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**Optimizing Interprofessional Rounds to Reduce Extended Length of Stay in Complex
Patients**

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NURS-670-K8C: Internship

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Abstract

Problem: Organizations have taken measures to reduce the length of stay by addressing logistical issues such as care coordination across the continuum. This becomes especially important for patients being discharged to skilled nursing facilities (SNF), where placement can be impeded due to complex care needs. In March 2021, the facility accounted for 20% of all extended length of stay (ELOS) patients across the organization. The average ELOS was 36 days, with 42% of these patients being discharged to a SNF.

Context: The Extended Length of Stay (ELOS) team functions at a mesosystem level within twenty-one medical centers across Northern California. The ELOS team identifies appropriate treatment and disposition options for complex patients across the system with lengths of stays greater than 20 days.

Interventions: Integrating a SNF liaison, as the subject matter expert, into at least 50% of the biweekly ELOS rounds to improve communication and care coordination for patients being discharged to a SNF.

Measures: Primary outcomes include reducing ELOS patient days by 2% (36 days to 35.3 days) during a three-month intervention period from July 2021 to September 2021 and SNF liaison participation in biweekly ELOS rounds at least 50% of the time.

Results: A six percent reduction in ELOS patient days was achieved, and 100% participation by the SNF liaison in attending twice weekly ELOS rounds.

Conclusions: Reducing LOS in complex patient populations, especially those discharged to a SNF, is achievable when the appropriate specialty care experts are integrated into multidisciplinary LOS rounds.

Keywords: interprofessional collaboration, skilled nursing facility, length of stay

Optimizing Interprofessional Rounds to Reduce Extended Length of Stay in Complex Patients

Healthcare has become increasingly complex, involving systems of individuals, services, and organizations. A systems approach highlights the different participating structures and their interdependent components. A systems-based practice changes the traditional paradigm, “shifting the focus from the technical performance of a solution to the solution's influence on a variety of individual stakeholders and their interactions in tandem” (Gubin et al., 2017). By executing a systems approach, a Clinical Nurse Leader (CNL) can identify the potential opportunities to improve efficiency and safety through systematic analysis of a unit, entity, or organization at the point of care.

Extended and unnecessary hospital stays lead to patient complications and increased costs and has a detrimental impact on the experiences of patients and staff. As a result, organizations have taken measures to reduce the length of stay. According to McDermott et al. (2017), inpatient hospital stays in the United States reached 35.4 million in 2014, remaining relatively stable between 2005 and 2014. Despite this seemingly stable figure, costs related to hospitalizations have increased by 12.7 percent during this same period from 2005 to 2014, adjusting for inflation (McDermott et al., 2017). While some interventions, such as Enhanced Recovery After Surgery, are focused on improving clinical care, other approaches address logistical issues such as care coordination which is especially important in patients who experience an extended length of stay.

Problem Description

The regional organization of this facility has created the Extended Length of Stay (ELOS) team to support the reduction in length of stay for patients hospitalized greater than 20

days across the different medical facilities under its umbrella. The ELOS team functions at a mesosystem level. One of the team's key initiatives was creating ELOS rounds to proactively address the growing number of ELOS patients across the twenty-one medical centers in Northern California. ELOS rounds embody a system of interdependent teams that aim to achieve several common goals, including reducing the length of stay and identifying appropriate treatment and disposition options in this complex patient population.

In 2020, the medical facility accounted for 20% of the total ELOS patients across the Northern California region for the 21-hospital organization, representing a significant burden in terms of cost within a single location. In March 2021, an additional analysis of ELOS patient discharges from the facility was performed ([see Appendix A](#)). This data revealed the average LOS for an ELOS patient to be 36 days. Additionally, 42% of the ELOS patient discharges were to a Skilled Nursing Facility (SNF). The team's further review and inquiry would be required to identify the key contributors resulting in the disproportionate share of ELOS patients at this one facility. This information is helpful in improving care coordination and care transitions to reduce costs and achieve excellent outcomes for both patients and the organization.

Available Knowledge

A PICOT question guided the search for evidence on collaboration and ELOS. The PICOT question was: In support of ELOS/Complex patients (P), does incorporating a skilled nursing facility (SNF) liaison to ELOS collaborative rounds (I) compared to no skilled nursing facility (SNF) liaison to ELOS collaborative rounds (C) reduce ELOS patient length of stay (O) during the three-month intervention period (T)?

A comprehensive literature search was conducted in June 2021. The search included the following databases: PubMed, CINAHL databases, and AHRQ Evidence report. The search

strategy focused on the value of interprofessional collaboration, outcomes related to collaboration, and on patient length of stay. The key search terms used were: *interprofessional collaboration, multidisciplinary, skilled nursing facility, clinical nurse leader, discharge planning, length of stay, long stay, case manager, and patient outcomes*. Limitations to the search strategy were English language, peer reviewed, full text and not published prior 2016. Results yielded 156 studies, of which five were selected for the literature review. The selected articles were evaluated using Johns Hopkins Evidence-Based research evidence appraisal tool ([see Appendix B](#)) (Dang & Dearholt, 2018).

Researchers, Akuamoah-Boateng et al. (2019), conducted a prospective cohort study measuring the impact of a structured interprofessional collaboration (IPC) model on length of stay. The historical comparison group, RAMPED-UP measured the impact on hospital length of stay in a surgical trauma population. The researchers concluded that IPC could improve discharge by noon as well as the length of stay. The level of evidence and quality for this study is rated II B and has applicability for this project as it highlights the importance of identifying the appropriate experts and structure to support the reductions in length of stay.

In a study by Cesta (2016), the value of a specialty position in case management in improving the discharge planning process of complex and long-stay patients was evaluated. This article highlighted the value of a specialist like a SNF clinical liaison to manage the complexity of care, thus helping to decrease patient LOS. This article rates level IV B and is essential because 42% of the ELOS patients at this hospital are discharged to the SNF.

In an observational cohort study, researchers DePesa et al. (2020) created a multidisciplinary team of physicians, nurses, case managers, physical and occupational therapists to identify patients' risk for prolonged hospital LOS and implemented multidisciplinary

rounding. The project targeted acute care surgery patients. The interventions implemented included generating a list of specific targeted population patients with structured rounding with a small multidisciplinary group that can influence discharge decisions to achieve reductions in LOS. This article rates level IV B and highlights the value of a multidisciplinary approach and relying on subject matter experts to reduce LOS.

