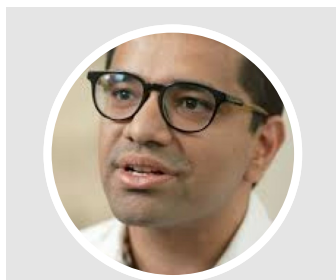


CARE ENGLAND WEBINAR CO-PANELLISTS

# Redefining Overnight Care Model

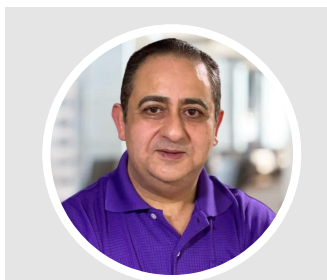
A strategic conversation on establishing acoustic AI monitoring frameworks, enhancing overnight clinical safety, and eliminating manual sleep disturbances.



**Prad Thiruvengatanathan**

FOUNDER & CEO

Earzz Ltd



**Raj Sehgal**

CEO & DIRECTOR

ArmsCare Group



**Karen Johnson**

DIRECTOR OF CLINICAL SERVICES

Heathlands Village / The FED

CARE ENGLAND PARTNERSHIP  
BRIEFING

# Elevating Resident Safety With Acoustic AI.

We cover the clinical and operational impact across multiple care homes—demonstrating longitudinal value trends across multiple months to show sustained, compounding safety and workforce outcomes.

**THE FED** THE FED CARE VILLAGE SCALE  
HEATHLANDS VILLAGE CLINICAL VALIDATION

100+ BEDS (LARGE SCALE)



**THE FED**

**Heathlands Care Village**

Deploying non-intrusive sound monitoring to streamline night clinical safety and support staff triage across complex wings.

▼ **86%**  
NIGHT FALLS DROP



**ARMS CARE** ARMS CARE PORTFOLIO SCALE  
ARMS CARE GROUP PORTFOLIO SCALE-UP

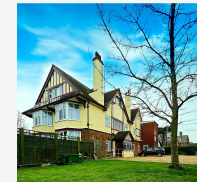
20-40 BEDS (COMMUNITY SCALE)



**ARMS CARE**  
**Terrington Lodge**  
**13 to Zero Falls**



**ARMS CARE**  
**Docking House**  
**1 Fall / 6 Months**



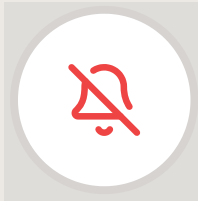
**ARMS CARE**  
**Driftwood House**  
**Zero Night Falls**

# THE HIDDEN CARE GAP

Overnight Operational Reality & Provider Considerations



**COGNITIVE  
BARRIERS**



**PENDANT  
UNDERUSE**



**OVERNIGHT  
UNSEEN RISK**

"Across varied night care regimes—from 1 or 2-hourly checks to residents requesting zero room entries—periodic patrols leave **an operational gap between visits** while risking waking sleeping residents. Acoustic AI provides continuous, non-intrusive safety reassurance—respecting resident privacy while instantly alerting staff if sounds of concern occur."

## ⚠ OPERATIONAL CHALLENGES FOR CARE TEAMS

### OCCUPANCY & CARE QUALITY

Night falls increase emergency hospital visits and lengthen recovery periods, straining care resources.

### ADMINISTRATIVE BURDEN

Unwitnessed events require lengthier incident reporting, neurological observations, and post-event audits.

### STAFF STRAIN & BURNOUT

Discovering residents post-fall creates emotional anxiety, contributing to night shift stress and attrition.

### SLEEP DISTURBANCE

Fixed scheduled room checks can wake residents, causing disorientation that contributes to daytime falls.

## PROACTIVE AI TRANSFORMATION

# Transitioning to Acoustic Triage

Replacing fixed scheduled patrols with intelligent, non-intrusive acoustic monitoring allows Earzz to alert care staff the moment sounds of concern are recognized.

1

### ACOUSTIC PATTERN LOGIC

Recognizes specific sounds of concern (restlessness, vocalisations, thuds) directly through non-intrusive audio monitoring.

