HAC 2016 ABSTRACT for Oral Presentations

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Project title
Express Queue under EDS cuts pharmacy waiting time by 48-61% for single-item prescriptions at peak hours

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Introduction
Express Dispensing System (EDS) has been in use in HA for many years. Despite continual refinements, EDS has reached its maximum effectiveness in coping with the increasing workload and the tidal wave pattern of service demand. Long waiting time and congestion at waiting hall during peak hours are common scenes across SOPC pharmacies with poor patient experience ensued.

Objectives
To determine the effects of an Express Queue workflow model implemented under EDS on the pharmacy average waiting time (AWT) and degree of congestion at waiting hall.

Methodology
The concept of Express Queue workflow was explored by a working group comprising members from major hospitals, CPO and HAIT. Data-mining reviewed that ~25% of daily prescriptions contained single item only. Workflow study was conducted and system enhancement areas identified. Before a new corporate-wide system became available, QES Pharmacy simulated an express queue workflow for single-item prescription for 2 weeks from 30-11-2016 to 11-12-2015 (study). The 2-week period before study was taken as control. The hourly AWT during 9am-7pm was compared. Prescriptions not requiring patients to wait (CGAT and "keep-record only") were excluded from analyses.

Result
The average number of "eligible" prescriptions dispensed daily was similar in the compared periods (all prescriptions, 881 control vs 869 study; single-item 257 vs 256). The AWT (in minutes) for single-item prescription was remarkably reduced throughout and especially during peak hours (12-1pm, 49 control vs 23 study (53% decrease); 1–2pm, 48 vs 25 (48%); 4–5pm, 37 vs 15 (59%); 5–6pm, 31 vs 12 (61%)). No adverse impact on prescriptions with >1 item was observed (maximum increase in AWT from 53 to 58 during 12nn-1pm). Improvement in percentage of prescriptions completed within 30 minutes was observed overall (42.8% vs 56.3%), for single-item prescriptions (50.3% vs 91.5%), and for >1-item prescriptions (39.8% vs 41.6%). The cumulative number of prescriptions received minus the number issued during each hourly period was decreased including peak hours (4-5pm, 148 control vs 119 study, 20% decrease), suggesting reduced waiting hall congestion. Conclusion: This study demonstrated that the Express Queue workflow shortened the waiting time overall and for single-item prescription substantially, without adversely impacting the non-express queue patients. Waiting area congestion was also alleviated.