

The background of the slide features a photograph of a large, classical building with a prominent white dome, likely a state capitol building. The sky is a clear, bright blue. In the foreground, there are out-of-focus branches with yellow and orange autumn leaves, suggesting a fall setting. The text is overlaid on a semi-transparent white rectangular box with a thin orange border.

Development of a Sensor-Enhanced Care Coordination Approach to Facilitate Aging in Place:

Age-friendly, Smart, Sustainable, and Equitable Technologies for Aging in Place (ASSETs for AIP)

Presented by Ashley Roberts Dulany, MOT, OTR/L, CAPS, ADAC (she/her)

And Elizabeth Conrow, RN, MSN (she/her)

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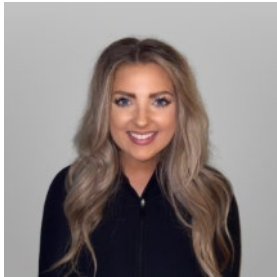


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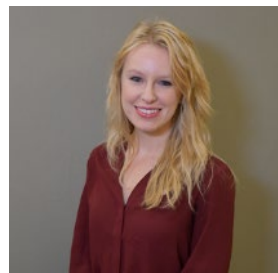
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Affiliated with Show-Me Home A Money Follows the Person (MFP) Program

- Helps Medicaid-eligible Missourians who are age 63 or older or have a disability live more independently by:
 - Help them move out of a nursing facility and transition to living independently in their community
 - Allowing them to choose where they live and get helpful services
 - Providing them with person-centered, high-quality services in the community



Current Eligibility Criteria for ASSETs for AIP

- Discharged from the Show-Me Home program
 - (originally must have discharged from Show-Me Home at least one year ago)
- Live within a three-hour travel range from Columbia, MO
 - (originally must live in designated rural counties)



Recruitment Strategies

Partner

- Partner with state agencies and transition coordinators for up-to-date client list

Reduce

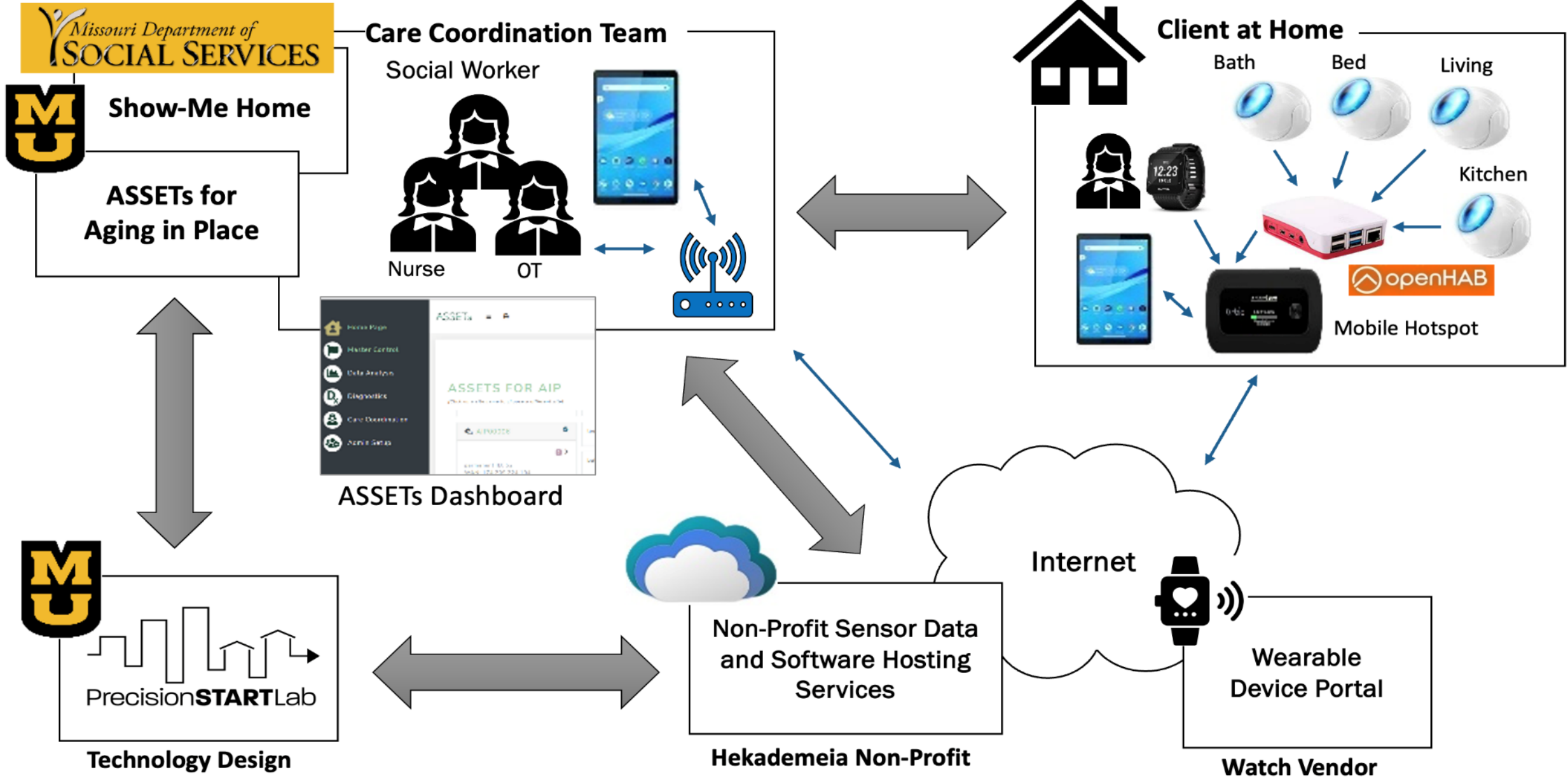
- Reduce time from MO Show-Me Home program discharge (to <1 year)

