Posters

Quality of Prescription Writing on the Bristol Renal Unit

Kate Ghee, Jon Standing & Jon Urch, Renal Pharmacists, Southmead Hospital

Introduction

An audit was undertaken to determine whether national 1 and trust 2 guidelines for writing of in-patient prescriptions were adhered to on the renal unit.

Objectives

Identify areas of poor prescribing giving rise to increased risk.

Method

On a single day renal in-patient charts were reviewed and data collected.

Key findings

Several areas of increased risk were identified;

- The use of block capitals and indelible ink.
- Clear discontinuation and alteration of items.
- Reference to specialist charts used in conjunction with main medicine chart (e.g. heparin, diabetic and warfarin)
- Lack of maximum frequency on PRN items.

References

1. British National Formulary No. 41 March 2001
2. North Bristol NHS Trust - Southmead Hospital Drug Chart (Prescription Guidelines)

Establishment and Audit of a Clinical Pharmacy Discharge Team

Ashton B, Bamford S, Castle R, Simcock V., Pharmacy Directorate, City General Hospital, North Staffordshire Hospital Trust

Introduction

A Clinical Pharmacy Discharge Team was established to meet the Trust's commitment to reduce drug wastage and increase the speed and quality of the discharge process 1, 2, 3.
The discharge service was then audited to support a business case for funding to extend the scheme.

Objectives

To establish a dedicated ward-based discharge team.
To demonstrate the effectiveness of the improved discharge service.

Method

Funding was obtained for 1WTE C++ pharmacist and 2WTE ward-based MTO2 technicians.
The following services were introduced and audited:

- Pharmacist written discharge prescriptions (TTO's)
- Re-use of patient's own drugs on discharge

- Discharge medication counselling
- Individual patient needs analysis

Key Findings

- An average of 30% of TTO's were written by pharmacists
- This resulted in an average saving of 6 hours junior doctors time per month
- An average of £300 per ward per month savings achieved on TTO expenditure
- An average of 30 hours per month dispensary time saved
- An average of 200 patients per month had their individual needs assessed and were counselled on discharge

References

1. A Spoonful of Sugar-Medicines Management in NHS Hospitals; Audit Commission Report, December 2001.
2. Pharmacy in the Future – Implementing the NHS plan. A programme for Pharmacy in the NHS. September 2000.
3. National Service Framework for Older People. Department of Health. March 2001.

Prescription tracking and error monitoring system TRAKKER

M H Rahman, B Spencer, G Weston, M Wilson

The key aim of this project was to reduce the time spent by nursing and pharmacy staff establishing the status of urgently required Prescriptions by improving information availability; as a result of this we improved the patient experience by reducing their waiting time for the TTA's.
Pharmacy staff spent an average of two and half-hours per day answering the telephone regarding the status of discharge Prescriptions (TTAs). In parallel the nursing staff spend twice as long as pharmacy staff chasing TTAs.
The software solution reported in this paper reduced the pharmacy query handling time down to thirty minutes per day with additional active messaging to the wards. The rapid supply of information also reduced nursing time wasted chasing TTAs.
The solution also provides workflow information, which has facilitated evidence, based review of staffing levels designed to more closely match capacity to demand. Graphical data presentation allows easy understanding of most performance parameters, but TRAKKER also supports detailed numerical analysis.

Benchmarking the current capacity of Welsh hospital pharmacy dispensaries
Welsh Dispensary Capacity Planning Working Party

Burfield, R; Francis, M; Hawksbee, M; Hiom, S; Lord, S; Roberts, D; Walker, K; Warner, N.
(For correspondence: S. Hiom, St Marys Pharmaceutical Unit, Cardiff & Vale NHS Trust)

Introduction

There is a need to develop capacity planning tools for pharmacy services not only for strategic planning but also to provide guidance for safe working limits1. In order to investigate capacity issues we must first benchmark current workload rates. Previous reports of this, however are anecdotal, small scale or do not have clear methodology 2.

Objectives

We proposed to collect clearly defined data in terms of items/person/hour from secondary care dispensaries across Wales.

Method

17 sites collected hourly data relating to staff time and items dispensed over a three day period in October 2002.

Key Findings

Welsh National Average for non specialist hospital pharmacy dispensing rate = 9.9 items/person/hr (CI 95% = 0.9), with a significant positive association between hospital size and telephone interruptions (0.83) ($p<0.001$) and a negligible, non significant correlation between hospital size and dispensing rates (0.06) ($p=0.822$).