In a systematic review, Donovan et al. (2018) described the importance of interprofessional care in contemporary critical care. This level III B research article identified various initiatives to quality and required interprofessional collaboration to succeed. A comprehensive body of evidence supports an interprofessional approach as a critical component of providing high-quality, critical care to patients with complex and diverse needs. This article rates as a level III B.

Michalsen et al. (2019) conducted a systematic review to examine existing evidence on interprofessional shared decision-making. From the evidence, the authors suggested clinicians consider an interprofessional shared model of decision-making to the support exchange of information, deliberation, and joint achievement of essential decisions on treatment. This article rates level III B and has applicability to this project as it shows the importance of having a shared decision making among the participants as well as a deliberate exchange of information. Creating standard work for communication that is used by the entire multidisciplinary team will ensure that everyone has a part and contributes to the exchange of information between the ELOS and those who are responsible for doing the work.

In summary, the key themes drawn from the literature in support of this project improvement include focused and structured communication during multidisciplinary rounds, including lists of patients, shared decision making, and ensuring that the appropriate subject

matter experts are present. Incorporating these key findings from the literature should be beneficial in helping to navigate the complexities that exist when transitioning patients from one care setting to another.

Rationale

Reducing the length of stay and avoidable delays in the ELOS patient population is a key metric that is tracked by the organization's regional teams and communication to each hospital within the organization. Therefore, having rounds that specifically address ELOS patients is one of the primary initiatives to reduce overall LOS.

Two conceptual frameworks are used to guide this project: Lewin's change theory and the Institute of Healthcare model for improvement.

Changing culture and processes can be challenging in any organization. Driving forces seek to propel change while restraining forces oppose the driving forces. Therefore, with any change project, individuals and groups are impacted by both driving forces and restraining forces to maintain the status quo.

Lewin's theory provides a simple framework that breaks the change process down into three easy-to-understand phases. The three phases of change include unfreezing, moving, and refreezing ([see Appendix C](#)). The first phase, unfreezing, entails devising a strategy to aid individuals and groups in letting go of old behavior patterns and overcoming resistance to change. One strategy used to overcome the resistance to change for this project was using organizational data showing the need for improvement. Additionally, the attendance of high-level executives reinforced the significance of these rounds. In the second phase, moving involves a change in processes or behaviors is required. The moving phase of this project introduces the SNF liaison into the ELOS rounds as the subject matter expert was explored as

part of the restructuring of this multidisciplinary group. This stage also entailed creating a structured list generated from the electronic medical record and creating a structured format for communication within the group incorporating a shared decision-making model. The final phase of Lewin's theory of change is that of refreezing. In this phase, the team will have agreed upon the changes adopted as standard work, allowing equilibrium to be achieved once again as this new structure and group dynamic becomes normalized into a new habit or process. Along with any change process, it is vital to ensure that drift does not occur, and the team reverts to previous practices. Establishing clear goals using a project charter was incorporated to assist in articulating the goals and standard work necessary to support the refreezing of this change in process ([see Appendix D](#)).

The second framework, the Model for Improvement, developed by the Institute for Healthcare Improvement (IHI), is a well-established and reliable quality improvement model that guided this process improvement initiative. The model comprises of the three fundamental questions: What are we trying to accomplish? How will we know that a change is an improvement? What changes can we make that will result in an improvement? Coupled with the Plan-Do-Study-Act (PDSA) cycle to test changes and determine if the change is an improvement. The aim, measures, and interventions were developed ([see Appendix E](#)).

Specific Project Aim

The specific aim of this project is to implement participation of the SNF liaison into twice weekly ELOS collaborative rounds at least 50% of the time (once a week) between July 2021- September 2021.

Section III: Methods

Context

The medical center for this process improvement initiative is a 343-bed tertiary hospital with 17 subspecialties, including spine and vascular surgery, oncology, and pediatrics. The medical center's average daily census was 256 in 2020. The microsystem assessment completed in March 2021 facilitated analysis by the ELOS team to identify what is working well and the opportunities for improvement of ELOS rounds ([see Appendix A](#)). The ELOS patient population's top admission diagnoses that drove the increased length of stay were: COVID 19 Pneumonia, Severe Sepsis, and Acute Respiratory Failure. The ELOS team comprises healthcare personnel from frontline staff consisting of patient care coordinator case managers and social workers, including their respective leaders, resource management managers, and social work managers. Physicians in executive roles also participate, and senior executive leaders like the coordination of care service director, continuum administrator, and the chief operating officer.

The ELOS rounds address patients receiving care in the hospital for 20 days or more and are identified by the care teams when they anticipate issues that are likely to result in an increased LOS. The multidisciplinary team, led by the Resource Management leadership, is conducted twice weekly for 60 minutes. The team addresses the patient's current care plan, psychosocial support and financial situation, potential needs, barriers upon discharge, and expected milestones needed to achieve a timely and proper discharge from the acute care setting.

An analysis of the project's strengths, weaknesses, opportunities, and threats (SWOT) was completed ([see Appendix F](#)). The SWOT analysis revealed the internal strengths of the availability of subject matter experts, senior leadership support, and a highly collaborative team. Weaknesses are competing priorities and staffing challenges. External opportunities are integrating additional subject matter experts like SNF liaisons and improving the discharge

planning process. Threats to the initiative are limited SNF bed availability and capacity to manage complex patient cases. Other external threats include multiple SNF closures due to the continued possibility of a COVID 19 outbreak within the local community.

Healthcare is a business, and as identified earlier, healthcare costs continue to rise, creating more pressure on insurers and governmental agencies to control costs through capitation and bundled payments. One way to achieve cost reduction is to reduce the number of days patients require inpatient hospitalization by transitioning them to a lower cost setting for discharge as soon as they are medically stable. At this organization, the cost for a standard medical-surgical unit bed is approximately \$6000 per day. On average, the facility has approximately ten ELOS patients. Reducing the ELOS patient stay by two percent (36 days to 34.7 days) would result in a cost savings of approximately \$24,000 (two patients discharged one day earlier at \$6000 per day). Additionally, reducing the length of stay improves the throughput of patients from the ED to inpatient beds and improves capacity for increased surgical cases and transfers who need to come into the facility.

Furthermore, the SNF liaison is currently funded by the organization, so adding this person as the subject matter expert into the ELOS rounds is budget neutral and does not require any additional funding, thus maintaining current labor costs. Finally, creating standard work within the ELOS review process that incorporates the SNF liaison's skill and expertise will reduce redundancies and operational inefficiencies for teams downstream who perform the work of transitioning the patients to the SNF. Thus, this project promotes the best outcomes for our patients and the organization while optimizing workflows and processes through standardization and a model of shared decision making.

