

From Data Silos to Action:

A proposed AI Platform for Resident Risk Detection

Proactive insights. Personalized care.
Stronger outcomes.



Argentum LEAD
Spring Cohort 2026



Created by
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Identified Industry Challenge

Gauging Resident Risk and Satisfaction with Proactive Strategy



Senior living organizations operate in high risk environments with ongoing data silos, making it difficult to identify risks, take action, and improve outcomes.

Leaders need real-time guidance and clear next steps—especially as many join our field with variable business or leadership experience.



Ambiguous Risk Visibility

Overall satisfaction and risk scores are unclear and often reactive.



Department Data Silos

Information is siloed across departments and systems, limiting visibility and connection.



Limited Actionable Guidance

Leaders lack clear recommendations, accountability, and next-step guidance.



Variable Leadership Experience

Leaders join with varying levels of experience, resulting in inconsistent risk management.



Result:

Organizations often struggle to consistently identify residents at risk for dissatisfaction, move-out, declining engagement, or negative outcomes before escalation occurs.





Industry Context

We surveyed over 60 operators from across the senior living industry about the realities and challenges of identifying and acting upon resident and family member dissatisfaction.



Top predictors of resident and family dissatisfaction

1

Clinical events

Falls, hospitalizations, incidents

2

Financial concerns

Rate increases, billing issues, collections activity

3

Increased care needs

Transitions between levels of care, decreased independence, associated care costs

4

Dining issues

Food or service complaints, non-participation in dining experience

5

Decline in activity participation

Isolation, unmet preferences

BIGGEST OPERATIONAL BARRIERS-



Communication gaps between departments



Systems that do not integrate



Inconsistent documentation practices



Impact of the Challenge

When Risk and Satisfaction Are Ambiguous and Siloed

Operating without clear, connected insights creates risks, strain, and missed opportunities to support residents.



Increased Operational & Clinical Risk

Higher risk of incidents, regulatory issues, and legal exposure.



Staff Strain & Inefficiency

More time spent reacting and chasing data versus supporting residents.



Missed Resident & Family Satisfaction Concerns

Concerns are identified too late—after situations have escalated.



Impact on Brand & Market Position

Trust is strengthened or weakened by the quality of resident experiences.





OUR BIG IDEA

An integrated dashboard that brings together multidisciplinary risk factors to proactively identify, rank, and trend residents at risk for dissatisfaction, move-out, or risk escalation—supported by AI-powered insights and solutions that help leaders recover customer engagement sooner and more effectively.



What Leaders Want in an At-Risk Tool-



High interest in adoption:

Survey respondents had a strong appetite for a risk-flagging system, and **72%** responded that they were “very likely” to use such a tool.



Follow-up tracking and accountability



Cross-department communication



Time-management/workload support



Leadership coaching

SUPPORT LEADERS NEED



Most requested outputs

- 1  Summary of risk factors
- 2  Suggested action steps
- 3  Alerts when risk increases
- 4  Trends over time



Technology design implications

- Must integrate with existing systems
- Must be simple and not add to workload
- Needs clear accountability workflows
- Should support proactive action – early detection and action step recommendations

1

Data Integration

Bring together resident data from across departments and systems.

Key Data Sources



Clinical / EHR



Dining



Life Enrichment



Housekeeping



Maintenance



Administration / Billing



Family & Satisfaction Feedback



Creates a centralized resident profile and eliminates data silos.



2

AI Risk Identification & Scoring

Identify key risk factors and calculate a weighted risk score by department.

Key Risk Areas



Clinical

Falls, missed meds, hospitalizations, weight loss



Dining

Meal refusals, reduced dining attendance



Life Enrichment

Declining participation, increased isolation



Administration

Financial concerns, family complaints



AI generates a weighted risk score for each resident to prioritize intervention.



AI Weighted Risk Score



Per Department • Per Resident

3

Guided Action Dashboard

Deliver personalized insights and recommended actions to drive proactive resident support.



Prioritized Insights

Surface highest-risk residents and key issues based on AI risk scores.



Recommended Actions

Provide department-specific, next-best actions to address risks early.



Track & Monitor Progress

Monitor action completion and resident outcomes over time.



Alerts & Notifications

Notify teams in real time to ensure timely intervention.



A centralized view that helps teams take the right actions, at the right time.



Resident-focused
insights



Actionable
next steps



Better outcomes
together

4

Adaptive Learning & Continuous Improvement

Continuously learn from outcomes to improve accuracy, effectiveness, and impact.



Learn from Outcomes

Analyze results to understand what's working and what's not.



Refine Models

Continuously update AI models and risk scores for greater accuracy.



