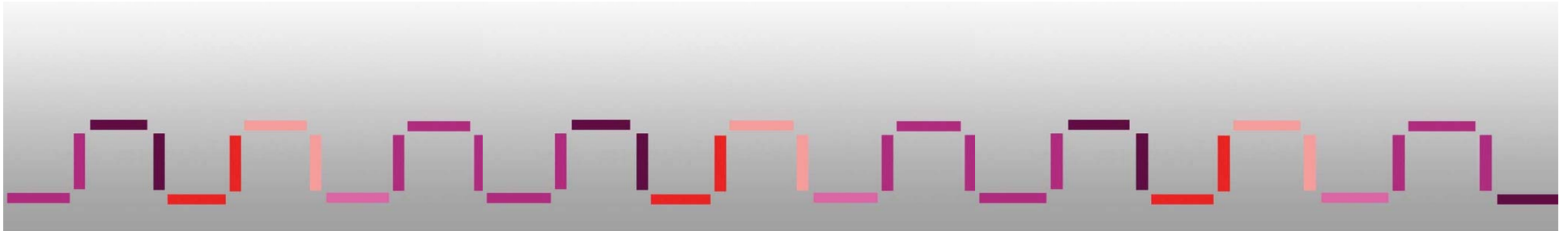# *Implementing interventions and collecting data electronically is becoming the norm.*
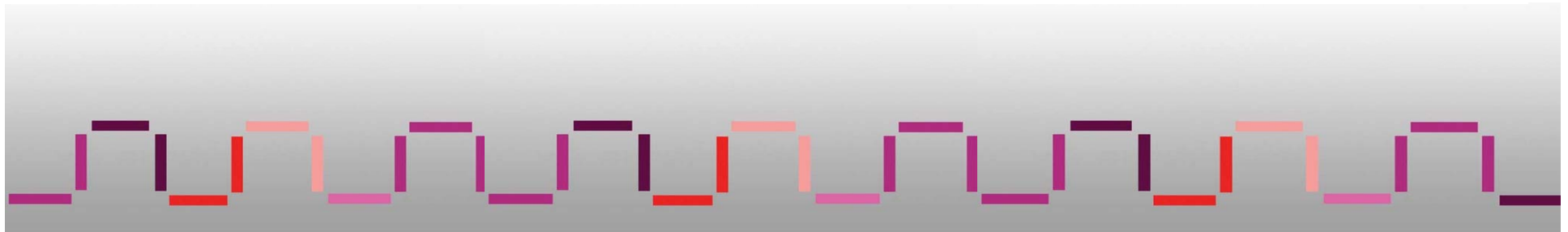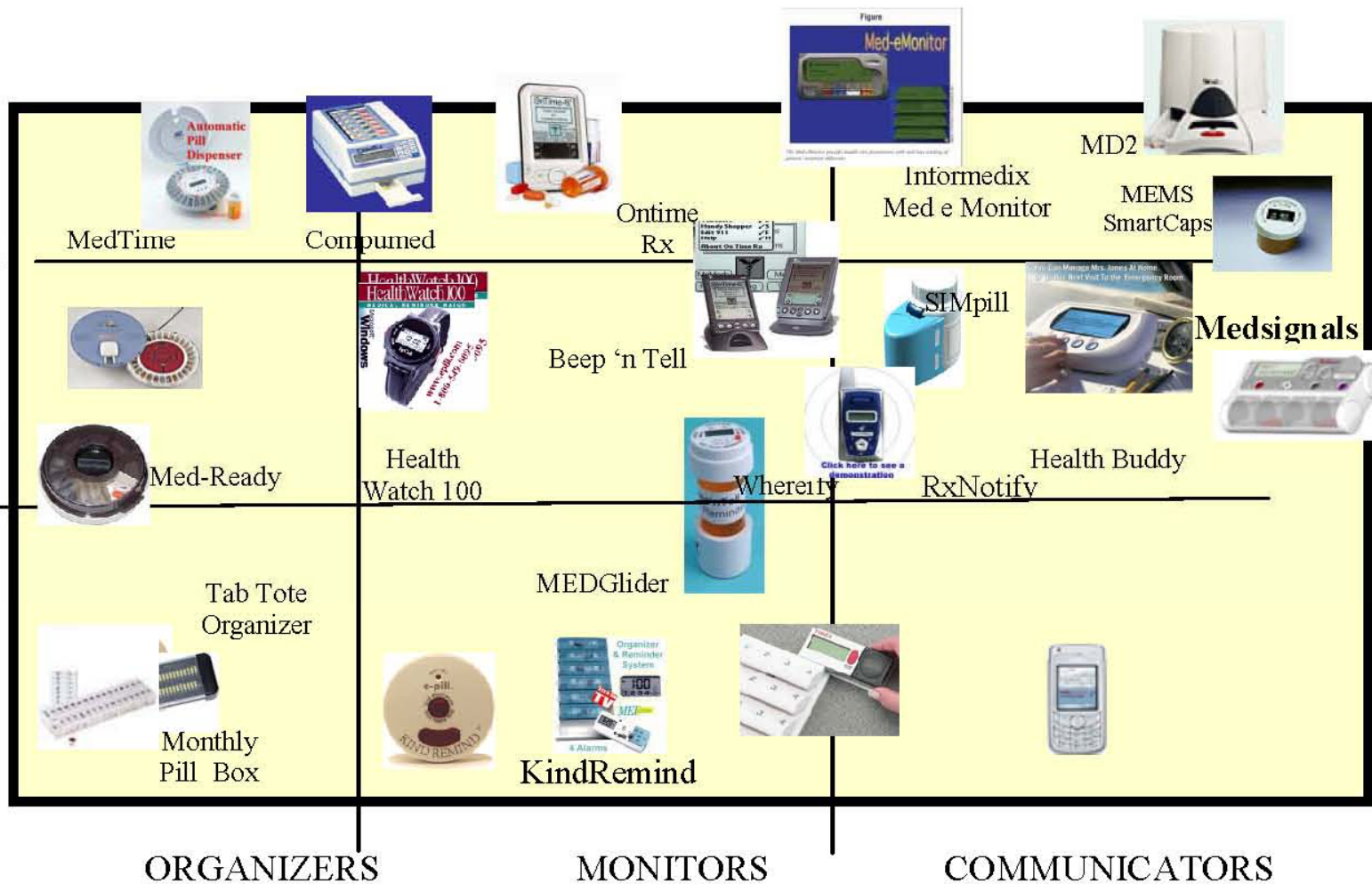
1. What capabilities do these technologies provide? Which apply to your work?

