



TOOLKIT 29 · QUALITY IMPROVEMENT · TOOL 3 OF 4

Run Chart — Plot It, Then Read It

A measure over time, with the median line: the only way to tell improvement from noise. The grid and the four rules

Measure (with units) · ward · period (week / month numbers) · median = ____ (middle value of the first 10–12 points; redraw after a sustained shift)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
100																								
90																								
80																								
70																								
60																								
50																								
40																								
30																								
20																								
10																								
0																								
Point	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Annotate below the grid: when each change was introduced (arrow and label), holidays, staffing events, outbreaks.

Rule	Signal of non-random change	Means
1 · Shift	6 or more consecutive points all above or all below the median (points on the median do not count)	Something changed the level

Rule	Signal of non-random change	Means
2 · Trend	5 or more consecutive points all going up or all going down	A steady drift
3 · Runs	Too few or too many crossings of the median for the number of points (use the runs table)	Patterned, not random
4 · Astronomical point	A point obviously, extremely different from the rest	Investigate that event

Worked example. Hand-hygiene compliance, Ward 3, monthly: 41, 38, 45, 40, 44, 39, 42, 43 (median 41.5). Dispensers installed at every bed in month 9. Months 9–16: 55, 58, 52, 61, 59, 63, 60, 62 — eight consecutive points above the median: a shift (rule 1). The change worked; redraw the median for the new level and keep watching.

ASF standards: Governance — measurement (means of verification: run charts attached to PDSA and dashboards)