Aneurin Bevan Local Health Board Analysis

Focus: Reducing Readmission Rates & Enhancing Operational Efficiency
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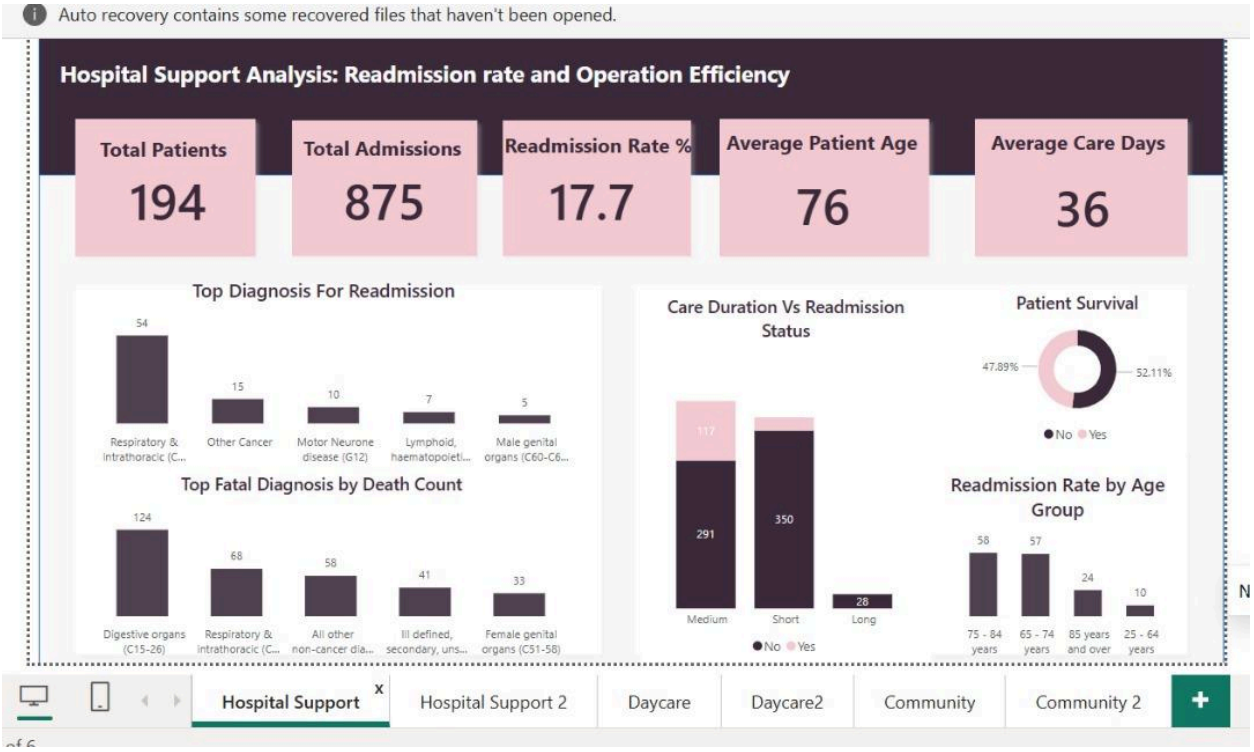
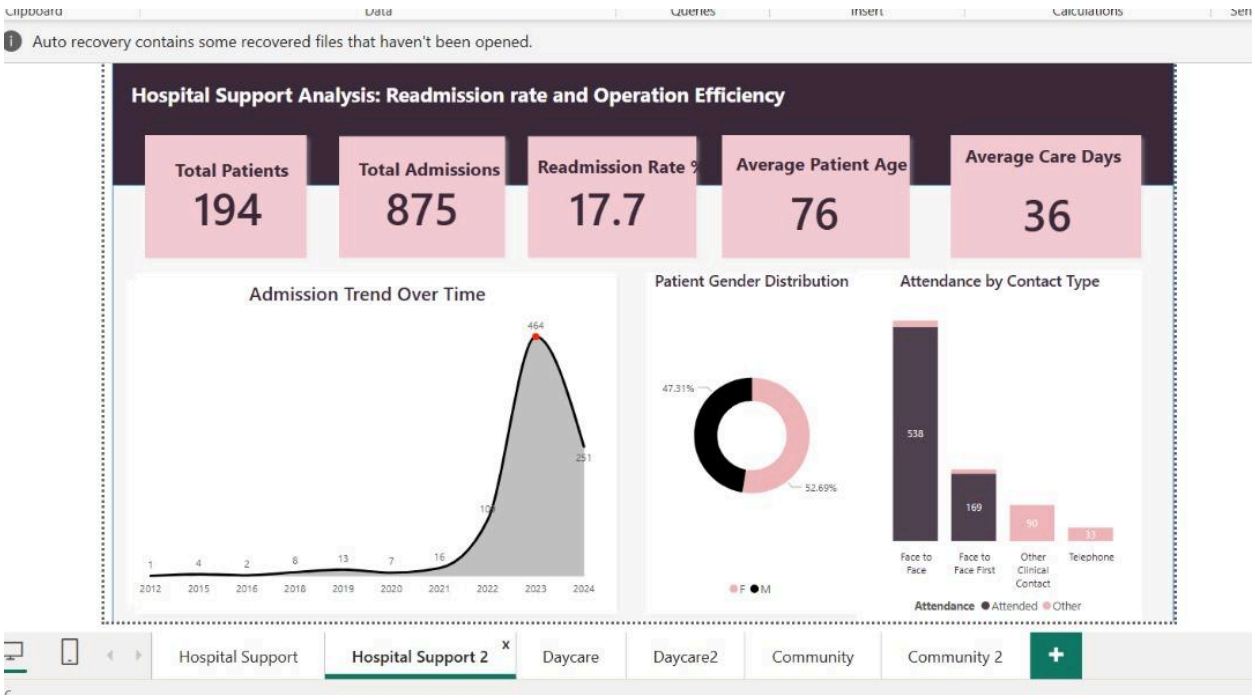
Executive Summary