References

1. Remedies For Success. Welsh Assembly Government (2002).
2. PharmJ. (1999),263, p270

Assessment of surface bioburden during hospital aseptic processing

S.J. Hiom, St Mary's Pharmaceutical Unit, Cardiff & Vale NHS Trust (for correspondence).
Christina Lowe, Singleton Hospital, Swansea NHS Trust.
Mark Oldcorne, Wrexham Maelor Hospital, North East Wales NHS Trust

Introduction

One of the five major sources of contamination during aseptic processing is surface bioburden1. A disinfection process is usually carried when transferring items into the critical work zones. Current methods to assess surface bioburden (and hence disinfection) are insensitive (swabs, contact plates).

Objectives

Use a novel validated method2 to benchmark bioburden throughout the aseptic preparation process, in three Welsh hospitals.

Method

Surface bioburden on sample vials were recorded at various points throughout the aseptic process.

Key Findings

Maximum bioburden on items during storage was 32cfu/vial and in critical work zones, 9 cfu/vial. Assessment of different in-house disinfection procedures was also determined.

References

1. NHS QC Committee. The QA of Aseptic Preparation Services. (2001).
2. S.J.Hiom. In-house bioburden assessment. National QC symposium. (2001).

The feasibility of a centralised intravenous additive service (CIVAS) in Paediatrics.

Benita Bhatt, Gill Hinson, Chris Cairns
*Directorate of Pharmacy, University Hospital Lewisham, London, SE13 6LH, *Department of Pharmacy, King's College, University of London, London, SE1*

Introduction.
Research has identified the resources needed to prepare paediatric IV doses [1].

Objectives. This study was designed to identify the extent and nature of IV doses on NICU and PICU, thus determining nurse resource implications.

Method. All IV doses were identified and recorded from drug charts and notes, over a 2-week period. This was analysed for workload and potential cost-avoidance.

Key findings.
771 doses of 24 different drugs, from 47 patients, were found. 70% of doses were for antibacterials; Cefotaxime, Benzylpenicillin, Metronidazole, Teicoplanin, and Gentamicin being commonest. These five equated to 1329 hours of nurse time and potential cost-avoidance savings of £18,000 annually.

Reference

1. Armour et al, Pharmacoeconomics, 1996; 10: 386-394

Interactions between Medicines and Enteral and Parenteral Nutrition

Louisa Kaprowicz Chris Cairns*
*Directorate of Pharmacy, University Hospital Lewisham, London, SE13 6LH, *Department of Pharmacy, King's College, University of London, London, SE1*

Introduction.
Despite literature reports of interactions, little is known of the extent of interactions between medicines and artificial nutrition.

Objectives.
This study was set up to identify the extent and nature of drug –feed interactions and determine their clinical significance.

Method.
A reference tool was prepared from the literature. Patients identified from Pharmacy and Dietetics records, had data abstracted from prescription charts, notes and nutrition records.

Key findings.
62 interactions were identified in 41/52 (79 %) patients, (range 1– 4). 18 drugs were identified, the commonest being Aspirin (27%), Sucralfate (15%) and Atenolol (8%). There was potential clinical impact in 81% of interactions.

A financial analysis of a one-stop dispensing service on two orthopaedic wards

Mayne, W. Downes, H. and Daly, M.
Pharmacy Department, RJAH Orthopaedic and District NHS Trust, Oswestry, SY10 7AG.

Introduction

A one stop dispensing service (OSDS) with re-use of patients own drugs (PODs) is recommended within the hospital service1. To examine the costs involved, patients attending for orthopaedic surgery were monitored until discharge. PODs were used when appropriate, and other drugs required issued via OSDS or discharge prescriptions. Actual versus potential costs were then assessed.

Results

48 patients were included in the study, as follows :

No.	Total number of medicines	Average per patient	Traditional supply		One-Stop dispensing supply	
			No.	NHS Cost	No.	NHS Cost
48	180	3.75	117	£1,293.68	63	£480.25

Only 63 non-POD medicines were required, saving £813.43 (£16.94 per in-patient stay). Savings may be considerably higher with drug-tariff-based prices.

Discussion

OSDS enables a more patient-focused deployment of skilled pharmacy staff, and potential increases in drug costs2 are offset by the re-use of PODs.

[1] – ‘A spoonful of sugar : Medicines Management in NHS Hospitals’. Audit Commission, 2001.
[2] – Jeffery, L. 28-day patient pack discharge medication. Pharmacy Management 2001;17:24-25.

