The intervention was comprised of using the Model for Improvement (IHI) to determine measures around baseline, benchmark, and sustainability. Expected length of treatment (time in chair) vs. actual length of treatment data was collected for 30-day periods. Variances were investigated and assessed against benchmark. Direct care time during treatment was identified as the greatest influence to variation.

Direct care time by treatment was reviewed and given an ‘acuity scale’. This matrix was then applied by the team leader and clerk when scheduling appointments. Further P-D-S-A cycles included adjustments to expected length of treatment and smoothing out allocations by assessing acuity in 15-minute blocks. These changes resulted in a reduction of non-value added chair time for the patients, improved on-time length of treatment for all regimes, improved chair utilisation and staff satisfaction, and a reduction in staff sick leave.

The improved matrix was used to establish electronic scheduling plans. The Scheduling Improvement work demonstrates the benefit of reducing non-value added chair time to patients by adding an acuity scale for smoothing workflow. This method has also been used in the Theatre Perfect List project with success.

Abstract: This work was undertaken at the Chemotherapy Day Unit of Ballarat Health Services in Victoria, Australia by a team comprised of the redesign lead, nursing, and clerical staff. The need for improved scheduling was highlighted in the Victorian Chemotherapy Service Redesign Project (VCSRP). During baseline data collection it was determined that 50% of patients were experiencing non-value added chair time.

CHEMOTHERAPY DAY UNIT
Reducing Scheduling Variation

Model for Improvement

What are we trying to accomplish? Improve on-time length of treatment by reducing variances and non-value added chair time.

How will we know that a change is an improvement? Measure expected length of treatment (scheduled time in chair for treatment) vs. actual length of treatment (time in chair). Measure value added time vs. non-value added time during treatment.

What changes can we make that will result in improvement? Reduce variation caused by non-value added time in chair. Add acuity scale to reflect direct care time required for each treatment to ensure consistent workload for staff.

Baseline:
- 30-day data collected utilizing existing scheduling tool (above right).
- Each treatment regime actual time vs. expected (scheduled) time recorded.
- Variances documented (Graph, above right). Variances assessed regarding one-off vs. recurring by regime.

Benchmark:
- Where variance in treatment regime was recurring benchmarking was undertaken using The Health Roundtable data (right).
- Benchmark also included assessment of direct care time previously scheduled, actually provided and as in HODC Acuity Scale (right).

Plan-Do-Study-Act Cycle:
- Adjustments made to appoint scheduling tool to reflect revised times and acuity (right).
- During trial only Team Leader and Ward Clerk allowed to schedule to ensure new planning tool utilised.
- Nursing allocation adjusted to acuity model in 15-minute blocks, to allow for smoothing of start and stop treatment times that translated to higher acuity.
- 30-day trial of revised system with data collection as per baseline.
- Revisions made as issues identified.

Results:
- Reduction in non-value added chair time for patients
- Improved on-time length of treatment for all regimes
- Improved chair utilisation—improved access to care for patients
- Reduction in staff overtime
- Reduction in staff sick leave (reflection of staff satisfaction)

Sustainability:
- Revised scheduling method used to create electronic scheduling
- 6 month sustainability report showed continued level of improvement.

Reducing Scheduling Variation

Ballarat Health Services
SMOOTHING OUT SCHEDULING IN A REGIONAL CHEMOTHERAPY DAY UNIT BY ADDING AN ACUITY SCALE TO LENGTH OF TREATMENT

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