This report analyzes patient data from a hospice facility in the United States with the goal of reducing the high readmission rate and improving operational efficiency. The analysis was performed using Power BI after data cleaning, focusing on key indicators such as readmission trends, diagnosis, patient demographics, and care durations.
Actionable insights and recommendations are provided to support funding applications and strategic decision-making.

HOSPITAL SUPPORT ANALYSIS





Metric	Value
Total Patients	194
Total Admissions	875
Readmission Rate(%)	17.7%
Average Patient Age	76 years
Average Care Days	36 days

Insights from the Data

1. **High Readmission Concentration in Specific Diagnoses**

Respiratory & Intrathoracic Cancer accounts for the highest readmission volume (54 cases), followed by other cancer types and motor neurone disease.

Digestive organ cancers lead in patient deaths (124), suggesting the need for enhanced palliative and preventive strategies.

2. **Readmission is Higher Among the Elderly**

Patients aged 75–84 and 65–74 had the highest readmission rates, which signals the need for support programs for aging patients.

3. **Short & Medium Care Durations See the Most Readmissions**

A large portion of readmitted patients had medium (117) or short care durations. This may suggest premature discharge or insufficient transitional care.

4. Patient Survival is Nearly Balanced
The patient survival rate is slightly above 52%, showing close equivalence, which might be a major concern about the status of our health care. It might also indicate opportunities to improve outcomes via better post-care monitoring.

5. **Gender Distribution**
Slightly more females (52.69%) than males (47.31%) were recorded, but no strong gender disparity in readmission is observed.

6. Contact Type Shows Heavy In-Person Dependency
Face-to-Face contact dominates (538), but relatively no effectiveness of telehealth (33) and other clinical contact methods. This shows that Face to Face contact works more and More improvement must be made on other contact methods such as telehealth.