Optimize Actions

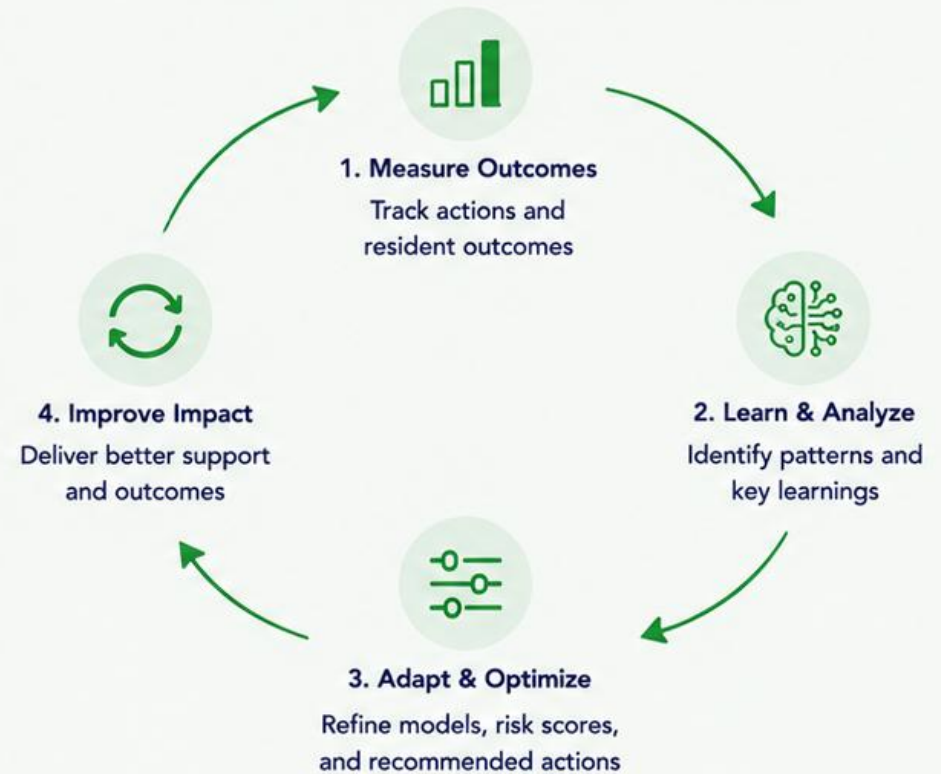
Adjust recommendations and workflows based on performance data.



Drive Continuous Impact

Create a cycle of learning and improvement that delivers better outcomes over time.

A continuous cycle of learning and improvement





Senior Living
Community



Overview



Residents



Risk Alerts



Departments



Reports



Recommendations



Templates



Settings



Sarah Johnson
Executive Director

Resident Risk & Engagement Dashboard

Overview of resident risk and engagement across all departments



May 12 – May 18, 2025



Filter

Overall At-Risk Residents

18

15% of total residents



Yellow Risk

26

21% of total residents



Red Risk

12

10% of total residents



Total Residents

120

Active Residents



At-Risk Residents

Resident Name	Overall Risk Score ↓	Risk Level	Trend (vs last 7 days)
 Margaret Thompson Apt. 201	82	High	↗ +15
 James Wilson Apt. 305	68	Medium	↗ +8
 Linda Martinez Apt. 112	45	Medium	↗ +3
 Robert Davis Apt. 410	23	Low	↘ -5
 Patricia Anderson Apt. 218	15	Low	↘ -2

[View All Residents →](#)

Resident Snapshot



Margaret Thompson

Apt. 201

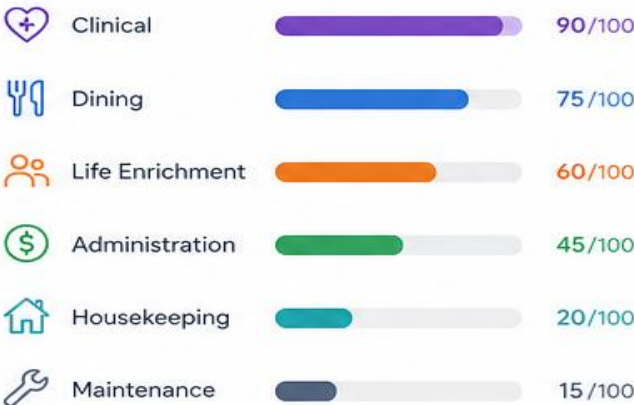
Move-in Date: 03/14/2022

Overall Risk Score

82

High Risk

Risk Breakdown by Department



[View Full Resident Profile →](#)



Recommended Next Steps

Based on Margaret's risk factors, we recommend the following:



Schede care plan review with Clinical Team



Follow up on dining engagement and meal preferences



Invite to upcoming small group activity

[View Suggested Actions →](#)

Quick Actions



Call Resident



Email Family



Risk scores are AI-generated based on data from clinical, operational, engagement, and financial systems.



Margaret Thompson

Apt. 201 | Move-in Date: 03/14/2022

Primary Contact: Susan Thompson (Daughter)

 (555) 123-4567  susan.t@example.com

Overall Risk Score

82

High Risk

Risk Level Trend (7 Days)



May 12May 18

Overall Risk Level

 **High Risk**

Margaret's overall risk score has increased +12 points in the last 7 days.

