## Case study: Virtual wards at Croydon Primary Care Trust

Croydon Primary Care Trust (PCT) has been piloting the practical use of the Combined Model on behalf of the King's Fund and Health Dialog since May 2006. It has developed a package of care called *virtual wards* that it offers solely to people at highest predicted risk. The virtual wards project won an unprecedented four prizes at the Health Service Journal Awards in November 2006:

- Primary Care Innovation
- Clinical Service Redesign
- Patient-Centred Care
- Information-Based Decision Making

Virtual wards are now being introduced by PCTs and their equivalents in other parts of the UK.

In essence, virtual wards use the systems, staffing and daily routine of a hospital ward to provide case management in the community.

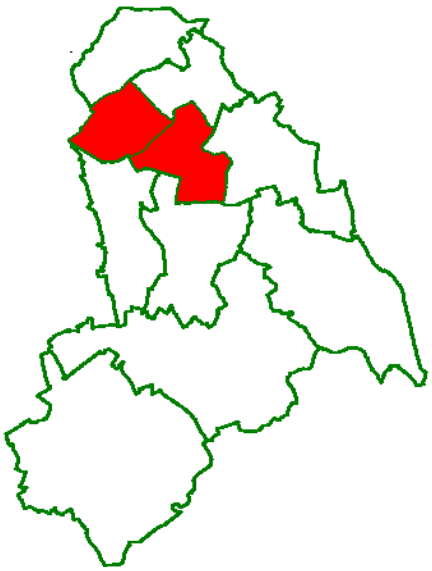
### Virtual Wards

Virtual wards copy the strengths of hospital wards: the virtual ward team shares a common set of notes, meets daily, and has its own ward clerk who can take messages and coordinate the team. The term 'virtual' is used because there is no physical ward building: patients are cared for in their own homes. The only way in which patients are admitted to a virtual ward is if their name appears at highest on the predicted risk score on the Combined Model.

Each virtual ward has a capacity to care for 100 patients. Using hospital parlance, each virtual ward has 100 'beds'. Croydon has plans for a network of ten wards that would care for the 1,000 patients at highest risk in the borough. The population of Croydon is 340,000 so the catchment population for each ward will be roughly 34,000 ie approximately one ward for every 15 GPs.

However one of the key strengths of the Combined Model is that it enables predicted need to be mapped across a borough. The catchment population for each virtual ward can therefore be adjusted so that in areas where there is a high level of predicted need, the catchment population will be less than 34,000 and vice versa. In this way it is possible to counter the Inverse Care Law that states that the healthcare provided in a locality is usually inversely proportional to its level of need.

