GP appointment systems: How much can "Doctor First" help?

Summary:

Doctor First is a GP appointment system where all patients speak on the phone to a GP, on the day they call the surgery. The GP may then ask the patient to come into the surgery that day if necessary. Doctor First aims to reduce patient waiting time, while liberating time for the GP. We used data from a pilot of Doctor First and built a simulation to examine the potential impact of the appointment system and compared these results with those as described by the originator of Doctor First.

We found that the Doctor First system requires more time than a conventional appointment system for those under 20 years old, moderate time savings are made for 20-80 year olds and significant time savings are made for 80+ year olds. This is due to the phone/face-to-face conversion ratio being >50% for the under 20 year olds (and so the majority require both phone and face-to-face appointments), ~40% for 20-80 year olds and <40% for 80+ year olds.

Both phone/face-to-face conversion rates and the time spent on the telephone were higher than advertised for Doctor First. The modelling suggested a moderately improved ability to meet patient demand and a slightly lower utilisation of GP time. If the model was run according to how Doctor First is described by the originator (18 patients per hour on the phone, with two thirds of patients not requiring a subsequent face-to-face appointment) much more significant gains are expected.

Context:

Doctor First was introduced into a surgery already running a phone-triage system. In order to compare Doctor First with a full face-to-face appointment system, a simulation was built to mimic performance if all appointments were face-to-face.

Method:

Patients call for appointments with weekly patterns in accordance to historic data. The model allows for various types of appointments to be allocated (e.g. on-the-day appointments, same week appointment, long-term advance booking) and allows phone appointments to be used or not (durations for both phone and face-to-face appointments may be set in the model). Patients failing to obtain an appointment may return the next day or may go elsewhere. A certain proportion of patients may be classified as high priority and the GP will use over-time to see them. The model monitors the proportion of patients obtaining an appointment, the utilisation of available GP time and the requirement for GP overtime.
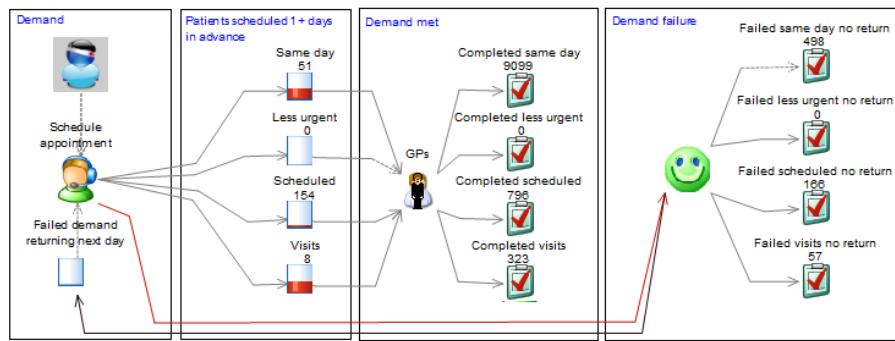
	% Demand Met	% Demand met first time
Same day	94	94
Less urgent	0	0
Scheduled	75	75
Visits	80	80

Urgent demand requiring overtime	5%
GP utilisation	98.7

Contacts	3860

Outputs:

Five different scenarios are summarised below. Scenario 1 represents a situation with current demand and no use of telephone appointments. A small improvement is obtained with the performance of the phone appointment system as currently operating. If the phone appointment system operated as described by Doctor Clay, who originated Doctor First, then significant improvements would be made (scenario 5).
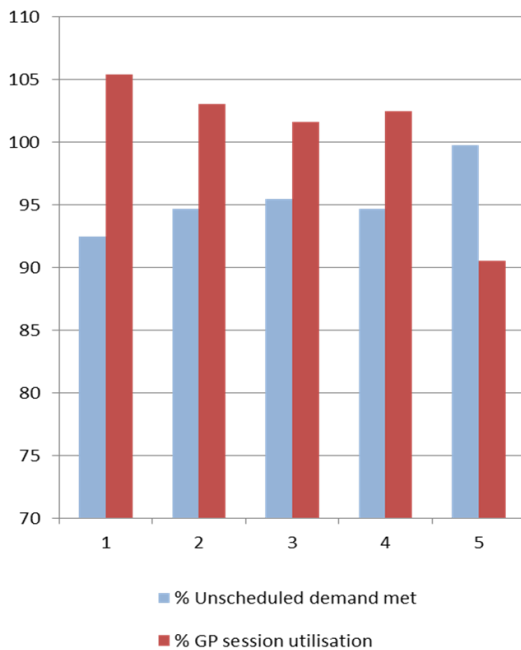
Scenario 1: Base case. No use of phone to treat (P2T). Demand 9% higher than activity (based on GP survey where 9% reported they were not able to get an appointment last time they tried). 50% un-scheduled patients classed as urgent and overtime used to see them. 6hr/GP/full day is available for patient contact. 6 patients/hr for contacts.

Scenario 2: Current Dr First performance at a Devon practice. P2T used for 90% of patients with average conversion rate of 43%. 12 patients/hr for phone triage.

Scenario 3: As 2 but to not P2T patients <20 years old (these have conversion rates >50%).

Scenario 4: As 2 but P2T only patients 70+

Scenario 5: Dr First as described by Dr Clay: All patients have phone triage, 18 patients/hr for phone triage, 33% conversion rate.

- % Unscheduled demand met
- % GP session utilisation

Discussion:

The benefits of the Doctor First system depend on the phone/face-to-face conversion ratio and the time required for the phone contact. The different population characteristics in Devon may mean the benefits of the Doctor First system are smaller than obtained elsewhere.

Contact and more information:

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