Overall Risk Breakdown by Department

82

Overall Score out of 100

 Clinical 90 /100

 Dining 75 /100

 Life Enrichment 60 /100

 Administration 45 /100

 Housekeeping 20 /100

 Maintenance 15 /100

 Clinical and Dining factors are the primary drivers of elevated risk.

[View Full Risk Details by Department →](#)

Key Risk Drivers (All Departments)

 **Recent Hospitalization** High Impact

Discharged 7 days ago for UTI.

 **Decreased Dining Room Attendance** High Impact

Attended 2 meals in the dining room in the last 7 days.

 **Increased Meal Tray Delivery** Moderate Impact

Meal trays delivered to room 8 of the last 14 days (up from 2 of prior 14 days).

 **Weight Loss Noted** Moderate Impact

4.2 lbs lost in the last 30 days.

 **Reduced Activity Participation** Moderate Impact

Attended 1 activity in the last 14 days (down from 6 previously).

[View All Risk Factors →](#)

ED Next Steps – Resident & Family

1

Reach out to Margaret and her daughter, Susan, within 48 hours to check in and express support.

 Due: May 20

2

Schedule a care conference with clinical, dining, and life enrichment to review needs and align care plan.

 Due: May 22

3

Create a personalized engagement and dining plan focused on preferences, routine, and social connection.

 Due: May 24

4

Follow up within 7 days to reassess and adjust plan as needed.

 Due: May 31

 **Suggested Family Communication**

Use the provided call script to connect with Susan and provide an update and listen to any concerns.

 [View Family Call Script →](#)

 Department Follow-Up from Key Risk Areas

Department	Leader	Last Action Taken	Next Follow-Up
 Clinical	Sarah Miller, RN	Follow-up visit completed 5/17; meds reviewed.	 May 20

 Coaching Tips for Department Leaders

 **Collaborate:** Coordinate with other departments to ensure a unified, resident-centered approach.

 **Listen First:** Understand Margaret's perspective and preferences before offering solutions.

 Summary

 Overall Risk Score: **82** (High Risk)

 Risk Score Change (7 Days):  +12

 Primary Risk Drivers: Clinical, Dining



New Message

← Reply

↔ Reply All

→ Forward

🗑 Delete



From: AI Resident Insights <alerts@airesidentinsights.com>
To: Executive Director
Subject: **At-Risk Resident Notification: Margaret Thompson (Apt. 201)**

⚠ **HIGH PRIORITY**

May 18, 2026 8:00 AM



Margaret Thompson
Apartment 201

Risk Score

82

Risk Level

HIGH RISK

Trend



Trending Up



WHY YOU ARE RECEIVING THIS ALERT

AI identified multiple indicators associated with increasing resident dissatisfaction and move-out risk.

KEY FACTORS



Recent Hospitalization



Dining Attendance Declining



Increased Meal Tray Delivery



Weight Loss



Reduced Activity Participation



RECOMMENDED ACTIONS

1



Priority 1

Contact resident and daughter, Susan, within **48 hours**

2



Priority 2

Schedule interdisciplinary review
(Clinical • Dining • Life Enrichment)

3



Priority 3

Update support plan and assign follow-up tasks

4



Priority 4

Reassess resident status within **7 days**



AI INSIGHT

Residents experiencing changes across multiple departments may benefit from earlier coordinated intervention.



View Full Resident Dashboard →



This is an automated notification from AI Resident Insights. [Log in to the platform](#) for more details and to take action.

Measuring Success

Key Metrics for Our AI Project

1



Longer Average
Length of Stay
for Residents

2



Lower Average Monthly
Move Out Numbers
for Avoidable Reasons

3



Increased
Staff Efficiency

4



Higher Department Leader
Confidence in Managing Risk
and Improving Outcomes

5



Reduced Risk for
Negative Outcome
Events for Residents

6



Lower Regulatory Concerns
with Improved Visibility
and Tracked Action

7



Improved Documented
Follow Through on
Concerns and Dissatisfaction

8



Stronger
Family Engagement

Key Considerations



**Strong governance.
Right expertise. Protected data.**

Thoughtful oversight, the right people, and strict data protection ensure the platform is trusted, compliant, and delivers impact.



Oversight & Governance

- Cross-functional steering committee
- Clear roles and decision rights
- Track performance and ensure alignment



Key People Needed

- Executive sponsor
- Project and data leads
- IT, risk/compliance, and change leads



PHI & Legal Considerations

- Ensure HIPAA compliance and privacy
- Apply role-based access and data minimization
- Maintain security, audit logs, and breach plans
- Partner with Legal & Compliance

“
**AI will not replace
the human connection
in senior living.**
**It will strengthen
our ability to deliver.**
”



Thank you



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