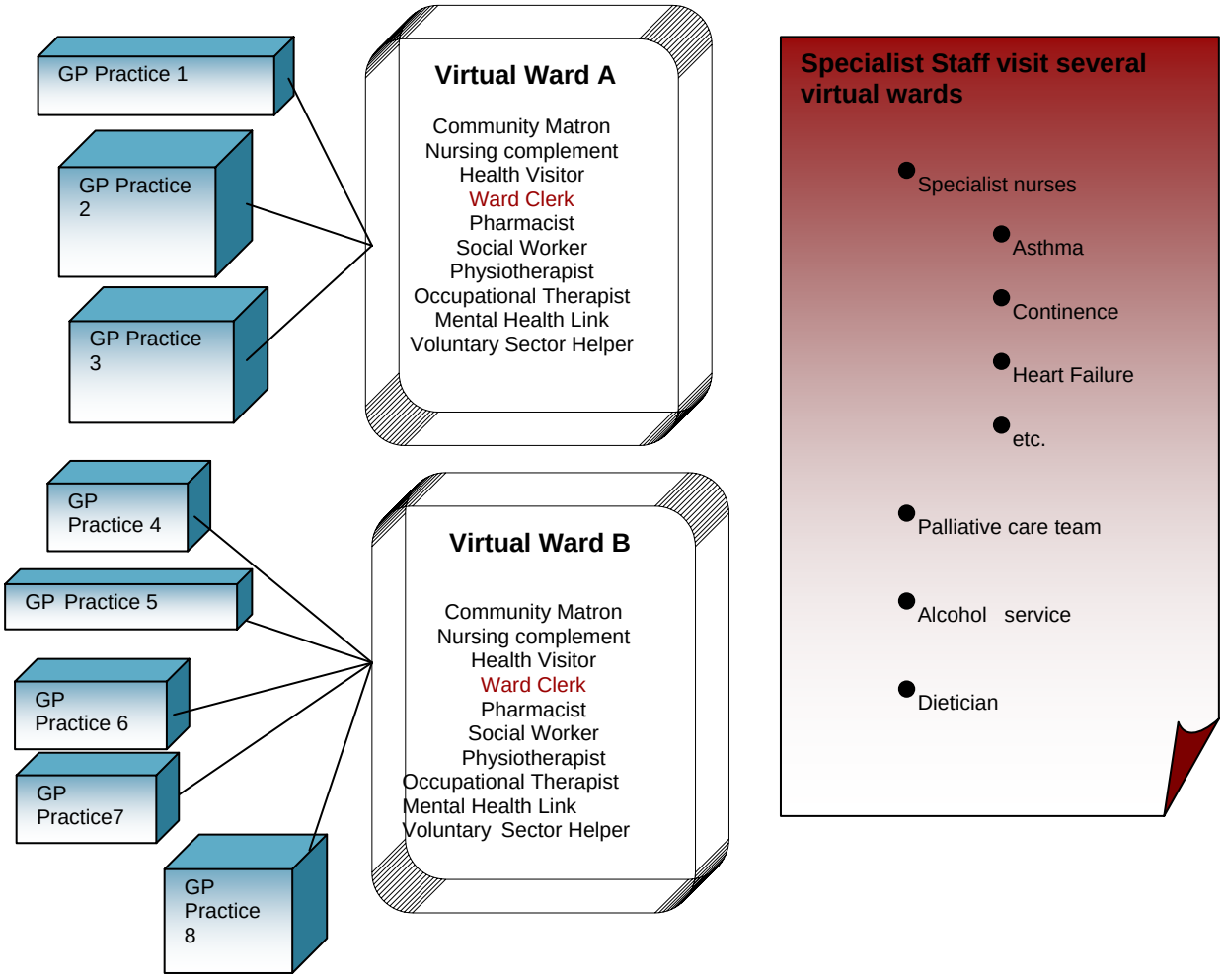
A pilot of two virtual wards – both of which are in the North of Croydon – opened earlier this year.



*Map for illustration purposes only*

If the pilots are successful then the plan is to roll out the virtual wards project across the whole borough. There is also the possibility of opening an eleventh virtual ward for children from across Croydon. This is made possible because the Combined Model allows the predicted risk scores of toddlers and octogenarians to be compared on the same scale.

If the virtual wards are going to be successful in the long term then they need to be embedded with GP practices. Each virtual ward is therefore permanently linked to a group of GP practices (three or four large practices, or a larger number of small practices). In this way the virtual ward staff can develop close working relationships with their constituent practices. It is hoped that in future, groups of practices may wish to commission virtual wards through practice-based commissioning.




In the same way that certain hospital nurses will cover several acute wards (eg asthma specialist nurses in a district general hospital) so the specialist teams in the community will likewise cover several virtual wards.

**Ward Staff**

- The day-to-day clinical work of the ward is lead by a community matron. Other staff include a social worker, health visitor, pharmacist, community nurses and other allied health professionals.
- A key member of staff is the ward administrator ('ward clerk'). With a dedicated telephone number and email address, the ward administrator is able to collect and disseminate information between patients, their carers, GP practice staff, virtual ward staff, and hospital staff.
- Medical input is comes from daily telephone contact between the community matron and the duty doctor at each constituent GP practice. The matron is also able to book surgery appointments to see any patient's usual GP.
- The virtual ward will develop close working relationships with organisations such as hospices, drug and alcohol service and voluntary sector agencies.

