Institute for Health Improvement Student Practicum Project
Open Access at the Toronto Western Family Health Team

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Submitted to:
The University of Toronto IHI Chapter

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Project Charter

This is the guiding document for the design and implementation of an Open Access Scheduling Quality Improvement Project at the Toronto Western Hospital Family Health Team.

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1. Stakeholders and project name

Project Name:
Implementing an Open Access Scheduling System at the Toronto Western Hospital Family Health Team

Team Leader:
Kevin Brophy

Team Members:
Christopher Yarnell
Dina Carovska
Mary Guyton
Timea Urban

Champion:
Dr. Phillip Ellison

Project Start Date:
December 2010

2. What are we trying to accomplish?

Aim Statement:

We aim to decrease the average time to third next available appointment to 1 or 0 days for participating providers at the Toronto Western Hospital Family Health Clinic by the end of April 2011. We will implement open access scheduling in the practices of a specific group of interested physicians at the Toronto Western Hospital Family Health Clinic. The results of the first cycle of implementing the change will guide the project to either refine the scheduling system or to expand the system to other teams of physicians at Toronto Western Hospital. By decreasing the average time to third next available appointment, we hope to increase patient satisfaction, provider satisfaction, and the effectiveness of care.

Success criteria:

The project will be deemed successful if the weekly average time to third next available appointment across the majority of participating physicians is less than 1 day.

Tools that will be developed to achieve and maintain success:

1) A list of strategies for reducing backlog, together with quantitative measures and qualitative accounts of their effectiveness.

2) A list of strategies for accommodating the new scheduling challenges the clinic will face (eg. increased stress on phone lines).

3) An evaluation of how to maintain the positive gains won by the project

4) Education material for patients and providers about the new scheduling system

Specific numerical goals:

1) Decrease the weekly average time to third next available appointment across the majority of participating physicians to less than 1 day

2) Maintain a constant number of patients seen per provider-day

Business impact:

This is difficult for us to assess. Some possible aspects of business in this plan might include:

1) Increased workload on receptionists, resulting in the need to hire another receptionist? Or would it decrease the workload on receptionists?

2) Frustration from doctors at not having their schedules booked up long in advance, which means their income may not be as certain?

Background:

The Toronto Western Hospital Family Health Team is an academic care team organized into four practice groups. Together the team handles approximately 45,000 visits each year, with a roster of more than 12,300 patients. The team also consists of family medicine residents and physician researchers. To handle all the demand, there are numerous nurses, pharmacists, administrative support staff, and allied health professionals incorporated into patient care.

This project is an attempt to improve the quality of care delivered by the Toronto Western Hospital Family Health Team though the implementation of an open access scheduling system. Open access scheduling is also know as "same day appointment" scheduling, or "advanced-access" scheduling. This system strives to reduce the future backlog of appointments many primary care physicians experience, which prevents their patients from timely access for acute needs. Open access strives to increase patient access to their primary care physician, and by consequence improve patient care, patient satisfaction, and quality of care.

Reason for the Effort:

Long wait times for appointments sabotage the quality and efficiency of care for the following reasons:

1. quality of care suffers when the issue motivating an appointment is separated in time from the appoint itself. Conditions may resolve; or conditions may progress.
2. both quality and efficiency of care are decreased when long wait times send patients to the emergency room, where care is slow and conducted by unfamiliar health professionals.
3. patient satisfaction is an element of the quality of care, and patients generally appreciate prompt appointments.
4. a more satisfied staff can offer better care for patients, and many (but not all) implementations of advanced access scheduling have improved staff satisfaction.

Open or advanced access is a scheduling paradigm that has dramatically reduced patient wait times in many North American clinics. It is based on the rough observation that even a practice with a six-week wait for appointments tends to see all of the people who phone today on a day six weeks from now, on average. In most cases, the wait times are not growing, and so if you could remove the six-week backlog, you could see today all of those people who phoned today.

In practice, the average time-to-third-next-available-appointment has become the measure for patient wait times employed by those trying to implement open access, because it is less vulnerable to variance introduced by cancellations. Many clinics implementing open access have reduced their time-to-third-next-available-appointments from 10, 20, or 40 days to 1, 2, or 4 days.

Please refer to some of the following articles for more information about open access scheduling:

Hudec JC, MacDougall S, Rankin E. Advanced access appointments: Effects on family physician satisfaction, physicians' office income, and emergency department use. *Can Fam Physician*. 2010;56(10):e361-367.

Kopach R, DeLaurentis P, Lawley M, et al. Effects of clinical characteristics on successful open access scheduling. *Health Care Manag Sci*. 2007;10(2):111-124.

Mehrotra A, Keehl-Markowitz L, Ayanian JZ. Implementation of Open Access Scheduling in Primary Care: A Cautionary Tale. *Ann Intern Med*. 2008;148(12):915-922.

Murray M, Berwick DM. Advanced access: reducing waiting and delays in primary care. *JAMA*. 2003;289(8):1035-1040.

Murray M, Bodenheimer T, Rittenhouse D, Grumbach K. Improving timely access to primary care: case studies of the advanced access model. *JAMA*. 2003;289(8):1042-1046.

3. How do we know that a change is an improvement?

To assess this, we will keep track of the following measures:

Measure	Measurement Type (outcome, process, balance)	Reason for inclusion (Does it lend to our aim?)
Time to 3rd next available appointment	outcome	To achieve our goal
Number of appointments per physician that are pre-booked on a given day	process	To measure the extent of a physicians' schedule that is available for open access
Number of appointments per physician on a given day	process	To measure the extent of a physicians' schedule that is available for open access and to measure capacity
Qualitative Feedback from Stakeholders (Staff, Health Professionals, Patients)	process and balance	Gauge stakeholder responses to changes and use their feedback to refine future adjustments
Percentage of appointments that are no shows	balance	Measures efficiency of care and provider satisfaction

4. What changes can we make that will lead to improvement?

List of Change Ideas:

1. Recruit interested stakeholders
    a. recruitment will identify parties to include and consult with regarding any changes
2. Create project definitions and expectations
    a. assure that both stakeholders and the project team are aware of the goal and how it will be accomplished
    b. provides a central document to guide ongoing project
3. Survey health care providers who are interested in participating in the project about their current perceptions of the scheduling system and their satisfaction with it
    a. repeat this survey after the fact in order to assess any attitude or perception shifts
4. Educate health professionals and patients on expected changes

    a. ensure stakeholders are aware and prepared for the changes
5. Choosing a date to have physician schedules free to begin implementing open access
    a. pick a specific date on which the implementation will commence
6. Gather baseline measurement data
    a. collect information prior to the implementation of the changes
7. Implement first change
    a. demonstrate the benefits of open access scheduling as described above
8. Gather first change measurement data and qualitative data from stakeholders
    a. measure changes to see if they are having the desired impact and learn how to refine the
    b. changes for the next implementation phase
9. Implement second change
    a. further demonstrates the benefits of open access scheduling
10. Gather second change measurement data and qualitative data from stakeholders
    a. analyze the impact of the changes and create sustainability recommendations

5. Project schedule

Timeline:

Deadline	**Project Deliverable**
November 27, 2010	Project Charter draft sent to IHI and Champion
December 3, 2010	Project Charter evaluated and finalized by Champion
December 2010	Develop QI Team understanding and appreciation for functioning of the TWH FHT
December 18, 2010	Select member of the QI Team will familiarize themselves with the scheduling system and pilot the proposed data collection methods with the aim of improving the process and identifying any pitfalls or potential issues
January 5, 2010	First PDSA cycle write-up evaluated and finalized by Champion (to collect the baseline data)
January 25, 2011	First PDSA cycle completed and documented (baseline data collected and analyzed)
February 1, 2011	Second PDSA cycle write-up finalized and evaluated by Champion (in preparation for the first attempt at implementation)
February 25, 2011	Second PDSA cycle completed and documented (analysis and reporting of results

	of the first attempt at implementation)
March 5, 2011	Third PDSA cycle write-up finalized and evaluated by Champion (in preparation of the second implementation)
March 30, 2011	Third PDSA cycle completed and documented (analysis and reporting of the results of the second implementation)
April 5, 2011	Drafting of project summary and recommendations for champion begins
April 22, 2010	Project summary given to IHI and champion
April 30, 2010	White paper, poster/ PowerPoint presentation

Initial activities:

In order to implement any Open Access changes at the Toronto Western Family Health Team, a good understanding of how the clinic functions is necessary. The QI team will need to consult extensively with various staff members, physicians and support staff, to understand how the clinic functions on a daily basis. Some observation may be appropriate as well. Understanding the inner workings of the clinic, the structure and flow of patient organization, and the capacity of the support staff are essential for data gathering design, data gathering procedures, and change implementation.

The most important steps to focus on initially are understanding the clinic and beginning to collect baseline data. Baseline data measurements need to be prepared to be collected and analyzed by January at the latest in order to allow for at least 3 weeks of data for analysis to establish baseline measures. This will enable changes to be implemented in February.

In order to facilitate this understanding and begin data collection, QI team members will spend an morning at the TWH FHT in order to pilot our data collection methods and tools. This will also familiarize the team with the functioning of the FHT as the clinic will be running during the visit.

