

# CLINICAL EFFECTIVENESS

## Improving governance of clinical advice offered by chemical pathology registrars in Belfast Health and Social Care Trust

### Background

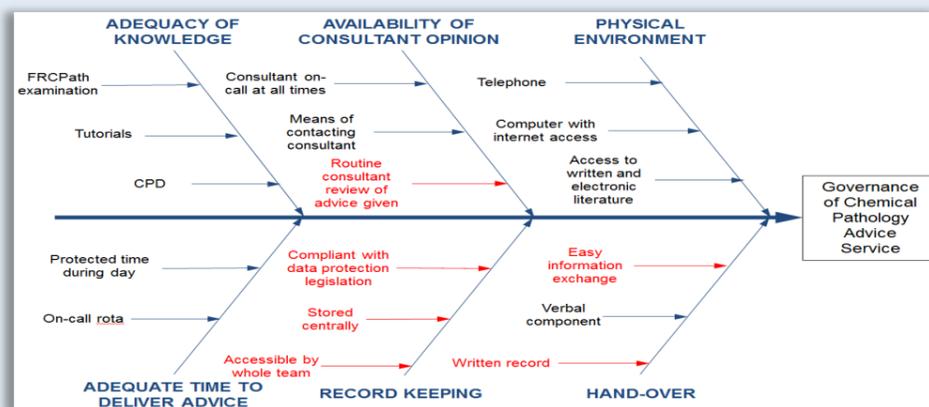
Chemical pathology staff at Belfast Health and Social Care Trust provide a 24-hour service, giving clinical advice on a range of biochemical problems. The majority of these calls are answered initially by specialty registrars.

### Current state

Hand-written records were kept. Consultant input into clinical cases was sought on an ad-hoc basis, at the trainee's discretion. The current system has not resulted in any problems, but it was felt by the team that the system could be substantially improved pre-emptively, in an attempt to prevent an adverse event.

### Problem statement

A process-mapping exercise was undertaken. A variety of shortcomings were identified and agreed by all team members. These are highlighted in the following fishbone analysis diagram:



*Fishbone analysis of governance systems in place for chemical pathology advice service. Shortcomings in the existing system are shown in red.*

Deficiencies in the system were as follows:

1. Record keeping was undertaken by each individual, using a handwritten entry in a notebook or similar. Notes could only be accessed by the individual in possession of them, could easily be misplaced or damaged, and did not facilitate rapid information exchange during hand over. No formal record of hand over was kept.
2. There was no formal mechanism in place for reviewing the quality of advice given by trainees. Identification of training issues therefore relied largely on self-recognition by trainees.

### Goal statement

1. To improve the security of clinical notes kept by chemical pathology trainees, while also ensuring that they are accessible to other members of the team to facilitate continuity of care.
2. To introduce a system in which all clinical advice offered by trainees is reviewed by a consultant chemical pathologist in a timely manner.

### Root cause analysis

1. No available record storage system that was sufficiently robust to satisfy the current needs of the team.
2. Consultant advice was available when trainees asked for it, but there was no regular consultant review of all clinical advice offered by trainees.

### Determine countermeasures

An options appraisal was performed, and the following were accepted as being likely to improve all identified weaknesses in the system:

1. Develop a secure electronic database, available to view and edit by all members of the chemical pathology team. Trainees would record all clinical advice in this database.
2. In addition to 24/7 availability of a consultant for emergency queries, have protected consultant time each week during which trainees discuss all clinical advice provided that week. Contact could again be made with the referring team if any issues arose. Areas for training development could also be identified during these sessions.

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### Countermeasures implementation plan

May–June 2015: A password-protected database, hosted on the hospital network, was created. This is accessible by all members of the team both onsite and offsite.

July 2015: The database was tested and improved.

August 2015: Trainees began recording all clinical advice in the database.

November 2015: Protected time for a weekly 'virtual ward round' was introduced into a consultant chemical pathologist's job plan. All clinical advice offered by trainees is now reviewed on a weekly basis by a consultant.

Screenshot showing database data-entry screen.

### Evaluate results and process

In the first year, advice given in 425 individual cases was recorded in the database by trainees. Paper records are no longer used. All advice given for patients from November onwards was discussed with a consultant chemical pathologist at a weekly virtual ward round. There have been no technical issues. Since the system is only used by two trainees (there are only two trainee chemical pathologists in Northern Ireland), it was deemed unnecessary to conduct a formal written evaluation. A team discussion revealed that the new system was viewed favourably by all team members. It was felt that the system did not significantly lengthen the record-keeping procedure. It did, however, ensure that information was held centrally, and was accessible by the whole team 24 hours a day onsite or offsite. Handover of information to on-call team members was subjectively faster than before, since a synopsis of each case was already stored electronically, meaning that it could be sent by secure e-mail in a matter of seconds. The availability of previous clinical notes can be invaluable when encountering new patients out-of-hours. Team members welcomed the removal of the need to carry a notebook with the associated stress of misplacing it. It is the opinion of the team that the new system facilitates a safer and more effective clinical service. There were no significant adverse clinical events during this period but, should such an incident occur in the future, full documentation of the advice given is now recorded systematically, which will facilitate investigation.

From an educational point of view, the weekly virtual ward round is viewed as a valuable training opportunity for registrars: gaps in knowledge and variations in practice have been identified, discussed and addressed before problems arise. Trainees have used discussions at the virtual ward round to facilitate workplace-based assessments, to identify areas for further study and to highlight cases in which formal reflective learning can take place. The resource implications of this project were as follows: 6 hours of one trainee's time to set up the database, and the ongoing need for approximately 30 minutes of consultant time weekly. Although no formal measure of consultant time was recorded before the introduction of the new system, it is likely that no significant difference in consultant time utilisation has taken place with its introduction. Previously, trainees would have contacted consultants as and when required. Since trainees now have the reassurance that all cases will be discussed weekly, there is no impetus to discuss non-urgent cases with the on-call consultant unless felt to be absolutely necessary. This approach should actually optimise the use of consultant time, since they should be less likely to be interrupted when carrying out other duties.

### Follow-up actions

Roll-out to all members of the chemical pathology team locally. Review the use of the database on an annual basis. Any adverse incidents that might in any way relate to this system will be collated and used to make improvements, should any be deemed necessary.

**Start date:** 1 May 2015. **Date completed:** 6 December 2016.