2

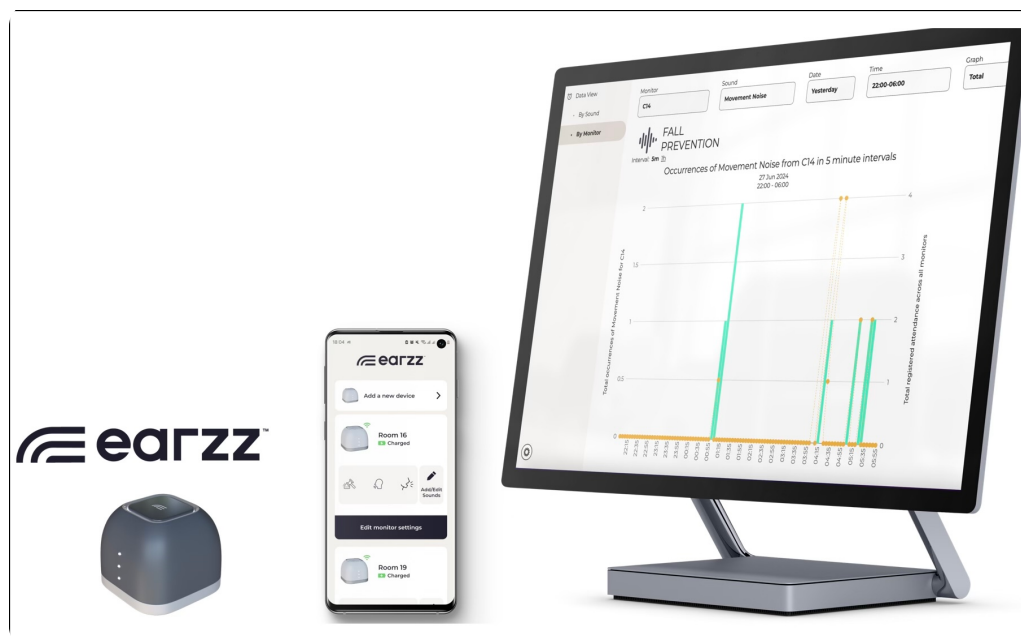
### TARGETED ALERTING SCHEMA

Smart alerts route to active carer smart handsets with customizable sensitivity thresholds to prevent alert fatigue.

3

### PRIVACY & DIGNITY PROTECTED

Analyzes acoustic sound signatures only—speech and conversations are filtered and never recorded, ensuring full privacy.



>82%

AVERAGE FALL REDUCTION

20X

FASTER CARER RESPONSE



CLINICAL CASE STUDY

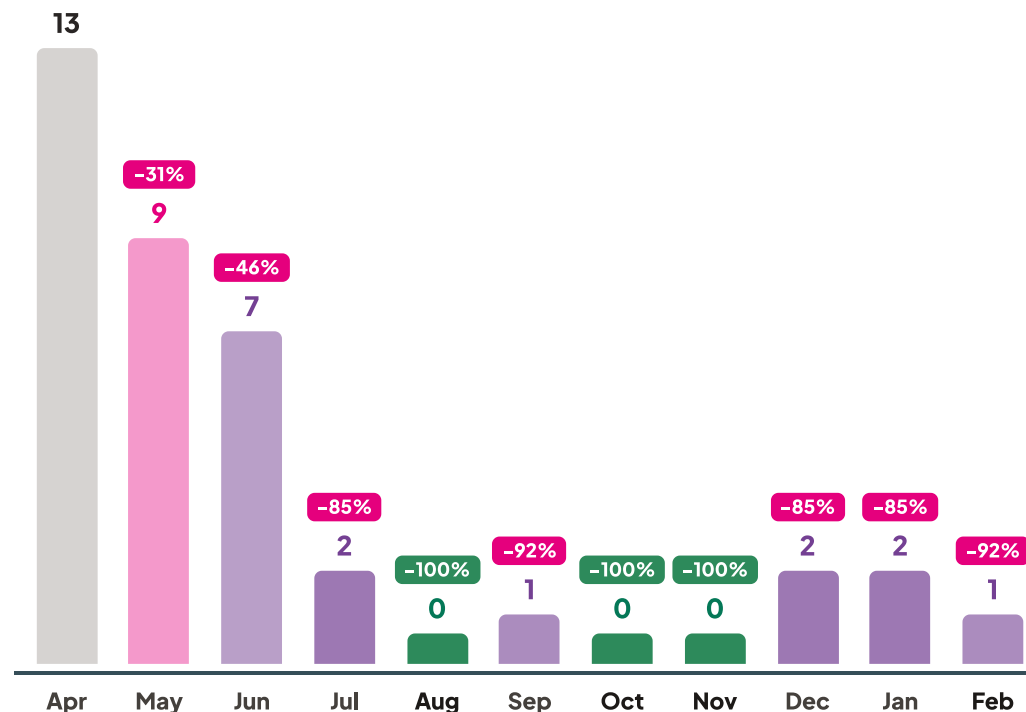
# Journey to Zero Night Bedroom Falls: Terrington Lodge

Documented across 11 months of continuous deployment. By detecting acoustic indicators early, carers were able to respond proactively and prevent bedroom night falls.