6. Constraints and considerations

Boundaries:

A potential limitation to this project is the existing administrative support system currently in use by the family health team. The implementation of the project will most likely require changes in the current administrative support system's organization and planning. Depending on what changes are made, and what the results are from the changes, the current support system may not be adequately equipped to handle the changes. This boundary will have to be assessed throughout the project.

Another limitation that needs consideration is financial constraints to developing patient education materials. Previous projects of similar nature have generally invested in patient education videos, pamphlets, and handouts. It is reasonable for our team to create some patient education materials, but it may be difficult to produce them in mass, and to have them translated into the various languages necessary for the entire patient population to understand the changes.

As a teaching and academic Family Health Team, there is great variability in the amount of time different physicians spend working in the clinic. This varies from one afternoon a week, to 8 afternoons a week depending on each physicians interests and activities. The open access model will have to be modified to accommodate this variation within the FHT's functioning.

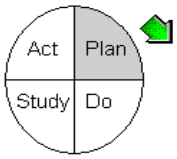
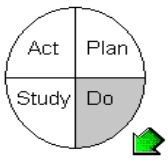
A final important limitation that will need constant follow-up is ensuring that there is ongoing buy-in and support from participating physicians. If there are initial challenges or problems implementing the changes, then it will be important that the physicians' concerns are heard, understood, and steps taken to ensure their continued participation in the project.

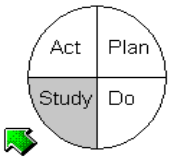
Resources:

The team will consist of the 5 students, the champion, the participating physicians, and the Toronto Western Hospital Family Health Team support staff. The participating physicians will be required to engage in helping design the implementation of the project to ensure their needs are met, and they will be required to familiarize themselves with the changes in order to educate their patients appropriately. The support staff will also be required to participate in the project design and spend time familiarizing themselves with the changes so they can act accordingly.

Sponsorship:

The guiding team for this charter and the ongoing development and implementation of the quality improvement project is the University of Toronto Institute for Healthcare Improvement Chapter leaders; Jacqueline Chan, Beth Li, and Kavita Patel.

Cycle A1 - Creation and Use of Data Collection Manual & Template	**Start Date: December 2010** **End Date: April 2011**
Objective of Cycle	____Collect Data to Develop a Change __*__ Test a Change____ Implement a Change **Short Objective of the Cycle:** Create and test a method for collecting data that will be used for implementing an open access scheduling system at Toronto Western Hospital Family Health Team (TWH FHT)
Plan 	**Questions:** 1. Do the instructions in the data collection manual complement the data collection template in a way that makes data collection efficient? a. **Prediction:** The order of the steps in the manual match the order of the headings in the template and so efficient data collection is predicted. 2. Are the instructions in the data collection manual clear and easy to follow? a. **Prediction:** The instructions themselves seem to be succinct but without prior use of the scheduling software used at TWH FHT, from which the data is to be collected, the manual may be difficult to follow in the beginning. 3. Is the data collection template organized in a way that makes it easy to input data? a. **Prediction:** The column headings in the template are accurately labeled and the distinction between "previous week" data and "next week" data is made clearly.
	Test/Implementation Plan: The change that will be implemented is the creation and use of a data collection manual and template. The manual and template will be used in the collection of data for the open access scheduling system implementation at TWH FHT. The change will be implemented by creating the data collection template and corresponding manual and then using them while extracting data from the scheduling software used at TWH FHT. The implementation will be run by the IHI Quality Improvement (QI) team at TWH FHT every Saturday morning from December 2010 to April 2011.
	Collect Data Plan (Usually required for all PDSA cycles: Information will be collected from each IHI QI team member regarding ease of use of the manual and template, clarity of manual instructions and any changes that team members feel may be necessary. It is important that each team member feels that the manual and template are easy to use and that each member understands the instructions in the manual so that data collection is consistent among team members. Data will be collected and analyzed by the TWH IHI QI team at the TWH FHT every Saturday from December 2010 to April 2011. Observations about the use of the manual and template will be collected through team member discussion and feedback.
Do: 	**Observations:** <u>Record observations not part of the plan:</u> - Team members were unclear about which appointment types were to be counted as part of the data. <u>Did you need to modify the original Plan?</u> - The original plan was modified after each team member used the data collection manual and template at least once together with the scheduling software from which data was collected. - All steps in the instructions that lead to confusion about which data was to be collected from the scheduling software were addressed and then the instruction was clarified in the manual. - Additional steps were added to the instructions to further elaborate on unclear steps.
Study	**Questions:** 1. Do the instructions in the data collection manual complement the data collection template in a way that makes data collection efficient? a. **Prediction:** The order of the steps in the manual match the order of the headings in the template and so efficient data collection is predicted.



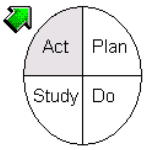
b. Learning: As predicted, the order of the steps in the manual and the order of the headings in the template complemented each other well according to the IHI QI team members who used them.

2. Are the instructions in the data collection manual clear and easy to follow?
   - **a. Prediction:** Without prior use of the scheduling software used at TWH FHT, from which the data is to be collected, the manual may be difficult to follow in the beginning.
   - **b. Learning:** After each IHI QI team member used the data collection template and manual together at least once a lot of questions arose. In some instances it was unclear which appointment types were to be counted and which were not or in which column of the template they were to be included. As a result of group discussion it was found that some of the steps in the data collection manual would need to be clarified.

3. Is the data collection template organized in a way that makes it easy to input data?
   - **a. Prediction:** The column headings in the template are accurately labeled and the distinction between "previous week" data and "next week" data is made clearly.
   - **b. Learning:** Initially some members were collecting data using a paper copy of the template and then later inputting the data into the electronic version of the template. It was later found that directly inputting data into the electronic version of the template was much easier by simply tabbing back and forth between the scheduling software screen and the template screen. In general, as predicted the template organization was well organized and easy to use.

New Issues: The main issue that arose out of this first PDSA cycle was the fact that IHI QI team members were not totally clear on which data to include from the scheduling software based on the instructions in the manual. This could end up being very problematic in that data would be inconsistently gathered.

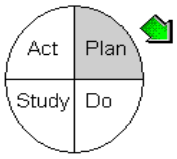
Summary: This PDSA cycle allowed the new data collection manual and template to be tested by the IHI QI team members. They will be using the manual and template to collect data for their implementation of an open access scheduling system at TWH FHT. The template and manual were generally clear and easy to use but due to all members being new to the scheduling software from which data was collected clarity in some of the instructions in the manual is required.



Act

Describe next PDSA Cycle; New Questions to Answer/Decisions made/Action to be taken
The next PDSA cycle will include the modified version of the data collection manual and template. Each team member will have a chance to use them together with the scheduling software from which data is collected to see if it is clear, organized and easy to use. This will ensure consistent data collection among all team members.

Cycle A2 – Adaptation and Use of Data Collection Manual	**Start Date: January 2011** **End Date: April 2011**
Objective of Cycle	____Collect Data to Develop a Change__*__ Test a Change ___Implement a Change **Short Objective of the Cycle:** The objective of this cycle is to determine whether the feedback taken from the IHI QI team members was used effectively in modifying the original data collection manual to make it easier to use.

<table>
<tr>
<td>Plan
 
</td>
<td>Questions:
4. Do the instructions in the data collection manual complement the data collection template in a way that makes data collection efficient?
a. Prediction: It is predicted that the instructions in the manual will continue to complement the template as well as they did prior to the modifications made.
5. Are the instructions in the data collection manual clearer and easier to follow now that clarifications have been added?
a. Prediction: Considering that all IHI QI team members' input was used in making the modified data collection manual it should now be easier to understand and follow.</td>
</tr>
<tr>
<td rowspan="2"></td>
<td>Test/Implementation Plan:
The change that will be tested is whether the new modified version of the data collection manual is easier to use as compared to the original version.
The change will be tested by having each IHI QI team member use the manual along with the template and scheduling software at TWH FHT.
The test will be run by each member of the IHI QI team at the TWH FHT every Saturday morning from January 2011 to April 2011.</td>
</tr>
<tr>
<td>Collect Data Plan (Usually required for all PDSA cycles):
Information will be collected from each IHI QI team member regarding ease of use of the manual and template and clarity of manual instructions as compared to the original version of the manual to see if the modifications that were made have made data collection more straight forward.
It is important that each team member feels that the manual and template are easy to use and that each member understands the instructions in the manual so that data collection is consistent among team members.
Data will be collected and analyzed by the TWH IHI QI team at the TWH FHT every Saturday from January 2011 to April 2011.
Observations about the use of the manual and template will be collected through team member discussion and feedback.</td>
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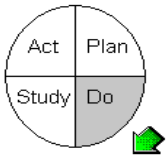
<tr>
<td>Do:
 
</td>
<td>Observations:
Each team member felt that the modified data collection manual was clearer and easier to use. No further modifications were necessary because all uncertainties in the instruction steps were adequately addressed during the first modification stage. This lead to more consistent data collection across team members.</td>
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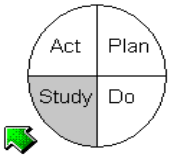
<tr>
<td>Study
 
</td>
<td>Questions:
1. Do the instructions in the data collection manual complement the data collection template in a way that makes data collection efficient?
a. Prediction: It is predicted that the instructions in the manual will continue to complement the template as well as they did prior to the modifications made.
b. Learning (Comparison of questions, predictions, & analysis of data.): As predicted all IHI QI team members felt that the manual and template were easy to use in conjunction with each other for quick and efficient data collection.