Intervention

The ELOS rounds are held in person, with an option to attend virtually to increase attendance. Participation in ELOS rounds includes healthcare personnel from frontline staff consisting of patient care coordinator case managers and social workers, including their respective leaders, resource management managers, and social work managers. Physicians who hold executive roles within the organization also participate with other senior executive leaders, such as the coordination of care service director, continuum administrator, and the chief operating officer. Patient cases with a LOS of 20 days or more are filtered from the electronic health connect system and discussed, starting with the highest length of stay. A standard template is utilized to ensure barriers are identified, discussed with appropriate next steps.

The intervention is to incorporate a SNF liaison, a subject matter expert, into the ELOS collaborative rounds. Rounds are held twice weekly. This project aims to incorporate a SNF liaison into at least 50% of the rounds. In addition, we will continue to evaluate and ensure that the SNF liaisons can add value to the rounds through a meaningful exchange of information.

Study of the Intervention

Baseline data captured was from January 1, 2021, to June 30, 2021. An analysis of the ALOS of ELOS patients' month to month was reviewed and analyzed for trends through the health connect HIFI2E report of the organization. The data review revealed that the ALOS month to month ranges from 35-37 days each month. The ALOS from January to June 2021 was at 36 days. The intervention period began on July 1, 2021, and concluded in September 30, 2021. Analysis was once again performed on the LOS of all ELOS patients from January 2021 to September 2021 through the health connect HIFI2E report of the organization. Attendance of the SNF liaison was tracked through the ELOS attendance sheet. All patients' adjusted 30-day

readmission rate during the same period was also captured and analyzed through an internal monitoring system called hospital insight readmission report. Analysis of the data pre and post-intervention was performed by the key stakeholder of the project, the Coordination of Care Service Director and the Process Improvement Advisor.

Measures

A family of measures was developed for the project ([see Appendix G](#)). The outcome measure is reducing the average LOS of all ELOS patients with a 2% target. The current baseline average LOS of ELOS patients is 36 days. The process measure is the percentage of attendance of SNF liaisons to the ELOS collaborative rounds with the target of at least 50%. By measuring the SNF liaisons' attendance, it can be determined if the system is performing as planned to affect the outcome. Finally, the balancing measure is the observed readmissions. The decrease or steady percentage in observed readmissions tells us that the quality of discharges has not been compromised in respect to reducing acute hospital LOS.

Ethical Considerations

ELOS optimization initiative project has been approved as a quality improvement project by faculty using QI review guidelines and does not require IRB approval ([see Appendix H](#)).

Social and distributive justice is a struggle that is constantly faced in healthcare. By applying the Jesuit values in healthcare practice, service to others, we seek to treat others with a positive and loving attitude no matter how challenging, or unique each patient situation may be—ensuring all have access to care. This project reflects those core values in that it seeks to provide equitable care among the members without regard to health insurance payer sources.

The involvement of a SNF liaison ensures all patients have access to required services for optimal recovery while also ensuring that health care costs are effectively managed. This

improvement project enables ELOS patients to obtain healthcare based on their individual needs and the hospital's resource availability. In healthcare, it is required to be treated similarly and have appropriate access to finite health resources. Individual variables are assessed on their own merits to apply justice in any instance. Access for patients, not ELOS, requiring special services is also optimized.

Section IV: Results

Outcome Measure Results

The three-month period of the project from July 2021 to September 2021 revealed favorable results ([see Appendix I](#)). There was 100% participation by the SNF liaison during the process improvement for ELOS rounds. The participation of the SNF liaison at 100% exceeded the goal of 50%. Moreover, the ALOS was reduced by 6% from the baseline of 36 days to 34 days during this period exceeding the project goal by 4% ([see Appendix J](#) and [Appendix K](#)). Readmissions, selected as a balance metric for this project increased for all ages during this same period from a baseline of 0.96 to 1.09. This observed increase in readmission was an unexpected outcome and will require further analysis to identify the drivers of this increase in readmissions ([see Appendix L](#)).

Section V: Discussion

Summary

The COVID 19 pandemic surge caused by the delta variant of COVID 19 occurred during this project's implementation. Despite the constraints to resources, availability of SNF beds, and other pandemic-related sequelae, integration of the SNF liaison into the twice-weekly ELOS rounds proved to be a critical element in the success of this project, exceeding the stated goals. The interprofessional collaboration allowed for more streamlined care and reduced ALOS

significantly. Overall, the ALOS was reduced by 6%, demonstrating how collaboration and care coordination can improve outcomes for the most complex patients. The SNF liaison was able to identify barriers in the placement of SNF patients and make recommendations for appropriate alternatives to discharge disposition. Incorporating subject matter experts in collaborative rounds enabled an organized workflow that reduced LOS. The improvement project did not impose additional costs as the SNF liaison is an available resource. However, the incorporation of the SNF liaison has reduced costs by reducing the ALOS by two days, at a hospital billing rate of \$6000 per day. The project was successful because the ELOS team members committed themselves to the project, and the leaders provided support.

Conclusion

Evidence used to support this project provided valuable information improvement, which was consistent within the literature. In addition, introducing complex and ELOS rounds has facilitated interprofessional collaboration, thus improving LOS. “Interprofessional collaborative teams that include nurses, physicians, social workers, pharmacists, and physical and occupational therapists can help healthcare organizations improve patient and family experiences, ensure good outcomes, and reduce costs. Successful collaboration also enhances the workplace” (Sigmon, 2020, p.36).

As a future CNL, the utilization of evidence-based practice and inclusion of subject matter experts to inform patient care decisions and quality initiatives are essential tools to improve patient care and achieve positive patient outcomes. This quality improvement project has demonstrated that reducing LOS in complex patient populations is both achievable and realistic. Therefore, the ELOS rounds will continue in their current state with some future iterations to the process currently being considered. Future considerations for tracking and

trending outcomes include the addition of a patient satisfaction survey provided to the ELOS patient population who are discharged to a SNF. Moreover, the success of this project has garnered the attention of regional leaders of the organization who plan to implement this rounding model as a permanent change to the structure of required attendees across all ELOS collaborative rounds within the other medical centers across the entire organization.