Medicine reminder charts – what is the best design for older patients?

Julia Howarth, Pharmacist, Leeds Teaching Hospitals NHS Trust

It is current practice within our Trust to issue a medicine reminder chart to selected patients with their discharge medication.

It is widely accepted that a grid design should be adopted for medicine reminder charts, based on one validated design published some years ago.

It has been observed in our practice, and in one published report, that older patients may have difficulty understanding tabulated information.

We have compared our Trust’s standard medicine reminder chart with two alternative designs (one a very simple grid, the other in list form) by randomised trial on a typical Medicine for the Elderly ward. The aim was to determine if the way information is presented on a reminder chart significantly influences the usefulness of the chart to an older patient. Quantitative and qualitative results are presented and discussed.

Quality of Prescription Writing on the Bristol Renal Unit

Kate Ghee, Jon Standing & Jon Urch, Renal Pharmacists, Southmead Hospital

Introduction
There have been reported incidents where errors have occurred which may have been contributed to, in part, by lack of clarity on the prescription chart. It was decided to conduct an audit to assess adherence with trust and national guidelines for prescription writing.

Objectives
Identify areas of poor prescribing giving rise to increased risk.

Method
Data was collected on a single day from inpatient charts on the renal wards. 40 charts were audited against agreed criteria 1, 2.

Key findings
Several areas of increased risk were identified;

- The use of block capitals and indelible ink.
- Clear discontinuation and alteration of items.
- Reference to specialist charts used in conjunction with main medicine chart (e.g. Heparin, diabetic and warfarin)
- Lack of maximum frequency on prn items.

Conclusion
There are several problems that can occur if a prescription is written poorly. It obviously has the possibility of impacting on direct patient care if an item is misread or misinterpreted. It also means that obtaining an accurate history of a patients treatment in the situation of eg a clinical incident can be impossible.
This audit was presented at a multidisciplinary meeting, following which prescription writing guidelines were produced. Since this time this audit has been repeated approximately every six months. A renal pharmacist now provides education during a training period for new renal shos.

References
1. British National Formulary No. 44 September 2003
2. North Bristol NHS Trust - Southmead Hospital Drug Chart (Prescription Guidelines)

Developing the role of the controls assurance technician
Sheila Strachan, Cliff Ward, Susan Manktelow

Introduction
Controls assurance is a systematic approach to reducing risk and provides a foundation upon which high quality clinical care can be delivered.
It is a system of monitoring performance against standards and ensuring that the required level of control is maintained.

Objective
To use a Pharmacy Technician to co-ordinate the monitoring of safe and secure handling of medicines at ward level.

Method
To produce a series of audits which identified gaps in performance and unnecessary exposure to risk. These audits are then supervised by the Technician.

Key findings
- This role is effective in monitoring many aspects of drug handling
- Risks are quickly identified and reduced
- Improved control at ward level

This role has enhanced the safety and quality aspects of medicines management at ward level, ensuring that the ward based technician team are able to address potential problem areas swiftly before they develop into an incident.

References
NHS Executive (1999): Guidelines for implementing controls assurance in the NHS. Guidance for directors. Leeds NHS Executive Controls Assurance Team.
HSC2001/005 Controls Assurance Statement 2000/2001 and establishment of a Controls Assurance Support Unit

Antibiotics prescribing in community acquired pneumonia

Ann Chan, Clinical Pharmacist, Southmead Hospital

Introduction
Community Acquired Pneumonia (C.A.P) is a condition associated with significant mortality. Guidelines for the treatment of chest infections were developed at Southmead Hospital in 1996 and were updated in 1998.
Aim
To review prescribing practice in the treatment of community acquired pneumonia

Objectives
- To determine the antibiotics prescribed and dose used
- To identify the average length of antibiotic course
- To assess compliance with local hospital guidelines2

Methodology
This was a prospective study undertaken on patients admitted with an initial diagnosis of community acquired pneumonia on acute medical wards at Southmead Hospital over a 5-week period (Dec 2002 – Jan 2003).
Stage 1 : Patients identified by ward pharmacists
Stage 2 : Details were collected from medical notes, drug charts and observation charts using a data collection form.

Key findings
- 30 patients were recruited in this audit, with an average age of 71 years ; 23% had mild pneumonia, 40% moderate and 37% severe.
- 40% of antibiotic prescribing did not comply with local guidelines.
- The average course of intravenous antibiotics was 5.4 days

- The average total length of antibiotics course was 10.5 days

Conclusions & Recommendations

There are considerable variations in prescribing practice.