2. Are the instructions in the data collection manual clearer and easier to follow now that clarifications have been added?
a. Prediction: Considering that all IHI QI team members' input was used in making the modified data collection manual it should now be easier to understand and follow.
b. Learning (Comparison of questions, predictions, & analysis of data.): The number of questions that team members had, after their respective data collection days, was greatly minimized with the use of the modified manual. This suggests that the steps in the modified manual were clearer.

New Issues: In regards to the data collection manual and template no new issues were encountered. Each team member feels comfortable using the two together and data collection seems to be running smoothly.

Summary: After taking each team members input into account in creating the modified manual</td>
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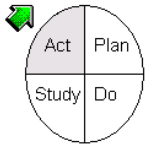
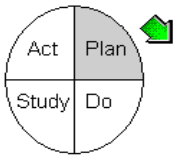
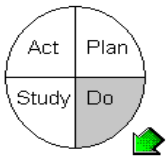
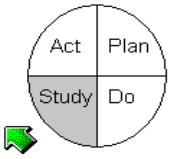
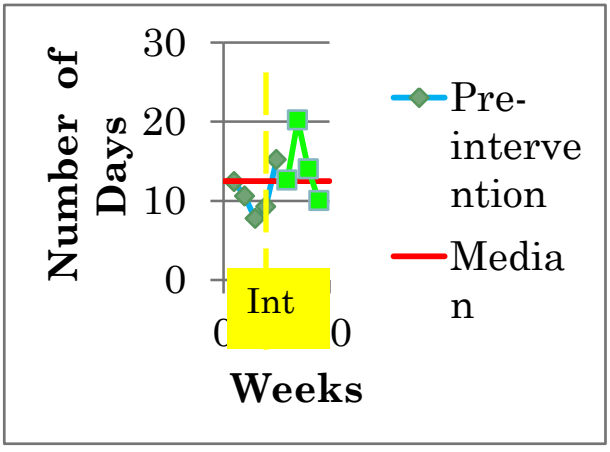
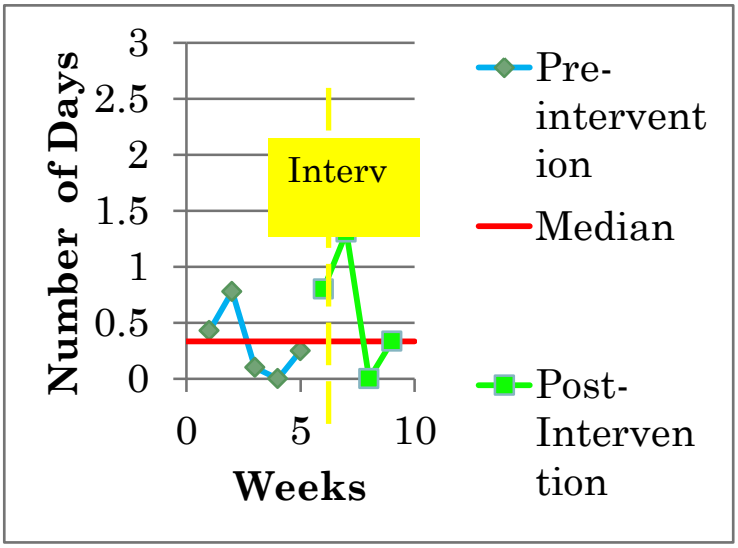
	data collection became more efficient in part because there were less or no uncertainties about which data to input into the template and which to leave out.
 **Act**	**Describe next PDSA Cycle; New Questions to Answer/Decisions made/Action to be taken** 1. Although the next PDSA cycle is not exactly related to the data collection manual and template during this second PDSA cycle it was found that two additional measures needed to be tracked. These will be added to the current data collection template or will be tracked in a separate template.
Cycle B1 - Collecting Baseline Measures	**Start Date: January 8, 2011** **End Date: February 12, 2011**
Objective of Cycle	__**X**__**Collect Data to Develop a Change** ____ Test a Change***** ___Implement a Change****** **Short Objective of the Cycle:** To gather baseline data on the current scheduling system and determine the appointment burden of each participating physician in order appropriately develop an implementation phase and to provide date for comparison with post intervention data.
Plan 	1. What is each participating physicians time to 3rd next available appointment? **a) Prediction:** The Toronto Western Hospital Family Health Team physicians' third next available appointments will be at least 4 shifts away, which is the equivalent of approximately 2 weeks or more from the current date. 2. How many no show appointments are present each week? **a) Prediction:** Each physician will have at least 2 no show appointments per week. 3. How many double bookings or appointments booked outside of normal clinical hours are present each week for each physician (as a measure of efficiency)? **a) Prediction:** There will be at least 3 appointments that are either double booked or booked outside of normal clinical hours per week for each physician. 4. What percentage of each physician's schedule is pre-booked at the start of each week? **a) Prediction:** At least 80% of each physicians schedule will be pre-booked at the beginning of each week (Monday). 5. How many unused appointment slots are there each week for each physician? **a) Prediction:** There will be at least 2 unused appointment spaces per week for each physician.
Note: ***For Test reference p. 96 of *Improvement Guide* for Testing Checklist** ****For Implementation Cycle reference p. 136 of *Improvement Guide* for Implementation Checklist**	**Test/Implementation Plan:** The QI Team members collected baseline data every Saturday morning from January 8th until February 12th on the chosen Pod 1 physicians at the Toronto Western Hospital Family Health Team clinic. This data was used design of the intervention as well as provided baseline figures that provided data for comparison after the intervention was implemented. There were no changes implemented prior to February 1st, after which date no appointments were booked for dates greater than two weeks as per the *"Limited Time Window for Scheduling"*.
	Collect Data Plan (Usually required for all PDSA cycles): The QI Team was gathering information regarding each physician's booked appointments from the previous week as well as the upcoming week's schedule to determine the appointment burden. Specifically, the data that was collected included: the percentage of booked versus open time, the number of no shows, the number of clinical shifts until 3rd next available appointment, the number of calendar days until 3rd next available appointment, and the amount of double bookings or appointments booked outside of normal clinical hours. This data is important since it provided baseline figures for each of the participating Pod 1 physicians regarding the current appointment burden the physician was dealing with. This allowed for parameters of the intervention to be created. As well, this provided data for comparison and

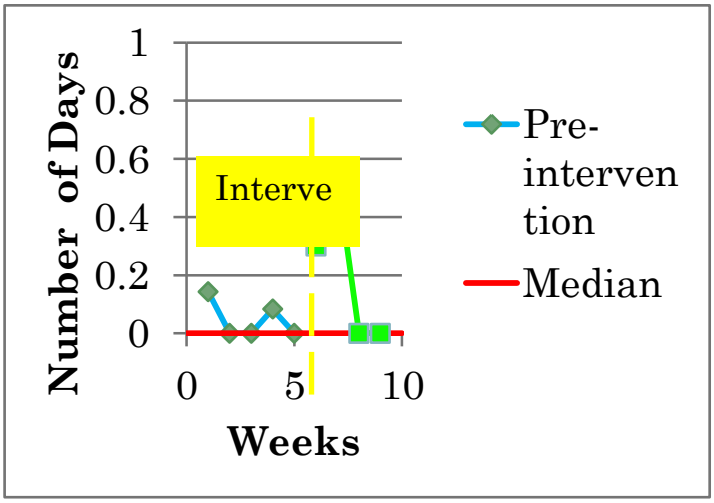
	analysis for the post intervention phase. The QI team members collected the data on Saturday mornings at the Toronto Western Hospital Family Health Team clinic. The QI team members analyzed the data as a group. The data will be collected at the Toronto Western Hospital Family Health Team clinic. Data was collected from January 8th until February 12th for the baseline figures. A data collection manual with specific instructions was developed by the QI Team members to ensure all team members collected data the same manner. The data was then subsequently recorded in spreadsheets that were tracked and analyzed by the group on a weekly basis.
Do: 	**Observations:** *Record observations not part of the plan:* -Data was affected by staff vacations -Patient voiced concerns about navigating the phone system and inability to book an appointment with their physician when they requested *Did you need to modify the original Plan?* -Vacation time taken by the physicians was noted in the spreadsheets -Data was collected by the reception staff on reasons patients walked in for appointment (unable to get through on the phone, more convenient to walk in, needed appointment urgently)
Study 	**Questions:** (copy and paste Questions and Predictions from Plan above and add Results. Complete analysis of the data. Insert graphic analysis whenever possible.) 1. What is each participating physicians time to 3rd next available appointment? **a) Prediction:** The Toronto Western Hospital Family Health Team physicians' third next available appointments will be at least 4 shifts away, which is the equivalent of approximately 2 weeks or more from the current date. **b) Results:** The number of days until the third next available appointment ranged from 7.75-15.1 days **Total Days until Third Next Available Appointment**  2. How many no shows are there each week? **a) Prediction:** Each physician will have at least 2 no show appointments per week. **b) Results:** There was approximately 1 – 2 no shows per week for each physician.

3. How many double bookings or appointments booked outside of normal clinical hours are present each week for each physician (as a measure of efficiency)?
    a) **Prediction:** There will be at least 3 appointments that are either double booked or booked outside of normal clinical hours per week for each physician.
    b) **Results:** The number of double bookings per week per physician ranged from 0-0.78 double bookings. The number of appointments outside of normal hours per half clinic day ranged from 0 to 0.14 appointments.