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Section VII: Appendices

Appendix A

Supporting Microsystem Profile									
A. Purpose: Why does your microsystem exist?									
Name of Service: ELOS Rounds			Site Contact: Shannan Bradley			Date: 3/15/2021			
Service Manager: Jessica Small			Service Lead: Christina Santiago						
B. Know Your Customers: Take a close look into your microsystem; create a "high-level" picture of the Customers that you serve. Who are they? What resources do they use/request? How do customers view the services they receive?									
Est. Distribution of workload	%	List Your Top 10 Work type requests		Top requesting Customers		Customer Satisfaction Scores		% Excellent	
18-64 y/o	54	1. Discharge Planning	6.	Chemotherapy		Experience via phone			
65 y/o and above	46	2. Palliative Care	7.	Respiratory related condition		Length of time to get complete work			
		3.	8.			Accuracy of work			
		4.	9.			Satisfaction with personal manner			
		5.	10.			Satisfaction with work product			
		Customers who are frequent users of your service and their reasons for interacting with your microsystem		Other services you interact with regularly as part of your normal work processes.		Work-lead distribution: Do these numbers change by season? (Y/N)		#	Y/N
Est. # of work requests in last month						Work-lead in a day			
						Work-lead in last week			
						Work-lead in last month			
						Other			
Top Payors				Home Health/Hospice 25%					
				Skilled Nursing Facility 75%					
Medicare									
Commercial									
MediCal									
*Complete "Through the Eyes of Your Customer"									
C. Know Your Professionals: Use the following template to create a comprehensive picture of your microsystem. Who does what and when? Is the right person doing the right activity? Are roles being optimized? Are all roles who contribute to the patient experience listed? What hours are you open for business? What is the morale of your staff?									
Current Staff	FTEs	Role/Function		Days of Operation	Hours of Operation				
Enter names below totals (Use separate sheet if needed)					Monday	n/a			
					Tuesday	12:30	1:30		
Microsystem Total					Wednesday	n/a			
					Thursday	12:30	1:30		
Chief Operating Officer		Provide general guidance from an administrative viewpoint		Friday	n/a				
Continuum Administrator		Continuum service line oversight		Saturday	n/a				
Continuity of Care Service Director		Facilitate meeting and follow up		Sunday	n/a				
Utilization Management Manager		Review acute care criteria, facilitate discharge plan including level of functioning, short- and long-term care needs		Which activities are you involved in? Check all that apply.					
Social Work Manager		Review psychosocial issues related to discharge needs		<input type="checkbox"/> Electronic Work Request		<input type="checkbox"/> E-Mail (with customers)			
Resource Management Chief		Assist with clinical issues and physician follow up		<input type="checkbox"/> Data Management		<input type="checkbox"/> Website			
ELOS Consultant		Provide guidance in complex case management, including transitional needs		<input type="checkbox"/> Certification		<input type="checkbox"/> Other-			
Patient Care Coordinator Case Manager		Present updates on current medical status and plan of care		Regularly attend clinical microsystem meetings you are supporting		<input type="checkbox"/> Other-			
Social Worker		Present social situation and potential barriers		X Leadership meets regularly with clinical microsystems being supported					
Managers									
Other:									
Work Type	Cycle Time	Comment		Do you use a Float Pool? <input type="checkbox"/> Yes X No					
				Do you use On-Call? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
				Do you use Per Diems? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Staff Satisfaction Scores									
How stressful is this microsystem?		% Very stressed							
Would you recommend it as a good place to work?		% Strongly Agree							
*Each staff member should complete the Personal Skills Assessment and "The Activity Survey"									
D. Know Your Processes: How do things get done in the microsystem? Who does what? What are the step-by-step processes? How long does it take to complete the work here, are the delays? What are the "between" microsystems hand-offs? Have you discussed a shared purpose with clinical microsystems and other supporting microsystems?									
1. Track cycle time from work requested, work assigned, work completed, final product sent to customer.									
2. Complete the Core and Supporting Process Assessment Tool									
E. Know Your Patterns: What patterns are present but not acknowledged in your microsystem? What is the leadership and social pattern? How often does the microsystem meet to discuss processes? Are customers involved? What are your results and outcomes?									
• Does every member of the microsystem meet regularly as a team?		• Do the members of the microsystem regularly review and discuss errors, safety and reliability issues?		• What have you successfully changed?		• What are you most proud of?			
• How frequently?				• What is your financial picture?					
• What is the most significant pattern of variation?				*Complete "Metrics that Matter"					

Appendix B

Evidence Based Literature Review

Study	Design	Sample	Outcome/Feasibility	Evidence rating
Akuamoah-Boateng, K., Wiencek, C., Esquivel, J. H., DeGennaro, G., Torres, B., & Whelan, J. F. (2019). RAMPED-UP: The Development and Testing of an Interprofessional Collaboration Model. <i>Journal of Trauma Nursing</i> , 26(6), 281-289. https://doi.org/10.1097/JTN.0000000000000466	Prospective cohort study	100 participants from each targeted group	Measured the impact of a structured interprofessional collaboration (IPC) model, RAMPED-UP, on hospital length of stay in a surgical trauma population. Proved that IPC could improve DBN (discharge by noon) and RAMPED-UP length of stay. Useful in exhibiting that interprofessional collaboration is an essential component of care delivery needed to achieve optimal patient- and system-level outcomes like reducing the length of stay.	JHNEBP Level IIIB
Cesta, T. (2016). The process of managing long-stay and difficult-to discharge patients. <i>Hospital Case Management</i> , 24(12), 167-170. https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=ccm&AN=119379083&site=ehost-live&scope=site&custid=s3818721	Expert opinion	None	Discuss the value of a specialty position in case management in improving the discharge planning process of complex and long-stay patients. Highlight the value of a specialist like a clinical liaison in improving patients' length of stay and managing the complexity.	JHNEBP Level IVB
DePesa, C. D., El Hechi, M. W., McKenzie, R., Waak, K., Woodis, L., Chang, Y., Gervasini, A., Velmahos, G. C., &	Quality improvement	6,120 patients were included in the analysis	Demonstrates that by creating a list of targeted patients, rounding with a small, multidisciplinary group with influence on	JHNEBP Level IVB

