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Supplemental Materials for

Application of Lean Principles to the Comprehensive Geriatric Assessment to Reduce Cycle Time

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Table S1
"Lean" Principles

| LEAN phase | Description | Time period | Number of visits | Method of data collection and analysis |
|---------------------|--|--------------------------|------------------|---|
| Define | Decision on target problem and flow chart creation | June 2023 | 0 | Discussion amongst interdisciplinary team |
| Measure | Current state analysis of usual clinic workflow (CHA—5 geriatricians) | July 2023 | 10 | Time study |
| | Current state analysis of patient and caregiver experience | July-August 2023 | 44 | Likert scale questionnaire with comments for qualitative analysis |
| | Measurement of baseline for target clinic | August-November 2023 | 19 | Outcome and balancing measures |
| Analyze | Value stream mapping using flow chart, time study, and patient perspective | August 2023 | 0 | Value stream mapping for idea generation and decision on change ideas to test |
| Improve and Control | PDSA cycles | December 2023-April 2024 | 33 | Outcome, process, and balancing measures; SPC charts for analysis |

Appendix S1

Patient and caregiver survey



Date:

Please tell us about your experience at the Centre for Healthy Aging.

The survey takes about 1 minute. You are free to decide if you wish to take the survey. You can change your mind and stop at any time. Your decision will not affect your care at Hamilton Health Sciences. Your name will not be used.

Thinking about the health care(s) providers that you have seen, how often...?

| | Never | Rarely | Sometimes | Very often | Always |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Did you feel as though you have been listened to by the health care team? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did you feel your questions and concerns were addressed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Thinking about the health care(s) providers that you have seen; how would you rate your interaction with them?

| | Strongly disagree | Disagree | Undecided | Agree | Strongly agree |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| They treated you with dignity and respect | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| They gave you clear instructions about what you need to do after your visit and what is going to happen next in my care | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Any comments:

Table S2

Key Themes from Survey

| Core themes | Subthemes | Responses |
|----------------------|-----------------------------------|---|
| Clear communication | Counseling | <i>Communication was outstanding. Helped bring humour into challenging diagnosis.</i> |
| | | <i>Great detail info and great discussion with patient</i> |
| | | <i>Clear communication</i> |
| | | <i>Instructions moving forward</i> |
| | | <i>Explained very well, answered all our questions well</i> |
| | | <i>Doctors explained what is happening and explained in</i> |
| | | <i>Informative, constructive</i> |
| | | <i>Informative</i> |
| | | <i>Information available</i> |
| | | <i>Instructions moving forward</i> |
| | <i>Time spent was informative</i> | |
| | | Listening |
| | Information gathering | <i>Thoroughness of questions</i> |
| | | <i>Asked good questions</i> |
| | | <i>Looked after mom thoroughly</i> |
| Patient centred care | Respect | <i>High level of patient respect</i> |
| | | <i>Respectful</i> |
| | Empathy | <i>Kindness towards my father</i> |
| | | <i>Understanding and caring</i> |
| | | <i>Compassion</i> |
| | <i>Patience with spouse</i> | |
| Team performance | Organization | <i>Organized</i> |
| | | <i>Everything was organized</i> |
| | Skill | <i>Impressed by the staff-very knowledgeable and friendly. Impressed with what was done</i> |
| | | <i>Exceptional doctor and we are pleased and appreciate to be her patient</i> |
| | | <i>Pleasant doctors</i> |
| | | <i>Case manager-she's awesome!</i> |
| | | <i>Intake with the reception. She's a sweet lady!</i> |
| | | <i>Entire team was outstanding</i> |
| Parking issues | | <i>Difficulty with parking machine</i> |

Supplemental Figures

Figure S1

Results of shared notes

Intake % Completion of intake assessment - Run Chart

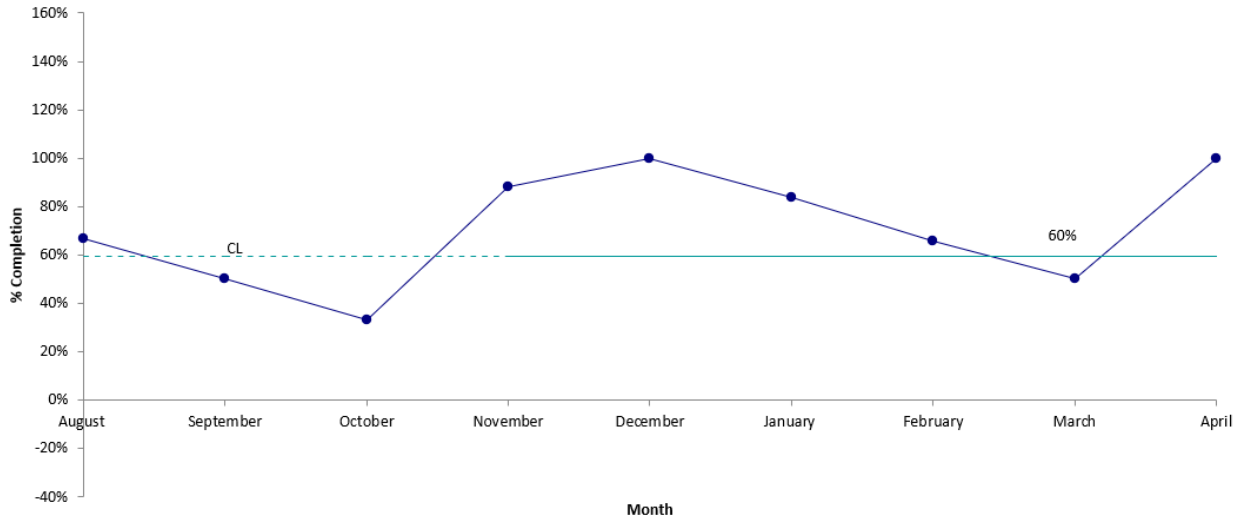


Figure S2

Clinic Experience Results

Patient Clinic Experience on 5 point Likert Scale (1-poor, 5-excellent)

