Control Chart Exercises

1. A large metropolitan hospital processes many samples of blood daily. Some occasionally get mislabeled or lost, so new samples are required (rework). Subgroups of 50 samples are tracked each day for a 15 day period. **Construct a control chart to search for special sources of variation.**

**Graph a P-Chart - Find P,UCL, LCL , etc Trends? Runs? Out of control?**

|  |  |  |
| --- | --- | --- |
| Sample # | n | Missing or Lost |
| 1 | 50 | 4 |
| 2 | 50 | 4 |
| 3 | 50 | 6 |
| 4 | 50 | 5 |
| 5 | 50 | 2 |
| 6 | 50 | 0 |
| 7 | 50 | 6 |
| 8 | 50 | 1 |
| 9 | 50 | 2 |
| 10 | 50 | 0 |
| 11 | 50 | 4 |
| 12 | 50 | 2 |
| 13 | 50 | 3 |
| 14 | 50 | 0 |
| 15 | 50 | 2 |
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1. A hospital interested in monitoring its accounts receivable randomly samples a varying number each week to determine how many are more than 30 days past due. The results of the last 10 weeks are shown below. **Develop a P-chart for this varying n data. Need same: P, Proportion nonconforming UCL, LCL, Runs? Trends? Out of control?**

|  |  |  |
| --- | --- | --- |
| # Sampled | # Nonconforming | Proportion Nonconforming |
| 112 | 45 |  |
| 104 | 39 |  |
| 95 | 42 |  |
| 126 | 40 |  |
| 118 | 37 |  |
| 87 | 41 |  |
| 121 | 43 |  |
| 100 | 39 |  |
| 79 | 42 |  |
| 98 | 45 |  |