- Liase with microbiology and evaluate support for current guidelines.
- Re-publicise guidelines if approved through medical and pharmacy staff education.

References

1. British Thoracic Society. Guidelines for management of Community acquired pneumonia in adults. Thorax 2001; 56 : supplement IV

2. Southmead Hospital, Microbiology Department. Guidelines for the treatment of chest infections. Southmead Hospital; 1998

3. Cooke J, Kubin M, Morris T, Ribas J. Intravenous and oral antibiotics in respiratory tract infection: an international observational study of hospital practice. Pharmacy World & Science 2002; 24 (6) : 247 -262

Evaluation of Metered dose inhalers and compatibility of Spacer devices

Eve Wood MRPharmS B Grade Pharmacist Southmead Hospital, North Bristol NHS Trust

Introduction

Asthma prevalence is increasing1. Inhalation via pressurised metered dose inhalers (MDI's) is the most widely used drug delivery system for asthmatics. MDIs are lightweight, portable and contain many doses, however difficulty in synchronising inhaler activation and inspiration is a common problem. Breath activated inhalers eliminate the need for co-ordination, but are more expensive. Spacer devices can be used with MDI's to remove the need for co-ordination.

Conventional plastic spacers are often bulky and impractical and a static charge builds up on the inner surface, inhibiting drug flow. New devices have been introduced to overcome these problems, some claim to be compatible with any MDI.

Objectives

To address the importance of MDI and spacer device compatibility, and draw up a table of recommended combinations.

Methods

Literature searches on MDI and spacer compatibility were conducted and the manufacturers of spacer devices and MDI's were consulted.

Key Findings

Each drug has a specific behaviour in a spacer device. Manufacturers of inhalers and spacers recommend a specific combination2. The importance of using the 'correct' combination is questionable3, as many patients are controlled on other combinations.

Recommendations

Drug delivery from MDI's differs with different spacer devices. A recognised combination should be employed. An unauthorised combination may be justified if this controls the patient's condition.

References
1. Cole, O. Introduction to asthma. Hosp pharm 2001; 8: 238 – 240.
2. Snell. N. Volumatic Usage. Pharmaceutical Journal. 251: 721.
3. Bell, J. H. Volumatic Usage. Pharmaceutical Journal. 251: 652.

Audit to establish BNF usage throughout the hospital

Eve Wood MRPharmS B Grade Pharmacist and Alison Yeo MRPharmS PhD Medicines Information Pharmacist. Southmead Hospital North Bristol NHS Trust

Introduction

Medical practice and licensing recommendations are evaluated, reviewed and changed regularly. The BNF is published twice yearly to take this into account.

Objectives

- Identify and remove out-of-date BNFs on each ward.
- Identify how many BNFs are required by each ward in future.
- Promote use of only the most recent edition.
- Convey risk of using out-dated information sources.

Methods

39 wards were audited in September 2002 corresponding with the distribution of the 44th edition of the BNF. The importance of keeping only up-to-date BNFs was conveyed via the ward pharmacist and a short letter.

Each out-of-date BNF was recorded and immediately removed, in addition any March 2002 (edition 43) BNFs were recorded and removed and new editions were left.

Key Findings

- A variety of BNF editions were kept on many wards.
- Out-of date editions ranged from March 1999 to September 2001 (editions 37 to 42).
- Twelve of the wards had no up-to-date BNF's.
- Three of the wards had no BNFs at all.
- Wards have requested to receive around 50% more BNFs in the future.

Recommendations

- Pharmacists must be vigilant and ensure the removal of out-dated information sources.
- Removal of old BNFs upon the twice-yearly allocation of the new editions could be a convenient and easy solution.

Development of a business case to support the introduction of NICE oncology drugs

Susan Thomson, Clinical Information Manager
Nicola Stringer, Senior Pharmacist Oncology Directorate
Lisa Brown, Directorate Liaison Technician

Pharmacy Directorate, North Staffordshire Hospitals NHS Trust, Stoke on Trent

Introduction

NICE was established to provide guidance on the clinical and cost effectiveness of clinical interventions to the NHS. To implement these recommendations the local health economy established a NICE Implementation Group.1 One role was to review organisational implementation plans for published guidance including their financial implication. Once these are approved authorisation is given to proceed with implementation and funding is released.