Number of Double Bookings per Half Day

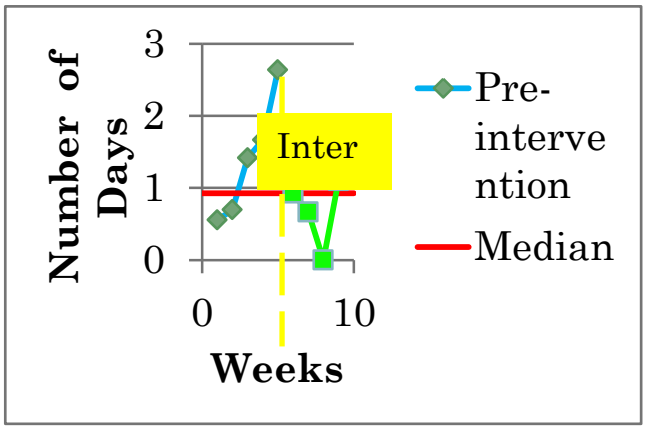
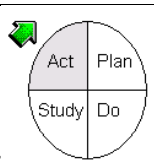


Number of Appointments Outside of Normal Hours per Half Clinic Day

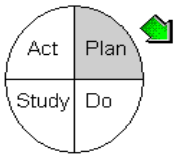


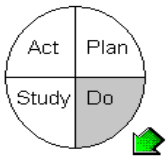
4. What percentage of each physician's schedule is pre-booked at the start of each week?
    a) Prediction: At least 80% of each physicians schedule will be pre-booked at the beginning of each week (Monday).
    a) **Results:** Approximately 90% or greater of each physicians schedule was pre-booked at the start of each week.

5. How many unused appointment slots are there each week for each physician?
    a) Prediction: There will be at least 2 unused appointment spaces per week for each physician.
    b) Results: The number of unfilled appointments in the upcoming week per half

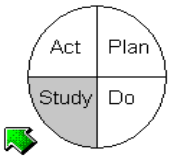
	day clinic was 0.56 to 2.64 appointments. **Number of Unfilled Appointments in the Upcoming Week per Half Day Clinic**  New Issues: -tracking concerns of patients regarding the new scheduling -tracking vacation time taken by physicians -monitoring staff satisfaction regarding the new schedule
 **Act**	Describe next PDSA Cycle; New Questions to Answer/Decisions made/Action to be taken The next PDSA cycle will involve a *"Limited time window for scheduling"* starting February 1st; where no appointments will be booked for dates greater than two weeks from the date of booking.
Ad Hoc Contributors	Recognize subject matter experts and others who have contributed to the learning

Cycle B2 – Scheduling Freeze and First Implementation	**Start Date: Fall 2010** **End Date: February 14, 2011**
Objective of Cycle	____Collect Data to Develop a Change ____ Test a Change* __X_**Implement a Change**** **Short Objective of the Cycle:** To stop booking appointments on or after February 14, 2011 in the Fall of 2010 to ensure there are appointments available for the open access scheduling system and same day appointments.

Plan  	**Questions:** 6. Are the Toronto Western Hospital Family Health Team staff dissatisfied with the current scheduling system? **a) Prediction:** Yes, the staff at TWH FHT are currently dissatisfied with the scheduling system. 7. Does the Toronto Western Hospital Family Health Team staff generally work past their originally scheduled hours or into their breaks? **a) Prediction:** Yes, TWH FHT staff generally work past their originally scheduled hours or into their breaks. 8. Are patients often seen when they are acutely ill? **a) Prediction:** Patients are not often seen when they are acutely ill due to long wait times for booking appointments with their physician. 9. Toronto Western Hospital Family Health Team staff feel that increasing access to the clinic is a priority? **a) Prediction:** TWH FHT staff feel it is a priority to increase access to the clinic by patients. 10. How many unused appointment slots are there each week for each physician? **a) Prediction:** There will be at least 2 unused appointment spaces per week for each physician.
Note: ***For Test reference p. 96 of *Improvement Guide* for Testing Checklist** ****For Implementation Cycle reference p. 136 of *Improvement Guide* for Implementation Checklist**	**Test/Implementation Plan:** The reception staff at Toronto Western Hospital Family Health Team were notified to stop booking further appointments after and including February 14th in the Fall of 2010. This prevented further backlog of appointments to develop and made room in the schedule for the open access system. The reception staff was provided with detailed instructions regarding what to tell the patients in case they inquired about the new system and letters explaining the new process were mailed to the patient roster. The implementation was run primarily by the reception staff, however the physicians and other staff members at the clinic were also provided with handouts to give to patients in the event questions arose. The QI Team members monitored the feedback from the patients and the staff while continuing to collect data. This change was implemented at the Toronto Western Hospital Family Health Team, which is also were data and feedback was collected. The scheduling freeze commenced in the fall and included all dates including February 14th, 2011. As of February 1st, 2011 the reception staff were booking limited appointments and only up to two weeks in advance.
	Collect Data Plan (Usually required for all PDSA cycles): It was important to collect data from the staff regarding the problems with scheduling and access to the clinic. This involved surveys regarding the opinions regarding the current scheduling system. It was important to collect this information in order to have a baseline to which the post implementation feedback can be compared to. This is important since it allows for comparison of feedback before and after the implementation of the open access scheduling system. Surveys were developed by the QI Team members; which were distributed to the Toronto Western Hospital Family Health Team staff. The sheets were collected by the receptionist staff and was analyzed by the QI Team members. The QI Team members then analyzed and discussed the results of the surveys to better develop the open access scheduling system and to ensure all parties involved were satisfied with the process. All the surveys were performed at the Toronto Western Hospital Family Health Team clinic. The collection of data took place in February 2011. The data was collected in the form of surveys then the responses were summarized within a chart.
Do:	**Observations:** Record observations not part of the plan: -A tracking sheet for compliments and complaints was developed so the reception staff could record feedback from the patients -The reason for walk in appointments was also tracked to monitor why patients were utilizing walk in appointments as opposed to booked appointment slots



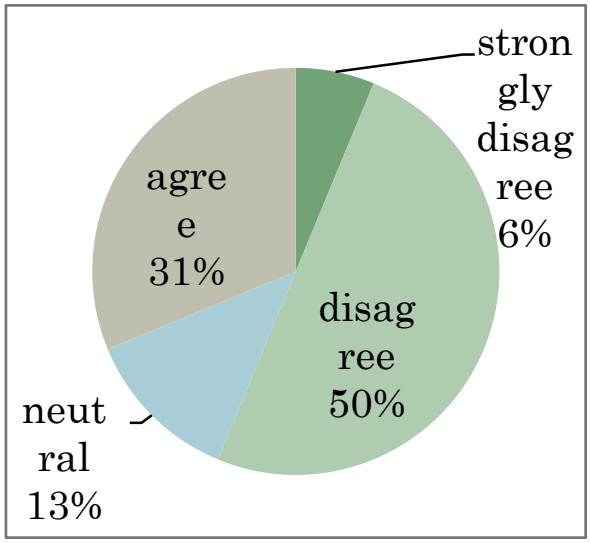
Study



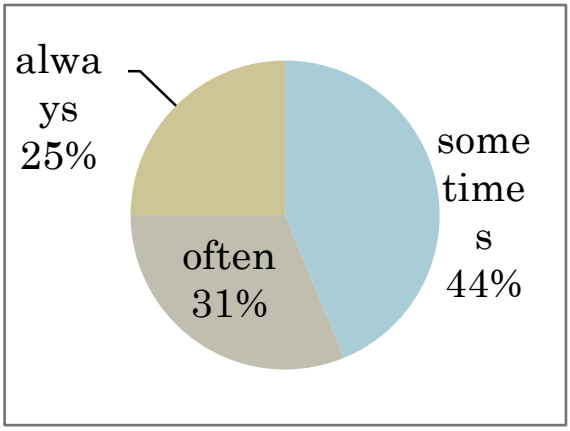
Questions: (copy and paste Questions and Predictions from Plan above and add Results. Complete analysis of the data. Insert graphic analysis whenever possible.)

1. Are the Toronto Western Hospital Family Health Team staff dissatisfied with the current scheduling system?
   a) Prediction: Yes, the staff at TWH FHT are currently dissatisfied with the scheduling system.
   b) Results: TWH FHT staff were generally dissatisfied with the current scheduling system.

Are TWH FHT staff satisfied with the current scheduling system?

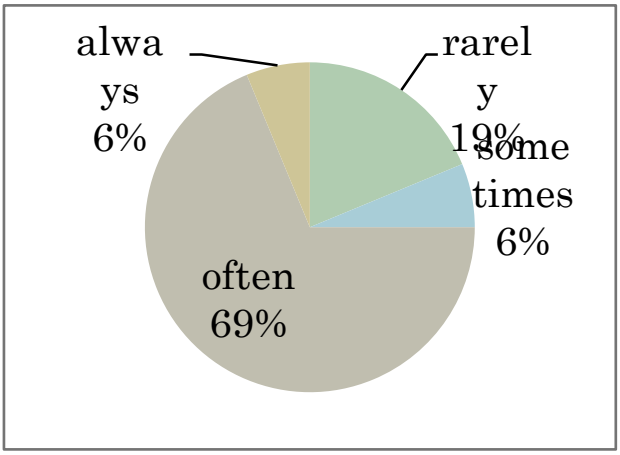


2. Do staff at the Toronto Western Hospital Family Health Team generally work past their originally scheduled hours or into their breaks?
   a) Prediction: Yes, TWH FHT staff generally work past their originally scheduled hours or into their breaks.
   b) Results: The survey indicated TWH FHT staff did work past their originally scheduled hours or into their breaks.