2. Where are the trends moving?

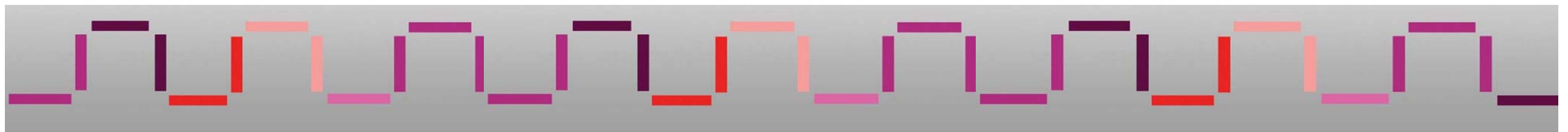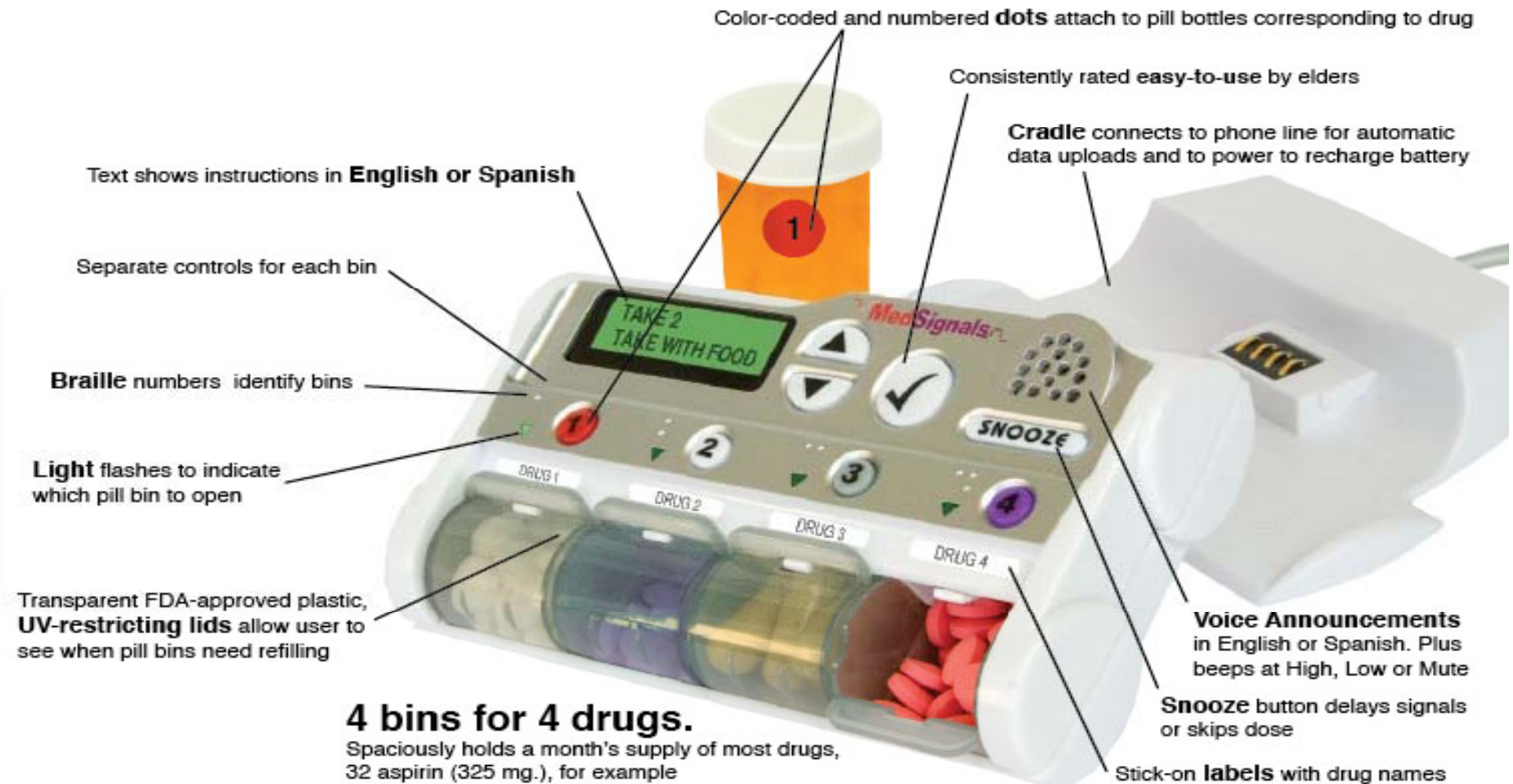3. How to design state-of-the-art/science interventions

