to participants that complete the study including but not limited to free product, access to providers for related follow ups, etc.
3. Implement Health Equity best practices through out the TPLC
4. Intentionally address protections provided for subject’s data
Health 360x study showed that African American non-medical/lay coaches were just as effective as medical ones, that said:

1. Create study community ambassadors to liaise between the sponsor and subjects to simultaneously bridge communication and build trust
2. Provide education about PDUFA, regulatory protections, and patient advocacy committee opportunities
3. RWE trainings for minority focused providers/companies that aim to capture RWD/PGHD
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