Objective

To develop a business case which incorporated the predicted funding implications of NICE oncology guidance. This would be used for forward financial planning and inform the SaFF. Sections would be reviewed and updated as guidance was issued.

Method

For each drug the following information was collated:

- Predicted patient numbers
- Treatment flow charts
- Actual and associated drug costs
- Drug status
- Predicated date of full implementation

Key findings

10 appraisals for drugs used in the treatment of non-haematological cancers had been issued by December 2002. In 2002-03 £273,194 has been obtained to support the use of temozolamide, gemcitabine for pancreatic cancer, irinotecan in colorectal cancer and trastuzumab and vinorelbine in advanced breast cancer. For 2003-04 £1,260,581 is requested to enable full implementation of all guidance due to be issued in 2002-03.

Monthly expenditure is monitored against budget and is reported to the directorate management team. Infrastructure requirements have been secured via a separate business case. The case has been highlighted as an example of good practice by the local cancer network.

Conclusion

NHS Trusts need to develop robust plans that include resources to implement NICE guidance. Pharmacists can make an important contribution to this process.

Reference

1.Fitzpatrick R, Kinsey J, Rajaratnam G.
Implementation of NICE guidance in a local health economy.
Oral Presentation at NICE Conference 2002.

A novel patient-centred educational development programme for hospital pharmacy

Rob Swallow, Centre for Pharmacy Postgraduate Education and Claire Grout, Greater Manchester Workforce Development Confederation

Introduction

The need for a different approach to educational development within hospital pharmacy was identified. The proposal for learning from 'best practice' to develop services was highlighted in the Audit Commission report 'A Spoonful of Sugar'1. It was also acknowledged that the educational strategy should be available to pharmacists and technicians.

Objective
To develop a CPPE accredited programme of events to support hospitals in patient-centred service development.

Method
Following background exploratory information to identify needs, a series of practice-based sessions was developed in collaboration with colleagues in the North West and South West of England. These events covered electronic discharge information; patients own drugs systems; training for novel anticoagulant services; delivering clinical pharmacokinetics; shared care for patient compliance in mental health; and ward based technicians to support clinical pharmacy.

Key Findings
The pilot events ran in February and March 2003. Feedback from participants was excellent, and has shown that the sessions achieved their aims of supporting service development.

References
1. Audit Commission (2001). A Spoonful of Sugar: Medicines Management in NHS Hospitals
Acknowledgements
Grateful thanks to the project steering group - Jane Portlock, Richard Cattell, Sue Scobie & Peter Moody – and those who ran the events.

Qualifications for pharmacy technicians: is there a 'gold standard'?
Joanne McLaughlin, North Manchester General Hospital and Claire Grout,
Greater Manchester Workforce Development Confederation

Introduction
Due to recruitment difficulties, increasing numbers of pharmacy technicians are being recruited into hospitals and primary care organisations from community pharmacy backgrounds. There was a lack of knowledge regarding the different qualifications obtained in community pharmacy and this was leading to an inconsistent approach to recruitment and further training. The proposal for technician registration added extra weight to the project.

Objectives
- To establish guidelines for employers regarding different technician qualifications available
- To explore the need for a 'top up' programme

Method
- Survey of hospital pharmacy managers and PCT pharmaceutical advisers to define key knowledge and skills required by technicians
- Review of course content of community qualifications

- Development of accredited ‘top up’ programme from identified gaps, in collaboration with local college
- Development of guidelines for employers

Key Findings
The first 11 candidates are currently undertaking the programme and feedback has been excellent. The guidelines have been a useful tool for employers.

The Development of a Complete Medication Incident System
Graham Bell and Lynn Owens, Kettering General Hospital NHS Trust

Introduction
The Trust-wide reporting scheme for reporting medication incidents was not affecting the rate or nature of incidents. We are developing a system which will change practice at ward level.

Method
Each incident report is scored (1 to 16) and all those scoring 9 or over are investigated further. Action plans are assessed and improved, discussions take place with key people and the changes to practice are monitored and assessed.
An example is shown which describes our actions following an incident with ketamine which was originally prescribed incorrectly for intravenous use, corrected to sublingual use but the dose administered was ten times that intended. The actions included meeting with the Modern Matron for the ward concerned, issuing guidance on dealing with unfamiliar drugs and arranging teaching sessions for doctors and senior nurses.

Key findings
Previous methods to improve practice (bulletins, induction programmes etc) made little difference. Current method is to include a process that shows that action plans are appropriate, carried out and audited. Proven good practice will be rolled out to the whole Trust.