Extend

- Extend recruitment reach beyond rural counties

Connect

- Connect ASSETs for AIP, MO Show-Me Home and University of Missouri to build trust



Team Composition and Skills



Care Coordinators and Manager

- Installation Process via Fully Modular Sensors
- Client Outreach and Management



Technology Test & Planning

- Visualization
- Technology proof-of-concept testing



Interactive Resolution

- Team Weekly Meeting with 24/7 Channel for a speedy resolution



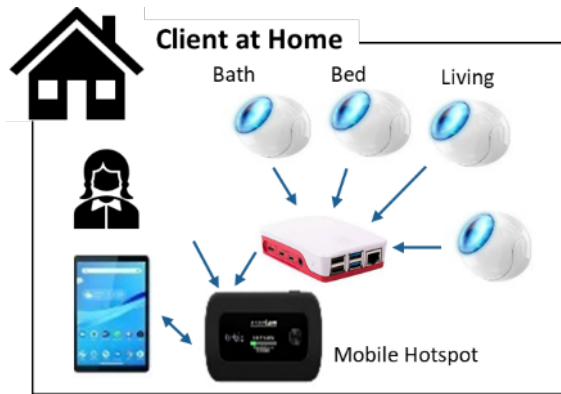
Project Coordinator



Novel Approach: Sensor-Enhanced Care Coordination

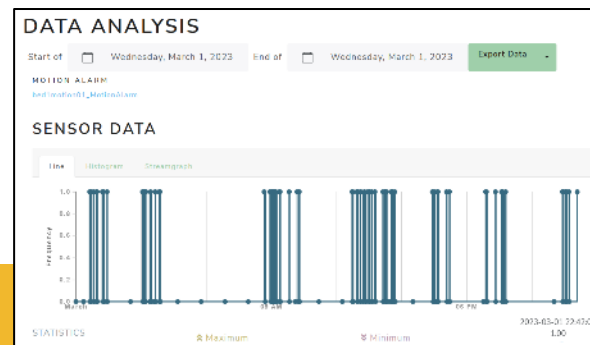
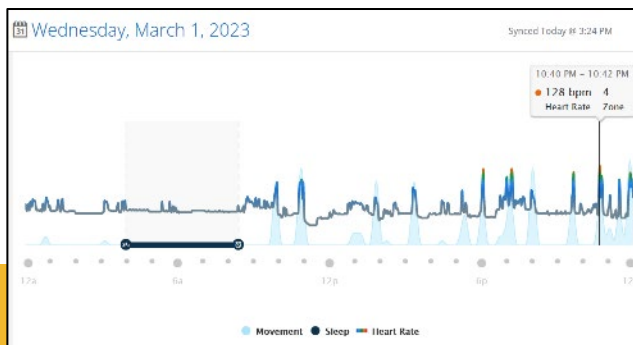
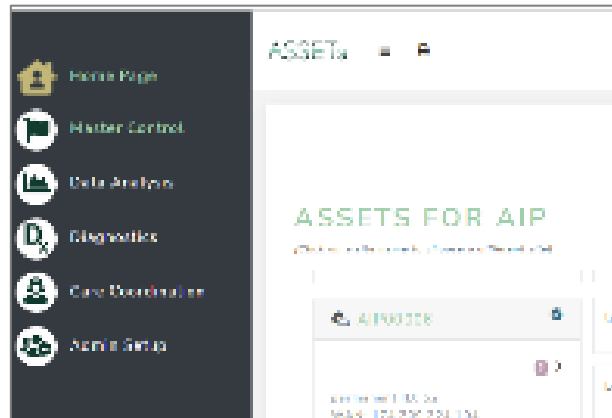
- Initial Assessment: Care Coordinator assigned dependent on client goals
 - However, all work as a team to consult with one another and follow clients
- Multiple weekly team meetings
- Routine contact with each client
- Quarterly client interviews and assessments
- Strengths-based, client driven approach
 - Assess-health related conditions
 - Set goals
 - Empower change
 - Monitor Progress