7. Sharp Admission Increase (2021–2023)
Admissions skyrocketed to 464 in 2023, which may indicate growing patient load or reporting changes. A dip in 2024 to 251 hints at either seasonal changes or impact of earlier interventions.

Recommendations

Reduce Readmissions:
Implement a robust discharge follow-up program targeting patients with respiratory and digestive system cancers.

Extend care durations cautiously where medically necessary to prevent premature release.

Introduce readmission risk scoring tools at discharge to flag high-risk patients for extra care.

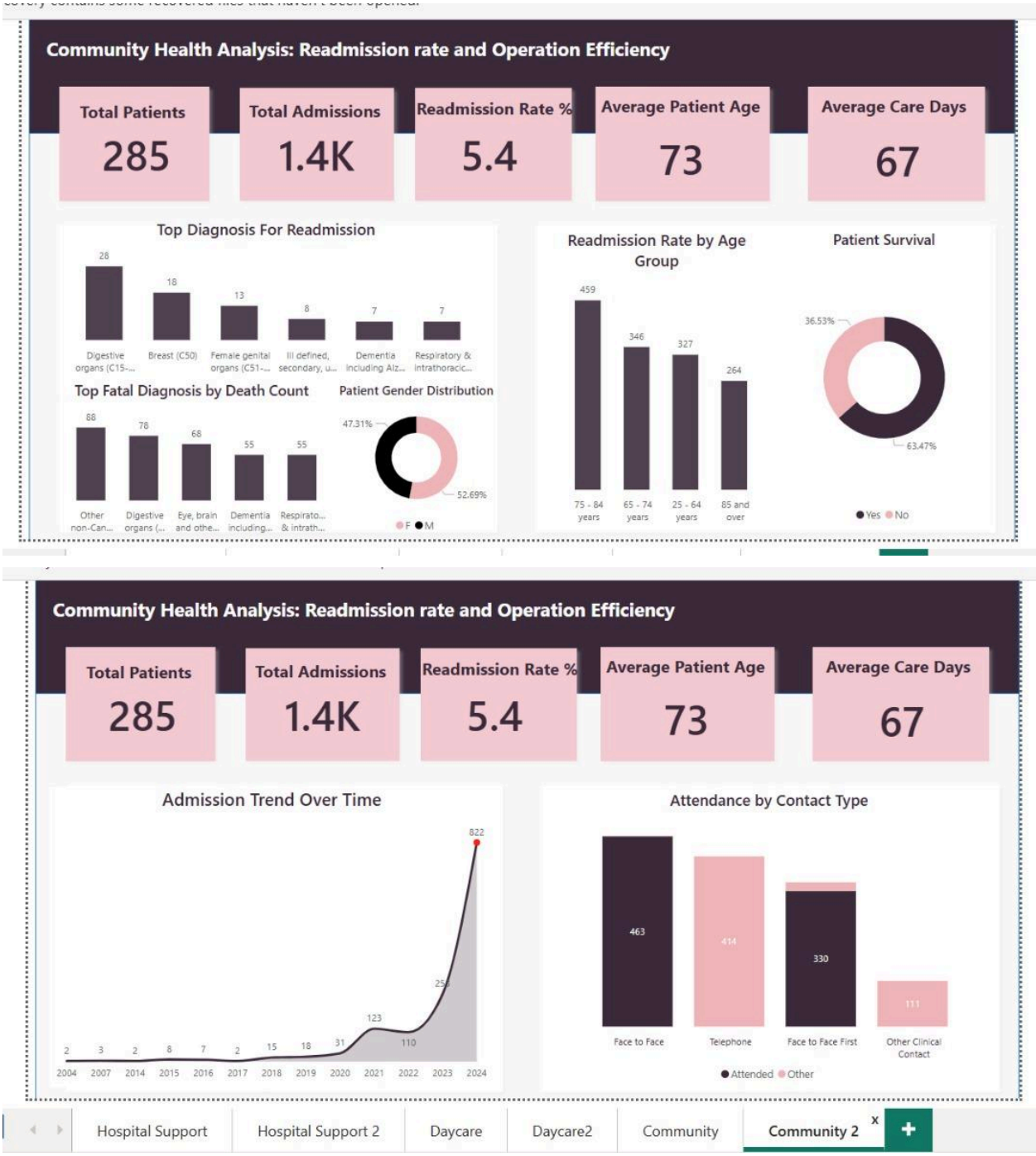
Improve Operational Efficiency:
Expand telehealth and telephone support post-discharge to monitor patients remotely and reduce resource burden.