The ward based technician as clinical Support
Graham Bell, Susan Manktelow and Claire Oliver, Kettering General Hospital NHS Trust

Introduction
It is known that patients develop their own regime for taking medicines1. It is also known that approximately 30% of drug histories taken by junior doctors have one or more inaccuracies.
Ward based technicians talk to patients about their personal regime and use this information in conjunction with the patient’s PODs to identify medication problemstake and use this to improve medicines management and patient care. They work closely with the ward pharmacists to improve medicines management and patient care. It is known that patient stay can be reduced if medication problems are resolved early in the episode of care. 2

Method
An independent audit was performed assess the impact of this activity. The audit was carried out over a six week period and included all contacts that the ward based technicians had with patients.

The wards that are covered include general medical and surgical wards, trauma and orthopaedic, medical assessment and gynaecological wards.

Key Findings
Problems were identified with 70% of patients who took medication. 56% of these were of minor consequence. 43% of discrepancies discovered could have increased the patient's stay.
At least six beds per day are released and one patient a week has a re-admission prevented. Cost saving is estimated at £700 per week.

References
1. Medicines and Older People: National Service Framework; Implementing medicines-related aspects of the NSF for Older People; Department of Health pp 7 –10
2. A Spoonful of Sugar: Audit Commission, December 2001, para 70, p 30

A point prevalence study to review the incidence of administration error with paracetamol containing products
J. Cox, J. J. Davies, O. M. Jones, Ysbyty Glan Clwyd, Conwy & Denbighshire NHS Trust
Drug administration errors are a well documented problem1-2, as is paracetamol overdose3,4. The Risk Management Pharmacist noted that there had been a number of clinical incidents where a patient had received more than 4g of paracetamol. It was decided that an audit of paracetamol prescribing should be done to investigate the prevalence of inappropriate prescribing of paracetamol. A point prevalence study was undertaken to determine the extent of the problem. Inpatient prescriptions (328) were reviewed on 20 wards on one day. A total of 222 (67.5%) patients were prescribed paracetamol, of whom 16 (5.91%) were prescribed two paracetamol containing products. Regular prescribing accounted for 27.3% and PRN 72.7%. Administration records did not show doses >4g/24 hours being administered. The ratio of PRN:Regular suggests that the prescriber's are using paracetamol more for intermittent pain rather than constant pain. 5.91% of patients, on the day of the study, were prescribed more than one paracetamol containing product. If this is a realistic value it presents a very real risk of a patient receiving an overdose of paracetamol on a frequent basis. The one-day study shows that prescribing and administration is better than anticipated but dual prescribing does give cause for concern, to confirm these findings it will be necessary to repeat the study at a later date.

References:
1. David W Bates et al - Incidence of adverse drug events & potential drug events – JAMA. 1995;274(1):29-34
2. Kenneth N. Barker et al – Medication errors observed in 36 health care facilities – Arch Intern Med. 2002;162:1897-1903
3. Robinson, D et al – Severity of Overdose after restriction of paracetamol availability: retrospective study – BMJ 2000:321 926-927
4. Hawton, K et al – Effects of legislation restricting pack sizes of paracetamol and salicylate on self poisoning in the United Kingdom: before and after study – BMJ 2001:322 1203-1210

Treat every defect as a treasure
Documentation audit and incident reporting as tools for Continuous Quality Improvement
Christina Lowe QA&C Pharmacist Swansea NHS Trust

Aim
To describe the application and impact of a revised exception reporting scheme adopted by the CYTO/CIVA Service, Singleton Hospital, Swansea.

Objectives
To outline the scheme - Measurement
To present sample results - Analysis
To share some of the lessons - Action
A checklist based on the National CIVAs Error Reporting Scheme was introduced to complement existing Complaints and Recalls procedures. The form aids rapid data collection by all staff for transfer to a Microsoft Access database. Processed data is exported to Microsoft Excel for further analysis and reporting.

Key Findings
- Complaints and rejects provide a small quantity of data about extreme failures.
- Documentation audit and the CIVAs reporting scheme capture potentially valuable information allowing system failure points to be identified from data otherwise lost to follow up.
- Database collation allows detailed analysis of error data, highlighting recurrent errors.
- Involvement of all operators increases reporting and improves take up of corrective actions.

"Treat every defect as a treasure" Dr W. Edwards Deming "the man who taught the Japanese about quality".