

How implementing MatrixCare improved skilled nursing resident care



Skilled nursing facilities aim to provide the best care to their residents and for this, several features are of prime importance, such as fall prediction, infection tracking, detection of changes in acuity and wound management.

Falls can lead to a range of injuries (e.g. fractures, lacerations or internal injuries) especially in seniors with pre-existing conditions, and can significantly exacerbate their overall health status (Kimura et al., 2023). Fall risk prediction in skilled nursing facilities is a complex issue that affects nearly every aspect of care, from resident safety and well-being to financial and regulatory concerns. Effective fall risk management can significantly improve the quality of life for residents while also benefiting the facility in numerous ways.

Knowing that a facility takes fall risk seriously can provide peace of mind to residents and their families, thereby increasing satisfaction rates and enhancing the emotional well-being of residents.

Patients in skilled nursing facilities may also develop infections such as influenza, pneumonia or urinary tract infection, conditions that can lead to delirium in older patients. Antipsychotic drugs are commonly prescribed to manage behavioral disturbances but are associated with serious adverse events (Zhang et al. 2023). Therefore, the use of these drugs should be avoided as much as possible in the elderly and tracked if needed.

Monitoring the weight of the residents is crucial because a significant and/or rapid weight loss can be serious and lead to a loss of ability to perform activities of daily living (e.g. bathing, dressing, grooming), greater fatigue and greater risk of falls and injuries (Alibhai et al., 2005).

Knowing that a facility or organization has technology in place to prevent falls, infections and weight loss, as well as to monitor the use of antipsychotic drugs, can improve and strengthen healthcare relationships.

MatrixCare solutions to monitor fall risk in real time for proactive care

MatrixCare provides electronic health record and analysis software to skilled nursing facilities that uses machine learning and preventative technology to support nursing staff in their day-to-day work to ensure proactive management of the residents.

Analyzing millions of data points in your MatrixCare EHR, Clinical Advanced Insights (CAI) provides critical intelligence that can improve resident outcomes and help you in efforts to reduce rehospitalization, predict where resources are needed next, help nurses focus on preventive care, and save time while taking proactive control of costs and risks.

Using user-friendly dashboards, CAI presents the real-time status of each floor, wing and resident, enabling staff to closely monitor emergent conditions, and examine fall risk scores so they can focus on the most vulnerable residents.

As an example, Figure 1 highlights an upward trend among residents at high risk for falls. With this information, the staff will be able to identify falls risk trends in real time, investigate the root cause(s) more thoroughly, and implement appropriate interventions. The dashboard enables building staff to quickly visualize areas with a higher risk of falls among residents, providing the facility with the opportunity

to proactively allocate staff or admit residents to areas with the capacity to deliver the best care. This is one of the key features of the MatrixCare solution: detecting abnormal trends in residents' daily activities and enabling the staff to take timely corrective actions.

The MatrixCare solution also includes other features to support operational and clinical success such as:

- > Wound Management that helps keep track of and supports the care of residents with pressure ulcers (Figure 2a)
- > Infection Tracker that provides trending data at a glance and enables easy monitoring of common infections in facilities such as upper respiratory infections or urinary tract infections (Figure 2b)
- > PHQ-9 analysis to better support residents with mental health issues (Figure 2c)

The use of the MatrixCare solution in skilled nursing facilities can help:

- > Decipher where the staff will be the most effective
- > Support efforts to prevent falls and other adverse outcomes and focus nurses' time on ongoing or rehabilitative, not emergent care
- > Take control of costs and risks

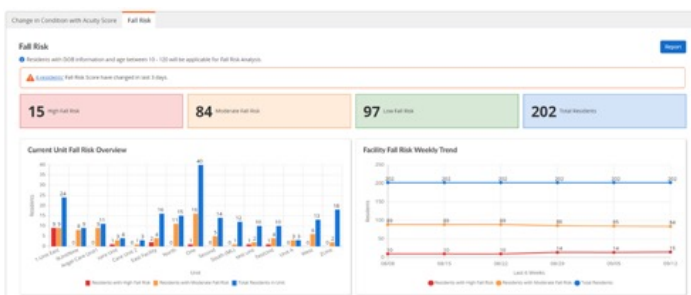


Figure 1: Fall Risk dashboard (Clinical Advanced Insights)