Apply for funding to train staff on transitional care planning and chronic condition management.

Target Elderly Patients:
Design age-specific wellness and care plans, especially for 65+ patients who are more vulnerable to complications.

Offer community support programs or partner with family caregivers to ensure ongoing monitoring.

COMMUNITY HEALTH ANALYSIS REPORT



Metric	Value
Total Patients	285

Total Admissions	1.4K
Readmission Rate (%)	5.4%
Average Patient Age	73 years
Average Care Days	67 days

Insights

1. Admissions Trend

Admissions increased exponentially between 2023 and 2024 (from 250 to 822).

This sharp rise suggests a growing demand for hospice services, potentially due to aging demographics or increased referrals.

2. Readmission Analysis

The current readmission rate stands at 5.4%.

The age group 75–84 years has the highest readmissions (459), followed by 65-74 years (346), suggesting targeted support.

Top causes for readmission include:

- Digestive system disorders (28 cases)
- Breast cancer (18 cases)
- Female genital organ-related issues (13 cases)

3. Patient Demographics

Average age: 73 years;suggests an elderly population needing chronic care.

Gender distribution: 52.69% female and 47.31% male.
Gender-specific diagnoses (e.g., breast, female genital organs) suggest a need for gender-aware interventions.

4. Contact Type Efficiency

Most interactions are Face to Face (463) and Telephone (414).
However, all telephone contacts did not attend which shows lack of effectiveness in telehealth (improvement needs to be made).

5. Mortality and Survival Rates

Patient survival rate is 63.47%, while 36.53% do not survive. This result is still fair, but improvement can be made

Leading causes of death:

- Non-cancer diagnoses (88)
- Digestive and brain disorders (78 & 68)
- Dementia (55)

Indicates a need to improve palliative care for chronic non-cancer conditions.

Recommendations

Reduce Readmissions
Introduce post-discharge follow-up programs, especially for patients aged 75–84 years.

Focus on early detection and preventive care for digestive and breast-related conditions.

Implement personalized care plans based on patient diagnosis and age group.

Strengthen Telehealth
Expand telemedicine programs, especially for follow-up care, to reduce unnecessary readmissions and operational load.

Train staff and patients to use digital communication tools effectively.

Gender-Specific Care
Allocate resources for female-dominant diagnoses such as breast and genital organ conditions.

Introduce screening and wellness campaigns for aging female patients.