<p>Kaafarani, H. A. (2020). A multidisciplinary approach to decreasing length of stay in acute care surgery patients. <i>Journal of Advanced Nursing</i>, 76(6), 1364–1370. https://doi.org/10.1111/jan.14335</p>			<p>discharge decisions, and early identification and action on barriers to discharge, an institution can use existing resources to create a significant decrease in acute care surgery patient days per year.</p> <p>Valuable to show how a collaborative approach with a multidisciplinary team that influences discharge decisions like SNF liaisons can affect the length of stay.</p>	
<p>Donovan, A. L., Aldrich, J. M., Gross, A. K., Barchas, D. M., Thornton, K. C., Schell-Chaple, H. M., Gropper, M. A., Lipshutz, A. K. M., on behalf of the University of California, S. F. C. C. I. G., Turner, K., McCullough, J., Schwarz, J., Liu, K. D., Anderson, W., Khanna, R., Agarwal, P., Engel, H., Daniel, B., Timothy, K., & Lencioni, A. (2018). Interprofessional care and teamwork in the ICU. <i>Critical care medicine</i>, 46(6), 980–990. https://doi.org/10.1097/CCM.00000000000003067</p>	Systematic review	Literature review	<p>A comprehensive body of evidence supports an interprofessional approach as a critical component in providing patients with complex and increasingly diverse needs with high-quality, critical care.</p> <p>Useful in highlighting the value of interprofessional collaboration and the use of subject matter experts in planning care for complex patients.</p>	JHNEBP Level III B
<p>Michalsen, A., Long, A. C., DeKeyser Ganz, F., White, D. B., Jensen, H. I., Metaxa, V., Hartog, C. S., Latour, J. M.,</p>	Systematic review and Normative analysis	Systematic review	<p>Clinicians should consider an interprofessional shared model of decision making that allows for an exchange of information,</p>	JHNEBP Level III B

<p>Truog, R. D., Kesecioglu, J., Mahn, A. R., & Curtis, J. R. (2019). Interprofessional shared decision-making in the ICU: A systematic review and recommendations from an expert panel. <i>Critical care medicine</i>, 47(9), 1258–1266. https://doi.org/10.1097/CCM.00000000000003870</p>			<p>deliberation, and joint achievement of essential decisions in treatment.</p> <p>Helpful in showing the value of interprofessional collaboration in decisions for treatment.</p>	
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Appendix C**Lewin's Change Theory**

Appendix D

Project Charter

Project Charter: Optimizing Interprofessional Rounds in Support of Extended Length of Stay (ELOS) Complex Patients.

Global Aim: To reduce the average length of stay of ELOS Complex patients by 2% in Kaiser Oakland Medical Center within one year.

Specific Aim: To increase participation of the SNF (skilled nursing facility) liaison on ELOS/complex patients and initiate attendance at least once a week of biweekly ELOS collaborative rounds within three months.

Background:

Inpatient hospital stays in the United States totaled 35.4 million in 2014, with 3.9 million newborn, 4.1 million maternity-related, 7 million surgical, and 17 million medical admissions (McDermott et al., 2017). Extended and unnecessary hospital stays could lead to patient complications and increased costs. Furthermore, the length of hospitalization may have a detrimental impact on both the patient and the staff's experience. To reduce length of stay, organizations have created a variety of interventions, each with its own design, goal, and focal point. While some interventions, such as ERAS (Enhanced Recovery after Surgery), are largely focused on improving clinical care, other approaches address logistical issues such as care coordination.

Sponsors

Regional Continuum of Care Service Director	Jessica Small
Continuum Administrator Kaiser East Bay	Roland Gigon

Goals

To promote interfacility communication and collaboration by incorporating SNF liaisons to ELOS collaborative rounds, allowing subject matter experts to have a venue to collaborate. Complex and ELOS rounds have allowed interprofessional collaboration, thus improving the metric that matters like reduction of hospital length of stay.

Measures

Measure	Data Source	Target
Outcome		
% of Average LOS in days of ELOS patients	Healthconnect HIFI2E report	<2%
Process		
% of attendance of SNF liaisons to ELOS collaborative rounds	ELOS rounds attendance sheet	<50%
Balancing		

Adjusted 30-day readmission rate of all patients	KP Insight readmissions Report	< or = 10%
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Team

Resource Management Chief MD	
Coordination of Care Service Director	
Resource Management Manager	
Social Work Manager	
Continuum Administrator	
Palliative Manager	
Frontline Staff (Case Manager/Social Worker)	
ELOS Consultant	

Measurement Strategy

Background (Global Aim) To reduce the average length of stay of ELOS complex patients by 2% in Kaiser Oakland Medical Center within one year.

Population Criteria: All medical extended length of stay patients twenty days and above at Kaiser Oakland.

Data Collection Method: Data will be obtained from Allscripts data reports, as well as the ELOS tableau dashboard and HIFI2E data report. Baseline data for SNF discharges of ELOS patients as well as average LOS of ELOS patients March 1, 2020-February 28, 2021. Data will be reviewed every month based on results.

Data Definitions

Data Element	Definition
Length of Stay (LOS)	Length of stay in days from date of admission to date of discharge.
ELOS complex patients	All medical patients with a LOS of 20 days or more.
SNF liaison	SNF Manager or Director or any representative from the Continuum Department.
30-day Readmission of ELOS patients	Any ELOS patient readmitted to the hospital within the 30days of index discharge date to date of readmission.

Measure Description

Measure	Measure Definition	Data Collection source	Goal
% of Average LOS of ELOS patients	N= total # of LOS in days of all ELOS patients D= # ELOS patients	Healthconnect HIFI2E report	<2 %

Attendance of SNF Liaisons	N= # of attendance of SNF liaisons to ELOS rounds D = # of ELOS collaborative rounds weekly	ELOS attendance sheet	50%
No increase in adjusted 30-day readmission rate in all patients	N= # of observed patients readmitted within 30 days D= # of expected patients readmitted within 30 days	Hospital Insight Readmission report	< or = 10%