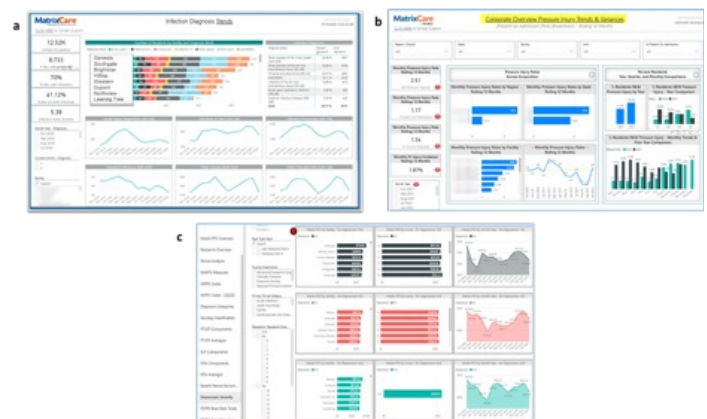


Figure 2: MyAnalytics dashboards for (a) infection tracking, (b) wound management and (c) depression severity

ClearView Healthcare Management program

ClearView Healthcare Management oversees the operations of skilled nursing facilities throughout Kentucky and Tennessee. Their homes offer short-term rehabilitation and skilled care, as well as long-term nursing care. The ClearView philosophy, "Focused on Quality," puts their residents and their needs as the first priority to make each resident's stay as comfortable and rehabilitating as possible. In the last year, ClearView Healthcare Management facilities transitioned to MatrixCare solutions to optimize resident care, support the care teams' decision-making process, and generate operational value to the skilled nursing facilities.

Seven Clearview facilities implemented the MatrixCare solutions and the results from the first 365 days of use, notably regarding the fall risk prediction and the use of drugs, will be discussed below.

Transitioning from competitor to MatrixCare solution: 1-year feedback

First, when transitioning from their previous management software to the MatrixCare solution, ClearView centers were provided with new features: Clinical Advanced Insights, Wound Management, Infection Tracker, Discharge Management and MyAnalytics, allowing a comprehensive approach to resident data to deliver the best care to each according to their personal needs. By utilizing MatrixCare's MyAnalytics solution, key trends were presented in intuitive views so that management and those focused on oversight could take action and follow up.

The comparison of the quality measures pre- vs post-MatrixCare implementation demonstrated an improvement of 29 of the 49 data points, i.e. an overall 59% improvement. In one of the facilities, an increased trend of falls was observed, and MyAnalytics enabled the assessment of the root cause of these falls, highlighting the fact that the majority of falls were occurring in the residents' rooms around 5pm (Figure 3). This analysis enabled the organization to immediately look further into meal time, residents needing more assistance with transfer/toileting, and those going to/returning from meal time. Nonetheless, another finding showed that 50% of residents who fall had a primary diagnosis of dementia, which led the staff to research if the appropriate care plans and right interventions were in place to manage these patients.

In another facility, 81 wounds were identified within 0-3 days of admission that were not present on admission (Figure 4). This finding led the staff to look further into the completion of the skin checks to ensure they were adequately completed and if the appropriate skin interventions were initiated with the baseline care plan.