MedSignals®

High End
$250- $3,500

MedTime · Compumed · Ontime Rx · Informedix Med e Monitor · MD2 · MEMS SmartCaps

HealthWatch 100 · Beep 'n Tell · SIMpill · Medsignals

Mid Range
$61 - $250

Med-Ready · Health Watch 100 · Wherify · MEDGlider · RxNotify · Health Buddy

Low End
$5 - $60

Tab Tote Organizer · Monthly Pill Box · KindRemind

ORGANIZERS · MONITORS · COMMUNICATORS

Most MedSignals® features resulted from researcher needs

MedSignals®

Color-coded and numbered **dots** attach to pill bottles corresponding to drug

Consistently rated **easy-to-use** by elders

Cradle connects to phone line for automatic data uploads and to power to recharge battery

Text shows instructions in **English or Spanish**

Separate controls for each bin

Braille numbers identify bins

Light flashes to indicate which pill bin to open

TAKE 2
TAKE WITH FOOD

MedSignals

SNOOZE

DRUG 1   DRUG 2   DRUG 3   DRUG 4

Transparent FDA-approved plastic, **UV-restricting lids** allow user to see when pill bins need refilling

Voice Announcements in English or Spanish. Plus beeps at High, Low or Mute

Snooze button delays signals or skips dose

4 bins for 4 drugs.
Spaciously holds a month's supply of most drugs, 32 aspirin (325 mg.), for example

Stick-on **labels** with drug names

Programmable
- ## Online
- ## On the device
- ## Via your laptop

- Point and Click on the **_Webpage._** The phone downloads new settings to the device from your desk.

- On the **_device_** using 3 buttons.

- From your own computer with a **phone simulator** (known as an I-Set), synchronize the device with your new settings

When an analog phone line isn't available in your office, the MedSignals® I-Set™ provides quick office set-ups.

- Bypass phone, uploads straight to server when computer is online.
- Program many devices for a protocol in minutes.
- Download devices in office visits, without waiting for phone dial-ups.
- Access website globally without int'l phone costs.

MedSignals®

When patients need monitoring on more than 4 drugs, multi-packs can be integrated into common data reports.