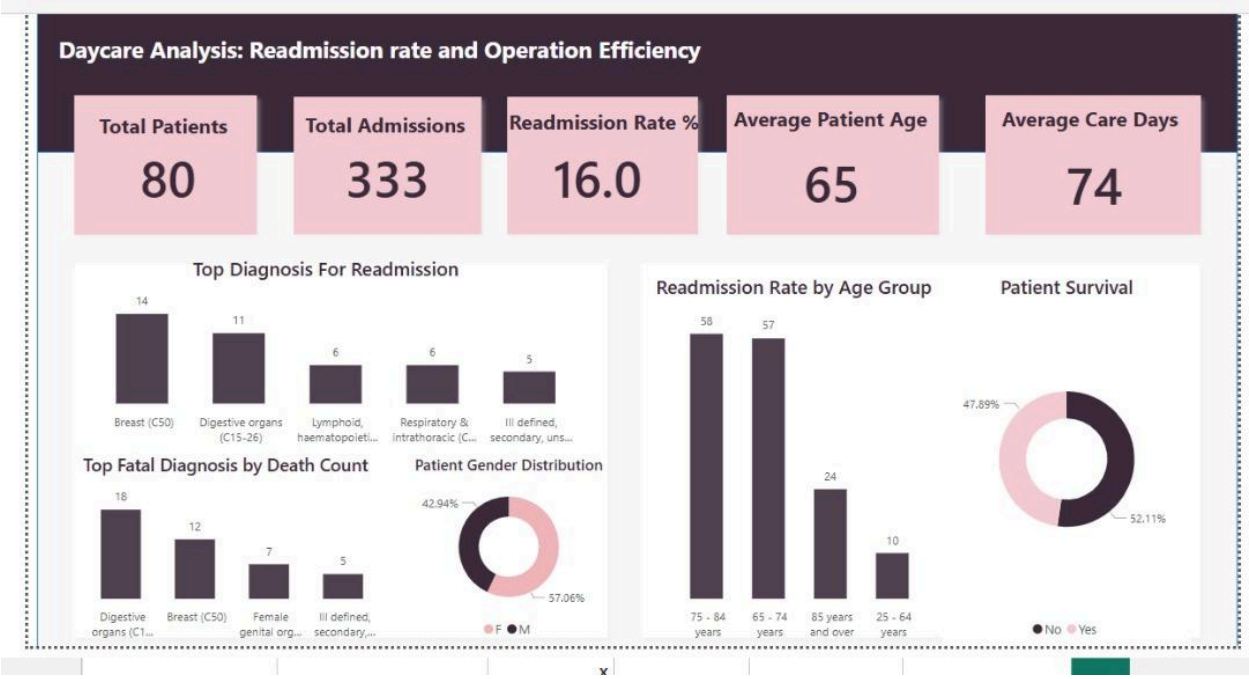
Improve Operational Efficiency
Use the predictable spike in admissions to plan staffing, bed allocation, and medication logistics ahead of time.

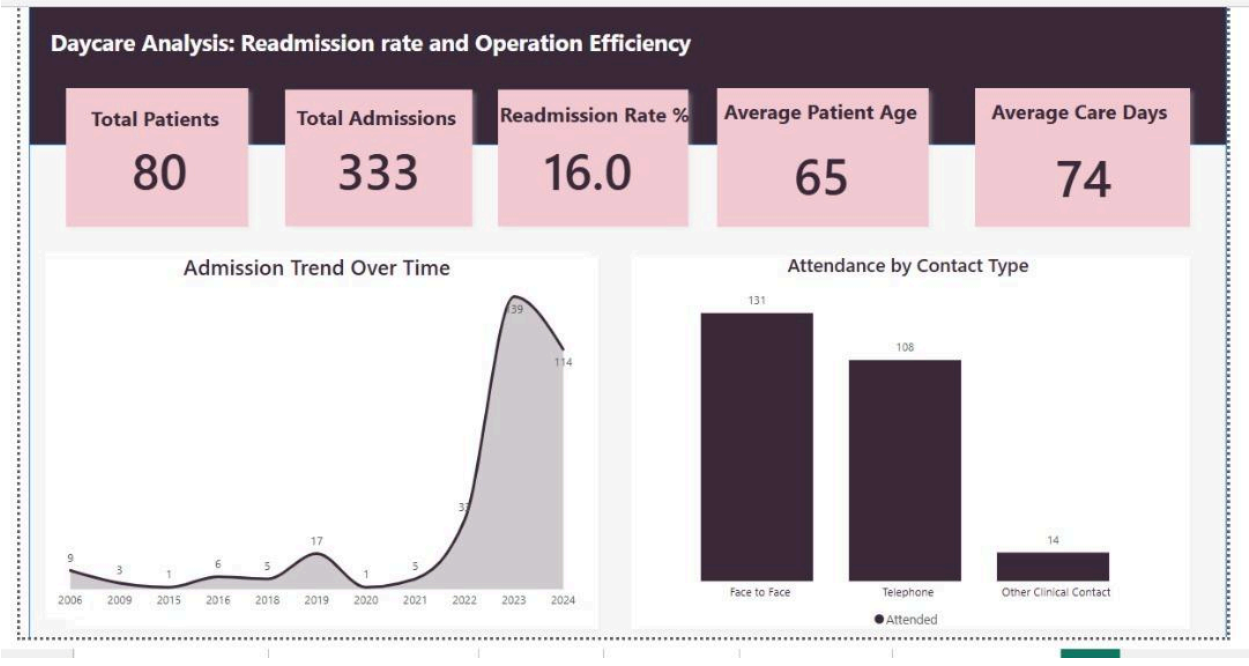
Seek funding for electronic health record optimization to reduce time spent on administrative tasks.