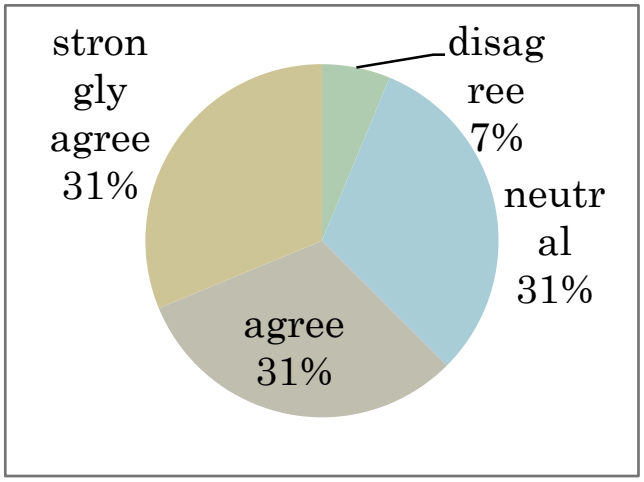


3. Are patients often seen when they are acutely ill?

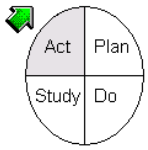
a) Prediction: Patients are not often seen when they are acutely ill due to long wait times to book an appointment with their physician.
b) Results: Patients are often seen when they are acutely ill.



4. Do Toronto Western Hospital Family Health Team staff feel that increasing access to the clinic is a priority?
   a) Prediction: TWH FHT staff feel it is a priority to increase access to the clinic by patients.
   b) Results: 62% of the TWH FHT staff strongly agreed or agreed with the statement that increasing access to the clinic was a priority.



Act



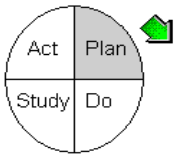
Describe next PDSA Cycle; New Questions to Answer/Decisions made/Action to be taken

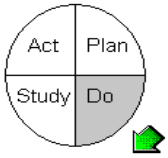
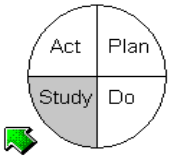
The next PDSA cycle will involve a limited time window for scheduling. This involves no appointments being booked more than two weeks in advance starting February 1st, 2011. This will allow for data on the open schedule system to be collected.

The compliments and complaints from the patients will be continuously tracked as well as satisfaction from the Toronto Western Hospital Family Health Team staff will be monitored with the use of surveys.

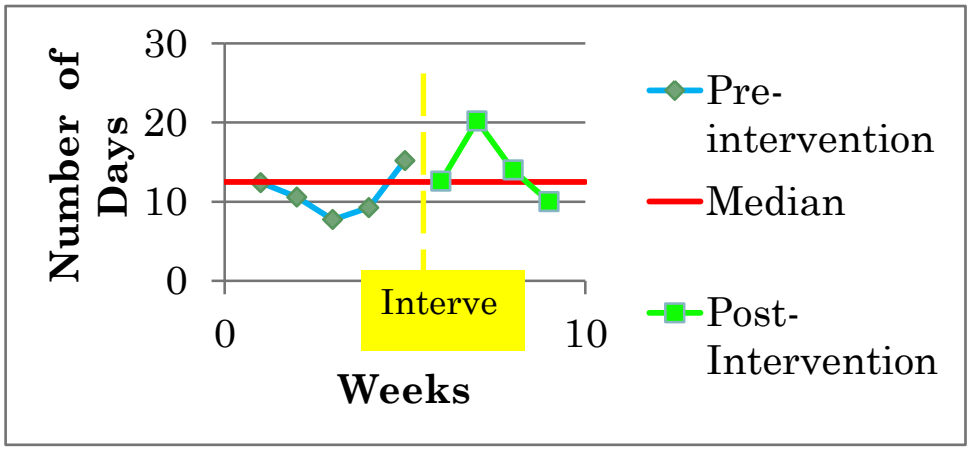
Ad Hoc Contributors

Recognize subject matter experts and others who have contributed to the learning

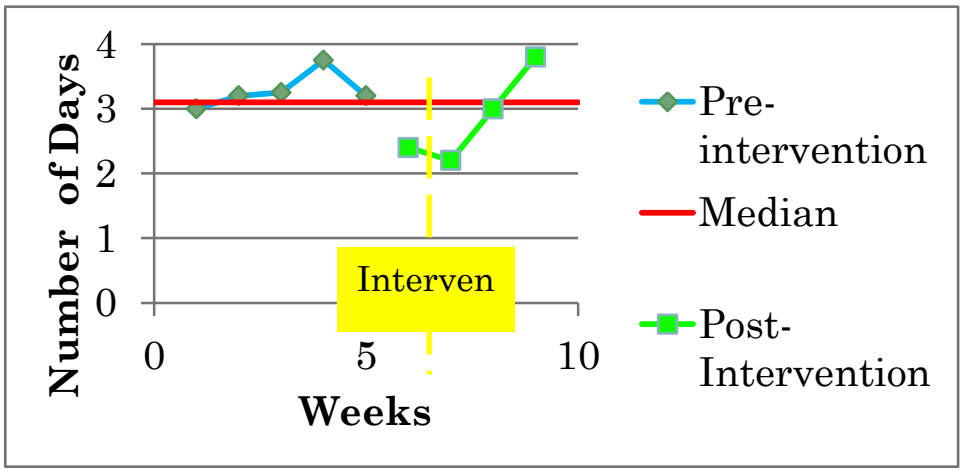
Cycle B3 – Limiting Scheduling Parameters	Start Date: February 1, 2011 End Date: May 7, 2011
Objective of Cycle	____Collect Data to Develop a Change __**X**__ **Test a Change*** ___Implement a Change**** **Short Objective of the Cycle:** To ensure reception staff was aware not to book appointments for more than 2 weeks in advance from the current date and to leave approximately 60% of the schedule un-booked to accommodate for same day appointments. Also, it was important to continue tracking satisfaction of the patients/physicians and the reason for walk in appointments. This allowed for time slots ere some appointment slots left open for same day appointments.
Plan  	**Questions:** 11. Did the time to 3rd next available appointment for each participating physicians decrease? **a) Prediction:** The physician's third next available appointment will be decreased allowing patients to be seen sooner by their physician therefore reducing wait times and improving patient satisfaction. 12. Is there a reduced number of no shows each week as compared to the baseline figures? **a) Prediction:** Yes, there is a reduced number of no shows noted for each physician as compared to baseline figures. 13. Do physicians have a reduced number of double bookings or appointments booked outside of normal clinical hours as compared to baseline figures (as a measure of efficiency)? **a) Prediction:** Yes, each physician has a reduced number of double booked appointments or booked outside of normal clinical hours as compared to baseline figures. 14. Do physicians have a reduced number of unused appointment slots for each week as compared to baseline figures? **a) Prediction:** Yes, physicians have a reduced number of unused appointment slots per week as compared to baseline figures.
Note: ***For Test reference p. 96 of *Improvement Guide* for Testing Checklist** ****For Implementation Cycle reference p. 136 of *Improvement Guide* for Implementation Checklist**	**Test/Implementation Plan:** The QI Team members continued to collect data every Saturday morning from February 1st, 2011 to May 7th, 2011 on the chosen Pod 1 physicians at the TWH clinic. This data will represent the open scheduling system since at this point the reception staff has not been booking any appointments beyond two weeks of the current date. Also, 10% of the schedule for each physician in Pod 1 has been kept open to accommodate same day appointments. Therefore the reception staff played an integral component of the implementation of the open scheduling system, while the QI Team members recorded the data using the Pod 1 Physicians on a weekly basis. This data will test whether an open scheduling system decreases physician appointment burden and increases satisfaction of both the physicians and the patients. In the long run, the implementation of the open schedule should decrease the wait time for patients as well as reduce the number of double-booked appointments and no shows, thereby increasing the efficiency at the clinic.
	Collect Data Plan (Usually required for all PDSA cycles): The QI Team continued collecting data the same way baseline data was collected. This included each physician's booked appointments from the previous week as well as the upcoming week's schedule to determine the appointment burden. Specifically, the data that was collected included: the percentage of booked versus open time, the number of no shows, the number of clinical shifts until 3rd next available appointment, the number of calendar days until 3rd next available appointment, and the amount of double bookings or appointments booked outside of normal clinical hours.