TERRINGTON LODGE CARE HOME

## 11-MONTH AUDIT: MONTHLY BEDROOM FALLS TREND



*"We have only had one fall in the bedroom since early July... the decline from an average of 13 monthly falls demonstrates the value of the acoustic system."*

— VICTORIA HARRISON, HOME MANAGER, TERRINGTON LODGE

# Clinical Outcomes: Heathlands Care Village

Validated across Month 3 performance logs. Non-intrusive sound monitoring and staff triage yield compounding safety gains compared to baseline metrics.

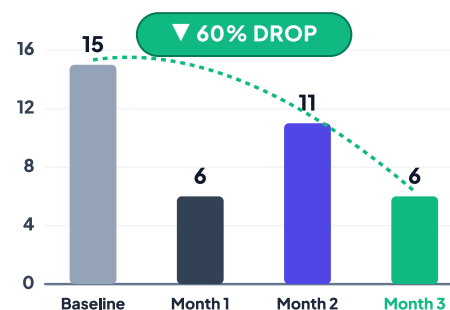


HEATHLANDS CARE VILLAGE COMPLEX

## HEATHLANDS BEDROOM FALLS DROP PROGRESSION

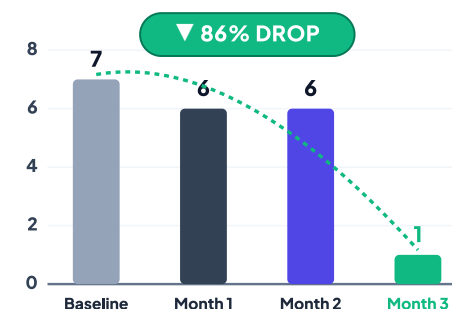
MONTH 3 AUDIT

### TOTAL PRIVATE BEDROOM FALLS



Total bedroom falls compared against baseline (15) and Month 3.

### NIGHTTIME BEDROOM FALLS (8 PM – 8 AM)



Isolating nighttime bedroom falls across baseline (7) and Month 3.



GROUP REPLICATION

# Scaling Zero Night Falls

Demonstrating systematic, replicable safety benchmarks across high-risk environments and varying care home sizes. Moving from manual room entry checks to proactive acoustic alert triage.



**DOCKING HOUSE**  
DEMENTIA CARE HUB

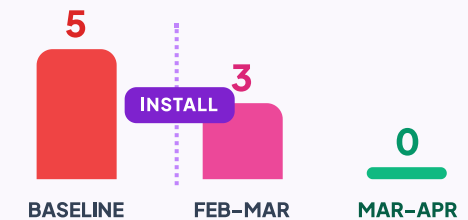
6-MONTH CLINICAL AUDIT  
**JUST 1**  
NIGHT BEDROOM FALL IN 6 MONTHS

"We are pleased to report that we have only had one bedroom fall at night so far this year across the entire unit..."

## DRIFTWOOD HOUSE

ZERO FALLS  
ACHIEVED

100% NIGHT FALLS DROP AUDIT



★ 100% UNWITNESSED FALLS  
REDUCTION REACHED

Eliminating unseen night incidents while providing peace of mind to carers.

## CLINICAL EFFICIENCY DASHBOARD

# Integrated Workflow & Workforce ROI

Replacing legacy scheduled entry checks with target-led Acoustic Triage yields massive workforce time savings while safeguarding restorative resident sleep cycles.

### AVERAGE DAILY CHECK-INS

Terrington Lodge nightly routine checks dropped from 127 down to 63 visits.