2-Packs (8 drugs)

3-Packs (12 drugs)
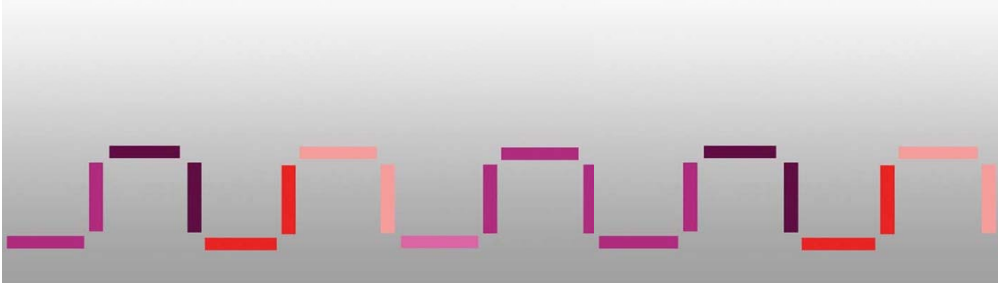
Trends in Home-Based Monitoring:

• Instant alerts, notifications to care team
• Wireless (embedded cell phone chips) in devices –
not Bluetooth-ing to individuals' cell phones.
• Co-morbidity drugs, with reports to multiple

hubs (MedSignals, AT&T Actuarius, etc.)
• Nurse-led Call Centers for exception handling,
barriers management
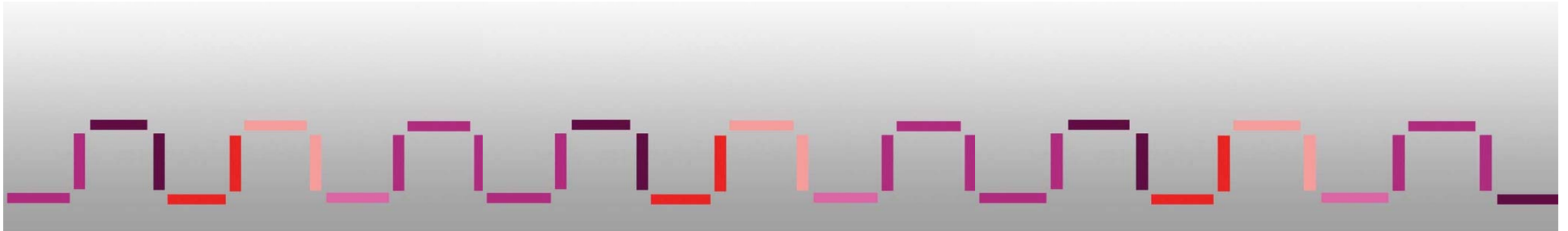
Opportunities for Researchers:

- Co-morbidities: comprehensive disease management
- Non-standard use of bins: methadone weaning
- Event reminders beyond meds: "virtual" bins
- Non-pill medication forms (blister packs, injections, refrigerated drugs)
- Solar-powered devices (homeless, African HIV)
- Cost-effectiveness and comparative effectiveness measures
- Non-English languages
- Call center and phone IVR feedback loop
- Apps for smart phones
- RFID-tagged drugs and other diversion technologies
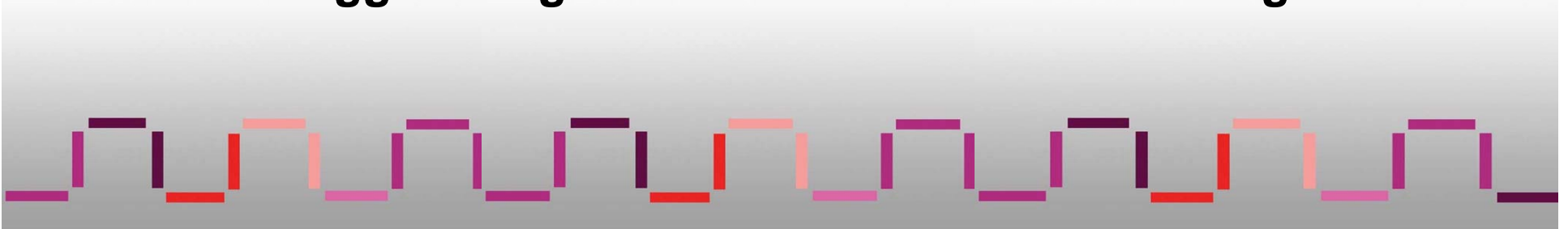
Contact Information:

Vesta Brue

Founder/CEO

vesta@medsignals.com

Phone: 210-222-2067

MedSignals LLC

217 Alamo Plaza

San Antonio, TX 78205

MedSignals® Functions in Intervention Mode

- Records each pill-taking event in memory

- Signals at pill times in 4 multi-sensory ways (**beeps, flashing, text, VOICE**).