	This data is important since it provided figures that could be compared to the previously collected baseline figures, thereby providing an opportunity to analyze whether the previous scheduling freeze and current open access scheduling system was decreasing the physician appointment burden. The QI team members collected the data on Saturday mornings at the clinic, as in the previous cycles. The QI team members analyzed the data as a group as the data was being collected, as in the previous cycles. The data was collected at the Toronto Western Hospital Family Health Team, as in the previous cycles. Data was collected from February 14th until May 7th. The data was collected using the previously developed data collection manual. Then the data was recorded in the spreadsheets that were tracked and analyzed by the QI Team members on a weekly basis.
Do:  	**Observations:** Record observations not part of the plan: Did you need to modify the original Plan? If so, how? Begin analysis of data (graph of the data, picture) *Record observations not part of the plan:* -Data was affected by staff vacations -Patient concerns about navigating the phone system -Reception staff concerns about managing walk in appointments, patient concerns and meeting patient needs *Did you need to modify the original Plan?* -Vacation time taken by the physicians was noted in the spreadsheets and was noted while analyzing the data -Data was collected by the reception staff on reasons patients walked in for appointment (unable to get through on the phone, more convenient to walk in, needed appointment urgently) -Patient and provider satisfaction was monitored with the use of surveys to ensure all parties were satisfied with the new appointment booking process
Study  	**Questions:** (copy and paste Questions and Predictions from Plan above and add Results. Complete analysis of the data. Insert graphic analysis whenever possible.) 1. Did the time to 3rd next available appointment for each participating physicians decrease? **a) Prediction:** The physician's third next available appointment will be decreased allowing patients to be sooner therefore reducing wait times and improving patient satisfaction. **b) Results:** Overall, there were no definitive trends noted in the third next available appointment among the various physicians. This may be due to the intervention having no impact or the intervention was working well enough to keep measures at baseline levels throughout the implementation. It should also be noted that the physicians were taking vacations at various times throughout the project therefore the clinic was operating with a lower number of physicians as per normal.

Total Days until Third Next Available Appointment



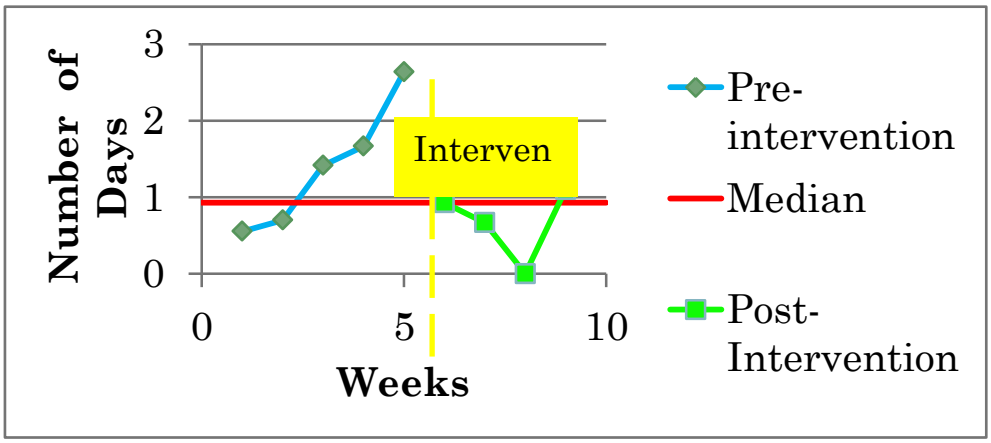
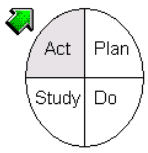
Number of Half Day Clinics until Third Next Available Appointment



2. Is there are reduced number of no shows each week as compared to the baseline figures?
   a) Prediction: Yes, there will be a reduced number of no shows noted for each physician as compared to baseline figures.
   b) Results: There was a slightly reduced number of no shows noted in the physician's schedules from an average of 1-2 per week, to 1 per week.

3. Do physicians have a reduced number of double bookings or appointments booked outside of normal clinical hours as compared to baseline figures (as a measure of efficiency)?
   a) Prediction: Yes, each physician has a reduced number of double-booked appointments or booked outside of normal clinical hours as compared to baseline figures.
   b) Results: There was an increase in number of double bookings noted in the physician's schedules. This may be attributed to the vacation taken by the physicians thereby increasing the workload for those physicians still at the clinic.

4. Do physicians have a reduced number of unused appointment slots for each week as compared to baseline figures?

	a) Prediction: Yes, physicians have a reduced number of unused appointment slots per week as compared to baseline figures. **b) Results:** There was a reduced number of unused appointment slots noted each week as compared to baseline numbers. This may be indicative of increased efficiency of the clinic and improved ability to accommodate patients' needs on a more timely basis. **Appointments Unfilled in the Upcoming Week per Half Day Clinic**  New Issues: -Should the open scheduling system be expanded to the other three pods (Pods 2-4) -Training the TWH FHT staff should we trained to continue collecting data
Act  	Describe next PDSA Cycle; New Questions to Answer/Decisions made/Action to be taken Next steps include monitoring the satisfaction of the patients, physicians and reception staff to ensure all parties involved are satisfied with the new process and highlight areas that may be improved in the future. In addition, the Toronto Western Hospital Family Health Team will be trained to continue monitoring the results of the open access scheduling as it takes at least three months for robust trends from the data to surface.
Ad Hoc Contributors	Recognize subject matter experts and others who have contributed to the learning

Project Summary

Team Members:

1. Kevin Brophy (Medicine)
2. Dina Carovska (Pharmacy)
3. Mary Guyton (Nursing)
4. Timea Urban (Nursing)
5. Christopher Yarnell (Medicine)

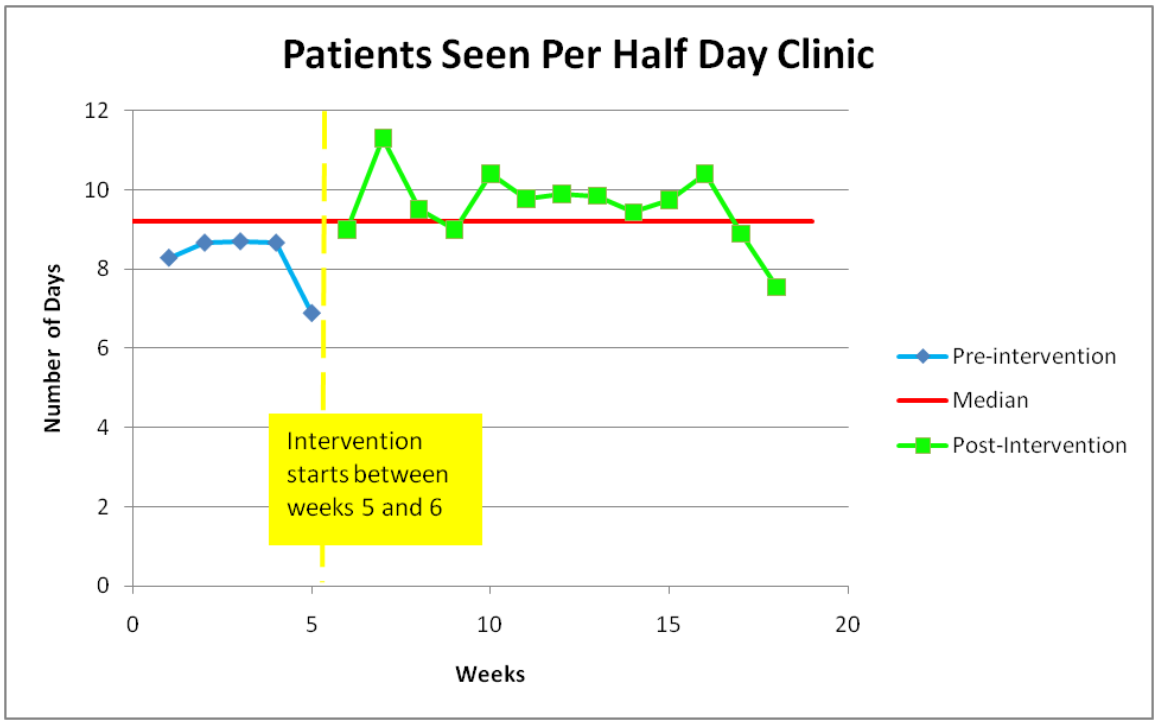
Faculty and Health Care Setting Sponsor:

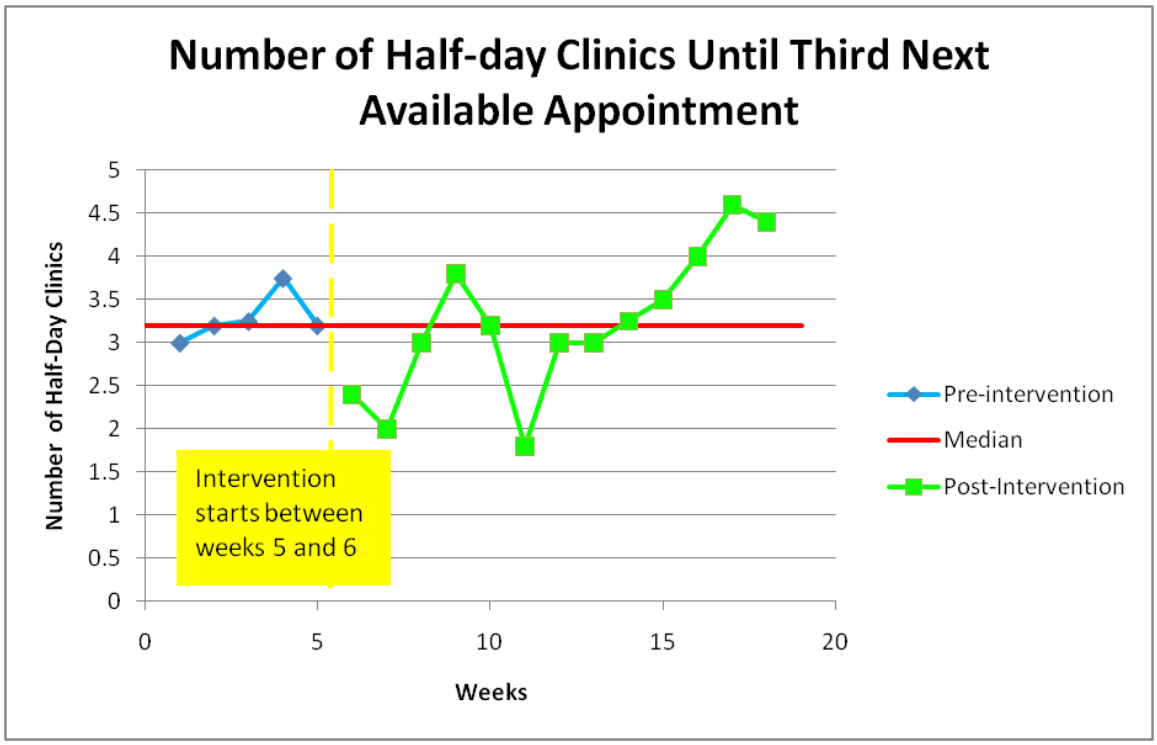
1. Dr. P. A. Ellison, Toronto Western Family Health Team