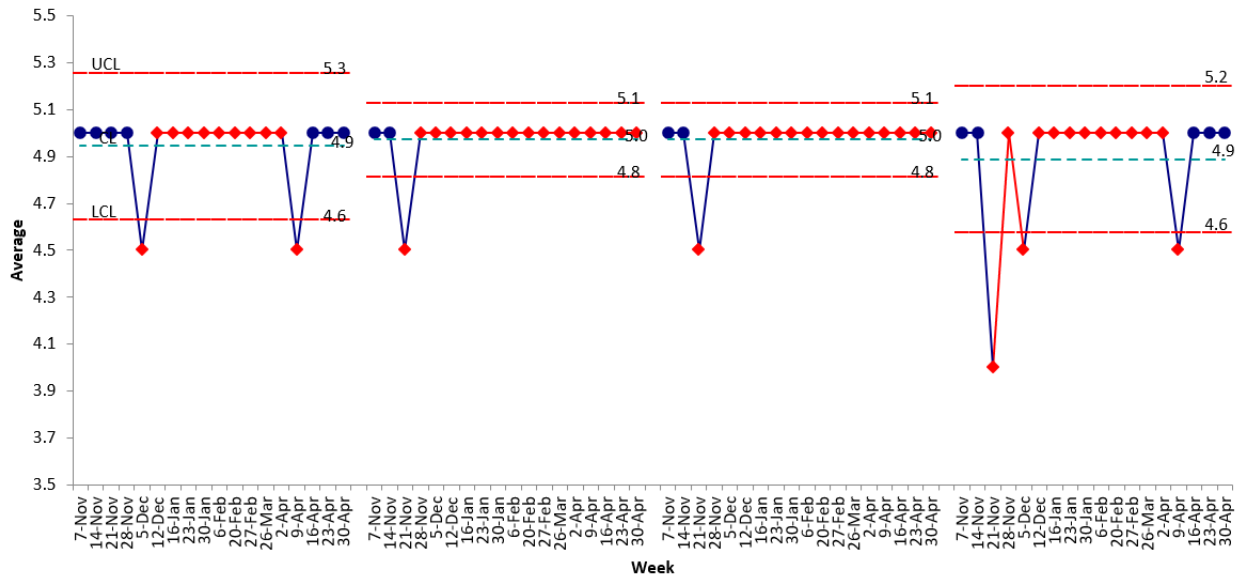
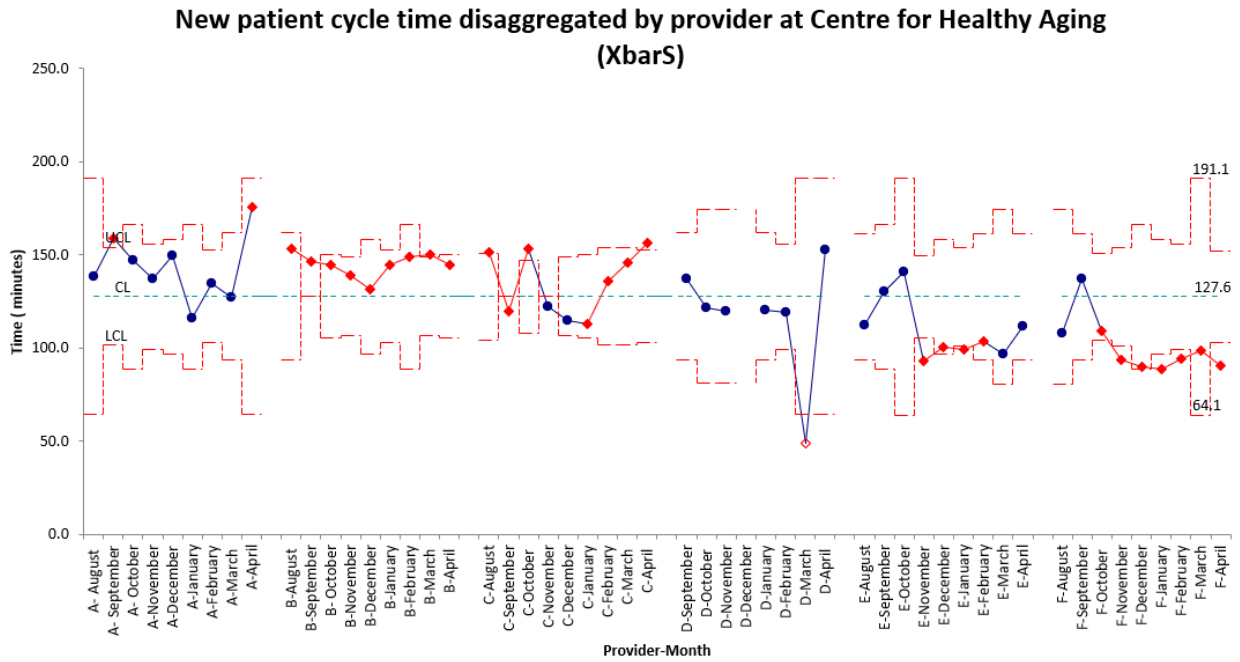


Figure S3

Cycle time for the Centre



Statistical process control (SPC) X-Bar S chart for new patient cycle time of all providers at CHA (UCL: upper control limit, CL: centre line, LCL: lower control limit). UCL and LCL are variable due to variation in the number of visits per data point. Red data points indicate special cause variation. Change ideas were tested in only physician E and F clinics from Nov 2023-April 2024.