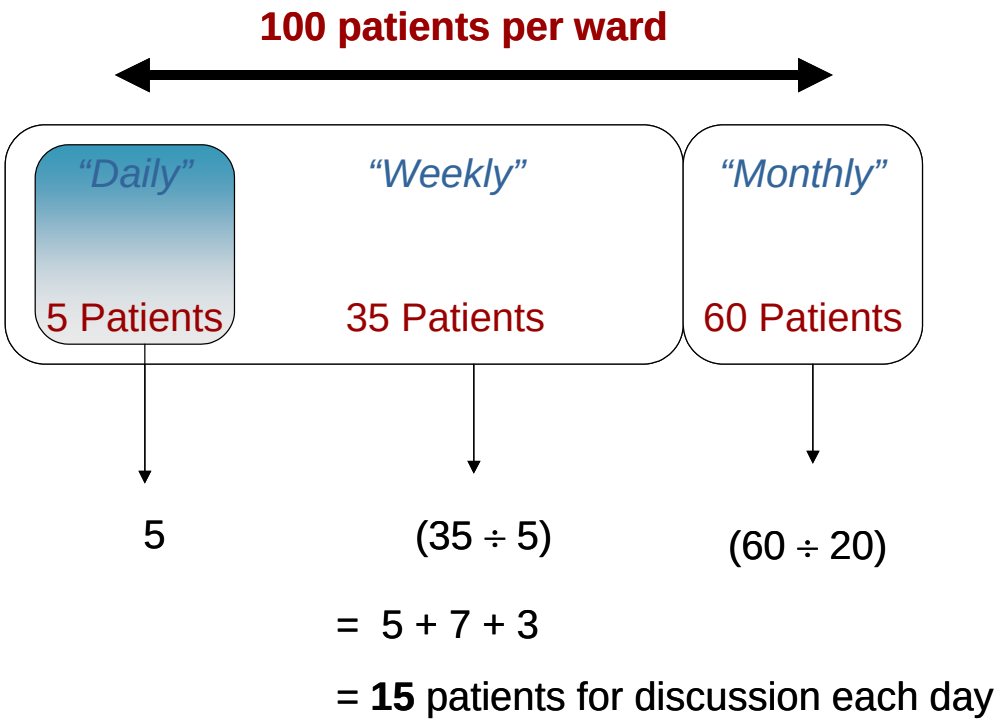
Medical input to the virtual wards comes in two ways:

1. The community matron for each ward will be given the bypass telephone number to the duty doctor at each of the constituent GP practices for that virtual ward.
2. Additionally, the community matron will be able to book appointments to see the patient's usual doctor.

**Admission to a virtual ward**

At the time of admission to the virtual ward, the community matron visits the patient at home and conducts an initial assessment. This record, and all further entries by ward staff, is entered into a shared set of electronic notes. A summary from the GP computer system is pasted into these ward notes before the initial assessment, so as to provide background information and avoid unnecessary duplication of work. The GP practice is informed of all significant changes to the patient's management.

Members of the virtual ward staff hold an office-based ward round each working day. Patients are discussed at different frequencies depending on their circumstances and stability.




Of the 100 patients on each ward, 5 patients are discussed daily, 35 are discussed weekly, with the remaining 60 patients discussed monthly. The community matron can move patients freely between these different intensity 'beds' according to changes in their clinical conditions.

**Communications**

Every night an automatic email containing a list of each virtual ward's current patients is sent automatically to local hospitals, NHS Direct and GP out-of-hours cooperatives. This information is uploaded onto these organisations' clinical computer systems. Should a virtual ward patient present to their services (eg to a local A&E department) then the staff working there will be alerted automatically to the patient's status. They then know that by contacting the virtual ward administrator, they can obtain up-to-date details of the patient's care. They can also arrange early discharge back to the care of the virtual ward team.

**Discharge**

When a patient has been assessed by all relevant virtual ward staff, and has been cared for uneventfully for several months in the ‘monthly review’ section of the ward, then the ward staff may feel that the patient is ready to be discharged back to the care of the GP practice. They also receive a prompt when the patient’s name drops below the 100 people with highest predicted risk in the catchment area according to the Combined Model.

A discharge summary is sent to the practice and a discharge letter (using lay terminology) is sent to the patient. For the first two years following discharge, the GP practice conducts quarterly –rather than annual – reviews. This not only ensures that the patient is borne in mind, but these quarterly review data are serve as positive feedback to the predictive risk modelling algorithm.

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