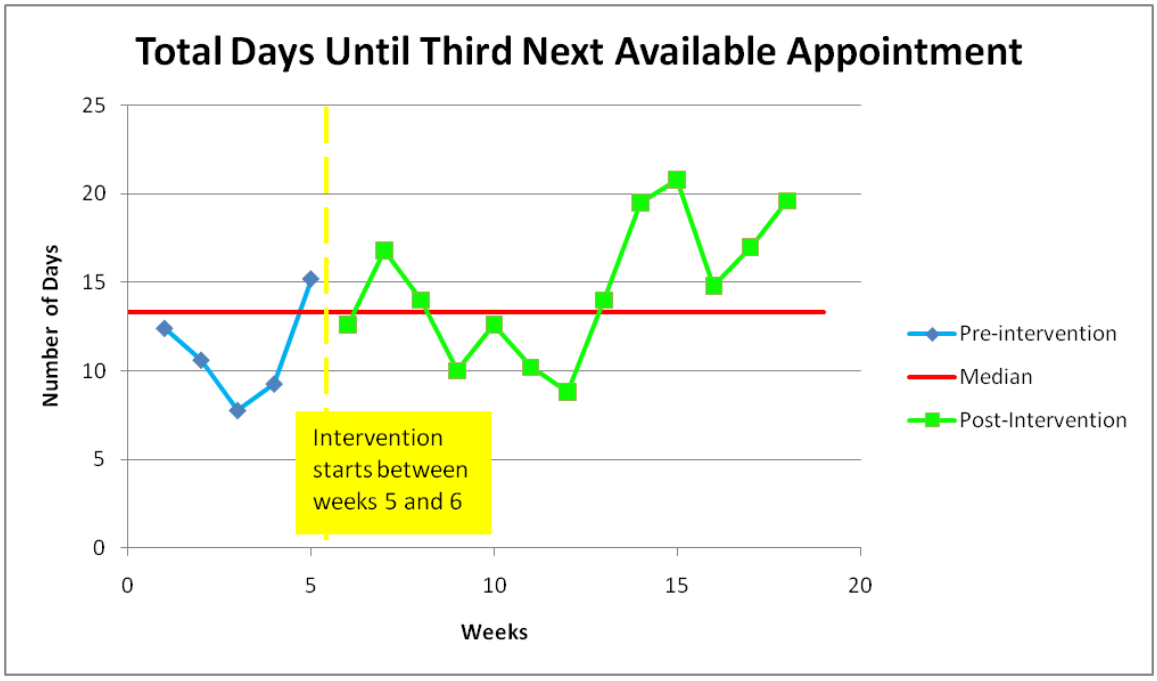
Results:

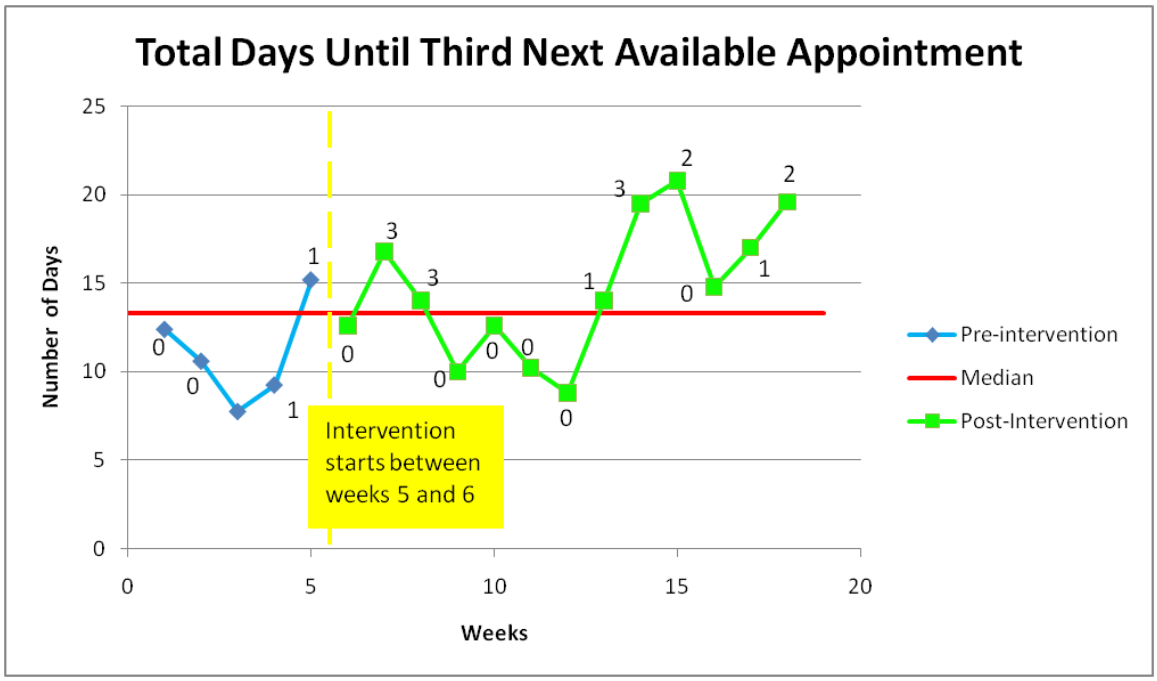
Our prediction was that we would be able to reduce the third next available appointment time to 1 day without negatively impacting the balancing measures or overall functioning of the clinic.

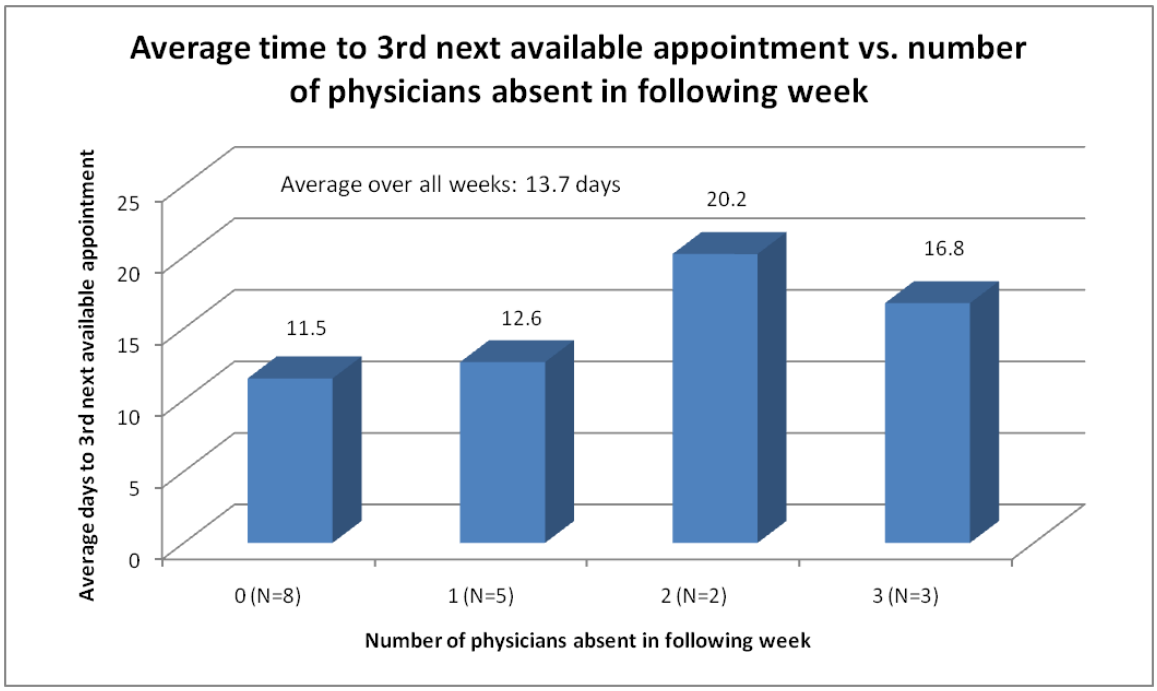
This prediction did not come true as we did not have a marked impact on our outcome measures, but we did identify crucial places for future improvement (ie. a consolidated vacationing schedule) and improved perceived access and satisfaction of patients and providers.




