

eAppendix Table 1. Pre- and Post-Intervention Length of Stay by Diagnosis

| Diagnosis | Pre-Intervention Length of Stay | Post-Intervention Length of Stay |
|--------------------------|--|---|
| Chest Pain | 5.99 +/- 3.14 | 2.81 +/- 1.72 |
| ACS | 6.34 +/- 2.56 | 3.17 +/- 2.66 |
| Arrhythmia | 8.68 +/- 4.91 | 3.80 +/- 2.91 |
| Electrolyte Abnormality | 8.19 +/- 4.30 | 3.47 +/- 1.70 |
| CHF Exacerbation | 4.64 +/- 3.38 | 3.50 +/- 1.53 |
| CVA | 5.85 +/- 3.20 | 4.06 +/- 3.66 |
| Syncope | 7.11 +/- 4.57 | 2.76 +/- 6.09 |
| Asthma/COPD Exacerbation | 8.28 +/- 3.33 | 4.45 +/- 1.80 |
| Seizure | 6.14 +/- 1.05 | 2.35 +/- 1.95 |
| AMS | 8.24 +/- 4.99 | 3.75 +/- 1.18 |
| Sepsis | 8.04 +/- 4.50 | 4.03 +/- 4.90 |
| GI bleed | 9.56 +/- 3.25 | 4.80 +/- 7.15 |

ACS, acute coronary syndrome; AMS, altered mental status; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; CVA, cerebrovascular accident; GI, gastrointestinal; SOB, shortness of breath. Data are mean +/- standard deviation.

eAppendix Table 2. Monthly and total cost saving of mean telemetry length of stay Post-Intervention







| Average Telemetry Pre-Intervention* | Date | Telemetry LOS Post-Intervention | N | Delta (Average Telemetry LOS Pre-intervention -Telemetry LOS Post-Intervention) | Patient Days (N X Delta) | Cost saving (\$34 x Patient days) |
|--|------------------------|--|----------|--|---------------------------------|--|
| 7.2 | Aug-17 | 5.99 | 167 | 1.21 | 202.07 | 6870.38 |
| | Sep-17 | 4.02 | 173 | 3.18 | 550.14 | 18704.76 |
| | Oct-17 | 3.27 | 177 | 3.93 | 695.61 | 23650.74 |
| | Nov-17 | 3.28 | 180 | 3.92 | 705.6 | 23990.4 |
| | Dec-17 | 3.21 | 164 | 3.99 | 654.36 | 22248.24 |
| | Jan-18 | 3.28 | 196 | 3.92 | 768.32 | 26122.88 |
| | Feb-18 | 3.59 | 179 | 3.61 | 646.19 | 21970.46 |
| | Mar-18 | 4.22 | 209 | 2.98 | 622.82 | 21175.88 |
| | Apr-18 | 4.1 | 195 | 3.1 | 604.5 | 20553 |
| | May-18 | 3.4 | 215 | 3.8 | 817 | 27778 |
| | Jun-18 | 2.98 | 217 | 4.22 | 915.74 | 31135.16 |
| | Total saving | | | | | \$244, 199.9 |
| | Average monthly saving | | | | | \$22,199.99 |

Average calculated for the period from January 2017 to July 2017.

eAppendix Figure. Telemetry Pocket Card

Does My Patient Need Telemetry?

Assess each patient daily to determine if they truly need telemetry or not

| | |
|--|--|
| <p style="text-align: center;">YES My Patient will Clinically Benefit from Telemetry</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="font-size: x-small; margin: 0;">My patient has one of the following conditions</p> <ul style="list-style-type: none"> - Post cardiac arrest - Temporary pacing - High grade AV block - Post cardiac surgery, high risk - Arrhythmias (including LQTS and WPW) Intensive care unit - New onset bradyarrhythmia - Overdose of a pro-arrhythmic agent - Severe Hypokalemia or hypomagnesemia </div> <p style="font-size: x-small; margin: 0;">Continue telemetry indefinitely based on clinical condition</p> <p style="text-align: center; font-weight: bold; font-size: small;">← YES NO</p> | <p style="text-align: center;">NO My Patient No Longer Needs Telemetry</p> <div style="text-align: center; margin-bottom: 10px;">  </div> <ul style="list-style-type: none"> - I have placed a D.C. Order - I told nurse <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px; font-size: x-small;"> <p>I know that patients with the following conditions do not automatically need telemetry</p> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-bottom: 10px;"> <div style="text-align: center;">  <p style="font-size: x-small; margin: 0;">Dyspnea or hypoxemia</p> </div> <div style="text-align: center;">  <p style="font-size: x-small; margin: 0;">GI Bleed</p> </div> </div> <div style="text-align: center; margin-bottom: 10px;">  <p style="font-size: x-small; margin: 0;">Stable PE without right heart strain</p> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p style="font-size: x-small; margin: 0;">Alcohol Withdrawal</p> </div> <div style="text-align: center;">  <p style="font-size: x-small; margin: 0;">Anemia</p> </div> </div> |
| <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="font-size: x-small; margin: 0;">My patient has one of the following conditions</p> <ul style="list-style-type: none"> - Acute/subacute heart failure - Acute MI - Syncope of unknown etiology - Post-noncardiac surgery high risk - Acute neurological event </div> <p style="font-size: x-small; margin: 0;">Continue tele for 24 hours</p> <p style="text-align: center; font-weight: bold; font-size: small;">← YES NO</p> | <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <p style="font-size: x-small; margin: 0;">My patient has one of the following conditions</p> <ul style="list-style-type: none"> - Post-pacemaker/ablation/ICD - Chest pain syndrome (excluding very low-risk patients) - Uncontrolled atrial tachyarrhythmia - Initiation of drug known to cause TdP </div> <p style="font-size: x-small; margin: 0;">Continue tele for 24 hours</p> <p style="text-align: center; font-weight: bold; font-size: small;">← YES</p> |



Now that I have stopped telemetry:

- My patient will be less likely to suffer from alarm fatigue
- I'm helping the hospital improve throughput, yay me!
- I'll be saving the nursing staff time that would otherwise go toward tele logistics
- I know there's a low incidence of clinically significant arrhythmias in patients on tele who are not in ICU

DID YOU KNOW?

- Telemetry is a costly resource that should only be utilized if needed
- Think about whether having your patient on telemetry will change management or not
- Telemetry is estimated to cost **\$1400 per patient per 24 hours**

.....

Together, we can deliver excellent care in a resource effective manner, THANK YOU for all that you do!!
Brought to you by the MSSL Telemetry Committee