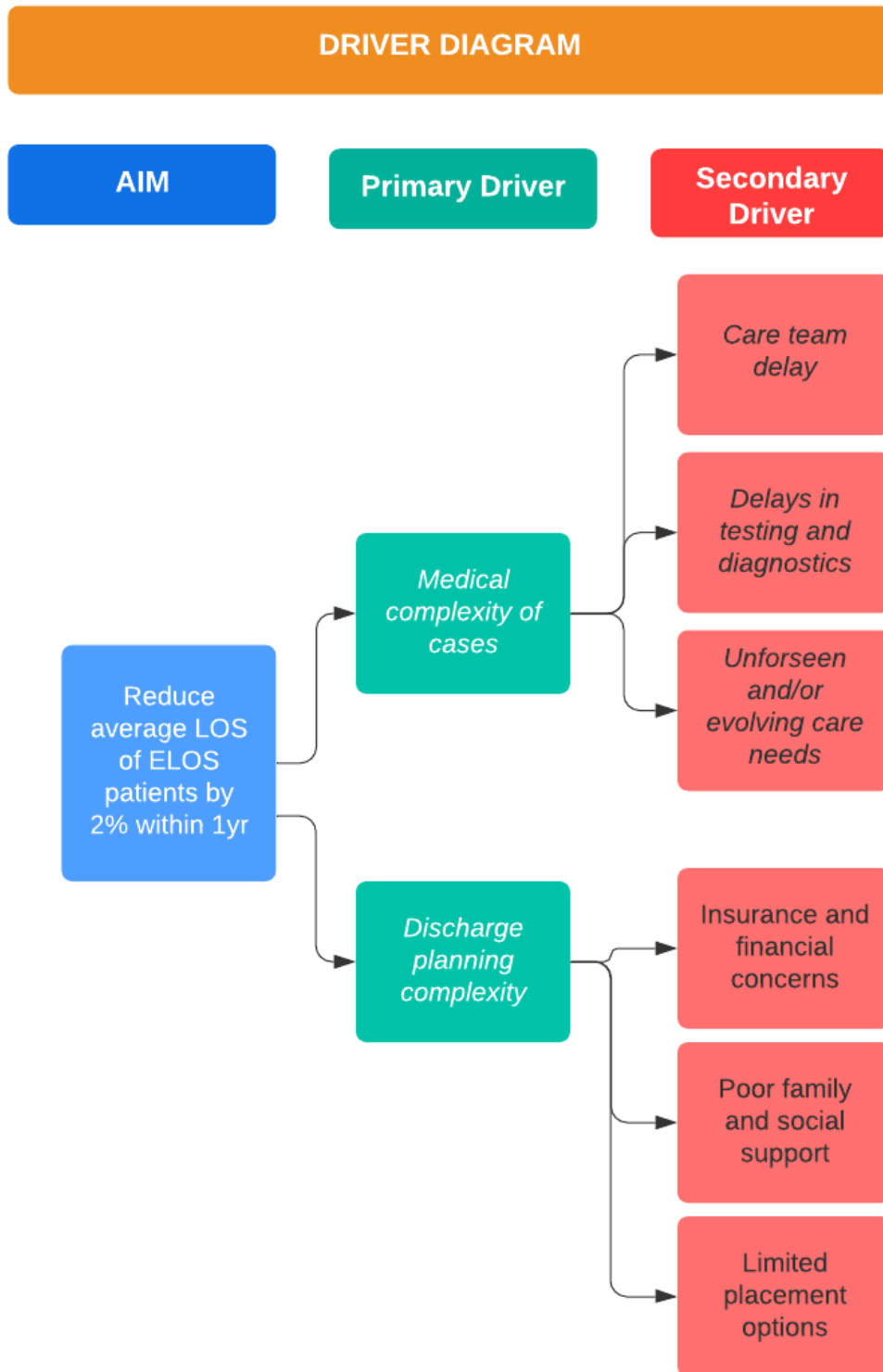
Changes to Test

- Optimize ELOS collaborative rounds by incorporating SNF liaisons.
- Plan-Do-Study-Act (PDSA) approach to ensure ELOS rounds continue effective and efficient on the discussion of all ELOS patients.

CNL Competencies

1. **Systems Analyst/Risk Anticipator-** One of the primary responsibilities of the CNL is to improve the quality of care by assessing and anticipating risks to patient safety. By incorporating SNF liaisons to ELOS rounds, the CNL ensures appropriate transitions of our patients to the next level of care.
2. **Outcomes Manager-** The CNL utilizes evidence-based practice around subject matter expert involvement to inform patient care decisions and quality initiatives to close gaps in patient care and achieve positive patient outcomes.
3. **Team Manager-** Through ELOS collaborative rounds, the CNL encourages prompt and effective communication among various healthcare practitioners, including physicians, nurses, therapists, and consultants.