Number of Half-day Clinics Until Third Next Available Appointment
Number of Half-Day Clinics
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
5
10
15
20
Weeks
Intervention starts between weeks 5 and 6
Pre-intervention
Median
Post-Intervention

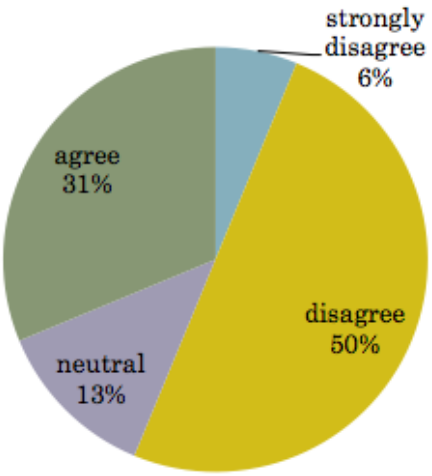

Total Days Until Third Next Available Appointment
Number of Days
25
20
15
10
5
0
0
5
10
15
20
Weeks
Intervention starts between weeks 5 and 6
Pre-intervention
Median
Post-Intervention


Total Days Until Third Next Available Appointment
Number of Days
Weeks
Intervention starts between weeks 5 and 6
Pre-intervention
Median
Post-Intervention

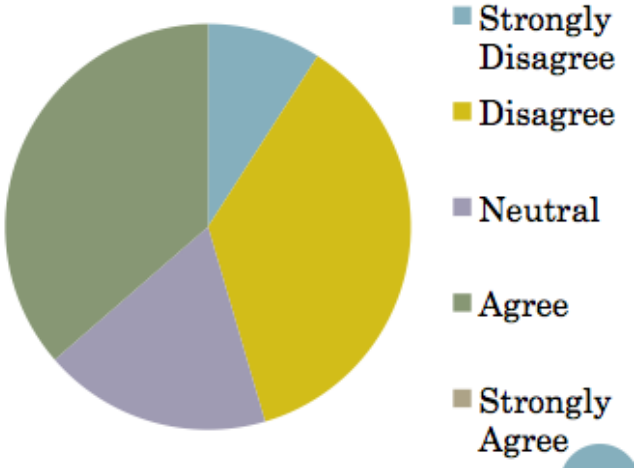

Average time to 3rd next available appointment vs. number of physicians absent in following week
Average days to 3rd next available appointment
Average over all weeks: 13.7 days
11.5
12.6
20.2
16.8
0 (N=8)
1 (N=5)
2 (N=2)
3 (N=3)
Number of physicians absent in following week

"I AM SATISFIED WITH THE CURRENT SCHEDULING SYSTEM."

Pre-intervention

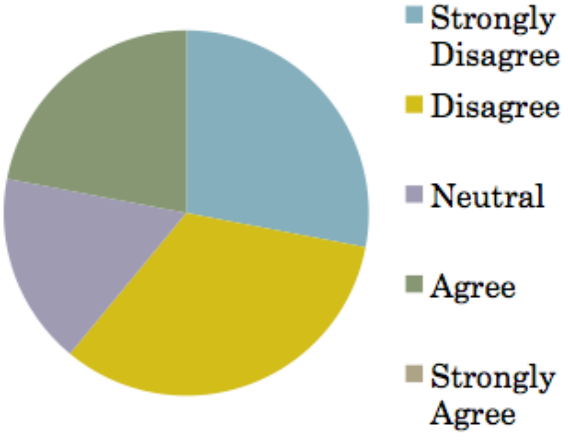


Post-intervention

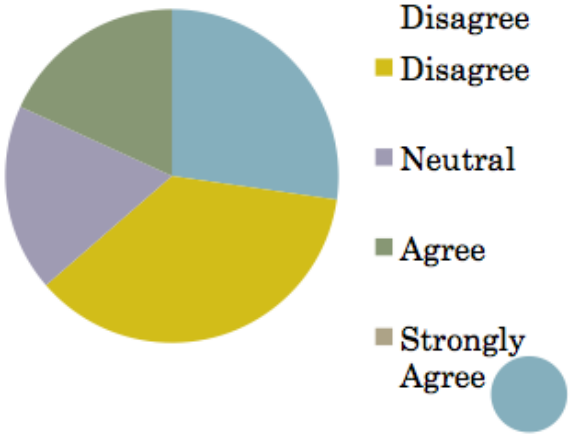


"I FEEL THAT PATIENTS ARE SATISFIED WITH THE CURRENT SCHEDULING SYSTEM."

Pre-intervention

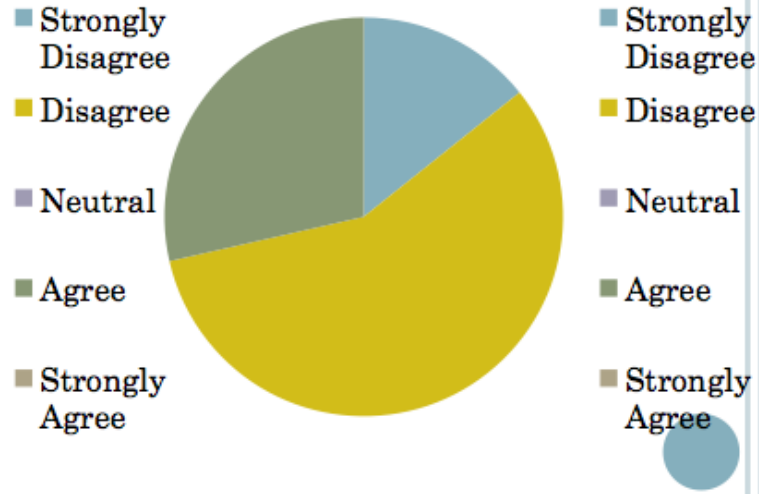


Post-intervention



"I AM SATISFIED WITH THE CURRENT SCHEDULING SYSTEM."

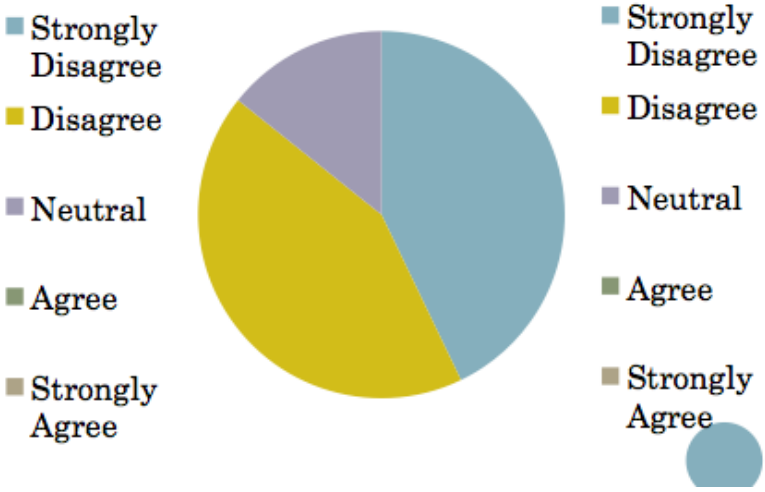
POD 1



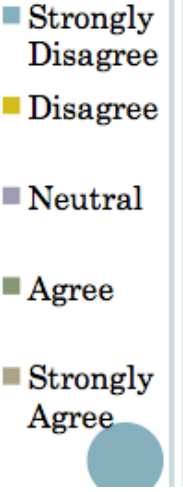
Other

"I FEEL THAT PATIENTS ARE SATISFIED WITH THE CURRENT SCHEDULING SYSTEM."

POD 1



Other



Summary of Results:

There were no definite changes in any of the measures, and no disruptions to the normal work flow of the clinic. However, there was much anecdotal discussion among staff members about improvements in staff satisfaction and patient access to the clinic. It was also interesting to note that a 15% improvement in access could be made by putting in place a system to ensure that no more than one physician is off duty at a time, as this dramatically increased the outcome measures.

Project Outcomes:

The project sparked interest and commitment from the staff at the Toronto Family Health Team to continue working towards a better open access system to improve patient access and workflow in their clinic. Although the project it self had limited impact the staff agreed to continue to project in similar fashion and it is still ongoing. The same measures, data collection procedures, and analysis processes are still being used. This project has impacted how POD 1 schedules patients in an attempt to improve efficiency and access. The entire Family Health Team plans to slowly adopt an open access paradigm based on the successes of POD 1's project.

Reflections and Discussions:

This project was very enjoyable and successful for all involved. The factors leading to the success of the project were most likely due to the strong working relationship the group formed within itself and the strong supportive relationship the team developed with the staff at the family health team. This enabled the IHI team to function as one with the family health team and allowed the project to meet the needs of the clinic.

The team's role was very facilitative. They helped the clinic explore quality improvement options in order to decide on the best project for them. Once decided upon the team laid the foundation for the full project to commence by setting up procedures and processes to implement and analyze the project in a flexible way to allow the actual intervention to evolve with the family health team. As the team's timeframe came to an end for the project, they ensured a smooth transition to the family health team to continue and helped train those responsible for it's ongoing implementation to ensure a sustainable project.

This project is approved to be published at ihi.org.