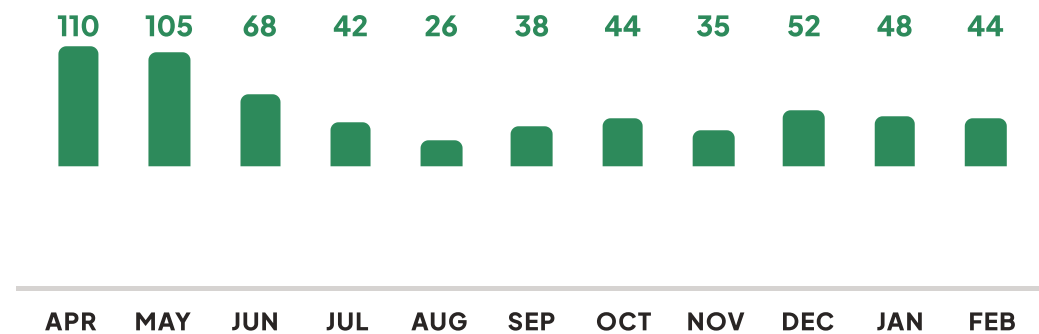
▼ **50.4%**  
CHECK REDUCTION

## 11-MONTH CLINICAL AUDIT: FALLS VS. STAFF INTERVENTIONS SUSTAINED IMPACT

### 1. MONTHLY BEDROOM FALLS



### 2. AVERAGE DAILY CHECK-INS



## ⦿ ACTIONABLE ACOUSTIC INDICATORS

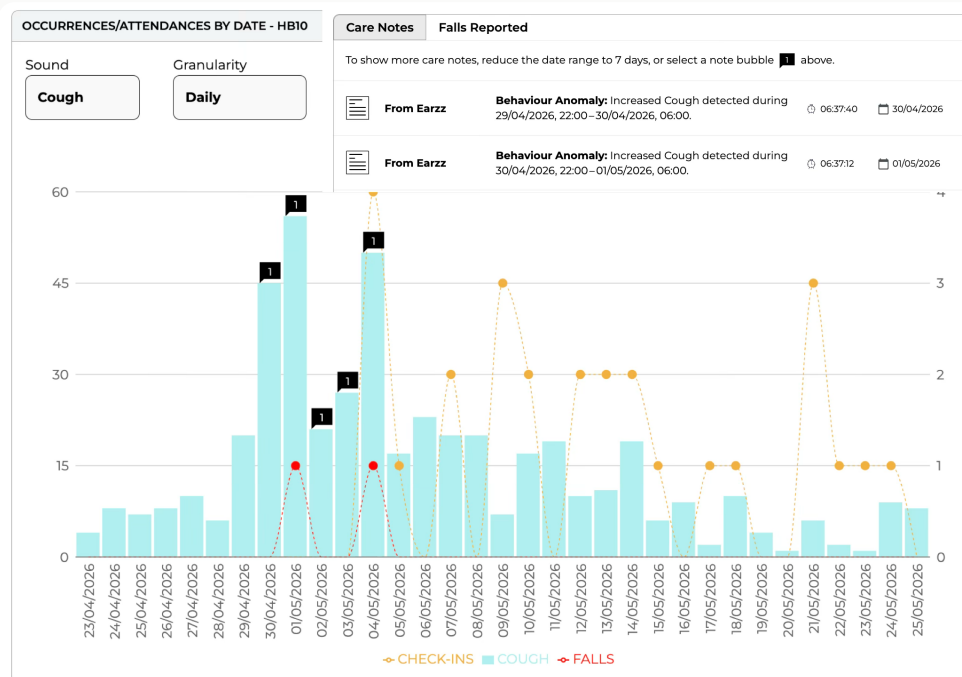
# Tracking Behavioral Precursors

Earzz provides **actionable acoustic indicators** to assist care staff. By automatically flagging restlessness, movement, or vocal calls, care teams receive early notifications to inform proactive, human-led visits and **enable proactive care planning**.

"Acoustic AI flags nighttime restlessness automatically—alerting care staff so carers can make timely, informed check-ins to support residents before a fall occurs, enabling proactive care planning."

## AUTOMATED ACOUSTIC EVENT LOG & CARE NOTES

● Live Sync



Providing objective indicators for better care, eliminating manual overnight analysis.

## ✓ ACOUSTIC INTELLIGENCE

# Ambient Acoustic Alerting

Continuous room soundscape monitoring provides care staff with early acoustic insights—allowing human carers to make timely, informed clinical decisions.

### 🔊 CAPTURING NON-VERBAL CALLS:

Vocal distress or bed agitation can be missed by pressure pads or cameras. Acoustic AI alerts carers immediately, leaving all care choices firmly in human hands.

## CORE ACOUSTIC CAPABILITIES

### 1 NON-VERBAL DISTRESS

Detects vocal distress or bed agitation directly, without requiring an active call button press.

### 2 SOUND PATTERN BASELINES

Establishes room sound baselines for each resident room, recognizing significant changes in night activity.

### 3 RESTORATIVE SLEEP

Replaces intrusive wake-up visits with targeted alert responses, preserving undisturbed sleep.

### 4 GOVERNANCE RECORDS

Flows alert response data automatically into care management logs, aiding CQC compliance trails.



