

Profile | Byteflies

- Remote patient monitoring solutions provider
- Hardware, cloud software, analytics, provider dashboards, patient apps, and logistical services
- Solutions for COVID-19 at-home care, cardiac monitoring, and seizure monitoring

Alicia's Story

Alicia is a 64-year-old patient discharged directly to her home following a transient ischemic attack (TIA). Her virtual-first care (V1C) cardiologist is concerned about atrial fibrillation (AF) and wishes to monitor her for 1-4 weeks.



Intake and Onboarding

It is difficult for Alicia to come into the office to get set up with an electrocardiogram (ECG) monitoring device because of her full-time job. The practice has a relationship with a remote patient monitoring (RPM) company to monitor appropriate patients using wearable digital technology. Her cardiologist prescribes CardioCare@Home after verifying Alicia's insurance will cover the service.

Byteflies ships the digital technology kit to Alicia's home, and contacts Alicia and her caregiver to set up a video conference call to educate her on how to use the device. This process consists of using a wearable patch and a base station to charge the wearable and upload recorded data to the cloud (provided the patient has an internet connection; otherwise data is recorded locally). She will wear the device for approximately 1-4 weeks.



Longitudinal Co-Management

As long as the base station is connected, the continuous ECG signal is uploaded securely to the Byteflies Cloud twice daily. Byteflies will contact Alicia if no data or low-quality data is uploaded to verify if there is a problem. High-quality data are processed and made available to her cardiologist. The annotated data will allow her cardiologist to make a quick clinical assessment if AF was observed, typically once daily or once every other day. The cardiologist can decide to stop monitoring Alicia if clinical AF or other important cardiac risk factors were observed to start an appropriate treatment plan to prevent complications, such as a stroke or an additional TIA. Byteflies store all recorded data in a de-identified manner that can be linked back to the medical record system of the cardiologist. The historical data will be available to the practitioner if a decision is made to start a new monitoring period to verify if cardiac risk factors have improved or quantify the effect of an anti-arrhythmogenic treatment.

How it Works

A provider will typically contract with Byteflies as a vendor and data processor. Currently, the provider is reimbursed for medical services rendered, and part of those funds are transferred to Byteflies for their services. As it stands in Belgium, where this system is operational, and in the U.S. today, the existing fee-for-service reimbursement codes for set-up, monitoring, and analysis are a poor match for the full range of care management services this solution provides. A better alternative payment model would tie outcomes improvements and whole-person care to performance-based fee bundles.

“Byteflies Care@Home improves the delivery of care by providing the right clinical insights at the right time, in a collaborative effort with ‘brick and mortar’ and virtual providers.”

- Benjamin Vandendriessche, CMO Byteflies

TAKEAWAYS FOR EFFECTIVE CARE TRANSITIONS



Bi-Directional Communication

Patient and caregiver education on technology use is key to successfully using RPM to improve care outcomes and reduce unnecessary downstream care transitions.

Appropriate access to timely, annotated data is a necessary condition of success for co-management powered by RPM.

Fit-for-purpose monitoring approaches that combine the value of high-density sensor streams with appropriate processing and labeling are critical to using RPM to drive better clinical decision-making in the context of longitudinal disease management programs.



Incentive Alignment

Current fee-for-service payment schemes for RPM inadequately capture the value of outcomes improvements and reduction in avoidable healthcare services utilization that are possible when these solutions are integrated with effective disease management programs.



Visit the [V1C Care Transitions Toolkit](#) or view additional [V1C Care Transitions Case Studies](#).