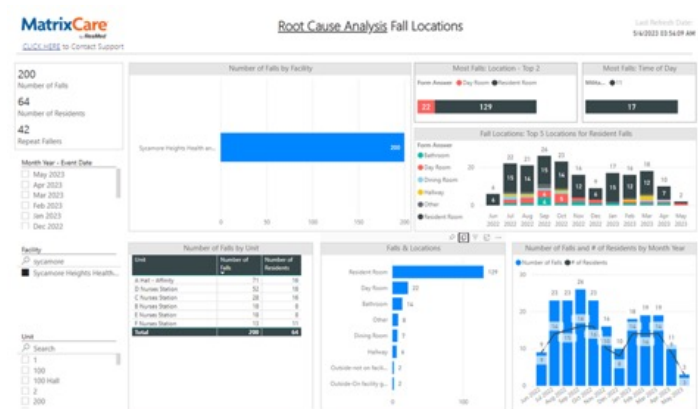


Figure 3: Fall root cause analysis through MyAnalytics

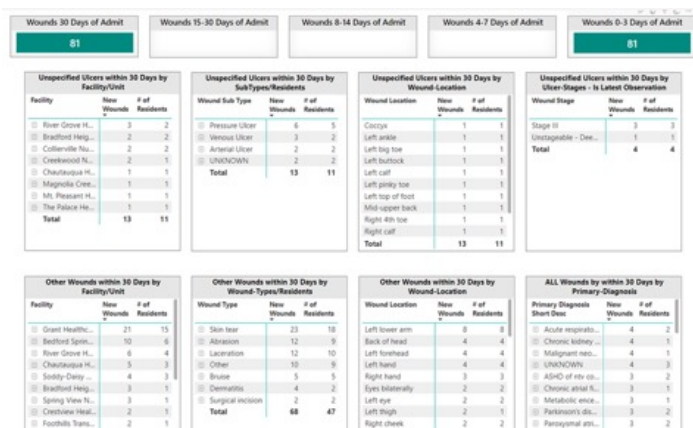


Figure 4: Wound identification using the MyAnalytics feature

Having comprehensive resident data sets and being able to effectively combine and analyze the data, trends and contributing factors is a feature of MyAnalytics. MyAnalytics provides trending information as well as actionable insights into what is occurring related to key facility metrics. For example, malnutrition puts residents at risk for negative outcomes such as falls, wounds and readmissions, to name a few. MyAnalytics breaks down the trends by bringing associated factors to the surface supporting effective quality performance improvement or other quality related activities.

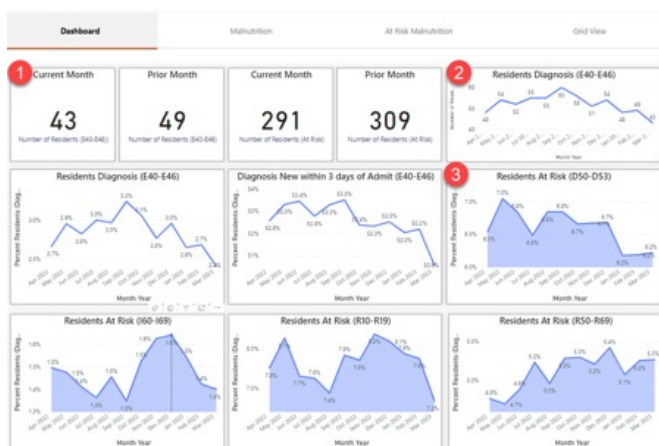


Figure 5: Malnutrition and wound

MyAnalytics data also highlights those facilities, regions, or states who stand out in a positive way:

- > One facility stood out with a significant reduction in psychotherapeutic drug usage over 2 months
- > One state, Kentucky, showed lower pressure injury rates month over month following the implementation of MatrixCare
- > One facility showed their in-house acquired pressure injury rate was lower than the rate for those present on admission
- > One facility showed a significant drop in readmission rates month over month following the implementation of MatrixCare

Conclusion

In conclusion, it has been demonstrated that MatrixCare offers significant advantages compared to its main competitor. Through the evidence collected, the success criteria were achieved, including providing clinical insights to optimize care and increase operational efficiency.

Visit matrixcare.com or call **866.469.3766** for more information.

References:

Alibhai SM, Greenwood C, Payette H. An approach to the management of unintentional weight loss in elderly people. *CMAJ*. 2005 Mar 15;172(6):773-80. doi: 10.1503/cmaj.1031527. PMID: 15767612; PMCID: PMC552892.

Kimura M, Ruller S, Frank C, Bell A, Jacobson M, Pardo JP, Ramsey T, Sobala M, Fung C, Kobewka D. Incidence Morbidity and Mortality From Falls in Skilled Nursing Facilities: A Systematic Review and Meta-Analysis. *J Am Med Dir Assoc*. 2023 Aug 22:S1525-8610(23)00642-4. doi: 10.1016/j.jamda.2023.07.012. Epub ahead of print. PMID: 37625452.

Zhang Y, Wilkins JM, Bessette LG, York C, Wong V, Lin KJ. Antipsychotic Medication Use Among Older Adults Following Infection-Related Hospitalization. *JAMA Netw Open*. 2023 Feb 1;6(2):e230063. doi: 10.1001/jamanetworkopen.2023.0063. PMID: 36800180; PMCID: PMC9938426.