## THE FED SOUND TRENDS

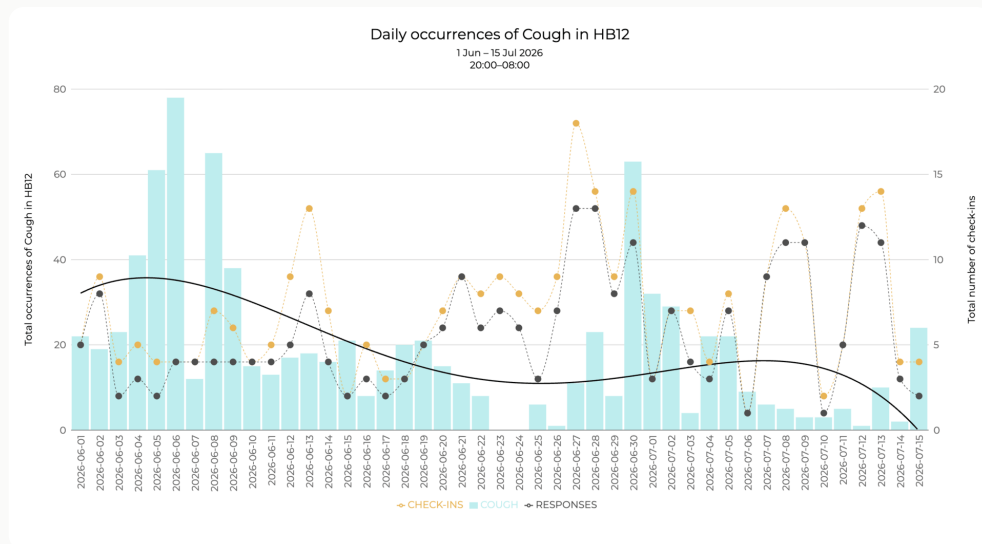
# Tracking Coughing & Health Indicators

Continuous soundscape monitoring maps room coughing frequencies—providing care teams with early indicators of localized coughing patterns and health shifts across wings.

### Early Indicators to Support Doctor Rounds:

Correlating continuous restlessness and vocal indicators gives care teams **objective data to share during GP visits and clinical reviews** (e.g., assessing early signs of chest infections or UTIs) prior to major physical deterioration.

## COUGHING OCCURRENCES & PATTERN MAPPING SPREAD\_OF\_COUGH\_HB.GIF



*Passive acoustic tracking provides clear indicators that support human clinical decision-making during GP rounds.*

👤 CHANGE MANAGEMENT & CULTURE SHIFT

# Staff Acceptance & Change Management

Key practical implementation takeaways from Raj Sehgal & Karen Johnson on managing staff mindsets and navigating initial rollout phases.

## 1 BUILDING TRUST & BUY-IN

- **Mindset Shift:** Emphasising how acoustic AI empowers carers and enhances resident well-being.
- **Open Dialogue:** Engaging care teams early through transparent, supportive pre-implementation briefings.

*"Once staff realized it helped them respond before panic set in, resistance changed into complete team backing."*

## 2 NAVIGATING TEETHING PHASES

- **First 60 Days:** Expect handset volume, threshold & habit adjustments as routine.
- **Continuous Training:** Regular night-shift refresher sessions bridge the transition gap.

*"Teething adjustments are natural with any new tech—continuous refresher sessions bridge the initial gap."*

## 3 FOSTERING SHIFT ENGAGEMENT

- **Friendly Competition:** Benchmark response times between shifts and homes.
- **Shift Pride:** Teams celebrate rapid, targeted responses to resident alerts.

*"Average response times dropped significantly as night shifts competed to deliver faster, safer care."*

Request Clinical Papers ✉

Visit Earzz Trust Centre 🛡

● LIVE Q&A SESSION

# Audited Impact: The Value of Proactive Adoption

Portfolio-wide outcomes when care teams transition from scheduled patrols to proactive Acoustic Triage.

 **HEATHLANDS VILLAGE**

▼ **86%**

**NIGHT FALLS DROP**

100+ Bed village scale validation over M1-M3 audit.

 **TERRINGTON LODGE**

**13 → 0**

**BEDROOM FALLS TREND**

Sustained zero night falls & 50.4% check reduction.

 **DOCKING HOUSE**

**1 FALL**

**IN 6 MONTHS**

Dementia hub achieving near-zero night room incidents.

 **DRIFTWOOD HOUSE**

**ZERO**

**NIGHT BEDROOM FALLS**

100% unwitnessed falls drop reached post-install.

## 🗨️ WEBINAR PANEL Q&A

Type your questions in the webinar chat window for Prad, Raj, and Karen.

✉ Request Papers

🛡 Trust Centre

13 OF 13



Restart ↺