Appendix D



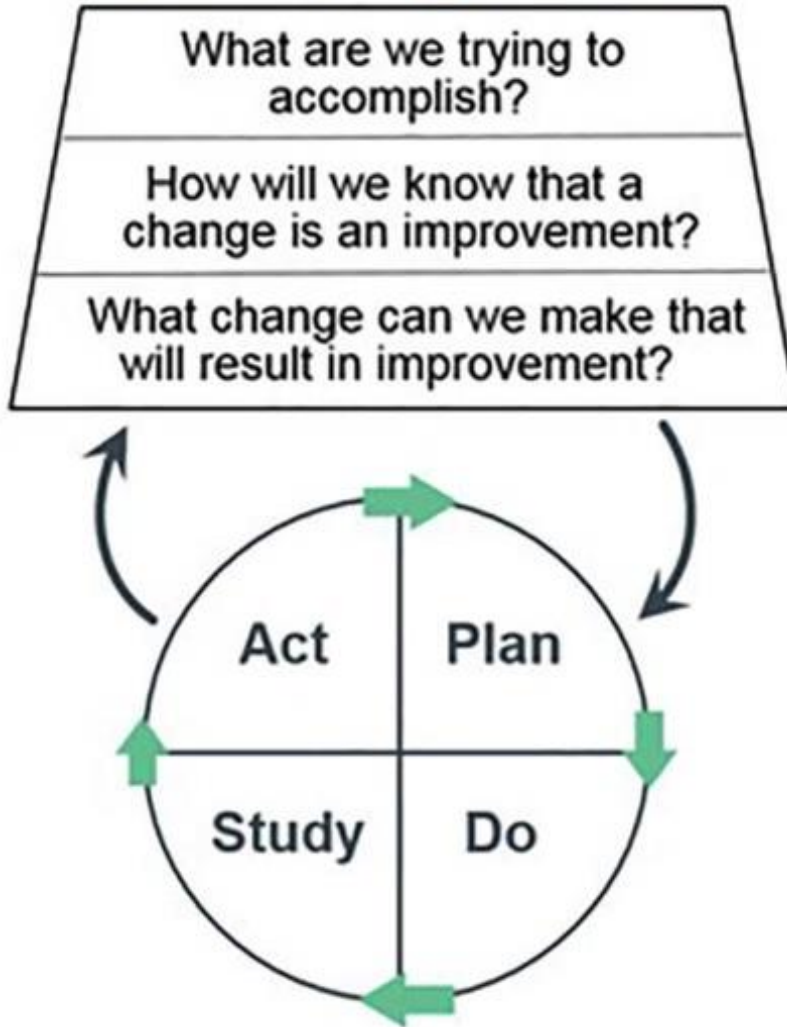
Appendix D

PROJECT TIMELINE: Optimizing Interprofessional Rounds in Support of Extended Length of Stay (ELOS) Complex Patients										
	MAR 21	APR 21	MAY 21	JUN 21	JUL 21	AUG 21	SEP 21	OCT 21	NOV 21	DEC 21
<i>Perform Microsystem assessment</i>	Unfreezing									
<i>Initiate literature review and research of baseline data of metric that matters</i>	Unfreezing	Unfreezing								
<i>Develop change project</i>		Unfreezing	Unfreezing	Unfreezing						
<i>Present change project to Local Senior and Regional Leadership</i>				Unfreezing						
<i>Present change project to ELOS team members</i>					Unfreezing					
<i>Initiate integration of SNF liaisons to ELOS rounds</i>					Change	Change	Change			
<i>Track data metric monthly</i>					Change	Change	Change	Change	Change	Change
<i>Reinforcing SNF liaisons attendance to ELOS rounds</i>							Refreezing	Refreezing		
<i>Presentation of findings to Leadership/Sponsors</i>								Refreezing		
<i>Presentation of findings to ELOS team members and formalizing change</i>								Refreezing	Refreezing	Refreezing

Legend: Unfreezing Change Refreezing

Appendix E

Model for Improvement



Appendix F**SWOT ANALYSIS**

<p data-bbox="298 491 774 562">Strengths</p> <ul data-bbox="316 583 755 783" style="list-style-type: none">• Availability of subject matter experts• Senior leadership support• Highly collaborative team	<p data-bbox="849 491 1325 562">Weaknesses</p> <ul data-bbox="867 583 1192 678" style="list-style-type: none">• Competing priorities• Staffing challenges
<p data-bbox="298 1041 774 1113">Opportunities</p> <ul data-bbox="316 1134 760 1388" style="list-style-type: none">• Intergration of additional subject matter experts to the rounds like SNF liaisons• Improve discharge planning process	<p data-bbox="849 1041 1325 1113">Threats</p> <ul data-bbox="867 1134 1325 1440" style="list-style-type: none">• Limited SNF bed availability and capacity to manage complex patient cases• Multiple SNF closures due to COVID 19 outbreak within the facilities.

Appendix G

Family of Measures

Measures	Data Source	Baseline	Target
Outcome			
% of Average LOS in days of ELOS patients	Healthconnect HIFI2E report	36 days	<2%
Process			
% of attendance of SNF liaisons to ELOS collaborative rounds	ELOS rounds attendance sheet	0%	<50%
Balancing			
Observed/expected 30-day readmission rate of all patients	KP insight readmissions report	0.96	< or = 10%

Appendix H

**CNL Project: Statement of Non-Research Determination Form****Student Name: Christina May P. Santiago****Title of Project:**

Optimizing Interprofessional Rounds in Support of Extended Length of Stay (ELOS) Complex Patients.

Brief Description of Project:

ELOS rounds were initiated to proactively address the growing number of ELOS patients across the twenty-one medical centers of Kaiser Permanente in Northern California. ELOS rounds in Kaiser Oakland Medical Center embody a system of interdependent teams that aim to achieve several common goals, including reducing the length of stay and identifying appropriate treatment and disposition options in the ELOS and complex patient populations. The SNF setting has been identified as a high-volume discharge disposition, and the interfacility communication and collaboration might be optimized if the process is begun earlier while patients are in the hospital.

A) Aim Statement:

This project aims to reduce the average length of stay of ELOS Complex patients by 2% in Kaiser Oakland Medical Center within one year. The specific aim of this project is to increase upstream participation of the SNF liaison on ELOS/ complex patients and initiate attendance at least once a week of biweekly ELOS collaborative rounds within three months.

B) Description of Intervention:

Incorporate Skilled Nursing Facility (SNF) Liaisons to ELOS collaborative rounds.

C) How will this intervention change practice?

Incorporating a subject matter expert like the SNF Liaisons will optimize collaborative rounds and exchange valuable information to other team members while also facilitating a smooth transition of our patients to the next level of care.

D) Outcome measurements:

- 1) Reduced average length of stay in ELOS complex patients.
- 2) At least once a week attendance of SNF liaison to biweekly ELOS collaborative rounds

To qualify as an Evidence-based Change in Practice Project, rather than a Research

Appendix H



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Project, the criteria outlined in federal guidelines will be used:
(<http://answers.hhs.gov/ohrp/categories/1569>)

This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	x	
The specific aim is to improve performance on a specific service or program and is a part of usual care. ALL participants will receive standard of care.	x	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	x	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	x	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	x	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	x	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	x	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	x	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: "This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not	x	

Appendix H



formally supervised by the Institutional Review Board."

ANSWER KEY: If the answer to ALL of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files. If the answer to ANY of these questions is NO, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print):

Christina May P. Santiago

Signature of Student:

[Handwritten signature]

DATE_6/29/2021

SUPERVISING FACULTY MEMBER NAME (Please print):

Carla S. MARTEN, MSN, RN

Signature of Supervising Faculty Member:

[Handwritten signature]