Targeted End-of-Life Care
Allocate more resources to non-cancer palliative care, as they represent a higher death count.

Train healthcare workers in compassionate, specialized care for neurodegenerative and organ-failure patients.

DAYCARE ANALYSIS REPORT





Metric	Value
Total Patients	80
Total Admissions	333
Readmission Rate(%)	16%

Average Patient Age	65
Average Care Days	74

Insights

High Readmission Rate

Readmission Rate -16%; This indicates that 1 in 6 patients return after being discharged, which suggests potential issues with discharge planning, follow-up care, or underlying chronic conditions.

Elderly Population Dominance

Average Patient Age: 65 years

Readmission is most common in 75–84 years (58 patients) and 65–74 years (57 patients), highlighting that older adults are significantly more at risk for readmissions, potentially due to comorbidities or inadequate post-care support.

Top Diagnosis & Mortality

Breast Cancer (C50) is the leading cause of readmissions (14 patients) followed by Digestive organs disorders (11).

Digestive Organ Disorders (C15–26) and Breast Cancer lead fatal diagnosis category (18 and 12 deaths) indicating a critical area needing targeted care improvements and monitoring.

Patient Survival

Only 52.11% survived post-treatment, with a concerning 47.89% mortality rate. This trend is concerning and could make it harder to justify funding unless it's clearly explained using details like patient age or health conditions.

Gender Distribution

57.06% Female, 42.94% Male: higher female patient may partly relate to breast cancer readmissions.

Admissions Are Increasing

Admissions rose significantly in recent years, peaking at 139 in 2023, suggesting growing demand and possible resource strain.

However the recent dip in Admissions in 2024 should be look into.

Contact Type Efficiency

Most visits are Face-to-Face (131) or Telephone (108); Other Clinical Contact (14) is minimal, implies heavy reliance on traditional care modes, possibly underutilizing telehealth options.

Recommendations

Reduce Readmission Rate

Implement targeted discharge planning for high-risk groups (elderly, cancer patients).

Introduce post-discharge follow-up calls or check-ins within 72 hours of release.

Create patient education programs around managing chronic conditions (especially digestive and cancer-related).

Operational Efficiency Improvements
Invest in telehealth services to reduce dependence on in-person visits, particularly for follow-ups and check-ins.

Use predictive analytics to flag patients at risk of readmission or mortality, especially those aged 65+ or with top fatal diagnoses.

Strengthen Funding Proposal
Highlight the rapid growth in admissions (2021–2024) to justify the need for more resources and staffing.

Emphasize the critical patient outcomes and potential improvements from enhanced equipment, better follow-up systems, or remote care infrastructure.

Include survival rate concerns as justification for investing in preventive measures, not just treatment.

Specialized Care Programs
Consider setting up dedicated care units for digestive and cancer patients, especially those needing recurring attention.

Conclusion
This analysis reveals key issues driving readmissions especially among older patients and those with cancer or chronic conditions. Addressing these through better discharge planning, expanded telehealth, and targeted support can greatly improve outcomes. With the right interventions, the facility can reduce readmissions, operate more efficiently, and build a stronger case for funding support.