- Voice announces how many pills to take and how to take them (9 optional warnings) in **English, Spanish** (others coming.)

- Provides feedback at the press of a button on today's usage (last, next, and how many pills today) in the Intervention mode.

- Uploads lid opening data to server database and imports to your database **or the patient's Electronic Medical Record**

- Displays Smart Charts on patient's secured, customized web page

- Dashboards and aggregate charts help study managers **quickly respond to non-adherents** (using your own criteria) for exception handling.

MedSignals® Functions in Control Condition Mode

- Turn off all signals and patient feedback at the push of a button. Tracks natural pill-taking patterns thereafter.

- Records each lid-opening event in memory

- Automatically uploads lid opening data to server database, imports to your database or the patient's electronic record

- Charts activity on participant's secured web page to quickly spot malfunctions or participant attrition. Dashboards and aggregate charts help study managers quickly respond to non-adherents (using your own criteria).
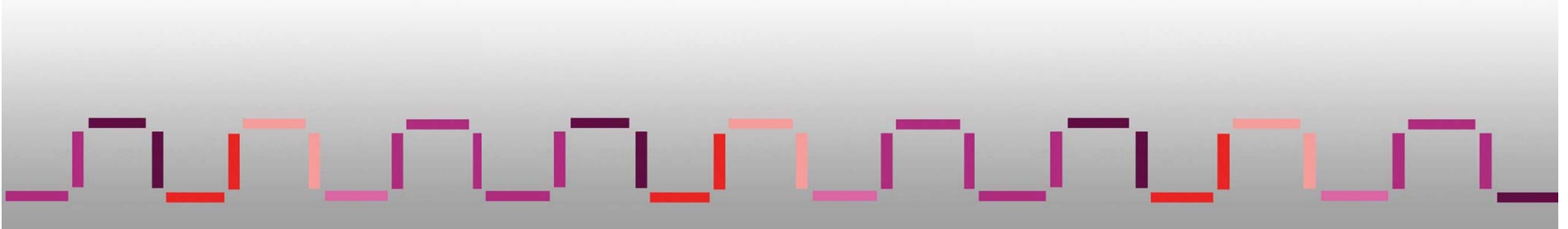
Unique Benefits to Researchers:

- Improve **data collection reliability and ease**. Reduce attrition. Identify and remedy non-performing participants early. Export data anytime, any way. .
- Conduct **polydrug** studies efficiently. Track multiple drugs simultaneously.
- **Set devices remotely.** Two-way communications lets you change settings when prescriptions change, without an office visit.
- **Reuse devices** with new participants, new studies. Rechargeable battery should last years.

>>> more >>>>
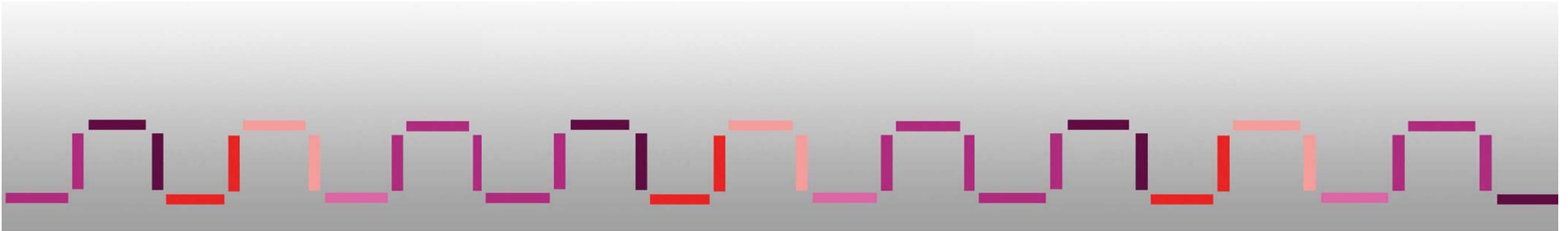
- Convert quickly from **Intervention** to **control condition** data collection
- **Bluetooth** **connectivity from other home-based bio-monitors**, capturing real-time metrics.
- **Cut costs, labor**, and participant **burden**.
- Continuous data collection enables **adaptive trials**.
- Execute **customized study interventions** with reminder signals.
- Match device models and functions to your study protocols.
- Choose frequency of uploads to **match your needs and budget.**