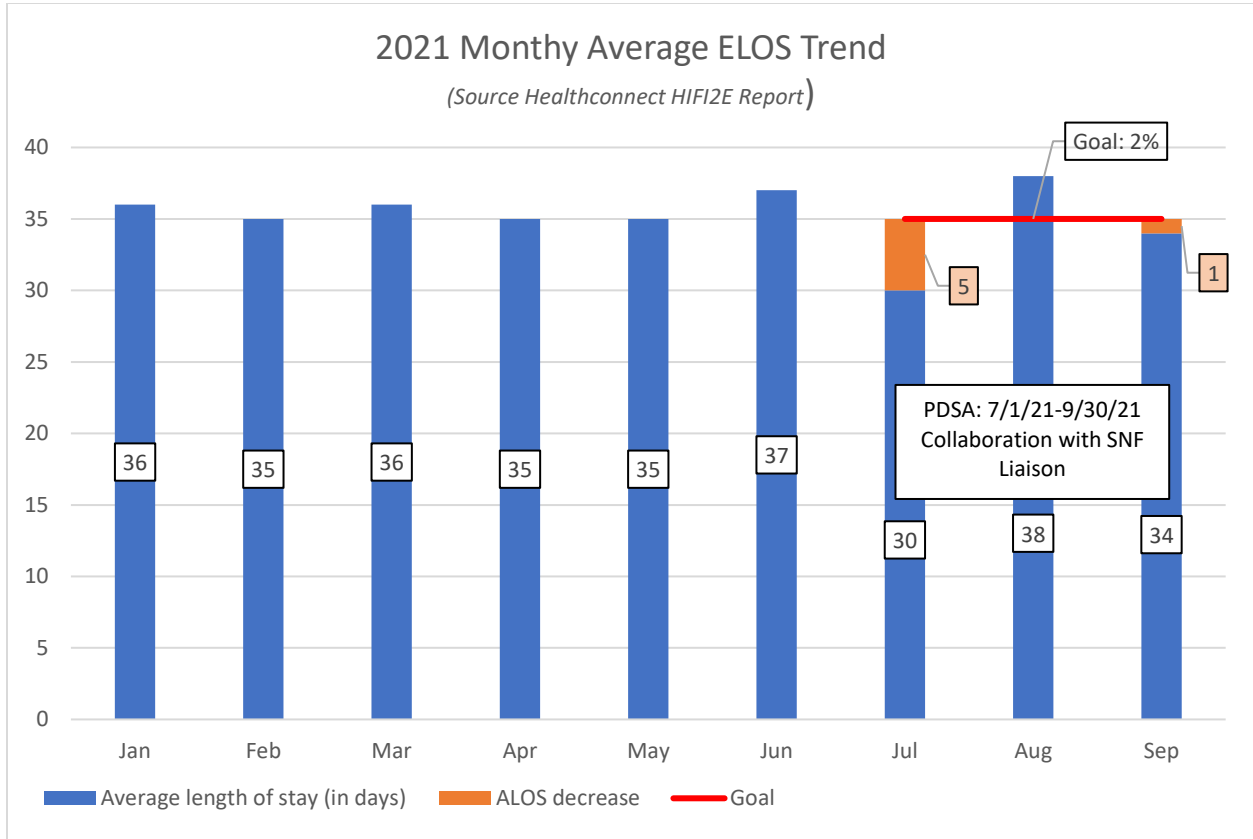
DATE 11/19/2021

Appendix I

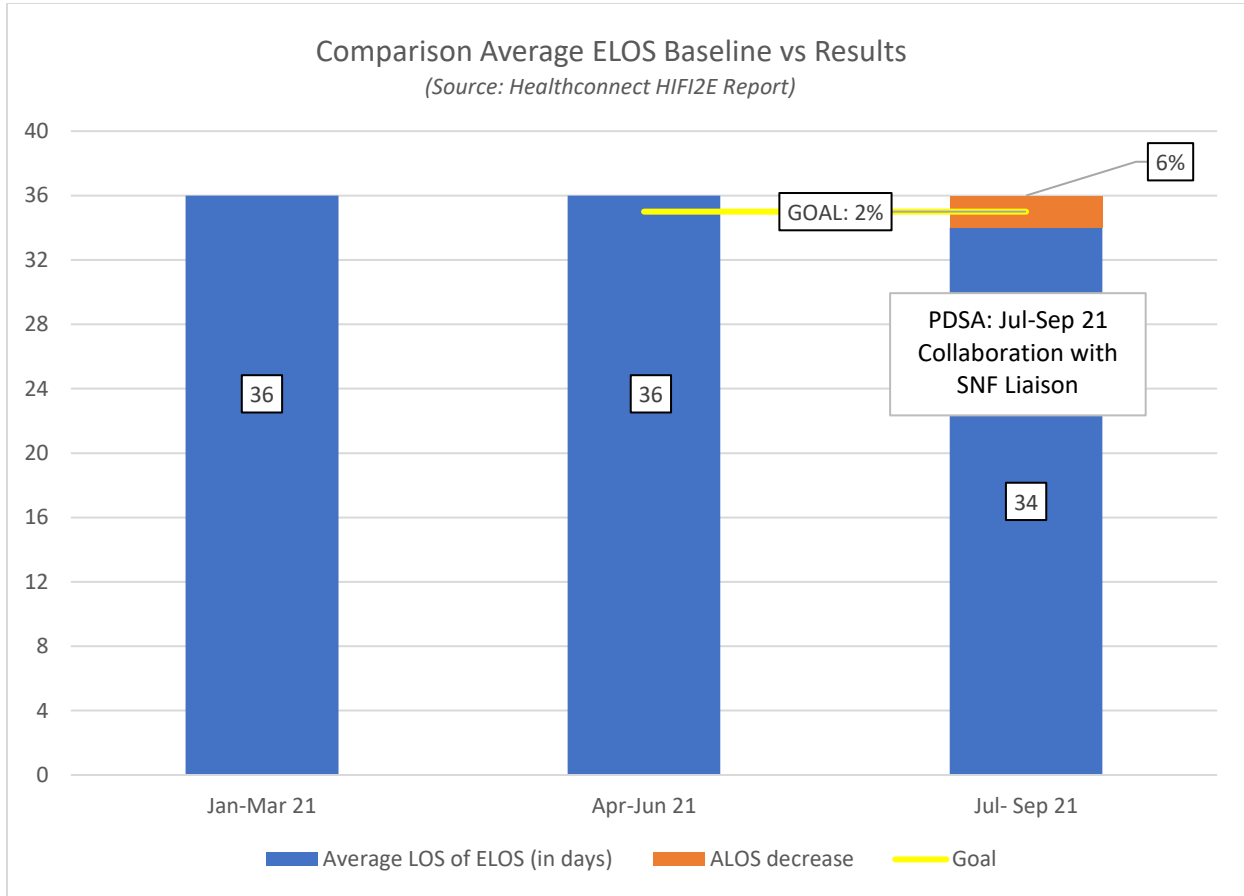
Family of Measures

Measures	Baseline	Result	Target
Outcome			
% of Average LOS in days of ELOS patients	36 days	34 days (↓ 6%)	<2%
Process			
% of attendance of SNF liaisons to ELOS collaborative rounds	0 %	100%	<50%
Balancing			
Observed/expected 30-day readmission rate of all patients	0.96	1.09	< or = 10%

Appendix J



Appendix K



Appendix L

