

AMIA Annual Symposium 2022 Workshop on

Incorporating Digital Health into Clinical Workflows: The Future of Longitudinal, Remote, and Assisted Patient Monitoring

Post-Workshop Materials:

Case Studies using DBDP Modules

- [Validation of HR extracted from consumer wearables against ECG](#)
- [Sleep tracking using wearables](#)

Slides from Workshop

- https://drive.google.com/file/d/1WMxKmQNja4sNxowqJSZTTHRZRKWCLyi9/view?usp=share_link

Reference Materials:

Learn about the DBDP

What is Digital Biomarker Discovery Pipeline (DBDP)?

- [Digital Biomarker Discovery Pipeline](#) (4 min read)
- Bent, B., Wang, K., Grzesiak, E., Jiang, C., Qi, Y., Jiang, Y., . . . Dunn, J. (2021). The digital biomarker discovery pipeline: [An open-source software platform for the development of digital biomarkers using mHealth and wearables data](#). Journal of Clinical and Translational Science, 5(1), E19. doi:10.1017/cts.2020.511

Learn about open initiatives:

- Official website to [Open mHealth](#)
- Open mHealth github repo: [schemas](#) and [OMH-to-FHIR IG](#)
- Official website to [Open DBDP](#)
- Official website to [EXTEND Trial](#)
- Interoperability standards: official website to [FHIR](#)
- IEEE P1752 Open Mobile Health Data Working Group <https://sagroups.ieee.org/1752/>
- DiMe's [Sensor Data Integration project](#) includes a [Library of Standards](#) and an [Interactive Landscape of Standards](#)

Learn about Digital Health and Clinical Care Integration

- Zeng B, Bove R, Carini S, Lee J, Pollak J, Schleimer E, Sim I. Standardized Integration of Person-Generated Data Into Routine Clinical Care. JMIR Mhealth Uhealth 2022;10(2):e31048. URL: <https://mhealth.jmir.org/2022/2/e31048>. DOI: 10.2196/31048
- "IEEE Standard for Open Mobile Health Data—Representation of Metadata, Sleep, and Physical Activity Measures," in IEEE Std 1752.1-2021 , vol., no., pp.1-24, 16 Sept. 2021, doi: 10.1109/IEEESTD.2021.9540821. <https://ieeexplore.ieee.org/document/9540821>

Tools, Software, Workspace, and Dataset used for the Workshop

Learn about Python (easy tutorials)

- Google colaboratory [data science](#)
- Google colaboratory [visualization](#)
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Learn about the STEP Dataset (will be used for our case studies)

- Bent, B., Goldstein, B.A., Kibbe, W.A. et al. [Investigating sources of inaccuracy in wearable optical heart rate sensors](#). npj Digit. Med. 3, 18 (2020). doi: 10.1038/s41746-020-0226-6