

Digital Engagement With A Patient Smartphone App And Text Messaging Is Associated With Increased Compliance In Patients Undergoing Long-Term Continuous Ambulatory Cardiac Monitoring

Anthony J. Battisti PhD¹, Joshua Raley MS¹, Alice Fan MBA¹, Relana Pinkerton PhD¹,
Hardwin Mead MD², Mintu P. Turakhia MD, MAS³

¹iRhythm Technologies, Inc, San Francisco, CA; ²Silicon Valley Cardiology, East Palo Alto, CA

³iRhythm Technologies and Stanford University, San Francisco, CA

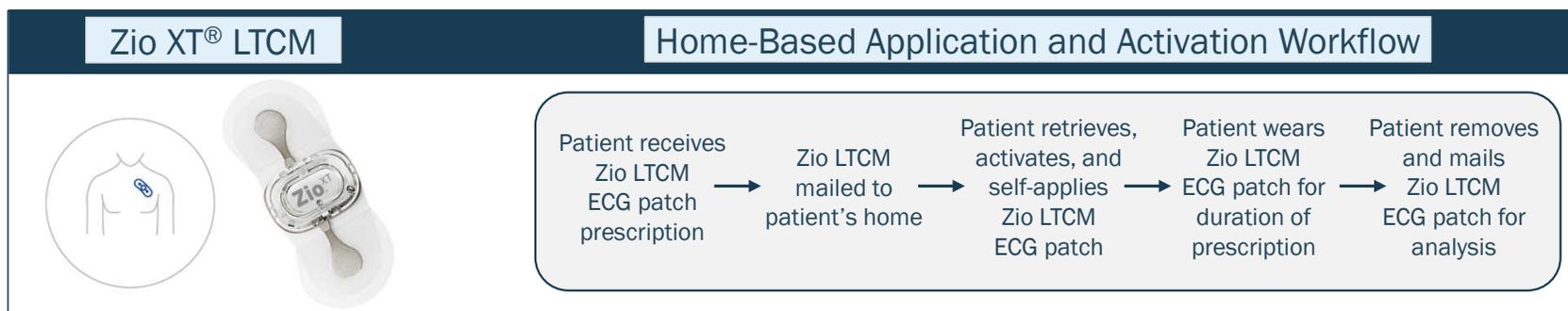
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Disclosures

- AJ Battisti, Joshua Raley, Alice Fan, and Relana Pinkerton are employees of iRhythm Technologies, Inc.
- Dr. Turakhia is an employee and corporate officer of iRhythm Technologies. In the last 36 months, he has had research support from VA, NIH, AHA, Apple, Bristol Myers Squibb, Bayer, Sanofi, and Gilead. He has equity in Connect America, Forward, Evidently, AliveCor, Hippocratic.AI, RCE Medical, PocketRN, and iRhythm
- Dr. Mead has received consulting fees from Medtronic and iRhythm Technologies, Inc.

Background

- Long-term continuous ambulatory cardiac monitoring (LTCM) has been shown to be superior vs. other modalities; Zio XT had highest adjusted odds of arrhythmia diagnosis and lowest adjusted odds of retesting¹
- Shift to home-based activation and placement of diagnostics was accelerated by the COVID-19 pandemic



- A recent study of >29,000 home-based Zio LTCM devices has shown comparable wear times and analyzable data vs. in-clinic application, but lower device return rates (91% vs. 97-98%)²
- Digital engagement strategies could improve compliance (activation, wear and return) for home-based device application

1. Reynolds MR, et al. Comparative effectiveness and healthcare utilization for ambulatory cardiac monitoring strategies in Medicare beneficiaries. *Am Heart J.* 2024;269:25-34. doi: 10.1016/j.ahj.2023.12.002.
2. Goergen JA, et al. Comparison of Data Quality and Monitoring Completion Rates Between Clinic and Self-Applied ECG Patches. *Heart Rhythm* 2023;20(3):407-413. doi: 10.1016/j.hrthm.2022.11.020.

Objective

- Evaluate association of **MyZio®** and **SMS Text Opt-In** digital interventions to compliance outcomes

Methods

- Developed Two Optional Digital Intervention Tools for use with Zio® LTCM (iRhythm Technologies, Inc.; San Francisco, CA)
 - MyZio® 2.0 app designed to improve patient engagement and compliance (activation, wear, device return)
 - SMS Text Opt-In
- Data Analysis
 - US patients shipped Zio LTCM between Oct 1 and Apr 3, 2024, following launch of MyZio 2.0
 - Operational/Quality Assurance de-identified data
 - Independent analysis by iRhythm biostatistics, data management and science teams
- Calculated compliance rates stratified by use of one or both digital interventions

MyZio 2.0 Digital Intervention

MyZio MyZio
Symptom logging for MyZio [Get](#)

★★★★★23K ⓘ iRhythm Technologies, Inc #45 Medical

App Activation Tracking Registration Self-Application Wear

MyZIO



Welcome to MyZio

We're excited to have you join us. MyZio will be your guided companion throughout your wear time.