Novel Approach: Sensor-Enhanced Care Coordination

- Sensor generated health information is accessible on the ASSETs Dashboard for review by the Care Coordinators.
- The clinical team provides ongoing monitoring of daily activity to identify early changes in routine that may indicate the development of a health problem.
- The team works with clients to understand the change and formulate a plan of action.

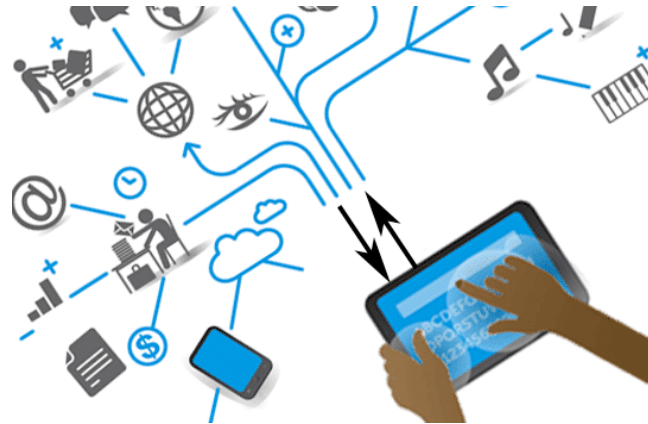


Overcoming Key Challenges to Technology



Internet Connectivity

- Client Internet Status
- Mobile Hotspot



Sustainability

- Equipment
 - Adaptability
- Service
 - Internet



Adoption and Use

- Privacy
- Remote Access
- Technology Literacy (Initial Instruction)

Barriers and Facilitators to Care Coordination

Facilitators to Change

- Thorough initial assessment
- Adequate social and community support systems
- Reliable internet access
- Client access to their own data
- Knowledge of community resources

Barriers to Change

- Low income and lack of client resources
- Lack of transportation
- Client feels disempowered that change can happen
- Lack of communication with program and support people



ASSETs for AIP
Case Study Example



Case Study #1: Mark*

- 62-year-old widowed male that lives alone
- 5'10" - 355 pounds
- Health status: COPD, CHF, DVT, sleep apnea, pre-diabetes
 - currently taking 12 medications
 - On oxygen and uses CPAP
- Receives meals 5 days/week
- Requires assistance with house cleaning and laundry
- At initial assessment: recovering from broken wrist after tripping on oxygen tubing and falling
- Client goals:
 1. Remain living independently in home
 2. Lose weight
 3. Become more involved/volunteer



