Pilot Program finds Productivity Benefits with PHEMI Clinical

From November 2013 to January 2014, an acute care clinic at a teaching and research hospital participated in a pilot program with PHEMI Health Systems to address productivity issues including overtime, wait lists and staff shortages. The objective of this pilot was to quantify the impact of automation on clinic productivity.   The pilot measured how PHEMI Clinical impacted two workflows at the clinic – the Initial Consultation and the Follow Up Visit.

The pilot found up to a 91% productivity improvement for clerks, and a 36% improvement for nurses when using PHEMI Clinical to automate clinic workflow processes.

Pre and Post-Pilot, monitors timed each step in the clinic workflow for the clerks, nurses and physicians. Timings occurred the week before, the day before and the day of the patient visit.

Pre-Pilot Observations

- Nurse productivity was timed at 32% (68% of their time not spent with patients).
- An average of 10 patient file hand-offs occurred during an Initial Consultation.
- 80% of the time, patient charts were incomplete, requiring manual retrieval of missing information and expensive duplication of tests and procedures.

PHEMI Clinical Implementation[1]

PHEMI Clinical was introduced in the clinic to automate two workflows. PHEMI Clinical:

- Provided seamless aggregation of patient data from 6 disparate hospital information systems, based on patient ID.
- Auto-populated patient forms.
- Eliminated double and triple data entry for clerical staff and clinicians.
- Generated physician consult letters automatically.
- Automatically published patient data from PHEMI Clinical to a centralized disease registry.

Initial Consultation

	Minutes Per Patient			Annual Savings[2]
	Status Quo	PHEMI	Savings	(Minutes)
Clerk	79	2	77	34,419
Nurse	18	9	10[3]	4,247
Physician	8	3	5	2,235
Total	**105**	**14**	**92**	**40,901**

Follow Up Visit

	Minutes Per Patient			Annual Savings
	Status Quo	PHEMI	Savings	(Minutes)
Clerk	31	3	28	24,363
Nurse	12	9	3	2,948
Physician	7	3	4	3,468
Total	**50**	**15**	**36[2]**	**30,779**

Pilot Results Post-PHEMI Clinical Implementation

- The greatest efficiencies were obtained in automating chart preparation activities performed by the clerk:
  - o Initial Consultation chart preparation saved 77 minutes per patient (from 79 to 2 minutes).
  - o Follow-up Visit chart preparation saved an additional 28 minutes per patient (from 31 minutes to 3 minutes).
- Automated workflows, pre-populated forms and completeness of patient data resulted in nurse preparation time dropping from 18 to 9 minutes for Initial Consultation and from 12 to 9 minutes for Follow Up Visits. This drove an overall 36%[4] increase in patient capacity. Nurses were able to process more patients for physicians and conduct more follow-up visits on their own.
- Physicians saved approximately 6 minutes per patient, since dictation was eliminated with PHEMI Clinical, replaced by auto-generated consult letters.
- The Pilot also identified increases in quality of patient care, timeliness and efficiency.

Overall Findings

The integration of PHEMI Clinical with the clinic workflow produced significant productivity benefits:

- 91%[5] productivity improvement from clerks.
- 36% productivity improvement for nurses.
- $95,778 annual savings from increased productivity on the two automated workflows. More savings to be realized by automating further workflows (e.g. referral, discharge).
- Clinician and clerk satisfaction rate of 100%, attributed to efficiency gains, simplicity of use, completeness of patient files, and choice of iPad or desktop.
- Less than ten minutes of training time, attributed to intuitive product interface.

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[1] The results documented in this pilot program are unique to this clinic. Not every clinic experiences the same results.
[2] Based on 1314 patients seen per year at time of pilot.
[3] Rounding calculations.
[4] Measured by using 100% of time saved and applying it to seeing more patients.
[5] Measured by taking clerk time (indirect and direct) saved through automated chart preparation process.