Your Monitor is on the Way!



It's scheduled for USPS delivery
April 12, 2021

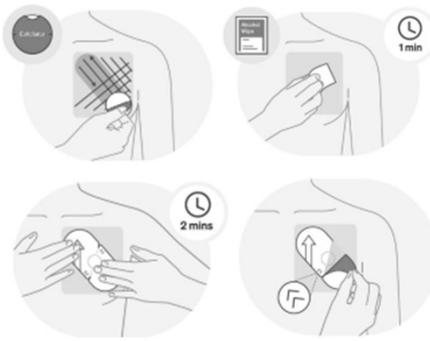
[Track Package](#)

Register Your Monitor



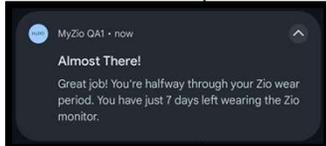
Register your monitor to add it to your account

[Register Your Monitor](#)



10
Days To Go

You can remove your Zio on **Oct 28, 2024**



Log Symptoms Removal Return for Analysis

How are you feeling?

Chest Pain Fainted

Irregular Beats Light Headed

Racing Short of Breath

Other

[Continue](#)

What were you doing?

Exercising Lying Down

Sitting Sleeping

Standing Walking

Other

[Continue](#)

When did you feel the symptom(s)?

September 17, 2018 at 9:30 PM

How long did you feel the symptom(s)?

1 min or less 10 min or less 1 hour or less More than 1 hour

[Save](#)




Return Your Monitor



It is time to remove and return your last worn monitor

[Return Your Monitor](#)

SMS Text Digital Intervention

- Developed in parallel to MyZio
- A simple solution; not all patients download apps
- Text opt-in patients receive SMS updates on delivery, billing, and device return



Beginning of Wear

Welcome to the Zio service.
Avoid showering and sweating in the first 24 hours. For more tips, download the MyZio app (<http://myzio.com>) or call [888-693-2401](tel:888-693-2401). Reply STOP to unsubscribe

End of Wear

Reached the end of your Zio wear period? If so, drop your Zio in any USPS mailbox ASAP so we can send your data to your healthcare provider. You can also schedule a USPS pickup for free (<http://ziopickup.com>).
Questions? Call [888-693-2401](tel:888-693-2401).

Results

Digital Interventions and Compliance Outcomes in 169,131 Patients With LTCM Ambulatory ECG Home-Based Application

Digital Intervention	Devices Registered (% of Total; n=169,131)	Compliance (% with Device activation, wear and return at 45 Days)	Odds Ratio (95% CI) ²	p-value ³
No MyZio And No Text Opt-In ¹	52,670 (31.1%)	39,318/52,670 (74.6%)	Reference category	--
MyZio Without Text Opt-In ¹	11,241 (6.6%)	10,090/11,241 (89.8%)	2.98 (2.79 to 3.17)	< 0.001
Text Opt-In With No MyZio	74,396 (44.0%)	63,239/74,396 (85.0%)	1.93 (1.87 to 1.98)	< 0.001
MyZio With Text Opt-In	30,824 (18.2%)	29,214/30,824 (94.8%)	6.16 (5.84 to 6.50)	< 0.001

¹Patient did not elect to receive text messages.

²Odds Ratios calculated for Devices returned/Devices not returned vs. no digital intervention reference (No MyZio and No Text Opt-in).

³Chi Square test used to report associated p-values compared to Reference (no intervention).

- Compliance was lowest (74.6%) when neither the app nor text messaging were used
- App use was associated with highest gains in compliance, irrespective of concomitant text messaging
- Opting into SMS text was associated with compliance improvement but was inferior to app use

Limitations

- Retrospective analysis
- Specific to patients who opted into participation
- Rates of participation by intervention were not pre-specified

Conclusions

- Dedicated patient app and SMS texting were associated with improved compliance (activation, wear, and device return), although the app had a stronger effect
- Data support use of patient digital health interventions in home-based diagnostics and post-implementation evaluation of outcomes
- Underscores power of product operational metrics for evaluation of outcomes, especially for digital tools