Case Study #1: Progress

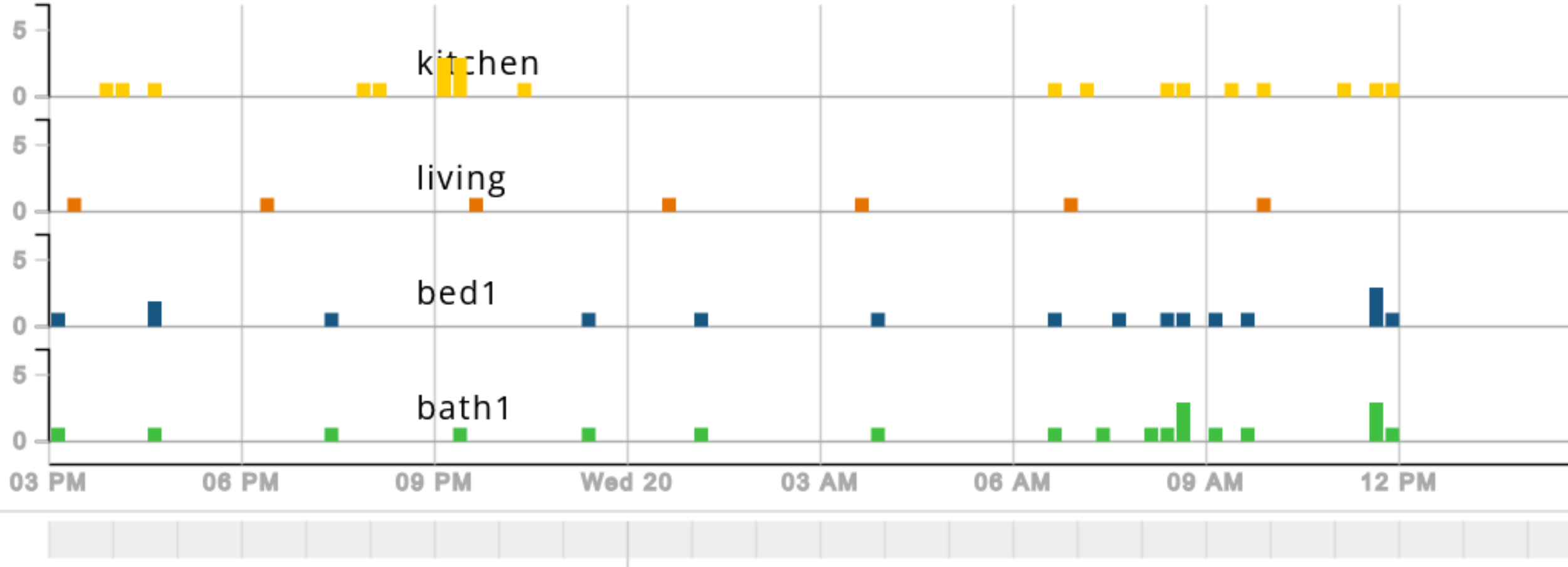
- Initial assessment: provided fire extinguisher for home safety and nonslip shower stickers
- Watch Data: showed heart rate spikes around 120 bpm, up to 180 bpm
 - Coordinator called client to investigate, reported findings to RN coordinator
 - Determined that client experiences increased heart rate with physical activity (carrying groceries)
 - Client has COPD and CHF - Recommended follow up with pulmonology team and cardiologist
- Sensor Data: shows active and appropriate motion in each room of home
 - No concerns or deviations from daily pattern
 - Notifies coordinators when he plans to be out of town or visiting a friend
- Weight loss: client has started exercising at a gym 3x/week
 - Client engages in smart watch dashboard and monitors his own progress
 - Client has lost almost 50 pounds since enrolling
 - Eats healthier foods and decided to stop drinking alcohol
- Involvement: became a volunteer member of HUD (Housing and Urban Development) Board
- Social life: in a new relationship and has good relationship with family

Daily Heart Rate Data from Garmin



Daily Motion Data

All motion sensors &



Case Study #2: Mary Beth*

Client's residence:
Porch in need of
repair for safety
concerns



Question: “What would you like to do that you don't do now?”

Answer: “Gardening; walk to the mailbox”

Question: “What do you need to do these things?”

Answer: “Attention to porch area; safety rails, ramp is uneven and in poor condition, rotting porch”.

Case Study #2: Mary Beth's Ramp Installation




ADA ramp
construction
completed on 8/16/23





ASSETs for AIP Moving Forward

- Wide geography
 - Need partners that are geographically dispersed
- Could be used as an add-on service for direct service providers and clients
 - Additional layer of resources to enhance client's overall health and wellbeing
 - Sensors that can identify changes to client's baseline patterns
 - Professional expertise to augment current services

The background of the image is a photograph of the Missouri State Capitol building, featuring a prominent white dome with a dark blue roof and a white spire. The building is set against a clear blue sky. In the foreground, there are out-of-focus yellow and orange leaves from trees, suggesting an autumn setting. A yellow text box with a thin orange border is centered over the image, containing the following text.

Questions or Comments?

If you know someone who is
eligible for our services, please
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